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Authors

Lee, Philip R.
Franks, Patricia E.

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Philip R. Lee, MD, and Patricia E. Franks

Philip R. Lee Institute for Health Policy Studies
School of Medicine, University of California San Francisco

Supported by the Josiah Macy, Jr. Foundation
and the California HealthCare Foundation

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Dedication

To the past, present, and future classes of the
University of California, San Francisco School of Medicine and
Stanford University School of Medicine



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Executive Summary

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EXECUTIVE SUMMARY

Study Purpose

The purpose of this study was to help determine actions needed to increase racial and ethnic diversity in U.S. medical schools in the coming decades. The focus was on increasing the participation of racial and ethnic groups underrepresented in medicine—Blacks or African Americans, Hispanics or Latinos, American Indians and Alaska Natives, Native Hawaiians and Other Pacific Islanders, and other groups that may be underrepresented in specific states, regions, and localities in the country.

The study did not consider gender, age, disability status, or other aspects included in broad definitions of diversity, such as that adopted by the University of California in 2006:

Diversity refers to the variety of personal experiences, values, and worldviews that arise from differences of culture and circumstance. Such differences include race, ethnicity, gender, age, religion, language, abilities/disabilities, sexual orientation, socioeconomic status, and geographic region, and more.

Study Aim and Objectives

The study aim was to better understand the mix of interventions, public and private, needed to increase diversity in medical schools, particularly among applicants, acceptants, matriculants, and graduates. To achieve this aim, we had the following objectives:

1. To examine many levels of policy with a direct impact on diversity in medical schools over the period from the early 1960s through the early 2000s: federal policies (i.e., U.S. Supreme Court and other federal court decisions, Executive Branch policies and initiatives, and federal legislation); State of California policies; University of California and Stanford University policies; and policies of the University of California, San Francisco (UCSF) and Stanford University medical schools.
2. To analyze the evolution of federal policies in civil rights, health care, health workforce, health professions education, medical research and research training, higher education, and elementary and secondary education, concentrating mainly on the period from the early 1960s through the early 2000s.

3. To describe demographic, economic, social, cultural, and political developments in the State of California and the evolution of state policies and actions of the Executive Branch and the state Legislature, as well as state ballot initiatives that have influenced diversity in the University of California.
4. To examine the policy context of the University of California and Stanford University, including their founding as public and private universities, leadership, major eras of growth and change in their development, emergence as modern universities, commitment to diversity, major initiatives and policies to increase diversity, and challenges to affirmative action and diversity policies.
5. To review the history of the UCSF and Stanford University medical schools and the development of institutional policies that have influenced the application, acceptance, matriculation, and graduation of students, with a focus on racial and ethnic groups underrepresented in medicine.
6. To examine social and political developments beyond government and university policies that have influenced diversity in medical schools, as well as other efforts.
7. To analyze U.S. and California demographic, educational, and medical school trends, as well as UCSF and Stanford medical school trends from the early 1960s through the early 2000s.

Study Approach and Methods

The study team used an interdisciplinary approach employing historical and policy analysis, as well as multiple methods, including case studies of UCSF and Stanford University medical schools; archival research; key informant and oral history interviews; review and analysis of secondary demographic, educational, and medical school data; and literature review. (See Appendices 1-4.)

Study Team

Philip R. Lee, M.D., Principal Investigator and Professor of Social Medicine (Emeritus), Department of Medicine, UCSF School of Medicine, headed the interdisciplinary study team. During the initial period of this study, Dr. Lee served as Senior Scholar at UCSF's Institute for Health Policy Studies (now the Philip R. Lee Institute for Health Policy Studies), and as Consulting Professor, Human Biology Program and School of Medicine, Stanford University. Dr. Lee remains a Senior Scholar at the Institute.

Kevin Grumbach, M.D., Professor and Chair, Department of Family and Community Medicine, UCSF School of Medicine, was a Co-Investigator and served as consultant to the team during the initial study period on strategies to increase diversity in the health professions, particularly in medicine.

Nancy Rockafellar, Ph.D, Co-Investigator, served as Director of the Oral History Program, Department of History, Anthropology and Social Medicine, UCSF School of Medicine during the initial study period. She conducted 15 oral histories of UCSF and Stanford medical school administrators and faculty members who were leaders in the development of affirmative action and diversity policies, producing a first-of-a-kind, eleven-volume *Diversity in U.S. Medical Schools Oral History Series* as a companion to this report.

Mary P. Sutphen, Ph.D., Co-Investigator and a historian specializing in studies of the history of medicine, conducted more than 40 key informant interviews of former students and current and former faculty, staff, and administrators at UCSF and Stanford medical schools, as well as extensive archival research. Dr. Sutphen is Adjunct Assistant Professor, Department of Social and Behavioral Sciences, UCSF School of Nursing. She is also currently a Research Scholar at the Carnegie Foundation for the Advancement of Teaching.

Patricia E. Franks, Senior Research Associate, Philip R. Lee Institute for Health Policy Studies, UCSF School of Medicine, served as Project Director and Senior Policy Analyst as well as co-author with Dr. Lee of this report.

Dr. Lee and Ms. Franks were assisted by Dorothy Lee, Fortune Meriwether, Susan Priscilla Canny, Elizabeth Newell, Lena Libatique, Jasmine Libatique, and Marc Ellen Hamel, who provided research, technical, and editorial support. Eunice Chee, Janet Coffman, Phyllis Fetto, Helen Gonzales, John Meyer, Claire Brindis, and Sue Klein provided other invaluable assistance. Kehua Zhang, Senior Research Analyst, Division of Diversity Policy and Programs, Association of American Medical Colleges, Washington, D.C, provided medical school data files for the project.

The study and report were funded by the Josiah Macy, Jr. Foundation and the California HealthCare Foundation. The initial study period was from 2002 through 2005; the study was expanded and continued from 2006 through December 2009.

Major Findings

1. U. S. medical school racial/ethnic diversity has increased from 1960 to the early 2000s.
 - In 1960, about 4 percent of the 7,081 graduates from the 81 U.S. medical schools were racial/ethnic minorities.
 - By 2008, racial/ethnic minorities made up about 37 percent of the 16,167 graduates from 130 medical schools, with some groups having made greater and more consistent gains than others.
2. Blacks or African Americans, Hispanics or Latinos, American Indians and Alaska Natives, and Native Hawaiians and Other Pacific Islanders remain underrepresented in medicine relative to their numbers in the U.S. population and populations in specific states, regions, and localities.

- California is a case in point. The state has 20 percent of the nation’s minority population, and minorities represent nearly 60 percent of the state’s population, making California a “majority minority” state.
 - Groups underrepresented in medicine in California’s general population account for more than 40 percent of the state’s population.
 - However, recent total first-year enrollment figures in the state’s five University of California public medical schools and its three private medical schools show that underrepresented students comprised only about 20 percent of first-year enrollment.
 - Results of a recent survey of more than 61,000 active patient care physicians in California reveal that Hispanics or Latinos represented only 5.2 percent of the physician workforce and Blacks or African Americans, only 3.2 percent, while their numbers in the general population were more than 30 percent and 7 percent, respectively.
3. The lack of a diverse physician workforce engaged in active patient care—both primary and specialty care—all aspects of research, and teaching bears directly on people’s access to care, quality of care, and outcomes of care, as well as on the future benefits of research to the health of diverse populations, and the education and training of future generations of physicians in the nation and in California.
 4. The diversity of the physician workforce is linked directly to issues related to physician supply and specialty and geographic distribution of physicians.
 - Choices of specialty in graduate medical education and geographic areas of practice differ for graduates of U.S. allopathic medical schools and international medical graduates, which now make up more than one-quarter of the U.S. physician workforce. These groups also differ in terms of their racial/ethnic makeup.
 - U.S. graduates of allopathic medical schools are less likely to choose primary care residencies—internal medicine, family practice, and pediatrics—than are U.S. citizen international medical graduates and non-U.S. citizen international medical graduates (except for pediatrics).
 - U.S. graduates of allopathic medical schools are less diverse than international medical graduates. The largest groups among international medical graduates are Asians from India and Pakistan, Whites, and Hispanics, with other major groups from the Philippines, and Middle Eastern and African nations.
 - Primary care residency programs are more likely to attract minority residents than White residents among residents from all types of schools—U.S. allopathic and osteopathic medical schools and international medical schools.
 - Minority graduates, both U.S. medical graduates and international medical graduates, are more likely to serve in Medically Underserved areas, Health Professional Shortage Areas, communities with high proportions of minority populations, and low-income communities.
 - These choices have direct effects on the diversity of the U.S. physician workforce and its capacity to meet primary and specialty care and other health needs of increasingly diverse U.S. and California populations in both rural and urban areas, as well as on the physician workforce in other countries.

5. Federal and state laws and policies in civil rights, health care, health workforce, health professions education, medical research and research training, higher education, and elementary and secondary education have been, and continue to be, driving forces in advancing—or impeding—progress in achieving racial and ethnic diversity in medical schools and in the U.S. physician workforce.
6. U.S. medical schools now have different legal frameworks for their efforts to enhance diversity.
 - There are medical schools in 44 states, the District of Columbia, and Puerto Rico. In most of these areas, both public and private medical schools are permitted to consider race as one of many factors in a carefully designed, competitive admissions process, based on the opinion of the U.S. Supreme Court in the *Grutter v. Bollinger* case in June 2003.
 - The Court’s 2003 opinion upheld as a binding precedent the opinion of Justice Lewis F. Powell, Jr., in the U.S. Supreme Court’s 1978 *Regents of the University of California v. Bakke* case, which allowed race to be considered as one of many factors to permit universities to obtain the educational benefits that flow from a diverse student body in fulfilling their educational mission.
 - By the end of 2008, state anti-affirmative action laws in California and Florida (two of the nation’s largest and most diverse states), Michigan, Nebraska, and Washington had affected institutional policies of 15 public medical schools among the 130 accredited, four-year medical schools in the U.S. These schools are now prohibited from considering race, ethnicity, gender, color, or national origin in their admissions and other policies.
 - All medical schools have the opportunity to use diversity as a rationale to advance their missions; however, some are forbidden to use race-conscious policies to promote diversity.
7. Medical schools’ institutional policies related to affirmative action and diversity have been shaped not only by federal and state government laws and policies, but also by many other forces.
 - University governing boards, university and medical school administrators, faculty, students, and staff have helped to shape institutional policies related to affirmative action and diversity.
 - Non-governmental agencies, particularly the Association of American Medical Colleges (AAMC), other trade and professional associations, foundations, and civic and community organizations have all played—and continue to play—vital roles in supporting diversity.
8. Case studies of the UCSF and Stanford University medical schools show that these schools were early national leaders in efforts to enroll those underrepresented in medicine, and remain so today.
 - At UCSF, underrepresented matriculants made up from 20 to 25 percent of entering classes for the great majority of years beginning in 1969 and continuing through the early 2000s; in five of these years, the percentages ranged from 26 through 31 percent.

Nationally, the greatest percentage of URM entrants to U.S. medical schools was about 16 percent in 1995.

- At Stanford, underrepresented matriculants accounted for 20 percent of entering classes for the great majority of years, beginning in 1969 and continuing through the early 2000s; in five of these years, the percentages of URM matriculants were between 25 and 30 percent.
- Five themes emerged from the case studies of UCSF and Stanford medical schools that characterize the schools' efforts to increase diversity over a period of more than forty years. The schools have had the capacity to:
 - Recognize and mobilize leadership from many quarters and of many different types to advance diversity within and outside their schools.
 - Link diversity to excellence in meeting the medical schools' interrelated missions of education and training, research, patient care, and public or community service.
 - Revitalize efforts to increase diversity by renewing leadership over time to develop and modify a mission-driven, multidimensional approach focused on action in these policy areas:
 - outreach and recruitment
 - admissions
 - retention: student support
 - curriculum reform
 - student financial aid
 - campus environment
 - educational and health care partnerships
 - cross-cultural education and training
 - Support students over their educational and career continuum to increase and sustain diversity within and outside the medical school to develop physician leaders in primary and specialty patient care, academic medicine, research (biomedical, clinical, social and behavioral, health services, and health policy), and public and community service.
 - Make diversity part of strategic plans to increase diversity among faculty, trainees, students, and staff and create an infrastructure to assure implementation and accountability.

9. The demographic case for increasing diversity in the nation's and California's medical schools and the physician workforce is compelling:

- In 1960, the U.S. Census count was 178.5 million. The populations of Alaska and Hawaii were not included in this count. There was no information available from the Census on the number of people of Hispanic origin. Whites were estimated to account for 88.8 percent of the population; Blacks, 10.6 percent; American Indians, Eskimos, and Aleuts, 0.3 percent; and Asians and Pacific Islanders, 0.3 percent.
- In a little more than twenty years in 2030, U.S. Census Bureau projections indicate that the U.S. population will stand at 363.5 million. Hispanics or Latinos of any race are expected to make up 20.1 percent of the population. Whites alone, who are not Hispanic

or Latino, will make up 57.5 percent, Blacks alone, 13.9 percent, Asians alone, 6.2 percent, and all other races, 4.1 percent.

- In California, the population in 1960 was 15.7 million, with Whites representing 92.0 percent; Blacks, 5.6 percent; American Indians, Eskimos, and Aleuts, 0.2 percent; and Asians and Pacific Islanders, 2.0 percent of the population. Information was unavailable about those of Hispanic origin.
- In 2030, California's population is expected to stand at 48.1 million, with Hispanics or Latinos representing 46.8 percent of the population. Whites who are not Hispanics or Latinos are expected to account for 29.5 percent, Asians, 12.8 percent, Blacks, 6.6 percent, and all other races, 4.3 percent of California's population.

10. Challenges to increasing diversity in medical schools and in the physician workforce are complex. They require leadership and actions by medical schools, universities, state government, federal government, accreditation agencies, professional and trade associations, foundations, and others. Forward-looking efforts to increase by 2030 the number of those underrepresented in medicine in U.S. and California medical schools and in the U.S. and California physician workforce must confront these realities:

- Some ethnic and racial populations, particularly Hispanics or Latinos, are growing much more rapidly than their numbers as applicants and entrants to medical schools nationwide and in California and other states.
- Severe educational disparities, which begin early and persist over time, exist among ethnic and racial population groups in the U.S. and in many states, including California, and these disparities affect both educational achievement and attainment.
- Students must successfully traverse an educational pathway that begins in kindergarten and continues through college over a period of 16-18 years to be prepared with required academic courses to apply to medical school. Students also need family, social, and financial support and life experiences that motivate them to apply to and enter medical school.
- Bridge-building opportunities for students—pre-college and pre-and postbaccalaureate academic enhancement and service learning experiences—that may be vital to supporting students on the educational pathway to medical school are often not regarded as “core” programs and are vulnerable to funding cutbacks or elimination.
- The total number of positions in U.S. and California medical schools is increasing, but enrollment is still growing relatively slowly, and competition for positions is intense.
- Superior academic achievement (i.e., college grade point averages [GPA] and Medical College Admission Test [MCAT] scores) is a major selection factor for admission to medical school, even though use of a “holistic review process” helps to assure that no GPA-MCAT group is guaranteed acceptance.
- Costs of undergraduate education and medical education are sharply increasing.
- The debt burden of students for their undergraduate education and medical education is also growing sharply.
- The availability and amount of federal, state, and private loans and scholarships are not keeping pace with the increasing costs of medical school.
- Completing undergraduate medical education and graduate medical education is a lengthy process requiring 7 to 12 years.

- The funding of graduate medical education and the policy implications of specialty and geographic distribution of physicians need to be more fully understood for non-U.S. citizen international medical graduates completing their graduate medical education in the U.S. and remaining in the U.S. in terms of meeting the health care needs of U.S. populations and populations in these physicians' countries of origin, as well as for U.S. citizen international medical graduates and graduates of U.S. allopathic and osteopathic medical schools.

Recommendations from Major Reports

Many major national and California reports with recommendations on diversity in medical schools and the health professions, as well as on the physician workforce, have been developed over the past fifteen years. Broad recommendations summarized from these reports are:

1. Revitalize Efforts to Increase the Participation of Diverse Populations in U.S. Medical Schools to Provide Physician Leadership to Meet the Nation's and California's Health Needs.
2. Use Multiple Strategies to Increase Diversity in the U.S. and California Physician Workforce, Improve Specialty and Geographic Distribution, and Strengthen Medical Education in a Global Health Environment.
3. Align Health Care, Health Workforce, and Health Professions Education Policies in Health Care Reform.
4. Enforce Accreditation Standards for Diversity and Cultural Competence in Medical Schools.
5. Provide Clear Guidance to all Universities and Medical Schools in Meeting Responsibilities under Federal and State Civil Rights Laws.
6. Renew University and Medical School Institutional Leadership and Accountability related to Diversity.
7. Meet Increasing Challenges to Reduce Financial Barriers to Undergraduate Education and Medical Education.
8. Strengthen K-12 Education and Build Bridges on the Educational Pathway to Medical School.
9. Develop Broad-based Coalitions among the Public, Private, and Independent Sectors to Support Diversity Efforts.
10. Bring Community Benefit by Increasing Diversity.

A detailed discussion of the context for these recommendations is included in Chapter 9. Recommendations: Opportunities for Action.

Opportunities for Action

UCSF and Stanford Schools of Medicine and other U.S. Medical Schools

Leadership and accountability of University Presidents or Chancellors, Provosts, campus-wide administrative office heads, medical school Deans, Deans' office heads, Department and Division heads, and individual faculty members are required to increase diversity within medical schools. Engagement of medical students, residents, postdoctoral fellows, alumni, staff, advisory groups, and other campus groups is essential. Priority recommendations for a comprehensive approach to increasing diversity among applicants, students, trainees, faculty, and staff are:

1. Make the Commitment to Diversity an Institutional Priority and an Institutional Value Linked to Excellence in Meeting University and Medical School Missions.
2. Communicate the Commitment to Diversity, the Many Aspects of Diversity, and the Benefits of Diversity to the Campus Community, University and Medical School Alumni, and the Public.
3. Make Increasing the Diversity of Students, Trainees, Faculty, and Staff Part of University and Medical School Strategic Plans with Goals, Measurable Objectives, Methods, Lead Responsibilities, Tasks, Timelines, Data Systems for Monitoring, Accountability, Resources, and Incentives.
4. Have University and Medical School Leadership Share Progress and Problems in Meeting Goals and Objectives Openly and Regularly.
5. Use a Mission-driven, Multidimensional Approach to Revitalize Medical Student Diversity: Review and Renew these Major Policy and Program Areas:
 - Mission
 - Educational Mission
 - Outreach and Recruitment
 - Admissions
 - Retention: Student Support
 - Medical School Curriculum
 - Student Financial Aid
 - Campus Environment
 - Educational and Health Care Partnerships
 - Cross-cultural Education and Training
6. Use the Liaison Committee on Medical Education's (LCME's) Accreditation Standards for Diversity (MS-8 and IS-16) for Medical Schools as an Impetus to Review Diversity Efforts Related to Applicants, Students, Trainees, Faculty, and Staff.

7. Use LCME's Accreditation Standards for Cultural Competence (ED-21 and ED-22) and Models and Tools to Help Guide Renewed Efforts in Cross-cultural Education and Training and in Evaluation of Efforts.
 - Align Cross-cultural Education and Training Efforts for students, trainees, faculty, and staff with federal law in National Standards for Culturally and Linguistic Appropriate Services in Health Care (CLAS), Cultural Competencies of the Accreditation Council for Graduate Medical Education (ACGME), the Joint Commission's Hospital Accreditation Standards on Cultural Competence, and the Health Resources and Services Administration's Framework for Assessing Cultural Competence.
8. Develop a Support Structure over the Educational and Career Continuum to Increase and Sustain Diversity within and outside the Medical School.
 - Develop diverse physician leaders in primary and specialty patient care, community health service delivery, research (basic, biomedical, clinical, social and behavioral, health services, and health policy), education and training, and public service. The following are actions that might be undertaken by medical schools to increase and sustain diversity:
 - *Reach Out*—to diverse K-12 students to develop an interest in and fascination with science, basic and advanced science knowledge, and motivation, skills, and experience through service learning
 - *Build Up*—knowledge, skills, and experience with diverse K-12-16 students, applicants, and acceptants with pre-college, college-eligible, postbaccalaureate, and prematriculation programs
 - *Attract*—Use learning pathways, curriculum design, special educational opportunities, the learning environment, and student financial aid to attract diverse applicants and acceptants to the medical school to meet its interrelated missions
 - *Nourish*—diverse medical students, residents, and postdoctoral fellows through formal and informal mentoring as they come to critical decisions about graduate medical education and their careers
 - *Hold on*—to diverse graduates through their residency years, postdoctoral fellowship study, recruiting them as faculty members and retaining them as the next generation of physician leaders
 - *Seed*—diverse graduates and postdoctoral scholars to become physician leaders in community medicine, academic medicine, research, and government service in institutions throughout the country and the world

University of California

To increase diversity within the University of California's medical schools will require strong leadership as well as the accountability of the Board of Regents, the President, the Academic Senate, the Staff Diversity Council, and other University offices and groups. Priority recommendations for University undergraduate, graduate, and professional education; health professions education and the California health workforce; as well as University pre-college, college-eligible, and postbaccalaureate medical programs, are:

1. Make the Commitment to Diversity an Institutional Priority and an Institutional Value for the University of California to Assure Excellence in Meeting the University's Interrelated Missions in Education and Training, Research, Patient Care, and Public Service.
2. Use the 2009 Annual Accountability Sub-report on Diversity to the Board of Regents to Improve the Ability to Monitor Progress and Problems in Increasing Diversity within the University's Ten Campuses.
 - Develop and use process benchmarks in annual reports to give the President and Board of Regents measurable indicators on improvements likely to impact trend lines over time.
 - Request verbal presentations by Chancellors to the President and Board of Regents highlighting information submitted as part of annual reports on diversity.
 - Use specific recommendations of the Staff Diversity Council and the Study Groups on University Diversity presented to the Board of Regents to profile campus progress and best practices in these areas in a consistent way:
 - Leadership
 - Accountability
 - Recruitment and Retention of Diverse Staff
 - Recruitment and Retention of Diverse Faculty
 - Recruitment and Retention of Diverse Graduate and Professional Students
 - Recruitment and Retention of Diverse Undergraduate Students
 - UC Campus Admissions Should Align to Best Practices
 - Regularly Assess Campus Climate
 - Academic Planning
 - Apply Funding and Support
3. Provide Clear Guidance to Campuses in Meeting the University's Legal Requirements under Federal and State Laws: Title VI of the Civil Rights Act of 1964 and the California State Constitution Article 1, Declaration of Rights, Section 31 (a-f) and on Federal and State Laws related to Cultural and Linguistically Appropriate Services in Health Care and Cultural and Linguistic Competency.
4. Continue to Review and Develop Policies to Increase Access to the University for Diverse Undergraduate, Graduate, and Professional Students, including Increasing Need-based Student Financial Aid.
 - Continue the UC Blue and Gold Opportunity Plan and increase funds available under this Plan.
 - Increase funding for Cal Grants A& B.
 - Explore the development of other federal, state, institutional, and private grants, gifts, and loans for students with high need.

5. Review University Pre-College, College-eligible, and Graduate and Professional School Academic Preparation Programs, including the Postbaccalaureate Medical School Program, and Continue to Budget and Allocate Funds for these Programs.
 - Provide opportunities for students to develop a fascination with science and commitment to service.
 - Provide opportunities for students to acquire knowledge, skills, and experience in science and math, and research.
 - Provide opportunities for service learning.
 - Improve chances that diverse applicants committed to entering medical school will be accepted and enrolled.
 - Partner with foundations, University alumni, and other private donors to support these programs.
6. Continue to Coordinate University Health Professions Education Policies with California Health Workforce Policies and Continue to Budget and Allocate Funds for PRIME (Program in Medical Education) and Other Increases in Medical School Enrollment.
7. Continue to Make Diversity a Priority in the University's Systemwide Long-range Academic Planning.

State of California

Despite challenges posed by the current economic climate, the State of California has commitments to keep to the people of California now and in the future. Two basic commitments are to help assure that every Californian has access to a high-quality educational system and to help assure that every Californian has access to high-quality health care. The Governor is in a position to provide leadership in California in key policy areas—K-12 education, postsecondary education, health professions education, health planning and development, and health care. The California Legislature is also in a position to advance policies, including the appropriation of adequate funds to support essential programs in these areas. As the diversity of California's general population, its student population, and its patient population has grown, the need to have a health care workforce, including a physician workforce, that reflects this diversity and is culturally and linguistically competent has become increasingly compelling. Priority recommendations for the Governor, the State Superintendent of Public Instruction, the California Postsecondary Education Commission, the Secretary of Health and Human Services, other agencies, and the Legislature are:

1. Strengthen K-16 Education in California and Build Bridges on the Pathway to Medical School.
 - Make the California Department of Education's first priority to improve educational achievement and attainment of all of California's K-12 students to assure diverse workforce participation and a strong economic future for California.

- Use policy levers to improve students' transition from high school to college by engaging the California Department of Education and the California Postsecondary Education Commission to develop a plan to:
 - Align coursework and assessments from early grades through grade 14 or later.
 - Integrate goals from K through 16 in financing education.
 - Develop high-quality data systems that span the K-16 continuum.
 - Develop accountability systems that connect K-12 and postsecondary education.
 - Expand educational opportunity through educational outreach and K-12 improvement programs to improve diversity in the University of California:
 - Invest in the long-term capacity of K-12 schools and enhance student diversity in the University of California through:
 - Student-centered programs
 - School partnerships
 - Professional development
 - Enrichment and informational programs
 - Continue to budget and allocate state funds for University of California pre-college, college-eligible, and graduate and professional school academic preparation programs, including the Postbaccalaureate Medical School Program.
2. Improve Access and Quality of Health Care for all Californians by Coordinating California's Health Care, Health Workforce, and Health Professions Education Policies.
- Address as an urgent priority the serious and continuing underrepresentation of Hispanic or Latino, Black or African American, American Indian and Alaska Native, and Native Hawaiian and Other Pacific Islander physicians in California:
 - Samoan, Cambodian, and Hmong/Laotian physicians are in very short supply. Add these groups to the list of underrepresented physicians.
 - Minority physicians in California play a major role in providing care in underserved communities, including Medically Underserved Areas, Health Professional Shortage Areas, and high-minority and low-income communities.
 - Minority physicians in California are more likely than White physicians to work in primary care (i.e., family medicine, general medicine, and general pediatrics).
 - Address as an urgent priority physician supply shortages in California, which are expected to reach 17,000 physicians by 2015.
 - Address physician geographic and specialty maldistribution, particularly the shortage of primary care physicians actively practicing in California.
 - Keep the state's commitment to invest in new public medical schools in California at the University of California, Riverside and the University of California, Merced.

- Continue to provide state funding to the University of California for PRIME (Program in Medical Education), the focused program in medical education that prepares medical students to work with urban and rural underserved populations and other diverse populations and increases enrollment at University of California medical schools at Davis, Irvine, Los Angeles, San Diego, and San Francisco.
 - Engage the Office of Statewide Health Planning and Development, the California Healthcare Workforce Policy Commission, the Office of the President of the University of California and its five public medical schools, and the three private medical schools (Loma Linda, Stanford, and the University of Southern California) in creating a California Physician Workforce Development Plan.
- Provide greater state investment in loan repayment programs, such as the National Health Service Corps/California State Loan Repayment Program and the Steven M. Thompson Physician Corps Loan Repayment Program:
 - Consider incentive plans to encourage more medical students to remain in California for graduate medical education and practice.
3. Enforce California Business and Professions Code Section 2190.1 4 (b-e) Related to Continuing Medical Education in Cultural and Linguistic Competency for Physicians and Surgeons (AB 1195, effective July 1, 2006).

Federal Government

Federal leadership and policies in civil rights, health care, health workforce, health professions education, minority research and research training, higher education, and elementary and secondary education have been of great importance in fostering—or impeding—diversity in medical education. Presidential and Congressional leadership, as well as judicial leadership at the federal level, have played seminal roles in shaping policies. New Presidential and Congressional leadership provides new opportunities for action across several policy areas.

Civil Rights

The President leads a diverse nation and must exert strong and clear leadership on the importance of affirmative action and diversity. Assuring that all states, universities, and medical schools meet legal requirements under federal laws on nondiscrimination, the receipt of federal funds, and culturally and linguistically appropriate services in health care is critical. Priority recommendations for the President and Executive Agency Leadership (the Secretary of Health and Human Services, the Secretary of Education, the Attorney General), as well as the U.S. Commission on Civil Rights, and the Congress in the area of civil rights are:

1. Support Actively the U.S. Supreme Court’s 2003 decision in *Grutter v. Bollinger* on the Benefits of Diversity and the Use of Race-conscious and Race-neutral Practices.

2. Provide Clear Guidance to States and Institutions of Higher Education, including those with State Anti-affirmative Action Laws, on Compliance with Provisions of Title VI of the Civil Rights Act of 1964 and Regulations Promulgated to Enforce the Law.
3. Review, Revise, and Eliminate, if necessary, Previous Executive Orders and Statements of Administration Policy Affecting Civil Rights, including Affirmative Action and Diversity in Education, Employment, and Federal Contracting.
4. Assure Implementation and Enforcement of Earlier Executive Orders:
 - Executive Order 13160: Ensuring Equal Opportunity in Federally Conducted Education and Training Programs (June 23, 2000)
 - Executive Order 13166: Improving Access to Services with Limited English Proficiency (LEP) (August 11, 2000)
 - Executive Order 12250: Leadership and Coordination of Nondiscrimination Laws (November 2, 1980)
5. Enforce Federal Laws and Standards on Cultural and Linguistic Competence in Health Care Facilities:
 - Title VI of the Civil Rights Act of 1964
 - National Standards for Culturally and Linguistically Appropriate Services in Health Care (CLAS)

Health Care, Health Workforce, and Health Professions Education and Training

The President and the Congress are moving forward with health care reform. The House of Representatives approved Affordable Health Care for America Act (H.R.3962) on November 7, 2009, and the Senate began debating in late November 2009 provisions of the Patient Protection and Affordable Health Care Act (H.R.3590), the vehicle merging bills passed by the Senate Finance Committee and the Senate Health, Education, Labor, and Pensions Committee. On December 24, 2009, the Senate approved with amendment the Patient Protection and Affordable Health Care Act. The Senate and House bills must now be reconciled. A comprehensive approach to health care reform must address health workforce and health professions education and training issues, as well as access, quality, cost, and affordability issues, and the organization and delivery of care. Priority recommendations for the President, Executive Agency Leadership (Secretary of Health and Human Services), and the Congress are:

1. Improve Access and Quality of Health Care for All Americans by Taking a Comprehensive Approach to Health Care Reform that Addresses these Critical Issues:
 - The serious and continuing underrepresentation of Hispanic or Latino, Black or African American, American Indian and Alaska Native, and Native Hawaiian and Other Pacific Islander physicians in primary and specialty care, all types of research, and teaching to participate in the education and training of future generations of physicians.

- The shortage of primary care physicians. Primary care is critical for access to care and for the effective functioning of the health care system. There is a shortage of primary care physicians—two-thirds of physicians are specialists or involved in other professional activities.
 - The serious and growing shortage of U.S. medical school graduates choosing careers in primary care for several reasons (i.e., high levels of student indebtedness, low pay, high patient volume).
 - The lack of physicians practicing in rural and economically disadvantaged areas, including Medically Underserved Areas, Health Professional Shortage Areas, and high-minority and low-income communities.
 - The lack of incentives for physicians to practice in alternative delivery and payment models that may enhance quality of care and help to contain costs.
2. Extend Authorization and Increase Annual Appropriations Levels for the National Health Service Corps.
 - Increase the amount of loan repayment and the flexibility of service.
 - Make annual appropriations meet increased authorization levels.
 3. Reauthorize Title VII Health Professions Education and Training Programs and Increase Annual Appropriations Levels for these Programs.
 - Restructure these programs to better integrate diversity training programs; interdisciplinary, community-based programs; primary care medicine and dentistry programs; and student loan programs as part of a comprehensive federal health professions workforce strategy.
 - Provide funding to support scholarships, loans, and grant support to enhance academic capacity in primary care (family medicine, general internal medicine, general pediatrics, and geriatrics), emphasizing support for disadvantaged students who are underrepresented in medicine and training in community-based settings, including medical home models and models coordinating physical, mental, and other health services.
 - Provide grant support to academic teaching centers to support resident training programs in community-based settings.
 4. Reauthorize and Amend the Indian Health Care Improvement Act.
 - Authorize grants to tribes, tribal organizations, urban Indian organizations, and public and non-profit organizations for a Health Professional Recruitment Program for Indians to increase the supply of Indian health professionals for the Indian Health Service, and tribal and urban Indian health care centers.
 - Authorize programs to provide scholarships, loans, and loan repayment programs for pre-professional and professional assistance to Indians.
 5. Establish Accountable Care Organization, Medical Home, and Independence at Home Pilot and Demonstration Programs under Medicare.

- Test these and other new delivery and physician reimbursement models that may improve quality and help to control costs.
6. Increase Medicaid reimbursement rates for primary care services to match Medicare rates.
 7. Strengthen the National Institutes of Health Minority Research and Training Programs Based on Recommendations of the National Research Council of the National Academies of Sciences' Assessment.
 8. Initiate a MedPAC (Medicare Payment Advisory Commission) Review of Medical School Policies for Graduate Medical Education (including those regarding U.S. International Medical Graduates and non-U.S. Citizen International Medical Graduates). Examine the effect of policies on diversity in the physician workforce and on enrollment in U.S. medical schools.
 9. Fund and Conduct Studies Mandated by the Higher Education Opportunity Act of 2008 Important to Policymakers:
 - Study on Foreign Graduate Medical Schools
 - Analysis of Federal Regulations on Institutions of Higher Education
 - Study of Minority Male Academic Achievement
 - Study of the Impact of Student Loan Debt on Public Service.

Higher Education

The President has made investment in education and education reform high priorities for his Administration. The College Cost Reduction and Access Act (CCRAA) of 2007 (Public Law 110-084) and the Higher Education Opportunity Act (HEOA) of 2008 (Public Law 110-315) are both parts of the reauthorization of the Higher Education Act of 1965. The House of Representatives approved the Student Aid and Fiscal Responsibility Act (H.R. 3221) with amendments on September 17, 2009, and the bill moved to the Senate Committee on Health, Education, Labor, and Pensions on September 22, 2009. Provisions of this bill would also amend the Higher Education Act of 1965. The CCRAA, the HEOA, and H.R. 3221 provisions affect undergraduate, graduate, and professional students and their families, including medical students and residents. Colleges and universities, minority-serving institutions, medical schools, and lenders are also affected. The laws reauthorize long-standing federal grant and loan programs, as well as set terms and conditions for loan programs, and authorize new programs providing support to individuals and institutions. H.R. 3221 proposes reforms to: 1) increase college access and completion through Pell Grants and other grants, 2) simplify student financial aid forms, and 3) change Stafford and Perkins Loan programs to allow for non-profit lenders and Direct Loans from the Department of Education. The bill also includes provisions for grants to modernize and repair public schools, an Early Childhood Challenge Fund, and an American Graduation Initiative. Priority recommendations for the President, the Secretary of Education, and the Congress are:

1. Provide Federal Financial Aid to Institutions and Individuals to Assure Opportunities to Pursue and Complete Undergraduate, Graduate, and Professional Education.
 - Assure maximal funding for the Pell Grant Program to meet added student demand and tie increases to increases in the Consumer Price Index plus 1 percent.
 - Assure appropriations at maximal authorized levels for Perkins Loans for undergraduate, graduate, and graduate students.
 - Assure appropriations at maximal authorized levels for Federal Direct Loan Programs (Direct Subsidized and Unsubsidized Loans, PLUS, Consolidation Loans). These programs include the Federal Direct Stafford Subsidized and Unsubsidized Loans, the Direct PLUS Loans, and the Direct Consolidation Loans. The U.S. Department of Education is the lender.

2. Strengthen Federal Institutional Support to Improve the Chances of Underrepresented and Disadvantaged Students Completing Postsecondary Education and Receiving Academic Enrichment in Sciences through Provisions of the College Cost Reduction and Access Act (CCRAA) of 2007, the Higher Education Opportunity Act (HEOA) of 2008, and the Student Aid and Fiscal Responsibility Act (H.R. 3221).
 - A New College Access and Completion Innovation Fund providing College Access Challenge Grants, a New State Innovation and Completion Grants program, and New Innovation in College Access and Completion Grants.
 - Institutional Support Programs to Assist Minority-Serving Institutions. American Indian Tribally Controlled Colleges and Universities, Alaska Native and Native Hawaiian-Serving Institutions, Native American-Serving, Non-tribal Institutions, Asian American and Native American Pacific Islander-Serving Institutions, Historically Black Colleges and Universities and for Predominantly Black Institutions, and Promoting Postbaccalaureate Opportunities for Hispanic Americans.
 - Existing and new programs (TRIO, STEM, YES Partnership Grants, Mathematics and Science Scholars Program, Patsy T. Mink Fellowship Program, and other programs) to provide support to youth to help them to progress from middle school to Postbaccalaureate Programs; to engage youth in Science, Technology, Engineering, and Mathematics through outreach and experiential learning; and to pursue doctoral study and careers in teaching.
 - Graduate and Postsecondary Improvement Programs:
 - Improving College Enrollment by Secondary Schools
 - Improving Science, Technology, Engineering and Mathematics Education with a Focus on Alaska Native and Native Hawaiian Students
 - Pilot Programs to Increase College Persistence and Success
 - College Partnership Grants
 - Rural Development Grants for Rural Colleges and Universities
 - Special Programs for Students Whose Families are Engaged in Migrant and Seasonal Farm Work

Elementary and Secondary Education

Reauthorization of the Elementary and Secondary Education Act (ESEA) of 1965 was scheduled for 2007. Last reauthorized as the No Child Left Behind Act of 2001 (Public Law 107-110), ESEA reauthorization is again on the agenda, with stakeholders' meetings sponsored by the Department of Education in fall 2009. There have been calls for improvements with reauthorization from many quarters. These include the Department of Education, the National Education Association, the National Science Foundation, the National Science Board, the Commission on No Child Left Behind, and 144 organizations representing civil rights, religious, children's, disability, and civic organizations signing a Joint Organizational Statement on No Child Left Behind. Many other agencies and groups have put forward statements about problems with provisions of the act or recommendations for the reauthorization of the act or other legislation. Continuing K-12 educational disparities among racial and ethnic groups in the nation and California, as well as the lack of emphasis on science education, seriously affect the pool of students who will be able to apply and successfully enter medical school.

1. Strengthen Provisions of the Elementary and Secondary Education Act of 1965 (No Child Left Behind Act of 2001) with Reauthorization to Improve K-12 Education in the Nation and States.
 - Set high achievement standards consistent with state content and achievement standards and with nationally recognized professional and technical standards.
 - Strengthen state assessment and accountability systems by using multiple up-to-date measures or indicators in addition to standardized tests:
 - Allow states to measure students' growth in achievement as well as their performance in relation to pre-determined levels of academic proficiency.
 - Improve data systems.
 - Ensure that all children, particularly the most disadvantaged, have access to an education that will prepare them to succeed in the 21st Century:
 - Focus on high-quality, early childhood education and child care, parental involvement and mentoring programs, as well as access to quality health care.
 - Address continuing K-12 educational disparities among racial and ethnic groups:
 - Support English Language Learners, both immigrants and migrants.
 - Strengthen programs for American Indians and Alaska Natives, and Native Hawaiians.
 - Ensure that high schools prepare students for college and the workforce.
 - Strengthen advance placement programs, including those in science:
 - Increase the supply of effective math and science teachers through Mathematics and Science Partnerships.

- Identify schools in need of assistance and provide assistance to them to develop effective interventions instead of labeling and punishing them.
- Provide teachers, principals, schools, school districts, and states with support and resources that they need to help students succeed.



PREFACE

Writing this report about diversity in U.S. medical schools has made us reflect on just where the country is in terms of diversity. We are more diverse in some places in the country than in others. Racial and ethnic diversity is growing rapidly in some states, regions, and communities and not as rapidly in others. Many parts of the country are experiencing a level of change in their ethnic and racial makeup that has never been experienced before, while other areas have a long history of diversity, of learning to live and work together. We are living in a time, too, when we are confronted by both historical and contemporary issues related to the changing face of our society.

In some places, people are afraid of each other, angry at each other, or have become divided against each other. They are feeling displaced because they believe that others are taking away their jobs, their places in school, their opportunities, their rights. They feel that they are not getting “a fair shake,” and they believe that people who are different from them are the cause of their problems.

Others believe that, if we could only be blind to race, blind to ethnicity, blind to color, blind to our national origin, blind to our religion, our gender, our sexual orientation—all the things that make us different and ourselves—we could somehow suddenly, finally, all stand side by side and be equal. Even if we could be blind to these characteristics, which sometimes shape our relationships in the form of stereotypes, we will always be different, as individuals and as populations. The question is: can we allow both difference and equality of opportunity?

At a time when we need to hold together and embrace diversity in the broadest sense, not only in terms of its racial and ethnic aspects, but in all of its aspects, on our campuses, in our universities, in our workplaces, in our communities, in our states, in our nation, and in the world—and learn and grow with and from each other, we are instead still made uneasy in debates when race or our other differences enter in.

What should we do about diversity? What should we do about our differences as people? Clearly, these are questions that we’ve faced time and time again in our history.

We believe that now and in the future we need policies that have as their primary goal the full participation of all people in the life of society. This goal goes beyond assuring equal protection of the rights of individuals under the law. It means recognizing equality of opportunity as a right. It means “investing in people” to make this phrase a reality, rather than a lost proposition from the past.

It means a promise made real of equal opportunities for families, children, youth, adults, and elders, whether they were born here or in other countries. It means an opportunity to participate in education, an opportunity to learn, an opportunity to achieve, and an opportunity to attain the type and level of education one chooses. It means that beginning at home, even before kindergarten, parents have the opportunity to nurture their children, so they can grow, learn, and continue to express themselves and contribute in creative and surprising ways through pre-school, elementary school, middle school, high school, college, and medical school.

Diversity brings many benefits—to individual students; to groups of students; to whole student bodies; to medical schools in meeting their missions of education and training, research, patient care, and public service; to communities; and to the larger society.

Our report on diversity is organized into nine chapters.

Chapter 1: Changing Opportunities and Challenges for Medical Schools: From Desegregation to Affirmative Action to Promoting Diversity in an Anti-affirmative Action Environment

From a civil rights perspective, five eras can be identified that describe the broader context within which the consideration of race and ethnicity by institutions of higher education, including medical schools, in admissions and other areas has taken place. This chapter discusses the five eras, starting with discrimination, segregation, and the beginnings of desegregation during the period from 1945 through 1963 before the Civil Rights Act of 1964 and concluding with an examination of university and state anti-affirmative action measures from 1995 through the present, as well as the *Grutter v. Bollinger* U.S. Supreme Court decision in 2003 and implications for U.S. medical schools. A complex array of forces has affected diversity in medical schools over the past several decades. The chapter introduces the roles of the Association of American Medical Colleges, other professional and trade associations, foundations, community and advocacy organizations, federal and state government, and university governing boards. The chapter also describes social, political, and demographic changes that are examined in more detail in the next chapters of the report, as well as the changing picture of diversity in U.S. medical schools. The chapter concludes with a discussion of the benefits of diversity, medical schools' use of diversity as a rationale, and their use of an institutional policy framework linking diversity to excellence in meeting their interrelated missions in education and training, research, patient care, and public service.

Chapter 2: Increasing Access to U.S. Medical Schools for Diverse Populations: U.S. Demographic, Education, and Medical School Trends, 1960s-2000s, Graduate Medical Education, and the U.S. Physician Workforce

This chapter provides a national overview of demographic trends from the 1960s through the early 2000s, as well as population projections to 2050, showing changes in the size and racial and ethnic composition of the U.S. population and the picture of diversity geographically by region of the country. These changes include the rapid growth of the Hispanic or Latino population, as well as the substantial growth of Asian and African American populations. The chapter also describes trends in educational attainment and achievement for different racial and ethnic groups from kindergarten through college. The educational pathway that leads to

successful entry into medical school—and points along this pathway where students who aspire to go to medical school may no longer continue because they face academic or financial barriers—is discussed. Trends in the number of U.S. medical schools in the 20th and early 21st centuries, a historical review of medical school graduates by race and ethnicity from 1950 through 1998, and trends for applicants, acceptants, matriculants, and graduates by race/ethnicity and URM (Underrepresented Minorities/Underrepresented in Medicine) status from 1974 through 2008 are presented. The chapter concludes with a discussion of graduate medical education and the U.S. physician workforce, including the diversity of the workforce and physician supply and specialty and geographic distribution.

Chapter 3: The Changing Federal Policy Context

The policy-making process related to diversity in medical education is complex and often confusing. No scheme is readily available either to analyze events in the process or to make predictions about outcomes. The vertical nature of the policy-making process further complicates it: actions may be needed at the federal, state, and local levels, and multiple interests are involved at every level. Over time, policies often prove to have long-term, unintended consequences. This chapter reviews the federal policy context over the period from 1945 through the early 2000s in a number of policy areas—civil rights, health care (Medicare and Medicaid), health workforce, health professions education, biomedical research and research training, higher education, and elementary and secondary education. The chapter highlights the importance of Presidential leadership—in advancing or impeding—the evolution of policies directly affecting affirmative action and diversity in medical schools, beginning with President Harry S. Truman and extending through the administration of President George W. Bush. The chapter concludes with a discussion of critical issues in seven key policy areas affecting diversity in medical schools for consideration by President Barack Obama and Congress.

Chapter 4: California's People: Demographic Transformation, Educational Trends, and Challenges for Medical School and Physician Diversity

California's population is the largest and most racially and culturally diverse in the nation. In the 2000 Census, California officially became one of the first “majority minority” states—no single racial or ethnic group constitutes a majority, but collectively minority groups now make up a majority of the state's population. This chapter describes the growth and change in California's population from 1960s through the early 2000s and projections through 2050, including changes in the racial/ethnic makeup of the state, particularly increases in the Hispanic or Latino and Asian populations. Demographic changes form the backdrop for discussions of K-12 and postsecondary education trends in achievement and attainment by race and ethnicity for California. Educational disparities in California—from high school to college to graduate and professional education—and ways to improve the alignment of coursework and the transition between K-12 and other educational levels, and bridge-building efforts for students on the educational pathway to medical school have implications for increasing medical school diversity in the state's five public and three private medical schools. The chapter ends with a discussion of trends in first-year enrollment of URMs in California medical schools from 1990 through 2008 and physician diversity and supply in California.

Chapter 5: California's Changing Policy Context

The policy context of diversity in medical education in California is influenced by several factors—geographic, economic, demographic, social, cultural, political, and historical. This chapter begins by describing California's economy and its dynamic growth and continues by discussing the state's increasing diversity through immigration, its history of discrimination and ethnic exclusion, and its early role in civil rights with the California Fair Employment Practices Commission and the Fair Employment and Housing Act. The chapter describes the state's educational policies, including the Master Plan for Higher Education and elementary and secondary education policies. The chapter concludes with a discussion of the politics of California, which is characterized by hyper-pluralism and “participatory” democracy through the state ballot initiative process. Two of the most nationally well-known state initiatives are Proposition 13, which limited local property taxes in 1978 and shifted education funding from the local to the state level, and Proposition 209, the anti-affirmative action constitutional amendment of 1996, prohibiting a consideration of race, sex, color, ethnicity, or national origin in public employment, education, and contracting. The most serious sociopolitical problems now facing the State of California, and by extension, the University of California, are the shift from representative government to “direct” or “participatory” democracy. State policy has been increasingly dominated by special interests, including an anti-tax attitude, anti-immigrant attitudes, as well as continued racism and discrimination. California's current political and fiscal crisis was symbolized by the Governor's and the Legislature's extraordinary difficulty in 2008-2009 in working together to come to agreement on a state budget and to provide appropriations for the State of California, including the University of California. This crisis was exacerbated by a severe nationwide economic downturn and huge budget shortfalls in California before and after passage of the FY 2009-2010 budget.

Chapter 6: The University of California: The Changing Policy Context of a Public University

From its founding in 1868, the University of California has been shaped by its leadership—Presidents, Academic Senates, Boards of Regents—the creativity, enterprise, and social causes of its students, faculty, and staff, as well as by California's Governors, the Legislature, the public, and social and economic challenges. This chapter examines the history of the University of California, which in 1878 at a state constitutional convention became a public trust with its “autonomy” guaranteed under the new state Constitution. Other points in the University's history explored in this chapter include its emergence as a modern university, the beginning of affirmative action in the 1960s, varying political and public support for the University, challenges to affirmative action policies and practices, university initiatives to increase diversity in its medical schools, other diversity initiatives and reports, the University's enrollment plan for health professions linking California's health workforce needs to University health sciences education, including its plans to increase enrollment in its medical schools and establish new medical schools. The chapter concludes with an examination of the University's long-range plans and priorities, including the priority of diversity and expanding the University's academic health science centers' role in improving the delivery of health care.

Chapter 7: Stanford University: The Changing Policy Context of a Private University

Founded in 1885, Leland Stanford Junior University was established by California State Senator Leland Stanford, Sr. and his wife, Jane Lathrop Stanford, after the death of their only son of typhoid fever in Italy in 1884. The founders had high aims for the University. Stanford has grown from a small, regional, privately endowed university into a world-class center for research and graduate and professional education. This chapter describes the history of Stanford University, its Presidential and scientific leadership, the move of the School of Medicine from San Francisco to the Palo Alto campus in the late 1950s, the University's commitment to diversity and excellence, times of campus racial tension and strife, and the development of an exemplary multicultural campus. This chapter concludes with a discussion the University's strengths and challenges in the early years of the 21st century.

Chapter 8: Case Studies of Diversity: UCSF and Stanford University Medical Schools

This chapter tells the story of two California medical schools, one public and one private, and their development as national leaders of policies related to affirmative action and diversity. The chapter begins with a discussion of the schools' early shared history, the climate for change at the two medical schools in the early 1960s, and the chronology of key events in the 1960s and 1970s related to affirmative action and diversity policies at the two medical schools. Data on medical school enrollment trends by race and ethnicity in the 1960s and early 1970s are presented, as well as AAMC applicant, acceptant, matriculant, and graduate data by race and ethnicity and URM status from 1974 through the early 2000s. For each school, examples are provided of how UCSF and Stanford have supported more diverse student bodies over many decades by developing mission-driven, multidimensional approaches to enhancing diversity, through outreach and recruitment, admissions, retention, MD curriculum reform, student financial aid, the campus environment, educational and health care partnerships, and cross-cultural education and training. The chapter concludes with a description of five common themes that emerged from the case studies that characterize the schools' institutional efforts to promote diversity in the past and point the way to future success in meeting challenges of increasing diversity among medical students, trainees, faculty, and staff. The chapter includes reflections of UCSF and Stanford administrators, faculty members, and former students from key informant interviews and oral histories.

Chapter 9: Recommendations: Opportunities for Action to Increase Diversity

A number of national and California reports on enhancing diversity in medicine and in other health professions and on the physician workforce have been released over the fifteen-year period from 1994 through 2009. The chapter presents a summary of recommendations from these major reports as well as opportunities for action for: 1) UCSF and Stanford Schools of Medicine and other U.S. medical schools, 2) the University of California, 3) the State of California, and 4) the federal government.

We thank Haile T. Debas, M.D., Dean (Emeritus) of the UCSF School of Medicine, and Philip A. Pizzo, M.D., Dean of Stanford University's School of Medicine for their initial and continuing enthusiastic support of this study. They were among the nearly sixty Deans and other administrators, faculty, staff, and former students serving as key informants and oral history subjects for our study. Many others from the UCSF and Stanford campuses provided us with their perspectives and experiences as well as direct assistance. As our Co-Investigator, Nancy Rockafellar, noted in the Historian's Preface to the *Diversity in U.S. Medical Schools Oral History Series*:

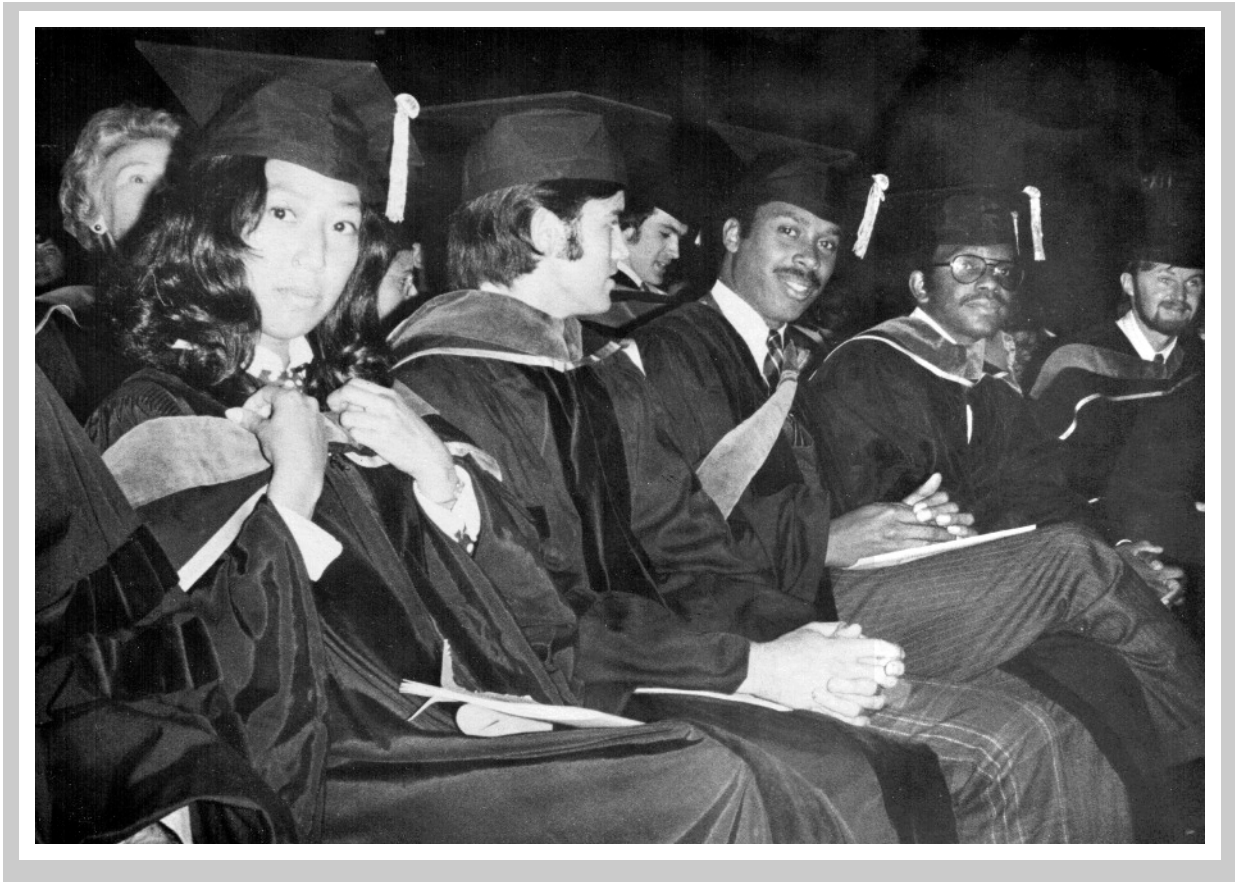
... this project represents the first attempt to explore the history of affirmative action specifically in the context of the nation's medical schools. We have chosen to focus on case studies of two California medical schools with remarkably parallel histories....The interviews contain dramatic personal accounts placed in the context of institutional structure and tradition...of the direct impact of the civil rights movement in the 1960s through the shifting national political environment of affirmative action in the 1970s, 1980s, and 1990s.

We thank the Josiah Macy, Jr. Foundation, a leader among foundations since the 1960s in support of medical schools' efforts to increase diversity, for the support of this study. We thank the California HealthCare Foundation, which is committed to reducing barriers to health care for underserved populations in California, for support of additional analysis and dissemination of study findings and recommendations through this report and other channels.

Philip R. Lee, M.D.
Professor of Social Medicine (Emeritus)
Department of Medicine
Senior Scholar, Founder, and Director (Emeritus)
Philip R. Lee Institute for Health Policy Studies
School of Medicine
University of California, San Francisco

Patricia E. Franks
Senior Research Associate
Philip R. Lee Institute for Health Policy Studies
School of Medicine
University of California, San Francisco

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Commencement, members of Class of 1971, UCSF School of Medicine
Courtesy of UCSF Library and Center for Knowledge Management, Archives and Special Collections



CHAPTER 1

Changing Opportunities and Challenges for Medical Schools:

From Desegregation to Affirmative Action to Promoting Diversity in an Anti-affirmative Action Environment

Introduction

U.S. medical schools have been confronted with both opportunities and challenges as they have moved to develop policies to increase diversity over half a century. Landmark federal civil rights legislation in the mid-1960s supported desegregation of medical schools and hospitals and affirmative action in education, employment, and contracting. A U.S. Supreme Court decision in the late 1970s specified race as one of many factors that could be considered in admissions to higher education institutions, including medical schools, and the benefits of diversity were identified as a compelling interest for universities in fulfilling their educational mission. A U.S. Court of Appeals decision in the mid-1990s repudiated the diversity rationale as a justification for the consideration of race, and this anti-affirmative action ruling affected public universities in three states. University and state anti-affirmative measures emerged in the mid- to late 1990s and continue to be proposed and debated today. A U.S. Supreme Court decision in 2003 upheld affirmative action and the use of race as one of many factors to be considered in admissions based on the educational benefits of diversity. These often conflicting actions have served as a changing backdrop for medical school policies and practices in admissions, outreach and recruitment, and other areas, and they have resulted in the differing legal frameworks that today's medical schools face in promoting diversity.

From a civil rights perspective, five eras can be identified that describe the broader context within which consideration of race and ethnicity by institutions of higher education, including medical schools, have taken place over the past decades (Table 1-1). Prior to these eras, a long prelude to social change before and after the end of slavery set the stage for the modern Civil Rights Movement. All of these eras have been shaped in turn by social, political, and policy developments of the times.

Table 1-1
Five Eras in the Consideration of Race/Ethnicity in Medical Schools (1945-present)

1945-1963	Discrimination, Segregation, and the Beginnings of Desegregation before the Civil Rights Act of 1964
1964-1977	Desegregation and Affirmative Action after the Civil Rights Act of 1964
1978-1994	Affirmative Action after the <i>Regents of the University of California v. Bakke</i> (1978) U.S. Supreme Court decision
1995-	<p>Anti-affirmative Action Measures:</p> <p style="padding-left: 20px;">University Regents of the University of California Resolutions SP- 1 and SP-2 (1995)</p> <p style="padding-left: 20px;">Federal U.S. Fifth Circuit Court of Appeals, <i>Hopwood v. Texas</i> (1996) Louisiana, Mississippi, and Texas</p> <p style="padding-left: 20px;">State Ballot Initiatives and Executive Order —California (Proposition 209, 1996) —Washington (Initiative Measure 200, 1998) —Florida Governor’s Executive Order 99-281 (One Florida Initiative, 1999) —Michigan (Proposal 2006-02 [Prop 2], 2006) —Nebraska (Initiative 424, 2008)</p>
2003-	<p>Affirmative Action after the U.S. Supreme Court <i>Grutter v. Bollinger</i> decision (2003)</p> <p style="padding-left: 20px;">Supplants <i>Hopwood v. Texas</i> decision affecting Louisiana, Mississippi, and Texas</p> <p style="padding-left: 20px;">Upholds <i>Regents of University of California v. Bakke</i> decision in all states except those with state anti-affirmative action laws superseding the decision</p>

In each of these five eras, medical schools have been involved in developing and modifying policies and programs that have affected who applies, who is accepted, who chooses to matriculate, and who successfully completes the course of study for a medical degree. The Association of American Medical Colleges (AAMC), other professional and trade associations, foundations, national and community civic and advocacy organizations, as well as university governing boards and medical school administrators, faculty, students, and staff, and federal and state government have been involved in shaping medical schools’ responses.

This chapter explores the complex interaction of forces that has influenced diversity in medical schools over the past five decades. The chapter also introduces themes, including the changing social and political context, the changing demographic context, and the changing federal, state, university, and medical school policy context, that will be examined in more depth in the next seven chapters of this report.

The Long Prelude to Social Change

African slavery existed in the Western Hemisphere from the early 1500s and in British colonies in North America from the early 1600s.¹ Slavery continued through the time of the American Revolution and constitutional debates in the late 1780s until the Emancipation Proclamation in 1863 and the ratification of the Thirteenth Amendment to the U.S. Constitution abolishing slavery in 1865.^{2,3,4} Before and after slavery and the ratification of the Fourteenth (1868) and Fifteenth (1870) Amendments,^{5,6} guaranteeing equal protection under the law and the right to vote, respectively, the U.S. Supreme Court repeatedly determined the parameters of civil rights, affecting not only education but all aspects of American life.

The U.S. Supreme Court's Early Role in Defining Civil Rights: Limiting Rights and Legitimizing Discrimination and Segregation

In the notorious *Scott v. Sandford* decision in 1857, the Court's reasoning included these points:⁷

First, "A free negro of the African race, whose ancestors were brought to this country and sold as slaves, is not a 'citizen' within the meaning of the Constitution of the United States."

Second, "When the Constitution was adopted, they were not regarded in any of the States as members of the community which constituted the State, and were not numbered among its 'people or citizens.' Consequently, the special rights and immunities guaranteed (sic) to citizens do not apply to them. And not being 'citizens' within the meaning of the Constitution, they are not entitled to sue in that character in a court of the United States, and the Circuit Court has not jurisdiction in such a suit."

Third, "The only two clauses in the Constitution which point to this race treat them as persons whom it was morally lawfully to deal in as articles of property and to hold as slaves."

Fourth, "Congress (has) no right to prohibit the citizens of any particular State or States from taking up their home there while it permits citizens of other States to do so. Nor has it a right to give privileges to one class of citizens which it refuses to another. The territory is acquired for their equal and common benefit, and if open to any, it must be open to all upon equal and the same terms."

Fifth, "Every citizen has a right to take with him into the Territory any article of property which the Constitution of the United States recognizes as property."

Sixth, "The Constitution of the United States recognizes slaves as property, and pledges the Federal Government to protect it. And Congress cannot exercise any more authority over property of that description than it may constitutionally exercise over property of any other kind."

Thus, the Court ruled that Dred Scott could not sue for his freedom because he was held not to be a citizen but property of John F. A. Sandford and the Congress could not bar slavery in the territories.⁸

The majority opinion of the U.S. Supreme Court in the *Slaughterhouse Cases* (1873), written by Justice Samuel Miller, appeared to support the Thirteenth, Fourteenth, and Fifteenth Amendments to the U.S. Constitution concerning civil rights, all of which had been adopted after the Civil War.⁹ However, less than a decade after its enactment, the Civil Rights Act of 1875, guaranteeing equal rights for freedmen, was struck down by a U.S. Supreme Court ruling in 1883, allowing private segregation, based on an interpretation of the Fourteenth Amendment's guarantee of equal protection as being applicable to state action, but not to private action.¹⁰

The U.S. Supreme Court's decision in the 1896 case of *Plessy v. Ferguson* legitimized segregation, by upholding the constitutionality of a Louisiana law mandating separate but equal accommodations for Blacks and Whites on intrastate railroads.¹¹ The Court's majority decision in *Plessy v. Ferguson* served as the legal justification for racial segregation for more than fifty years.

Testing the Separate but Equal Doctrine in Higher Education

Even so, cases were taken to the courts and the U.S. Supreme Court several times to test the separate but equal doctrine in higher education.¹² In 1933, a Black student sought but was denied admission to the law school in North Carolina, and in 1938 a Black student was successful in his bid to enter the University of Maryland law school.¹³ The U.S. Supreme Court first became involved in 1938 in a University of Missouri case, *Missouri ex rel Gaines v. Canada*, in which a Black student, Lloyd Gaines, was denied admission to the state university law school and no separate law school for Blacks existed in the state. An offer was extended to send Mr. Gaines out of state for law school.¹⁴ The Court ruled that Mr. Gaines was entitled under the Fourteenth Amendment to admission to the University of Missouri: "By the operation of the laws of Missouri, a privilege has been created for white law students which is denied to negroes by reason of their race. The white resident is afforded legal education within the State; the negro resident having the same qualifications is refused it there, and must go outside the State to obtain it."¹⁵

Early Expansion of Opportunities in Medical Education

Opportunities for medical education for Blacks were very limited, but there appear to have been no systematic early attempts to bring challenges through the courts. The first Black to obtain a medical degree did so outside the country at the University of Glasgow in 1837.¹⁶ Rush Medical College in Chicago granted the first medical degree to a Black in this country in 1847.¹⁷ Harvard and Bowdoin began accepting Blacks in the 1840s.¹⁸ After the Civil War, dozens of Black medical schools were founded in several Southern states to meet the needs for Black physicians, since White physicians for the most part did not accept Black patients.¹⁹ Howard University College of Medicine opened its doors in 1868 in Washington, DC,²⁰ and Meharry Medical College was established in 1876 as the Medical Department of Central Tennessee College of Nashville, under the auspices of the Freedman's Aid Society of the Methodist Episcopal

Church.²¹ Many of the Black medical colleges closed, particularly after the Flexner Report of 1910, which criticized all except Howard and Meharry as being ineffective and costly.²²

Although Black students continued to graduate from segregated schools, their opportunities were still very limited, especially after the Flexner Report. There were 131 medical schools when the report was published in 1910, but only 76 by 1930.²³ The number of medical schools admitting primarily Black students declined from eight to two. During 1935-1936, a total of 369 Black medical students were enrolled in the United States; 346 were registered at Howard and Meharry, with the remainder enrolled in Northern schools.²⁴ In 1938-1939, there were 350 Black medical students enrolled, or 1.64 percent of total enrollment.²⁵ Not until the 1940s and 1950s was there mobilization around issues related to racial segregation in medical education and medical care, including the segregation of hospital patients.

Before the Civil Rights Act of 1964 (1945-1963): Discrimination, Segregation, and the Beginning of Desegregation

The social transformation of the 1960s had its beginnings in a series of national events that occurred in the 1940s and 1950s. The modern era of the federal government's role in civil rights and health policy began under President Harry S. Truman. The situation in the nation at the time President Truman took office on April 12, 1945, after the death of President Franklin Delano Roosevelt, was described by Gardner:

The South and the Border States, such as Missouri, were segregated; the vast U.S. Armed Services were segregated; much of corporate America was segregated; and even the nation's capital—the sacred seat of America's constitutional democracy—was segregated.²⁶

The President's Committee on Civil Rights and a Plan for Civil Rights Reform

President Truman established the President's Committee on Civil Rights, the first Presidential civil rights body, by Executive Order 9808 on December 5, 1946. When the final report of the Committee, *To Secure These Rights*, was issued on October 30, 1947, its recommendations focused on the "elimination, by federal and state governments, of segregation in America based on race, color, creed and national origin" and "enactment of comprehensive federal voting rights legislation."²⁷ (See Chapter 3: The Changing Federal Policy Context.) Although President Truman responded in areas in which he could, Congressional opposition kept many of the Committee's proposals from becoming law for more than a decade.

The Beginning of a Civil Rights Advocacy Movement in Medical Care

At the same time that President Truman was initiating actions at the federal level, other forces were building. The National Association for the Advancement of Colored People (NAACP), the National Medical Association, the National Urban League, and other organizations began in the late 1940s to protest segregation in hospitals, as well as to advocate for national health care.²⁸ “For many civil rights activists, the fight against segregation was inseparable from demands for national health care.”²⁹ Dr. W. Montague Cobb, a Black physician leader, called in 1947 “for the National Medical Association, the organization of Black doctors, to attack racial discrimination in medical care, and also demanded a ‘vigorous and forthright confirmation’ of national health insurance.”³⁰ The National Urban League Community Relations Project documented conditions in 13 Northern and Southern cities in 1945-1946.³¹ Dr. Cobb’s report, *Medical Care and the Plight of the Negro*, was published by the NAACP in 1947.³² Cobb identified racial discrimination in four areas of health care: 1) professional education, 2) professional societies, 3) hospital facilities, and 4) prepayment medical plans.³³

Ending Segregation in the Armed Forces, the Federal Workforce and Facilities, and Veterans Administration Hospitals

When President Truman accepted the nomination of his party in mid-1948, he promised to convene a Special Session of Congress to deal with the nation’s unfinished business. On the first day of that Special Session, July 26, 1948, President Truman issued two related Executive Orders, 9980 and 9981, which would forever change the racial landscape of the United States. With the stroke of his Presidential pen, Harry Truman unilaterally mandated an integrated federal workforce and simultaneously integrated the vast U.S. Armed Forces.³⁴ These orders also ended segregation in Veterans Administration hospitals and other federal facilities.³⁵

More Testing of the Separate but Equal Doctrine in the U.S. Supreme Court

In 1950, the U.S. Supreme Court heard two cases: *G.W. McLaurin v. Oklahoma State Regents*³⁶ and *Sweatt v. Painter*.³⁷ The first case involved the University of Oklahoma and a Black retired professor, who sought and had been denied the opportunity to pursue a doctoral degree in education. Since no such degree was offered at a “Negro institution” in Oklahoma, the Court ruled that Mr. McLaurin be admitted to degree program at the University, but on a segregated basis.³⁸ In the second case, the Court ruled that the education that Mr. Sweatt would receive at a newly established law school for Negroes was not equal to that he would receive at the University of Texas, and that he must be admitted to the state university.³⁹

The Beginning of the End of Segregation in Education: The U.S. Supreme Court Decision in *Brown v. Board of Education of Topeka*, 1954 and 1955

On May 17, 1954, the U.S. Supreme Court under Chief Justice Earl Warren ruled in *Brown v. Board of Education of Topeka* that “separate but equal” education of White and Negro children in public schools violates the Fourteenth Amendment of the Constitution, the equal protection clause.⁴⁰ This decision overturned the Court’s 1896 *Plessy v. Ferguson* decision, which had had direct effects on education until 1954. In this landmark case, the Court noted that “The history of the Fourteenth Amendment is inconclusive as to its intended effect on public education....⁴¹ The question presented in these cases must be determined not on the basis of conditions existing when the Fourteenth Amendment was adopted, but in the light of the full development of public education and its present place in American life throughout the Nation.”⁴²

The Court noted that: “Where a State has undertaken to provide an opportunity for an education in its public schools, such an opportunity is a right which must be made available to all on equal terms.... Segregation of children in public schools solely on the basis of race deprives children of the minority group of equal educational opportunities, even though the physical facilities and other ‘tangible’ factors may be equal.”⁴³

The Court ruled that “The ‘separate but equal’ doctrine adopted in *Plessy v. Ferguson*... has no place in the field of public education.”⁴⁴

In April of 1955, in a second *Brown v. Board of Education of Topeka* decision, the Court ruled that:

- Racial discrimination in public education is unconstitutional...and all provisions of federal, state or local law requiring or permitting such discrimination must yield to this principle.⁴⁵
- School authorities have the primary responsibility for elucidating, assessing and solving the varied local school problems which may require solution in fully implementing the governing constitutional principles.⁴⁶
- Courts will have to consider whether the action of school authorities constitutes good faith implementation of the governing constitutional principles.⁴⁷
- While giving weight to these public and private considerations, the courts will require that the defendants make a prompt and reasonable start toward full compliance with the ruling of this Court.⁴⁸
- Once such a start has been made, the courts may find that additional time is necessary to carry out the ruling in an effective manner.⁴⁹

There was strong resistance in the South to the Supreme Court’s decision that racial discrimination in public education was unconstitutional. The Eisenhower Administration did little to enforce the decision.

The Modern Civil Rights Movement Emerges: The 1950s

On August 28, 1955, the brutal murder in Mississippi of Emmett Till, a 14-year-old Black youth from Chicago, triggered a massive national reaction.⁵⁰ Till's death and the later acquittal of his killers became major mobilizing events of the modern Civil Rights Movement. On December 1, 1955, Rosa Parks, a Black woman, refused to give up her seat to a White passenger on a Montgomery, Alabama, bus. The Montgomery Bus Boycott, and the Civil Rights Movement, had officially begun.⁵¹

The Civil Rights Act of 1957, which was introduced in response to sharp political and social divisions growing out of the *Brown v. Board of Education of Topeka* decision and the growing Civil Rights Movement, was passed by Congress on August 29, 1957.⁵² This legislation, the first federal civil rights legislation in eighty years, created a Commission on Civil Rights to investigate allegations that people were being deprived of their right to vote because of their race or color or for other reasons and a Civil Rights Section within the U.S. Department of Justice to enforce violations of civil rights.⁵³ This was an important step forward in the civil rights struggle; in Robert Caro's words, "The Civil Rights Act of 1957 was more than half a loaf, a lot more. It was hope."⁵⁴ In September of 1957, only five days after he signed the Civil Rights Act, President Eisenhower sent federal troops to Little Rock, Arkansas, in response to Governor Faubus' defiance of a federal court desegregation order.

September 2, 1957 was the day before nine Black students were to enter Central High School in Little Rock, Arkansas. "In a televised speech that night, Arkansas Governor Orval Faubus explained that he had called (in)...National Guardsmen because he had heard that white supremacists from all over the state were descending on Little Rock. He declared Central High off-limits to blacks and Horace Mann, the black high school, off-limits to whites."⁵⁵ National Guardsmen were blocking the entry of the nine Black students to Central High the next day.

Governor Faubus, looking back on the event, said:

Although crowds gathered, everything was peaceful with the few Guardsmen in control. In the course of events a federal judge at the request of the Justice Department...ordered me to remove the National Guard. I promptly complied with the order. The next school day there was disorder and (President Dwight D. Eisenhower) sent 1,100 troops of the 101st Airborne Division to Little Rock and placed 10,000 federalized National Guardsmen on duty.⁵⁶

"On September 25th, 1957, after a three-week standoff, the paratroopers escorted the students up the steps of Central High School." reflected Tom Bearden, a National Public Radio reporter, in a special report on the 40th anniversary of the event in 1997.⁵⁷ "The soldiers carried rifles with fixed bayonets. Few people knew the weapons weren't loaded, however. Once inside the building, the students found even more verbal hostility and physical confrontation."⁵⁸

Governor Faubus continues his remembrance of events:

School was conducted the entire year of 1957-58 with federal soldiers on the school grounds and in the rooms and hallways of the Central building. Then the people of the Little Rock district voted to close the senior high schools rather than submit to another year of classes under the control of federal troops or U.S. marshals. The senior high schools only remained closed for a year. All other schools operated normally....Classes were resumed in all Little Rock schools in the school year 1959-60.⁵⁹

“Today Central High is known for academic excellence,” Tom Bearden goes on to say in the special 1997 NPR report. “It is a racially diverse school—60 percent black, 40 percent white—still reflecting the white flight that came in the wake of court-ordered busing. More than half of the city’s students are still bused.”⁶⁰

On February 23, 2007, the Little Rock School District was released from federal court supervision of its desegregation efforts, nearly fifty years after President Eisenhower sent federal troops.⁶¹ However, the attitudes of many have not changed. John W. Walker, a civil rights lawyer who was counsel to a group of Black children and parents in the case, observed: “In 2007, we have people in neckties living in big houses celebrating the return to 1957, a return to the concept of white supremacy.”⁶²

Medical Education and Medical Care: The 1950s and the Early 1960s

In 1950-1951, there were 72 U.S. medical schools with a total enrollment of 25,633⁶³ and a Black enrollment of 661, or about 2.6 percent of the total.⁶⁴ Of these, 143 Blacks (21.6 percent) were enrolled in predominantly White medical schools.⁶⁵ In 1955-1956, after *Brown v. Board of Education of Topeka*, the total enrollment in 82 U.S. medical schools was 28,639.⁶⁶ Blacks were enrolled in 50 of the 82 approved medical schools.⁶⁷ Black enrollment was 761, or about 2.7 percent of the total. Howard and Meharry accounted for 525 of those students, or about 69.0 percent, and predominantly White schools, 236, or 31.0 percent.⁶⁸ Both Northern and Southern predominantly White schools had begun to enroll more Blacks.

A 1956 study of the extent of segregation in the nation’s hospitals by Dr. Paul Cornely of Howard University found that 83 percent of Northern hospitals provided some degree of integrated services, while only 6 percent of Southern hospitals offered services without restrictions to Blacks.⁶⁹ Thirty-one percent did not admit Blacks under any conditions, even emergencies; about half of those hospitals that did admit Blacks had segregated wards and the rest had modifications of discriminatory or segregated practices.⁷⁰

As Cornelius Hopper, M.D., former University of California Vice President for Health Affairs noted in testimony before the California State Legislature on March 31, 1997:

Implicit stringent racial quotas in the majority of medical schools were commonplace. I can speak from personal experience in that I filled the University of Cincinnati School of Medicine’s 1956 entering class quota of ONE (emphasis in the testimony text). When I joined the University of Wisconsin School of Medicine eleven years later, in 1967, that

school had graduated only one African American in its entire history. A scan of American medical schools at that time would show that this profile was not unusual.⁷¹

In 1961, President John F. Kennedy in Executive Order 10925 established the President's Committee on Equal Employment Opportunity. In Part III of the executive order, he used the term "affirmative action" for the first time in laying out nondiscrimination obligations of government contractors and subcontractors, including universities and medical schools.

The contractor will not discriminate against any employee or applicant for employment because of race, creed, color, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, creed, color or national origin.⁷²

No university or medical school wished to miss out on federal grants and contracts. David Barton Smith notes:

Federal research dollars represented a growing proportion of medical school budgets and a measure of their national prestige. Southern schools did not want to be relegated to second-class status. The University of North Carolina Medical School Hospital, reaching an understanding with civil rights groups and not wishing to draw attention, quietly integrated in 1962 without any public notice.⁷³

By the early 1960s, the number of medical schools had increased and total enrollment had grown to more than 30,000.⁷⁴ Black enrollment stood at 771 in 1961-1962 in the nation's 86 medical schools and accounted for 2.6 of total enrollment of 31,078,^{75, 76} and the number and percentage of Blacks enrolled in predominantly White schools had dropped to 176, or 23 percent.⁷⁷ In 1963-1964, Black enrollment in 87 schools had declined to 715, or 2.2 percent, of the total 32,001 enrollment, and the number and percentage of Blacks in predominantly White schools stood at 173, or 24 percent, still below their representation in 1955-1956.^{78, 79}

In a speech in June 1963, President Kennedy called for enactment of a comprehensive civil rights bill.⁸⁰

The Civil Rights Act of 1964 (1964-1977): Desegregation and Affirmative Action

The mid- to late 1960s were times of social turmoil in the United States. The times were marked by assassinations of three public figures—President John F. Kennedy in 1963 and Robert F. Kennedy and Martin Luther King, Jr. in 1968. The voices of a Black Power Movement, a Women's Movement, and a student Free Speech Movement demanded to be heard. There were civil rights and anti-Vietnam war protests, and there were massive civil disturbances. In August 1965, the Watts riots in Los Angeles resulted in 15,000 troops and police being called in to quell the disturbance; 3,400 people were arrested, more than 1,000 were injured, and 34 were killed, of whom 25 were Black.^{81, 82} Many more riots were to follow, resulting in more destruction and death—later in 1965, 1966, 1967, and in 1968 after Dr. King's assassination. Riots occurred in

Atlanta, Baltimore, Boston, Buffalo, Cincinnati, Chicago, Cleveland, Dayton, Denver, Detroit, Hartford, Jacksonville, Milwaukee, Minneapolis, Nashville, Newark, New York, Philadelphia, Pittsburgh, Portland (Oregon), San Francisco, Tampa, Tucson, Washington, DC, Wichita, and other cities.⁸³

At the same time, a steady stream of historic federal legislation was passed by Congress. The Civil Rights Act was signed into law on July 2, 1964.⁸⁴ This legislation, even more comprehensive than that proposed by President Kennedy, had been introduced by President Lyndon Baines Johnson soon after he was sworn in as President on November 23, 1963. The Voting Rights Act was signed into law on August 6, 1965.⁸⁵ There had been strong pressure on Congress to pass the Voting Rights Act by President Johnson after “Bloody Sunday” in Selma, Alabama, where police attacked and beat civil rights marchers.⁸⁶ Along with the Voting Rights Act, more than 80 bills were passed during the first eight months of 1965.⁸⁷ Many were landmark bills: Medicare and Medicaid; Health Professions Educational Assistance Amendments; Heart Disease, Cancer, and Stroke Amendments; the War on Poverty; Job Corps; Food Stamps; and Head Start; and the Elementary and Secondary Education Act.⁸⁸ From 1965 to 1967, Congress enacted more health legislation than all the previous Congresses put together. Not since that period have the public’s health and health care reform been such a high priority on the nation’s agenda.⁸⁹ (See Chapter 3: The Changing Federal Policy Context.)

The Civil Rights Act of 1964 was a cornerstone of social change in America. It transformed nearly every aspect of everyday life for Americans—education, employment, housing, health care, and public accommodations. Title VI, Non-discrimination in Federally Assisted Programs, of the Civil Rights Act was essential to implementing the desegregation of the nation’s hospitals and assuring non-discrimination by medical schools receiving federal financial aid.

The law established that “...no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, or be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.”⁹⁰

The first use of the term, “affirmative action,” as it affects students in educational institutions, is in Title 34 of the Code of Federal Regulations (CFR) implementing Title VI of the Civil Rights Act of 1964.⁹¹

Title VI regulations as they affect students include both “must” and “may” aspects of “affirmative action.” The “must,” or remedial aspect, of the affirmative action provisions states that:

In administering a program regarding which the recipient has previously discriminated against persons on the ground of race, color, or national origin, the recipient ***must take affirmative action to overcome the effects of prior discrimination.***⁹² (emphasis added)

The “may,” or discretionary aspect, of the affirmative action provisions states that:

Even in the absence of such prior discrimination, a recipient in administering a program ***may take affirmative action to overcome the effects of conditions which resulted in limiting participation*** by persons of a particular race, color, or national origin⁹³ (emphasis added)

These regulations, now administered by the Office for Civil Rights in the U.S. Department of Education, note specific discriminatory actions that are prohibited.⁹⁴

- Denying an individual any service, financial aid, or other benefit provided under the program.
- Providing any service, financial aid, or other benefit to an individual which is different, or is provided in a different manner, from that provided to others under the program.
- Subjecting an individual to segregation or separate treatment in any matter related to his receipt of any service, financial aid, or other benefit under the program.
- Restricting an individual in any way in the enjoyment of any advantage or privilege enjoyed by others receiving any service, financial aid, or any benefit under the program.
- Treating an individual any differently from others in determining whether he satisfies any admission, enrollment, quota, eligibility, membership, or other requirement or condition which individuals must meet in order to be provided any service, financial aid, or other benefit provided.
- Denying an individual an opportunity to participate in the program through the provision of services or otherwise or affording him an opportunity to do so which is different from that afforded others under the program (including the opportunity to participate in the program as an employee but only to the extent set forth in (c) of this section: *Employment Practices*).
- Denying a person the opportunity to participate as a member of a planning or advisory body which is an integral part of the program.
- ...utilizing criteria or methods of administration which have the effect of subjecting individuals to discrimination because of their race, color, or national origin, or have the effect of defeating or substantially impairing accomplishment of the objectives of the program as respect individuals of a particular race, color, or national origin.

Prohibitions against discrimination in education were later extended to include gender (Title IX of the Education Amendments of 1972) and disability (Section 504 of the Rehabilitation Act of 1973, and Title II of the Americans with Disabilities Act of 1990).^{95, 96, 97}

Medical Schools' Responses to Title VI of the Civil Rights Act of 1964: Emerging Policies, Programs, and Practices

Universities and medical schools within them had various responses to the enactment of the Civil Rights of Act of 1964 and compliance requirements related to student admissions, enrollment, and services, programs, and facilities under Title VI of the Act. (See Chapter 3: The Changing Federal Policy Context for a description of other compliance issues under Title VI.) Some very few mainstream schools had already begun minority outreach and recruitment efforts before the

passage of the Civil Rights Act. Most others had not. Some took a proactive approach. Others did not.

Association of American Medical Colleges data on minority graduates from U.S. medical schools from 1950 to 2002 shows that, with the exception of Howard and Meharry, only 29 medical schools had ten or more Black graduates in the nearly 20-year period from 1950 to 1969; only six schools had ten or more American Indian/Alaska Native graduates; and only 17 schools, with the exception of the University of Puerto Rico, had ten or more Hispanic graduates.⁹⁸

Doctor Jordan Cohen, former President of the Association of American Medical Colleges, summarized the state of affairs in this way:

Until the late 1960s, medical schools were as segregated as most other institutions of US society....On average, the 85 to 90 'mainstream' medical schools during that era each enrolled 1 African American student every other year. Figures for other minority groups are not available, but would doubtless reveal a similar pattern.⁹⁹

As Kenneth Ludmerer notes in *Time to Heal*, his history of medical education, not all medical schools were desegregated until 1966.¹⁰⁰

The mid-to late 1960s were times of trial and error in relation to increasing the number of minority students for universities and medical schools in terms of defining their policies, programs, and practices in outreach and recruitment, admissions, the curriculum, retention, student financial aid, and in other areas.

Foundation Assistance to Medical Schools

Medical schools had assistance in these undertakings. As Jane Isaacs Lowe and Constance Pechura note in their review of foundation efforts related to increasing minorities in the health professions:¹⁰¹

The philanthropic sector had been working on the problem of underrepresented minorities in medicine even before the 1960s. Some well-established foundations, including the Ford Foundation, the Carnegie Corporation, and the Rockefeller Brothers Fund, were supporting colleges and the United Negro College Fund. The National Medical Fellowships, which had been established in 1946 as the Provident Medical Associates, provided scholarships for African American, Hispanic, and Native American medical students. The Julius Rosenwald Fund, the Field Foundation, the Commonwealth Fund, and the Alfred P. Sloan Foundation provided support to it as far back as the 1940s.

After the Civil Rights Act, often in partnership with the AAMC, several foundations—the Josiah Macy, Jr. Foundation, the Alfred P. Sloan Foundation, the Grant Foundation, the Commonwealth Fund, and later The Robert Wood Johnson Foundation—played important roles in supporting the establishment of formal medical school offices to address minority recruitment, convening medical school administrators and others to discuss approaches to increase minority participation in medicine, supporting recruitment and outreach programs, funding student financial aid, and

documenting efforts and progress of medical schools in increasing opportunities for minorities.^{102, 103, 104, 105}

In 1967 and 1968, for example, the Josiah Macy, Jr. Foundation co-sponsored regional conferences in Fort Lauderdale, Florida and Atlanta, Georgia, to conduct dialogues on “how to attract more Negroes to study medicine and be physicians in the United States.” The Foundation also supported a recruitment committee at Yale University composed of members of New Haven’s Black and Spanish-speaking communities and Yale medical faculty, students, and staff. This committee visited colleges and universities primarily in New England but also in the South, arranging for visits of interested students to Yale, as well as summer employment at the medical school. Special efforts were made to recruit Spanish-speaking students through community-based organizations assisting students in obtaining a higher education. The Foundation sponsored several of these programs across the country. In 1966, the Macy Foundation had established the Post-baccalaureate Premedical Fellowship Program at Haverford College, first as a summer program and then a year-long program at Haverford, Bryn Mawr, Swarthmore, Oberlin, Kalamazoo, and Pomona College.¹⁰⁶

The AAMC’s Leadership Role: Adopting a Resolution in 1968 and Reporting on Medical Schools’ Efforts 1969-1970

At the AAMC annual meeting in 1968, the governing body of the association adopted the following resolution:

Medical schools must admit increased numbers of students from geographic areas, economic backgrounds, and ethnic groups that are now inadequately represented.¹⁰⁷

In 1969, the AAMC formed an AAMC Section on Minority Affairs. Also in that year, the AAMC obtained the first of approximately \$1.5 million in federal funding from the U.S. Office of Economic Opportunity to increase educational opportunities for minorities in the health professions.¹⁰⁸ These grants funded some 50 programs at colleges and health professions schools as well as the AAMC’s Office of Minority Affairs, the Medical Minority Applicant Registry, and the publication, *Minority Student Opportunities in United States Medical Schools*.

The 1969-1970 edition of *Minority Student Opportunities in United States Medical Schools*, the first edition, provided one-page descriptions from Deans and/or Associate Deans for Student Affairs of 91 of the nation’s 100 medical schools’ efforts to increase minority student representation in the 1969-1970 school year.¹⁰⁹ In addition, 62 of 100 medical schools reported in an Admissions Book Information Appendix to this first edition, that they had efforts “designed specifically for recruiting, admitting, and graduating disadvantaged students.”¹¹⁰

A majority of the 62 schools providing Admissions Book Information reported some level of special effort, informal or formal, to increase the number of those who were “unrepresented” or “underrepresented” in their schools. However, in addition to the 38 schools that did not respond to requests to provide information in the Admissions Book, ten schools reported that they were still in the planning stages in terms of their efforts (e.g., “developed a committee on disadvantaged students to report to the faculty,” have “an active university committee working

on the problems of professional education for Negro students,” “program is presently under consideration, or a “a faculty committee is currently studying this matter.”)

Thus, nearly half of all medical schools in spring 1969, five years after the enactment of the Civil Rights Act of 1964, did not report to AAMC that they had any special program in place to enhance minority student opportunities.

But, as Ludmerer notes: “Competition among medical schools to attract minority students was intense. Schools tried all sorts of recruitment devices: advertising, visits to college campuses (particularly black colleges), and follow-up letters and telephone calls to applicants—or even those who had requested applications and had not yet sent them in.”¹¹¹

Formal and informal efforts reported by medical schools fell into the following categories: 1) outreach and recruitment, including prebaccalaureate and postbaccalaureate academic enrichment; 2) admissions policies, processes, and procedures; 3) enrollment policies; 4) curricular change and curriculum options; 5) retention activities; and 6) student financial aid.

Efforts to increase the number of minorities were targeted externally to groups, educational institutions, and geographic areas. Among the groups targeted were: 1) specific racial/ethnic groups (i.e., Blacks, Hispanics, Spanish speaking, Mexican Americans, American Indians); 2) racial minority groups; 3) other groups (i.e., minorities, disadvantaged, socially and economically deprived, educationally disadvantaged, impoverished, poverty background, underrepresented economic backgrounds and ethnic groups); 4) community groups/leaders; 5) community physicians; and 6) foundations.

Traditionally Black colleges and universities in the South, other colleges and universities in proximity to medical schools, as well as high schools and junior or middle schools were the primary educational institutions targeted.

Administrators within university systems, universities, and medical schools (i.e., Presidents, Chancellors, Deans, and Associate Deans for Admissions, Student Affairs, and Academic Affairs) were those most often mentioned as being initially involved in developing responses to enhance minority student opportunities. Admission Committee Chairs, Committee members, and interviewers were also involved. Other medical school committees included Curriculum Committees, Special Study Committees, and Recruitment Committees.

The 1970 AAMC Task Force on Minority Student Opportunities in Medical Education

Early in 1970, the AAMC organized a Task Force, supported by a grant from the Alfred P. Sloan Foundation, to assist medical schools in developing mechanisms and programs to increase participation of minorities.¹¹² This Task Force was chaired by Bernard W. Nelson, M.D., Associate Dean and Chairman, Committee on Admissions, School of Medicine, Stanford University. The AAMC Task Force on Minority Student Opportunities in Medical Education issued a *Report of the AAMC Task Force to the Inter-Association Committee on Expanding*

*Educational Opportunities in Medicine for Blacks and Other Minority Students on April 22, 1970.*¹¹³

In this report, the Task Force defined “minorities” as “those racial or cultural groups underrepresented in U.S. medical schools as Black Americans, Mexican Americans, American Indians, and Mainland Puerto Ricans.”¹¹⁴

In its 1970 report, the Task Force defined the long-term goal for minorities in medicine as:

...to achieve equality of opportunity by reducing or eliminating inequitable barriers and constraints to access to this profession which have resulted in a representation of racial minorities in the medical profession much less than their representation in the U.S. population...¹¹⁵

Blacks at that time comprised 2.2 percent of all physicians as contrasted to 11-12 percent of the U.S. population.¹¹⁶ The report notes as well that “a disproportional representation of minority students exists in medical schools as well (2.8 percent minority representation [of total enrollment] as compared to 11-12 percent in the U.S. population).”¹¹⁷

The short-term objective proposed by the Task Force to achieve this goal was that:

U. S. medical schools increase the representation of minorities in the M.D. programs from 2.8 percent (of total enrollment) in 1970-1971 to 12 percent in 1975-76.^{*118}

The challenge for medical schools was to achieve a steep increase in first-year enrollment of minorities in medical school every year for five years.

To accomplish this short-term objective, the Task Force concluded that “major emphasis for the Task Force should be placed in three areas: (1) retention of students in the educational pathway leading to the medical profession, (2) financial assistance programs for medical students, and (3) recruitment of students into the educational pathway.”¹¹⁹

To achieve the long-term goal, the Task Force noted that three additional areas of investigation were important: (1) overall medical school financing, (2) increasing medical school class size, and (3) the delivery of medical care services, particularly to the minority community.¹²⁰

The 1970 Task Force conclusions and recommendations were endorsed by the nation’s medical schools through the governing body of AAMC, as well as by the American Hospital Association, the American Medical Association, and the National Medical Association, representing the other members of the Inter-Association Committee.¹²¹ Foundations and others also responded.

From 1971 through 1976, The Robert Wood Johnson Foundation distributed through AAMC \$10 million to medical schools for scholarships and loans to minority, women, and rural medical

* The figure of 12% for all minorities was based on data for Blacks only, because AAMC indicated that “information on other minority groups was not available. Therefore, the comparable goal for total first-year minority enrollment should have been 16%.”

students.¹²² National Medical Fellowships, Inc. distributed nearly \$2.3 million to medical students in 1973-1974, compared with \$195,000 in 1968.¹²³ The National Medical Association with funds from the U.S. Office of Economic Opportunity established “Project 75” to disseminate information regionally, and the Office of Health Resources Opportunity was created within the U.S. Department of Health, Education, and Welfare to provide funding for programs to improve access to health careers and health services for the disadvantaged.¹²⁴ The Office of Minority Affairs was also expanded within AAMC.

Substantial Gains for Underrepresented Minorities

The period from the late 1960s through the mid-1970s was a time of substantial gains for underrepresented minorities in U.S. medical schools.

Table 1-2
First-year Enrollment of Underrepresented Minorities in U.S. Medical Schools, 1968-1969 through 1976-1977

Selected U.S. Minorities	1968-69		1969-70		1970-71		1971-72		1972-73		1973-74		1974-75		1975-76		1976-77	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Black	266	2.7	440	4.2	697	6.1	882	7.1	957	7.1	1,027	7.2	1,106	7.5	1,036	6.8	1,040	6.7
American Indian	3	*	7	0.1	11	0.1	23	0.2	34	0.3	44	0.3	71	0.5	60	0.4	43	0.3
Mexican American	20	0.2	44	0.4	73	0.6	118	1.0	137	1.0	174	1.2	227	1.5	224	1.5	245	1.6
Mainland Puerto Rican	3	*	10	0.1	27	0.2	40	0.3	44	0.3	56	0.4	69	0.5	71	0.5	72	0.5
Total	292	2.9	501	4.8	808	7.0	1,063	8.6	1,172	8.6	1,301	9.2	1,473	10.0	1,391	9.1	1,400	9.0

* Less than 0.1

Source: Adapted from: Carnegie Council on Policy Studies in Higher Education. *Selective Admissions in Higher Education*. Chapter 5. Admissions to Medical Schools. Jossey-Bass Publishers: San Francisco, 1977, Appendix D.2 and *Medical Education and Societal Needs: A Planning Report for Health Professions*. Chapter 7. Medical School Admissions. M.A.Fruen. National Academy of Sciences, 1983, Table 1, page 177, and Office of Minority Affairs, AAMC.

Table 1-2 shows the great gains in first-year enrollment of minorities then designated as underrepresented. The AAMC’s objective of 12 percent minority first-year enrollment was not reached by 1975-1976. Minority enrollment peaked at 10 percent in 1974-1975 and then dropped to 9.1 percent in 1975-1976 and 9.0 percent in 1976-1977.¹²⁵ However, progress was made. The proportion of Blacks in the entering class had increased from 2.7 percent in 1968-1969 to 7.5 percent in 1974-1975; the number of Mexican Americans had increased 11-fold; and American Indians and mainland Puerto Ricans, more than 20-fold.

Significant Factors Influencing Gains in Minority Enrollment

A number of factors influencing gains in minority enrollment during the period from 1968-1969 through 1974-1975 have been identified:

1. The dramatic growth in baccalaureate graduates, which swelled the number of both minority and non-minority medical school applicants;¹²⁶ from 1970-1971 to 1974-1975, for example, the number of Black medical school applicants nearly doubled, from 1,218 to 2,310; the total number of applicants over this same period increased by about 70 percent, from 24,987 to 42,624;¹²⁷

2. High admission rates for minority students, which for Blacks stood at 75 percent in 1969-1970, but declined gradually to 41 percent in 1976, essentially the same as for majority students;¹²⁸
3. Growth in medical school capacity through federal and state support for building new schools and expanding existing schools,¹²⁹ making possible a large surge in first-year medical school enrollment;¹³⁰ in 1968-1969, enrollment stood at 9,863; by 1974-1975, it stood at 14,763.¹³¹ In 1968-1969, there were 85 fully accredited four-year medical schools in the U.S. By 1978-1979, there were 112.¹³² Over the decade from 1968 through 1978, 6,166 new positions in medical schools were added as a result of the establishment of new medical schools and expansions of class size in existing medical schools.¹³³ About “20 percent of these new places were filled by students from racial minority groups.”¹³⁴ Thus, part of the 400 percent increase in minority enrollment over this decade was linked directly to medical school expansion;¹³⁵ and
4. The increasing number of minorities enrolled in predominantly White medical schools. As James L. Curtis points out, in 1968-1969, Blacks represented 2.2 percent of total medical school enrollment of 35,800, and 58.0 percent of them were students at Howard or Meharry.¹³⁶ In 1975-1976, Blacks represented 6.2 percent of the much larger total enrollment of 55,800, and of the 8.2 percent total minority enrollment (including 0.3 percent American Indians, 1.3 percent Mexican Americans, and 0.4 percent Mainland Puerto Ricans) only 12.4 percent of minorities were students at Howard and Meharry.¹³⁷ As more medical schools accepted federal funding, they also accepted the nondiscrimination conditions in Title VI of the Civil Rights Act that accompanied that funding.

The Changing Social and Political Environment Beginning in the Mid-1970s

By the mid-1970s, the social environment that had spurred civil rights and other activism had already begun to change, as had the political and health policy landscape. Federal policy to increase physician supply ended abruptly, federal institutional support to medical schools began to decline, and federal support to schools for scholarships and loans also fell.^{138, 139} The catalytic event that many say led to greater racial and ethnic diversity in medical schools, the assassination of Dr. Martin Luther King, Jr. in 1968, was long past, and as minority enrollment increased in the 1970s, a backlash occurred.¹⁴⁰ Claims of “reverse discrimination” in employment and professional school admissions and lawsuits followed.¹⁴¹

An early suit, which found its way to the U.S. Supreme Court in 1974, was initiated by Marco DeFunis, a White male, who claimed that the University of Washington’s Law School admissions policy racially discriminated against him and violated his rights under the Fourteenth Amendment.¹⁴² Although the Supreme Court did not rule on the legality of the school’s admissions policy, since Mr. DeFunis had already been admitted to the Law School under the ruling of a trial court, Justice William O. Douglas’ dissenting opinion to the Court’s decision in the *DeFunis v. Odegaard* case was a harbinger of the Court’s deliberations four years later in *Regents of the University of California v. Bakke*:

The educational policy choices confronting a university admissions committee are not ordinarily a subject for judicial oversight; clearly it is not for us but for the law school to decide which tests to employ, how heavily to weigh recommendations from professors or undergraduate grades, and what level of achievement on the chosen criteria are sufficient to demonstrate that the candidate is qualified for admission. What places this case in a special category is the fact that the school did not choose one set of criteria but two, and then determined which to apply to a given applicant on the basis of his race. The Committee adopted this policy in order to achieve ‘a reasonable representation’ of minority groups in the Law School. Although it may be speculated that the Committee sought to rectify what it perceived to be cultural or racial biases in the LSAT or in the candidates' undergraduate records, the record in this case is devoid of any evidence of such bias, and the school has not sought to justify its procedures on this basis.¹⁴³

Affirmative Action after the *Regents of the University of California v. Bakke* U.S. Supreme Court Decision, 1978 (1978-1994)

After the *Defunis* case in 1974 and as the *Bakke* case was wending its way from the California Supreme Court to the U.S. Supreme Court, many medical schools adopted a more cautious stance or a “wait and see” attitude about their approaches to increasing minority enrollment.¹⁴⁴ Allan Bakke, a White male, who had been rejected from the University of California, Davis, medical school in 1973 and again in 1974, first filed suit in the Yolo County Superior Court and then in the California Supreme Court, claiming that the special admissions program of the medical school violated his rights under the Fourteenth Amendment and Title VI of the Civil Rights Act of 1964, and that he had been excluded from admission because of his race.¹⁴⁵ Both Courts found that the special admissions program violated the federal and state constitutions and Title VI of the Civil Rights Act, but differed in their opinions about whether Bakke should be admitted to the school.¹⁴⁶ The Regents of the University of California then appealed to the U.S. Supreme Court.

In his analysis, *The Evolution of a Social Contract: the University of California Before and in the Aftermath of Affirmative Action*, the historian John A. Douglass notes that affirmative action programs focused only on race were particularly vulnerable.

Race became not simply one variable among many, but a primary variable—a simple administrative remedy for increasing minority enrollment that, essentially, devalued other and more broadly accepted factors such as economic background and geographic representation. Separating race from these and other variables increased the political vulnerability of affirmative action programs.¹⁴⁷

The U.S. Supreme Court Decision in the *Regents of the University of California v. Bakke*, 1978

On June 28, 1978, the U.S. Supreme Court announced its decision in *Regents of the University of California v. Bakke*. “Legal issues often reveal themselves as social issues concerning justice, equity, and equality,” notes Janosik, in his discussion of legal issues in the context of higher education.¹⁴⁸ He traces the life cycle over time of several strategic issues facing higher education, noting that issues may move through a cycle of public awareness, public debate, legislation, regulation, and then litigation, with options to resolve issues narrowing and the potential for liability expanding over time.¹⁴⁹ Implementation of provisions of Title VI of the Civil Rights Act of 1964 through regulations of the Office of Civil Rights and compliance of institutions of higher education with regulations provides a vivid example of a strategic issue moving through this cycle.

As medical schools moved to comply with Title VI regulations and to respond to pressures within and outside their walls to pursue certain courses of action, they developed different “means” to accomplish “ends” related to affirmative action. For example, while the University of California, Davis, medical school established a “quota” in terms of the number of places reserved for minority students in an entering class, the UCSF medical school had a “goal.” Also, Davis used a racial/ethnic definition of “minorities,” and UCSF used a broader definition of minorities based on socioeconomic characteristics that made an applicant “unable to pursue a course of higher education or to do so only with disproportionately great difficulty.”¹⁵⁰

In the *Regents of the University of California v. Bakke* case, the U.S. Supreme Court clarified both permissible “means” and “ends.” However, as Justice Sandra Day O’Connor explains:

The (*Bakke*) decision produced six separate opinions, none of which commanded a majority of the Court. Four Justices...upheld the program against all attack on the ground that the government can use race to ‘remedy disadvantages cast on minorities by past racial prejudice.’...Four other Justices avoided the constitutional question altogether and struck down the program on statutory grounds. Justice Powell provided a fifth vote not only for invalidating the set-aside program, but also for reversing the state court’s injunction against any use of race whatsoever. The only holding for the Court in *Bakke* was that a ‘State has a substantial interest that legitimately may be served by a properly devised admissions program involving the competitive consideration of race and ethnic origin.’¹⁵¹

Justice Lewis F. Powell, Jr. announced the Court’s judgment and wrote a separate opinion expressing his own views. There were several important points expressed in the *Bakke* case that were to provide guidance to institutions of higher education, including medical schools, over the next 25 years.

Consideration of Race and Ethnic Origin in Admissions Is Permissible

The Court affirmed that race could be used as a factor in the admissions process.¹⁵² Justice Powell stated that “the goal of achieving a diverse student body is sufficiently compelling to justify consideration of race in admissions decisions under some circumstances.”¹⁵³ Four other Justices stated that “the purpose of overcoming substantial, chronic minority underrepresentation in the medical profession is sufficiently important to justify petitioner’s remedial use of race.”¹⁵⁴

Dual Admissions Programs and Racial Quotas, or Set-Asides, Are Not Permissible

The Court made clear that a dual admissions program that amounted to a racial quota system could not be used. The special admissions program used by the University of California, Davis medical school, with minority applicants rated only against each other and with 16 of 100 places reserved only for successful minority applicants, represented a racial quota system—or as Justice Powell notes “a line drawn on the basis of race and ethnic status.”¹⁵⁵ Drawing this line was not permitted.

Establishing Percentages of Selected Racial and Ethnic Groups for Admission is Discriminatory

The Court ruled that establishing a percentage within the student body for a particular group based on race or ethnic origin was not allowed. “If...the purpose is to assure within its student body some specified percentage of a particular group merely because of its race or ethnic origin, such a preferential purpose must be rejected....Preferring members of any one group for no reason other than race or ethnic origin is discrimination for its own sake. This the Constitution forbids.”¹⁵⁶

One Racial and Ethnic Group May Not Receive Benefits at the Expense of Another

The Court held that one group could not receive benefits at the expense of another group, or one individual at the expense of another:

The purpose of helping certain groups whom the faculty of the Davis Medical School perceived as victims of ‘societal discrimination’ does not justify a classification that imposes disadvantages upon persons...who bear no responsibility for whatever harm the beneficiaries of the special admissions program are thought to have suffered. To hold otherwise would be to convert a remedy heretofore reserved for violations of legal rights into a privilege that all institutions throughout the Nation could grant at their pleasure to whatever groups are perceived as victims of societal discrimination.¹⁵⁷

In its admissions policies designed to increase minority enrollment, the medical school had failed to provide “equal protection” under the law for all applicants under the Equal Protection Clause of the Fourteenth Amendment of the Constitution. “The fatal flaw (in the) petitioner’s (the University of California Regents) preferential program is its disregard of individual rights as guaranteed by the Fourteenth Amendment.”¹⁵⁸

Attaining a Diverse Study Body is a Constitutionally Permissible Goal

Justice Powell's opinion states that attaining a diverse student body was "a constitutionally permissible goal for an institution of higher education."¹⁵⁹ He also noted that academic freedom is not a specific right spelled out in the Constitution, but that it is "a special concern of the First Amendment" and that "the freedom of a university to make its own judgments as to education includes the selection of its student body."¹⁶⁰

Here Justice Powell cited Justice Felix Frankfurter, who had summarized the "four essential freedoms" that constitute academic freedom in *Sweezy v. New Hampshire*:

It is the business of a university to provide that atmosphere which is most conducive to speculation, experiment and creation. It is an atmosphere in which there prevail 'the four essential freedoms' of a university—to determine for itself on academic grounds who may teach, what may be taught, how it shall be taught, and who may be admitted to study.¹⁶¹

Justice Powell also cited *Keyishian v. Board of Regents (1967)*:

Our Nation is deeply committed to safeguarding academic freedom, which is of transcendent value to all of us, and not merely to the teachers concerned....The Nation's future depends upon leaders trained through wide exposure to that robust exchange of ideas which discovers truth 'out of a multitude of tongues, [rather] than through any kind of authoritative selection.'¹⁶²

Justice Powell went on to say:

The atmosphere of 'speculation, experiment and creation'—so essential to the quality of higher education—is widely believed to be promoted by a diverse student body. As the Court noted in *Keyishian*, it is not too much to say that the 'nation's future depends upon leaders trained through wide exposure' to the ideas and mores of students as diverse as this Nation of many peoples.¹⁶³

Justice Powell then noted that the University in seeking the educational benefits that flow from a diverse student body "must be viewed as seeking a goal that is paramount in the fulfillment of its mission."¹⁶⁴

Physicians serve a heterogeneous population. An otherwise qualified medical student with a particular background—whether it be ethnic, geographic, culturally advantaged or disadvantaged—may bring to a professional school of medicine experiences, outlooks, and ideas that enrich the training of its student body and better equip its graduates to render with understanding their vital service to humanity.¹⁶⁵

Diversity Encompasses a Broad Array of Characteristics, Not Only Race and Ethnicity

The meaning of diversity was clarified. “Ethnic diversity, however, is only one element in a range of factors a university properly may consider in attaining the goal of a heterogeneous student body.”¹⁶⁶

It is not an interest in simple ethnic diversity, in which a specified percentage of the student body is in effect guaranteed to be members of selected ethnic groups, with the remaining percentage an undifferentiated aggregation of students. The diversity that furthers a compelling state interest encompasses a far broader array of qualifications and characteristics, of which racial or ethnic origin is but a single, though important, element. Petitioner's (University of California Regents') special admissions program, focused solely on ethnic diversity, would hinder, rather than further, attainment of genuine diversity.¹⁶⁷

Race and Ethnicity May Be Considered as One Factor among Many in the Admissions Process, Assuring a Comprehensive Selection Process

An admissions program might consider race or ethnic background of an applicant as one factor to be weighed fairly against other elements in the selection process:

In such an admissions program, race or ethnic background may be deemed a ‘plus’ in a particular applicant's file, yet it does not insulate the individual from comparison with all other candidates for the available seats. The file of a particular black applicant may be examined for his potential contribution to diversity without the factor of race being decisive when compared, for example, with that of an applicant identified as an Italian-American if the latter is thought to exhibit qualities more likely to promote beneficial educational pluralism. Such qualities could include exceptional personal talents, unique work or service experience, leadership potential, maturity, demonstrated compassion, a history of overcoming disadvantage, ability to communicate with the poor, or other qualifications deemed important. In short, an admissions program operated in this way is flexible enough to consider all pertinent elements of diversity in light of the particular qualifications of each applicant, and to place them on the same footing for consideration, although not necessarily according them the same weight. Indeed, the weight attributed to a particular quality may vary from year to year depending upon the ‘mix’ both of the student body and the applicants for the incoming class.¹⁶⁸

The Admissions Process Must Be Individualized, Assuring a Fair and Competitive Process

An admissions program must treat each applicant as an individual in the admissions process:

The applicant who loses out on the last available seat to another candidate receiving a ‘plus’ on the basis of ethnic background will not have been foreclosed from all consideration for that seat simply because he was not the right color or had the wrong

surname. It would mean only that his combined qualifications, which may have included similar nonobjective factors, did not outweigh those of the other applicant. His qualifications would have been weighed fairly and competitively, and he would have no basis to complain of unequal treatment under the Fourteenth Amendment.¹⁶⁹

Diversity is a Dynamic Concept and Is Linked to Excellence in Education

The Court commented on the dynamic nature of the concept of diversity and its relationship to educational excellence, using Harvard College as an example:

The belief that diversity adds an essential ingredient to the educational process has long been a tenet of Harvard College admissions. Fifteen or twenty years ago, however, diversity meant students from California, New York, and Massachusetts; city dwellers and farm boys; violinists, painters and football players; biologists, historians and classicists; potential stockbrokers, academics and politicians. The result was that very few ethnic or racial minorities attended Harvard College. In recent years, Harvard College has expanded the concept of diversity to include students from disadvantaged economic, racial and ethnic groups. Harvard College now recruits not only Californians or Louisianans, but also blacks and Chicanos and other minority students. Contemporary conditions in the United States mean that, if Harvard College is to continue to offer a first-rate education to its students, minority representation in the undergraduate body cannot be ignored by the Committee on Admissions.¹⁷⁰

Diversity—Achieved through a Competitive Consideration of Race and Ethnic Origin—Was Identified as a Goal, or “End,” Sufficiently Compelling to Justify the Consideration of Race and Ethnicity in Admissions Decisions

The only holding for the Court in *Bakke*, as Justice O’Connor noted, was that a “State has a substantial interest that legitimately may be served by a properly devised admissions program involving the competitive consideration of race and ethnic origin.” The single goal, or “end,” for the special admissions program of the University of California, Davis, medical school argued by the University of California Regents and noted by Justice Powell to be “sufficiently compelling to justify the consideration of race in admissions decisions” was achieving a diverse study body and the attendant benefits of diversity to students in their education. The “means” of attaining that goal used by the medical school—developing a separate admissions process for selected minority groups and setting aside a specific number of seats for them alone—was found by the Court to be unnecessary and antithetical to achieving the goal of diversity and invalid under the Equal Protection Clause.

Other Goals, or “Ends,” Were Not Found to be Compelling Interests

Three other goals argued by the University of California Regents were rejected by the Court. First, an interest was rejected in “reducing the historic deficit of traditionally disfavored minorities in medical schools and in the medical profession” as an unlawful interest in racial balancing.¹⁷¹ Second, an interest was rejected in remedying societal discrimination because such measures would risk placing unnecessary burdens on innocent third parties “who bear no

responsibility for whatever harm the beneficiaries of the special admissions program are thought to have suffered.”¹⁷² Third, an interest was rejected in “increasing the number of physicians who will practice in communities currently underserved,” concluding that even if such an interest could be compelling in some circumstances the program under review was not “geared to promote that goal.”¹⁷³

Summarizing the Complexity of Issues Involved in the Consideration of Race and Ethnicity

The Carnegie Council on Policy Studies in Higher Education pointed to the gravity and complexity of the issues that were being confronted:

The issues raised in *Defunis v. Odegaard* and now joined in *Bakke* are basic questions, whose roots extend downward into the bedrock of our moral and social philosophy, and outward into the economic and technological foundations of our American society. At the center of these issues stands the painful question: Should universities adopt explicit policies that grant preferential treatment to racial and ethnic minorities? Pursuing preferential admissions policies would seem to be inconsistent with our deeply held convictions regarding individuality, merit, and personal responsibility. Failing to pursue such policies seems to reveal moral and ethnic blindness on the part of the majority of the historic and contemporary condition of racial minorities in American society, and is therefore perceived to be contrary to humanitarian and egalitarian themes within our national experience.¹⁷⁴

1978 AAMC Task Force Report on Minority Student Opportunities in Medicine: Continuing Problems and Challenges to Medical Schools

The issues of medical school commitment and direction in increasing minority enrollment in face of legal challenges were clearly reflected in the AAMC’s scan of the environment. In 1976, after re-evaluating progress, the Executive Council of the AAMC established a Task Force on Minority Student Opportunities in Medicine. The Task Force found that the primary problems affecting the participation of minority groups in medical education were similar to those identified eight years earlier by the first Task Force on minority opportunities: 1) a small applicant pool, 2) inadequate financial assistance, 3) low retention of premedical students, and 4) commitment of U.S. medical schools.¹⁷⁵

The Task Force report, issued in June 1978, the same month as the *Bakke* decision, posed sharp challenges to medical schools to reaffirm their commitment to affirmative action programs:¹⁷⁶

Medical schools must make a firm commitment to the existence and continuation of programs to assure equal participation of minority group members. This commitment to affirmative action programs for the recruitment, admission, and retention of minority students must become a part of each institution’s continuing philosophy and objectives.

Institutional commitment...means not only increasing the numbers of minority medical students admitted and graduated, but also increasing the applicant pool through regional and local programs rather than depending passively on whatever pool happens to appear. It also means commitment to the long-term goals of providing quality medical services to communities across the nation, particularly to those individuals who live in underserved areas—the inner cities, the barrios, the rural regions—and to other population groups whose needs for medical services present unique problems.

Institutional commitment depends on the position taken and the leadership provided by the deans and department chairmen. It becomes meaningful only when it is translated into effective action. This action is manifested in the tone of the institutional environment, in its various programs and support services, and in the involvement of its faculty.

To regain the enthusiasm for minority programs it is necessary for each medical school to reaffirm its commitment to affirmative action programs to augment, identify, recruit, admit, retain, graduate and place racial minority group members within the medical establishment.

The 1978 report laid out seven goals in priority order and recommendations to achieve these goals “to provide the AAMC, medical schools, philanthropic organizations, and federal and state governments with specific directions.”¹⁷⁷

Goal 1: Increase the pool of qualified racial minority applicants to levels equivalent to their proportion in the U.S. population with progress toward that goal reviewed on a biennial basis.

Goal 2: Enlarge the number of qualified racial minority students admitted to medical school through improvement of the selection process.

Goal 3: Emphasize the importance of financial assistance for racial minority group students pursuing careers in medicine.

Goal 4: Strengthen programs which support the normal process and successful graduation of racial minority students enrolled in medical school.

Goal 5: Increase the representation of racial minority persons among basic science and clinical faculty.

Goal 6: Encourage the development of faculty development programs aimed at fostering an understanding of history and culture of racial minority groups and at improving the quality of medical school instruction.

Goal 7: Ensure that graduate medical education needs and opportunities for racial minority students are met.

Medical Schools' Responses to the *Bakke* Decision

The U.S. Supreme Court's clarification of "means" and "ends" related to the consideration of race/ethnicity in higher education in the *Bakke* case had a major impact on the evolution of both public and private universities' and medical schools' policies, programs, and practices. As Justice Sandra Day O'Connor later noted in the opinion that she delivered for the Court in *Grutter v. Bollinger* on June 23, 2003:

Justice Powell's opinion announcing the judgment of the Court has served as the touchstone for constitutional analysis of race-conscious admissions policies. Public and private universities across the Nation have modeled their own admissions on Justice Powell's views on permissible race-conscious policies.¹⁷⁸

Universities, including medical schools, began to recognize that they needed to clarify their own goals, objectives, and methods in terms of "diversity" and "affirmative action." Schools also recognized, as did the AAMC, that the gains in underrepresented minority applicants since the late 1960s had been slowing. The AAMC also recognized that the ambitious goals and recommendations of the 1978 Task Force needed to be reevaluated and a realistic plan for implementation developed after the *Bakke* decision.¹⁷⁹ In February 1980, the AAMC released a plan for the implementation of the goals and recommendations, dividing them into four categories: 1) prematriculation, 2) matriculation, 3) graduate medical education, and 4) faculty development.¹⁸⁰ The plan also notes the important progress that had occurred in several areas by 1980, particularly in outreach and academic enrichment.

In terms of prematriculation programs, for example, 25 of the 112 U.S. medical schools responding to the AAMC's questionnaire offered summer programs for high school students; 32 offered summer programs for college undergraduates; 43 offered summer programs for those who had been accepted as students at the medical school, while two medical schools offered pre-matriculation programs to students accepted to any medical school; and five medical schools had postbaccalaureate programs.¹⁸¹

In the area of matriculation, progress was noted in AAMC efforts in "enhancing the ability of admissions committee members to evaluate effectively the qualities and personal characteristics presented in the non-traditional student's application."¹⁸² However, the Simulated Minority Admissions Exercise Tool developed by AAMC and used to assist admissions committees appears to have increased the number of non-traditional students interviewed, but not those admitted.¹⁸³ Increasing applicant pool size, improving applicant preparation, and preparation of admissions committees to evaluate minority and/non-traditional applicants as efforts to increase matriculation were all at the forefront of the AAMC's and medical schools' efforts.

But as Ludmerer notes:

After 1974...minority enrollments underwent a period of stagnation. The number of students admitted remained about the same, but the minority population in the U.S. continued to grow....This relative decline in minority enrollments occurred despite

sincere efforts of most medical schools to recruit qualified applications and despite the opening of a third black medical school, Morehouse School of Medicine, in 1981.¹⁸⁴

As Herbert Nickens and his colleagues note in a review of thirty years of efforts to increase enrollment of underrepresented minorities, the entire period from 1974 though 1990 was a period of stagnation. “Even though most of the programs designed to increase the participation of members of minority groups remained in place,...the proportion of the population made up of minority-group members increased at a faster rate than enrollment. This resulted in a more severe underrepresentation in 1990 than had existed fifteen years earlier.”¹⁸⁵

Cooper points to the progress that was made and one of the reasons for that progress:

Excluding schools in Puerto Rico, first-time Hispanic applicants increased from fewer than 400 in 1973 to approximately 900 throughout the 1980s....Similarly, the number of first-time black applicants increased from 1,000 in 1970 to approximately 1,600 throughout the 1980s....The growth of minority medical applicants in the 1980s closely tracked similar successes of minorities at the baccalaureate level, which in turn correlated with prior successes in narrowing the academic achievement gaps that have separated blacks and Hispanics from whites in grades K-12.¹⁸⁶

Among the reasons cited for the relative decline among underrepresented minorities in medical schools are that scholarship funds declined, tuition began to rise, the *Bakke* decision had a “chilling effect” on potential applicants and represented a defeat for affirmative action, and the number of qualified minority applicants was not expanding quickly enough.^{187,188,189,190,191,192} Several authors have commented on the link between the availability of medical school applicants and the educational pathway that leads to medical school. Ludmerer’s view underlines this connection:

Most important, the relative decline in minority enrollments resulted from the fact that the number of qualified minority applicants was not expanding rapidly enough. The problem of minorities in medicine was deep rooted, arising from educational, cultural, and economic deprivation that dated to the earliest years of childhood. In the 1980s the public became increasingly aware of the inadequacies of the country’s school system, which in the words of one influential report made the United States ‘a nation at risk’ because of the failure to prepare students for the increasingly technical world in which they would live. Minority students, particularly those from economically disadvantaged backgrounds, typically attended some of the worst public schools.^{193,194,195}

Cooper agrees with Ludmerer’s and Nickens and colleagues’ analysis:

However, after narrowing in the 1970s, (the gaps between blacks and Hispanics and whites) have undergone little further improvement...The availability of applicants reflects trends that are deeply rooted in early education and expectations. Indeed, more than half of all applicants report having decided on medicine before leaving high school. These early trends are ultimately displayed as long-term trends in the rates of college

participation and medical school application, which differ among gender, ethnic, and racial groups.^{196,197,198}

Paul Jolly notes, however, that there was also a large overall drop in applicants that occurred in the 1970s, but beginning later, particularly in 1978, when the new Medical College Admission Test (MCAT) was first required.¹⁹⁹ “This may have resulted from a decision by some unsuccessful applicants from the previous year, who normally would have reapplied for 1978, not to do so because of the new examination.”²⁰⁰ Other reasons proposed for the decline have been an end to the Vietnam War and military draft deferments.²⁰¹ Total applicants to U.S. medical schools stood at 42,617 in 1974; the number of applicants fell dramatically beginning in 1975 and continuing in the 1980s to a low of 26,702 in 1988.²⁰² Then, in 1989, the applicant pool again began to grow.²⁰³

The AAMC's 3000 by 2000 Project

The AAMC's 3000 by 2000 Project, launched in November 1991, was viewed as a way “to reverse the worsening underrepresentation of minorities” in medical schools.²⁰⁴ After analyzing strategies that had been put in place in the late 1960s and 1970s and continued into the 1980s, the AAMC recognized that they were “insufficient to address the primary problem. That problem is the failure of our nation's K-12 schools and our colleges to produce a sufficient number of academically well-prepared minority students.”²⁰⁵

The goal of the project was to matriculate 3,000 underrepresented minority matriculants each year by 2000. In the 1990 Census, the four underrepresented groups—Blacks, Mexican Americans, American Indians, and Mainland Puerto Ricans—made up just over 19 percent of the U.S. population; 3,000 is approximately 19 percent of all matriculants to the nation's allopathic medical schools.

The project was based on two precepts:

1. Academic medical centers have both the means and the responsibility to improve educational opportunities for young people in their communities, especially for minority and disadvantaged young people interested in medicine and related fields.
2. Medical and other health professions schools have not and will not be able to solve the problem of minority underrepresentation alone. Instead, they must work in partnership with the high schools and colleges that are primarily responsible for educating health professional students of the future.²⁰⁶

The AAMC created the National Network for Health Science Partnerships to facilitate communication among health professions school educators and colleges and K-12 school systems. The AAMC sponsored workshops and conferences to engage leaders in all educational schools. Partnering with The Robert Wood Johnson Foundation, the AAMC cosponsored the 3000 by 2000 Health Professions Partnership Initiative. Initial funding was provided to local partnerships in communities across the country by The Robert Wood Johnson Foundation. In

later funding cycles, the W.K. Kellogg Foundation joined the effort, which was extended to schools of medicine, nursing, dentistry, physical therapy, and public health.

The goal of Project 3000 by 2000—to matriculate 3,000 underrepresented medical students—was ambitious, since in 1989 fewer than 3,000 underrepresented minority students even applied to medical school.²⁰⁷ In the early years of the initiative, from 1991 through 1994, the number of underrepresented minority matriculants increased dramatically, from 1,584 in 1991 to 2,024 in 1994.*²⁰⁸

This trajectory of success, however, was interrupted by anti-affirmative action measures in California, Texas, Louisiana, Mississippi, and Washington, which went into effect from 1995 through 1999. Minority matriculants decreased overall, with most of the decline in these states.²⁰⁹ By 1998, however, underrepresented minority matriculants had increased by 18 percent and applicants, by 24 percent, over their numbers in 1991 when Project 3000 by 2000 began.²¹⁰ David Carlisle and colleagues have evaluated trends in the entry of underrepresented minorities into U.S. medical schools during the 1990s.²¹¹ They summarize their findings as follows:

Between 1990 and 1994, the number of new underrepresented minority students entering medical school grew at an 8.3% average annual rate, culminating with enrollment of 2014 minority students* (12.4% of all new entrants) in 1994. In 1995, this growth halted when 2010 such students entered medical school. In 1996, only 1906 underrepresented minority students entered first-year medical school classes—5.2% fewer than in 1995 and 38% fewer than the 3078 who would have been enrolled if the distribution of these minority groups were equal to the distribution of these minority groups in the overall US population. Fifty-four percent of all medical schools (61% of public institutions and 44% of private institutions) experienced such declines.²¹²

They also note: “Public medical schools in California, as well as Louisiana, Mississippi, and Texas were disproportionately affected by this trend. While these schools enrolled approximately 18% of underrepresented minority medical students in 1995, they accounted for 44% of the decrease in such enrollment in 1996.”²¹³

Anti-affirmative Action Measures: 1995 through the Early 2000s

From the late 1980s through the present, there have been numerous challenges to race-conscious university admissions policies in undergraduate, graduate, and professional education. Most of these challenges have occurred since 1995, when governors’ executive orders, a public university governing body resolution, state ballot initiatives, and court case opinions have taken the

* The difference in the number of matriculants and new entrants reported is due to differences in the dates for which data were reported.

perspective that affirmative action efforts represent “preferential treatment” based on race. By the end of 2008, California, Washington, Florida, Michigan, and Nebraska had state anti-affirmative action laws in place. These laws with some slight variation forbid “discrimination against” or “preferential treatment of” individuals and groups on the basis of race, sex, color, ethnicity, or national origin in public education, employment, and contracting.^{214,215,216,217,218} Florida’s 1999 Executive Order, the One Florida Initiative, affects admissions decisions only in its non-discrimination provisions in higher education. Anti-affirmative action campaigns were announced in several states with ballot initiatives (a total of 24 states have such initiatives): Arizona, Colorado, Missouri, Nebraska, Nevada, Oregon, South Dakota, Wyoming, and Utah.²¹⁹ Colorado voters defeated an anti-affirmative action measure in 2008 and measures failed in 2008 to reach the ballot in Arizona, Missouri, and Oklahoma.²²⁰

Proposition 209: Prohibition Against Discrimination or Preferential Treatment by State and Other Entities (“The California Civil Rights Initiative”) (1996)

Approved by California voters as a constitutional amendment in November 2006, Proposition 209 appears in California’s constitution in Article 1, Declaration of Rights, Section 31 (a-f):

The State shall not discriminate against, or grant preferential treatment to, any individual or group on the basis of race, sex, color, ethnicity, or national origin in the operation of public employment, public education, or public contracting.²²¹

Proposition 209 went into effect in 1997 after legal challenges had been settled. The 1998 freshman class at the University of California was the first to feel the effects of this ban on affirmative action. The groundwork for Proposition 209 had been laid by Governor Pete Wilson’s June 1995 Executive Order to End Preferential Treatment and to Promote Individual Opportunity Based on Merit (Executive Order W-124-95).²²² (This Executive Order is described in more detail in Chapter 5: California’s Changing Policy Context.). The Governor’s Executive Order, in turn, led to the University of California Regents’ adopting two resolutions, SP-1 and SP-2, on July 20, 1995, policies ensuring “equal treatment admissions” and “equal treatment business practices and employment.”²²³ (The resolutions are discussed in more detail in Chapter 6: The University of California: The Changing Policy Context of a Public University.)

Hopwood v. Texas (1996)

On March 18, 2006, the U.S. Court of Appeals from the Fifth Circuit reversed the ruling of the U.S. District Court in the Western District of Texas that the University of Texas may use race as a factor in law school admissions. The Court of Appeals Circuit Judge, Jerry E. Smith, posed the question before the Court in this way:

With the best of intentions, in order to increase the enrollment of certain favored classes of minority students, the University of Texas School of Law (“the law school”) discriminates in favor of those applicants by giving substantial racial preferences in its admissions program. The beneficiaries of this system are blacks and Mexican Americans,

to the detriment of whites and non-preferred minorities. The question we decide today is whether the Fourteenth Amendment permits the school to discriminate in this way.²²⁴

The Court held that it did not:

The law school has presented no compelling justification, under the Fourteenth Amendment or Supreme Court precedent, that allows it to continue to elevate some races over others, even for the wholesome purpose of correcting perceived racial imbalance in the student body. Racial preferences appear to ‘even the score’...only if one embraces the proposition that our society is appropriately viewed as divided into races, making it right that an injustice rendered in the past to a black man should be compensated for by discriminating against a white.²²⁵

The Court of Appeals also found that that “obtaining the educational benefits that flow from a racially and ethnically diverse student body” was not a compelling state interest.

...(A)ny consideration of race or ethnicity by the law school for the purpose of achieving a diverse student body is not a compelling interest under the Fourteenth Amendment. Justice Powell's argument in *Bakke* garnered only his own vote and has never represented the view of a majority of the Court in *Bakke* or any other case. Moreover, subsequent Supreme Court decisions regarding education state that non-remedial state interests will never justify racial classifications. Finally, the classification of persons on the basis of race for the purpose of diversity frustrates, rather than facilitates, the goals of equal protection.... Justice Powell's view in *Bakke* is not binding precedent on this issue.²²⁶

This decision of the Fifth Circuit Court affected institutions of higher education in Louisiana and Mississippi as well as those in Texas.

Washington State Initiative 200 (1998)

After passage of California's Proposition 209, the Sacramento-based American Civil Rights Institute (ACRI) began to use the proposition as a model to be introduced as legislation or as a ballot initiative in other states. The ACRI was founded in 1996 by Ward Connerly, an anti-affirmative action advocate and former University of California Regent who had been instrumental in supporting anti-affirmative action efforts of Governor Pete Wilson on the Board of Regents and in the campaign for Proposition 209. The American Civil Rights Institute and other organizations (e.g., the Center for Individual Rights, the Center for Equal Opportunity, the Pacific Research Institute) have joined in initiating and supporting challenges to affirmative action. Washington was the first state to be approached after California. After the Washington State Legislature refused to act, a campaign to place Initiative 200 on the state ballot was launched. The American Civil Rights Institute notes in describing background to the initiative:

Just as Prop. 209 was modeled after the landmark 1964 Civil Rights Act, WSCRI (the Washington Civil Rights Initiative) said ‘the state shall not discriminate against, or grant preferential treatment to, any individual or group on the basis of race, sex, color, ethnicity or national origin in the operation of public employment, public education or public contracting.’ It would appear on the November 1998 state ballot as Initiative 200 (I-200).²²⁷

The voters of Washington State approved Initiative 200 in November 1998. A report was released in December 1999, a year after the initiative became effective, *Diversity and Participation of People of Color in Higher Education* by the Washington State Higher Education Coordinating Board.²²⁸ Legislation introduced in 2004 to repeal parts of the initiative was not successful.²²⁹

One Florida Initiative (1999)

On November 9, 1999, Governor Jeb Bush signed Executive Order 99-281 establishing “non-discrimination” in government employment, state contracting, and higher education.²³⁰ In December 1999, The American Civil Rights Coalition (ACRC) introduced the Florida Civil Rights Initiative, but this initiative did not reach the 2000 Florida ballot. ACRC, which was established by Ward Connerly in 1997 as part of the coordinated national effort to end racial and gender preferences, works in conjunction with the American Civil Rights Institute.²³¹ Governor Bush’s One Florida Initiative, as it was known, met open opposition in January 2000 when two Black legislators staged a sit-in the Governor’s executive suite with “hundreds of black college students in the hallway outside his office and the largest ever protest-march...on the state Capitol in 2000.”²³²

For the State University System in Florida, the Governor’s Proposal outlined three pathways to admissions for students: 1) traditional admissions criteria based on GPA and SAT/ACT; 2) Talented 20 Program eligibility; and 3) profile assessment (alternative admits—10% waivers).²³³ Governor Bush’s plan differed from the Florida Civil Rights Initiative proposed by the ACRC. The One Florida Initiative eliminated the use of race and gender only in university admissions decisions; these characteristics could still be considered in awarding scholarships, conducting outreach, or developing pre-college summer programs.²³⁴ The Talented 20 Program, which was the Governor’s alternative to race-conscious admissions, was implemented in fall 2000, but only for undergraduates. No such program was developed for graduate and professional education. Under the Talented 20 Program, a public high school graduate in Florida who has completed 19 required high school units, ranks in the top 20 percent of his or her class, and has submitted SAT/ACT test scores, will be admitted to a university in the State University System.²³⁵ *Appearance and Reality in the Sunshine State: The Talented 20 Program in Florida*, an assessment of the program by Marin and Lee of the Harvard Civil Rights Project, was published in 2003.²³⁶

The Changing Challenge of Promoting Diversity at the University of Michigan, 1987-2007

The University of Michigan has been challenged in different ways over a period of twenty years with making the social and educational values of diversity more tangible. In 1987, nine years after the U.S. Supreme Court’s *Bakke* decision in 1978, the University of Michigan’s President, James Duderstadt, launched “the Michigan Mandate,” which presented “a vision, a strategy, and a series of concrete actions designed to build a multicultural academic community that will be a model for higher education and society at large.”²³⁷ The mandate recognized the “necessary linkage between racial and ethnic diversity and excellence in teaching and research.”²³⁸ One of

the first actions focused on recruiting and retaining a more diverse faculty, staff, and student body. Michigan's mandate "initiated a transformation to ensure that all racial and ethnic groups would be full participants in the life of the university."²³⁹

In 1997, ten years later, Barbara Grutter, a White Michigan resident, filed suit in District Court alleging that she had been discriminated against on the basis of race when she was denied admission to the University of Michigan's law school in 1996, and that her rights were violated under the Fourteenth Amendment and Title VI of the Civil Rights Act of 1964 because race was used as a "predominant factor" in the admissions process.²⁴⁰

In 2003, in *Grutter v. Bollinger*, the U.S. Supreme Court ruled that the law school's "narrowly tailored use of race in admissions decisions to further a compelling interest in obtaining the educational benefits that flow from a diverse student body is not prohibited by the Equal Protection Clause" of the Fourteenth Amendment.²⁴¹

In 2006, the people of the State of Michigan voted in the November election to approve Proposal 2006-02 (Proposal 2), The Michigan Civil Rights Initiative, an amendment to the state constitution providing that the state shall not "discriminate against, or grant preferential treatment to, any individual or group on the basis of race, sex, color, ethnicity, or national origin in public employment, public education or public contracting."²⁴² The Michigan Civil Rights Initiative was introduced in the state as another anti-affirmative action advocacy effort by the American Civil Rights Coalition. In March 2007, the University announced its *Diversity Blueprints Report*, recommendations for continuing to enhance diversity after Proposal 2.²⁴³

Nebraska Initiative 424: Constitutional Amendment to Prohibit Discrimination or Preferential Treatment (2008)

On November 4, 2008, voters in Nebraska approved Initiative 424, an amendment to the state constitution with the following text:

Be it enacted by the people of the State of Nebraska that, Article I of the Constitution of Nebraska be amended by adding a Section 30 as follows:

(1) The state shall not discriminate against, or grant preferential treatment to, any individual or group on the basis of race, sex, color, ethnicity, or national origin in the operation of public employment, public education, or public contracting.²⁴⁴

This was a petition initiative modeled on ballot initiatives approved earlier by voters in California, Washington, and Michigan, and defeated by voters in Colorado in 2008. The American Civil Rights Coalition was involved in advocacy for all of these measures.

Effects of State Anti-affirmative Action Laws

The three major effects of these state laws have been to engage universities and medical schools in: 1) developing policies to comply with requirements of the laws, particularly admissions and outreach and recruitment policies; 2) communicating new policies, chiefly to administrative staff

and faculty; and 3) documenting the short-term and longer term effects of the laws on applicants, acceptants, matriculants, and graduates of undergraduate, graduate, and professional programs. To our knowledge, no comprehensive review of the effects of the laws on medical schools in the five states has been undertaken.

Affirmative Action after the U.S. Supreme Court's Decision in *Grutter v. Bollinger*, 2003 through the Present

Today U.S. medical schools differ in the legal frameworks for their efforts to promote diversity. There are medical schools in 44 states, the District of Columbia, and Puerto Rico. In all of these areas—except in California, Florida, Michigan, Nebraska, and Washington—both public and private medical schools are guided in their admissions and other policies related to a consideration of race by the U.S. Supreme Court's June 2003 decision in *Grutter v. Bollinger*. (The *Grutter v. Bollinger* decision set aside the decision of U.S. Court of Appeals from the Fifth Circuit's decision in *Hopwood vs. Texas*, affecting Texas, Mississippi, and Louisiana.)

The opinion in *Grutter v. Bollinger* upheld as a binding precedent Justice Powell's earlier determination in *Bakke* that achieving the educational benefits of diversity is a compelling state interest allowing race to be considered as a single factor among many factors in admissions and other policies. The few private medical schools in the five states with anti-affirmative action laws in place are also guided by the *Grutter v. Bollinger* decision.

Public medical schools in California, Florida, Michigan, Nebraska, and Washington are not. This translates to 15 of the 130 accredited four-year U.S. medical schools in 2008 that were prohibited by law from a consideration of race, as well as ethnicity, gender, color, and national origin in their admissions policies and includes schools in two of the nation's largest and most diverse states, California and Florida. State anti-affirmative action laws supersede the Supreme Court's 2003 ruling in *Grutter v. Bollinger*. Nevertheless, there is much in the Court's opinion in *Grutter v. Bollinger* that is useful in considering the Court's views on the nature and multiple benefits of diversity, as well as on race-conscious and race-neutral policies.

U.S. Supreme Court Decision in *Grutter v. Bollinger*, 2003

Justice Sandra Day O'Connor, in delivering the opinion of the U.S. Supreme Court in *Grutter v. Bollinger* on June 23, 2003, writes:

This case requires us to decide whether the use of race as a factor in student admissions by the University of Michigan Law School (Law School) is unlawful.²⁴⁵...Today, we hold that the Law School has a compelling interest in attaining a diverse student body.²⁴⁶...Our conclusion that the Law School has a compelling interest in a diverse student body is informed by our view that attaining a diverse student body is at the heart of the Law School's proper institutional mission.²⁴⁷...In summary, the Equal Protection Clause does not prohibit the Law School's narrowly tailored use of race in admissions

decisions to further a compelling interest in obtaining the educational benefits that flow from a diverse student body.²⁴⁸

A 5-4 majority of the Court concurred in this opinion, which supported Justice Powell's opinion in *Bakke* that the University in seeking the educational benefits that flow from a diverse student body "must be viewed as seeking a goal that is paramount in the fulfillment of its mission."²⁴⁹

Other issues discussed by Justice O'Connor in the Court's opinion included the goals of the Law School's admissions policy, the broadly based nature of diversity, the benefits of diversity, the role of education and educational institutions, the consideration of race-neutral methods of achieving diversity, and the "time-limited" nature of race-conscious policies.

Goals of Admissions Policy

"The hallmark of (the admissions policy)," Justice O'Connor notes, "is its focus on academic ability coupled with a flexible assessment of applicants' talents, experiences, and potential 'to contribute to the learning of those around them.'"²⁵⁰ Among the goals of the admissions policy are:

- Seeking to "admit a group of students who individually and collectively are among the most capable,"²⁵¹ the Law School looks for individuals with "substantial promise for success in law school" and "a strong likelihood of succeeding in the practice of law and contributing in diverse ways to the well-being of others."²⁵²
- Seeking "a mix of students with varying backgrounds and experiences who will respect and learn from each other."²⁵³
- Engaging "in a highly individualized, holistic review of each applicant's file, giving serious consideration to all the ways an applicant might contribute to a diverse educational environment."²⁵⁴

The Broadly Based Nature of Diversity

In describing the nature of diversity that the Law School seeks to achieve, she notes that it is:

- Aspiring to "achieve that diversity which has the potential to enrich everyone's education and thus make a law school class stronger than the sum of its parts. The policy does not restrict the types of diversity contributions eligible for 'substantial weight' in the admissions process, but instead recognizes 'many possible bases for diversity admissions'....The policy does, however, reaffirm the Law School's longstanding commitment to 'one particular type of diversity,' that is, 'racial and ethnic diversity with special reference to the inclusion of students from groups which have been historically discriminated against, like African-Americans, Hispanics and Native Americans, who without this commitment might not be represented in our student body in meaningful numbers.... By enrolling a 'critical mass' of [underrepresented] minority students, the Law School seeks to 'ensur[e] their ability to make unique contributions to the character of the Law School.'"²⁵⁵

- Assuring that a “broad range of qualities and experiences that may be considered valuable contributions to student body diversity” (including as examples)...“admittees who have lived or traveled widely abroad, are fluent in several languages, have overcome personal adversity and family hardship, have exceptional records of extensive community service, and have had successful careers in other fields.”²⁵⁶
- Considering seriously “each applicant’s promise of making a notable contribution to the class by way of a particular strength, attainment, or characteristic—*e.g.*, an unusual intellectual achievement, employment experience, nonacademic performance, or personal background. All applicants have the opportunity to highlight their own potential diversity contributions through the submission of a personal statement, letters of recommendation, and an essay describing the ways in which the applicant will contribute to the life and diversity of the Law School...Here, the Law School engages in a highly individualized, holistic review of each applicant’s file, giving serious consideration to all the ways an applicant might contribute to a diverse educational environment.”²⁵⁷

Benefits of Diversity

Justice O’Connor notes that the “benefits of diversity are substantial,”²⁵⁸ that they are “not theoretical but real,”²⁵⁹ and that they are supported by numerous expert studies and briefs submitted in this case. These benefits include:

- Promoting “cross-racial understanding” helps to break down racial stereotypes, and “enables [students] to better understand persons of different races.”²⁶⁰ These benefits are “important and laudable,” because “classroom discussion is livelier, more spirited, and simply more enlightening and interesting” when the students have “the greatest possible variety of backgrounds.”²⁶¹
- Better preparing “students for an increasingly diverse workforce and society, and better (preparing) them as professionals...”²⁶² “as major American businesses have made clear that the skills needed in today’s increasingly global marketplace can only be developed through exposure to widely diverse people, cultures, ideas, and viewpoints.”²⁶³

Role of Education and Educational Institutions

“We have repeatedly acknowledged the overriding importance of preparing students for work and citizenship,” Justice O’Connor states, “describing education as pivotal to sustaining our political and cultural heritage with a fundamental role in maintaining the fabric of society....”²⁶⁴ For this reason, the diffusion of knowledge and opportunity through public institutions of higher education must be accessible to all individuals regardless of race or ethnicity.”²⁶⁵

She continues, “The United States, as *amicus curiae*, affirms that ‘[e]nsuring that public institutions are open and available to all segments of American society, including people of all races and ethnicities, represents a paramount government objective....’²⁶⁶ And, ‘[n]owhere is the importance of such openness more acute than in the context of higher education.’²⁶⁷ Effective participation by members of all racial and ethnic groups in the civic life of our Nation is essential if the dream of one Nation, indivisible, is to be realized.”²⁶⁸

Finally, she notes, “In order to cultivate a set of leaders with legitimacy in the eyes of the citizenry, it is necessary that the path to leadership be visibly open to talented and qualified individuals of every race and ethnicity.²⁶⁹ All members of our heterogeneous society must have confidence in the openness and integrity of the educational institutions that provide this training.”²⁷⁰

Race-neutral Alternatives

Use of such race-neutral alternatives as a lottery system, a percentage plan similar to those used by some undergraduate programs, or admissions standards for all applicants was found by the Court not to be feasible for the Law School. Instead, the Court’s opinion states, “We are satisfied that the Law School adequately considered race-neutral alternatives currently capable of producing a critical mass without forcing the Law School to abandon the academic selectivity that is the cornerstone of its educational mission.”²⁷¹ However, the Court addresses the issue of race-neutral alternatives again as it discusses time limitation of race-conscious policies.

Race-conscious Admissions Policies and Limitations in Time

The Court’s opinion notes that “[a] core purpose of the Fourteenth Amendment was to do away with all governmentally imposed discrimination based on race.”²⁷² Justice O’Connor follows with this observation:

Accordingly, race-conscious admissions policies must be limited in time. This requirement reflects that racial classifications, however compelling their goals, are potentially so dangerous that they may be employed no more broadly than the interest demands. Enshrining a permanent justification for racial preferences would offend this fundamental equal protection principle. We see no reason to exempt race-conscious admissions programs from the requirement that all governmental use of race must have a logical end point. We expect that 25 years from now, the use of racial preferences will no longer be necessary to further the interest approved today.²⁷³

In the context of higher education, the durational requirement can be met by sunset provisions in race-conscious admissions policies and periodic reviews to determine whether racial preferences are still necessary to achieve student body diversity. Universities in California, Florida, and Washington State, where racial preferences in admissions are prohibited by state law, are currently engaged in experimenting with a wide variety of alternative approaches. Universities in other States can and should draw on the most promising aspects of these race-neutral alternatives as they develop.²⁷⁴

Justification of Race-conscious Policies

At the same time, the Court affirmed that “remedying past discrimination is not the only permissible justification for race-based governmental action” in affirmative action efforts.²⁷⁵ The Court affirmed in *Grutter v. Bollinger* that “the Equal Protection Clause does not prohibit the Law School’s narrowly tailored use of race in admissions decisions to further a compelling interest in obtaining the educational benefits that flow from a diverse student body.”²⁷⁶

Framing the Benefits of Diversity

The opinions of the U.S. Supreme Court over a period of more than thirty years, beginning with the 1978 *Bakke* case and continuing with the 2003 *Grutter v. Bollinger* case and, most recently, the June 2007 *Parents Involved in Community Schools v. Seattle School District No.1*²⁷⁷ and *Meredith v. Jefferson County*²⁷⁸ cases (even though the Court did not approve the use of race-conscious policies to achieve diversity in these last cases), affirm the benefits of diversity that flow from a diverse student body to students, to the educational mission of institutions of higher education, and to the community and larger society. These benefits are summarized in Tables 1-3 through Table 1-5.

Table 1-3
Benefits of Diversity to Students

Diversity provides benefits to all students:

- to promote an atmosphere of “speculation, experiment and creation essential to the quality of higher education”
- to enrich training and better equip graduates “to render with understanding their vital service to humanity”
- to promote cross-racial understanding
- to help to break down racial stereotypes
- to enable students to better understand persons of different races
- to improve learning outcomes
- to better prepare them for an increasingly diverse workforce and society, and better prepare them as professionals with skills needed in today’s increasingly global environment that can only be developed through exposure to widely diverse people, cultures, ideas, and viewpoints.

Sources: *Regents of the University of California v. Bakke*, U.S. Supreme Court (1978)
Grutter v. Bollinger, U.S. Supreme Court (2003)

Table 1-4
Benefits of Diversity to Universities and Medical Schools

Diversity provides benefits to universities and medical schools:

- Diversity is “a compelling interest” for universities and medical schools in terms of meeting their educational mission.
 - In seeking the educational benefits that flow from a diverse student body, the university “must be viewed as seeking a goal that is paramount in the fulfillment of its mission.”
 - Attaining “a diverse student body is at the heart of the Law School’s proper institutional mission.”
-

Sources: *Regents of the University of California v. Bakke*, U.S. Supreme Court (1978)
Grutter v. Bollinger, U.S. Supreme Court (2003)

Table 1-5
Benefits of Diversity to Community and Society

Diversity provides benefits to the community and society by:

- Ensuring that public institutions are open and available to all segments of American society, including people of all races and ethnicities, represents a paramount government objective.
 - Keeping the path to leadership visibly open to talented and qualified individuals of every race and ethnicity. All members of our heterogeneous society must have confidence in the openness and integrity of the educational institutions that provide this training.
-

Source: *Grutter v. Bollinger*, U.S. Supreme Court (2003)

Using Diversity as a Rationale: Medical Schools’ Evolving Policies

All medical schools have the opportunity to use diversity as a rationale to advance their missions, even though some are forbidden to use race-conscious policies to achieve diversity.

The AAMC in September 2003 released an analysis, *Assessing Medical-School Admissions Policies: Implications of the U.S. Supreme Court’s Affirmative-Action Decisions*, aimed not at providing legal advice, but at assisting medical schools with the help of legal counsel on “using the diversity rationale in building race-conscious/ethnicity-conscious admissions policies.”²⁷⁹ In March 2008, The AAMC provided a substantive guide, *Roadmap to Diversity: Key Legal and Educational Policy Foundations for Medical Schools*.²⁸⁰ The purpose of this document is “help medical schools align admissions to mission, and establish and implement institution-specific, diversity-related policies that will advance their core educational goals with minimal legal risk.”²⁸¹

When policies related to diversity are linked to excellence in all of the interrelated missions of medical schools—education and training, research, patient care, and public service—then these policies can result in institutional change. Advancing these policies is not only an institution-by-institution process, but also an institution-wide process, involving leadership from university presidents and chancellors; medical school deans; offices of admissions, academic affairs, diversity and/or minority affairs, student affairs, and student financial aid; faculty; students; and staff. Outside of universities and medical schools, leadership has come from Presidents of the United States, Cabinet Secretaries, and executive agencies at the federal level of government and Congress, state government, private foundations, civic and advocacy organizations, and professional and trade organizations.

Using a mission-driven policy framework to consider how applicants, students, residents, postdoctoral scholars, faculty, and staff bring the benefits of diversity in its broadest sense to the institution’s education and training mission, its research mission, its patient care mission, and its community and public service mission is a way forward for all medical schools working to enhance diversity in a changing context.

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Class of 1992, UCSF School of Medicine
Courtesy of University Development and Alumni Relations



CHAPTER 2

Increasing Access to U.S. Medical Schools for Diverse Populations:

U.S. Demographic, Education, and Medical School Trends, 1960s-2000s, Graduate Medical Education, and the U.S. Physician Workforce

Introduction

The years from 1960 through the first years of the 21st century have been transformative for the United States population. In this chapter, we highlight national demographic, education, and medical school trends for the period from the 1960s through the early 2000s. We describe the growth of the U.S. population and changes in its racial and ethnic composition and look at diversity from national, regional, and local perspectives. We show trends in educational attainment and achievement for different racial and ethnic groups in elementary, secondary, and postsecondary education. We describe the educational pathway that leads to successful entry into medical school, as well as points along this pathway where students who aspire to go to medical school may no longer continue. Next we show trends by race and ethnicity for U.S. medical school applicants, accepted applicants, matriculants, and graduates from the 1960s through the early 2000s, focusing on trends for those groups underrepresented in medicine. Finally, we discuss the U.S. physician workforce, including a snapshot of the workforce in the early 2000s, recent reports on physician supply and demand in primary and specialty patient care and in other physician activities. We review recent and anticipated progress in increasing U.S. medical school enrollment, trends in graduate medical education for U.S. allopathic, international, and osteopathic medical school students and graduates. We examine the role of international medical graduates in the physician workforce. Throughout this discussion, we focus our analysis on race/ethnicity of medical students, physicians in training, and physicians and their involvement in patient care, research, and teaching activities.

A National Overview

In fewer than fifty years, the face of America has been transformed. The number of people in the nation has grown dramatically. The population in late 2009 stood at nearly 308 million.¹ In 1960, it was about 180 million.² The nation has become increasingly diverse, as reflected in the ancestry, national origin, country of birth, ethnic origin, race, and language use of individuals.^{3,4,5,6,7,8} Many more people, including those who are underrepresented in medicine—Blacks or African Americans, Hispanics or Latinos, American Indians and Alaska Natives, and Native Hawaiians and Other Pacific Islanders—have attained higher levels of education.⁹ More racial/ethnic minorities have obtained baccalaureate degrees in the sciences.¹⁰ The percentage of the U.S. population living in poverty has decreased, gaps between racial/ethnic groups are smaller in terms of those living in poverty, and median earnings have increased for all groups.¹¹ Average life expectancy has increased by seven years from 1960 through 2000,¹² and medical and public health advances have eliminated some health problems and made others manageable over a lifetime.¹³

At the same time, some trends over these decades pose major social and health policy challenges. There are major health disparities among racial and ethnic groups in the United States,¹⁴ as well as gaps in life expectancy¹⁵ and differences in health insurance coverage.^{16,17} There are educational disparities among racial and ethnic groups that begin at home even before young children enter kindergarten.¹⁸ These disparities, in turn, may be linked to health, social, and economic inequities.¹⁹ Some people today are losing economic ground.^{20,21} There continue to be major differences among racial and ethnic groups in terms of those pursuing postsecondary education, including advanced and professional degrees.²²

A Growing and Changing U.S. Population

The picture of diversity in the U.S. population—in terms of race, ethnicity, national origin, country of birth, ancestry, and language use—has become more detailed decade by decade, census by census. For example, the 1970 Census was the first to include a question about Hispanic origin; however, this question was asked of only a 15 percent sample of households and was based on Spanish language. Prior to 1970, “Hispanic origin” was determined indirectly by collecting data for “persons of Spanish surname” in five Southwestern states. Beginning with the 1980 Census, “Hispanic origin” became a separate question on the Census form; people were asked if they were of “Spanish/Hispanic origin or descent.” The term “Latino” was added in the 2000 Census.²³

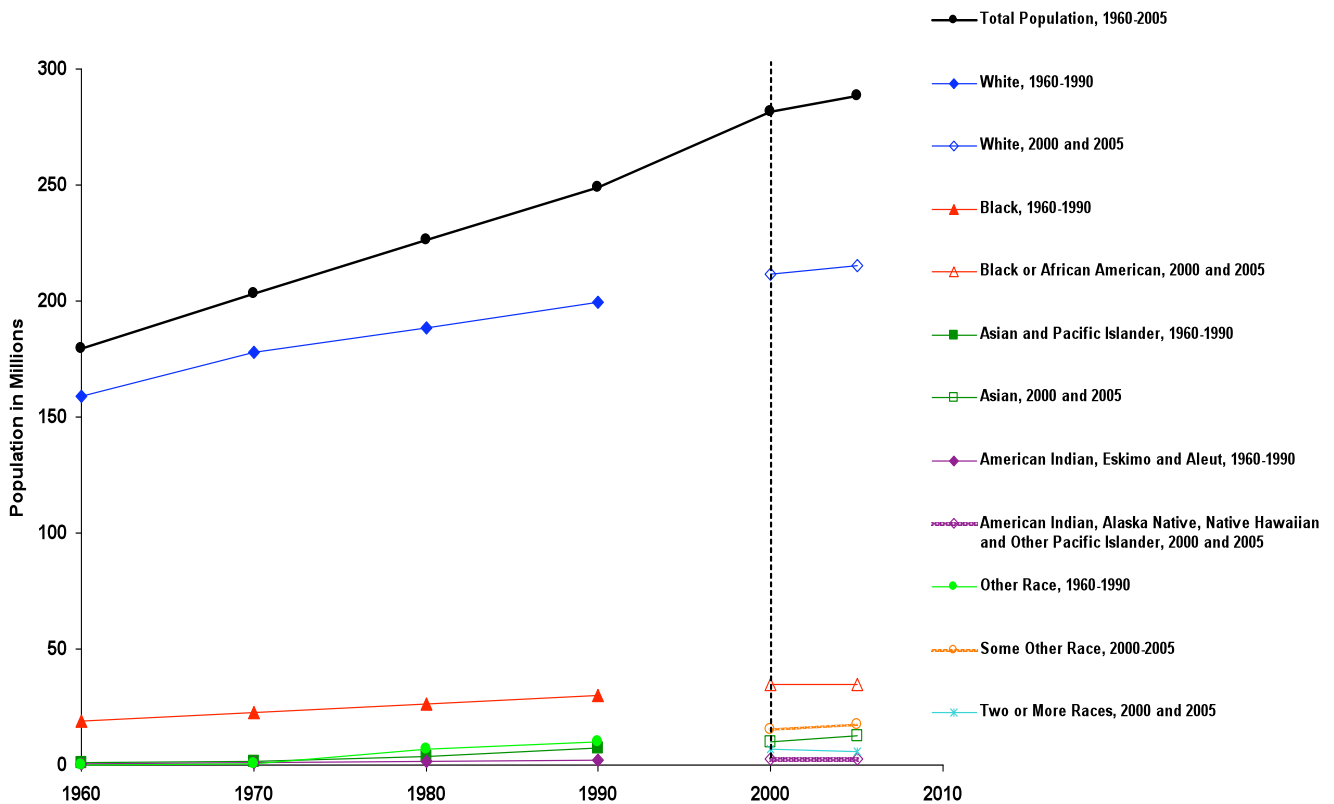
Trends by Race and Ethnicity, 1960s-2000s

In the 2000 Census, people were asked first if they were or were not of Spanish/Hispanic/Latino origin. They were then asked to identify their race by indicating one or more racial categories listed or writing in another race. The 2000 racial categories were White, Black or African American, American Indian and Alaska Native, Asian, and Native Hawaiian and Other Pacific Islander. In 2000, 6.8 million people, or 2.4 percent of the total population, identified two or

more racial categories when describing their race.²⁴ Because of these changes, Census 2000 data on Hispanic origin and race are not directly comparable with earlier censuses.²⁵

The U.S. population grew from 179.3 million people in 1960 to 288.4 million in 2005.²⁶ (Figure 2-1). Between 1960 and 2005, the rate of increase for the population as a whole was 61 percent. However, the rates of increase over this period for different racial groups varied widely. The White population increased by 36 percent, the Black or African American population by 85 percent, and the Asian population by 1,172 percent.²⁷ The minority population grew eleven times more rapidly than did the White non-Hispanic population between 1980 and 2000.^{*28} The 1990s marked the largest increase in population in any decade in U.S. history, with an increase of 32.7 million people.²⁹ This decade also marked a rise in Asian, Hispanic, and African American populations.

Figure 2-1
U.S. Population by Race, 1960-2005

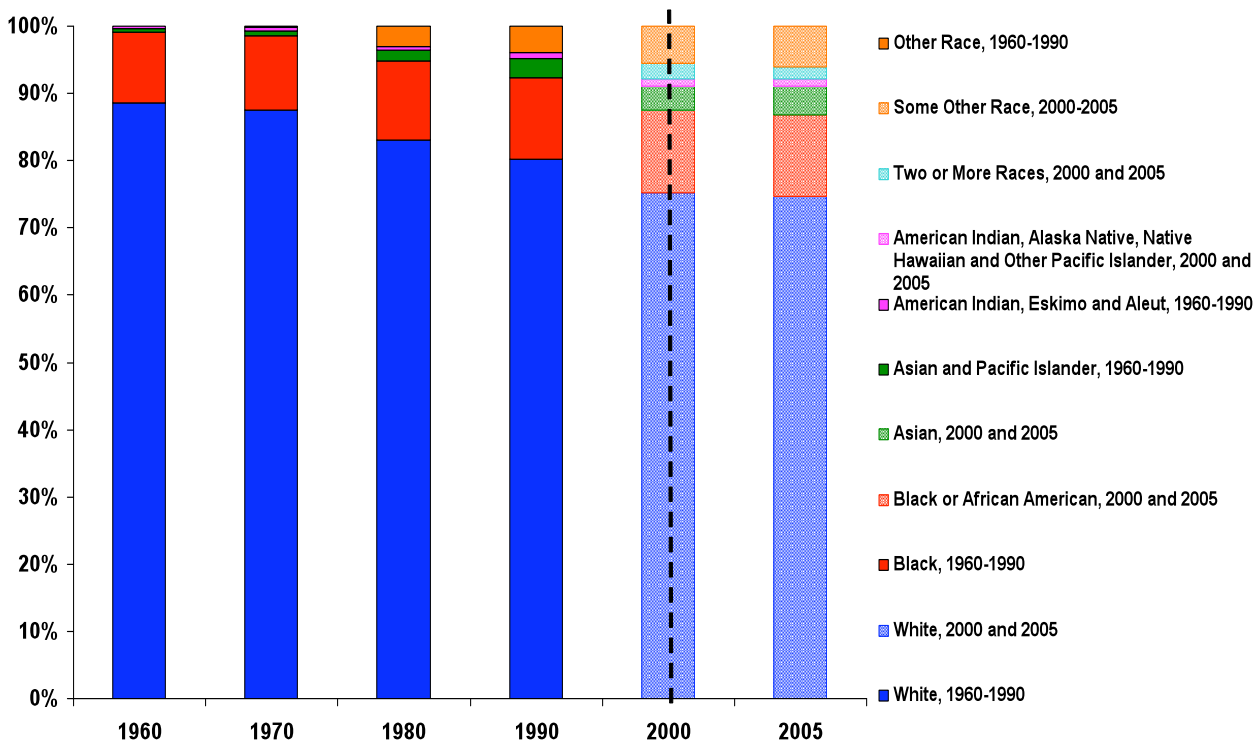


Note: Definitional changes occurred in 2000 and categories are not directly comparable to prior years. 2005 data are subject to sampling variability.

Source: U.S. Census Bureau, Population Division, Working Paper #56 by Campbell Gibson and Kay Jung; U.S. Census Bureau, Census 2000 Summary File 1; U.S. Census Bureau, 2005 American Community Survey

* Changes in the Census from 1990 to 2000 do not allow direct comparisons of data on race; the Census Bureau advises caution in interpreting changes in racial composition over time. U. S. Census Bureau. Overview of Race and Hispanic Origin: Census 2000 Brief: US Census Bureau; 2001

Figure 2-2
U.S. Population by Race as a Percent of Total Population, 1960-2005

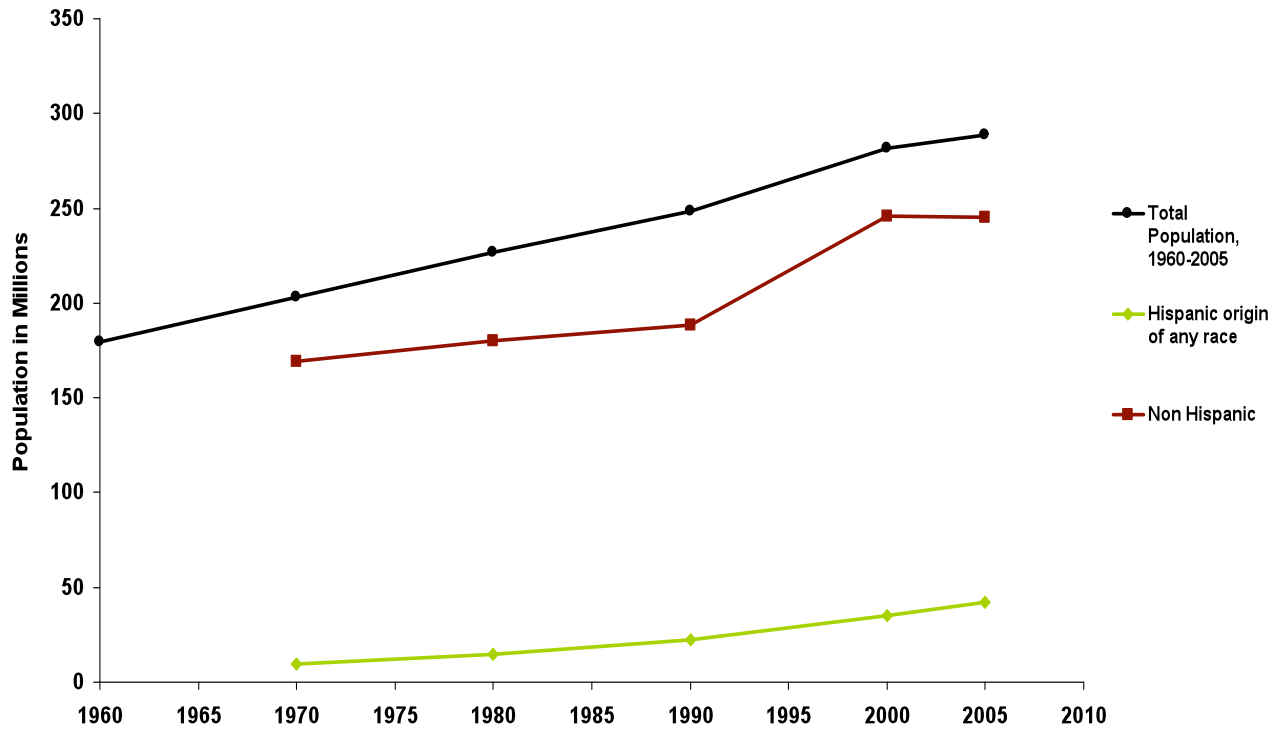


Note: Definitional changes occurred in 2000 and categories are not directly comparable to prior years. 2005 data are subject to sampling variability.

Source: U.S. Census Bureau, Population Division, Working Paper #56 by Campbell Gibson and Kay Jung; U.S. Census Bureau, Census 2000 Summary File 1; U.S. Census Bureau, 2005 American Community Survey

Since 1960 when Whites accounted for about 89 percent of the population, their proportion of the total U.S. population has steadily declined³⁰ (Figure 2-2). The proportion of Blacks has remained almost the same, comprising between 11 to 12 percent of the population in all decades. The Asian and Pacific Islander population has accounted for a growing proportion of the population, from 1 percent in 1960 to 4 percent for Asians alone percent in 2005. American Indians, Alaska Natives, and Native Hawaiians and Other Pacific Islanders have grown as a percent of the total population. Those who identified as Some Other Race comprised 6 percent of the population in 2005 and less than 1 percent in 1960.³¹

Figure 2-3
U.S. Population by Hispanic Ethnicity, 1970-2005

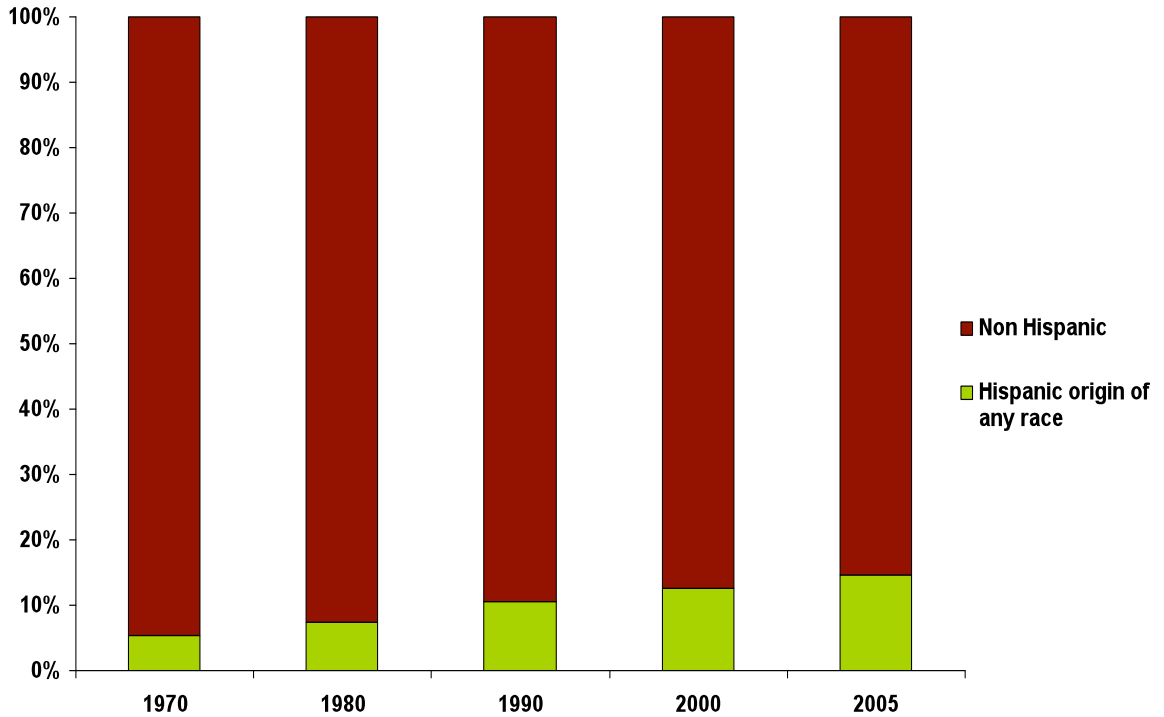


Note: 1970 Hispanic origin based on Spanish language, determined from 15% sample. 2005 data are subject to sampling variability.

Source: U.S. Census Bureau, Population Division, Working Paper #56, by Campbell Gibson and Kay Jung; U.S. Census Bureau, Census 2000 Summary File 1; U.S. Census Bureau, 2005 American Community Survey

Those of Hispanic origin have been the fastest growing population (Figure 2-3), increasing from 9.6 million people in 1970 to 41.9 million people in 2005. In the 1990s alone, the Hispanic population grew by more than 13 million, from 22.3 million in 1990 to 35.3 million in 2000.

Figure 2-4
U.S. Population by Hispanic Ethnicity as a Percent of Total Population, 1970-2005



Note: 1970 Hispanic origin based on Spanish language, determined from 15% sample. 2005 data are subject to sampling variability.

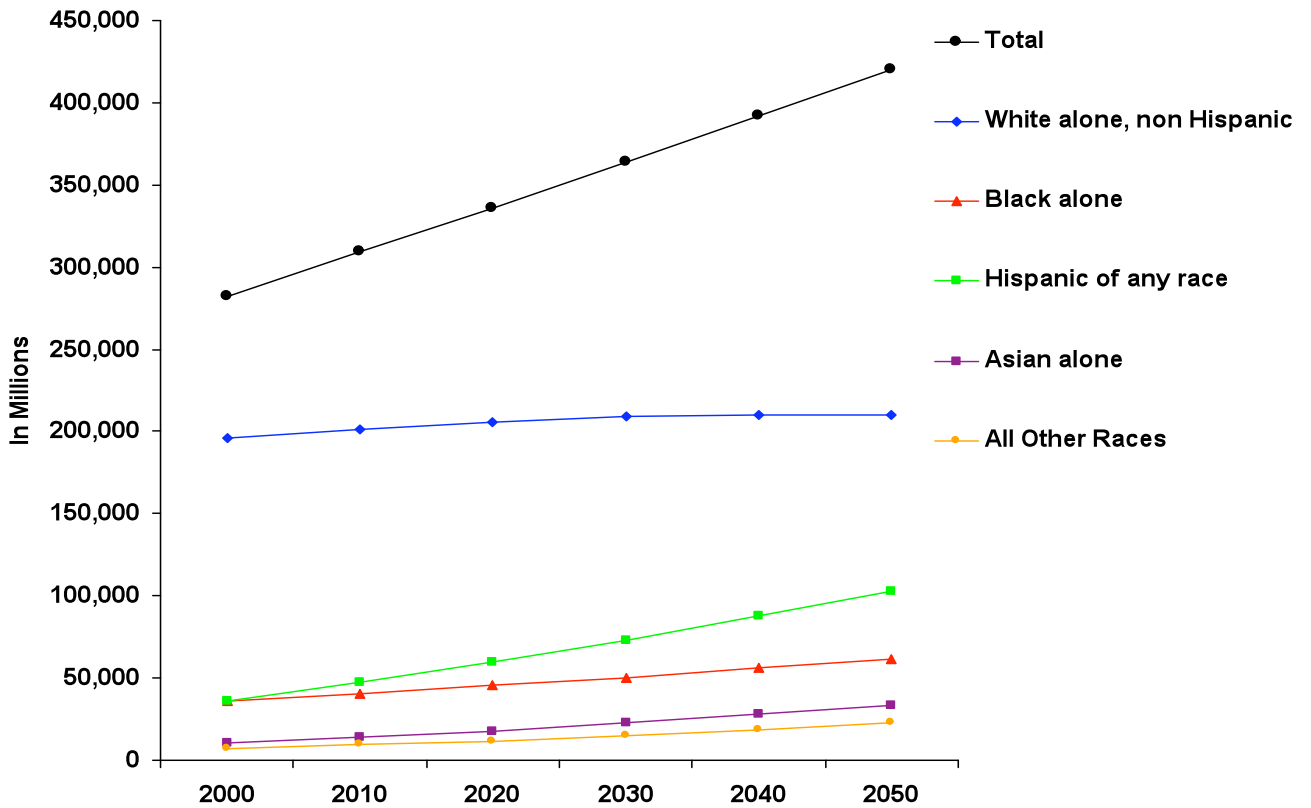
Source: U.S. Census Bureau, Population Division, Working Paper #56, by Campbell Gibson and Kay Jung; U.S. Census Bureau, Census 2000 Summary File 1; U.S. Census Bureau, 2005 American Community Survey

Hispanics represent a growing proportion of the total population (Figure 2-4), increasing from 5 percent in 1970 to 9 percent in 1990 to 13 percent in 2000 and 15 percent in 2005.

Population Projections by Race and Ethnicity to 2050

Over the next decades, population increases are projected to be greatest among Hispanics of any race; Blacks, Asians, and All Other Races are also expected to show increases (Figure 2-5—Figure 2-7). White non-Hispanics are expected to have a small rate of increase, as well as representing an ever declining proportion of the population.³²

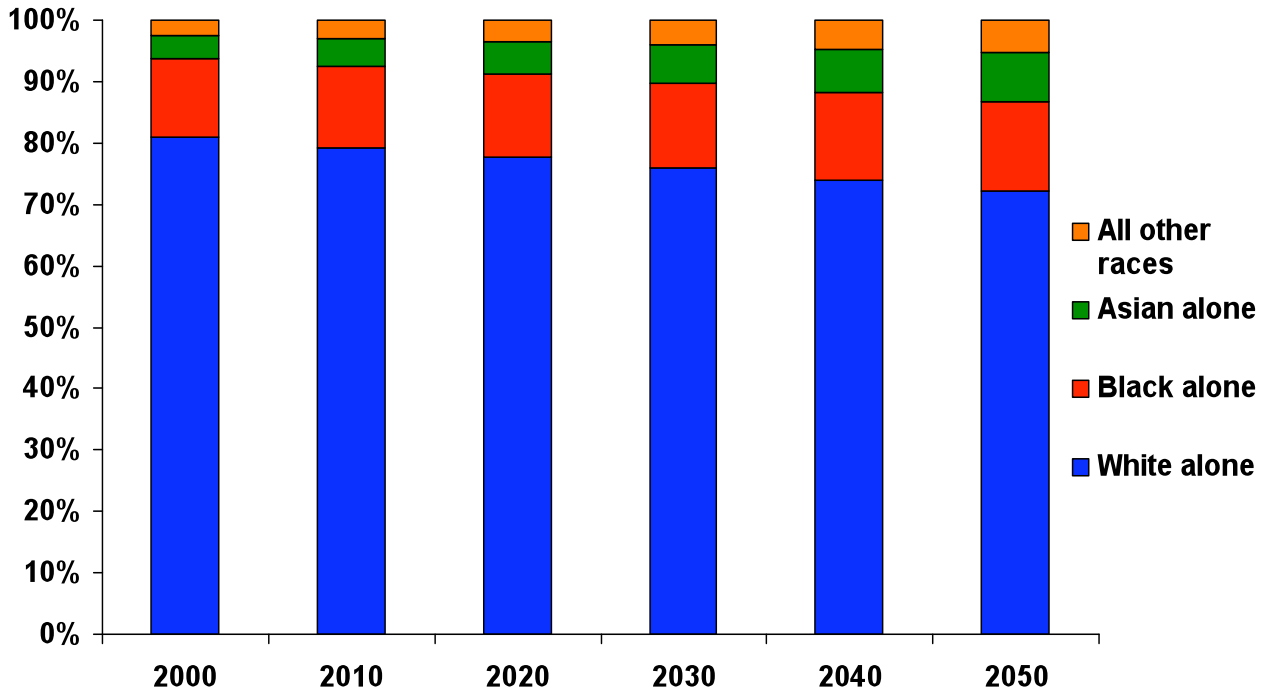
Figure 2-5
Projected U.S. Population by Race and Hispanic Origin, 2000-2050



Note: All Other Races includes American Indian and Alaska Native alone, Native Hawaiian and Other Pacific Islander alone, and Two or More Races

Source: U.S. Census Bureau. U.S. Interim Projections by Age, Sex, Race, and Hispanic Origin. 2004

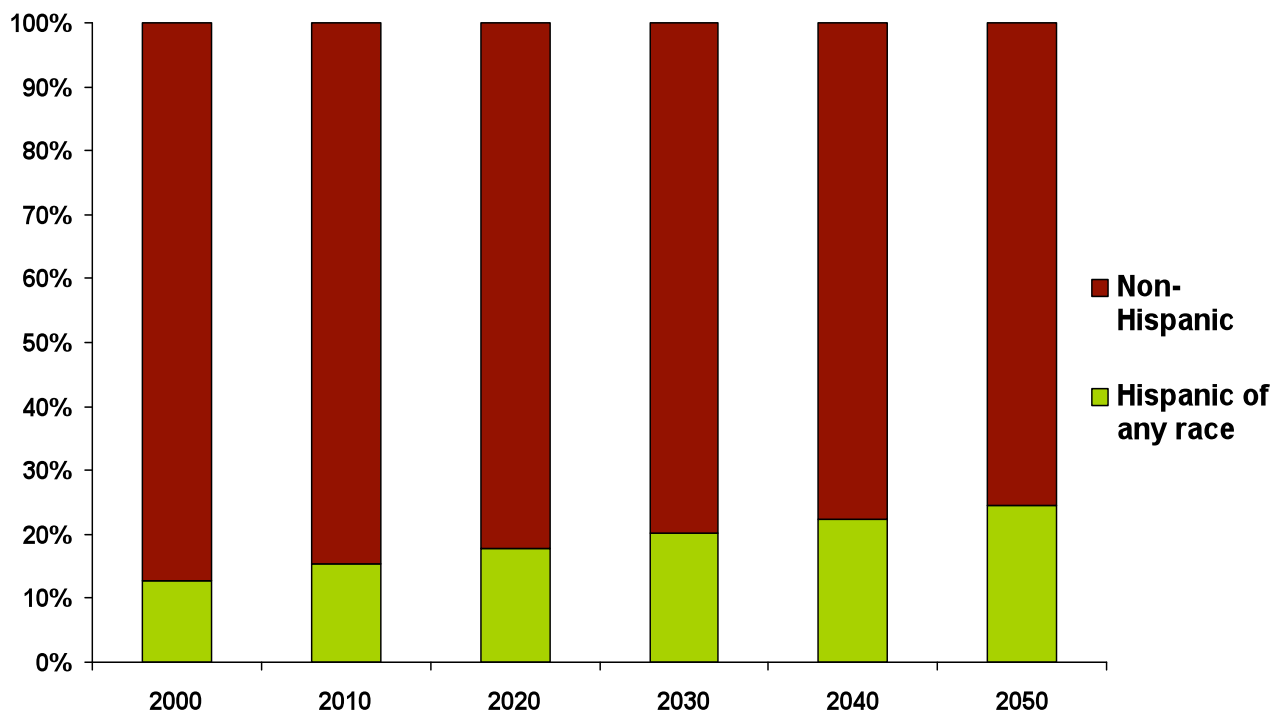
Figure 2-6
Projected U.S. Population by Race as a Percent of Total Population, 2000-2050



Note: All Other Races includes American Indian and Alaska Native alone, Native Hawaiian and Other Pacific Islander alone, and Two or More Races
 Source: U.S. Census Bureau. U.S. Interim Projections by Age, Sex, Race, and Hispanic Origin, March 2004

Blacks are expected to increase to 14 percent of the population by 2030 and nearly 15 percent by 2050. Asians are also expected to account for an increasing proportion of the population, growing to 6 percent of the population in 2030 and 8 percent in 2050.³³

Figure 2-7
Projected U.S. Population by Hispanic Origin as a Percent of Total Population, 2000-2050



Source: U.S. Census Bureau. U.S. Interim Projections by Age, Sex, Race, and Hispanic Origin, 2004

Hispanics of any race are expected to account for 20 percent of the population in 2030 and 24 percent in 2050.

Diversity in Geographic Regions and Metropolitan Areas

The increasing diversity of the United States is largely concentrated geographically in certain regions of the country (i.e., Hispanics or Latinos and all races in the West, Southwest, Southeast, and Northeast coastal regions) and in certain metropolitan areas (i.e., New York, Miami, Dallas, San Diego, Los Angeles, San Jose, and San Francisco). While some racial and ethnic minorities are dispersing from gateway metropolitan areas, the pace is fairly slow.³⁴ The Census produced a special report, *Mapping Census 2000: The Geography of U.S. Diversity*, showing the distribution of race/ethnicity by county (Figure 2-8). The map shows clearly both high-diversity and low-diversity areas. New England, the Midwest, the Plains, and the Pacific Northwest largely rank as “low diversity” regions, apart from certain metropolitan areas.³⁵ The geographic distribution by race/ethnicity shows both areas where intensive outreach and recruitment are essential in order to improve diversity in medical schools and areas where a diverse physician workforce is most essential to help meet the health needs of diverse populations. The maps presented in Figures 2-9 through 2-11 show ancestry, birth outside the U.S., and language other than English spoken at home in terms of distribution by county.

Figure 2.8

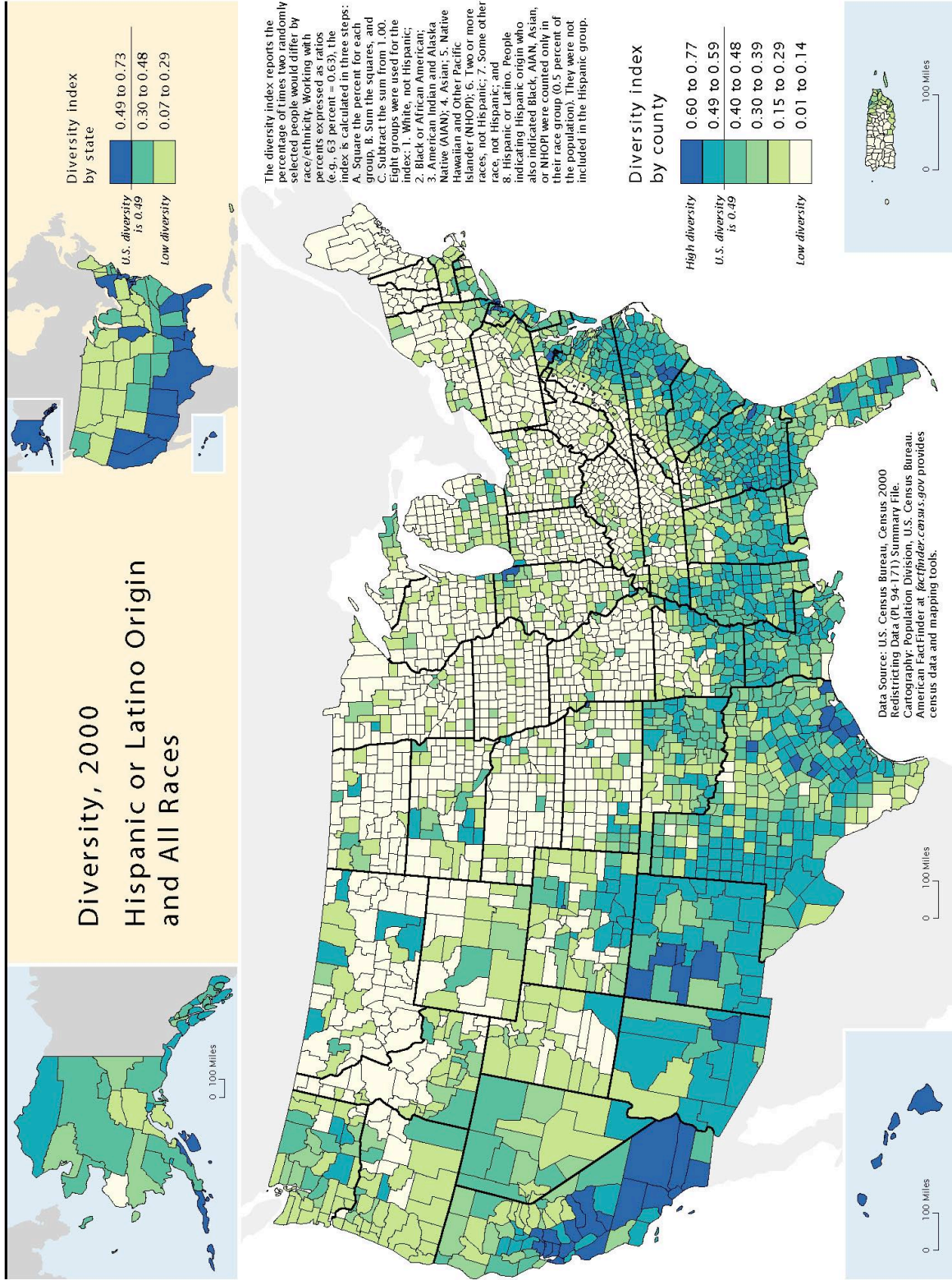


Figure 2.9

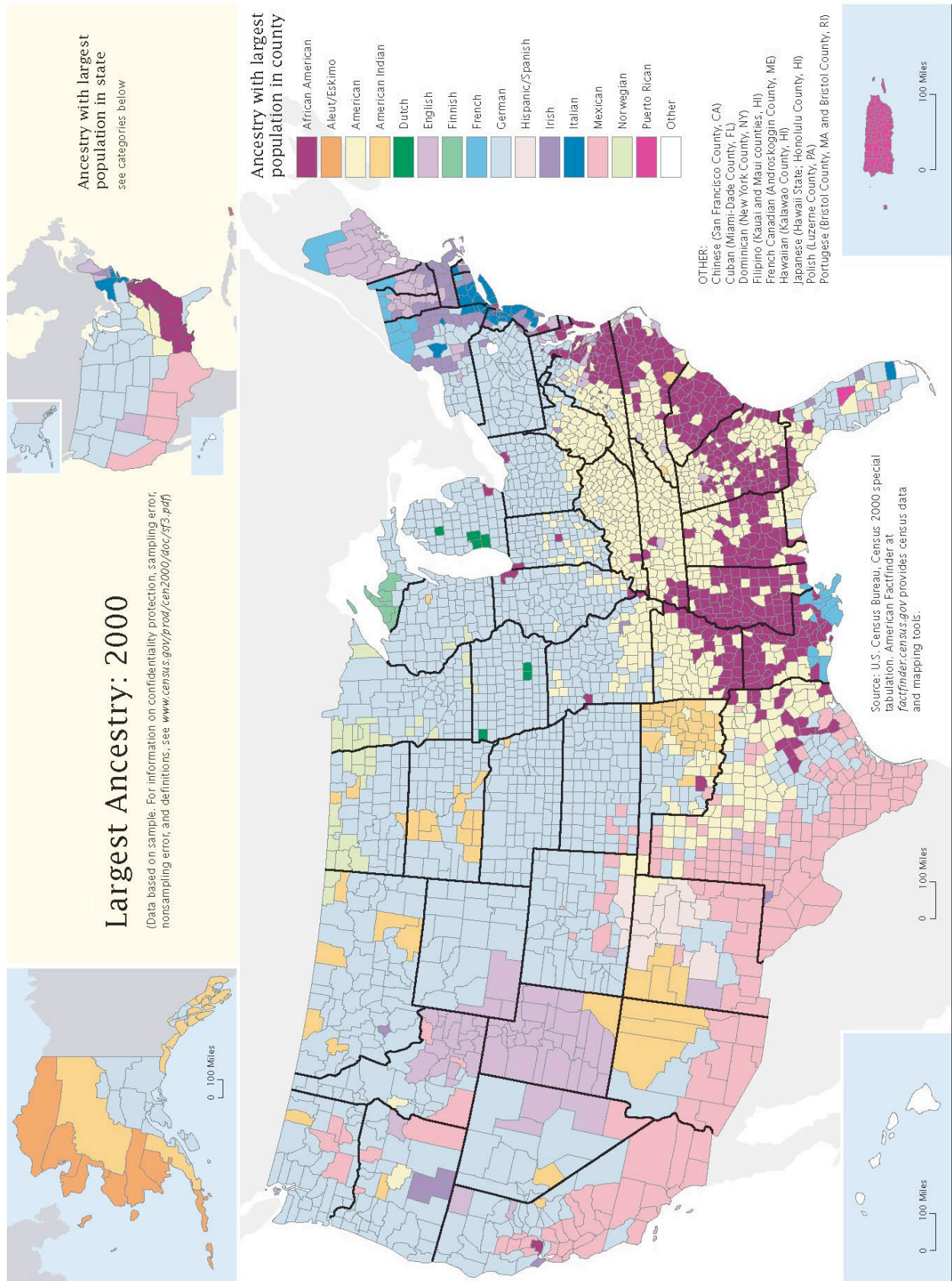


Figure 2-10

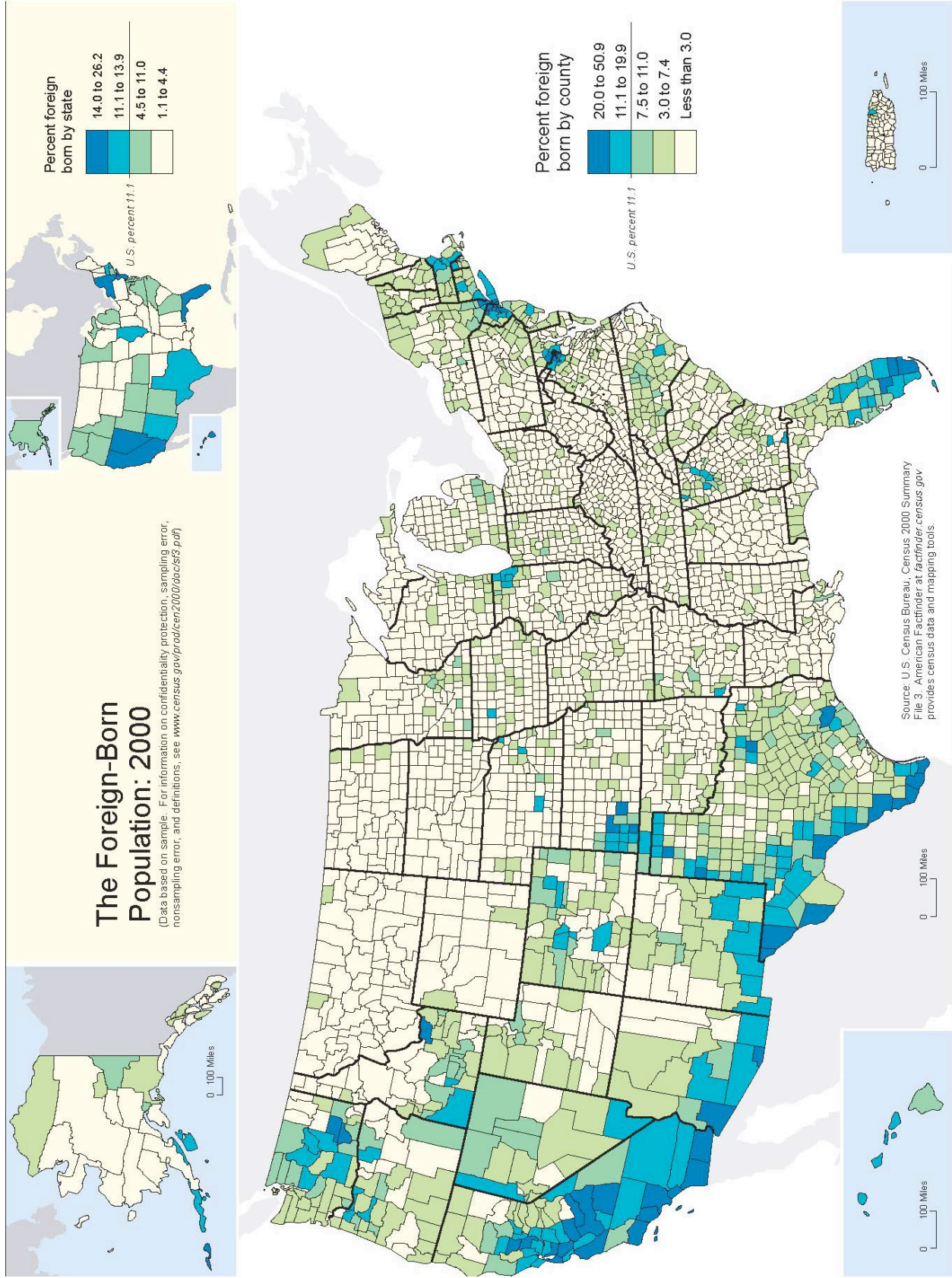
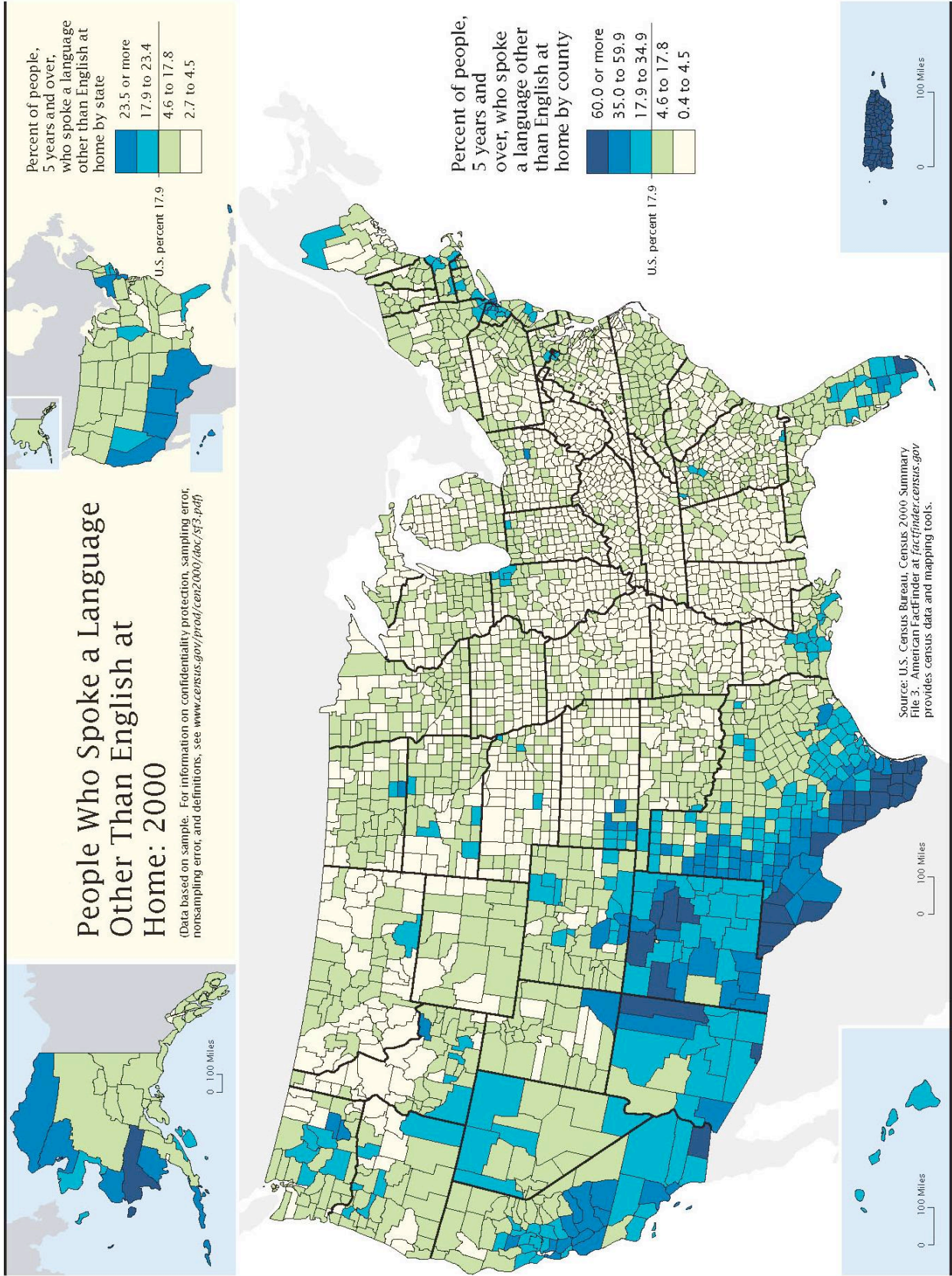


Figure 2-11



From Kindergarten to College: The Educational Continuum and the Pathway to Medical School

Social and Economic Dimensions of Educational Attainment and Achievement

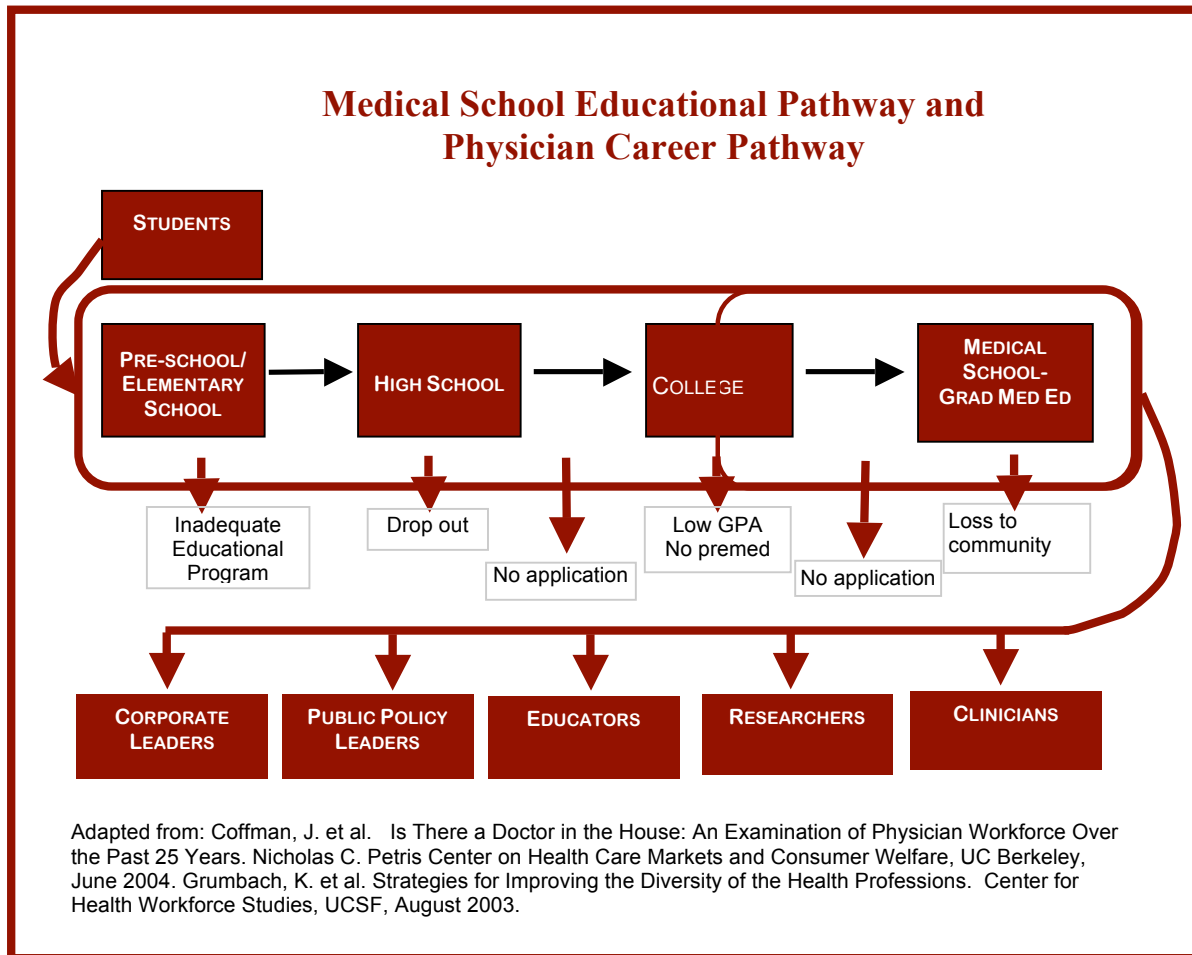
Medical school comes at the end of a long educational continuum that begins even before a child's first formal educational experience. Lack of opportunity to apply to, to be accepted to, to matriculate in, and to successfully complete medical school is the end result for some of social and economic inequities that exist at birth.³⁶ Parents' educational attainment and achievement, their employment status, the type of employment, household income, race/ethnicity, language spoken at home, immigration status, country of birth, parents' expectations for children in terms of education and career, and family support systems all affect a child's potential for educational attainment and achievement.³⁷ Where a family lives, the type of housing, the neighborhood, and the community are other factors that affect a child's educational possibilities and chances for success, as do school funding, resources, and environment.³⁸ Individually and collectively, these factors have an enormous impact on a child's ability to prepare successfully for medical school.

Black and Hispanic children, for example, are not only more likely to be in lower-income households than are their White counterparts, but also are more likely to be part of communities that suffer from under-resourced public schools.³⁹ The consequence of these factors is that children may leave the educational pathway to medical school and other health professions schools at many points.

The Educational Pathway to Medical School

This section examines educational attainment and achievement and potential barriers and exit points along the medical school educational pathway before students apply to medical school (Figure 2-12), observing trends by race/ethnicity among students. Loss of diversity among students along this segment of the educational pathway eventually results in a loss to the community in terms of the diversity of the physician workforce across several physician career paths.

Figure 2-12



Educational Attainment

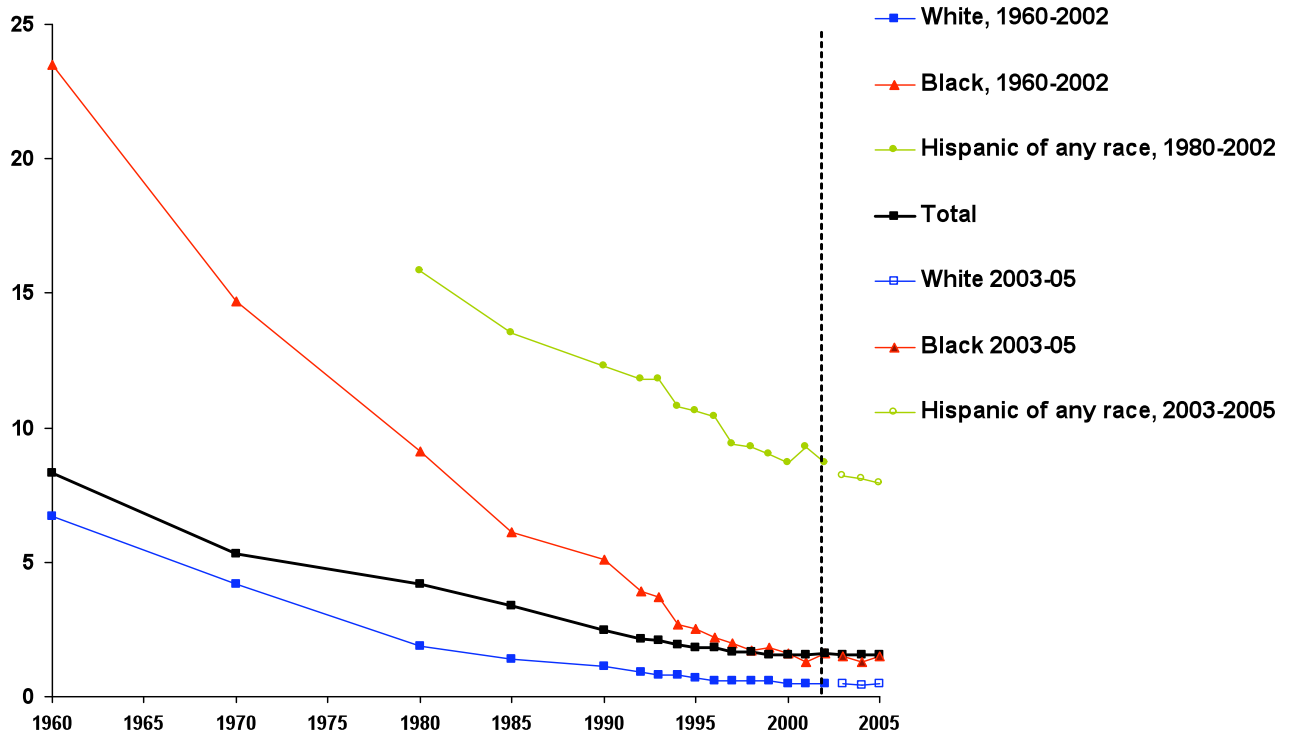
“To finish first, first you must finish.”

Just as finishing an athletic event is a prerequisite to winning, so, too, is completing certain educational milestones a prerequisite for becoming a physician. Often college biology, organic chemistry, or physics are described as “pre-med requirements;” however, there are a number of other requirements to be met before an individual reaches the point of becoming a “pre-med.”

ELEMENTARY AND SECONDARY EDUCATION. The percentage of U.S. students who have completed fewer than five years of elementary school has dropped dramatically from 1960 to 2005, but with large gaps by race (Figure 2-13).⁴⁰ The percentage completing high school has increased sharply, but also with racial gaps. Blacks have made substantial gains. The percentage completing less than five years of elementary school has dropped from more than 20 percent to 2 percent, and the percentage of students graduating from high school has increased from 21 to 81 percent (Figure 2-14).⁴¹

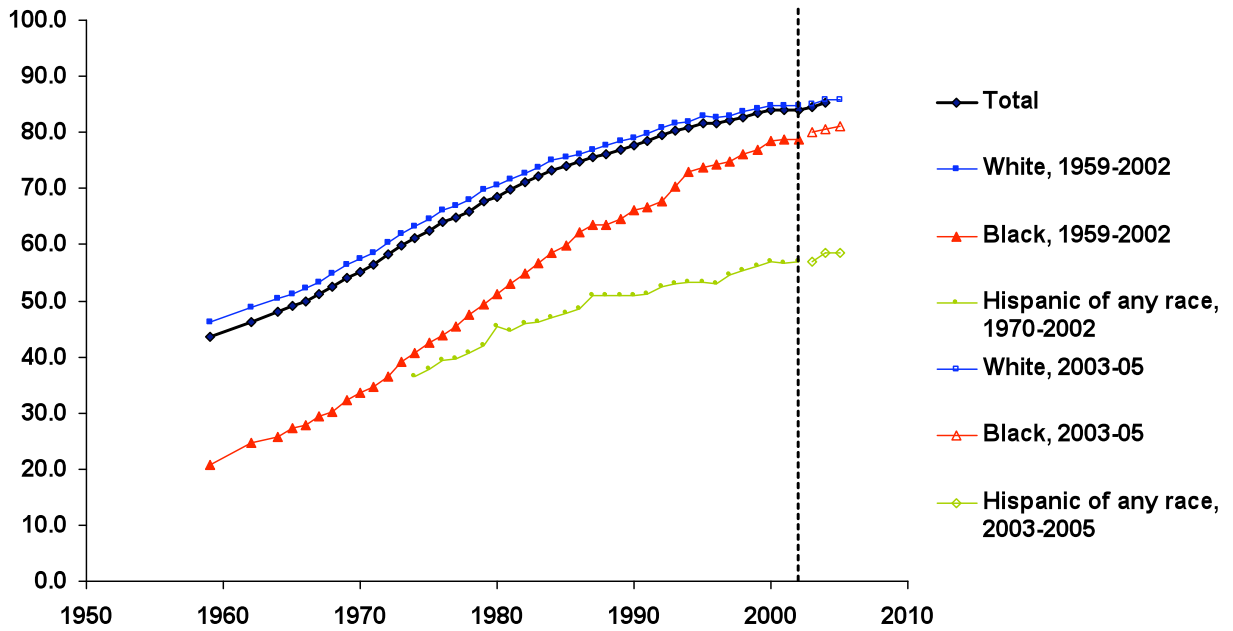
Rates for Hispanics have also improved both for elementary and secondary school; however, gains have not been as large as those for Whites and Blacks. In 2005, 8 percent of Hispanics completed fewer than five years of elementary school, compared to less than 1 percent of Whites and 2 percent of Blacks. Only 59 percent of Hispanics graduated from high school in 2005, compared to 81 percent of Blacks and 86 percent of Whites.⁴²

Figure 2-13
Percent of U.S. Students Completing Fewer than Five Years of Elementary School
by Race and Hispanic Origin, 1960-2005



Note: Prior to 1980, persons of Hispanic origin are included in the White non-Hispanic and Black non-Hispanic categories. Total includes other racial/ethnic groups not separately shown.
 Sources: U.S. Census Bureau. U.S. Census of Population, 1960, Vol. 1, Part 1; Current Population Reports, Series P-20 and unpublished data; U.S. Department of Education. National Center for Education Statistics. 1960 Census Monograph, Education of the American Population, by Folger JK and Nam CB. 2003; U.S. Census Bureau. Current Population Survey, March 2005

Figure 2-14
Percent of U.S. Students Graduating from High School
by Race and Hispanic Origin, 1959-2005

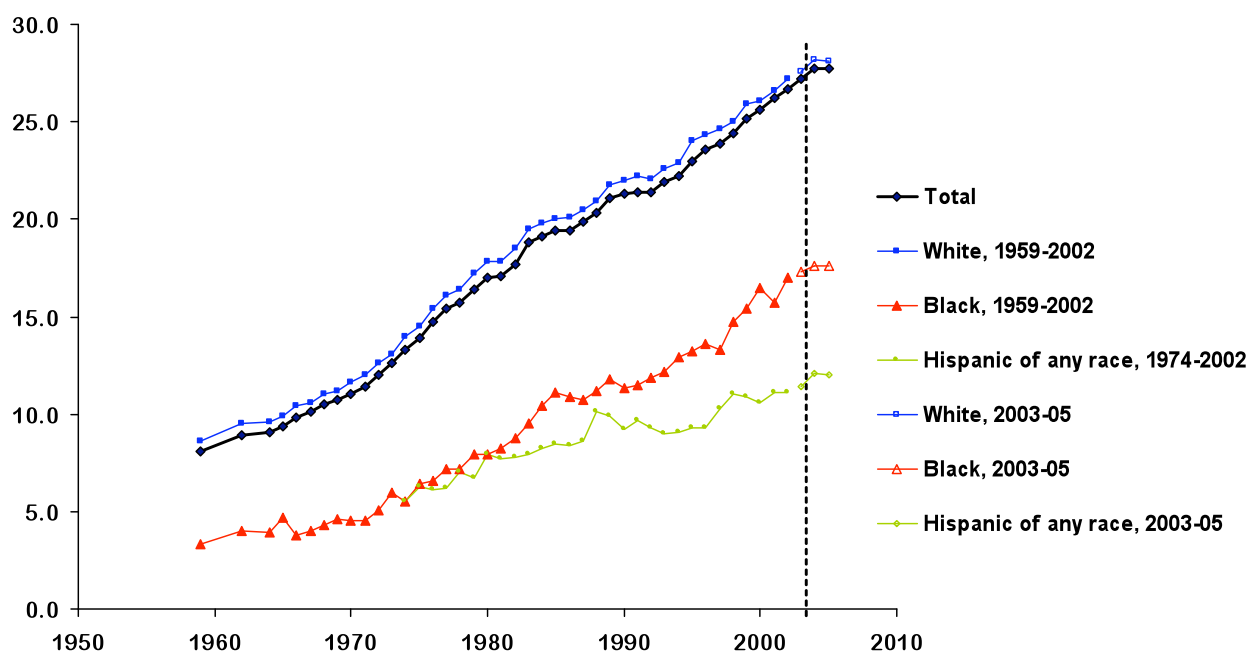


Note: Starting in 2001, data are from the expanded CPS sample and were calculated using population controls based on Census 2000. Data after 2002 are not directly comparable to prior years. Beginning with data in 1992, respondents were asked if they were a "High School Graduate" as opposed to "Completing 4 Years or High School or more."

Sources: 1947 and 1952 to 2002 March Current Population Survey, 2003 and 2004 Annual Social and Economic Supplement to the Current Population Survey (non-institutionalized population, excluding members of the Armed Forces living in barracks); 1950 Census of Population and 1940 Census of Population (resident population). U.S. Census Bureau, Education and Social Stratification Branch, 2005

POSTSECONDARY EDUCATION. While more Blacks and Hispanics are graduating from four-year colleges, there remain large gaps among Whites, Blacks, and Hispanics (Figure 2-15). In fact, gaps between Hispanics and Whites and Blacks are not closing, but are increasing. In 1980, 18 percent of Whites, 8 percent of Blacks, and 8 percent of Hispanics graduated from college. By 2005, this percentage had increased to 28 percent of Whites, 18 percent of Blacks, and 12 percent of Hispanics. While college graduation rates are increasing across the board, those for Blacks and Hispanics are increasing at slower rates than those for Whites.⁴³

Figure 2-15
Percent of U.S. Students Graduating from College
by Race and Hispanic Origin, 1959-2004



Note: Starting in 2001, data are from the expanded CPS sample and were calculated using population controls based on Census 2000. Data after 2002 is not directly comparable to prior years. Beginning with data for 1992, respondents were asked if they had a "Bachelor's degree, Master's degree, Doctorate degree, and/or Professional degree" as opposed to "Completed 4 Years of College or more."

Sources: 1947 and 1952 to 2002 March Current Population Survey, 2003 and 2004 Annual Social and Economic Supplement to the Current Population Survey (non-institutionalized population, excluding members of the Armed Forces living in barracks); 1950 Census of Population and 1940 Census of Population (resident population). U.S. Census Bureau, Education and Social Stratification Branch. Internet Release date: March 2005

Educational attainment—completing elementary school, graduating from high school, and/or graduating from college—has improved for all racial and ethnic groups, with gaps closing in primary and secondary education, but substantial gaps remain between groups in postsecondary education at the baccalaureate level.⁴⁴ This last phenomenon can be explained in part by looking at achievement gaps. Attainment data show only that students have met minimum requirements for graduation. While these measurements are useful for seeing how gaps have closed since 1960, they do not indicate whether students have the necessary skills to apply and be admitted to medical school.

Educational Achievement

MEASURING ACHIEVEMENT. While measurements of achievement are imperfect, they demonstrate the skills that students have at different points in their schooling. These measurements, which begin at a very young age and continue over the course of schooling, show how students perform on a variety of standardized tests. Achievement tests are used not only to measure a student's ability, but also to place students in remedial or enrichment classes, and in college admissions. For these reasons, it is useful to examine standardized scores to demonstrate how "ready" certain students are both in actual skill and in how this skill is assessed by those in college admissions.

Gaps in education exist before children enter the educational system. However, a number of government programs, such as WIC (Special Supplemental Nutrition Program for Women, Infants, and Children) and Head Start, were intended to help close these gaps before children entered kindergarten. Positive effects have been shown on cognitive functioning/performance, health status, and social/emotional adjustment of children in high-quality preschool programs.⁴⁵ Nationally, African Americans have the greatest percentage of children attending preschool, 79 percent of students, compared to 66 percent of Whites and 57 percent of Latino students.⁴⁶

However, attendance at preschool does not necessarily directly correlate with increased educational achievement.⁴⁷ The preschool experience varies with a family's socioeconomic status. Middle-class children typically attend a variety of private preschools with small class size as well as publicly supported programs in the community.⁴⁸ Many middle-class children stay home and receive educational opportunities from well-educated parents and caregivers in informal contexts.⁴⁹ Low-income children have more limited options. Head Start offers access to early childhood education; however, this program serves only half of eligible children and is uneven in quality.⁵⁰ While increased access to preschool has benefited children of all socioeconomic classes, it is neither necessary nor sufficient to explain achievement gaps in elementary school and later in students' educational careers.

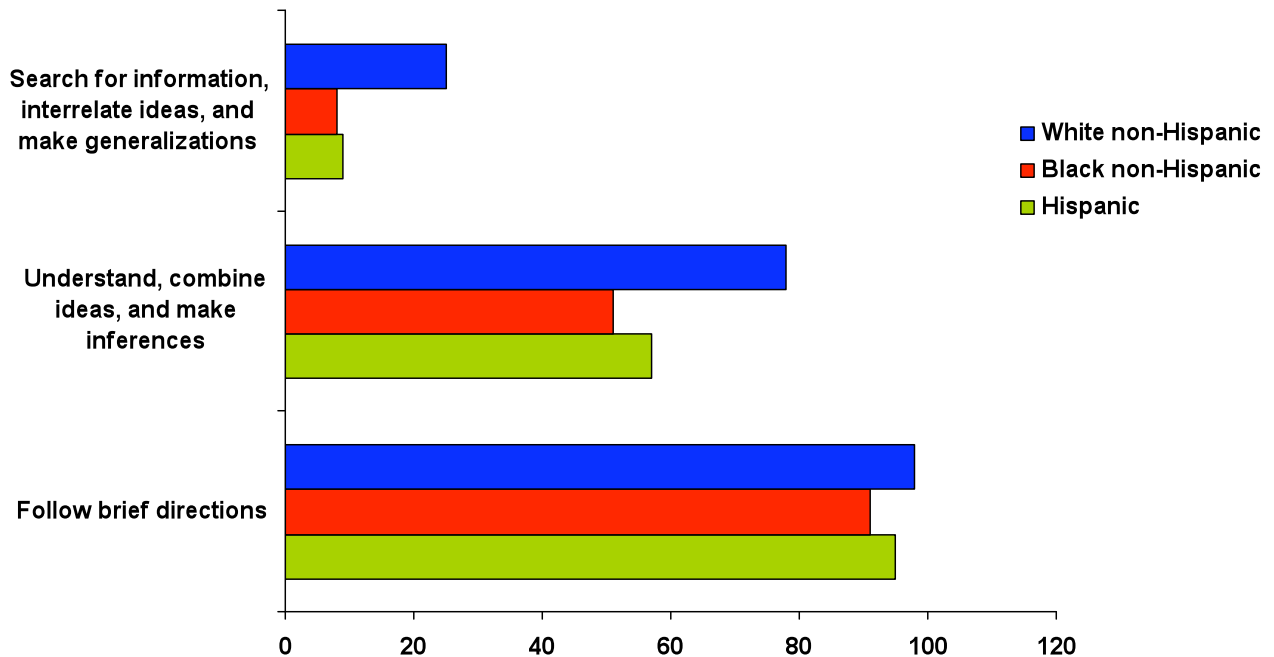
Gains made in early childhood education can be undermined by continuing education of lesser quality. In a study by Lee and Loeb, former Head Start attendees were found to be educated in middle-grade schools of lower quality than schools of students who did not attend preschool, or attended other preschools. The authors concluded that Head Start benefits are undermined if students are then exposed to schools of lower quality. This explains in part why effects of Head Start fade over time.⁵¹

Achievement Gaps Are Present Early and Persist Through Time. Achievement gaps among groups are noticeable at the early stages of formal academic assessment. For instance, of children in kindergarten in 2000, 34 percent of African Americans, 42 percent of Latinos, and 57 percent of Native Americans were in the lowest quartile for reading readiness, as compared to 13 percent of Asians and 18 percent of Whites.⁵² Math skills achievement test scores showed similar gaps by race/ethnicity: 39 percent of African Americans, 40 percent of Latinos, and 50 percent of Native Americans were in the lowest quartile for math, as compared to 13 percent of Asians and 18 percent of Whites.⁵³ The lower performance of Hispanic children, compared to African American children, in reading is likely related to English proficiency. However, Hispanic students' reading test scores have been found to seriously underestimate their reading comprehension potential, as test performance was shown to be highly correlated to limited prior knowledge of certain test topics.⁵⁴

Large gaps at the beginning of schooling suggest that preschool access is not enough to counter home advantages and disadvantages among children.⁵⁵ These early gaps present challenges and contribute to underachievement throughout elementary school. In first grade, children are divided into reading group levels. Boundaries formed in the first grade often become impermeable barriers to advancement into higher groups thereafter, as children tend to remain in the group within which they were initially placed.⁵⁶ Furthermore, advances made early in a child's education are undermined by low-quality education at schools later on.⁵⁷ Achievement gaps between White students and Latino and African American students continue through

elementary school.^{58,59} As shown in Figure 2-16, while achievement gaps for basic-level reading—“following directions”—have narrowed by age 9, achievement gaps remain large for reading levels demonstrating more complex skills—“understanding and combining ideas” and “searching for information and making generalizations.”⁶⁰ These gaps persist at age 13 (Figure 2-17).

Figure 2-16
Percent of Students at or above Reading Levels, Age 8, by Race/Ethnicity

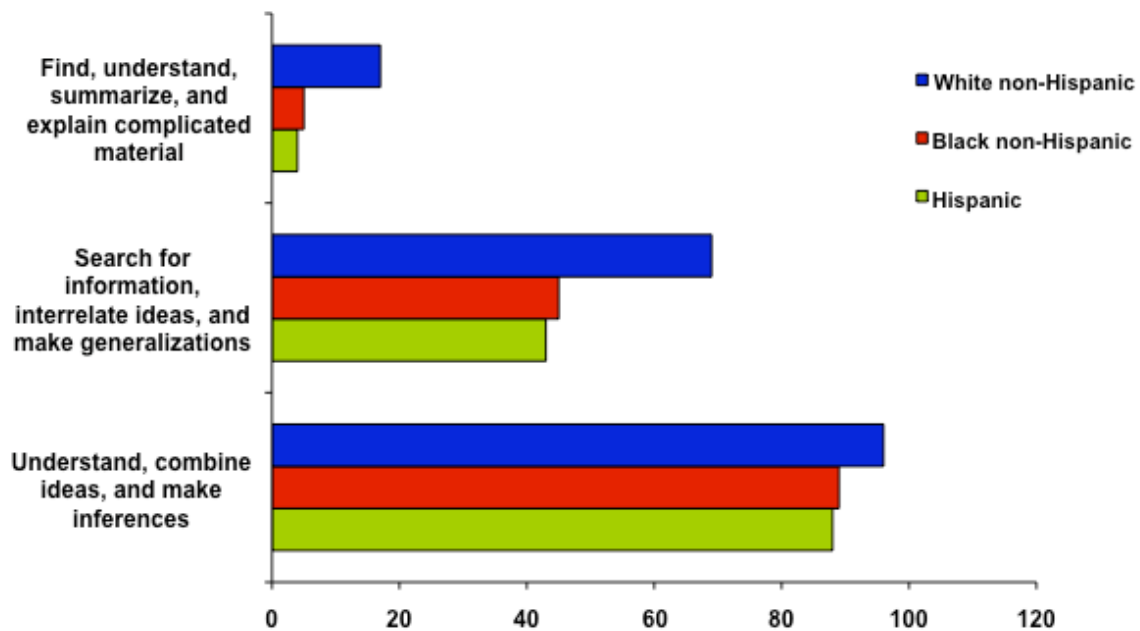


Note: Includes public and private schools. Excludes persons not enrolled in school and those who were unable to be tested due to limited proficiency in English or due to a disability.

Source: U.S. Department of Education, National Center for Education Statistics. National Assessment of Educational Progress (NAEP). NAEP 1999 Trends in Academic Progress; and unpublished tabulations, NAEP Data Explorer (<http://nces.ed.gov/nationsreportcard/nde/>), retrieved July 2005

* The NAEP (National Assessment of Educational Progress) scores have been evaluated at certain performance levels. Students at a reading score level of 150 are able to follow brief written directions and carry out simple, discrete reading tasks. Students at a reading score level of 200 are able to understand, combine ideas, and make inferences based on short uncomplicated passages about specific or sequentially related information. Students at a reading score level of 250 are able to search for specific information, interrelate ideas, and make generalizations about literature, science, and social studies materials. Students at a reading score level of 300 are able to find, understand, summarize, and explain relatively complicated literary and informational material.

Figure 2-17
Percent of Students at or above Reading Levels, Age 13, by Race/Ethnicity

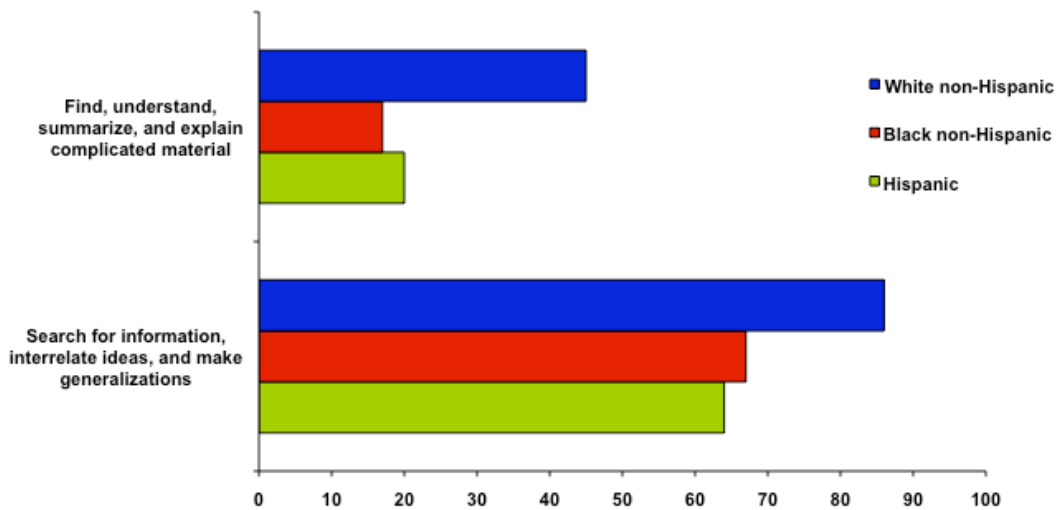


Note: Includes public and private schools. Excludes persons not enrolled in school and those who were unable to be tested due to limited proficiency in English or due to a disability.

Source: U.S. Department of Education, National Center for Education Statistics. National Assessment of Educational Progress (NAEP), NAEP 1999 Trends in Academic Progress; and unpublished tabulations, NAEP Data Explorer (<http://nces.ed.gov/nationsreportcard/nde/>), retrieved July 2005

At the beginning of high school, racial/ethnic gaps in reading levels persist (Figure 2-18). While there is only a small gap for lower-level reading—“understanding and combining ideas—large gaps remain for higher levels—“searching for information/making generalizations” and “finding/summarizing complicated materials.”⁶¹

Figure 2-18
Percent of Students at or above Reading Levels, Age 17, by Race/Ethnicity



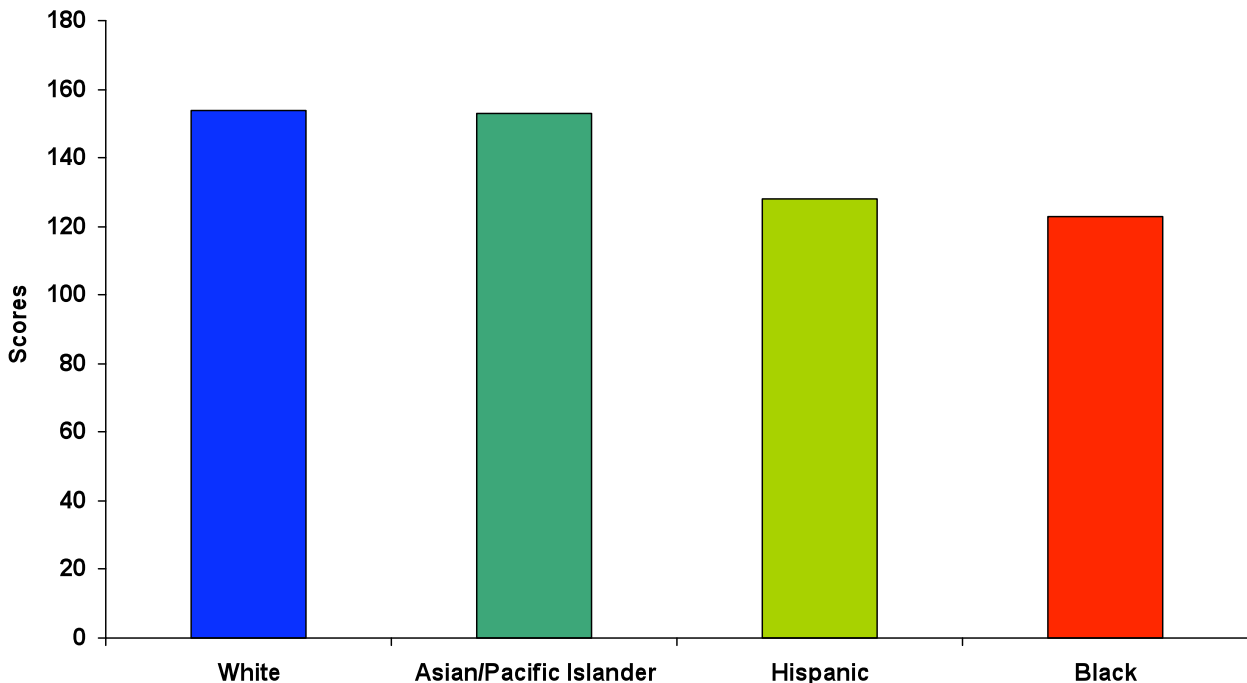
Note: Includes public and private schools. Excludes persons not enrolled in school and those who were unable to be tested due to limited proficiency in English or due to a disability.

Sources: U.S. Department of Education, National Center for Education Statistics. National Assessment of Educational Progress (NAEP), NAEP 1999 Trends in Academic Progress; and unpublished tabulations, NAEP Data Explorer (<http://nces.ed.gov/nationsreportcard/nde/>), retrieved July 2005

As students near high school completion, large gaps remain in reading levels by race/ethnicity. While 86 percent of Whites were scored as being able to “search for information, interrelate ideas, and make generalizations,” only 67 percent of Blacks and 64 percent of Hispanics scored at this level.⁶² For more complex functions, “Find, understand, summarize, and explain complicated material,” 45 percent of Whites, 17 percent of Blacks, and 20 percent of Hispanics scored at this level.⁶³ As students near college, large gaps persist for some racial and ethnic groups that affect achievement as the students move on in the educational pathway toward medical school.

Black and Hispanic students in grades 4 and 8 showed improvements in science scores between 1996 and 2000.⁶⁴ At grade 4, average scores increased by 7 points for Black students and by 11 points for Hispanic students since 2000.⁶⁵ Due to gains made by minority students, gaps between White students and their Black and Hispanic counterparts were smaller in 2005 as compared to gaps in 2000. However, the gap between high schoolers in science scores grew between 2000 and 2005.⁶⁶ Figure 2-19 shows that, in 12th grade, Hispanics and Blacks scored markedly lower (around 25 points) on science than their White and Asian counterparts, and this gap is increasing.^{67, 68}

Figure 2-19
Average Scores for Science, Grade 12, by Race and Ethnicity, 2000



Note: The NAEP Science scale ranges from 0 to 300. Observed differences are not necessarily statistically significant. Detail may not sum to totals because of rounding.
Source: U.S. Department of Education. National Center for Education Statistics. National Assessment of Educational Progress (NAEP), 1996 and 2000 Science Assessments

The future achievement of all children and youth in science is being influenced today by policies and practices affecting the curricula in elementary and secondary school grades and linking student performance, teacher performance, and school performance to funding. The No Child Left Behind Act of 2001 (Public Law 107-110),⁶⁹ an extension of the Elementary and Secondary Education Act, places great emphasis on language and mathematics instruction and little or no emphasis on science.

Today, for example, it is possible to ask a group of third graders in San Francisco what they liked best about science and get no answer or to ask them, “What is science?” and get nothing more than confused looks.⁷⁰ A survey of 923 Bay Area elementary school teachers by the Center for Research, Evaluation and Assessment of the Lawrence Hall of Science at the University of California, Berkeley, and WestEd found that 80 percent of the teachers said that they spent less than an hour each week teaching science.⁷¹ A national study seven years earlier found that teachers estimated that they spent twice that amount of time a week on science teaching.⁷² The project director for the current study said:

It’s alarming because it’s a very short amount of time per week dedicated to a subject that’s considered a core subject in schools....Understanding science helps children learn to think and solve problems while questioning the world around them. There is also evidence that people who go into scientific fields learned to love science as children.

And, as a practical matter, colleges require applicants to have taken science in high school. How are you going to understand high school science if you haven't had it before fifth grade?⁷³

Other findings of the Lawrence Hall of Science and WestEd survey were:

1. About 16 percent of the elementary teachers said that they spent no time on science at all. Most taught at schools that had missed reading and math benchmarks of the No Child Left Behind Act: They were trying to catch up.
2. Fewer than half of Bay Area fifth-graders (47 percent) scored at grade level or above on the Spring 2006 California Standards Test in science.
3. Ten times as many teachers said that they felt unprepared to teach science (41 percent) as felt unprepared to teach math (4 percent) or reading (4 percent).⁷⁴

SUMMING UP: ACHIEVEMENT IN READING, MATH, AND SCIENCE. While there have been significant improvements in achievement among Blacks and Hispanics on average, these indicators do not necessarily shed light on the preparation of students for medical school. Observing achievement scores for the highest levels of difficulty offers the most useful information for potential applicants to medical school. At the lowest level of reading difficulty, there was a narrowing in the "Black-White" achievement gap in the 1970s and early 1980s; in contrast, after narrowing to a small degree, the "Black-White" achievement gap at the highest levels of reading difficulty has progressively widened.⁷⁵ This is also true of the gap between Whites and Hispanics.⁷⁶

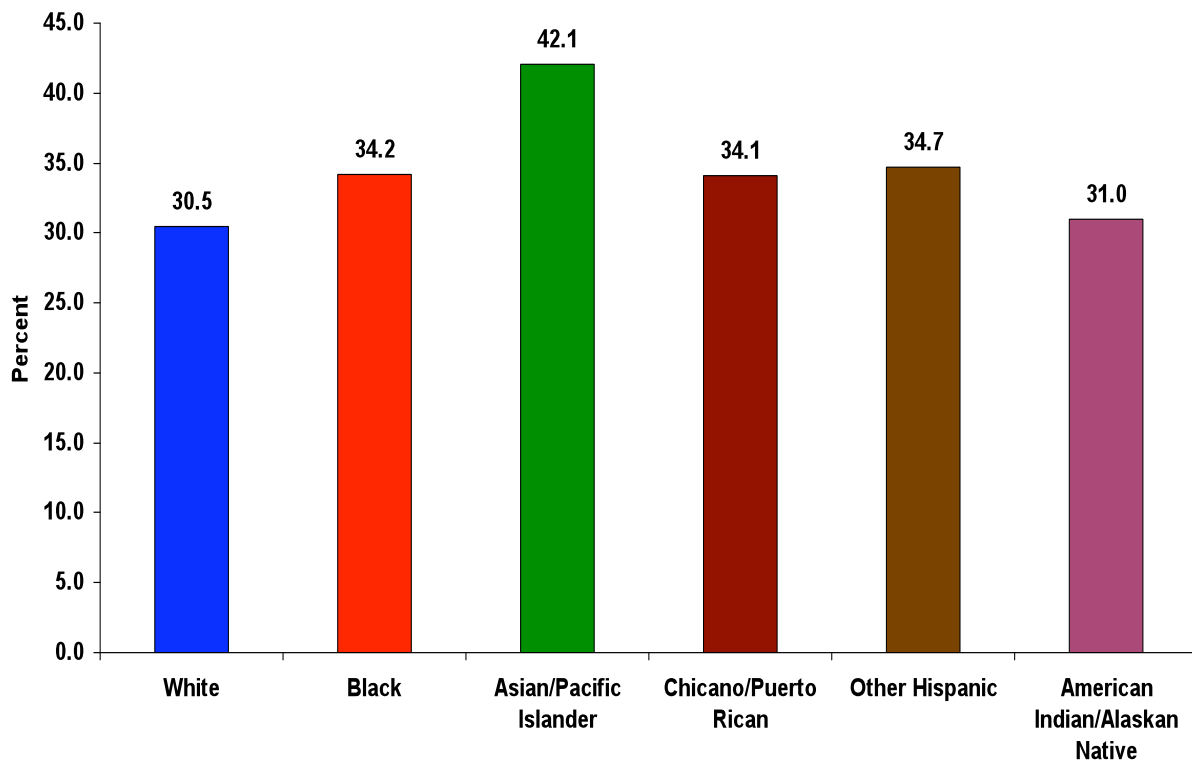
In math and science, at the highest level of difficulty, achievement gaps have widened for both Blacks and Hispanics since 1985. While high school students are taking more high-level math and science courses, few Blacks and Hispanics, as compared to Whites and Asians, enroll in these courses.⁷⁷ More than 40 percent of Asian high school graduates took pre-calculus, with 18 percent taking calculus in 1998. In contrast, 25 percent of Whites, 16 percent of American Indians, 15 percent of Hispanics, and 14 percent of Black students had taken pre-calculus. Twelve percent of Whites, 7 percent of Blacks, and 6 percent of Hispanic and American Indian high school graduates had taken calculus.⁷⁸ The proportion of minority students taking Advance Placement (AP) examinations increased from 12 percent in 1978 to 33 percent in 2000, with Asians comprising the majority of this subgroup.⁷⁹ Moreover, Hispanics were less likely to take science and math AP tests. For example, although Hispanics made up 10 percent of students taking AP exams in all subjects, they accounted for only 3 percent of those taking the AP Calculus BC exam in 2000.⁸⁰ Although performance on average has improved, performance at the high academic levels needed to be a successful medical school applicant is still lagging for groups underrepresented in medicine.

College Interest in Science and Medicine: Intention to Major in Science and Engineering

Those underrepresented in medicine (i.e., Blacks, Chicanos, Puerto Ricans, Other Hispanics, and American Indians and Alaskan Natives) in this Higher Education Research Institute 2002 survey have slightly higher intentions (between 31 to 35 percent) to major in science and engineering fields when they are freshmen than Whites (31 percent), and slightly lower intentions than Asian/Pacific Islanders (42 percent) (Figure 2-20).⁸¹

Figure 2-20

Intentions of Freshman to Major in Science and Engineering Fields by Race/Ethnicity, 2002

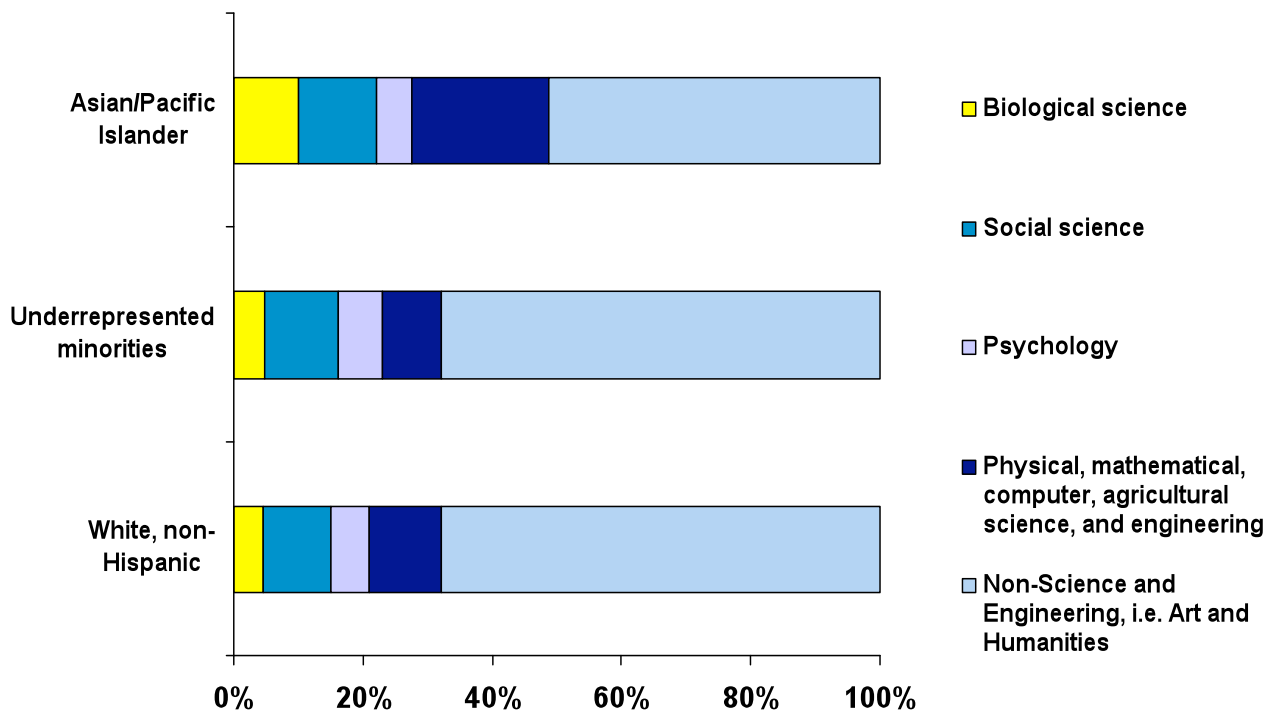


Note: Includes first-year students at all 4-year colleges.

Source: Higher Education Research Institute, University of California at Los Angeles, Survey of the American Freshman, special tabulations. Types of College Bachelor's Degrees Earned, 2002

Figure 2-21 shows that those underrepresented in medicine have about an equal proportion of students earning bachelor's degrees in the biological sciences as their White peers. Asians and Pacific Islanders have a larger percentage of students earning a degree in the biological sciences than both underrepresented minorities and Whites.⁸²

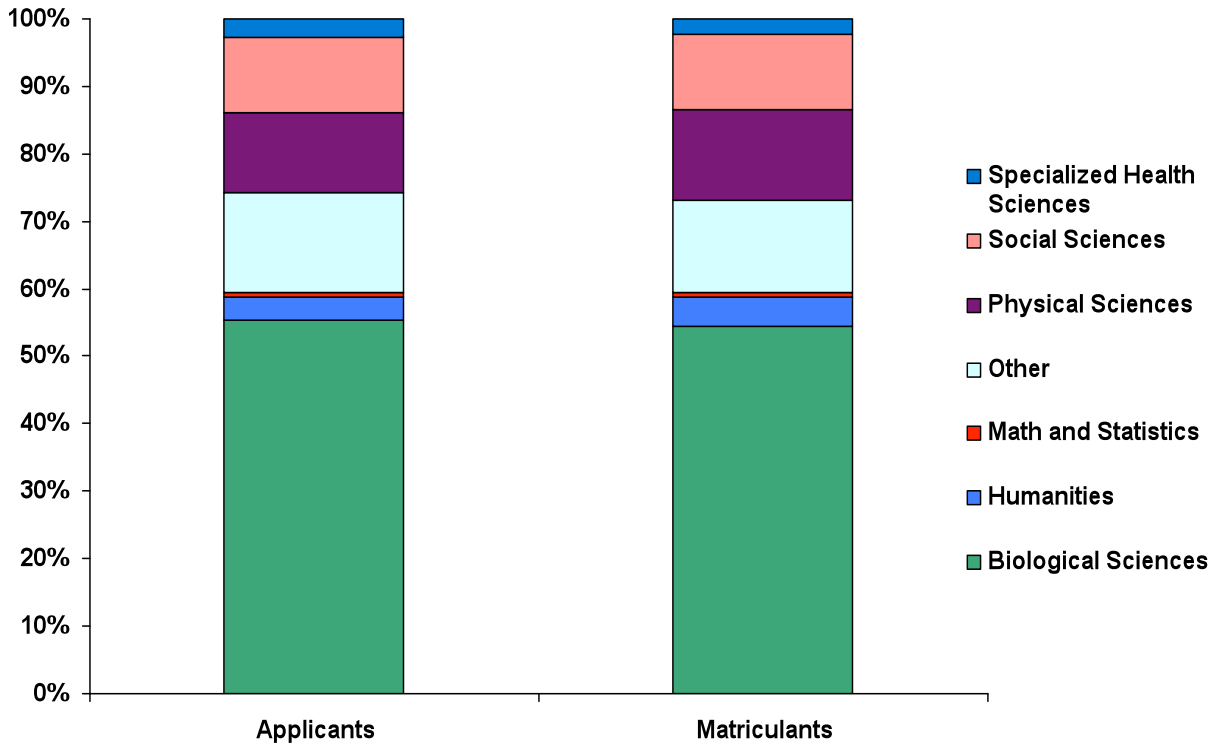
Figure 2-21
Earned Bachelor's Degrees by Race/Ethnicity, 1992-2001



Note: Detailed national data were not released for the academic year ending 1999 by the National Center for Education Statistics. Data on race/ethnicity of degree recipients were collected on broad fields of study only until 1994; therefore, these trend data could not be adjusted to the exact field taxonomies used by NSF. Source: Tabulated by National Science Foundation/Division of Science Resources Statistics; data from Department of Education/National Center for Education Statistics; Integrated Postsecondary Education Data System Completions Survey

Continuing on the educational pathway, a potential medical school applicant not only needs to complete college and have superior academic performance, but also must have a desire to become a physician. People entering medical school come from a wide variety of undergraduate majors. However, those majoring in biological sciences represent a large portion of those applying to and matriculating in medical school.⁸³ As shown in Figure 2-22, around 55 percent of medical school applicants and matriculants major in the biological sciences.⁸⁴

Figure 2-22
Applicants and Matriculants, U.S. Medical Schools by Undergraduate Major, 2006

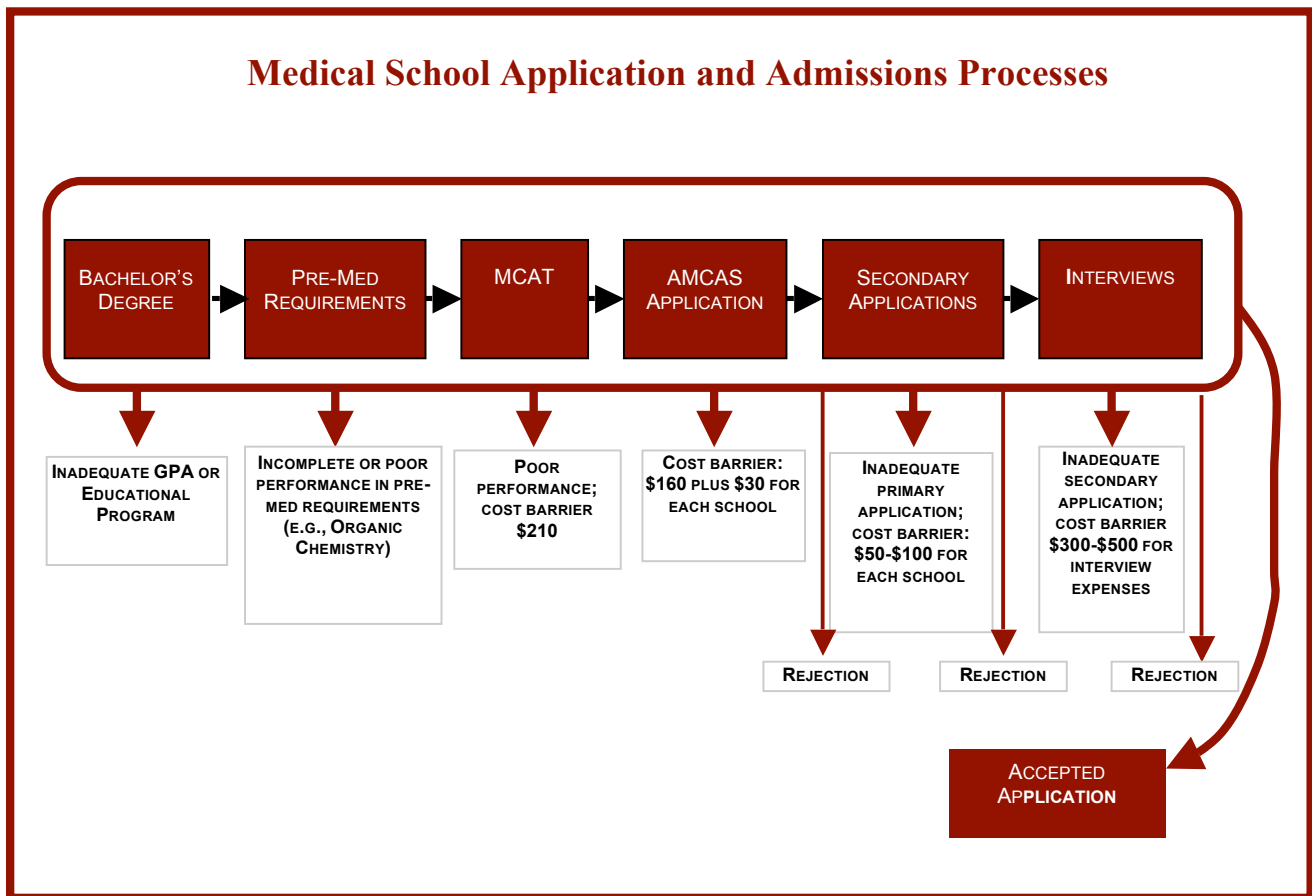


Source: AAMC: Data Warehouse: Applicant Matriculant File as of 10/27/2006.

The Medical School Application and Admissions Processes

The final points along the educational pathway to medical school are during the application and admissions processes (Figure 2-23). Admissions committees' assessments of applicants typically include academic ability as reflected in college academic performance and admission tests, extracurricular activities and interests, work experience, personality, motivation, and communication skills.⁸⁵

Figure 2-23



Applying to Medical School: Meeting Admission Requirements and Understanding Selection Criteria

A study in the mid-1980s of the structure and function of medical school admissions committees found that the three most important factors considered in selecting a candidate for admission were an applicant's college Grade Point Average (GPA), Medical College Admission Test (MCAT) scores, and the medical school interview, with additional weight being given to recommendations, personal statement, research experience, and volunteer experience.⁸⁶ Two

later studies show that high grades in science undergraduate courses and high MCAT scores are the selection criteria that matter the most in medical school admissions.^{87,88} The use of a “holistic review process,” now adopted by many medical schools and supported by AAMC’s Holistic Review Project, helps to assure that no GPA-MCAT group is guaranteed acceptance.

College Course Requirements

Admissions requirements for medical school affect the content of college students’ education.⁸⁹ Applicants to medical school must meet academic requirements for medical school that include, for example, college courses with labs in general biology (two semesters), general chemistry (two semesters), and physics (two semesters), as well as organic chemistry (two semesters).⁹⁰ A significant number of schools also require calculus and/or four to six courses in the humanities. Many educators and others have argued that certain premedical school requirements are not relevant to success in medical education and practice.^{91,92,93} Some argue that calculus, organic chemistry, and physics are merely “weed out” courses,⁹⁴ with little content value for future physicians; others claim that these courses contain important content and promote essential critical thinking skills, such as pattern recognition, systematic analysis, and three-dimensional thinking.^{95,96}

Others maintain that a change is needed in premedical school requirements, substituting genetics, molecular biology, biochemistry, ethics, psychology, and statistics for calculus, physics, and organic chemistry. Such a change, one educator argues, will both cover more essential content needed by physicians and develop necessary critical thinking skills.⁹⁷ Nevertheless, medical school applicants must first complete all current premedical requirements. Inability to successfully complete these college courses is the first “exit point” for college graduates with a desire to apply to medical school.

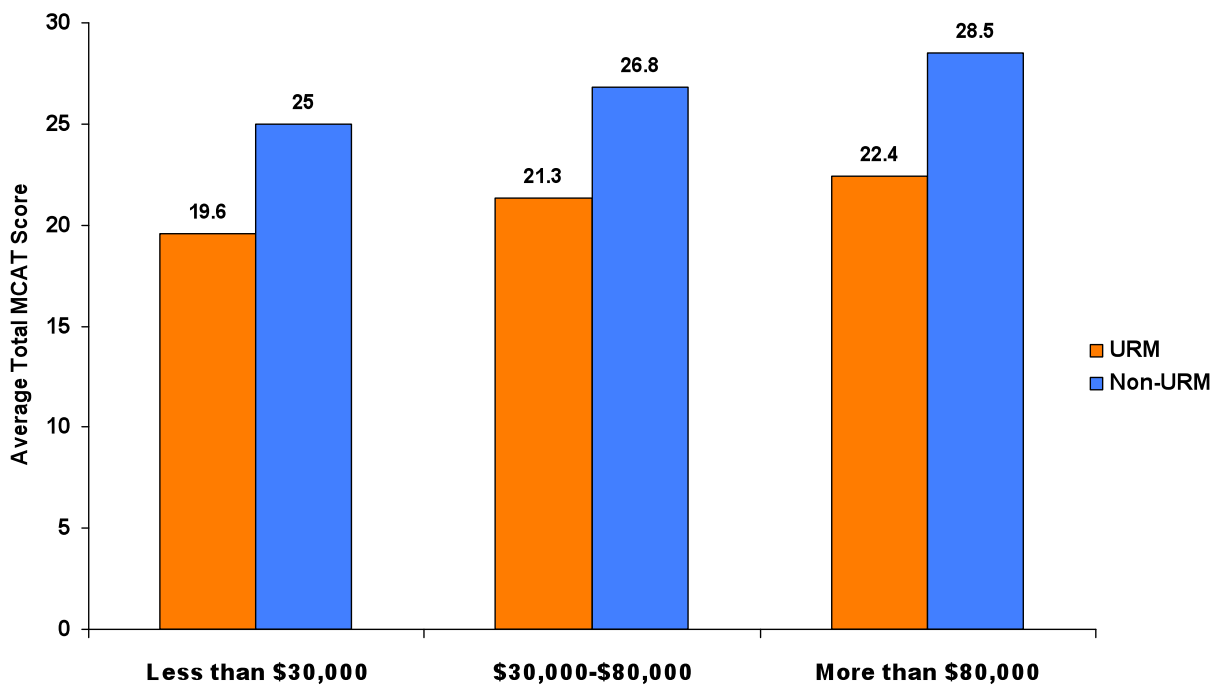
The Medical College Admission Test (MCAT)

Taking and successfully completing the MCAT is the second necessary step in the application process. Those underrepresented in medicine, as a whole, have lower MCAT scores than Whites and Asians.⁹⁸ MCAT scores, along with college GPA, are often combined with other selection criteria to form a total index, which may serve as a cut-off point.

The adoption of the MCAT coincides with the rise of quantitative approaches to measuring intelligence and the rise of scientific psychology.⁹⁹ The development of the precursor to the MCAT, the Moss Test, in 1928, continued the trend of increasing standardization laid out originally in the Flexner Report of 1910. In the early decades of 20th century, attrition rates for U.S. medical students ranged from 5 to 50 percent.¹⁰⁰ After the implementation of the Moss Test, attrition rates decreased from 20 percent in 1925-1930¹⁰¹ to 7 percent in 1946.¹⁰² However, this outcome was amidst other changes, including more rigorous higher education standards nationally, stricter medical school accreditation policies, and strict student admission procedures.¹⁰³ In its 77- year history, the MCAT has undergone five revisions in content, indicating that “the definition of aptitude for medical education reflects the professional and social mores and values of the time.”¹⁰⁴

Because of the high selectivity of medical school admissions, URMs with lower GPAs and MCAT scores are particularly vulnerable to disproportional representation.¹⁰⁵ Kahlenberg finds that controlling for social class reduces some of the test gap between URMs and non-URMs.¹⁰⁶ However, when controlling for income (Figure 2-24), race/ethnicity gaps still remain.¹⁰⁷ In 2001, among families with incomes of \$80,000 or more, the mean score for URM applicants was 22.4 compared to 28.5 for non-URM applicants from the same income group. In the lowest income group, URMs scored significantly lower than non-URMs; 19.6 compared to 25.0.¹⁰⁸ Disparities in test scores among racial/ethnic groups, even within similar income groups, show that strong social, cultural, family structure, educational, and other forces still operate along racial and ethnic lines.¹⁰⁹ Thus, while some argue for a broader definition of disadvantage that focuses on socioeconomic status, rather than race/ethnicity,¹¹⁰ such a focus will not address the entirety of the disparity among racial/ethnic groups.

Figure 2-24
MCAT Scores for URMs and non-URMs by Parental Income, 2001

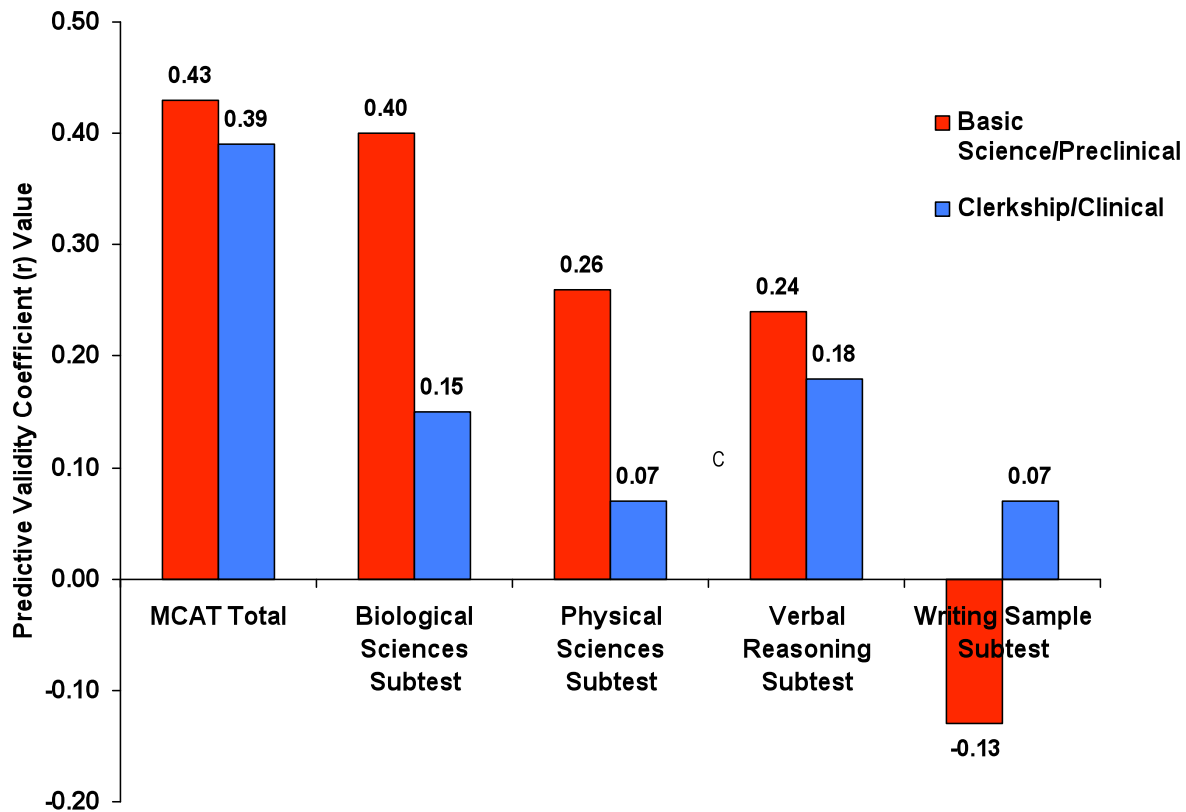


Source: Cohen JJ. The Consequences of Premature Abandonment of Affirmative Action in Medical School Admissions *JAMA* 2003;(9)289:1143-1149

Some argue against standardized testing because it is a poor predictor of success.^{111,112} While the MCAT is a very important factor in medical school admission requirements and in acceptance to medical school, it is not a fail-safe predictor of performance in medical school.¹¹³ In 1990, McGaghie argued that the MCAT is a poor predictor of success during clinical training and practice as a physician.¹¹⁴ A recent meta-analysis by Donnon et al. examined the predictive validity of MCAT scores on both medical school performance and on medical board licensing examinations. They observed differences in basic science/preclinical performance in medical school (years one and two) and clerkship/clinical training (years three and four). The study

showed that only 18.5 percent* of variance in medical school performance for basic science/preclinical courses can be accounted for by MCAT scores.¹¹⁵ There is a lower effect in clerkship/clinical courses: only 15.2 percent† of variance can be accounted for by MCAT scores.¹¹⁶ This leaves 80 to 85 percent of achievement to be explained by other factors. When the MCAT subtests are examined in isolation; however, they are far worse predictors, especially among clerkship/clinical performance. In basic science/preclinical courses, the biological subtest is the only medium predictor of performance; the physical sciences and verbal reasoning are weak predictors, and the writing sample is a negative indicator of performance. In clerkship/clinical, the biological science subtest and verbal reasoning subtest have slightly higher predictive validity than the physical sciences or writing sample; however, these all remain low (Figure 2-25).¹¹⁷

Figure 2-25
MCAT Predictive Validity of Medical School Performance

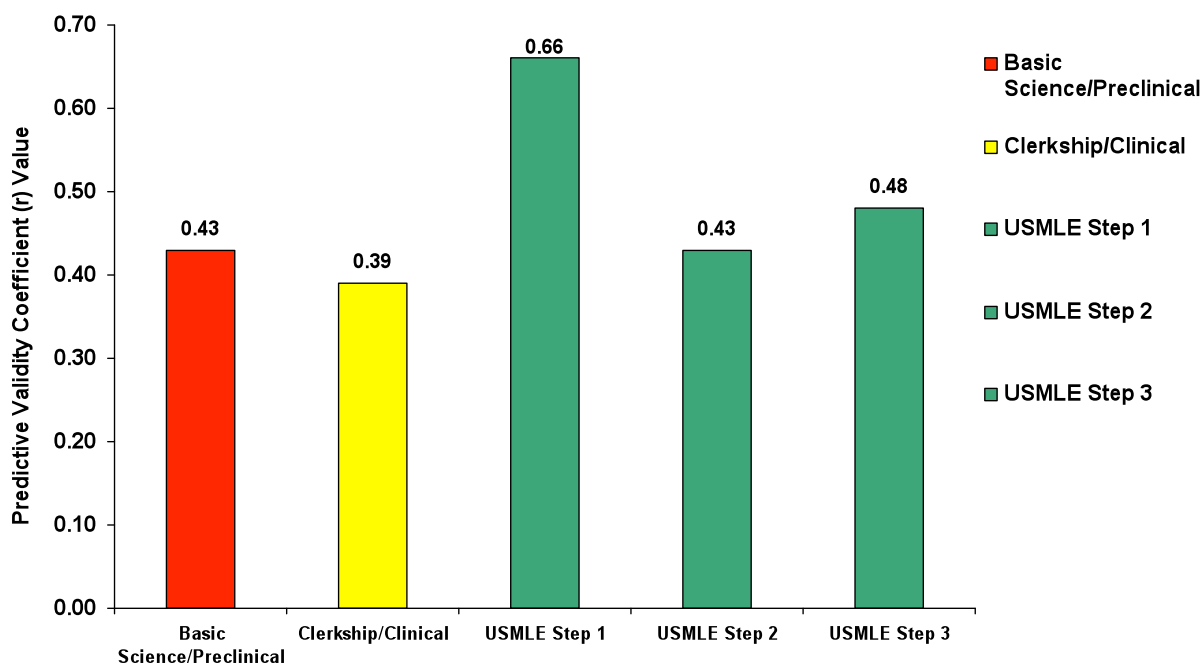


Source: Adapted from Table 2. Donnon T, Paolucci E, Violato C. The Predictive Validity of the MCAT for Medical School Performance and Medical Board Licensing Examinations: A Meta-Analysis of the Published Research *Academic Medicine*. 2007; 82(1):100-106.

* Adjusted medium predictive validity coefficient effect, $r=.43$.

† $r=.39$

Figure 2-26
MCAT Predictive Validity of Medical School and Board Examination Performance



Source: Adapted from Table 3. Donnon T, Paolucci E, Violato C. The Predictive Validity of the MCAT for Medical School Performance and Medical Board Licensing Examinations: A Meta-Analysis of the Published Research. *Academic Medicine*. 2007; 82(1):100-106.

The MCAT is better at predicting performance on medical licensing exams than on medical school performance, accounting for 44 percent of the variance on the USMLE (United States Medical Licensing Examination) Step 1 ($r=.66$) and 19 percent on the USMLE Step 2 ($r=.43$) (Figure 2-26).¹¹⁸

While this recent meta-analysis affirms previous studies that the MCAT is a predictor of medical school performance, it demonstrates that the MCAT is not a complete predictor and that certain MCAT subtests are more powerful predictors than others. Much variation in medical school achievement is due to unknown or unmeasured factors.¹¹⁹ Nevertheless, much weight in the admissions process is given to the MCAT; poor performance on this test marks another drop-out point in the process of applying to medical school.

Non-academic Factors

In addition to measures of academic performance, personal characteristics, such as compassion, coping capabilities, decision-making ability, inter-professional relations, realistic self-appraisal, sensitivity in interpersonal relationships, and staying power are factors assessed in medical school admissions,¹²⁰ often through the personal interview and letters of recommendation. Former President of the AAMC, Jordan Cohen, M.D., expressed discomfort with the admissions procedure: “I’m referring, of course, to our tendency to underemphasize, *because they are harder to measure*, the personal characteristics we are seeking in our applicants and to overemphasize

the more easily measured indices of academic achievement (emphasis added).”¹²¹ McGaghie observes that personal qualities are difficult to assess because educators and admissions committees do not agree on which personal qualities should be assessed and measurements of personal qualities are highly subjective.^{122,123,124} While the extent to which such factors are weighed in the admissions process is questioned by some, specific personal qualities believed to be associated with being a successful medical student and becoming a successful physician are elements assessed by admissions committees.

Applying to Medical School, Being Accepted, and Deciding to Enroll: An Increasing Financial Challenge

The rising cost of undergraduate education, increasing undergraduate debt burden, costs related to applying to medical school, increasing medical school costs, and rising medical school debt burden all pose increasing financial challenges for applicants to medical school and for those accepted, including those underrepresented in medicine.

Undergraduate Education Costs and Debt Burden

In 2008-2009, the average yearly cost for tuition and fees at a public four-year college or university was \$6,585, compared to an average yearly cost of \$25,143 for tuition and fees at a four-year private college or university.¹²⁵ Public school tuition and fee costs increased by 6.4 percent in the past year; private school costs, by 5.9 percent.¹²⁶ Total costs include both billable costs, such as tuition and fees and room and board, and indirect costs, which do not appear on the college bill, such as books and supplies, personal expenses, and travel. About two-thirds of full-time undergraduate degree students receive grant aid; in 2008-2009, estimated aid in the form of grants and tax benefits averaged about \$3,700 per student at public four-year schools and \$10,200 per student at private four-year schools.¹²⁷

Trends in tuition and fees for four-year public and private colleges and universities in constant dollars over the past thirty years are shown by decade in Table 2-1. Public school fees have increased more in recent years by percentage than those of private schools, which have increased more in dollars.

Table 2-1
U.S. Four-year Public and Private Universities and Colleges, Tuition and Fees, by Decade, 1977-1978 through 2007-2008*

Year	Public	Private
1977-1978	\$2,225	\$9,172
1987-1988	2,699	12,808
1997-1998	4,022	17,823
2007-2008	6,185	23,712

Source: Trends in College Pricing 2007. Trends in Higher Education Series. College Board. Adapted from Table 2a. p. 10. Accessed

http://www.collegeboard.com/prod_downloads/about/news_info/trends/trends_pricing_07.pdf November 9, 2007

* Constant dollar charges adjust prices for inflation. Increases in constant dollar prices indicate increases beyond the average increase in consumer prices. Charges for 2007-2008 are weighted by 2006-2007 enrollments. Charges for 2006-2007 and earlier years are weighted by same-year enrollments.

One of the major findings noted in the AAMC's 2005 report on medical education costs and student debt was that:

More students are completing college with higher undergraduate educational debt burdens than in the past, even before they begin to accumulate educational debt from graduate and professional school education.¹²⁸

Of 2007 medical school graduates, 36.2 percent reported that they had entered medical school with some undergraduate school debt; the average amount of debt for indebted students was \$24,519.¹²⁹ An earlier survey found a similar percentage with debt (37.6 percent among 2003 graduates). Among those who reported being indebted in 2007, the median amount of undergraduate debt for public medical school graduates was \$16,000 and for private medical school graduates, \$17,000.¹³⁰ Of 2008 graduates, 38 percent of all students reported undergraduate debt with a median of \$20,000.¹³¹

Medical School Application Expenses

There are several expenses related to applying to medical school.¹³² These include expenses for preparation for the MCAT (e.g., review books, sample exams, software, review courses, home study courses, and private tutoring), the MCAT registration fee, admissions information and advice (e.g., medical school admissions requirements, admissions consulting services), application fees (e.g., the AMCAS [American Medical College Application Service] fee, the school application fee, college service fees), interviewing costs (e.g., clothing, travel, lodging and meals, local transportation), and costs after acceptance (e.g., school deposit, tuition prepayment, relocation costs, and loan payment).¹³³ Applicants can expect to spend several thousand dollars in the process of applying to medical school.

Many students opt to take a preparatory course by Kaplan or Princeton Review, typically costing more than \$1,000. The MCAT registration fee is \$210. (An AAMC fee assistance program will reduce the fee to \$85 for those who qualify.) Applicants then apply online via the AMCAS at a cost of \$160 plus \$30 for each school; however, AAMC will also waive the fee of \$490 for AMCAS application to 12 schools. Applicants must pay \$30 for each additional school.¹³⁴

Students must send secondary applications to individual medical schools. These applications cost between \$50 and \$100, but again most schools will waive these fees if the applicant has received AAMC financial assistance. AAMC's financial assistance through the Fee Assistance Program (FAP) is for students who are in families making less than 300 percent of the poverty line (\$49,800 for a family of three). However, even for middle-income families, several thousand dollars for an application process is a major expense.

Interviews are another large expense, as medical students must travel, sometimes across the country, for medical school interviews, often with shorter notice than desirable to purchase inexpensive plane tickets. Some schools give interviewees notice of interviews of a few months; others give notice of a few weeks. At times, interview slots open at the last minute, and applicants may be asked to come on a week's notice. Some medical schools provide an interview date; others allow applicants to call to schedule interviews, and applicants can plan to interview far enough ahead of time to purchase an inexpensive plane ticket. Travel expenses are likely to average hundreds of dollars per interview, if several out-of-state interviews are scheduled.

Medical School Costs

In 1960, the median tuition at public medical schools was \$500 and at private schools, a little above \$1,000.¹³⁵ As Jolly observed, since the 1960s and “especially since the termination of federal capitation support at the end of the 1970s, tuition has increased in both current and inflation-adjusted dollars.”¹³⁶ The median cost of tuition and fees in 2006-2007 was \$20,978 for state residents and \$39,974 for non-residents at public medical schools and \$37,809 for residents and \$39,413 for non-residents at private schools.¹³⁷ (Data adjusted to constant 1960 dollars are \$3,088 for public school residents and \$5,884 for non-residents, and for private schools, \$5,565 for residents and \$5,801 for non-residents.) In 2008-2009, the median cost of tuition and fees was \$24,809 for resident public medical school students and \$43,360 for private medical school students.¹³⁸

A major finding of the 2005 AAMC study of the costs of medical education and student debt was that the rates of increase in medical school tuition and fees have been far in excess of inflation from the mid-1980s until the early 2000s, while physician income has not kept up with the pace of inflation.¹³⁹ In constant dollars, tuition increases were 50 percent for private medical schools and 133 percent for public medical schools from 1984 to 2004.¹⁴⁰ As Jolly notes, “A medical education is far less affordable to students and their families today than it was two decades ago.”¹⁴¹

A second finding of the AAMC 2005 study was that medical students pay for a large proportion of the cost of their medical education through educational loans, and this proportion has increased from about 45 percent to more than 60 percent over the past twenty years.¹⁴² Other ways to pay for medical education include scholarships, family and personal funds, and other sources. Family and personal resources have declined substantially as sources of paying for medical education.¹⁴³ In 1987, when students were asked how they planned to finance their medical education, 34.2 percent reported that their support would come from personal and family sources; by 2003, this percentage had dropped to 18.0 percent, as cost increases exceeded growth in personal and family resources.¹⁴⁴

A third finding was that over the past two decades, more than 60 percent of medical students have come from families in the top quintile of all U.S. families, with only 20 percent coming from families with incomes in the lowest three quintiles.¹⁴⁵ As Ludmerer points out, “By 1989, the median income of parents of first-year students was \$60,000. That year only 22.1 percent of incoming students came from homes where the combined gross income was less than \$40,000, and only 5.1 percent from families with gross incomes less than \$20,000.”¹⁴⁶

Ludmerer goes on to say:

Medical faculties repeatedly expressed their consternation over the prospect of medicine becoming a preserve of the rich—especially when the country was clamoring for greater opportunities for all racial, ethnic, and socioeconomic groups....As the faculty at one medical school observed, ‘Congress has a dislike for supporting educational costs for individuals who will be high wage earners.’¹⁴⁷ Medical schools viewed scholarship applicants as needy students. Congress and the public viewed them as tomorrow’s rich doctors.¹⁴⁸

Tuition costs at public medical schools have increased substantially in recent years. Jolly notes:

In a single year, from academic year 2001-02 to 2002-03, median tuition and fees increased 4.4 percent in private schools (2.8 percent in constant dollars) and 11.9 percent in public schools (10.2 percent in constant dollars). The increases from academic year 2002-03 to 2003-04 were even greater: 5.7 percent in private schools (3.4 percent in constant dollars) and 17.7 percent in public schools (15.1 percent in constant dollars). In six public medical schools, the increases in tuition and fees exceeded 45 percent.¹⁴⁹

Medical Education Debt Burden

Over the past twenty-five years, the medical education debt burden has increased dramatically. In 1984, 87 percent of graduates from public medical schools had debt and the median amount of those with debt was \$22,000.¹⁵⁰ Among private medical school graduates, 90 percent had debt, with a median debt amount of \$27,000.¹⁵¹ By 2003, the percentage of those with debt had declined to 85 percent for public school graduates and 81 percent of private school graduates, but the median amounts of debt had climbed to \$100,000 for public and \$135,000 for private school students. Even when these amounts are adjusted to constant dollars, the debt levels have risen more than 150 percent.¹⁵²

Responses to the AAMC medical school graduation questionnaire administered to 2006 graduates showed that the median debt for indebted graduates at public schools was \$120,000 and for those at private schools, \$160,000.¹⁵³ Almost 30 percent of indebted graduates of public schools reported having debt greater than \$150,000; among private school graduates, slightly more than 50 percent reported debt greater than \$150,000.¹⁵⁴

In the AAMC survey of 2008 graduates, median medical school debt burden for indebted public medical school 2008 graduates was \$145,000 for public medical school graduates and \$180,000 for private school graduates. More than three-quarters of all indebted graduates of public medical schools had debt of \$100,000 or more and nearly fifty percent reported debt of \$150,000 or

more. Among private medical school graduates, more than 80 percent reported debt of \$100,000 or more and about 40 percent reported debt of \$200,000 or more.¹⁵⁵

Data from the AAMC on racial/ethnic students underrepresented in medicine and indebtedness show that these students incur debt at about the same rate as White students.¹⁵⁶ Median indebtedness of URMs is also similar to Whites, with Black graduates having slightly higher rates and Mexican Americans and Puerto Ricans having slightly lower rates.¹⁵⁷

More than 90 percent of medical students reporting parental incomes of less than \$75,000 have medical education debt on graduation, compared to 60 percent of those with parental incomes between \$200,000 and \$500,000.¹⁵⁸

EXPECTATIONS OF INDEBTEDNESS. Results from a national medical school applicant survey conducted for AAMC revealed that, among students who were academically qualified for medical school but who did not apply, cost was a major deterrent for all students and the number-one deterrent for Black, Hispanic, and Native American students.¹⁵⁹

The Changing Medical Student Demographic and the Financing of Medical Education

One of the most pertinent findings to our study of the 2005 AAMC study on medical education costs and student debt is the following:

The demographics of the medical student population have changed significantly over the past several decades. Fifty years ago, medical students were typically white, unmarried, male, and recent college graduates. Today's medical students are about equally male and female, and many students are married and have families. Today's students represent a broader range of ages and racial and ethnic self-descriptions. This diverse student population also faces a broad range of financial challenges in paying for their medical education, and "one size fits all" financial aid strategies are neither appropriate nor effective.¹⁶⁰

Other Challenges in Gaining Admission to Medical School: Limitation of Entry Positions

Admission to medical school is highly competitive and the number of positions for students entering their first year is limited. Admissions committees must select a small number of applicants, whom they view to be the most likely to succeed and bring benefit to the school in terms of its mission, from a large pool of potentially qualified applicants. While candidates denied admission may be unqualified, there are also many qualified candidates who are also denied, leaving some commenting that acceptance is a "crap shoot."¹⁶¹ Many candidates who are initially rejected reapply and are accepted to medical school.¹⁶² There is evidence from some studies that there is no difference in performance in medical school between initially accepted and initially rejected medical students.¹⁶³ Lastly, many medical schools admit based on a rolling admissions policy. There has been little research on the effect of rolling admissions policy on the selection of applicants to medical school. In one study from the College of Medicine of the University of Kentucky, applicants who applied earlier were found to be significantly more

likely to gain admission, although there was no difference in academic qualifications.¹⁶⁴ There is no research on whether rolling admissions policies inadvertently favor one group over another, although one may infer that applicants who are working at full-time jobs or have familial obligations may apply later due to time and financial constraints. It is not known if the policy affects admissions in terms of race, ethnicity, or social class.

U.S. Medical School Trends

Trends in the Number of U.S. Medical Schools and Total Enrollment: The 20th Century and the Early 21st Century

The 20th century was marked by both a sharp decrease in the number of medical schools in the early part of the century and an increase in the mid-20th century. The Flexner Report in 1910 argued that there were far too many medical schools, many of which were substandard. Flexner assessed 155 medical schools in the United States and Canada. He sought to reduce the number of U.S. medical schools to 31, cutting the annual number of medical graduates from 4,442 to 2,000.¹⁶⁵

In 1904, before the Flexner report was issued, there were 160 MD-granting institutions with a total enrollment of 28,142 students.¹⁶⁶ By 1920, the number of medical schools had dropped to 85 institutions with a total enrollment of 13,798 students.¹⁶⁷ Between 1920 and 1960, the number of medical schools remained fairly constant at about 80, although the number of students graduating sharply increased.¹⁶⁸

The number of fully accredited four-year medical schools in the United States increased from 81 (39 public and 42 private) in 1960 to 125 (75 public and 50 private) in 2005.¹⁶⁹ Between 1960 and 1980, 34 new medical schools were established,¹⁷⁰ with the period of most rapid expansion from 1970 through 1980, when 28 new schools became fully accredited.

Total enrollment increased from 30,288 in 1960 to 40,487 in 1970 to 65,189 in 1980, growing by 115 percent over the 1960 to 1980 period. Total enrollment declined to 65,016 in 1989 and increased in 1990, declined, and increased again beginning in 2004, growing by only 6 percent over the 25-year period from 1980 through 2005.¹⁷¹

Thus, U.S. medical schools show two distinct patterns in terms of their growth in numbers and total enrollment—a period of rapid expansion during the 1960s and 1970s and a period of stagnation during the 1980s and 1990s. It is important to view other medical school trends within this context.

Trends in Graduates from U.S. Medical Schools by Race and Ethnicity and URM Status, 1950-1998

There have been great changes, both in the number and the composition of U.S. medical school applicants, accepted applicants, matriculants, and graduates by race and ethnicity over the period from the 1960s through the early 2000s. One of the best sources of information about early

trends comes from the AAMC report, *Minority Graduates of U.S. Medical Schools: Trends, 1950-1998*, published in 2000 and providing yearly race/ethnicity data dating back to 1950.¹⁷² This report is valuable, since the AAMC has traditionally been unable to confirm race/ethnicity data for applicants, accepted applicants, and matriculants prior to 1974.

Trends for minorities among medical school graduates over the period from 1950 through 1998 are shown by race/ethnicity in Figure 2-27. Increases in the number of graduates reflect increases in the number of medical students entering four (or more) years earlier. While the most rapid gains during the 1950 through 1998 period among Blacks and Hispanics occurred during the 1970-1975 period (corresponding to entering medical student classes of 1966-1971), increases for American Indians and Alaska Natives were small in number and came later. Asians experienced very rapid and large gains, particularly over the period from 1975 through 1998.

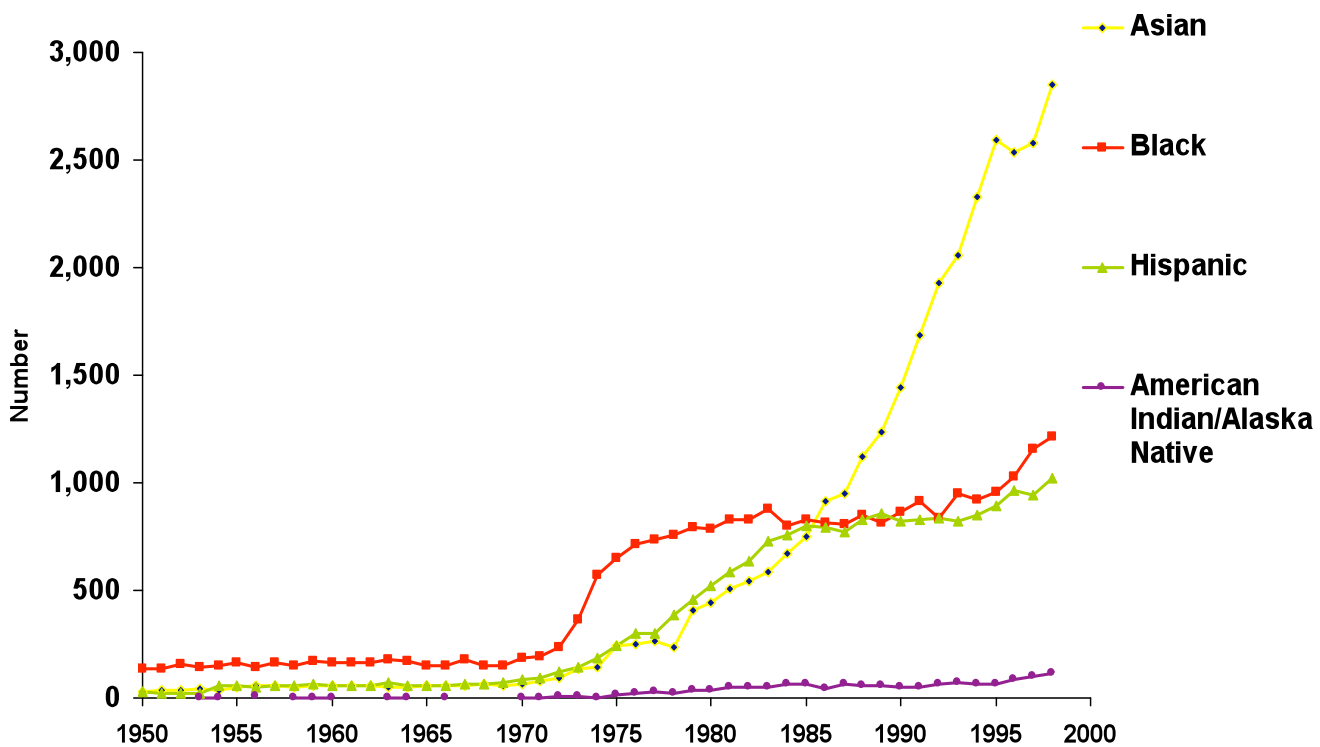
For Blacks, the gains between the years 1970 and 1975 represented increases of 244 percent over this five-year period.¹⁷³ Blacks continued to experience gains from 1976 through 1980, although at a much slower rate, about 10 percent. From 1981 through 1989, gains for Blacks slowed to stopping in some years. From 1990 through 1995, there were gains of 11 percent and from 1996 through 1998, gains of 18 percent.

For Hispanics, the gains between 1970 through 1975 represented an increase of 183 percent. Gains of 75 percent occurred during the period from 1976 through 1980, and 37 percent from 1981 through 1985. From 1986 through 1989, gains for Hispanics slowed to about 9 percent. From 1990 through 1995, they also stood at 9 percent. From 1996 through 1998, gains stood at about 7 percent.

Increases for American Indians and Alaska Natives have been very small in number, occurring mostly during the 1980s and the period between 1995 and 1998, with a picture of mixed gains and losses from year to year.

Asian graduates made very rapid and very large gains over the 20-year period, increasing nearly 975 percent (from 241 to 2,593 graduates) from 1975 through 1995. This compares to a 48 percent increase (from 647 to 959 graduates) for Blacks and a 265 percent increase (from 244 for 891 graduates) for Hispanics during this period. The number of American Indian and Alaska Natives graduates increased from 12 graduates in 1975 to 63 in 1995.

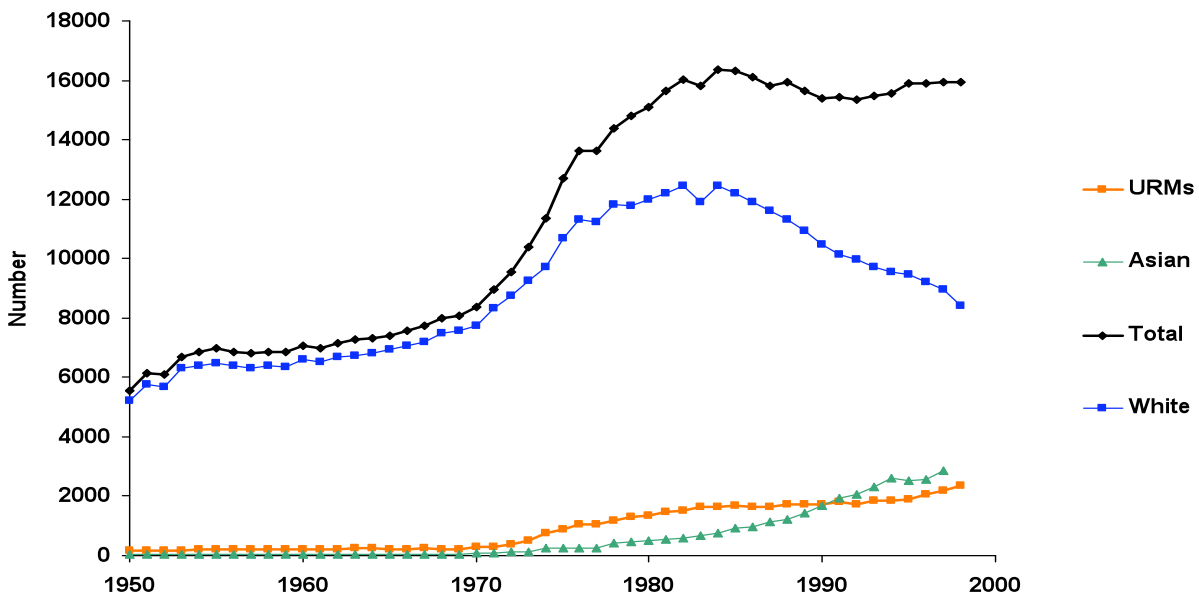
Figure 2-27
Graduates from U.S. Medical Schools by Race/Ethnicity, 1950-1998



Source: Minority Graduates of U.S. Medical Schools: Trends, 1950-1998. AAMC, 2000.

Figure 2-28 shows the substantial rise in underrepresented minority graduates between 1970 and 1985, when these graduates increased by more than 500 percent, from 275 graduates in 1970 to 1,694 in 1985.¹⁷⁴ This increase occurred at a time when the total number of graduates from U.S. medical schools was also rising sharply, increasing by nearly 100 percent, from 8,367 to 16,318. However, beginning in the mid-1980s, the picture changed dramatically, both in terms of increases in URM graduates and total graduates. Between 1985 and 1990, URM graduates increased by only 2 percent, and the total number of graduates decreased by 6 percent. Between 1990 and 1995, URM graduates increased by 10 percent as total graduates increased by 3 percent.

Figure 2-28
Graduates from U.S. Medical Schools by Race/Ethnicity and URM Status, 1950-1998



Note: URMs are defined as Blacks, Hispanics and American Indians/Alaska Natives.
 Source: Minority Graduates of U.S. Medical Schools: Trends, 1950-1998. AAMC, 2000.

Changes in Definitions: From Underrepresented Minority to Underrepresented in Medicine

“Underrepresented minority” is a term commonly used by government agencies, educational institutions, and others to describe a racial/ethnic group whose representation in an education or training program, research, or a profession or field does not reflect the group’s representation in the general population, nationally, within a state, or in a region.

Beginning with its 1970 Task Force Report on Minority Student Opportunities in Medical Education, the AAMC has used the term “underrepresented minorities” to refer to four groups historically underrepresented in medicine: Blacks, Mexican Americans, American Indians, and Mainland Puerto Ricans.¹⁷⁵

In 2003, the AAMC began using the term, “underrepresented in medicine” rather than “underrepresented minorities:”

*"Underrepresented in medicine (URM) means those racial and ethnic populations that are underrepresented in the medical profession relative to their numbers in the general population."*¹⁷⁶

This definition was adopted on June 26, 2003, after the U.S. Supreme Court’s decision in the University of Michigan Law School case, *Grutter v. Bollinger*. According to the AAMC, the definition shifts the focus from a fixed, national definition including four major racial and ethnic groups to a flexible definition that allows for variation based on demographic changes and regional and local perspectives on underrepresentation.¹⁷⁷

The National Institutes of Health (NIH) currently uses the term “underrepresented minorities” to refer to groups underrepresented in biomedical and behavioral research: Blacks or African Americans, Hispanics or Latinos, American Indians and Alaska Natives, and Native Hawaiians and Other Pacific Islanders.¹⁷⁸

Trends by Race and Ethnicity and by URM Status, 1974-2001 and 2002-2005: U.S. Medical School Applicants, Accepted Applicants, Matriculants, and Graduates

Approach to Analyzing Trends

The AAMC was the primary source of information in this assessment of medical school trends. The AAMC uses data from the AMCAS (American Medical College Application Service) as the primary source of information about medical school applicants, although the AAMC Data Warehouse has access to other sources of information about applicants, accepted applicants, matriculants, and graduates.

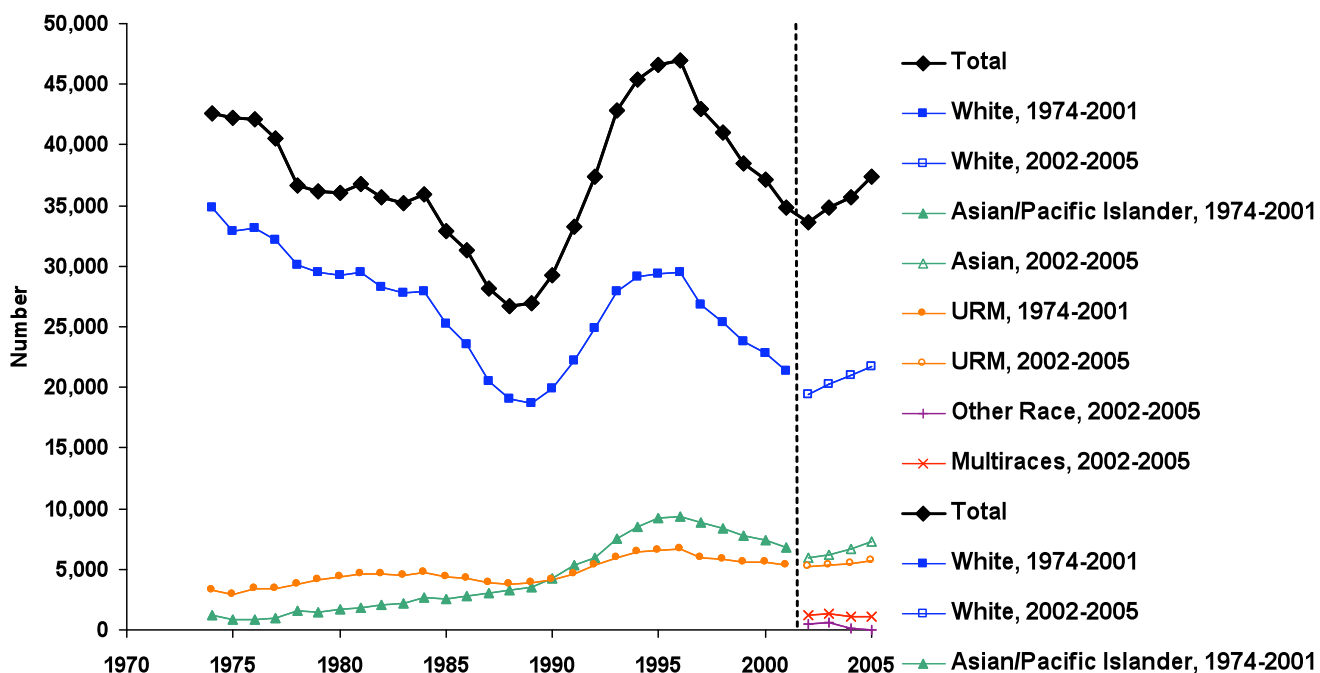
In recent years, two important changes have taken place that affect the analysis of trends in medical school data. First, as we discussed, the AAMC changed its definition of those underrepresented in medicine. Second, the AAMC and the AMCAS changed the way that racial and ethnic data are collected and reported to comply with changes in federal standards.

People applying to medical school through the AMCAS, which is used by most medical schools, had different options related to identifying their race and ethnicity during the time periods 1974-2001 and 2002-2005. During the first period, applicants could identify only one ethnic or racial background. In 2002, two significant changes occurred. First, ethnic origin (Hispanic/non-Hispanic) became a separate question distinct from race on the AMCAS application forms. Second, applicants had the option of choosing not only one, but multiple races after indicating whether they were Hispanic or non-Hispanic. In addition, from 1974 through 2001, Asians and Pacific Islanders were reported by the AAMC in a single category, as they were by the Census before 2000. In 2002, these groups were reported as “Asians” and “Native Hawaiians and Other Pacific Islanders.” The AAMC’s reporting of racial/ethnic categories in its data summaries changed to reflect changes in collecting racial/ethnic data on the AMCAS application.

Our analysis aims to show trends over the periods from 1974 and 2001 and from 2002 through 2005 for selected racial/ethnic groups—Whites, Asians, and URMs—as well as new racial categories that were used beginning in 2002 (Other Race, Multiraces). All figures depicting trends by selected race/ethnicity and URM categories show a break between data points for 2001 and 2002 for all groups to reflect these definitional changes.*

For 1974-2001, URMs are defined as Blacks, Mexican Americans, Other Hispanics, Puerto Ricans, and American Indians and Alaska Natives. For 2002-2005, URMs are defined as Hispanics (Mexican Americans, Cubans, Other Hispanics, and Multi-Hispanics) and non-Hispanic Blacks, American Indians, Alaska Natives, and Native Hawaiians and Other Pacific Islanders alone. For 2002-2005, Whites are defined as non-Hispanic Whites alone. For 2002-2005, Asians are defined as non-Hispanic Asians alone. Race/ethnicity and URM categories are not directly comparable for the two time periods, 1974-2001 and 2002-2005.

Figure 2-29
Applicants to U.S. Medical Schools by Race/Ethnicity and URM Status, 1974-2005



Note: Race/Ethnicity and URM categories are not directly comparable for the two time periods, 1974-2001 and 2002-2005. Race/ethnicity is reported only for U.S. citizens and aliens with permanent resident visas; prior to 1981 only U.S. citizens were included.

Source: AAMC Data Warehouse: Applicant Matriculant File, as of August 31, 2006.

* Even though the labels of some racial/ethnic categories remained the same for the 1974-2001 and the 2002-2005 periods, the numbers reported in these categories may have been affected because a) applicants had different options for identifying their race/ethnicity, and b) the AAMC reported the AMCAS data differently in the two periods. For these reasons, we decided not to present trends for every racial/ethnic group, but for selected groups—Whites, Asians, and URMs—as well as new racial categories (Multirace and Other Race) that have been used since 2002.

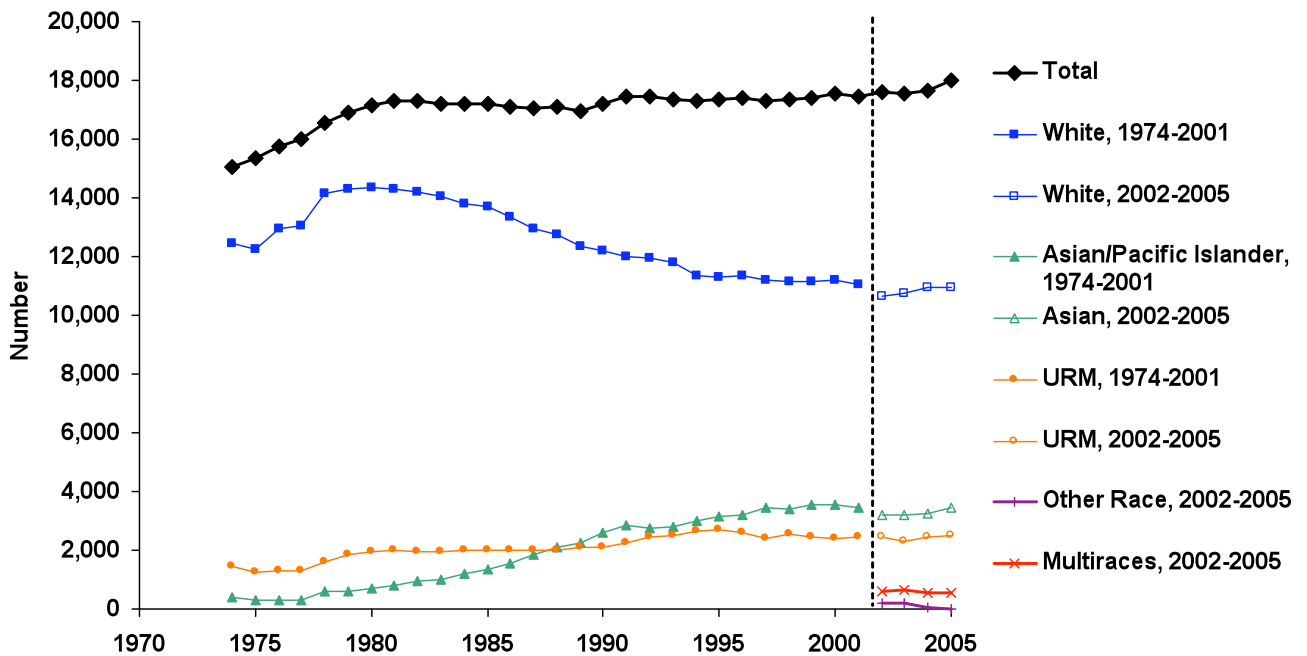
Applicants, 1974-2005

Data obtained from the AAMC and analyzed by us are for the number of applicants, rather than the total number of applications. Each applicant may apply to one or more medical schools. Figure 2-29 shows that the total number of applicants to U.S. medical schools has fluctuated widely from the mid-1970s to 2005, with sharp increases and declines. In 1974, there were 42,617 applicants, with a continued decline in applicants to 26,702 in 1988. From 1991 through 1996, applicants rose from 33,297 to 46,965, only to fall again through 2002 to 33,625. In 2003, another period of rising applicants occurred, which continued through 2005 with a total of 37,373.

Over the entire period from 1974 to 2005, the number of White applicants has declined. The number of Asian/Pacific Islanders and Asian alone applicants has increased dramatically, and the number of URM applicants has increased substantially.¹⁷⁹ URM applicants and Asians and Pacific Islanders and Asians alone show downswings and subsequent upswings in numbers, particularly over the period from 1984 to 2005.

The composition of the applicant pool has also changed over the period from 1974 through 2005. In 1974, Whites accounted for 82 percent of all applicants; in 1985, for 77 percent, in 1995, for 63 percent, and in 2005 for 58 percent. Asians and Pacific Islanders accounted for an increasing proportion of the applicant pool, comprising 3 percent of applicants in 1974, 8 percent in 1985, and 20 percent in 1995; Asians alone accounted for 20 percent in 2005. URMs increased substantially as a proportion of the applicant pool early in the period of analysis.¹⁸⁰ In 1974, URMs accounted for 8 percent of total applicants. By 1985, they accounted for 13 percent of the total. However, small gains occurred thereafter, with URMs making up 14 percent and 15 percent of the applicant pool in 1995 and 2005, respectively.¹⁸¹

Figure 2-30
Acceptances to U.S. Medical Schools by Race/Ethnicity and URM Status, 1974-2005



Note: Race/ethnicity and URM categories are not directly comparable for the two time periods, 1974-2001 and 2002-2005. Race/ethnicity is reported only for U.S. citizens and aliens with permanent resident visas; prior to 1981 only U.S. citizens were included.

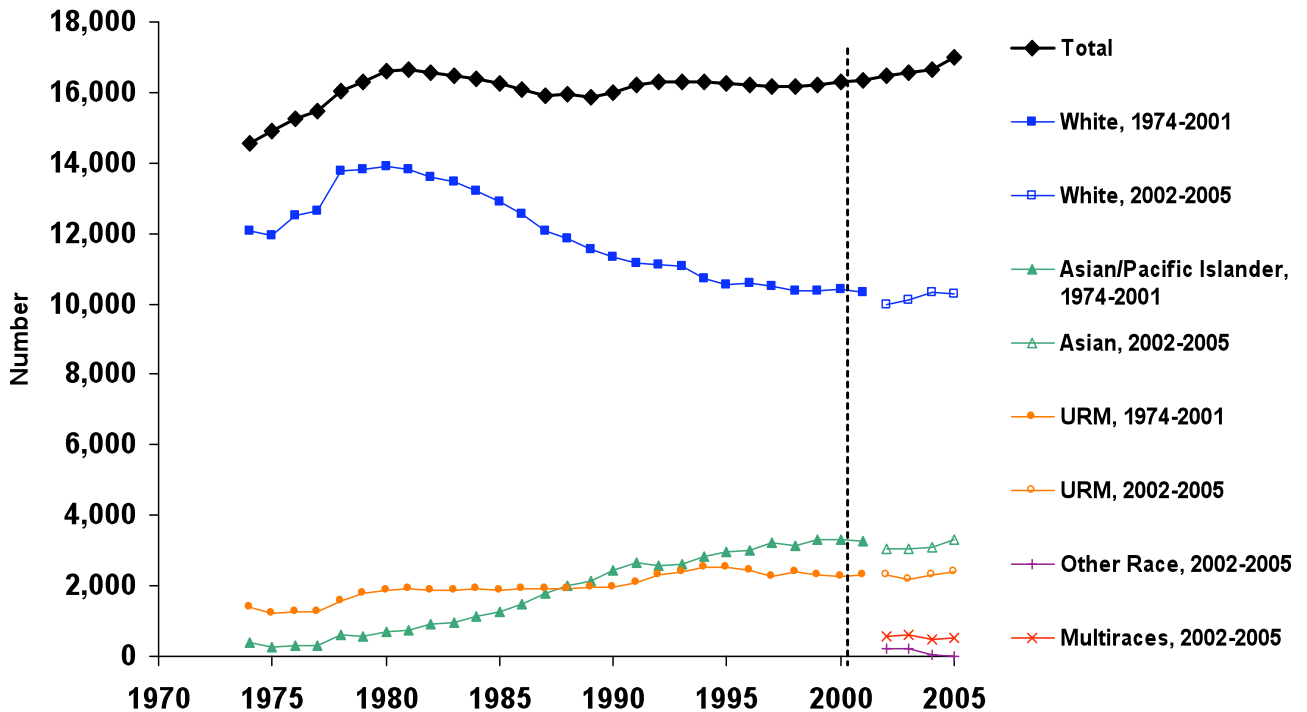
Source: AAMC Data Warehouse: Applicant Matriculant File, as of August 31, 2006.

Acceptances (Accepted Applicants, Acceptants, Acceptees, Admits), 1974-2005

Acceptances are applicants who are accepted at one or more medical schools. The total number of acceptances reflects the total number of applicants and the available positions in medical school entering classes. Total acceptances increased from 15,066 in 1974 to 17,987 in 2005. Figure 2-30 shows that Whites experienced an overall decline in the number of acceptances over the 1974-2005 period, while Asians and Pacific Islanders and Asians alone experienced a very large increase and URMs experienced a more modest increase.¹⁸²

The distribution of acceptances by race/ethnicity shifted sharply over the 1974-2005 period. In 1974, Whites accounted for 83 percent of all medical school acceptances and in 1985 for 79 percent. By 1995, this proportion had dropped to 65 percent and by 2005 to 61 percent. Asians and Pacific Islanders accounted for a larger share of acceptances over time, increasing from 3 percent in 1974 to 8 percent in 1985, and to 18 percent in 1995. In 2005, Asians alone accounted for 19 percent of acceptances. In 1974, URMs accounted for 10 percent of acceptances, in 1985 for 12 percent, in 1995 for 15 percent; and in 2005 for 14 percent.¹⁸³ A key difference between Asians and URMs is that the number of Asian acceptances has grown more rapidly and more consistently.

Figure 2-31
Matriculants in U.S. Medical Schools by Race/Ethnicity and URM Status, 1974-2005



Note: Race/ethnicity and URM categories are not directly comparable for the two time periods, 1974-2001 and 2002-2005. Race/ethnicity is reported only for U.S. citizens and aliens with permanent resident visas; prior to 1981 only U.S. citizens were included.

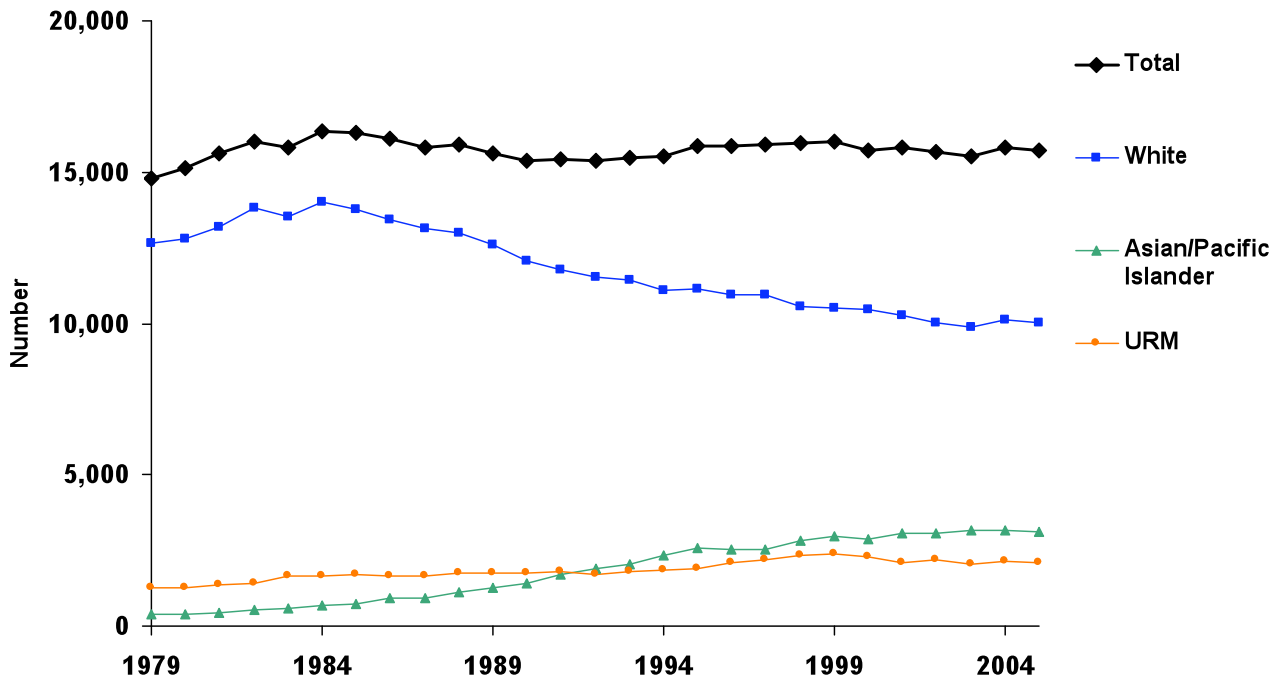
Source: AAMC Data Warehouse: Applicant Matriculant File, as of August 31, 2006.

Matriculants, 1974-2005

Matriculants are those who have enrolled in one medical school. In 1974, 104 medical schools matriculated 14,575 students. In 2005, 125 medical schools enrolled 17,003 matriculants.^{184, 185} Matriculant trends show overall declines for Whites, increases for URMs, and sharp increases for Asians and Pacific Islanders and Asians alone between 1974 and 2005.¹⁸⁶ (Figure 2-31).

Similar to trends for acceptances, Whites made up a declining proportion of matriculants, from 83 percent in 1974 to 80 percent in 1985 to 65 percent in 1995 and 61 percent in 2005. The proportion of Asians and Pacific Islander matriculants grew from 3 percent in 1974 to 8 percent in 1985, to 18 percent in 1995. By 2005, Asians alone represented 20 percent of all matriculants. URMs accounted for an increasing proportion of matriculants, from 10 percent in 1974 to 12 percent 1985 to 16 percent in 1995 and leveling off to 14 percent in 2005.¹⁸⁷

Figure 2-32
Graduates from U.S. Medical Schools by Race/Ethnicity and URM Status, 1979-2005



Note: URM are defined as this period as Blacks, Mexican Americans, other Hispanics, Puerto Ricans, and American Indians and Alaska Natives. Race/ethnicity is reported only for U.S. citizens and aliens with permanent resident visas; prior to 1981 only U.S. citizens were included. Source: AAMC Data Warehouse: Applicant Matriculant File, as of August 31, 2006.

Graduates, 1979-2005

Medical schools have a very high graduation rate. Nearly all who matriculate graduate. Thus, trends for graduates mirror those for the medical school matriculants (Figure 2-32). The number of White graduates has declined; Asians and URMs have experienced increases, with Asians experiencing a sharper increase.¹⁸⁸ (Figures 2-27 and 2-28 present trends for graduates by race and ethnicity and URM status for the 1950-1998 period.)

U.S. Medical School Trends by Race and Ethnicity, 2002-2007

To provide an update on trends over the past five years, we relied on an AAMC September 2007 analysis, since data are presented for specific racial and ethnic groups that are directly comparable over the 2002-2007 period.^{*189}

The total number of applicants to U.S. medical schools continued to rise with a total of 39,108 applicants in 2006, an increase of 4.6 percent over 2005, and 42,315 in 2007, an increase of 8.2 percent.¹⁹⁰ Accepted applicants and matriculants have also continued to rise; in 2006, there were 18,418 accepted applicants and in 2007, 18,858. The total number of matriculants was 17,361 in

* This analysis includes responses by applicants who chose one race or ethnicity alone, those who chose more than one race or ethnicity, and a total of responses in these categories.

2006 and 17,759 in 2007.¹⁹¹ Tables 2-2 through 2-4 show changes by race and ethnicity over this five-year period for applicants, accepted applicants, and matriculants.

Applicants, 2002-2007

Total applicants increased substantially—by more than a quarter—over the 2002-2007 period and all major groups made gains (Table 2-2). Asians made sizeable gains, of nearly 35 percent, in terms of the increase in the number of applicants in 2002 and in 2007, as well as gains in the percent of total applicants. Whites, Hispanics, and Blacks also gained substantially in numbers, but not in the percent of total applicants in 2002 and 2007. Native Hawaiian/Other Pacific Islander applicants increased by nearly 100 percent over the five-year period, but their total numbers remained small; the increase in American Indian/Alaska Native applicants was modest.

Table 2-2 Applicants to U.S. Medical Schools by Race and Ethnicity, Changes over the Five-year Period, 2002-2007

Racial/Ethnic Group	2002		2007		2002-2007	
	#	%	#	%	# +/-	% +/-
American Indian/Alaska Native	381	1.1	414	1.0	33	+ 8.7
Asian	6,594	19.6	9,225	21.8	2,631	+ 34.9
Black	2,983	8.9	3,471	8.2	488	+16.4
Hispanic	2,443	7.3	2,999	7.1	556	+22.8
Native Hawaiian/Other Pacific Islander	104	0.3	206	0.5	102	+98.1
White	21,648	64.4	26,916	64.0	5,268	+24.3
Other Race (non-Hispanic)	2,070	6.2	150	0.4	-1,920	-92.8
U.S. Unknown Race	270	0.8	505	1.2	235	+87.0
Foreign	979	2.9	1,810	4.3	831	+85.9
Total	33,625		42,315		8,690	+25.8

Note: Number of applicants in racial/ethnic categories includes totals of those who identified as one race alone and those who identified as more than one race on their application.

Source: Applicants to U.S. Medical Schools, 2002-2007, AAMC Data Warehouse Applicant Matriculant File as of September 25, 2007.

Accepted Applicants, 2002-2007

Total accepted applicants increased by about 7 percent over the 2002-2007 period, with Asians, Hispanics, Whites, and Native Hawaiians/Other Pacific Islanders all experiencing gains among accepted applicants (Table 2-3). American Indian/Alaska Natives and Blacks experienced small losses.

Table 2-3 Accepted Applicants to U.S. Medical Schools by Race and Ethnicity, Changes over the Five-year Period, 2002-2007

Racial/Ethnic Group	2002		2007		2002-2007	
	#	%	#	%	# +/-	% +/-
American Indian/Alaska Native	177	1.00	172	0.9	-5	-2.8
Asian	3,554	20.2	4,118	21.8	+4	+15.9
Black	1,340	7.6	1,334	7.1	-6	-0.4
Hispanic	1,193	6.8	1,343	7.1	+150	+12.6
Native Hawaiian/Other Pacific Islander	40	0.2	63	0.3	+23	+ 57.5
White	11,769	66.9	12,594	66.8	+825	7.0
Other Race (non-Hispanic)	929	5.3	47	0.2	-882	-94.9
U.S. Unknown Race	186	1.2	308	1.6	+122	+65.6
Foreign	275	1.6	406	2.2	+131	+47.6
Total	17,593		18,858		+1,265	+7.2

Note: Number of applicants in racial/ethnic categories includes totals of those who identified as one race alone and those who identified as more than one race on their application.

Source: Accepted Applicants to U.S. Medical Schools, 2002-2007, AAMC Data Warehouse Applicant Matriculant File as of September 25, 2007.

Matriculants, 2002-2007

Total matriculants increased by about 8 percent from 2002 to 2007 (Table 2-4). All major groups, except Blacks, experienced gains among matriculants.

Table 2-4 Matriculants to U.S. Medical Schools by Race and Ethnicity, Changes over the Five-year Period, 2002-2007

Racial/Ethnic Group	2002		2007		2002-2007	
	#	%	#	%	# +/-	% +/-
American Indian/Alaska Native	156	0.9	163	0.9	+7	+4.5
Asian	3,350	20.3	3,890	22.0	+540	+16.1
Black	1,283	7.8	1,281	7.2	-2	-0.2
Hispanic	1,130	6.9	1,277	7.2	+147	+13.0
Native Hawaiian/Other Pacific Islander	40	0.2	61	0.2	+21	+52.5
White	11,026	66.9	11,881	66.9	+855	+7.75
Other Race (non-Hispanic)	887	5.4	42	0.2	-845	-95.3
U.S. Unknown Race	180	1.1	292	1.6	+112	+62.2
Foreign	210	1.3	326	1.8	+116	+55.2
Total	16,488		17,759		+1,271	+7.7

Note: Number of applicants in racial/ethnic categories includes totals of those who identified as one race alone and those who identified as more than one race on their application.

Source: First-year Enrollees (Matriculants) to U.S. Medical Schools, 2002-2007, AAMC Data Warehouse Applicant Matriculant File as of September 25, 2007.

U. S. Medical School Matriculants and U.S. Population Estimates, 2007

Groups historically underrepresented in medicine—Blacks, Hispanics/Latinos, American Indians/Alaska Natives, and Native Hawaiians and Other Pacific Islanders—continued to be underrepresented in 2007 as matriculants in U.S. medical schools compared to their proportion in the general population (Table 2-5).

Table 2-5
U.S. Medical School Matriculants and
U.S. Population Estimates by Race and Ethnicity, 2007

Racial/Ethnic Group	2007 Matriculants (%)	2007 U.S. Population Est (%)
American Indian/Alaska Native	0.9	1.5
Asian	22.0	5.0
Black	7.2	13.5
Hispanic	7.2	15.0
Native Hawaiian/Other Pacific Islander	0.2	0.3
White	66.9	81.4*

Notes: Percent of applicants in racial/ethnic categories includes totals of those who identified as one race alone and those who identified as more than one race on their application. Population estimates include percent identifying as one race alone or in combination with one or more other races.

Sources: First-year Enrollees (Matriculants) to U.S. Medical Schools, 2002-2007, AAMC Data Warehouse Applicant Matriculant File as of September 25, 2007; U.S. Census Bureau. Population Estimates Bureau, DP-1 General Demographic Characteristics, 2007 Population Estimates, U.S. *Among people reporting that they were non-Hispanic, Whites alone (not in combination with any other race) accounted for 66 percent of the population.

Trends in URM Matriculants 1974-2007

Trends in URM matriculants to U.S. medical schools from 1974 to 2007, a more than 30-year period, show that the number of URM matriculants ranged from a low of 1,218, or about 8 percent, of an entering class of 14,897 in 1975 to a high of 2,804, or a little more than 16 percent, of an entering class of 17,361 in 2006.^{192,193} The percentage of URMs in entering classes increased slowly and almost steadily over the twenty-year period from 1975 to 1995, when the percentage of URMs stood at about 16 percent, but declined until an upswing in 2004.¹⁹⁴

U.S. Medical School 2008 Updates by Race and Ethnicity

Applicants

Total applicants to U.S. medical schools declined slightly from 2007 to 2008, from 42,315 to 42,231.^{*195} The number of Hispanic applicants increased, as did the number of applicants among Native Hawaiian and Other Pacific Islanders, and those of Other Races. Applicants in all other ethnic/racial groups—non-Hispanic Blacks, Asians, American Indians and Alaska Natives, and Whites—declined. The racial/ethnic composition of 2008 applicants was: American Indian and

* The AAMC Data Warehouse Applicant Matriculant File and Student File data for 2007 and 2008 differ in the presentation of data in ethnic/racial categories in tables used as sources in this section of the report.

Alaska Native, 0.3 percent; Asian, 19.6 percent; Black, 7.2 percent; Hispanic, 7.3 percent; Native Hawaiian and Other Pacific Islander, 0.3 percent; White, 56.4 percent; Other (Other Race, No Race Response, More than One Race), 4.7 percent; and Foreign and Unknown citizenship, 4.3 percent.

Accepted Applicants

The number of accepted applicants increased from 18,856 in 2007 to 19,135 in 2008.¹⁹⁶ The number of acceptances increased among Blacks, Hispanics, and those of Other Races, but declined among all other groups, except Native Hawaiians and Other Pacific Islanders, among whom the number of acceptances remained the same. The ethnic/racial composition of accepted applicants was: American Indian and Alaska Native, 0.3 percent; Asian, 19.7 percent; Blacks, 6.3 percent; Hispanics, 7.7 percent; Native Hawaiian and Other Pacific Islander, 0.2 percent; White, 59.0 percent; Other (Other Race, No Race Response, More than One Race), 4.9 percent; and Foreign and Unknown Citizenship, 2.0 percent.

Matriculants

The number of matriculants increased from 17,759 in 2007 to 18,036 in 2008.¹⁹⁷ Hispanic matriculants increased by 10.5 percent, from 1,281 to 1,444, from 2007 to 2008. The number of Asian matriculants and matriculants of Other Races increased; the number of Native Hawaiian and Other Pacific Islander matriculants remained the same; the number of American Indian and Alaska Native, Black, and White matriculants declined. The ethnic/racial composition of matriculants was: American Indian and Alaska Native, 0.3 percent; Asian, 19.8 percent; Black, 6.3 percent; Hispanic, 7.9 percent; Native Hawaiian and Other Pacific Islander; 0.2 percent; White, 59.0 percent; Other (Other Race, No Race Response, More than One Race), 4.9 percent; and Foreign and Unknown Citizenship 1.6 percent.

Graduates

The number of graduates increased from 16,142 to 16,167 from 2007 to 2008.¹⁹⁸ American Indian and Alaska Natives accounted for about 1.0 percent of graduates, Asians, 20.6 percent; Blacks, 6.8 percent; Hispanics (Mexican American, Puerto Rican, Cuban, and Other Hispanics or Latinos), 7.3 percent; Native Hawaiians and Other Pacific Islanders, 0.2 percent; Whites, 64.1 percent; Other Race, 0.6 percent; No Race Response or Unknown Citizenship, 1.6 percent; and Foreign, 1.3 percent.

Progress in Increasing Access of Diverse Populations to U.S. Medical Schools: 1960s-2000s

Race and Ethnicity of U.S. Medical School Graduates and the U.S. Population in 1960 and 2007

In 1960, there were 277 minorities (Asians, Blacks, Hispanics, American Indians and Alaska Natives)—or a total of about 4 percent—among 7,081 graduates of 81 fully accredited, four-year U.S. medical schools.¹⁹⁹ In 1960, the U.S. Census count was 178.5 million. The populations of

Alaska and Hawaii were not included in this count. There was no information available from the Census on the number of people of Hispanic origin. Whites were estimated to account for 88.8 percent of the population; Blacks, 10.6 percent; American Indians, Eskimos, and Aleuts, 0.3 percent; and Asians and Pacific Islanders, 0.3 percent.²⁰⁰

In 2007, there were 5,978 minorities—or a total of about 37 percent—of 16,142 graduates from 129 U.S. medical schools.²⁰¹ Of the minority graduates, 2,346—about 15 percent—were underrepresented in medicine: Blacks or African Americans, Hispanics or Latinos (Mexican Americans, Puerto Rican, Cuban, Other Hispanics or Latinos), American Indians and Alaska Natives, and Native Hawaiians and Other Pacific Islanders.²⁰² Another 3,300 minority graduates—about 20 percent—were Asians, the group making the most consistent and the greatest gains as entrants to and graduates from U.S. medical schools over the decades from the 1960s through the early 2000s. About 2 percent were those of Other Races.²⁰³

In 2007, the Census estimate for the U.S. population was 301.6 million. Hispanics or Latinos of any race were estimated to account for 15.0 percent of the population and non-Hispanics, 85.0 percent. People reporting that they were non-Hispanic or Latino and White alone (not in combination with any other race) accounted for 66.0 percent of the population. People who reported being Black alone, accounted for 12.8 percent of the population; American Indian and Alaska Native alone, for 1.0 percent; Asian alone, 4.4 percent; and Native Hawaiian and Other Pacific Islander alone, 0.2 percent. People who reported being Two or More Races accounted for 1.6 percent of the population.²⁰⁴

Overall, the nation's minority population reached 102.5 million in 2007—34 percent of the total population—and is expected to grow to 43 percent of the population by 2030.^{205,206} (California had 20 percent of the nation's total minority population in 2007.)²⁰⁷ The state's minority population is expected to grow to 71 percent by 2030.

The Goal of Achieving Physician-to-Population Parity for Ethnic and Racial Groups Underrepresented in Medicine

In a little more than twenty years in 2030, U.S. Census Bureau projections indicate that the U.S. population will stand at 363.5 million. Hispanics or Latinos of any race are expected to make up 20.1 percent of the population. Whites alone, who are not Hispanic or Latino, will make up 57.5 percent. Blacks alone will represent 13.9 percent, Asians alone, 6.2 percent, and all other races 4.1 percent.²⁰⁸

For the past nearly forty years, achieving physician-to-population parity for ethnic and racial groups underrepresented in medicine relative to their numbers in the general population has been an explicit or implicit goal of affirmative action and diversity policies and programs of U.S. medical schools, as well as others supporting these efforts, including professional and trade associations, foundations, and federal and state government.

Physician-to-population parity is a continually retreating goal, however, in the following scenario. This scenario is the context surrounding U.S. medical schools' current efforts to increase the numbers of ethnic and racial groups that remain underrepresented in medicine—

Hispanics, Blacks, American Indians and Alaska Natives, and Native Hawaiians and Other Pacific Islanders:

- Some ethnic and racial populations in the U.S. population, particularly Hispanics or Latinos, are growing much more rapidly than their numbers as applicants and entrants to U.S. medical schools.
- Severe educational disparities, which begin early and persist over time, exist among ethnic and racial population groups in the U.S., and these disparities affect both educational achievement and attainment.
- Students must successfully traverse an educational pathway that begins in kindergarten and continues through college over a period of 16-18 years to be prepared with required academic courses to apply to medical school. Students also need family, social, and financial support and life experiences that motivate them to apply to and enter medical school.
- Bridge-building opportunities for students—pre-college and pre-and postbaccalaureate academic enhancement and service learning experiences—that may be vital to supporting students on the educational pathway to medical school are often not regarded as “core” programs and are vulnerable to funding cutbacks or elimination.
- The total number of positions in U.S. medical schools is increasing, but enrollment is still growing relatively slowly, and competition for positions is intense.
- Superior academic achievement (i.e., college grade point averages [GPA] and high Medical College Admission Test [MCAT] scores) is a major selection factor for admission to medical school, even though use of a “holistic review” process helps to assure that no GPA-MCAT group is guaranteed acceptance.
- Costs of undergraduate education and medical education are sharply increasing.
- The debt burden of students for their undergraduate education and medical education is also growing sharply.
- The availability and amount of federal, state, and private loans and scholarships are not keeping pace with the increasing costs of medical school.
- Completing undergraduate medical education and graduate medical education is a lengthy process requiring 7 to 12 years.

Physician-to-population parity differs in the country’s regions, its states, in regions within states, and locally in terms of the race/ethnicity of physicians and the general population. In San Joaquin County, one of California’s Central Valley counties, for example, the need for Hispanic or Latino physicians who are bilingual and bicultural will be greater than for the state as a whole, since the projected population in this county in 2030 will be 43 percent Hispanic or Latino.²⁰⁹ In other California counties, there is a growing need for Cambodian, Hmong/Laotian, and Samoan physicians.²¹⁰ In northeast Wisconsin’s Menominee County, created from the Menominee Indian reservation in 1961, the need for American Indian physicians will be great, with 87 percent of the county’s population American Indian/Alaska Native.²¹¹ In 77 counties in five Southern states (Louisiana, Mississippi, Alabama, Georgia, and South Carolina), the majority of people are Black or African American; Claiborne County, Mississippi, on the Louisiana border has the highest percentage of Blacks (84 percent).²¹² Hawaii is the only majority-Asian state (Asians comprise 54 percent of the population), but Los Angeles County in California has the largest Asian population (5.1 million) of all states.²¹³ Honolulu County has the largest percentage of

Native Hawaiians (22 percent), but California has the largest population of Native Hawaiians and Other Pacific Islanders.²¹⁴

The U.S. Physician Workforce

There are many views about the physician workforce in the United States. Some are strongly held views on the numbers and types of physicians needed.^{215, 216} Some are equally strong views on the undergraduate and postgraduate medical educational pathways of U.S. physicians. Some are views on the roles and contributions now and in the future of graduates of U.S. allopathic medical schools, international medical graduates,^{*} and graduates of osteopathic medical schools in meeting demands for primary care and specialty care, as well as needs in other areas, such as teaching, research, and administration. There are also varying perspectives on the importance of the participation of a racially and ethnically diverse physician workforce as patient care givers, physician scientists, teachers, and academic and health care administrators.

The U.S. Physician Workforce: A Snapshot in the Early 2000s

Number of Active Physicians, Type of Medical School, and Type of Activity

In 2007, there were 747,581 active physicians[†] in the United States.²¹⁷ Of these physicians, 522,017 (69.8 percent) were MDs who had graduated from U.S. allopathic medical schools, 178,112 (23.8 percent) were international medical graduates (IMGs), MDs who had graduated from medical schools outside the U.S., and 47,452 (6.3 percent) were Doctors of Osteopathy (DOs). Primary care physicians[‡] accounted for 263,815 (35.3 percent) of total active physicians, with MDs representing 240,601 (91.2 percent) and DOs, 23,214 (8.8 percent). The great majority of physicians—more than 60 percent—were involved in providing specialty care to patients, administration, teaching, research, and other non-patient care activities.

* International medical graduates (IMGs) are U.S. citizens and permanent residents (USIMGs) and citizens of other countries (non-USIMGs) who are educated in medical schools outside the United States, Puerto Rico, and Canada.

† “Active physicians” are defined as “physicians who are licensed by a state are considered active, provided they are working at least 20 hours per week. Physicians who are retired, semi-retired, temporarily not in practice, not active for other reasons, or who have not completed their graduate medical education are excluded. Active physicians include those working in direct patient care, administration, medical teaching, research, or other non-patient care activities.” See *2007 State Physician Workforce Data Book*, Center for Workforce Studies, Association of American Medical Colleges, December 2007, p.4 .Available at:

<http://www.aamc.org/workforce/statedatabook/statephysiciandatabooksept08.pdf>

‡ “Primary care physicians” are defined as M.D.’s and D.O.’s whose primary specialty is adolescent medicine, family medicine, geriatric medicine, general practice, internal medicine, internal medicine/pediatrics, or pediatrics. M.D.’s and D.O.’s who are residents, fellows, retired, semi-retired, temporarily not in practice, or not active for other reasons are excluded. . . .” See *2007 State Physician Workforce Data Book*, Center for Workforce Studies, Association of American Medical Colleges, 2007, p. 9. Available at:

<http://www.aamc.org/workforce/statedatabook/statephysiciandatabooksept08.pdf>

Race and Ethnicity of the Physician Workforce and the U.S. Population

The picture of race and ethnicity among U.S. physicians (MDs, IMGs, and DOs) in 2006, based on data from the American Community Survey, showed that non-Hispanic White physicians accounted for 69.2 percent of the total; non-Hispanic Asians alone, 18.6 percent; Hispanics, 5.8 percent; non-Hispanic Blacks alone, 4.8 percent; non-Hispanic American Indian/Alaska Native/Native Hawaiian/Other Pacific Islander alone, 0.2 percent; non-Hispanic Other alone, 0.3 percent; and non-Hispanic Two or More Races, 1.1 percent.²¹⁸

In 2006, estimates from the U.S. Census Bureau for the U.S. population, showed that non-Hispanic Whites alone accounted for 66.4 percent of the population; non-Hispanics Asians alone, 4.3 percent; Hispanics, 14.8 percent; non-Hispanic Blacks alone, 12.3; non-Hispanic American Indians/Alaska Natives alone, 0.75; non-Hispanic Native Hawaiians/Other Pacific Islanders alone, 0.14; and non-Hispanic Two or More Races, 1.4 percent.²¹⁹

Recent Reports on U.S. Physician Supply and Demand

Several recent reports on the physician workforce point to the complexity of predicting supply and demand of physicians in a changing demographic, health care, and undergraduate medical education and graduate medical education context. Most of these reports focus on the physician workforce available for providing patient care, but some also address other physician activities, such as teaching and research. Few give major attention to the issue of diversity of the workforce, partly because data on the racial/ethnic composition of the physician workforce, particularly at state, county, and metropolitan levels, are often incomplete or unavailable, and investigators must rely on national estimates, which may also be limited.²²⁰

The Physician Workforce: Projections and Research Into Current Issues Affecting Supply and Demand

PHYSICIAN SHORTAGES ARE PREDICTED TO RANGE FROM 49,000 TO 185,000 BY 2020, DEPENDING ON THE SUPPLY/DEMAND SCENARIO. Released in December 2008, a report from the Bureau of Health Professions, Health Resources and Services Administration, Department of Health and Human Services predicted an increase in physician supply.²²¹ However, the report also predicted a slower increase in physician services provided, because of an increasing proportion of women and older physicians practicing, who tend to work fewer hours. At the same time, the report noted that there will be a sharper increase in demand for physicians, particularly in medical and surgical specialties, because of the growth and aging of the population:

The baseline projections suggest that between 2005 and 2020 overall requirements for physicians engaged primarily in patient care increase 22 percent, from approximately 757,300 to 921,500. In percentage terms, growth is lower for primary care (20 percent) than for non-primary care (23 percent). If it is assumed that requirements for physicians engaged primarily in non-patient care activities (e.g., administration, teaching, and research) remain relatively constant at approximately 6 percent of total

physicians, then total requirements for physicians will increase from about 802,100 to 976,000 during this period.²²²

The baseline projections from BHPr's (Bureau of Health Professions') physician supply and requirements models suggest that overall requirements are growing faster than the FTE supply of physicians. ... Between 2005 and 2020, requirements are projected to grow to approximately 976,000 (22 percent), while FTE supply is projected to grow to approximately 926,600 (14 percent). These projections suggest a modest, but growing, shortfall of approximately 49,000 physicians by 2020 if today's level of health care services is extrapolated to the future population.²²³

AN ADDITIONAL 7,000 PRIMARY CARE PHYSICIANS ARE NEEDED TO DE-DESIGNATE HEALTH PROFESSIONAL SHORTAGE AREAS (HPSAs), AND SHORTAGES ARE PREDICTED IN SURGICAL AND OTHER SPECIALTIES. The Bureau of Health Professions report also predicted demand for primary care and specialty care:

These projections suggest supply imbalances in many medical specialties, although rebalancing residency programs to areas of greatest need will help mitigate severe imbalances. The supply of primary care physicians is growing slightly faster than demand, and this trend could help to relieve the current undersupply of primary care physicians in some Federally designated shortage areas. Approximately 7,000 additional primary care physicians are currently needed to de-designate primary care HPSAs (Health Professional Shortage Areas).²²⁴

The projections suggest a growing shortage of specialists, with demand growing by approximately 62,000 more physicians than will be supplied. Surgical specialties account for more than half of this shortfall, although non-surgical specialties such as cardiology and pathology show demand growing significantly faster than supply.²²⁵

...the dynamic nature of the physician workforce means that projected shortages and surpluses in individual specialties tend to be overestimated with a static model. As inadequacies between supply and demand grow larger, market and other forces help to direct new graduates into specialties of greater need. Comparing the FTE supply projections to demand projections under the high-growth scenario produces an estimated shortfall of 185,000 physicians (or approximately a 20 percent shortfall in overall supply)....²²⁶

...For several decades the United States has been a net importer of medical school graduates. A growing demand for physicians that exceeds production from U.S. medical schools could make the Nation even more reliant on international medical schools, at a time when other nations face greater health workforce inadequacies than our own.²²⁷

THE RACIAL/ETHNIC DIVERSITY OF THE PHYSICIAN WORKFORCE IS NOT GROWING AS RAPIDLY AS THE DIVERSITY OF THE U.S. POPULATION, AND IT IS UNLIKELY TO DO SO EVEN IF THERE IS A DRAMATIC INCREASE IN UNDERREPRESENTED MINORITIES IN U.S. MEDICAL SCHOOLS. The report addressed physician supply and demand issues in relation to race/ethnicity of the physician workforce and of the U.S. population, noting:

During the last 3 decades, racial and ethnic minorities doubled as a proportion of the U.S. population from approximately 16 percent in 1970 to 31 percent in 2000. Minority representation among U.S. medical school applicants, candidates accepted, and graduates has also increased during this time; however, this representation remains substantially below the proportion of racial and ethnic minorities in the U.S. population.²²⁸

Advocates supporting an increase in the number of physicians underrepresented in medicine are not simply addressing an equity concern, the report noted, but hope to improve access to care for minorities and vulnerable, underserved populations.²²⁹ The report pointed out that “(e)ven if there were a dramatic increase in minority representation in U.S. medical schools, the overall racial/ethnic composition of the physician workforce would change very slowly because of the long length of time to train new physicians and because only a small portion of the current workforce retires each year.”²³⁰ In contrast, the great majority of IMGs in residency programs in 2007-2008 in the U.S. were non-White (70.4 percent), with India, Pakistan, the Philippines, and China among the top five countries of citizenship for IMGs over the past twenty-five years.^{231,232,233} Each year, IMGs enter practice in the U.S., many in primary care in underserved areas. IMGs currently account for one in five practicing U.S. physicians.²³⁴

DEMAND FOR HEALTH CARE BY A DIVERSE PHYSICIAN WORKFORCE WILL INCREASE AS DIVERSITY IN THE POPULATION CONTINUES TO INCREASE. The Bureau of Health Professions predicted in an earlier report that between 2000 and 2020, the percentage of total patient care hours spent with minority patients will rise from 31 to 40 percent.²³⁵ In 2000, care for Black patients accounted for 13 percent of total patient care hours—the highest proportion in emergency medicine, obstetrics/gynecology, and pediatrics.²³⁶ The lack of Black physicians in specialties (i.e., medical genetics [2 percent], radiation oncology [2 percent], allergy and immunology [2 percent] and of Hispanic physicians in orthopedic surgery [2 percent], radiology [3 percent], and dermatology [3 percent]) is well recognized.²³⁷ For Hispanic and other non-Black minority patients, the percentage of patient care hours in 2000 was 21 percent—the greatest proportion of patient care hours were in radiology, pathology, and pediatrics.²³⁸ Studies suggest that minority patients tend to use minority physicians as their usual care providers,²³⁹ that new physicians who are minorities are more likely to practice in federally designated HPSAs than are non-Hispanic Whites,²⁴⁰ that Black and Hispanic physicians tend to practice in areas with relatively high proportions of people of their own ethnicity and race,²⁴¹ and that minority physicians are more likely to provide care for Medicaid patients and uninsured patients.²⁴² The issue of the increasing need for culturally competent care to an increasingly diverse population was also noted in the Bureau of Health Professions report.

THERE IS A LACK OF RACIAL/ETHNIC DIVERSITY IN ACADEMIC MEDICINE POSITIONS AND IN SENIOR ACADEMIC POSITIONS, AND UNDERREPRESENTED MINORITIES ARE MORE LIKELY TO LEAVE ACADEMIC MEDICINE. The Bureau of Health Professions report assumed that requirements for physicians engaged primarily in non-patient care activities (e.g., administration, teaching, and research) will remain relatively constant at approximately 6 percent of total physicians. The report cited 1998 and 2000 studies by Palepu, Carr, Friedman et al.,^{243,244,245} who found statistically significant differences between minority and non-Hispanic White physicians in representation in senior positions and in promotion rates.²⁴⁶ These investigators noted that there were several reasons for the lack of representation of Black, Native American, Mexican American, and Puerto Rican physicians in academic medicine, including 1) few minority medical school graduates, 2) indebtedness of postgraduate trainees, 3) shortage of role models, and 4) lack of awareness of opportunities in academic medicine.²⁴⁷ Using a survey of faculty in 24 medical schools to obtain information on majority faculty, URM faculty, and other minority faculty, they found that a larger percentage of URM faculty were in medical specialties and spent more time in patient care than in research than the two other faculty groups. However, the investigators found no differences in the proportions practicing primary care. URM faculty felt more need to supplement their income, were less satisfied with their careers, and were more likely than the other groups surveyed to leave academic medicine.²⁴⁸

THERE ARE DIFFICULTIES IN PROJECTING PHYSICIAN SUPPLY AND DEMAND IN A RAPIDLY CHANGING POLICY ENVIRONMENT. The report emphasized what is even more apparent today: it is difficult to project supply and demand of health professionals when major health care reform proposals are being developed that will affect the organization, delivery, and financing of health care.

The health care system continues to evolve as does the role of physicians. Because of the long length of time needed to train physicians and to change our education infrastructure, policymakers, educators, physicians, and other stakeholders need to know at least a decade in advance how changes in the health care system and other trends will affect the adequacy of physician supply. Updating physician supply and demand projections every few years would allow the Federal Government to better reflect the latest trends and to provide advance warning of changes in the adequacy of physician supply.²⁴⁹

The Complexities of Physician Supply and Demand: Projections Through 2025

PROJECTIONS OF PHYSICIAN SHORTAGES PREDICTED TO RANGE FROM 124,000 TO 159,000. A November 2008 report from the AAMC's Center for Workforce Studies projected a shortfall of 124,000 physicians under a scenario with continued patterns of supply, use, and demand and 159,000 under a scenario with changes in supply, use, and demand by 2025.²⁵⁰ Key findings of this report were:

- The nation is likely to experience a shortage of physicians which will grow over time.
- Though the supply of physicians is projected to increase modestly between now and 2025, the demand for physicians is projected to increase even more sharply.
- Aging of the population may drive demand sharply upward for specialties that predominantly serve the elderly (e.g., oncologists).

- The U.S. Census Bureau projects that the U.S. population will grow by more than 50 million (to 350 million) between 2006 and 2025. This alone will likely lead to a considerable increase in the demand for physician services.
- Growth in future demand could double if visit rates by age continue to increase at the same pace they have in recent years—with the greatest growth in utilization among those 75+ years of age.
- Universal health care coverage could add 4 percent to overall demand for physicians; this would increase the projected physician shortfall by 31,000 physicians (25 percent).
- Even a modest increase in physician productivity could do more to alleviate the projected gap between supply and demand than any other supply-side change but productivity improvements in health care have been hard to achieve as care has become more complex.
- Future demand for physicians would be significantly reduced if physician assistants and nurse practitioners play a larger role in patient care.
- Even a robust expansion of GME capacity (from 25,000 new entrants per year to 32,000) would only reduce the projected shortage in 2025 by 54,000 physicians (43 percent).²⁵¹

This report also noted:

A 30 percent expansion in medical school enrollment and an increase in GME positions (from 25,000 new entrants per year to 32,000) will not eliminate the projected shortage, only moderate it. Growth in the physician supply needs to be accompanied by other actions, such as a shift in how physician services are delivered, in order to overcome the projected shortage.²⁵²

THE RACIAL/ETHNIC COMPOSITION OF THE PHYSICIAN WORKFORCE AND ITS IMPORTANCE IN ASSURING AN ADEQUATE SUPPLY OF PHYSICIANS. The AAMC report, like the Bureau of Health Professions report, noted that the “racial and ethnic composition of the physician workforce is changing, as the number of Black and Hispanic medical school graduates in the U.S. has grown substantially over the past two or three decades (about doubling for Hispanics).”²⁵³ The report also notes that Blacks and Hispanics are “still critically underrepresented among medical school graduates, relative to the general population.”²⁵⁴ The report cites Saha and Shipman’s 2006 report, *The Rationale for Diversity in the Health Professions*, “as providing compelling evidence that minority physicians are more likely to provide care for poor and underserved communities.”²⁵⁵

...the racial and ethnic diversity of the physician workforce bears directly on addressing disparities in access to care and perhaps even health outcomes for significant segments of the population. Given the relative growth rates of different racial and ethnic groups in the U.S, increasing the diversity of the physician workforce is also likely a critical measure in assuring an adequate supply of physicians.²⁵⁶

Other Reports and Analyses of Physician Supply and Demand

PHYSICIAN WORKFORCE POLICY GUIDELINES FOR THE UNITED STATES, 2000-2020 AND PHYSICIAN SUPPLY AND DEMAND: PROJECTIONS TO 2020 DIFFER IN PROJECTIONS. Two earlier reports,^{257,258} the first a January 2005 report from the Council on Graduate Medical Education (COGME),²⁵⁹

predicted a physician shortfall ranging from 85,000-96,000 by 2020.²⁶⁰ The second report, issued in October 2006 by the Bureau of Health Professions, noted:

The growth and aging of the United States population will cause a surge in demand for physician services. If current healthcare utilization and delivery patterns continue, the overall supply of physicians should be sufficient to meet the expected demand through the next 10 years. This finding suggests the need for modest increases in United States medical school capacity. Currently, one in four physicians in a residency program graduated from a foreign medical school, and a large portion of IMGs remain in the United States after completing their graduate training. If the United States desires to rely less on IMGs to meet the growing demand for physician services, then United States medical school capacity must be expanded beyond the expansion necessary to meet the needs of a growing and aging population.²⁶¹

Goodman and Fisher in their April 2008 article, “Physician Workforce Crisis? Wrong Diagnosis, Wrong Prescription,” respond to COGME’s call for increased physician supply.²⁶² They argue that “physician supply varies dramatically by region of the country,” that the “presence of more physicians doesn’t translate into better care,” and that “having more physicians does, however, mean more spending on health care.”²⁶³ These authors predict that expansion of physician supply will exacerbate “regional inequities in care,” “further undermine primary care and reinforce trends toward a fragmented, specialist-oriented health care system,” and cost \$5 to \$10 billion to expand the physician workforce by 30 percent.²⁶⁴

OTHER PROJECTIONS OF SHORTAGES. Analyses by Cooper et al. in 2002,²⁶⁵ which also projected physician shortages, were criticized by Barer,²⁶⁶ Grumbach,²⁶⁷ Reinhardt,²⁶⁸ and Weiner,²⁶⁹ who disagreed with the Cooper team’s assumptions and conclusions regarding the shortages.²⁷⁰ However, Salsberg has pointed out that 25 states have reported physician shortages, including California, Florida, Massachusetts, New Jersey, New York (regional), and Texas.²⁷¹ Several of the states have assessed workforce needs, including needs by specialty.²⁷²

Primary Care Physician Supply and Demand

PRIMARY CARE PHYSICIAN SUPPLY IS INCREASING, BUT NOT AS FAST AS THE SUPPLY OF PHYSICIAN ASSISTANTS AND NURSE PRACTITIONERS. The U.S. Government Accountability Office’s report, *Primary Care Professionals: Recent Supply Trends, Projections, and Valuation of Services*, issued in February 2008, analyzed the supply of primary care physicians, including both MDs (1995-2005) and DOs (1995-2004) (i.e., those in internal medicine, family medicine, general practice, and general pediatrics), as well as that of physician assistants, nurse practitioners, and dentists.²⁷³ The report noted that in recent years the supply of primary care physicians has increased by about 1 percent per year, but the supply of nonphysicians (physician assistants and nurse practitioners) has increased faster by an average of 4 percent and 9 percent, respectively.²⁷⁴

THE NUMBER OF PHYSICIANS IN PRIMARY CARE TRAINING IS INCREASING, BUT THE NUMBER OF PRIMARY CARE PROGRAMS HAS BEEN DECREASING. The number of physicians in primary care training programs increased by 6 percent between 1994 and 2006, but the number of primary care residency programs decreased from 1,184 programs to 1,145.²⁷⁵ The composition of the primary care physician workforce also changed over the 1995-2006 period; the decline by 1,655

in the number of USMD graduates selecting primary care residencies was offset by increases in the number of IMG and DO graduates entering primary care residencies, 2,540 and 1,415, respectively.²⁷⁶

THE SUPPLY OF PRIMARY CARE PHYSICIANS IS GROWING FASTER THAN THE SUPPLY OF SPECIALTY CARE PHYSICIANS, BUT THE NUMBER OF PRIMARY CARE PHYSICIANS IN NONMETROPOLITAN AREAS IS FAR FEWER THAN IN METROPOLITAN AREAS. The supply of primary care physicians grew from 80 per 100,000 people in 1995 to 90 per 100,000 in 2005, representing an increase of 12 percent; the supply of specialty care physicians grew by 5 percent, from 181 per 100,000 to 189 per 100,000 from 1995 to 1995.²⁷⁷ However, there were 93 primary care physicians per 100,000 people in metropolitan areas and 55 per 100,000 in nonmetropolitan areas.²⁷⁸

THE DECLINE IN U.S. MEDICAL STUDENTS CHOOSING PRIMARY CARE RESIDENCIES IS A SYMPTOM OF OTHER PROBLEMS RELATED TO PRIMARY CARE CAREERS. Particular concerns have been raised about the shortages of primary care physicians. Bodenheimer, Grumbach, and Berenson note that in 2009 “for the 12th straight year, the number of graduating U.S. medical students choosing primary care residencies reached dismally low levels”²⁷⁹ These physician researchers say that three factors contribute to the “crisis” in primary care: 1) primary care physicians receive lower pay than procedural specialists; 2) heavy workload and work stress lead primary care to be known as the “career with more work and less pay;” and 3) “medical education favors training in non-primary care fields.”²⁸⁰ Ebell underlines the correlation between physician salaries and fill rates in residency programs.²⁸¹ Other investigators point to the lack of balance between primary and specialty care²⁸² and the few physicians practicing in rural communities.²⁸³ Only 8.6 percent of physicians are practicing in rural communities and only 16.8 are practicing in underserved areas.²⁸⁴

ACCESS TO COMPREHENSIVE PRIMARY CARE IS ESSENTIAL TO THE FUNCTIONING OF THE HEALTH CARE SYSTEM. The U.S. Senate Finance Committee heard testimony in March 2009 on workforce issues in health care reform. Testimony underlined several issues: 1) the importance of access to comprehensive primary care for the effective functioning of the health care system;²⁸⁵ 2) the shortage of primary care physicians (nearly two-thirds of the U.S. physician workforces are engaged in specialty patient care or in non-patient care activities);²⁸⁶ 3) the lack of physicians practicing in rural and economically disadvantaged areas (most physicians practice in urban areas);²⁸⁷ 4) a “dysfunctional physician payment reimbursement system dominated by Medicare’s Resource Based Relative Value Scale (RBPVS) fee-for-service system;”²⁸⁸ and 5) a “serious and growing shortage of U.S. medical school graduates choosing careers in primary care” for reasons of high levels of student indebtedness, low pay, lack of career prestige, high patient volume, rushed care.²⁸⁹ The Committee also heard that student loan forgiveness may be a useful stop-gap measure for encouraging careers in primary care, but is unlikely to be “a sufficient or durable measure in the absence of fundamental payment reform that improves the primary care practice environment.”²⁹⁰

The Goal of Increasing U.S. Medical School Enrollment

The AAMC's Call for a 30 Percent Increase by 2015

In February 2005, the AAMC called for a 15 percent increase in U.S. medical school enrollment by 2015.²⁹¹ In June 2006, after additional analysis of demographic, health care, and workforce factors, the AAMC recommended an increase of 30 percent in medical school enrollment (from a 2002 baseline year) by increasing class sizes in existing schools and establishing new medical schools.²⁹² This would require 21,434 new matriculants by 2015.²⁹³

A 2008 AAMC Progress Report on U.S. Medical School Enrollment Expansion

THE NUMBER OF NEW MEDICAL SCHOOLS IS INCREASING. In 2002, there were 125 accredited medical schools, including one school (Florida State University College of Medicine) with preliminary accreditation.²⁹⁴ In 2008, there were 130 accredited schools, including Florida State University College of Medicine in Tallahassee, Florida; San Juan Bautista School of Medicine in Puerto Rico; Texas Tech University's Paul L. Foster School of Medicine in El Paso, Texas; Florida International University College of Medicine in Miami, Florida; the University of Central Florida College of Medicine in Orlando, Florida, and the Commonwealth Medical College in Scranton, Pennsylvania.^{295,296} Several more schools are in the process of seeking accreditation and several more are under discussion.^{297,298} Five schools have been designated by the Liaison Committee on Medical Education as "applicant schools" or "candidate schools."²⁹⁹

SOME PROGRESS IN INCREASING ENROLLMENT IS REPORTED, BUT NOT ENOUGH TO REACH THE TARGET BY 2015. In May 2009, AAMC's Center for Workforce Studies released an annual survey on medical school expansion indicating that first-year medical school enrollment will increase by 21 percent to a total of 19,946 by 2013 from the baseline 2002 academic year; this increase represents an increase of 3,458 matriculants, based on projections of entrants to 135 existing and new medical schools.³⁰⁰

Ninety-eight (78.4%) of the 125 schools accredited by the LCME in 2002 had increased their first year enrollment by the 2008-09 academic year. An additional 15 schools show plans to increase by 2013-14 for a total of 113 schools (90.4%) accredited in 2002 having either already increased or planning to increase first year enrollment.³⁰¹

U.S. medical schools' are not on a trajectory to meet AAMC's call for an increase of 30 percent enrollment by 2015, which would require an increase of 4,946 new entrants each year to reach the goal of 21,434 first-year medical students, but if current plans and projections are realized, the goal may be reached by 2017 or 2018.³⁰² Economic slowdowns may delay or change plans of some schools.

MORE INCREASES IN ENROLLMENT ARE COMING FROM PUBLIC MEDICAL SCHOOLS THAN FROM PRIVATE SCHOOLS. Of the projected increases in entrants to the 130 existing medical schools, 73.1 percent of enrollment increase is expected to come from public medical schools and 26.9 percent from private schools, with the greatest enrollment increases in the South and West; of the new medical schools in various stages of planning, most are in the most populous and diverse

states (Florida, California, Texas).³⁰³ Of the 81 schools that responded to a survey question about whether their expansion plans targeted a specific population, 21.9 percent said that they had such plans; the most common targets were minority groups currently underrepresented in medicine, rural populations, and underserved urban populations.³⁰⁴

INCREASING THE NUMBER OF U.S. MEDICAL SCHOOL GRADUATES HAS IMPLICATIONS FOR GRADUATE MEDICAL EDUCATION. The AAMC's May 2009 report also notes the implications for graduate medical education (GME) of increased medical school graduates:

A 30% increase in 1st year medical school enrollment above the 2002 level would lead to an increase of nearly 5,000 MD graduates, all of whom would need to enter GME before becoming licensed to practice. Currently, more than 7,000 international medical school graduates (IMGs) enter GME each year. If GME positions are not increased, it is likely that the expansion of MD graduates would lead to a parallel reduction in IMGs without an increase in physician supply to serve the nation.³⁰⁵

Those who are concerned about physician shortages in the U.S. recognize that increasing U.S. medical school enrollment is only one part of the solution to increasing aggregate physician supply, supply in primary care (i.e., family medicine, general medicine, general pediatrics) and in specific specialties, and supply in specific geographic locations for diverse populations and underserved populations.³⁰⁶ If entry-level positions in graduate medical education do not increase and if the Centers for Medicare and Medicaid retain caps on the number of GME positions eligible for Medicare funding, then, as one author notes, "leadership in the community must begin to develop a comprehensive strategy" about how to increase the number of year-one positions in the system and how to fund residency programs.³⁰⁷ The Balanced Budget Act of 1997 placed a cap on the number of residents and fellows that the Medicare program, which is the single largest source of support for graduate medical education, would pay for; before 1997, the number of residency programs and positions had been increasing for many years.³⁰⁸

Graduate Medical Education

To practice medicine in the U.S., students must graduate from medical school, pass a number of licensure exams, and complete a graduate medical education program, or residency.³⁰⁹ During residency, additional supervised clinical training is provided, most often focused on one medical, surgical, or support specialty, and residency experiences prepare physicians for later career experiences.³¹⁰ Each year, U.S. medical school seniors and graduates (USMGs or USMDs) plus international medical students and graduates (IMGs), who are U.S. citizens or permanent residents (USIMGs) and those from other countries (non-USIMGs), students and graduates of Doctor of Osteopathy (DO) programs in osteopathic medical schools, students and graduates of Canadian medical schools, and students and graduates of Fifth Pathway Programs* apply to

*The American Medical Association (AMA) defines Fifth Pathway Programs as "An avenue by which students who have attended four years at a foreign medical school may complete their supervised clinical work at a U.S. medical school, become eligible for entry to U.S. residency training, and ultimately obtain a license to practice in the U.S." These programs were discontinued as of June 30, 2009 by the AMA's Council on Medical Education.

<http://www.ama-assn.org/ama/pub/about-ama/our-people/ama-councils/council-medical-education/topics/the-fifth-pathway-program.shtml>

accredited U.S. graduate medical education programs for Postgraduate Year 1 (PGY-1) or Postgraduate Year 2 (PGY-2) residency positions.

The “Match”: The Changing Picture of Applicants, Residency Program Positions Offered, Positions Filled, and Program by Type of School of Students and Graduates

The “match,” or the process of confidentially matching applicants’ and GME programs’ preferences, which is conducted by the National Resident Matching Program (NRMP)—offered a record-high total number of positions (25,185) and PGY-1 (Postgraduate Year 1) positions (22,427) and attracted a record-high number of active applicants (29,890) in 2009.³¹¹ (In 1952, the year of the first match, there were 10,400 internship positions for 6,000 U.S. medical school graduating seniors.)

In 2009, graduating seniors (15,638) of U.S. allopathic medical schools accounted for a little more than half (52 percent) of active applicants.³¹² Non-U.S. citizen students and graduates (7,484) of international medical schools represented the next largest group (25 percent); U.S. citizen students and graduates (3,390) of international medical schools, the next largest group (11 percent); students and graduates (2,015) of osteopathic medical schools (7 percent); previous graduates (1,222) of U.S. allopathic medical schools (4 percent); students and graduates (106) of Fifth Pathway Programs (0.4 percent); and students and graduates (35) of Canadian medical schools,) (0.1 percent).

Highlights of the results for 2009 match were.³¹³

- Several specialties saw increases in the number of matched U.S. allopathic seniors in 2009: pediatrics (72), psychiatry (61), diagnostic radiology (55), emergency medicine (43), obstetrics and gynecology (41), and anesthesiology (40).
- The number of family medicine positions offered in 2009 declined by 101 and the number of matched U.S. allopathic seniors declined by 85. Despite the decline, 91.2 percent of the available family medicine positions were filled in 2009.
- The number of categorical internal medicine positions rose by 64 to 4,922; and while the percentages filled by U.S. seniors declined slightly from 54.8 percent in 2008 to 53.5 percent in 2009, the overall fill rate rose to 98.6 percent.
- General surgery continued to be a very competitive specialty with all but five of the 1,065 available positions filled, however, 64 fewer U.S. allopathic seniors matched to that specialty.

From 2005 through 2009, the total number of active applicants in the matching program increased from 25,348 to 29,890, or by about 18 percent.³¹⁴ The greatest increase, 62 percent, was among USIMGs, whose numbers grew from 2,091 to 3,390. Non-US IMGs grew by 35 percent, from 5,554 to 7,484; DOs, by 32 percent, from 1,524 to 2,015; USMGs, by 6 percent, from 14,719 to 15,638. The number of those from Fifth Pathway Programs stayed about the

same; the number of those from Canadian medical schools declined, as did the number of previous graduates from U.S. allopathic medical schools.

For USMG seniors, the largest numbers matched in 2009³¹⁵ were in:

- internal medicine (categorical)—2,632 (18.1 percent)
- pediatrics (categorical)—1,682 (11.5 percent)
- medicine (preliminary, PGY-1 only)—1,504 (10.3 percent)
- emergency medicine—1,171 (8.0 percent)
- anesthesiology—1,110 (7.6 percent)
- family medicine—1,071 (7.4 percent)
- diagnostic radiology—948 (6.5 percent)
- obstetrics-gynecology—879 (6.0 percent)
- transitional (PGY-1 only)—840 (5.8 percent)
- surgery—824 (5.7 percent)

These programs accounted for 86.9 percent of residency matches for the 14,566 USMGs matched in 2009.

For USMG prior graduates, the largest numbers matched³¹⁶ were in:

- internal medicine (categorical)—84 (15.4 percent)
- family medicine—80 (14.7 percent)
- surgery (categorical)—76 (14.0 percent)
- emergency medicine—58 10.6 percent

These programs accounted for 54.7 percent of residency matches for the 545 prior USMG graduates matched in 2009.

For DOs, the largest numbers matched³¹⁷ were in:

- internal medicine (categorical)—306 (21.7 percent)
- family medicine—244 (17.3 percent)
- pediatrics (categorical)—190 (13.5 percent)
- emergency medicine—171 (12.1 percent)
- obstetrics-gynecology—108 (7.7 percent)
- psychiatry (categorical)—102 (7.2 percent)
- anesthesiology—101 (7.2 percent)
- physical medicine and rehab—101 (7.2 percent)

These programs accounted for 93.9 percent of residency matches for the 1,408 DOs matched in 2009.

For USIMGS, the largest numbers matched³¹⁸ were in:

- internal medicine (categorical)—470 (29.0 percent)
- family medicine—420 (26.0 percent)

- pediatrics (categorical)—125 (13.5 percent)
- psychiatry (categorical)—93 (5.7 percent)
- obstetrics-gynecology—85 (5.3 percent)
- emergency medicine—78 (4.8 percent)
- medicine (preliminary PGY-1 only)—75 (4.6 percent)
- surgery (preliminary PGY-1 only)—70 (4.3 percent)

These programs accounted for 87.4 percent of residency matches for the 1,619 USIMGs matched in 2009.

For non-USIMGs, the largest numbers matched³¹⁹ were in

- internal medicine (categorical)—1,335 (42.9 percent)
- family medicine—482 (15.5 percent)
- pediatrics (categorical) 299 —(9.6 percent)
- surgery (preliminary PGY-1 only).—172 (5.5 percent)
- psychiatry (categorical)—162 (5.2 percent)
- neurology—152 (4.9 percent)
- medicine ((preliminary PGY-1 only)—114 (3.7 percent)

These programs accounted for 87.3 percent of residency matches for the 3,112 non-USIMGs matched in 2009.

Of the 22,427 PGY-1 positions offered, 21,340 were filled. USMG seniors (14,566) filled 68.3 percent of these positions.³²⁰ Of the 9,849 primary care (i.e., internal medicine, family medicine, pediatrics) positions offered, 9,490 (96.4 percent) were filled; USMG seniors filled 5,573 (56.7 percent) of the 9,490 primary care slots filled, 2,632 (54.2 percent) of the 4,853 internal medicine slots filled, 1,071 (46.3 percent) of the 2,311 family medicine slots filled, and 1,682 (72.3 percent) of the 2,326 pediatrics slots filled.³²¹

The match rates in 2009 varied among groups, and rates for all groups declined from previous years, since the increase in the number of applicants was greater than the increase in the number of positions offered.³²² Among USMG seniors, the match rate was 93.1 percent; among previous USMGs, the rate was 44.6 percent, among DOs, 69.9 percent, among USIMGs, 47.8 percent, and among non-USIMGs, 41.6 percent.

Race and Ethnicity of All Residents and of Residents by Type of School

Brotherton and Etzel's September 2008 analysis of 2007-2008 graduate medical education data provides a detailed picture of race and ethnicity of resident physicians by type of medical school from which they had graduated (i.e., U.S. and Canadian allopathic, U.S. osteopathic, and non-U.S.).³²³ On December 1, 2007, a total of 106,012 resident physicians were on duty in U.S. residency programs, based on reports through the 2007 National GME Census.

The ethnic and racial breakdown for all residents from all schools by number and percent was:³²⁴

• Non-Hispanic origin:	98,572	93.0 percent
• Hispanic origin:	7,440	7.0 percent
• Black:	5,823	5.5 percent
• Amer Indian/Alaska Native:	205	0.2 percent
• Native Hawaiian/Pac Islander:	404	0.4 percent
• Asian:	27,671	26.1 percent
• White:	55,872	52.7 percent
• Other/Unknown:	16,037	15.1 percent

Whites made up a little more than half (52.7 percent) and Asians a little more than a quarter (26.1 percent) of all residents in 2007-2008, accounting for 78.8 percent of the total.

For U.S. and Canadian allopathic medical schools, the ethnic and racial breakdown by number and percent of the total of 70,397 residents, who made up about two-thirds of all residents, was:³²⁵

• Non-Hispanic origin:	66,409	94.3 percent
• Hispanic origin;	3,988	5.7 percent
• Black:	4,286	6.1 percent
• Amer Indian/Alaska Native:	194	0.3 percent
• Native Hawaiian/Pac Islander:	214	0.3 percent
• Asian:	13,090	18.6 percent
• White:	33,023	78.8 percent
• Other/Unknown:	8,590	12.2 percent

Whites made up a very large proportion of residents from U.S. and Canadian allopathic medical schools (78.8 percent) and Asians, the next largest group (18.6 percent), for a total of 97.4 of all residents from these schools.

For U.S. osteopathic schools, the ethnic and racial breakdown by number and percent for the total of 6,784 residents, who represented about 6 percent of all residents, was:³²⁶

• Non-Hispanic origin:	6,617	97.5 percent
• Hispanic origin:	167	2.5 percent
• Black	106	1.6 percent
• Amer Indian/Alaska Native:	9	0.1 percent
• Native Hawaiian/Pac Islanders:	26	0.4 percent
• Asian:	799	11.8 percent
• White:	3,308	48.8 percent
• Other/Unknown:	1,536	37.4 percent

The large number residents in the Other/Unknown category makes it difficult to assess racial/ethnic patterns among residents from osteopathic schools, except that Whites (48.8 percent) and Asians (11.8 percent) make up the largest groups of residents whose race/ethnicity was known and reported.

For medical schools outside of the U.S., the ethnic and racial breakdown of 28,831 residents who made up about 27 percent of all residents, was:³²⁷

Asians make up the largest single racial group (47.8 percent) among residents from medical schools outside the U.S., with Whites the second largest group (29.6 percent).

Additional information on the country of medical school and the country citizenship of IMGs, as well as on their native language, comes from the Educational Commission for Foreign Medical Graduates (ECFMG) on standard ECFMG certificates issued in 2008.³²⁸ (ECFMG certification is a requirement for international medical graduates who wish to enter a residency program accredited by the Accreditation Council on Graduate Medical Education [ACGME].)

In 2008, 10,275 certificates were issued. For these certified IMGs, 60.5 percent graduated from medical schools in the following countries.

The 10,275 IMGs certified graduated from a total of 1,020 medical schools located in 135 countries and territories.³²⁹ About one-half of these medical schools provide instruction in English, and English is the native language reported by 29.4 percent of the certificants.³³⁰ Other of the 150 languages reported were Arabic (8.0 percent), Spanish (7.3 percent), Hindi (6.7 percent), Telugu (6.4 percent), and Urdu (6.2 percent).

For 70.1 percent of IMGs who were certified in 2008, these were the countries of citizenship:

- Philippines 3.2 percent
- China 3.1 percent
- Canada 2.7 percent
- Nigeria 2.0 percent
- Egypt 1.8 percent
- Iran 1.8 percent
- *Syria* 1.6 percent
- *Nepal* 1.6 percent

USIMGs accounted for 2,064 certificates issued in 2008, and 72.8 percent were graduates from medical schools in these countries:

- Dominica 28.2 percent
- Grenada 20.4 percent
- Netherlands Antilles 14.9 percent
- Cayman Islands 5.4 percent
- Israel 3.9 percent

Although USIMGs graduated from a total of 178 medical schools in 65 countries or territories, the majority of these medical schools report that English was one of their main languages of instruction.³³¹ For 81.1 percent of U.S. citizens graduating from medical schools outside the U.S., English was their native language; Spanish (4.4 percent), Arabic (1.4 percent), Urdu (1.4 percent), Farsi (1.3 percent), and Russian (1.2 percent) were other native languages reported.³³²

Race and Ethnicity and Type of Residency Program

When race/ethnicity of all resident physicians—USMGs, DOs, USIMGs, non-USIMGs, those from Canadian medical schools, and others—in Accreditation Council for Graduate Medical Education (ACGME) programs and in combined graduate medical education programs on December 1, 2007 and reported through the National GME Census was analyzed by Brotherton and Etzel,³³³ results for the greatest numbers and percentages of residents by type of program were as follows:

Hispanic origin residents: total 7,440

- internal medicine: 1,714 23.0 percent
- family medicine: 777 10.9 percent
- pediatrics: 699 9.4 percent
- general surgery: 587 7.9 percent
- psychiatry 401 5.4 percent

Black residents: total 5,823

- internal medicine: 1,182 20.3 percent
- family medicine: 631 10.8 percent

- pediatrics: 535 9.2 percent
- obstetrics-gynecology: 495 8.5 percent
- general surgery: 463 8.0 percent

American Indian/Alaska Native residents: total 205

- family medicine: 30 14.6 percent
- internal medicine: 24 11.7 percent
- general surgery: 20 9.8 percent
- obstetrics-gynecology: 17 8.2 percent
- emergency medicine: 16 7.8 percent

Native Hawaiian/ Pacific Islander residents: total 404

- family medicine: 65 16.1 percent
- internal medicine: 54 13.3 percent
- pediatrics: 37 9.2 percent
- general surgery: 21 5.2 percent
- anesthesiology: 19 4.7 percent
- psychiatry: 19 4.7 percent

Asian residents: total 27,671

- internal medicine: 8,273 30.0 percent
- family medicine: 2,319 8.4 percent
- pediatrics: 1,735 6.3 percent
- general surgery: 1,519 5.5 percent
- psychiatry: 1,124 4.1 percent

White residents: total 55,872

- internal medicine: 8,311 14.9 percent
- family medicine: 4,699 8.4 percent
- pediatrics: 4,477 8.0 percent
- general surgery: 4,399 7.9 percent
- emergency medicine 3,151 5.6 percent

Other/unknown residents: total 16,037

- internal medicine: 4,182 26.1 percent
- family medicine: 1,586 9.9 percent
- general surgery: 1,258 7.8 percent
- pediatrics: 1,256 7.8 percent
- psychiatry 892 5.6 percent

Primary care residency programs—internal medicine, family medicine, and pediatrics—attracted 44.7 percent of all Asians, 43.3 percent of those of Hispanic origin, and 40.3 of Blacks.

American Indians and Alaska Natives (26.3 percent), Whites (31.3 percent), and Native Hawaiians and Other Pacific Islanders (38.6 percent) had the fewest residents in primary care programs.

Race and Ethnicity of U.S. Allopathic Medical School Applicants and Residency Program Applications

The AAMC's Electronic Residency Application Service (ERAS) has self-identified race and ethnicity information from applicants by specialty residency program in 2007.³³⁴ The total number of applicants was 17,659, and the greatest number of applicants* by ethnicity and race and the residency programs to which they applied were reported as:

Hispanic origin applicants—total 1,186 (6.7 percent)

- internal medicine 468
- transitional year 196
- general surgery 168
- pediatrics 158
- family medicine 157
- anesthesiology 115
- emergency medicine 113
- obstetrics-gynecology 104

Black applicants—total 1,320 (7.5 percent)

- internal medicine 516
- transitional year 214
- family medicine 199
- general surgery 195
- obstetrics-gynecology 167
- anesthesiology 166
- pediatrics 159
- emergency medicine 119

American Indian/Alaska Native applicants—total 112 (0.6 percent)

- internal medicine 37
- general surgery 21
- transitional year 19
- pediatrics 17
- family medicine 16
- emergency medicine 11
- psychiatry 9
- anesthesiology 9

* Numbers of applicants for residency programs do not add up to total number of applicants in ethnic/racial groups, since applicants may apply to more than one program.

Native Hawaiian/ Pacific Islander applicants—total 42 (0.2 percent)

- internal medicine 10
- general surgery 8
- family medicine 7
- pediatrics 7
- transitional year 6
- emergency medicine 6
- psychiatry 5
- anesthesiology 5

Asian applicants—total 3,253 (18.4 percent)

- internal medicine 1,757
- transitional year 736
- general surgery 373
- pediatrics 347
- anesthesiology 341
- diagnostic radiology 282
- family medicine 215
- emergency medicine 206

White applicants—total 10,952 (62.0 percent)

- internal medicine 3,978
- transitional year 2,037
- pediatrics 1,420
- general surgery 1,387
- family medicine 1,201
- emergency medicine 1,053
- anesthesiology 882
- diagnostic radiology 774

Other Race applicants—total 788 (4.5 percent)

- internal medicine 317
- transitional year 154
- general surgery 113
- family medicine 104
- emergency medicine 94
- pediatrics 91
- anesthesiology 90

The greatest numbers of applicants of all racial/ethnic groups applied to internal medicine residency programs.

The U.S. Physician Workforce in a Global Health Environment: A Combination of Strategies to Meet 21st Century Workforce Needs

Federal and state policymakers and public and private universities and their medical schools face a number of complex issues related to health care, health professions education, and the health care workforce. Issues of physician education and training, supply, specialty and geographic distribution, and diversity are not only domestic health issues, but also global health issues. Strengthening medical education in less developed countries to meet these countries' needs is as essential as improving medical education in the United States to meet 21st century U.S. physician workforce needs.

Collaboration between U.S. medical schools and teaching hospitals and those in less developed countries is already taking place.³³⁵ The University of California, San Francisco's Global Health Sciences Program, for example, is building several training and research programs to assist less developed countries.³³⁶ UCSF's Sandwich Certificate Program³³⁷ is:

...a unique educational paradigm that assists developing nations in building their science and technology capacity by providing knowledge relevant to global health research, service, and training. It is designed for Masters and PhD level global health professionals who desire to make a contribution in their home country. The program uses a 'sandwich' model of training in which students complete the initial part of their training in their home university, attend UCSF for advanced training in education and research, and return home to complete a thesis on a topic appropriate to their country's health needs. The final degree is granted by the home university.

The benefit of this structure is that it encourages young investigators to remain in-country since they stay vested and actively engaged in studies within their home institution and must return home to receive their degree. This differs from other training programs based entirely overseas, which often lead to "brain drain" when many students decide not to return to their home country.³³⁸

Other efforts, such as the University of California, Los Angeles' Department of Family Medicine's IMG program, are targeted to IMGs who have graduated from medical school in Latin America or a Spanish-speaking country and are interested in obtaining residency training in family medicine and a license to practice in California, but have not taken their USMLE exams.³³⁹ The purpose of this privately funded program is to prepare bilingual (English/Spanish), bi-cultural IMGs to become board-certified California family physicians through a pre-residency training program, a three-year family practice residency program, and 18 to 36 months of service in an underserved communities providing care to immigrant and low-income populations faced with language and financial barriers to care.³⁴⁰ Health care systems (Kaiser Permanente, Molina Healthcare, Inc.) and other funders (The California Endowment, the New America Alliance, and UniHealth Foundation) support the IMG Program.³⁴¹

Understanding the Characteristics of International Medical Graduates and Their Contributions to the U.S. Physician Workforce: Physician Supply, Specialty and Geographic Distribution, and Diversity

In 2008, the American College of Physicians, which is the largest specialty society in the United States and represents more than 125,000 internal medicine physicians and medical students, issued a policy monograph on the role of international medical graduates in the U.S. physician workforce. The monograph contained this statement:

The College feels strongly that the nation needs to create a comprehensive national health care workforce policy to guide the training, supply, and distribution of health care providers. This policy should address the contributions of IMGs in meeting current needs and include them in estimating how the anticipated needs of the patient population will be met.³⁴²

There is an extensive literature on IMGs, including analyses comparing IMGs (both USIMGs and non-USIMGs) to USMGs in terms of licensure test performance,³⁴³ trends and characteristics,^{344,345,346, 347} residency matches and match rates,³⁴⁸ types of practice (patient care vs. non-patient care, primary care vs. non-primary care),³⁴⁹ geographic location of practice,^{350, 351} patient populations served,^{352,353,354} contributions,^{355,356} participation in academic medicine,^{357,358} integrating IMGs into the physician-scientist pool,³⁵⁹ cultural barriers faced by IMGs,^{360,361} and controversy over IMGs.^{362,363,364} Several major points about IMGs are discussed below based on the studies and reports cited here and others.

THE GROWING NUMBER OF IMG PHYSICIANS IN THE U.S PHYSICIAN WORKFORCE. In the early 1960s, about ten percent of all U.S. physicians were international medical graduates.³⁶⁵ By 1970, IMGs made up 18 percent of the workforce.³⁶⁶ From 1970 to 1994, the physician workforce grew by 104.9.³⁶⁷ During this nearly 25-year period, USMGs increased by 91.4 percent, and IMGs grew by 170.2 percent.³⁶⁸ (By 1980, IMGs accounted for 20.7 percent of all active physicians; by 1985, 21.2 percent; and in 1990, 20.9 percent.)³⁶⁹ In 1995, 22.6 percent, of physicians were IMGs and in 2000, 22.8 percent.³⁷⁰ The American Medical Association reported that in 2008 IMGs accounted for 26 percent of all U.S. physicians.³⁷¹

THE NUMBER OF IMG APPLICATIONS AND PERCENTAGE OF IMGs CERTIFIED BY ECFMG. Over the period from 1984 through 2003, the Educational Commission for Foreign Medical Graduates indicates that more than 265,000 IMGs applied for examination as a first step in achieving certification to apply to graduate medical residency programs in the U.S.; 54.2 percent eventually received certification.³⁷²

PERFORMANCE ON UNITED STATES MEDICAL LICENSING EXAMINATION (USMLE) STEPS 1 AND 2. USIMG and non-USIMG students and graduates had substantially lower pass rates as first-time and repeat test takers on USMLE (United States Medical Licensing Examination) Step 1 and Steps 2 (CK [clinical knowledge] and CS [clinical skills]) in 2007 and 2008 than students and graduates of LCME (Liaison Committee on Medical Education) - and AOA (American Osteopathic Association)-accredited U.S./Canadian medical schools/programs.³⁷³ Non-USIMGs had substantially higher pass rates than USIMGs both as on Step 1 and Step 2 (CK), but USIMGs had higher rates than non-USIMGs on Step 2(CS) during tests administered during 2007 and 2008.³⁷⁴ Two-thirds of USIMGs vs. 53.9 percent of non-USIMGs received ECFMG certification over the period from 1992 to 2001; in the more recent cohort from 1997 to 2001, 70.9 percent of USIMGs and 52.6 percent of non-USIMGs achieved certification.³⁷⁵

ACTIVE PRACTICE OF USIMGs VERSUS NON-USIMGs. A greater proportion of USIMGs are in active practice than are non-USIMGs after certification and residency training; nearly 92 percent of the 10,840 USIMGs who received certification from 1992 through 2001 were in active practice as reflected in the 2005 AMA Masterfile, while about 71 percent of the 73,034 non-USIMGs who received certification were found to be in practice.³⁷⁶

BOARD CERTIFICATION. USIMGs are less likely than non-USIMGs to achieve board certification.³⁷⁷

LANGUAGE. A greater proportion of USIMGs reports English as their native language (81 percent) than non-USIMGs (29 percent).³⁷⁸ For USIMGs, Spanish (4.4 percent), Arabic (1.4 percent), Urdu (1.4 percent), Farsi (1.3 percent), and Russian (1.2 percent) were other native languages reported. For non-USIMGs, Arabic (8.0 percent), Spanish (7.3 percent), Hindi (6.7 percent), Telugu (6.4 percent), and Urdu (6.2 percent) were reported as native languages.

THE GREATEST INCREASE IN IMG SUPPLY: METROPOLITAN VERSUS NONMETROPOLITAN AREAS. The greatest increases in the number of IMGs in the U.S. over the 20-year period from 1981 through 2001 have been in areas of the country with the largest cities; small increases, and in some cases, decreases have occurred in the number of IMGs in more rural, less populated areas.³⁷⁹

RESIDENCY LOCATIONS OF IMGs CONCENTRATED IN A FEW STATES. IMG residency locations tend to be concentrated in a few states, with a large proportion in New York State, which in 2003 accounted for 26.8 percent of all IMG residents. Pennsylvania, Illinois, New Jersey, Michigan, Ohio, and Texas are other states with substantial numbers of IMGs.³⁸⁰ The number of IMGs entering training programs in California has dropped by more than half since from 1995 through 2003.³⁸¹

COUNTRIES OF ORIGIN AND DESTINATION LOCATIONS. There are consistent patterns over time of IMG countries of origin and destination locations, with Central and South American IMGs settling in Florida, European IMGs in New York, and IMGs from Pacific Asian countries (China and Hong Kong) in California. Physicians from India make up significant proportions of IMGs in several states, many of which have a large number of rural residents.³⁸²

MAJOR PROFESSIONAL ACTIVITIES. IMGs' major professional activities have changed over the past twenty years, with a smaller percentage involved in administration, medical research, and teaching (5.4 percent in research in 1981 vs. 1.8 percent in 2001), compared to 4.5 percent and 2.2 percent for USMGs; a decrease in hospital-based practice from 16.6 percent to 11.8 percent from 1981 to 2001 for IMGs, compared to an increase from 7.1 percent to 8.2 percent for USMGs; an increase in office-based practice for IMGs from 64.9 percent to 72.7 percent, and for USMGs from 78.0 percent to 79.2 percent; and an increase in the proportion of IMGs providing direct patient care from 81.5 percent to 84.6 percent, compared to 85.0 percent and 87.4 percent for USMGs.³⁸³

IMG AND USMG GENERALISTS. Hart, Skillman, Hagopian et al. found that IMGs providing direct patient care in 2001 were more likely than USMGs to be generalists (39.3 percent vs.

34.2 percent); the opposite was the case in 1981 when 35.8 percent of USMGs and 33.1 percent of IMGs were generalists.³⁸⁴ Morris, Phillips, Fryer et al. note that the number of IMGs entering family medicine has increased steadily since 1997.³⁸⁵ In 1995, IMGs made up 20.8 percent of the family physician workforce; by 2003, IMGs accounted for 22.1 percent of this workforce. These authors' Community Tracking Study Physician Survey found that significantly more IMG than USMG family physicians practiced in urban areas than in rural areas, more IMG practices were open to all new Medicaid and Medicare patients, more of the practice revenue of IMGs was derived from these patients, and more IMGs were dissatisfied with their overall medical careers.³⁸⁶

IMGs AND USMGs PROVIDING CARE IN RURAL AREAS AND URBAN UNDERSERVED AREAS. There is controversy about the role of IMG physicians providing care in rural areas. Mertz, Jain, Breckler et al. state:

International medical graduates are more likely than U.S. graduates to practice in poor and underserved inner city and rural communities, to a large degree because visa waivers may be obtained by IMGs if they agree to practice in physician shortage areas after the conclusion of their residency training. International medical graduates with J1 visa waivers represent a substantial proportion of the physicians working in community health centers. They are also more likely than U.S. medical graduates to enter generalist fields. The number of U.S. graduates entering family medicine residency programs decreased by 50% over the past decade and during this period the percentage of family medicine residents who are IMGs more than doubled...It has been estimated that one out of every five adequately served rural counties would be underserved without IMGs.³⁸⁷

Primary care IMGs, however, were found to be no more likely than primary care USMGs to practice in rural underserved areas in a 2001 study by Fink, Phillips, Fryer, et al.³⁸⁸ In an earlier study in 1996 by Baer, Ricketts, Konrad et al., IMGs were found to constitute a greater percentage of the U.S. primary care workforce in rural, underserved areas than in rural, non-underserved areas.³⁸⁹

A 2005 review of changes in IMG physicians in the U.S. from 1981 through 2001 by Hart, Skillman, Hagopian et al. found that the proportion of both IMGs and USMGs providing patient care in rural areas declined from 1981 to 2001, and that IMGs remained less likely than USMGs to practice in all types of rural areas (large rural, small rural, and isolated rural) over this period.³⁹⁰ Among IMGs, 11.7 percent practiced in rural areas in 1981 and 10.5 percent in 2001; among USMGs, 14.9 percent practiced in these areas in 1981 and 13.8 percent in 2001.³⁹¹ IMGs were less likely than USMGs to be practicing in each of the rural underserved areas; the percentage of IMG generalists providing care in isolated, small rural areas (7.3 percent in 1981 and 6.5 percent in 2001) is less than that of USMG generalists (12.1 percent in 1981 and 9.9 percent in 2001).³⁹²

* "Physicians participating in federal programs that function to increase health care access in RUAs, such as the Indian Health Service and National Health Service Corps (NHSC), were not included in this study. The NHSC alone provides more than 800 physicians, 27 percent of the nonfederal USMGs in our study working in rural HPSAs." Fink KS, Phillips RL, Fryer GE, Koehn N.2003: p.260

IMG AND USMG GENERALIST PHYSICIANS PRACTICING IN HPSAs. Generalist physicians that did practice in rural counties tended to practice in counties designated entirely or partly as Health Professional Shortage Areas (HPSAs), and IMG generalists were more likely than USMG generalists to practice in HPSAs, particularly in isolated small rural areas; 84.0 percent of IMG generalists practicing in these areas were in HPSAs areas compared to 73.3 percent of USMGs in 2001, and there was an increase of both IMGs and USMGs practicing in HPSAs from 1981 through 2001.³⁹³ (As noted above, new IMGs with visa waivers to remain in the U.S. are required to work in underserved communities, as are some USMGs through their National Health Service Corps and state repayment obligations.)³⁹⁴ Non-USIMGs follow various visa pathways to enter and remain to practice in the U.S.; understanding the workforce policy and planning implications of these immigration policies is important.³⁹⁵

THE TYPE OF PRIMARY CARE SPECIALTY PRACTICE AND IMG AND USMG CARE IN RURAL UNDERSERVED AREAS. The types of primary care specialty practice (i.e., family practice, internal medicine, general practice, and pediatric practice) and practice location differ for USMGs, USIMGs, and non-USIMGs based on the 2001 study of Fink, Phillips, Fryer et al.; 2.1 percent of both USMGs and IMGs in 2000 were practicing primary care in non-MSA, whole-county HPSAs, but the proportions varied by primary care specialty and country of birth.³⁹⁶ More IMGs were likely to be primary care physicians than were USMGs. Among USMGs, 13.0 percent were family physicians (compared to 7.7 percent of IMGs), 11.8 percent were internists (compared to 18.6 percent of IMGs). Among internists, non-USIMGs were three times more likely than USMGs to be working in a rural underserved area (RUA) and USIMG internists were as likely as USMGs to be working in an RUA; among pediatricians, non-USIMGs were twice as likely as USMGs to work in an RUA; USIMG pediatricians were less likely to practice in an RUA.³⁹⁷ The percentage of IMGs in the primary care workforce varies across regions in the U.S., whole and partial HPSAs, and non-metropolitan counties.³⁹⁸

PATIENT POPULATIONS SERVED BY IMGs AND USMGs. Studies in California using California Medical Board Licensure Survey data from June 2005 showed differences in language, specialty practice, and practice patterns among South Asian IMGs, South Asian USMGs, non-South Asian IMGs, and non-South Asian USMGs.³⁹⁹ South Asian IMGs (71.2 percent) and South Asian USMGs (34.2 percent) spoke Hindi or Punjabi, compared with less than 1 percent of either non-South Asian IMGs or USMGs. South Asian IMGs were more likely to be in a medical subspecialty than South Asian USMGs or the other groups; South Asian USMGs were more likely than non-South Asian USMGs and less likely than South Asian and non-South Asian IMGs to be generalists. IMGs—both South Asian and non-South Asian—were “much more likely to practice in poor communities, communities with high proportions of Latinos, and communities designated as Health Professions Shortage Areas or Medically Underserved Areas.”⁴⁰⁰ A study by Hing and Lin of the role of IMGs providing office-based care in 2005-2006 showed that nearly one-quarter of all patient visits were to IMGs; that IMGs were more likely to be Asian and Pacific Islander (31.6 percent compared to 4.9 percent of USMGs) and of Hispanic or Latino origin (6.7 percent compared to 1.5 percent of USMGs); that IMGs were more likely to practice in primary care specialties (57.0 percent compared to 46.2 percent of USMGs); that IMGs were more likely than USMGs to practice in primary care shortage areas (67.8 percent) compared to USMGs (39.8 percent); that more patients who were Asian and Pacific Islander and Hispanic or Latino made more visits to IMGs (24.9 percent) than to USMGs (12.4 percent); that IMGs saw a higher proportion of patients expecting to use Medicaid or State

Children's Health Insurance Plan (SCHIP) as their primary source of payment (17.6 percent) compared with USMGs (10.2 percent).⁴⁰¹

IMGs' CONTRIBUTIONS TO DIVERSITY AND CULTURAL COMPETENCE. IMGs are an ethnically and racially diverse population in graduate medical education and in the physician workforce. Norcini, van Zanten, and Boulet point to three reasons why IMGs play an important role in increasing the racial/ethnic diversity of the workforce and why increasing racial/ethnic diversity is important: 1) it increases access to health care, since minority physicians are more likely to specialize in one of the primary care specialties, practice in underserved areas, and treat minority and indigent patients; 2) it increases the quality of health care and brings other benefits through racial/ethnic concordance between physicians and patients, which increases patient-centered care, improves patient participation in care, and increases patient satisfaction; and 3) it increases the ability of the physician workforce to provide care to people from diverse cultures.⁴⁰² In cases of physician-patient cultural and linguistic concordance, there can be multiple benefits. On the other hand, diagnosis and treatment can pose problems when a physician's cultural experience is different from the patient's. Kales, DiNardo, Blow, and their colleagues found a difference between IMGs and USMGs in diagnosis and treatment of late-life depression, with IMGs significantly less likely than USMGs to make a correct diagnosis of depression.⁴⁰³

IMGs' CONTRIBUTIONS TO ACADEMIC MEDICINE. A discussion paper of the American Medical Association on IMGs indicates that 16.2 percent of IMGs were in academics in its 2008.⁴⁰⁴ This same paper reports that the number of IMG faculty in medical schools has doubled—from 8,100 to 16,200—from 1981 through 2000, while the total number of full-time medical school faculty increased by 86 percent over this period, with IMGs representing 17-18 percent of total faculty and 16-17 percent of clinical faculty.⁴⁰⁵ The proportion of IMGs in basic science increased from 16 percent to 21 percent over the twenty-year period. Overall, more PhDs and fewer MDs became faculty members over this period.⁴⁰⁶

Additional thoughts about the IMG faculty are offered by David Steward from the Association of Professors of Medicine:

Workforce information and the demographic characteristics of fellows currently in subspecialty training programs (42 percent of whom are international medical graduates) suggest that international graduates will increasingly comprise a major proportion of subspecialists available as medical school faculty....international graduate faculty members bring many positive qualities to their departments. Almost by definition, they have proven their ability to achieve professional success in face of adversity. Their personal and medical training background may be broader than U.S. faculty, resulting in more creative and effective teaching and research. They may find it easier than their U.S. colleagues to develop personal and professional relationships with the growing number of international medical graduates in practice....They are likely to be better as role models and mentors for trainees of similar cultural/national background, and, in some instances, for U.S. minority medical students and residents. They will also be better at understanding and relating to patients of similar cultural or linguistic backgrounds.⁴⁰⁷

Steward calls for the academic internal medicine community, represented by the AAIM (Alliance for Academic Internal Medicine) to initiate:

...a formal study of the nation's internal medicine workforce needs, leading to strategic recommendations to configure the internal medicine undergraduate and graduate training system to meet these needs. Among other goals, the study should address how the number and types of training programs relate to the population's needs for general internists, hospitalists, and subspecialists; propose methods of providing care in places where the teaching hospital's house staff are the major health care providers for an underserved population; outline how the AAIM should respond to declining interest in internal medicine among U.S. applicants; and define the relative roles of U.S., international, and osteopathic graduates in U.S. internal medicine.⁴⁰⁸

CULTURAL AND OTHER BARRIERS FACED BY IMGs. Fiscella and Frankel point to challenges that IMGs face in providing care to patients in the U.S. using three core tasks of health care providers: 1) gathering data, 2) developing rapport, and 3) educating and motivating patients.⁴⁰⁹ These authors note that residency programs focus on developing English-language skills, rather than on skills in recognizing "regional patient dialects, colloquial speech, body language, and speech inflection, yet studies show that even IMGs who are proficient in standard English may find it difficult to understand patients' more subtle or informal means of communication."⁴¹⁰ The authors also note that both IMGs and USMGs who are racial and ethnic minorities "may find it difficult to establish rapport with patients who do not share their appearance or background."⁴¹¹ A frequent problem encountered by IMGs is the perception by their patients—and often their peers—that IMGs' training is inferior. Although orientation programs are provided for IMGs through the ECFMG and in some residency programs, Fiscella and Frankel recommend "tools such as mixed IMG and USMG support groups, international student retreats, cultural-sensitivity training, and standardized patients."⁴¹²

In 2000, the Massachusetts Medical Society documented issues of discrimination affecting physicians in the workplace.⁴¹³ "Being an IMG" was the most frequent response of physicians as the characteristic associated with "very significant or somewhat significant" discrimination (62.1 percent); other responses in order of frequency were "race/ethnicity" (48.1 percent), "gender" (43.2 percent), "age" (28.6 percent), "physical disability" (24.5 percent), and "sexual orientation" (21.2 percent).⁴¹⁴ IMGs (59.4 percent) were more likely than USMGs (40.6 percent) to report discrimination; more than 40 percent of USMGs also reported that "discrimination against IMGs in their current organization was very or somewhat significant."⁴¹⁵ IMGs acknowledged discrimination based on language, inability to obtain certification/eligibility, unfair consideration for promotion or senior management, pay not equivalent to peers, and hiring obstacles.⁴¹⁶

Alice Tolbert Coombs and Roderick King, from the Department of Social Medicine, Harvard Medical School and the Massachusetts Medical Society Committee on Ethnic Diversity, authors of this study, conclude:

...we are facing a U.S. population that is becoming more and more diverse each day. Therefore, the issues of equality, justice and cultural competence will become ever more important. Discrimination occurs as a result of the tension created by the need for more diversity and its resistance from individuals who refuse to address this need. We are at a

crossroads for the healthcare workforce, and addressing issues of discrimination is both a priority and a necessity for the development of the American healthcare system.⁴¹⁷

CONTROVERSY ABOUT IMGs AND THEIR ROLE IN THE U.S. PHYSICIAN WORKFORCE. Concerns about IMGs include the ethical and policy implications of countries exporting physicians to the U.S., characteristics of physicians migrating to the U.S., and the health status of people in the countries from which the physicians are migrating.⁴¹⁸ Concerns have also been raised about the use of Medicare funds to pay for the residency training of IMGs and the number of IMG physicians entering and remaining in the country.⁴¹⁹ Long-standing concerns about adequacy of undergraduate medical training and variability of training in medical schools attended by IMGs include issues related to basic clinical skills—medical history taking, physical examination, and physician-patient communication.⁴²⁰ The ECFMG's implementation of the Clinical Skills Assessment (CSA) as a new requirement for IMGs seeking certification in 1998 was a major step to address these issues. There are two components to the day-long CSA practical examination—the Integrated Clinical Encounter (ICE) component assessing ability to gather data and compose a clinical note and the Doctor-Patient Communications (COM) component.⁴²¹

A study by Salsberg and Nolan of posttraining plans of IMGs in New York State raises questions about relying on IMGs to pursue primary care specialties and provide care in Health Professional Shortage Areas.⁴²² These investigators found in a survey of physicians expected to complete allopathic or osteopathic residency training in New York State in 1999 that IMGs with temporary visas were more likely to train in primary care specialties, internal medicine subspecialties, and psychiatry than were USMGs.⁴²³ More IMGs with temporary visas were planning to subspecialize (62 percent) than USMGs (36 percent), and a substantial percentage (18 percent) of IMGs were planning to leave the U.S. immediately after completing training, leaving the percentage of IMGs (36 percent) entering primary care practice in the U.S. about equal to that of USMGs (38 percent).⁴²⁴ The percent of IMGs planning to practice in the U.S. and practice in HPSAs was 84 percent, compared to 11 percent of USMGs and 6 percent for other IMGs.⁴²⁵ However, the figure for IMGs planning to practice in HPSAs dropped to 15 percent when calculated as a percent of all graduating residents regardless of their plans; 44 percent of IMGs with temporary visas indicated that they had to change their plans because they could not find opportunities to practice.

Future Prospects for Diversifying the Physician Workforce and Meeting Other Workforce Needs: Race and Ethnicity of U.S. Medical School Matriculant, Graduate, and Faculty Career Plans and Areas of Practice, 2007

The physician workforce comprises primary and specialty care physicians, researchers (basic, biomedical, clinical, behavioral and social science, health services and health policy research), educators, medical school administrators, and physicians working in leadership positions in the public, private, and independent sectors. The AAMC's 2008 edition of *Diversity in Medical Education* notes:

Ensuring a diverse pool of physicians—scientists and clinical investigators is an essential step in eliminating health disparities. Black or African American and Hispanic clinical investigators are barely represented in the pool of health and medical scientists, due in large part to factors such as financial and geographical constraints as well as feelings of isolation and perceived bias, that make academia an unattractive choice for women and racial and ethnic minority scholars. Faculty from racial and ethnic groups continue to be outranked by their White counterparts, and are at or below rank of professor. Similarly, women of all races and ethnicities continue to be outranked by men. The numbers are equally bleak at the National Institute of Health (NIH), where only 1 percent and 1.5 percent tenure-track investigators are Black.⁴²⁶

Looking through the lens of race/ethnicity of U.S. medical school matriculants' and their career plans, U.S. medical school graduates' choices of residency and their plans to serve in an underserved area, career intentions of U.S.MD/PhDs, and U.S. medical school faculty service in basic science and clinical science departments provides a picture of current and future prospects for diversity in the workforce and areas of practice. Another indication of future prospects for diversity is the increasing number of undergraduate foreign students and graduates.

CAREER PLANS OF U.S. MEDICAL SCHOOL MATRICULANTS BY RACE AND ETHNICITY. The AAMC's 2007 Matriculating Student Questionnaire results showed that more than half of all matriculants indicated that they plan to enter full-time clinical practice; Hispanics or Latinos (64.3 percent) were most likely to enter practice followed by Whites (63.0 percent), American Indians and Alaska Natives (60.6 percent), Blacks or African Americans (59.4 percent), and Asians (56.4 percent).⁴²⁷

Among those who said that they planned to practice as generalists (e.g., family practice, internal medicine, and pediatrics), American Indians and Alaska Natives ranked first, with a third (33.2 percent) indicating this area of practice; Blacks (28.4 percent) ranked next followed by Whites (23.7 percent), Asians (21.8 percent), and Hispanics or Latinos (21.5 percent).⁴²⁸

Results of a survey study by Hauer, Durning, Kernan et al. published in 2008 of factors associated with a sample 1,177 fourth-year medical students' career choices regarding internal medicine at 11 U.S. medical schools showed that 272 students (23.2 percent) reported that they were likely to enter careers in internal medicine, including 24 (2.0 percent of the total sample) in general internal medicine and 27 (2.3 percent of the total sample) in internal medicine combined programs, most often medicine pediatrics.⁴²⁹ Being an underrepresented minority (i.e., Black or

African American, Native American, or Hispanic/Latino ethnicity) was not a significant factor in the choice of a career in internal medicine in this study.⁴³⁰

More matriculants in the AAMC 2007 Matriculating Student Survey overall indicated that they planned to practice in a surgical specialty (i.e., obstetrics-gynecology, neurosurgery, ophthalmology, orthopedics, plastic, thoracic, urology) than a medical specialty; Blacks (35.4 percent), Hispanics or Latinos (35.0 percent), Whites (33.0 percent), Asians (31.8 percent), and American Indians and Alaska Natives (30.5 percent) indicated this preference.⁴³¹

Medical specialties (i.e., allergy/immunology, dermatology, genetics, preventive medicine, neurology, psychiatry) were the planned area of practice for 35.3 percent of Asians, 31.1 percent of Hispanics or Latinos, 29.5 percent of Whites, 24.3 percent of Blacks, and 21.9 percent of American Indians and Alaska Natives.⁴³²

Support specialties (i.e., anesthesiology, emergency medicine, nuclear medicine, pathology, rehabilitation, and radiology) attracted 14.4 percent of American Indians and Alaska Natives, 13.7 percent of Whites, 12.4 percent of Hispanics or Latinos, 11.9 percent of Blacks, and 11.1 percent of Asians.⁴³³

Full-time academic faculty career plans were indicated by 11.8 percent of Asians, 9.2 percent of Hispanics or Latinos, 9.0 percent of Whites, 7.7 percent of Blacks or African Americans, and 6.9 percent of American Indians and Alaska Natives.⁴³⁴

A significant number of matriculants were undecided about their career intentions, ranging from about 20 percent to nearly 25 percent. A small percentage had plans grouped into an “Other” category.⁴³⁵

U.S. MEDICAL SCHOOL GRADUATES AND SPECIALTY CHOICE BY RACE AND ETHNICITY. The AAMC’s 2007 Graduation Questionnaire results showed that generalist residencies (i.e., family practice, internal medicine, internal medicine-pediatrics, and pediatrics) were selected by 17.0 percent of Hispanics or Latinos, 17.0 percent of Whites, 16.6 percent of Blacks, 12.3 percent of Asians, and 0.0 percent of American Indians and Alaska Natives. (Thirty percent of responses in this group fell into an “Unknown” category.)^{436*}

Surgical specialties (i.e., obstetrics-gynecology, neurosurgery, ophthalmology, orthopedics, plastic, thoracic, urology) were chosen by 17.1 percent of Blacks, 15.8 percent of Whites, 15.4 percent of American Indians and Alaska Natives, 14.0 percent of Hispanics or Latinos, and 12.4 percent of Asians.⁴³⁷

Medical specialties (i.e., allergy/immunology, dermatology, genetics, preventive medicine, neurology, psychiatry) were the choices of 12.0 percent of Whites, 9.4 percent of Asians, 8.8 percent of Hispanics or Latinos, and 7.7 percent of American Indians and Alaska Natives.⁴³⁸

Support specialties (i.e., anesthesiology, emergency medicine, nuclear medicine, pathology, rehabilitation, and radiology) were chosen by 23.1 of American Indians and Alaska Natives,

* Percentages do not add up to 100 percent since “Other” category was not included.

21.9 percent of Asians, 21.7 percent of Whites, 20.4 percent of Hispanics or Latinos, and 19.0 percent of Blacks.⁴³⁹

A study by Newton and Grayson of trends in career choice by U.S. medical graduates published in 2003 found that the distribution of choices varied considerably over the 15-year period from 1987 through 2002.⁴⁴⁰ The most dramatic shifts were in the percentage of U.S. medical graduates entering residencies in primary care. In 1987, 49.2 percent of all graduates matched to generalist residency in internal medicine, family medicine, or pediatrics; there was a steady decline to 43.1 percent in 1991, with a continued decline in internal medicine through 1993, when the percentage entering an internal medicine residency had dropped from 26.5 percent in 1987 to a low of 20.8 percent.⁴⁴¹ This trend reversed and by 1998 the number of primary care residencies had peaked at 53.2 percent only to decline again to 44.2 percent in 2002. For the period from 1998 to 2002, the percentage of residencies in internal medicine declined from 24.3 percent to 21.8 percent, in family medicine from 16.0 percent to 10.4 percent, and in pediatrics from 12.9 percent to 12.0 percent.⁴⁴² This study did not present an analysis of residency choices by race and ethnicity over the study period.

U.S. MEDICAL SCHOOL GRADUATES' INTENTION TO SERVE IN AN UNDERSERVED AREA BY RACE AND ETHNICITY. Based on their responses to the 2007 AAMC Graduation Questionnaire about a fifth (21.2 percent) of all graduates planned to practice in an underserved area, with significant variations among racial/ethnic groups.⁴⁴³ Fifty percent of American Indians and Alaska Natives, 45.3 percent of Blacks, 31.6 percent of Hispanics or Latinos, 19.1 percent of Whites, and 15.3 percent of Asians indicated that they would serve in an underserved area. Among those who said they did plan to serve, 53.5 percent indicated they would serve in an inner city community, 36.7 percent in a rural community, and 9.8 percent in another location.⁴⁴⁴

U.S. MD/PHDs' BY RACE AND ETHNICITY AND PLANS FOR INVOLVEMENT IN RESEARCH. Concerns have been raised about the number of MD/PhDs being trained and their career intentions. Over the period from 1992 through 2002, Newton and Grayson indicate that the percentage of MD/PhDs committed to working more than 25 percent time in an exclusive research career has declined by 16 percent; they also note that in 2002 only 0.9 percent of all medical school graduates obtained MD/PhD degrees, a decline from 2.3 percent five years earlier.⁴⁴⁵ The primary purpose of this combined degree program has been "to produce highly trained physician-scientists who will engage in biomedical science research careers."⁴⁴⁶

Andriole, Whelan, and Jeffe studied responses to the AAMC Graduate Questionnaire for 79,104 respondents over the period from 2000 through 2006; 1,833 (2.3 percent) were MD/PhD graduates and the proportion ranged from 2.0 percent to 2.5 over the study period, a higher proportion than that indicated by Newton and Grayson.⁴⁴⁷ (Data from the AAMC's Graduation Questionnaire indicate that 2.2 percent of graduates said they obtained a joint MD/PhD in 2004 and 3.2 percent in 2007.)⁴⁴⁸ Among the total study sample of 79,104 in the study by Andriole, Whelan, and Jeffe, there were 9,993 (12.6 percent) underrepresented minorities (i.e., Blacks, Hispanics, and American Indians and Alaska Natives). Of the 1,833 MD/PhD graduates, there were 135, or 7.4 percent, URM graduates.⁴⁴⁹ URM graduates were less likely to complete the MD/PhD program than were Whites, Asians and Pacific Islanders.⁴⁵⁰ Among MD/PhD graduates, 6.9 percent of URM graduates planned substantial involvement in research, compared to 66.4 percent of Whites and 26.3 percent of Asians.⁴⁵¹

U.S. MEDICAL SCHOOL FACULTY AND FACULTY RANK BY RACE AND ETHNICITY. In 2007, the AAMC reported that there 124,777 medical school faculty, with total of 7.5 percent of URM faculty (Hispanic or Latino, Black or African American, American Indian and Alaska Native, and Native Hawaiian and Other Pacific Islanders).⁴⁵² Over the period from 2003, when the number of faculty stood at 105,676 and the percentage of URM faculty was 7.0 percent, there were increases in the number of URM faculty, including Hispanics or Latinos, Blacks or African Americans, American Indians and Alaska Natives/Native Hawaiians and Other Pacific Islanders, with Blacks making the greatest gains in numbers among URMs.⁴⁵³ The largest gains, however, were among Asians, whose numbers increased from 12,531 to 16,458, or by 31.3 percent. Whites accounted for 69.0 percent of all medical school faculty in 2007; Asians, 13.2 percent; Blacks, 3.0 percent; Other Hispanics, 2.7 percent, Puerto Ricans, 0.7 percent; Mexican Americans, 0.6 percent; American Indian and Alaska Natives/Native Hawaiians and Other Pacific Islanders, 0.3 percent; and Multiple Hispanics, 0.2 percent. There were also 61 (< 0.1) Cuban faculty members. The Other/Unknown category accounted for 7.9 percent of all faculty. The AAMC 2008 report, *Diversities in Medical Education*, notes:

...racial and ethnic minority faculty were more likely to be at or below the rank of assistant professor, while White professors constituted the largest proportion of full professors. Women, in particular, continue to be outranked by men in all racial groups and ethnicities. Furthermore, multiple studies indicate that academic is unwelcoming to women faculty members and faculty members from racial, ethnic, and gender minorities for reasons such as isolation or financial constraints.⁴⁵⁴

U.S. MEDICAL SCHOOL FACULTY BY RACE AND ETHNICITY AND DEPARTMENT: BASIC SCIENCES AND CLINICAL SCIENCES. In 2007, of the 124,574 faculty for which AAMC had complete data by department under basic science, clinical sciences, and other activities, 14.4 percent of faculty were involved in the basic sciences (i.e., anatomy, biochemistry, microbiology, pathology [basic], pharmacology, physiology, other basic sciences).⁴⁵⁵ Among URM faculty, Other Hispanics (2.2 percent), Blacks (1.4 percent), Puerto Ricans (0.6 percent), Mexican Americans (0.3 percent), Native Hawaiians and Other Pacific Islanders (0.2 percent), American Indians and Alaska Natives (0.1 percent), and Cubans (0.1) were involved in the basic sciences.⁴⁵⁶ A total of 4.9 percent URMs was engaged in the basic sciences. Whites accounted for 67.5 percent of those the basic sciences, Asians, 15.2 percent, and those of Unknown race, 10.9 percent.

Faculty in the clinical sciences (i.e., anesthesiology, dermatology, emergency medicine, family medicine, internal medicine, neurology, obstetrics-gynecology, ophthalmology, orthopedic surgery, otolaryngology, pathology [clinical]. Pediatrics, physical medicine, psychiatry, public health, radiology, surgery, and other clinical sciences) accounted for 84.6 percent of all medical school faculty in this AAMC data analysis.⁴⁵⁷ Among URMs, 3.3 percent of Blacks, 2.7 percent of Other Hispanics, 0.8 percent of Puerto Ricans, 0.7 percent of Mexican Americans, 0.2 percent of Native Hawaiians and Other Pacific Islanders, 0.2 percent of Multiple Hispanics, 0.1 percent of American Indians and Alaska Natives, and 0.1 percent of Cubans. Whites accounted for 69.3 percent of those in the clinical sciences and Asians, 12.9 percent; those of Unknown race, 6.9 percent. URM faculty in the clinical sciences accounted for total of 8.1 percent of these faculty.

Other departments included dentistry, other health professions, social sciences, veterinary sciences, and all others. About 1.0 percent of faculty were affiliated with these departments, with little involvement of URM faculty.

FOREIGN STUDENT ENROLLMENT AND FOREIGN GRADUATES FROM U.S. MEDICAL SCHOOLS. In the five-year period from 2003 through 2007, the total enrollment of foreign students as undergraduates in U.S. medical schools has grown from 866 to 1,297, an increase of nearly 50 percent.⁴⁵⁸ Of graduates over the period from 2002 through 2007, the number of foreign graduates also increased by nearly 50 percent.⁴⁵⁹ Detailed information about countries of origin and residency and career plans of these graduates would help to inform policymakers about another group of physicians in the changing context of medical education in the 21st century.

Multiple Strategies to Increase Diversity in the U.S. Physician Workforce, Improve Specialty and Geographic Distribution, and Strengthen Medical Education in a Global Health Environment

The goal of increasing diversity in the U.S. physician workforce is inextricably linked to the goal of meeting other workforce needs related to the supply and specialty and geographic distribution of physicians in this country and in other countries. Clearly, the diversity of the U.S. physician workforce is reflected not only in graduates from U.S. allopathic and osteopathic medical schools, but also in the diversity of graduates from international medical schools, both of U.S. citizens and those from other countries.

There are several strategies that should be considered in this 21st century global health context, which is characterized by immigration and migration of health professionals and “advancing health worldwide” has become the mission of the University of California, San Francisco and many other academic health sciences centers have global health as their mission. These strategies represent opportunities for action by medical schools, state and federal government, international health organizations, professional and trade associations, accreditation and certification agencies such as the Educational Commission for Foreign Medical Graduates, and foundations:

1. Continue to increase the diversity of U.S. medical school applicants, acceptants, and matriculants through intensive outreach and recruitment with an emphasis on “downstream” bridge-building programs, such as postbaccalaureate medical school programs, to support students in moving successfully forward along the educational pathway to medical school.
2. Provide mentoring, role modeling, a variety of clinical and research opportunities, and other incentives, including scholarships and loan repayment programs, for URM and other U. S. medical students to consider a broad range of choices in their residency programs and careers. These include careers in primary care, specialty care, and support specialties, and careers in academic medicine in the basic sciences and the clinical sciences, as well as in social and behavioral sciences, and health services and health policy research.

3. Understand more clearly the immigration pathways by which non-USIMGs enter and remain in the U.S. and areas of practice in primary and specialty care and in academics.
4. Continue to develop collaborative educational programs between U.S. medical schools and those in countries outside the U.S. to advance training of international medical graduates that benefits trainees and their countries of origin.
5. Develop residency orientation programs for USIMGs and non-USIMGs.
6. Increase cultural and linguistic competence through cross-cultural education and training for:
 - USMGs
 - USIMGs, non-USIMGS
 - Residents
 - U.S. medical school faculty and staff

Making definitive policy recommendations related to the physician supply and demand, the number and types of residency positions, and the financing of graduate medical education is beyond the scope of this report, the main focus of which is on diversity.

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Members of Class of 2007, Stanford University School of Medicine
Courtesy of Stanford University School of Medicine, Office of Communication and Public Affairs



CHAPTER 3

The Changing Federal Policy Context

Introduction

This chapter begins with a discussion of the policy-making process and continues with an analysis of the federal policy context of affirmative action and diversity in medical education. Our analysis is more extensive than we had proposed in our original study objectives. We had planned to focus on the federal policy context over the forty-six year period since enactment of the Health Professions Educational Assistance Act of 1963. Instead, we broadened the analysis to review actions by federal government over the period from 1945 through the early 2000s in a number of policy areas—civil rights, health care, health care workforce, health professions education, medical research and research training, higher education, and elementary and secondary education. In order to highlight the importance of Presidential leadership, and to better describe the evolution of affirmative action policies and diversity, we have organized the chapter by discussing U.S. Presidencies, beginning with President Harry S. Truman and ending with President George W. Bush. The chapter concludes with a discussion of critical issues in seven key policy areas for consideration by President Barack Obama and the Congress.

The Policy-making Process

The policy-making process related to diversity in medical education is complex and often confusing. No scheme is readily available either to analyze events in the process or to make predictions about outcomes. The vertical character of the policy-making process further complicates it: actions may be needed at the federal, state, and local levels, including the level of individual institutions—medical schools themselves—and multiple interests are involved at every level. Over time, policies often prove to have long-term, unintended consequences.

Underlying the dynamics of the process, however, are stable contextual conditions that establish parameters for how public officials will respond to domestic social and economic problems, including issues related to medical research, medical education, and medical care. A 2006 article by Lee et al.¹ describes how the context of the distinct elements of American political ideology and institutions has shaped the nation's health policy. This analysis also emphasizes the way in which the core values of the American character, in particular individualism and distrust of government, have contributed to policy outcomes. The article notes:

...But the core values do not point policy in a uniform direction, as there are constant tensions between protection of individual liberty and the aspirations for equality embodied in the American social contract.²

The influence of American core values within the societal context certainly holds true for policies related to affirmative action and diversity. The nation's physician workforce in the early years of the 21st century does not reflect the racial, ethnic, and cultural diversity of the U.S. population. This is largely a result of racial prejudice and the practice of segregation embodied in federal and state policymaking in education, health care, employment, housing, and other areas over a period of time that now spans more than two centuries. Racial, ethnic, and religious minorities in the U.S. have encountered multiple barriers in their efforts to prepare academically and qualify for admission to medical school. Until the enactment of the Civil Rights Act of 1964 and Title IX of the Educational Amendments of 1972, most medical school admission policies and practices also discriminated against women.

The U.S. education system has been, and in many cases remains, a dual system that does not provide equal opportunities for the racial and ethnic populations underrepresented in medicine (namely, Blacks or African Americans, American Indians and Alaska Natives, Native Hawaiians and Other Pacific Islanders, those of Hispanic or Latino origin—Mexican Americans and Other Hispanics—and Mainland Puerto Ricans). Generations of students, at all academic levels from preschool through graduate and professional education, have been negatively affected, and specific programs for elementary, secondary, and higher education related to diversity in medical education have too often been overlooked.

Leadership under President Harry S. Truman (1945-1953): Moral Courage, Vision, and Major Changes despite Congressional Resistance

Beginning of the Modern Era of Federal Involvement in Civil Rights and Health Policy

After the death of President Franklin D. Roosevelt, Vice President Harry S. Truman became President on April 12, 1945. Under his leadership, the modern era of the federal government's role in civil rights and health policy commenced. The first step on President Truman's historic journey in support of racial equality was taken on December 5, 1946, when he issued Executive Order 9808 establishing the President's Committee on Civil Rights, the first Presidential civil rights body. The Committee's final report, *To Secure These Rights*, issued on October 30, 1947, included 35 recommendations focused on critical issues, including "elimination, by federal and state governments of segregation in America based on race, color, creed and national origin" and "enactment of comprehensive federal voting rights legislation."³ The opposition in Congress was so steadfast that many of the Committee's proposals became law only much later—after a decade or more had passed—embodied in the Civil Rights Act of 1957 (i.e., a permanent Civil Rights Commission), the Civil Rights Act of 1964, and the Voting Rights Act of 1965.⁴ President Truman responded positively to the Committee's report and took action in areas in

which he could influence attitudes and use his executive powers to change policies related to civil rights without the approval of Congress.

In his State of the Union Address on January 7, 1948, the President stated:

Our first goal is to secure the essential human rights of our citizens. Today, however, some of our citizens are still denied equal opportunity for education, for jobs and economic advancement, and for expression of their views at the polls. Most serious of all, some are denied equal protection under laws. Whether discrimination is based on race, or creed, or color, or land of origin, it is utterly contrary to American ideals of democracy.⁵

On February 2, 1948, President Truman sent a Special Message on Civil Rights to Congress, outlining his ten-point plan for Civil Rights Reform. A month after his proposal was sent to Congress, a Gallup poll found that only 9 percent of Americans supported Truman's proposal and 82 percent were opposed to it.⁶

On July 14-15, 1948, the Democratic Party Convention nominated President Truman and endorsed a strong civil rights plan—backed by Hubert Humphrey, then the Mayor of Minneapolis. During his acceptance speech, President Truman announced that he would convene a Special Session of Congress to deal with the nation's unfinished business. On the first day of that Special Session, President Truman issued two related Executive Orders, 9980 and 9981, “orders that would forever change the racial landscape of the United States. With the stroke of his Presidential pen, Harry Truman unilaterally mandated an integrated federal workforce and simultaneously integrated the vast U.S. Armed Forces.”⁷ The President's action was praised by the respected civil rights leader Dorothy Height, who served for four decades as President of the National Council of Negro Women: “Harry Truman's integration of the Armed Services represented the most significant institutional advance for the Civil Rights of Black Americans since President Lincoln issued the Emancipation Proclamation.”⁸ On June 29, 1949, President Truman addressed the National Association for the Advancement of Colored People (NAACP) at the Lincoln Memorial—the first time a president had ever addressed the association.

Although President Truman's re-election in a “come-from-behind” victory in November 1948 brought a Democratic majority to both the House of Representatives and the Senate, prospects for achievement of his civil rights goals through legislative action were no better than they had been with the Republican-led Congress in 1946-1948, because of the dominant influence of Southern Democrats in the Democratic Party's majority. Congress opposed President Truman's broad civil rights agenda, and also his specific proposals for national health insurance and federal support for medical education.

Federal Support for Hospital Construction and Medical Research

During the Truman era, progress was made in two areas that would later have a profound effect on medical education: hospital construction and biomedical research. The modern era of federal support for hospital construction began in 1946 with enactment of the Hospital Survey and Construction Act (known as the Hill-Burton Act), authorizing federal funding for planning and

constructing much-needed hospitals, including teaching hospitals. Between 1946 and 1963, existing hospitals were enlarged and new ones built, adding approximately 300,000 beds to the nation's hospital bed supply. For nearly two decades, the Hill-Burton Program made grants to racially segregated medical facilities, significantly perpetuating the policy of "separate but equal." In the 1963 case of *Simkins v. Moses H. Cone Memorial Hospital*, the U.S. Fourth Circuit Court of Appeals ruled that the separate-but-equal provisions in the Hill-Burton Program were unconstitutional. After this decision, the Department of Health, Education, and Welfare (DHEW) used Hill-Burton Program funding as leverage to expedite the implementation of hospital desegregation.⁹

The year 1946 saw the beginning of the post-World War II role of the National Institutes of Health (NIH) in biomedical research. The bulk of the portfolio of research grants and contracts of the Office of Scientific Research and Development's (OSRD) Committee on Medical Research was assumed by the U.S. Public Health Service (USPHS), primarily within the NIH, because the Army and Navy were not interested in taking on these activities. During the late 1940s, the 1950s, and early 1960s, although Congress refused to act on the growing need for federal aid to medical schools, it did appropriate significant funds to the NIH for both graduate (doctoral) and postdoctoral research training and for the training of specialists in various fields related to clinical research.

Diversity in these training programs was not a priority, and there were no specific federal policies to support the training of minority physicians in research methods or in the range of clinical specialties receiving NIH funding. NIH funding supported research in segregated institutions, even after the U.S. Supreme Court ruled "separate-but-equal" public education unconstitutional in *Brown v. Board of Education of Topeka* in 1954. Unlike the Hill-Burton Program, federal funding for biomedical research was never used as leverage to influence either medical schools or research institutions to desegregate.

The GI Bill of Rights

The Servicemen's Readjustment Act of 1944 (the GI Bill of Rights) was the single most important federal program contributing to the nation's post-World War II economic boom, as Katznelson describes:

...With the help of the GI Bill, millions bought homes, attended college, started business ventures, and found jobs commensurate with their skills through these opportunities, and by advancing the momentum toward suburban living, mass consumption, and the creation of wealth and economic security, the legislation created middle class America. No other instrument was nearly as important.¹⁰

The report, *Our Negro Veteran*, published in 1947, noted:

There are two major sets of facts surrounding the life of Negro Veterans in America today:

- (1) Over a million dark skinned ex-service men are by training, discipline, sacrifice, and determination, prepared to integrate into the nation's life as first class citizens.
- (2) The nation has almost universally failed to grasp the enormous opportunity, which is presented through veteran benefits to the minority group.¹¹

In fact, benefits for Black veterans were very limited and, although President Truman advocated racial equality, he was unable to modify the GI Bill because the Southern Democrats who controlled Congress had deliberately crafted the law to accommodate Jim Crow policies.¹² Discrimination in the South continued, and Blacks were denied entry to many educational institutions. Despite the obstacles, many Black veterans were able to take advantage of the program, but its administration sharply curtailed the growth of opportunities for Blacks and the promise of fair treatment remained a promise.¹³

The Failure to Support Medical Education

The federal government first became involved in financing undergraduate education (including premedical education) and medical education through World War II officer training programs (the U.S. Navy V-12 Program and the Army Specialized Training Program /ASTP). Virtually all of the medical students who were in the V-12 and ASTP programs had to serve on active duty after graduation, either in WWII or the Korean Conflict. From 1942 to 1946, thousands of premedical and medical students were supported in these programs but, because of discrimination on the part of the medical schools, very few Blacks or members of other minority groups were able to participate.

In 1948, President Truman presented a comprehensive national health plan to Congress. The plan included proposals for national health insurance; expanded federal support for public health programs, particularly maternal and child health; increased support for biomedical research and training through the NIH; expanded hospital planning and construction through the Hill-Burton program; direct federal financial aid for medical schools; and scholarships for medical students.

The opposition of the influential American Medical Association (AMA) helped defeat both the proposed plan for national health insurance and the program for federal aid to medical schools (despite the perceived national physician shortage). The AMA voiced no objections to federal support for biomedical research, select public health programs, and the expansion of the Hill-Burton hospital construction program, and Congress supported those programs.

During 1949, the issue of direct federal support for medical education was debated again and the Senate passed a bill for student financial aid, but the U.S. House of Representatives took no action on the measure. Certain provisions included in this legislation, particularly those to assure that scholarships would not be denied on the basis of race, creed, or color, and to permit admission for out-of-state residents to state medical schools, undoubtedly contributed to the bill's defeat in the House. The direct federal support for medical education proposed by Truman was not mandated by Congress until the 1960s.

However, there was also growing interest in health manpower issues in the Federal Security Agency, including the USPHS. In 1951, President Truman appointed the President's

Commission on the Health Needs of the Nation to deal with a range of issues, including health professions education. The Commission's first charge was to study:

the current and prospective supply of physicians, dentists, nurses, hospital administrators, and allied professional workers; the adequacy of this supply in terms of present demands for service; and the ability of the educational institutions and other training facilities to provide additional trained persons as may be required to meet prospective requirements.¹⁴

On December 18, 1952, the Commission submitted its report, *Building America's Health*, recommending that, to overcome the financial crisis in institutions for the education of health personnel, federal funds be made available to schools of medicine, dentistry, nursing, and public health to modernize and expand existing schools, to develop new schools, and for operating support "for a gradual, carefully planned expansion of enrollment without discrimination on account of race, creed, or geographic residence."¹⁵ To remove economic barriers for students, the Commission recommended that federal funds be made available to provide scholarships and to increase student opportunity. The Commission also recommended that state governments improve the quality of their secondary and collegiate school systems. Finally, the Commission recommended the following:

To meet the need for additional Negroes in the health professions: that special programs be formulated to make more and better pre-professional and professional opportunities available for the education and training of Negroes in the health professions.¹⁶

The Commission noted the harm caused by the segregated dual school system in many regions of the country, and it concluded that "discriminatory bars which start at the secondary school level and run all the way through post-graduate training, internships and hospital affiliation must be removed wherever they exist."¹⁷

Leadership under President Dwight D. Eisenhower (1953-1961): A Growing Civil Rights Movement Evokes Little White House Response, and Medical Education Policy Has a Low Priority

Response to *Brown v. Board of Education of Topeka*

In the area of civil rights, Eisenhower's presidency was in stark contrast to Truman's. In response to the 1954 U.S. Supreme Court decision in *Brown v. Board of Education of Topeka*, President Eisenhower simply stated, "The Supreme Court has spoken, and I am sworn to uphold the constitutional process and I will obey."¹⁸ During the following six years of his presidency, Eisenhower never publicly supported the ruling, and historian Robert Caro noted, "...not once would he say that *Brown* was morally right, or that segregation was morally wrong."¹⁹ The U.S. Supreme Court provided only vague guidelines on how to implement the ruling, and even a

subsequent 1955 ruling that the implementation of school desegregation proceed “with all deliberate speed” did little to change matters.²⁰

Beginning of the Civil Rights Movement and the Civil Rights Act of 1957

In August 1955, the murder in Mississippi of Emmett Till, a Black youth from Chicago, triggered a massive, unprecedented national reaction. In December 1955, the Civil Rights Movement was launched in Montgomery, Alabama, when Rosa Parks, a Black woman, refused to move to the back of a bus to make room for a White passenger. Under the nonviolent leadership of Martin Luther King, Jr., the bus boycott that followed was a crucial catalyst in the alteration of the perception of racial discrimination in much of the nation.

The situation in 1956 was described by MacKenzie and Weisbrot:

The triumph of the boycott late in 1956, aided mightily by a Supreme Court ruling that voided a city ordinance segregating buses, initiated a new phase in the assault on Jim Crow. It demonstrated that blacks—without political power and in the face of terrifying threats—could successfully challenge racism even in a city called the Cradle of the Confederacy.²¹

In February 1956, the U.S. Supreme Court ordered the University of Alabama to admit its first Black student. Mob violence followed. President Eisenhower did not speak out or intervene in any of these situations.²²

Congress’s passage of the Civil Rights Act of 1957, which provided limited new authority for the federal government, including a Civil Rights Commission, was an important advance for the Movement.²³ In September of 1957, only five days after he signed the Civil Rights Act, President Eisenhower sent federal troops to Little Rock, Arkansas, in response to Governor Orval Faubus’ defiance of a federal court desegregation order.

Congress Supports Research but not Medical Education

Federal funding of biomedical research was rapidly expanded after 1947 and funding levels continued to rise throughout the Truman, Eisenhower, Kennedy, and Johnson Administrations. Ludmerer describes this development:

The growth in research funding during the first 20 years of the NIH proved staggering. In 1947 the nation expended \$87 million on medical research, of which \$27 million came from the federal government and \$8.3 million from NIH. In 1966, the nation spent \$2.05 billion on medical research, independent of construction and training, of which \$1.4 billion came from the federal government and \$800 million from NIH. Correcting for inflation, that represented a 15-fold increase in the total dollar amount invested in medical research during this period.²⁴

From 1951 to 1966, NIH programs and appropriations for biomedical research contributed directly to both the significant increase in full-time medical school faculty (from 3,500 to over 17,000) and the rise in the number of Ph.D.'s and M.D./Ph.D.'s trained by the medical schools.²⁵

In contrast to the strong Congressional support for biomedical research, a cool and noncommittal climate prevailed in regard to direct support of medical education during the 1950s. Without federal funding, increases in the number of first-year medical school enrollments were very slight. In 1957, the House Appropriations Subcommittee, chaired by John Fogarty, warned NIH:

The Committee does not doubt that most medical schools need some additional financial assistance, however, funds appropriated to the National Institutes of Health are not for the purpose of general assistance to medical schools.^{26,27}

By 1960, about one-quarter of NIH appropriations were for fellowships and training grants, including funds for faculty salaries, yet very few faculty members—or Ph.D. degree recipients—belonged to groups underrepresented in medicine. That same year, the Committee of Consultants on Medical Research to the U. S. Senate Health Subcommittee made a favorable assessment of the relationship of NIH research and research training grants to medical education, noting that “the impact of the federal program in support of medical teaching has been extremely beneficial and has been largely responsible for an improvement in the standards of medical training.”²⁸ The Committee did not comment on the fact that these advances did not improve opportunities for either minority faculty or minority students.

Over the years, while Congress debated the issue of direct financial aid to medical schools, the medical schools were developing affiliation agreements with the Veteran’s Administration (VA), cooperating in rapidly expanding residency training programs after WWII. President Truman’s 1948 Executive Order²⁹ had desegregated the VA, including its hospitals, but this had little or no direct effect on increasing diversity in medical school enrollment or in residency programs.

Three reports in the late 1950s and early 1960s reiterated some of the problems identified in *Building America’s Health*, but they did not confront the issues of discrimination and segregation. In 1958, the “Bayne-Jones Report” to the Secretary of Health, Education, and Welfare emphasized the need for continued support for biomedical research and research training in NIH, and for the expansion of research in other components of the Public Health Service. In addition, the Bayne-Jones Report called for an increase in the number of places for first-year medical students, from 6,800 in 1955 to 8,700 by 1970.³⁰ The Report of the Surgeon General’s Consultant Group on Medical Education, in 1959, known as the “Bane Report,” predicted a physician shortage of 40,000 by the year 1975, and proposed an increase in the number of first-year medical school places, from 7,400 in 1959 to 11,000 by 1975.³¹ Ludmerer, the medical historian, noted: “The Bane report quickly became the most influential and effective report on medical education since Abraham Flexner’s report half a century before.”³² Despite the growing evidence of a physician shortage, neither the Congress nor the Eisenhower Administration took any action.

Leadership under President John F. Kennedy (1961-1963) and President Lyndon B. Johnson (1963-1969): Civil Rights and Health Policy Move to the Top of the Policy Agenda

Early Actions by President Kennedy: Health Professions Education

President John F. Kennedy, pressured by a variety of issues, including the failed Bay of Pigs invasion and the Cuban Missile Crisis, was slow to respond to civil rights leaders and the Civil Rights Movement. He did, however, support an aggressive health policy agenda (e.g., health professions education, Medicare).

In 1961, the Kennedy Administration's health professions education policy proposals closely resembled those made by the Committee of Consultants in 1960. Congress considered a ten-year program for the construction of teaching facilities for medical, dental, and public health schools and a scholarship program for medical and dental students. A year later, the U.S. House of Representatives Interstate and Foreign Commerce Committee reported a bill to the House that reflected these policies, with the significant exception that loans were substituted for scholarships.³³

The leadership of Boisfeuillet Jones was a critical factor in the process of gaining direct federal support for medical schools. While Vice President for Health Affairs at Emory University, he served as Chairman of the Committee of Consultants that submitted the 1960 report *Federal Support of Medical Research* to the Health Subcommittee, Senate Committee on Appropriations. The "Bo Jones Report" emphasized the need for the federal government to initiate measures to train more physicians and dentists, and recommended federal support for loan assistance, scholarships, and fellowships for medical and dental students interested in teaching and research.³⁴ On a leave of absence from the University, Mr. Jones joined the Kennedy Administration in a key role as Special Assistant for Health and Medical Affairs to the Secretary of Health, Education, and Welfare from 1961 through 1963. He was instrumental in convincing the medical school deans to take a strong stand in favor of federal aid to medical schools, and his influence was vital to the formulation of the Health Professions Educational Assistance (HPEA) Act of 1963, legislation amending Title VII of the Public Health Service Act. The recommendations made in the 1960 Committee of Consultants report were all incorporated in this landmark legislation.

Congressional debate continued and it took two years to secure the first major breakthrough in federal support of medical schools: passage of the Health Professions Educational Assistance (HPEA) Act of 1963. This legislation included grants for the construction of medical schools and other health professional schools, for remodeling existing institutions, and for student financial aid (loans). The Act was reinforced in 1965 with amendments providing additional educational improvement grants and scholarship assistance, as well as modifying the student loan authority to provide loan forgiveness in exchange for practice in medically underserved areas. Revisions

enacted in 1968 reauthorizing these provisions added new special project grant authority and tied the funding for construction grants to increased enrollment by the schools.³⁵

After enactment of the 1963 HPEA, federal funding enabled the expansion of enrollment in existing schools and the establishment of new medical schools, and significant progress was made toward increasing enrollment of underrepresented minorities and furthering diversity in health professions education overall. (See Chapter 1: Changing Opportunities and Challenges for Medical Schools: From Desegregation to Affirmative Action to Promoting Diversity in an Anti-affirmative Action Environment.)

The Civil Rights Act of 1964 and Hospital Desegregation

During the first two years of the Kennedy Administration, there was little emphasis on domestic policy, including civil rights. Congressional resistance to any aggressive policies on civil rights made effective legislative action impossible. Recognizing this situation, President Kennedy took a number of executive actions, including the appointment of Blacks in high-level positions as well as a White House special assistant for civil rights, nominating Thurgood Marshall to fill a vacancy in the Appellate Court in New York, and initiating a review of federal policies and programs by the Civil Rights Commission. He also emphasized a strong role for the U.S. Department of Justice's Civil Rights Division. Unlike President Eisenhower, President Kennedy spoke out on the issues and endorsed school desegregation.

In June 1962, federal intervention was required to assure the admission of students to the University of Alabama's main campus in Tuscaloosa, and in the fall of 1962, federal action was again needed to assure James Meredith's admission to the University of Mississippi. When there was a violent reaction by the police in Birmingham, Alabama in April and May of 1963 to the protest against segregation, President Kennedy acted forcefully.³⁶

On June 11, 1963, President Kennedy delivered a landmark speech on civil rights and eight days later he asked Congress to pass the most comprehensive civil rights bill in the nation's history, incorporating proposals presented to President Truman by the President's Commission on Civil Rights in 1947.³⁷ Lyndon Baines Johnson, shortly after he was sworn in as President after Kennedy's assassination on November 22, 1963, proposed an even more comprehensive—and controversial—civil rights bill. After being opposed by the longest filibuster in Senate history, the Civil Rights Act of 1964 finally became law on July 2, 1964. While many people played key roles, the Civil Rights Act would not have become law without Martin Luther King, Jr., and President Johnson.

Title VI of the Civil Rights Act of 1964 was essential to implementing the desegregation of the nation's hospitals in 1966, and assuring nondiscrimination by medical schools receiving federal financial aid after the mid-1960s. Title VI established as law that:

...no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.³⁸

The desegregation of Hill-Burton funded hospitals, initiated by the DHEW in 1963, was broadly expanded after the enactment of the Civil Rights Act of 1964. The passage of the 1965 Social Security Amendments, notably Title XVIII (Medicare) and Title XIX (Medicaid) provided the means to transform the segregated hospital system in the South and to implement hospital desegregation nationwide in 1966. Title VI of the Civil Rights Act of 1964 was applied to all of the hospitals in the United States that would participate in the Medicare program. The power of the Medicare program to pay for inpatient hospital care of the elderly was an effective incentive and most of the segregated hospitals soon complied with Title VI regulations. James Quigley, DHEW Assistant Secretary for Administration from 1961 to 1966, led the hospital desegregation effort initially, with the strong support of DHEW Secretary Anthony Celebrezze and (after August 1965) DHEW Secretary John Gardner.

Sherry Arnstein, Quigley's young Special Assistant, was also in the forefront of this effort in 1964-65; she was instrumental in developing the basic DHEW policies for hospital desegregation and remained a key figure in its implementation in 1966. More than 1,000 hospitals were desegregated in the first six months of that year, and the Surgeon General of the U.S. Public Health Service judged the nation's remaining 6,000 hospitals to be in compliance with the law and qualified for the Medicare program. Hospital residency training programs, many associated with medical schools, were also desegregated at this time and the desegregation of medical schools receiving federal funds soon followed.

Education Policies: From Head Start to Elementary and Secondary Education to Higher Education

The Johnson Administration gave education programs high priority. The Head Start Program was created by the Office of Economic Opportunity as part of the War on Poverty. Begun in 1965 as an eight-week summer program, Head Start developed into a year-round program and is now administered by the Department of Health and Human Services (DHHS). At first, the program's focus was on five-year-olds, but it now includes three- and four-year-olds as well. The Head Start Program has a comprehensive approach to health, nutrition, and education. Head Start's interventions helped to provide the early preparation necessary for later success in elementary and secondary school, college, and the ability to successfully apply to and enter medical school.

The Elementary and Secondary Education Act (ESEA) of 1965 has been the foundation of federal education policy since its enactment. The focus of the ESEA of 1965 was on assistance for low-income, disadvantaged students. The original Act authorized Mathematics and Science Partnerships to encourage state and local education agencies, elementary and secondary schools, and institutions of higher education to work toward raising students' levels of academic achievement in those subjects.³⁹ The initial funding for ESEA programs was \$528 million; funds under the law were eventually disbursed to 14,000 of the nation's 16,022 school districts using a formula related to per capita income, which allotted proportionally more support to low-income districts than to middle- or high-income ones.⁴⁰ The ESEA has been amended and renewed every five to seven years since its enactment.

The cost of education, which includes tuition and the cost of living, represents a significant barrier to student participation in undergraduate, graduate, and medical education. Student financial aid has been a significant part of the federal health professions education policy for the past forty years, in the form of scholarships, loans, loan forgiveness, and loan guarantees. The federal government has provided major funding for scientific research in universities since World War II, but the direct support of higher education institutions—and of college and university students—was only undertaken after the enactment of the HPEA of 1963 and the Higher Education Act (HEA) of 1965. One of the most important Titles in the HEA of 1965 was Title IV, which authorized federal loan, grant, and scholarship programs to help students finance undergraduate, graduate, and professional education.

Federal support for higher education includes both general institutional aid to enhance the academic, administrative and financial capacities of higher education institutions, and targeted financial assistance provided to select groups of institutions including Historically Black Colleges and Universities (HBCU), Hispanic-serving institutions, and Native American Tribal Colleges and Universities, as well as institutions serving Alaska Natives and Native Hawaiians. A detailed review of federal, state, and private sector programs, from preschool through college and in the health professions, carried out by Grumbach and colleagues at UCSF and UC Davis, was published in 2003 by The California Endowment.⁴¹

Celebrating the GI Bill of Rights

The GI Bill of Rights, which was initiated under President Roosevelt, served veterans of World War II, the Korean Conflict, and the Vietnam War. Celebrating the 20th anniversary of the GI Bill on June 22, 1964, President Johnson noted: “It represented America’s intention to insure that the war we’re going to win would be followed by a peace we are not prepared to lose.”⁴²

The President went on to describe some of the contributions of the GI Bill:

1. Almost 8,000,000 veterans—nearly half of all the men and women who served in World War II— receive some training under the bill’s provisions.
2. The bill produced 600,000 engineers and scientists, 360,000 school teachers, and 700,000 business and executive personnel.”⁴³

The President added, “...It is time to review our commitment to carry forward the work of peace which they so successfully began.”⁴⁴

Because of the policies of the Johnson Administration, particularly the Civil Rights Act (1964), the Higher Education Act (1965), and the Health Professions Educational Assistance Act (1963), the kind of discrimination evident in the early administration of the GI Bill would no longer be possible.

Limited Leadership under President Richard M. Nixon (1969-1974) and President Gerald R. Ford (1974-1977): Slow on Civil Rights, but Progress in Health Professions Education

An Anti-affirmative Action Policy Emerges

An anti-civil rights attitude characterized the Nixon Administration's policies on affirmative action, unlike the commitment to the cause that was evident during the Johnson Administration. While Nixon's Labor Secretary George Schultz initiated the Philadelphia Plan, designed to end discrimination in the construction trades, the President focused on slowing, or stopping, the Civil Rights Movement across the governmental spectrum. Targeting elementary and secondary education, his point of attack was school busing. The efforts to desegregate public schools made while Leon Panetta was chief of the DHEW Office of Civil Rights were stymied by the White House. As Panetta notes in *Bring Us Together*, published in 1971, the DHEW took regulatory action against only one medical school during the entire year he held the job.⁴⁵

Although President Nixon was opposed to it, Congress approved the extension of legislation empowering minority voters, the Voting Rights Act of 1965, considered by many to be even more important than the Civil Rights Act of 1964. Two very important laws that affected different aspects of diversity were also enacted while Richard Nixon was in office: the first, Title IX of the Education Amendments of 1972, mandated the end of gender discrimination in federally funded programs, and the second, the Rehabilitation Act of 1973, established the rights of disabled Americans. In addition, the Higher Education Act was amended in 1972 to establish the Pell Grant Program.

Pell Grants are need-based grants targeted toward low-income undergraduate and some graduate and professional students. The Stafford Loan Program, which includes both subsidized and unsubsidized loan programs, helps to support many health professions students.

Progress in Increasing Diversity in Health Professions Education

Despite President Nixon's ambivalence on race-related civil rights issues, progress continued in increasing diversity in the health professions. Regarding medical education, one of us (Philip R. Lee, M.D.), Chancellor of the University of California, San Francisco (1969-1972), noted the exemplary changes underway by 1969 at UCSF School of Medicine, a leading institution in both the development of policies fostering diversity and the implementation of affirmative action:

The most significant change in admission of minority students came, not in the doubling of Black student enrollment in the past four years, but in the five-fold increase in minority applicants for the class entering in the fall of 1969. From the vastly expanded pool of qualified applicants 32 minority group students were admitted to the School of

Medicine. This is 25 percent of the entering class. Of this group admitted to the School of Medicine, 22 were Black and the remainder, other minority groups.⁴⁶

Similar changes followed in many medical schools throughout the country during the 1970s. Strong leadership and effective advocacy by minority groups (both on a nationwide level and in individual states, communities, and schools) were instrumental in the development and implementation of vital outreach and support programs for underrepresented minority students and contributed to the consequent achievement of a more diverse student body (and faculty to a lesser extent) in medical schools.

In 1970, the Carnegie Commission on Higher Education issued a special report, *Higher Education and the Nation's Health: Policies for Medical and Dental Education*, recommending a substantial federal contribution to the nation's health professions schools for basic operating expenses and the implementation of comprehensive strategies for significant enrollment increases to meet the nation's health care workforce and service needs, particularly in geographic areas with severe health manpower shortages.⁴⁷ Congress responded positively to this report and to studies of policy for financing medical education by Fein and Weber⁴⁸ and by the National Fund for Medical Education.⁴⁹

The leadership of Senator Edward Kennedy and Congressman Paul Rogers was instrumental to the enactment in 1970 of the Emergency Health Personnel Act, establishing the National Health Service Corps and providing assistance to regions with health manpower shortages. Enacted the following year, the Comprehensive Health Manpower Training Act of 1971 included capitation grants designed to ensure stable support and increase enrollment in medical schools as well as other health professions schools, and provisions for physician shortage area scholarships, grants for training family physicians and physician assistants, and grants to shorten the curriculum. Upon signing this Act and its companion measure, the Nurse Training Act, President Nixon said that the two laws "constitute the most comprehensive health manpower legislation in the nation's history."⁵⁰

In 1972, Congress enacted the Uniformed Services Health Professions Revitalization Act, establishing the Uniformed Services University of Health Sciences, under the Department of Defense. Congress also passed the Veterans Administration Medical School Assistance and Health Manpower Act of 1972, authorizing the VA to help establish eight state medical schools and to provide grants to existing schools. The Public Health Service Amendments of 1974 revised and extended the National Health Service Corps and established the National Health Service Corps Loan Repayment Program.

Geographic and Specialty Maldistribution and Lack of Diversity in the Physician Workforce

Two persistent problems, which had been clearly identified by the 1970s, demanded priority in the formulation of federal health policy (e.g., Title VII of the Public Health Service Act): 1) the increase over time of geographic and specialty maldistribution in the physician workforce, with its resulting inequities in access to health in rural and inner city areas; and 2) the need for diversity in the health care workforce. By the mid-1970s, the focus of federal policymakers,

including Congress, had shifted away from physician shortages and expansion of medical school enrollment. The problems of geographic and specialty maldistribution had grown worse between 1965 and 1975 despite the increases in physician supply.

During Congressional hearings in 1974, Dr. Charles C. Edwards, Assistant Secretary for Health and Scientific Affairs of DHEW, signaled a significant shift in policy by the Ford Administration when he testified against continuation of the policy of capitation support for medical schools. Dr. Edwards suggested that, because physicians earn high incomes, students could afford to bear more of the costs of their medical education. The Association of American Medical Colleges (AAMC) advocated continued capitation support (if the medical schools maintained existing enrollment levels), but asserted that the medical schools could do little about the problems of geographic and specialty maldistribution.

Congressman Paul Rogers had become the leader in the House of Representatives in the development of federal health manpower policies; in 1976, in the Foreword to *Primary Care in a Specialized World* by Lee et al., he reflected on the policy process:

Thus, in past years, federal health manpower policy was principally predicated on resolving three issues: the need for adequate funding of medical and other health professions education, the need to increase the supply of adequately trained health manpower, and the need to increase educational opportunity for students from low-income families.⁵¹

He noted that:

There are no simple solutions to the problems of geographic and specialty maldistribution and the growing reliance of this country on graduates of foreign medical schools, nor can these problems be resolved solely by government intervention.⁵²

Congressman Rogers did not specifically address the problem of diversity within medicine and the other health professions, because rapid progress had been made in medical schools throughout the country from the late 1960s to the mid-1970s.

The Health Professions Educational Assistance Amendments of 1976 included controversial provisions that reflected increased Congressional frustration with the issues identified by Congressman Rogers. To vigorously counter the problems of specialty and geographic maldistribution, Congress initially stipulated that capitation payments be conditioned on the medical schools' assuring that at least 50 percent of their graduates would enter primary care residencies (family medicine, internal medicine, and pediatrics). Scholarships were tied to service in underserved areas; each year of scholarship entailed a year of service in an underserved area after graduation. In 1977, the conditions for the awarding of capitation grants were revised and made less onerous.

Leadership under President Jimmy Carter (1977-1981): More Emphasis on Education, Less on Civil Rights

Education Is a Priority

President Carter was a strong supporter of education, and in 1979 he successfully proposed the establishment of a separate Department of Education (DOE), which would take over all the education programs from the DHEW, subsequently renamed the Department of Health and Human Services (DHHS). Although his predecessors Nixon and Ford had not been strong supporters of the Elementary and Secondary Education Act, over the years the Democratic Congress had continued to increase annual appropriations for elementary and secondary education. The funding level had reached \$4.5 billion in 1977 (at that time fewer than six million children were receiving assistance),⁵³ and in the Carter years rose to \$7 billion.⁵⁴

During the Carter Administration, federal regulation of hospital costs was proposed to address the problem of rapidly increasing costs, but Congress supported a voluntary regulatory plan instead: President Carter's proposed plan for national health insurance was also unsuccessful. The Administration's principal public health initiative, aimed at health promotion and disease prevention, was the Healthy People initiative, which set national health goals and objectives. Policymakers broadened their focus beyond medical care financing to population health. In health professions education policy, more attention was given at this time to the problems of geographic and specialty maldistribution of the physician workforce than to diversity or the task of increasing medical school enrollment.

Ambivalence on Civil Rights

Despite strong speeches in favor of civil rights made on the campaign trail against President Ford in the fall of 1976, President Carter's actions in the White House were mixed. In *Governing America: An Insider's Report from the White House and the Cabinet*,⁵⁵ Joseph A. Califano, Jr., Secretary of Health, Education, and Welfare from January 1977 to August 1979, observes:

It is imperative for the nationally elected Chief Executive of the United States to lead the people with his eloquence, persuasion, and manifest commitment. If he fails to act with courage in the face of political resistance, few are likely to step out front on the civil rights issues.⁵⁶

Mr. Califano relates the struggles over civil rights issues during the early years of the Carter Administration, and, in a detailed discussion of the *Regents of the University of California v. Bakke*, he describes the vastly different positions of the Justice Department and DHEW on the substance of the Justice Department brief prepared for submission to the U.S. Supreme Court. Although *The Washington Post's* headline proclaimed, shortly before the brief was filed, "Carter's Plan to Oppose Racial Quotas Splits Administration,"⁵⁷ a brief was eventually produced that was more positive on affirmative action.

The Supreme Court's decision included multiple opinions; it found the quota system used by University of California, Davis to be unconstitutional, but declared "that educational institutions may take race into account in the admissions process as part of an effort to obtain a diverse student body."⁵⁸ Although this ruling did not initially have an impact on federal policy, negative repercussions of the *Bakke* decision played a part in slowing the pace of affirmative action efforts in medical schools throughout the country. We believe that a lack of understanding of how to implement major aspects of the *Bakke* decision, which provided guidance to higher education institutions, resulted in diminished and less effective affirmative action programs in many medical schools. (See Chapter 1: Changing Opportunities and Challenges for Medical Schools: From Desegregation to Affirmative Action to Promoting Diversity in an Anti-affirmative Action Environment.)

Leadership under Ronald W. Reagan's Administration (1981-1989): Setbacks and Advances in Civil Rights and Health Professions Education

A Dramatic Shift in Priorities

After the inauguration of Ronald Wilson Reagan as President in January 1981, affirmative action—which Reagan termed “reverse discrimination”—did not have a friend in the White House. President Reagan advocated successfully for major tax cuts, increased defense spending, and reduced social spending. The subsequent “belt-tightening” limited federal appropriations for health professions education and reduced discretionary spending that might have continued to foster diversity in medical education.

In the early 1980s, priority was no longer given to enhancing minority opportunities in health professions education by establishing new medical schools and expanding enrollment in existing schools. Although President Reagan did not express particular views about health professions education, his Office of Management and Budget cut back funding in FY 1982 for National Health Service Corps Scholarships, a program that had supported many minority medical students during the 1970s, and federal health policymakers did not focus on removing barriers to medical education for low-income and minority students. In the increasingly *laissez faire* economy, federal capitation grants to medical schools were eliminated—funding that had been key to the achievement of sustained enrollment increases and had also supported reforms in medical education.⁵⁹

Eliminating Direct Support for Medical Schools

Further rationalization for the Reagan Administration's desire to limit domestic social spending had also come from an unexpected source. The Graduate Medical Education National Advisory Committee's (GMENAC) 1980 Report to the Secretary of Health and Human Services contained predictions of a large physician surplus by the years 1990 and 2000. In 1976, the Secretary of DHEW had created the GMENAC to assess the problem of graduate medical education financing and examine physician supply and distribution. The most important conclusions of the

GMENAC report were:

1. In 1990 there will be 70,000 more physicians than required to provide physician services (536,000 supply, 466,000 requirements).
2. By 2000 there will be 145,000 more physicians than required to provide physician services (643,000 supply, 488,000 requirements).
3. The expected entry into practice over the next 10 years of 40,000 to 50,000 graduates of foreign medical schools accounts for more than half of the 70,000 surplus.⁶⁰

Federal policymakers respected the report's findings of an oversupply of physicians, based on new analytic methodologies, and the impact of the GMENAC predictions on federal health workforce policies was immediate and drastic. Congress terminated direct federal aid for medical education, including capitation grants. Later studies, in which conclusions similar to the GMENAC regarding physician supply were also reached, were carried out by the Bureau of Health Professions, Public Health Service, DHHS, and by the Council on Graduate Medical Education (COGME), which was established in 1985 by the Consolidated Omnibus Budget Reconciliation Act (COBRA).⁶¹

Medicare hospital reimbursement policies were a subject of Reagan-era reforms in the Social Security Act in 1983 and were further refined in the 1985 COBRA. Specific trust funds were established: for Direct Medical Education (DME), to provide stipends for the direct support of residents, and for Indirect Medical Education (IME), to compensate for the higher operating costs incurred by teaching hospitals. The original system of cost-based payments by Medicare was replaced by a new method of prospective payments based on diagnostic-related groups (DRGs). Inadvertently, greater financial incentives were provided for hospitals to increase the number of residency positions. As a result, at the same time that U.S. medical schools were curtailing enrollment growth in the wake of federal funding cutbacks, teaching hospitals nationwide, many affiliated with those same medical schools, were recruiting international medical graduates (IMGs) to fill the newly available, Medicare-funded residency positions.

Leadership under the George H. W. Bush Administration (1989-1993): Incremental Advances Related to Diversity

Incremental Advances Continue during Dr. Louis Sullivan's Term as Secretary of HHS

Appointed under President George H. W. Bush, Louis Sullivan, M.D., is the only African American to have served as the Secretary of Health and Human Services. During his tenure, from early 1989 until President Clinton's 1993 inauguration, incremental advances continued to be made in federal support for diversity in health professions education.

In 1990, the Bush Administration supported the Disadvantaged Minority Health Improvement Act and the National Health Service Corps Revitalization Amendments. The strong combined leadership of Dr. Sullivan and another African American physician, Dr. Herbert Nickens, of the AAMC, facilitated the 1991 launch of the AAMC's Project 3000 by 2000, which was aimed at renewing medical schools' efforts to admit URMs. Federal funds were not forthcoming, however, in support of the project's target, which was to increase the number of underrepresented minorities in the entering medical school class from 1,500 to 3,000 students by the year 2000.

Lack of a Clear-cut Record on Affirmative Action

The record of the Bush Administration is not clear cut on affirmative action. In 1990, the Administration successfully supported the Americans with Disabilities Act of 1990, the most sweeping civil rights legislation since the Civil Rights Act of 1964 and the Voting Rights Act of 1965. In 1991—after a long and contentious Senate Judiciary Committee hearing—Congress confirmed, by a bare margin of 52-48 votes in the Senate, the President's U.S. Supreme Court nominee Clarence Thomas, a conservative African American opposed to affirmative action.⁶²

President Bush initially opposed Congress on the Civil Rights Act of 1991, a bill sponsored by Republican Senator John Danforth, who had guided the Thomas nomination through the Senate. Although Congress voted on and supported affirmative action, it did not define the policy. The President conceded to sign the act, but the day before its signing White House Counsel C. Boyden Gray issued a directive ordering termination of any regulations or mandates supporting affirmative action. The next day, the directive was dropped and the President's Press Secretary, Marvin Fitzwater, stated: "Let me be clear. The President supports affirmative action, preferences, and minority set asides as long as they are consistent with the new Civil Rights law, period."⁶³

There were conflicting views within the Bush Administration on Civil Rights. In 1991, the U.S. Commission on Civil Rights urged President Bush to "take a strong stand in support of affirmative action in the recruitment of minority students, including the use of minority-based scholarships where necessary."⁶⁴ The Office for Civil Rights of the U.S. Department of Education has announced that the Civil Rights Act of 1964 "prohibits the funding of minority-targeted scholarships by institutions receiving federal financial assistance."⁶⁵ As an independent, bipartisan, fact-finding agency concerned with discrimination or denial of equal protection of the laws because of race, color, religion, sex, age, handicap, or national origin, the U.S. Commission on Civil Rights could take policy positions and make policy recommendations that were different from those of the President, executive agencies, and Congress.

The Health Professions Education Extension Amendments of 1992

In 1992, Congress also enacted both the Health Professions Education Extension Amendments, which clarified provisions for student loans and scholarships for students with exceptional financial need, and the Indian Health Amendments of 1992, which provided scholarships for American Indian and Alaska Native students and revised provisions of the existing loan program.

The COGME Third Report of 1992

The perspective of the Council on Graduate Medical Education's (COGME's) Third Report, *Improving Access to Health Care through Physician Workforce Reform: Directions for the 21st Century* issued in October 1992, which advocated increased emphasis on primary care, particularly in residency training programs, and on the elimination of primary care shortages, would influence the health policies of the incoming Clinton Administration.

Leadership under President William Jefferson Clinton (1993-2001): Lack of Congressional Support for Health Care Reform, but Presidential and Congressional Bipartisan Support for Affirmative Action

The Health Security Act of 1993

In 1993, President Clinton initially emphasized deficit reduction and trade liberalization in his administration. In September of that year he proposed the Health Security Act, which included a Comprehensive Public Health Initiative developed by the DHHS.⁶⁶ Establishment of a coordinated, all-inclusive policy for graduate medical education (GME) was a major focus, and proposals were included for gradually increasing the number of primary care residencies, decreasing the number of specialty residencies in oversupply, and limiting the total number of residency positions each year (to equal the number of graduates of U.S. allopathic and osteopathic medical schools plus 10 percent). Financing the changes in GME was slated to come from Medicare, the proposed Health Security Act, and existing private health insurance programs.

Also within the scope of the proposed Health Security Act were programs specifically intended to increase the diversity of the nation's health care workforce. The Clinton Administration's health care workforce proposals drew on the 1992 COGME report, which had stated:

The racial/ethnic composition of the physician population should reflect the population's overall diversity. Consequently, the number of entering minority medical students should be doubled from 1500 to 3000 by the year 2000 (a goal of the Association of American Medical Colleges).⁶⁷

Even though policymakers reaffirmed the goals of Project 3000 by 2000, because of the high priority given to deficit reduction in order to balance the nation's budget, additional federal funds for health professions education were not readily available.

The Clinton Administration's health care reform proposals died in Congress—without reaching a vote, either in the Senate or the House of Representatives—and no separate action was taken on health professions education. The reasons for this stalemate are complex and include strong interest group opposition, as well as the unwillingness of any Republicans to support the Health Security Act.

The Legacy of GI Bill Support in Health Professions Education and Training

The 50th anniversary of the GI Bill was celebrated on June 22, 1994 and President Clinton was strong in his praises: “Just as D-Day was the greatest military action in our history, so the GI Bill arguably was the greatest investment in our people in American history.”⁶⁸ He went on to note that the GI Bill helped over 15 million returning veterans (almost double the number noted by President Johnson on the 20th Anniversary). He added to President Johnson’s comment on World War II veterans that the 180,000 who became doctors or nurses were supported by the GI Bill.⁶⁹ In advocating for his programs, Clinton added:

... Almost everything we are trying to do is animated by the spirit and the ideas behind the GI Bill. Give Americans a chance to make their own lives in the fast changing world; they will secure the American Dream. They will secure our freedom. They will expand its reach if you give them the power to do it.⁷⁰

The Republicans Gain Control of Congress

In 1994, Republicans gained control of Congress for the first time in forty years. Their majority conservative views were very different from those of President Bill Clinton. However, Republicans in Congress and President Clinton did agree on a major change in welfare policy, which transferred responsibility for the Aid to Families with Dependent Children (AFDC) to the states, with matching funds provided by the federal government.

Student Financial Aid Policies

Student financial aid policies also underwent changes. As an alternative to increasing Pell Grants to meet the need for aid, tax policies were utilized, beginning with the introduction of the Hope and Lifetime Learning Credits. These were further modified with tuition tax credits and tax-free deductions in 2002.⁷¹

Little Increase in Discretionary Spending on Health Programs or Health Professions Education

In 1998, President Clinton reported the first federal budget surplus in thirty years. Unfortunately, this did not result in increased discretionary spending either for health professions education or other domestic health programs, with the exception of the NIH budget, HIV/AIDS funding, and the State Child Health Insurance Program (SCHIP). Although there was little legislative action that pertained specifically to health professions education issues during most of the Clinton years, it is important to note that Congress enacted the Health Professions Education Partnerships Act (amending the Public Health Service Act) in 1998, whereby 44 health professions training programs were consolidated into a broad primary care medicine and dentistry grant program; health professions education programs, including minority health professions education programs, were reauthorized.

Civil Rights: The Continuing Struggle

Bill Clinton was admired by African Americans as a progressive advocate of affirmative action. A number of quotes from the most detailed commentary on the subject made by President Clinton during his eight years in the White House are found among his “Remarks on Affirmative Action at the National Archives and Records Administration.”

The purpose of affirmative action is to give the nation a way to finally address the systematic exclusion of individuals of talent on the basis of gender or race from opportunities to develop, perform, achieve and contribute⁷²

He summed up his views: “We should have a simple slogan: mend it but don’t end it,” which may have been inspired by the views of the Citizens’ Commission on Civil Rights and others.⁷³

Citizens’ Commission on Civil Rights Reports, 1995 and 1997

The Citizens’ Commission on Civil Rights, a bipartisan organization established in 1982, monitors civil rights policies of the federal government and seeks ways to accelerate progress in the area of race relations and on other civil rights issues.⁷⁴ In its 1995 report, *New Challenges: The Civil Rights Record of the Clinton Administration Mid Term*,⁷⁵ “the Commission urged the President to hold fast to a commitment to affirmative action remedies to increase opportunities for full participation in our society.”⁷⁶ On January 1, 1997, the Commission made its report, *The Continuing Struggle 1997: Civil Rights and the Clinton Administration*.⁷⁷ The report did not give high marks to the President during his first term:

...even at the midpoint of the term government was still very much in the beginning of revitalizing civil rights enforcement and developing new policies to meet the needs of the 90s. This, we wrote, made ‘difficult a clear assessment of the effectiveness of the Administration in achieving civil rights objectives.’ For various reasons—including indecision, a reluctance to stand behind nominees whose views generated controversy, and a desire to achieve balanced racial and ethnic tickets at some agencies—the Clinton Administration had proven to be very slow in filling key civil rights positions. The slow pace of presidential appointments created a vacuum at civil rights agencies, necessitating the deferral of many important policy decisions and the creation of a backlog for agency heads to deal with once they assumed office. All told, it would take the Administration nearly two years to fill key civil rights positions, a delay that the Commission observed, ‘would prove to be damaging to hopes that momentum in key civil rights enforcement would be established.’⁷⁸

The 1995 report of the Commission noted that changes resulting from the 1994 elections made leadership on affirmative action uncertain:

The gains that had been made over the past three decades have been made possible only because Republicans and Democrats stood together in Congress and elsewhere. But it is by no means certain that there remains a cadre of Republicans in the new Congressional leadership that is committed to continued progress in extending equality of

opportunity. Some Congressional committee chairs may use their oversight authority to deter the use of affirmative civil rights remedies by federal agencies. Other threats to civil rights laws may come more directly, in the form of cutbacks in the collection of racial data, and in curtailing education, job training, and social service funds needed for the effective exercise of civil rights.⁷⁹

Bipartisan Congressional Support of Federal Affirmative Action Programs

In 1997, the House of Representatives Judiciary Committee voted 17-9, on a bipartisan basis, to defeat legislation aimed at dismantling federal affirmative action programs. In 1998—despite the ideological differences between Republicans and Democrats—repeated efforts to eliminate specific federal affirmative action programs, including those in higher education, were rejected by the Senate and House of Representatives.

President Clinton's Second Inaugural Address

In his January 1997 Inaugural Address, at the beginning of his second term in office, President Clinton observed that “the divide of race has been America’s constant curse.” In his State of the Union address on February 4, 1997, he said:

In the end, more than anything else, our world leadership grows out of the power of our example here at home, out of our ability to remain strong as one America. All over the world, people are being torn asunder by racial, ethnic, and religious conflicts that fuel fanaticism and terror. We are the world’s most diverse democracy, and the world looks to us to show that it is possible to live and advance together across those kinds of differences.

America has always been a nation of immigrants. From the start, a steady stream of people in search of freedom and opportunity has left their own lands to make this land their home. We started as an experiment in democracy fueled by Europeans. We have grown into an experiment in democratic diversity fueled by openness and promise. ... We must never... believe that our diversity is a weakness. It is our greatest strength. Americans speak every language, know every country. People on every continent can look to us and see the reflection of their own great potential, and they always will, as long as we strive to give all of our citizens, whatever their background, an opportunity to achieve their own greatness.

We’re not there yet. We still see evidence of abiding bigotry and intolerance in ugly words and awful violence, in burned churches and bombed buildings. We must fight against this, in our country and in our hearts...

We may not share a common past, but we surely do share a common future. Building one America is our most important mission, the foundation for many generations, of every other strength we must build for a new century. Money cannot buy it. Power cannot compel it. Technology cannot create it. It can only come from the human spirit.⁸⁰

The President's Initiative on Race: One America for the 21st Century

On June 14, 1997 President Clinton called for a “great and unprecedented conversation about race”⁸¹ and he appointed an advisory board, headed by the African American historian John Hope Franklin, to “study race.”^{82, 83} Announcing a new initiative—One America for the 21st Century: The President’s Initiative on Race—Professor Franklin said that it had five goals:

1. To articulate the President’s vision of racial reconciliation and a just, unified America.
2. To help educate the nation about the facts surrounding the issue of race.
3. To promote a constructive dialogue, to confront and work through the difficult and controversial issues surrounding race.
4. To recruit and encourage leadership at all levels to help bridge racial divides.
5. To find, develop, and implement solutions in critical areas such as education, economic opportunity, housing, health care, crime and the administration of justice—for individuals, communities, corporations, and government at all levels.⁸⁴

FOCUS OF THE ADVISORY BOARD REPORT. The Advisory Board’s report to the President was released in September 1998. The report’s five chapters focused on these topics:

- Searching for Common Ground
- Struggling with the Legacy of Race and Color
- The Changing Face of America
- Bridging the Gap
- Forging a New Future.

CIVIL RIGHTS ENFORCEMENT. The report noted two “major impediments blocking effective civil rights enforcement”—“lack of data about some minority groups and under-funding of civil rights enforcement agencies.”⁸⁵

Recommendations were to: 1) strengthen civil rights enforcement throughout the United States, 2) improve data collection on racial and ethnic discrimination, and 3) strengthen laws and enforcement against hate crimes.⁸⁶

EDUCATION AND RACE. In terms of education and race, the report noted “our concern...that educational opportunities and public resources are being restricted to those who live disproportionately in areas of concentrated poverty.”⁸⁷

The two most important challenges noted were: first, “overcoming racial educational disparities in educational opportunity and attainment by providing all our children with the highest quality education beginning in the earliest years and extending throughout the educational pipeline”; and second, educating “all of our children in high-quality integrated schools where they have the

opportunity to learn together in ways that can break down negative stereotypes and improve race relations.” Commenting on these two challenges, the report goes on to say “Segregation remains a problem both in and among our schools, and the situation appears to be getting worse.”

Recommendations were to: 1) enhance early childhood learning, 2) strengthen teacher preparation and equity, 3) promote school construction, 4) promote movement from K-12 to higher education, 5) promote the benefits of diversity in K-12 and higher education, 6) provide education and skills training to overcome increasing income inequality that negatively affects lower skilled and less educated immigrants, and 7) implement the comprehensive American Indian and Alaska Native education policy.

PRESIDENT CLINTON’S RECOMMENDATIONS TO CONGRESS. The President sent a report to Congress laying out the unfinished work of the One America initiative, offering recommendations in the areas of economic and social progress, educational excellence for all children, and civil rights enforcement.⁸⁸

The education recommendation was:

- Reauthorize the Elementary and Secondary Education Act so that federal education funds promote higher standards and accountability for results, put qualified teachers in all classrooms, and turn around all failing schools. Finish the job of hiring 100,000 teachers to reduce class size. Expand after-school and summer school and help to make sure all students reach high standards. Mentor disadvantaged youth to increase the chance they go to college. Provide tax credits to help build or modernize 5,000 schools. Act on the findings of the newly appointed Presidential Commission on Resource Equity, that is charged with finding ways to close the resource equity gap between schools in poor communities and those in more affluent ones.

The civil rights enforcement recommendation was:

- Redouble our efforts to end all forms of discrimination by expanding investments in civil rights enforcement and passing the Employment Nondiscrimination Act.

As President Clinton’s second term was drawing to a close in 2000, he signed Executive Order 13160 and Executive Order 13166, two directives designed to articulate federal policy on equal opportunity in education and to assist the Department of Justice in enforcing these policies.⁸⁹

Executive Order 13160: Ensuring Equal Opportunity in Federally Conducted Education and Training Programs (June 23, 2000)

This is a guidance document including a statement of policy on education programs and activities conducted by executive departments, definitions, exemption from coverage, administrative enforcement, implementation and agency responsibilities, reporting requirements. The executive order noted, “The Federal Government must hold itself to at least the same principles of nondiscrimination in educational opportunities as it applies to the education programs and activities of State and local governments and to private institutions receiving Federal financial assistance.”⁹⁰

Executive Order 13166: Improving Access to Service for Persons with Limited English Proficiency (LEP) (August 11, 2000)

This executive order lays out goals to make an array of services funded by the federal government accessible to eligible persons who are not proficient in the English language, and defines federally conducted and assisted programs and activities, consultations, and judicial review.⁹¹

Responsibility for Civil Rights Enforcement: Coordination and Review Section, Civil Rights Division, U.S. Department of Justice

The U.S. Department of Justice, Civil Rights Division, Coordination and Review Section is responsible for enforcing provisions of these executive orders, as well as Executive Order 12250: Leadership and Coordination of Nondiscrimination Laws, signed by President Carter on November 2, 1980, to provide consistent and effective implementation of various laws prohibiting discriminatory practices on the basis of race, color, national origin, sex, disability, or religion in programs and activities receiving federal financial assistance.⁹² The responsibility for implementing this Executive Order was initially the Attorney General's; except for the authority to approve regulations, the responsibility was then delegated to the Assistant Attorney General for Civil Rights. The Coordination and Review Section carries out responsibility on a day-to-day basis.⁹³

The U.S Commission on Civil Rights: Understanding the Impact of Percentage Plans in Higher Education

In April 2000, the U.S. Commission on Civil Rights issued a report, *Toward an Understanding of Percentage Plans in Higher Education: Are They Effective Substitutes for Affirmative Action?*⁹⁴ The report focused on percentage plans developed in Florida after the One Florida Plan (Executive Order 99-281) in 1999, in Texas after the Appeals Court decision in *Hopwood v. Texas* in 1996, and in California after the University of California Regents Resolution SP-1 in 1995 and the passage of Proposition 209 in 1996. The Florida plan guaranteed state university admissions to high school seniors in the top 20 percent of their class without regard to SAT or ACT scores plus \$20 million in additional funds for student financial aid.⁹⁵ The Texas Legislature adopted a Ten Percent Plan.⁹⁶ California adopted a plan to increase the University of California's overall eligibility pool from 11.5 percent to 12.5 percent of California's high school seniors. Among the conclusions of the report were:

- “The most positive aspect of the percentage proposals is that they shine a spotlight directly on the failure of the states to exercise their constitutional responsibility to ensure an equal opportunity to learn in K-12 for poor African American and Latino students.”⁹⁷
- “...percentage plans may succeed as an effective public relations strategy. They could gain broad appeal because they focus on the goal that everyone should have equal opportunity to learn in higher education.”⁹⁸

- “Percentage plans are also a good public relations strategy because they fit into an educational history having nothing to do with race.”⁹⁹
- “The major problem with the percentage plans is their inattention to law schools, medical schools, and other graduate and professional schools, where ending affirmative action is devastating.”¹⁰⁰

Some Progress on Diversity in Medical Education

During the late 1990s, under the leadership of Assistant Secretary for Health/Surgeon General David Satcher, increasing emphasis was placed on the issue of health disparities. In response to this challenge, there were a limited number of initiatives by the National Institutes of Health (NIH), the Centers for Disease Control and Prevention (CDC), the Health Resources and Services Administration (HRSA), and the Substance Abuse and Mental Health Services Administration (SAMHSA). The Indian Health Service (IHS) received only small increases in funding. Medical school leaders embraced the AAMC Project 3000 by 2000 during the early years of the Clinton Administration. The percentage of URM matriculants in medical schools accredited by the Liaison Committee on Medical Education rose to a high of 15.5 percent in 1994, and subsequently declined to 13.8 percent in 2000. The number of URM applicants to medical schools reached a peak of 6,663 in 1996,¹⁰¹ and by the year 2000 had declined by 17 percent to 5,511.¹⁰²

Grumbach et al. observe that from 1996 to 2000 “The largest decrease in URM applicants parallels the trend for non-URMs, which dropped from 40,304 to 31,581 (a 22 percent decrease) during the same period.”¹⁰³ AAMC data show that, from 1997 to 2002, the overall number of medical school applicants, of all races and ethnicities, declined, then rebounded, and began to increase steadily again in 2004.¹⁰⁴ From 2003 to 2004, the number of URM applicants rose but only recovered to a level similar to that of 1992.¹⁰⁵ (See Chapter 2: Increasing Access to U.S. Medical Schools for Diverse Populations: U.S. Demographic, Education, and Medical School Trends, 1960s-2000s, Graduate Medical Education, and the U.S. Physician Workforce for a more detailed discussion of data on medical school applicants, acceptants, matriculants, and graduates.)

Leadership under George W. Bush’s Administration (2001-2009): Shifting Priorities

A Dramatic Shift in Priorities after 9/11

By the time President George W. Bush was elected in November 2000, there was a multibillion dollar budget surplus, the economy was strong (although there were early signs of a recession), jobs were plentiful, and the public’s mind was not on affirmative action. Initially, tax relief and increased support for the military were uppermost on the Bush Administration’s agenda. After the attack on the World Trade Center and the Pentagon on September 11, 2001, anti-terrorism became a high priority in many sectors of the federal government, including the Department of Health and Human Services and its public health agencies.

Tax cuts in 2001 and 2003, as well as increased expenditures for Homeland Security and the

wars in Iraq and Afghanistan affected discretionary spending in education and other domestic social programs, particularly health professions education and training. However, the Administration and Congress worked together to enact an extension of the Elementary and Secondary Education Act (The No Child Left Behind Act of 2001) and the College Cost Reduction and Access Act (CCRAA) of 2007 and the Higher Education Opportunity Act (HEOA) of 2008, long-awaited extensions of the Higher Education Act.

Conflicting Perspectives on Affirmative Action: The U.S. Commission on Civil Rights, the Administration, and the U.S. Supreme Court

During George W. Bush's Administration, there were several important actions, often conflicting, related to civil rights with implications for affirmative action and diversity in higher education and medical education. Reports of the U.S. Commission on Civil Rights, an independent agency, addressed challenges facing equal opportunities in education,^{106,107} responsiveness of federal agencies to civil rights recommendations,¹⁰⁸ and funding for civil rights enforcement.^{109,110,111} The Brief for the United States as *Amicus Curiae* Supporting Petitioner in the *Grutter v. Bollinger* case brought before the U.S. Supreme Court and decided in June 2003, provided a perspective on the Bush Administration's policy direction related to the consideration of race in higher education, which was much different from the Presidential and bipartisan Congressional support for affirmative action during the Clinton Administration.¹¹² The Department of Education's Office for Civil Rights attempted to strengthen the performance of the agency in response to problems cited in evaluations by the U.S. Commission on Civil Rights and to clarify—after more than five years—the agency's views on race-conscious admission policies in postsecondary education in a way that is consistent with the Supreme Court's *Grutter v. Bollinger* decision and requirements of Title VI. It is important that some of these issues be revisited by the current administration.

Critical Issues in Seven Key Policy Areas for Consideration by President Obama and the Congress

We believe that there are critical issues in seven key policy areas related to diversity in medical education that must be addressed by the President Barack Obama and the Congress. These areas include 1) civil rights; 2) health care 3) health workforce, 4) health professions education and training, 5) minority opportunities in research training, 6) higher education; and 7) elementary and secondary education.

Civil Rights

Issues related to civil rights as they affect affirmative action and diversity in higher education and medical schools center on Presidential and Congressional leadership and Executive Agency (the Secretary of Health and Human Services, the Secretary of Education, the Attorney General) direction in relation to U.S. Supreme Court rulings and federal and state civil rights laws and regulations. The U.S. Commission on Civil Rights also plays an important role as an independent agency in assessing federal laws and policies and making reports and recommendations to the President and Congress.

The President leads a diverse nation and must exert strong and clear leadership on the importance of affirmative action and diversity. Assuring that all states, universities, and medical schools meet legal requirements under federal laws on non-discrimination, and the receipt of federal funds is critical.

THE U.S. Commission on Civil Rights Report: The Commission, Affirmative Action, and Challenges Facing Equal Opportunities in Education

In March 2003, the U.S. Commission on Civil Rights released a report noting that

...the Supreme Court has decided to hear two cases from the Sixth Circuit—*Grutter v. Bollinger* and *Gratz v. Bollinger*—initiated by unsuccessful applicants to the University of Michigan undergraduate and law programs who claim that the university’s affirmative action admissions policies unconstitutionally discriminated against them. The cases raise the question of whether it is a violation of the Constitution to consider race as a factor among many others in admitting students. The key legal issue is whether achieving a diverse student body is a compelling state interest that justifies governmental action of allowing consideration of college applicants’ race in deciding whom to admit. Commentators have noted that, by agreeing to review the Michigan cases, the Supreme Court has set the stage for a dramatic decision—one that could either undermine affirmative action as a means of promoting diversity in higher education, or reaffirm *Bakke* and sanction the use of narrowly tailored race-conscious affirmative admissions policies such as the University of Michigan’s.¹¹³

The report also noted that, even though “affirmative action programs have substantially improved diversity in America’s institutions of higher learning, legal and political challenges” had already “limited affirmative action in such places as California, Texas, Louisiana, Mississippi, Florida, Maryland, Washington, and Georgia” and that “*Grutter* and *Gratz* represent only a subset of recent challenges to affirmative action....”¹¹⁴

Brief for the United States as Amicus Curiae Supporting Petitioner, Barbara Grutter, in Grutter v. Bollinger

The question presented in the *Grutter v. Bollinger* case was: Does the University of Michigan Law School’s use of racial preferences in student admissions violate the Equal Protection Clause of the Fourteenth Amendment, Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d *et seq.*) or 42 U.S.C 1981?¹¹⁵ The brief for the United States represented interests of both the Department of Justice and the Department of Education in enforcing laws related to discrimination in public education. The argument in the brief was that the “respondents’ use of race-based admissions criteria is not justified in light of the ample race-neutral alternatives.”¹¹⁶ The subpoints to the argument were:

- Public universities have ample means to ensure that their services are open and available to all Americans.
- These ample race-neutral alternatives render respondents' race-based policy both unnecessary and unconstitutional.
- The Law School's admissions program operates as an impermissible quota system.
- Other requirements of this Court's narrow tailoring analysis reinforce the unconstitutionality of respondents' race-based admissions policy.
 - The Law School's admissions policy would permit race-based discrimination in perpetuity.
 - The Law School's admissions policy places a disproportionate emphasis on racial considerations.
 - The Law School's race-based admissions policy unfairly burdens innocent third parties.¹¹⁷

U.S. Supreme Court Grutter v. Bollinger Decision

When Justice Sandra Day O'Connor announced the U.S. Supreme Court's decision in *Grutter v. Bollinger* on June 23, 2003, she said:

...Today, we hold that the Law School has a compelling interest in attaining a diverse student body.¹¹⁸...Our conclusion that the Law School has a compelling interest in a diverse student body is informed by the view that attaining a diverse student body is at the heart of the Law School's proper institutional mission.¹¹⁹...In summary, the Equal Protection Clause does not prohibit the Law School's narrowly tailored use of race in admissions decisions to further a compelling interest in obtaining the educational benefits that flow from a diverse student body.¹²⁰

Office for Civil Rights (OCR), Department of Education Responsibilities and Roles in Assisting Colleges and Universities in Meeting Title VI Regulations

OCR has responsibility for protecting against discrimination as defined in the following major statutes:

- Title VI of the Civil Rights Act of 1964 (34 C.F.R. Part 100)—race, color, national origin
- Title XI of the Education Amendments of 1972 (34 C.F.R. Part 106)—sex
- Section 504 of the Rehabilitation Act of 1973 (34 C.F.R. Part 104)—disability
- Age Discrimination Act of 1975 (34 C.F.R. Part 110)—age
- Title II of the Americans with Disabilities Act of 1990 (28 C.F.R. Part 35 disability)

There are several ways that the Department of Education's OCR may act to assist the more than 4,000 colleges and universities through its Office of Postsecondary Education in complying with Title VI regulations. These include policy guidance (e.g., updating regulations and providing implementation guidelines), technical assistance interactions and materials (e.g., best practice guidelines), public education and outreach, compliance reviews, and investigation and resolution of complaints.¹²¹

Proving violation of Title VI regulations is based on two theories.¹²² Under the first theory, a recipient of federal funds violates the statute by engaging in “*intentional discrimination* based on race, color, or national origin,” resulting in *disparate treatment* of individuals of a particular race, color, or national origin; under the second theory, *unintentional discrimination* may occur if a recipient uses “a neutral procedure or practice that has a *disparate impact* on individuals of a particular race, color, or national origin and such practice lacks a ‘substantial legitimate justification.’”¹²³

As the Title VI Legal Manual of the Civil Rights Division of the Justice Department notes:

...all entities that receive Federal funding enter into standard agreements or provide assurances that require certification that the recipient will comply with the implementing regulations under Title VI. The Supreme Court has held that these regulations may validly prohibit practices having a disparate impact on protected groups, even if the actions or practices are not intentionally discriminatory.¹²⁴

Office for Civil Rights Responsiveness to U.S. Commission on Civil Rights Recommendations

In an evaluation of federal agencies’ responses to civil rights recommendations over a ten-year period pursuant to Public Law 103-419, the U.S. Commission on Civil Rights reported in September 2004 on the OCR of the Department of Education, one of the largest civil rights enforcement units in the federal government.¹²⁵ Vacancies in two of the three top positions in the OCR, absence of strategic and operational planning and analysis (the Planning, Analysis, and Systems Service office was found to no longer exist), lack of tracking of civil rights expenditures, absence of manuals explaining Title VI compliance and review processes, and limited compliance reviews were some of the problems noted in the evaluation. The workload of the OCR has increased steadily in terms of the number of complaints received, and, although its budget has increased over several years, these increases have not allowed the agency to increase staff to accommodate the increased workload.¹²⁶ The OCR’s then current manual explaining procedures for Title VI compliance and review processes did not, the Commission found, describe procedures for pre-award and post-award compliance review, or the different procedures used for conducting a compliance review of a school district and of a college or university.¹²⁷

LACK OF POLICY GUIDANCE RELATED TO COLLEGE AND UNIVERSITY ADMISSIONS POLICIES. After the OCR’s compliance review at Harvard in 1988 determined that the lower admit rate for Asian American applicants compared to White applicants “could be entirely explained by admission preferences that Harvard gave to athletes and children of alumni (legacies)” and decided that legacy preferences are not illegal, the Commission recommended that the OCR issue policy guidance clarifying requirements that a university must meet under Title VI to justify a legacy policy or other admissions policies that have a disparate impact by race, color, or national origin¹²⁸ During the period the Commission conducted its evaluation, the OCR had not issued any such guidance.¹²⁹

LACK OF DATA ON COLLEGE AND UNIVERSITY APPLICANTS AND ADMITS BY ALL RACIAL AND ETHNIC CATEGORIES. After the OCR's 1992 investigation of "ceilings" being placed on the number of Asian American admits at Brown University, Harvard University, and the University of California, the Commission recommended that the Office require "colleges and universities covered under Title VI to provide OCR with data on the racial and ethnic breakdown and qualifications of applicants and admitted students" and "use these data in deciding whether to initiate Title VI compliance reviews of these institutions."¹³⁰ The Commission found that the OCR now coordinates with the National Center for Education Statistics within the Department of Education to require that racial/ethnic data be collected on students enrolled in postsecondary institutions, but the institutions are not required to collect information on applicants.¹³¹ The Commission also recommended that data be provided for groups other than White, Black, and Hispanics, and the Department of Education has responded by providing data on Asian Americans and Native Americans, with the National Center for Education Statistics collecting data at the postsecondary level.¹³²

LACK OF UPDATED BEST PRACTICE DOCUMENTS. The Commission found that a number of best practice documents produced in 1996 had never been updated for use in technical assistance.¹³³ Among these documents were:

- Promising Programs and Practices for Recruiting and Retaining Minority and Other Disadvantaged Students at Postsecondary Institutions
- Promising Programs and Practices: Access for Women and Minorities to Mathematics and Science Programs and Gifted and Talented Education Programs
- Promising Practices and Programs for Serving National Origin Limited English Proficient Students.

Enhanced Efforts of the Department of Education's OCR

Substantial changes have been made within the Department of Education and the OCR in the years since the ten-year evaluation of the OCR was released 2004. The Department's public website is now more user friendly and provides information about programs and initiatives, legislation, reports, publications, and resources.¹³⁴ The Office of Postsecondary Education provides information about its Policy, Planning, and Innovation activities, including policy and legislative proposals, and Higher Education Programs.

The OCR has issued two documents, both on race-neutral approaches to diversity. The first document, *Race-Neutral Alternatives in Postsecondary Education: Innovative Approaches to Diversity*, was issued in March 2003 before the U.S. Supreme Court's decision was announced in the University of Michigan cases.¹³⁵ The report provides a catalog of approaches being used by institutions in several states as well as the federal government, dividing them up into two categories:

1. Developmental approaches—designed to develop skills, resources, and abilities of students who might not otherwise apply to and succeed in college

2. Admissions approaches—designed to achieve diversity with preference based not on race, but on socioeconomic factors or on class rank (percent plans and target class-rank plans).¹³⁶

This document builds on the No Child Left Behind Act of 2001, which represented a bipartisan effort to attempt to reform education based on the assumption that “every child can learn and excel” and emphasizes links between secondary and postsecondary education.¹³⁷ Among the race-neutral developmental approaches to providing more equal educational opportunity discussed in the 2003 report are:

- Expansion of Advanced Placement courses
- Partnerships between colleges and low-performing schools
- Partnerships between the College Board and educational institutions
- Expanding online course offerings
- Expanding financial aid
- Recruitment and outreach
- College summit
- Federal efforts
 - GEAR UP (Gaining Early Awareness and Readiness for Undergraduate Programs)
 - TRIO Programs (The Federal TRIO Programs are educational opportunity outreach programs designed to motivate and support students from disadvantaged backgrounds.)¹³⁸
 - State Scholars Initiative¹³⁹ (The State Scholars Initiative (SSI) is funded under section 114 of the Carl D. Perkins Vocational and Technical Education Act of 1998 (Act), 20 U.S.C. 2301 et seq., which authorizes the Secretary to support, among other things, development, dissemination, evaluation and assessment, capacity building, and technical assistance with regard to vocational education to further the purposes of the Act.)¹⁴⁰

Under admissions approaches, the report discusses:

- Socioeconomic preference approaches—the Comprehensive Review used by the University of California
- The Texas 20 percent plan
- Florida’s Talented 20 program
- California’s 4 percent plan¹⁴¹

A second report issued by OCR in February 2004, *Achieving Diversity: Race-Neutral Alternatives in American Education*, updated the earlier report utilizing information from an April 2003 conference of postsecondary educators.¹⁴²

OCR Policy Guidance Related to the Use of Race in Postsecondary Student Admissions Consistent with Title VI of the Civil Rights Act

More than five years after the U.S. Supreme Court's decision in *Grutter v. Bollinger*, the Assistant Secretary for Civil Rights within OCR on August 28, 2008 issued a "Dear Colleague Letter" to "clarify how the Office for Civil Rights in the United States Department of Education evaluates whether the use of race in admissions by a postsecondary institution is consistent with Title VI of the Civil Rights Act of 1964."¹⁴³

The letter states that the OCR will apply the following parameters when undertaking Title VI investigations and other enforcement activities:

- Use of race must be essential to an institution's mission and stated goals.
- The diversity sought by the postsecondary institution must be broader than mere racial diversity.
- Quotas are impermissible.
- Providing individualized consideration is paramount and there must be no undue burden on other-race applicants.
- Before using race, there must be a serious good faith consideration of workable race-neutral alternatives.
- Periodic reviews are necessary and the use of race must have a logical end point.¹⁴⁴

It is unclear what OCR guidance applies to institutions in the five states—California, Florida, Michigan, Nebraska, and Washington—that prohibit the consideration of race, sex, color, ethnicity, or national origin in admissions in higher education.

Health Care, Health Workforce, and Health Professions Education and Training

A Comprehensive Health Policy Coordinating Health Care, Health Workforce, and Health Professions Education

Over the past thirty years, the federal government has been unable to develop a comprehensive health policy coordinating health care, health workforce, and health professions education and training, and the problems of the 1970s—specialty and geographic maldistribution and lack of diversity—are still with us.¹⁴⁵ In the AAMC's 2000 report, *Minority Graduates of U.S. Medical Schools*, AAMC President Jordan J. Cohen, M.D. observed:

The stark disparity between the number of practicing minority physicians and the increasingly diverse U.S. population is becoming more acute and presents unique challenges for the future delivery of quality health care.¹⁴⁶

A new set of physician workforce positions adopted by the AAMC Executive Council in June 2006 made 12 recommendations.¹⁴⁷ The statement acknowledged:

A variety of factors affect the reliability and future validity of projections of future workforce needs. First and foremost among these variables are the structure and dynamics of the overall healthcare delivery system.¹⁴⁸

Besides calling for a 30 percent increase in enrollment in medical schools, or more than 21,000 new matriculants by 2015, the 2006 recommendations addressed several other issues, including diversity, geographic maldistribution, and the National Health Service Corps:

The AAMC should continue to advocate for and promote efforts to increase enrollment and graduation of racial and ethnic minorities from medical schools; and promote the education and training of leaders in medical education and health care from racial and ethnic minorities.¹⁴⁹

The AAMC should undertake a study of the geographic distribution of physicians and develop recommendations to address mal-distribution in the U.S.¹⁵⁰

National Health Service Corps (NHSC) awards should be increased by at least 1,500 per year to help meet the need for physicians caring for under-served populations and to help address rising medical student indebtedness.¹⁵¹

We have discussed several other issues related to the health care workforce and health professions education and training, including the U.S. physician workforce, physician supply and demand, physician diversity in primary and specialty care and academic life, U.S. medical school enrollment and plans for the future, graduate medical education and career choices of U.S. medical graduates and international medical graduates in Chapter 2.

Improving Access and Quality of Health Care for all Americans by Taking a Comprehensive Approach to Health Care Reform

The President has made health care reform among his highest priorities and Congress is taking the lead in preparing health care reform legislation and moving this legislation forward. On November 7, 2009, the House of Representatives approved the Affordable Health Care for America Act (H. R. 3962).¹⁵² On November 19, 2009, the Senate released the Patient Protection and Affordable Health Care Act (H.R. 3590, amendment in the Senate), the vehicle merging health care reform legislation passed by the Senate Finance Committee and the Senate Health, Education, Labor, and Pensions Committee that was used for debate in the Senate.¹⁵³ On December 24, 2009 the Senate approved the bill and the House and Senate bills are not in the process of being reconciled. Both the House and Senate bills contain provisions related to the health care workforce and health professions education and training. A detailed, side-by-side comparison of provisions in the Senate and House bills is beyond the scope of this report. However, it is important to note specific areas addressed in the House and Senate bills^{154,155} that help to address these critical issues related to the physician workforce:

- The serious and continuing underrepresentation of Hispanic or Latino, Black or African American, American Indian and Alaska Native, and Native Hawaiian and Other Pacific Islander physicians in primary and specialty care, all types of research, and academic medicine to participate in the education and training of future generations of physicians.

- The shortage of primary care physicians. Primary care is critical for access to care and for the effective functioning of the health care system. Two-thirds of physicians are specialists or involved in other professional activities. There are also shortages in some specialties.
- The serious and growing shortage of U.S. medical school graduates choosing careers in primary care for several reasons (i.e., high levels of student indebtedness, low pay, low prestige, and stressful work conditions).
- The lack of physicians practicing in rural and economically disadvantaged areas, including Medically Underserved Areas, Health Professional Shortage Areas, and high-minority and low-income communities.
- The lack of incentive for physicians to practice in alternative delivery and payment models that may enhance quality and help to contain costs.

AFFORDABLE HEALTH CARE FOR AMERICA ACT (H.R. 3962). The bill is designed to address health care access, quality, costs, and affordability. It also addresses organization and delivery of care as well as public health issues. The bill has four Divisions:

Division A: Affordable Health Care
 Division B: Medicare and Medicaid Improvements
 Division C: Public Health and Workforce Development
 Division D: Indian Health Care Improvement.

A number of health care workforce and health professions education and training issues are addressed in Division C: Public Health and Workforce Development, which has five titles:¹⁵⁶

Title I-Community Health Centers
 Title II-Workforce
 Title III-Prevention and Wellness
 Title IV-Quality and Surveillance
 Title V-Other Provisions

The bill establishes a Public Health Investment Fund depositing a total of \$34 billion for use over the next five years (FY 2011-2015). These funds are above the level of appropriations authorized to be appropriated for FY 2008.

Division C: Public Health and Workforce Development. Title II Workforce. This title and its subtitles address primary care workforce, nursing workforce, public health workforce, and adapting workforce for evolving health system needs, establishing new programs as well as reauthorizing several Title VII and Title VIII programs with increased appropriations levels.

Subtitle A: Primary Care Workforce provisions:¹⁵⁷

- Increase National Health Service Corps loan repayment benefits for each Corps member to a maximum of \$50,000 per year and allow fulfillment through part-time service and clinical teaching (up to 20 percent of the total period of obligation)
- Authorize an additional \$1.8 billion in appropriations for the National Health Service Corps over the next five years (FY 2011- 2015) to be appropriated from the Public Health Investment Fund
- Establish a Frontline Health Providers loan repayment program to address health care

needs in geographic areas (“health professional needs areas”) not currently recognized as health professional shortage areas. Eligible providers include National Health Service Corps as well as other categories of physicians and health professionals

- Revise requirements of primary care loan funds in terms of determining the financial resources available to students to support his/her health professions education
- Provide funds to support primary care (family medicine, general internal medicine, general pediatrics, geriatrics, and physician assistants) training programs and build academic capacity
- Establish a program to support the development of and operation of training programs for medical residents in community-based settings, such as community health centers
- Authorize an additional \$1.3 billion over the next five years (FY 2011-2015) for various primary care programs to be appropriated from the Public Health Investment Fund
- Require the U.S. Government Accountability Office to conduct a study on the effectiveness of scholarships and loan repayments offered through both the National Health Service Corps and the Frontline Health Provider Program in encouraging individuals to pursue and maintain careers in primary care and practice in underserved areas

Subtitle C: Public Health Workforce provisions:¹⁵⁸

- Authorize an additional \$283 million over the next five years (FY 2011-2015) for various public health workforce programs to be appropriated from the Public Health Investment Fund
- Establish Public Health Workforce Corps modeled on the National Health Service Corps to address the shortage of public health workforce shortages to provide scholarship and loan repayment support for those serving in areas of need
- Provide funding support for public health training programs
- Provide funding to support training grant programs for preventive medicine physicians

Subtitle D: Adapting Workforce to Evolving Health System Needs provisions:¹⁵⁹

- Authorize an additional \$1.0 billion over the next five years (FY 2011-2015) for various workforce programs, including Centers of Excellence, to be appropriated from the Public Health Investment Fund
- Reauthorize Title VII Health Professions Training for Diversity Programs providing scholarships for disadvantaged students, loan repayments and fellowships for faculty positions, and educational assistance in the health professions for individuals from disadvantaged backgrounds, including the Health Careers Opportunities Program
- Require the Secretary to coordinate workforce diversity and cultural and linguistic competency activities
- Establish a new program under Title VII Interdisciplinary Training Programs to promote cultural and linguistic competency among health care professionals
- Establish an innovations in interdisciplinary care training program to improve coordination across health care settings, including training in medical home models that integrate physical, mental, or oral health services

- Create an Advisory Committee on Health Workforce Evaluation and Assessment to assess the adequacy and appropriateness of the nation's health workforce and to make recommendations to the Secretary on federal workforce policies to meet the nation's needs
- Require the Secretary to collect data on the supply, diversity, and geographic distribution of the nation's health workforce, including individuals participating in various federal workforce programs

Division B: Medicare and Medicaid Improvements. Title III Promoting Primary Care, Mental Health Services, and Coordinated Care. This title includes several provisions including provisions to:¹⁶⁰

- Establish an Accountable Care Organization Pilot Program to create an alternative payment model within fee-for-service Medicare to reward physician-led organizations that take responsibility for the costs and quality of care received by the patients over time
- Establish a Medical Home Pilot Program to expand and reorient the medical home demonstration in Medicare to assess the feasibility of reimbursing for qualified patient-centered medical homes
- Create a new Independence at Home Demonstration Program for chronically ill Medicare beneficiaries to test a payment incentive and service delivery system that utilizes physician and nurse practitioner directed home-based primary care.

Division B Medicare and Medicaid Improvements. Title V Medicare Graduate Medical Education. This title includes provisions to:¹⁶¹

- Direct the Secretary to redistribute residency positions that have been unfilled for the prior three cost reports to slots for the training of primary care physicians, with preference given to programs with a reduction in their slots, formal arrangements to train residents in ambulatory settings or shortage areas, operate three-year primary care residency programs, have residency programs over their cap, or are located in states with a low physician resident to general population ratio
- Preserve resident cap positions from closed hospitals
- Improve accountability for approved medical residency training by setting broad goals: 1) training to work in non-acute traditional settings, 2) coordination of care across settings, 3) understanding cost and value of diagnostic and treatment options, 4) working in multidisciplinary teams, 5) participating in quality improvement projects, and 6) demonstrating meaningful use of electronic health records in improving care
- Direct the U.S. Government Accountability Office to evaluate residency training programs and the extent to which they are meeting these goals

Division B Medicare and Medicaid Improvements. Title VII Medicaid and CHIP. Subtitle C: Requires State Medicaid programs to reimburse for primary care services to match Medicare rates.

Division D: Indian Health. The Indian Health Care Improvement Act is reauthorized. The seven titles in this division address: Indian health, human resources, and development; health services;

facilities; access to health services; health services for urban Indians; organizational improvements; behavioral health programs; and miscellaneous issues.¹⁶²

PATIENT PROTECTION AND AFFORDABLE CARE ACT (AMENDMENT IN SENATE) (H.R. 3590). This bill has nine Titles, each addressing a component of health care reform:¹⁶³

- Title I-Quality, Affordable Health Care for All Americans
- Title II-Role of Public Programs
- Title III-Improving the Quality and Efficiency of Health Care
- Title IV-Prevention of Chronic Disease and Improving Public Health
- Title V-Health Care Workforce
- Title VI-Transparency and Program Integrity
- Title VII-Improving Access to Innovative Medical Therapies
- Title VIII-Class Act
- Title IX-Revenue Provisions

Title V Health Care Workforce. “The purpose of this title is to improve access to and the delivery of health care services for all individuals, particularly low income, underserved, uninsured, minority, health disparity, and rural populations....”¹⁶⁴ This title reauthorizes several Title VII and Title VIII programs as well as establishing new programs. Key provisions in this title are included under several subtitles:¹⁶⁵

Subtitle B: Innovations in the Health Care Workforce provisions:¹⁶⁶

- Establish a National Health Care Workforce Commission to review health care workforce data, project needs, and provide information to the Administration and Congress to assist in decision-making about appropriations to discretionary programs and restructuring federal funding sources
- Provide state health care workforce development grants, including planning and implementation grants
- Establish a National Center for Health Workforce Analysis and regional centers for health workforce analysis to collect, analyze, and report data related to Title VII of the Public Health Service Act primary care workforce programs. An Advisory Committee on Training in Primary Care Medicine and Dentistry, an Advisory Committee on Interdisciplinary, Community-based Linkages, and an Advisory Council on Graduate Medical Education will assist in developing, publishing, and implementing performance measures and guidelines for longitudinal evaluations. Activities of the National Center will coordinate with state and local agencies and provide data to the National Commission.

Subtitle C: Increasing the Supply of the Health Care Workforce provisions:¹⁶⁷

- Ease criteria to qualify for federally supported student loan funds, shorten payback periods, and decrease noncompliance provisions
- Establish a loan prepayment program for pediatric subspecialists and providers of mental and behavioral health services to children and adolescents working in a health professional shortage area, a medically underserved area, or with a medically underserved population

- Offer loan repayment to public health students and workers in exchange for working at least three years at a federal, state, local, or tribal health agency
- Increase and extend authorization of appropriations for the National Health Service Corps scholarship and loan repayment program (FY 2010-2015):

FY 2010-\$320,461,632
 FY 2011-\$414,095,394
 FY 2012-\$535,087,442
 FY 2013-\$691,431,432
 FY 2014-\$893,456,433
 FY 2015-\$1,154,510,336

Subtitle D: Enhancing Health Care Workforce Education and Training provisions:¹⁶⁸

- Provide grants for training programs in family medicine, general internal medicine, general pediatrics, and physician assistantship for financial assistance to operate programs, for trainees and faculty, faculty development in primary care and physician assistant programs, and to establish, maintain, and improve academic units in program care. Preference to programs educating students in team-based approaches to care, including patient-centered medical home
- Authorize funding for geriatric education centers to support training in geriatrics, chronic care management, and long-term care for faculty and family caregivers; develop curricula and best practices in geriatrics; and for other activities
- Reauthorize and expand cultural competency, prevention, and public health, and disabilities training programs
- Authorize the Secretary to address workforce shortages in state and local health departments in applied public health epidemiology and public health laboratory science and informatics
- Direct the Surgeon General to establish a U.S. Public Health Service Sciences Track to train physicians, dentists, nurses, physician assistants, mental and behavioral health specialists, and public health professionals, using team-based service, epidemiology, and emergency preparedness and response. Students receive tuition remission and a stipend and are accepted as Commissioned Corps officers in the U.S. Public Health Service with a two-year service commitment for each year of school covered

Subtitle E: Supporting the Existing Health Care Workforce provisions:¹⁶⁹

- Reauthorize the Centers of Excellence program at \$50 million, 150 percent of 2005 appropriations. The program develops a minority applicant pool to enhance recruitment, training, academic performance and other support for minorities interested in careers in health
- Reauthorize and increase funding from \$37 to \$51 million for 2009 to 2013 for Health Professions Training for Diversity. Provide scholarships for disadvantaged students who commit to working in medically underserved areas as primary care providers and expand loan repayments for individuals who serve as faculty members
- Authorize funding to establish community-based training and education grants for Area Health Education Centers (AHECs) and Programs under the Interdisciplinary,

Community-based Linkages category of Title VII. Infrastructure development awards and points of service enhancement and maintenance awards are targeted to individuals seeking careers in the health professions from urban and rural medically underserved communities

- Create a new Primary Care Extension Program to educate and provide technical assistance to primary care providers about evidence-base therapies, preventive medicine, and other issues. The Agency for Healthcare Research and Quality awards planning and program grants to state hubs, including a state health department, state entities administering Medicare and Medicaid, and one health professions school

Subtitle F: Strengthening Primary Care and Other Workforce Improvements provisions:¹⁷⁰

- Provide primary care practitioners and general surgeons practicing in health professional shortage areas, beginning in 2011, with a 10 percent Medicare payment bonus for five years, with half the cost of bonuses to be offset by across-the-board reductions in all other services
- Direct the Secretary to develop and implement a prospective payment system for Medicare-covered services furnished by Federally Qualified Health Centers (FQHCs) and add Medicare-preventive services to the list of services eligible for reimbursement when furnished by a FQHC
- Direct the Secretary, beginning in 2011, to redistribute residency positions that have to been unfilled for the prior three cost reports and direct the slots for training primary care physicians. Preference to programs located within state with low physician resident to general population ratio and highest ratio of population living in health professional shortage area relative to the general population
- Preserve resident cap positions from closed hospitals
- Modify rules governing when hospitals can receive indirect medical education (IME) and direct medical education (DME) funding for residents who training in a non-provider setting.
- Modify rules for counting resident time toward IME and DME costs for didactic and scholarly activities in provider and non-provider settings
- Direct the Secretary to establish a grant program to support new or expanded primary care residency programs at teaching health centers and authorize \$25 million for FY 2010, \$50 million for FY 2011, and FY 2012. Also provide \$230 million in funding under the Public Health Service Act to cover indirect and direct expenses of qualifying teaching health centers related to training primary care residents in certain expanded or new programs

Subtitle G: Improving Access to Health Care Services provisions:¹⁷¹

- Authorize appropriations for FQHCs:

FY 2010-\$2.98 billion

FY 2111-\$3.86

FY 2012-\$4.99

FY 2013-\$6.44

FY 2014-\$7.33

FY 2015-\$8.33

- Direct the Secretary to establish, in consultation with stakeholders, a comprehensive methodology and criteria for designating medical underserved populations and health professional shortage areas
- Authorize \$50 million in grants to coordinate and integrate services through the colocation of primary and specialty care in community-based mental health and behavioral health settings
- Establish a Commission on Key National Indicators to conduct comprehensive oversight on a newly established national indicators system, with a required annual report to Congress

To put these legislative proposals in perspective, we discuss in the following section the historical and funding context of federally supported efforts in several areas: 1) the National Health Service Corps, 2) health professions education and training programs, 3) minority opportunities in research training, 4) Medicare, Medicaid, and graduate medical education, and 5) the roles of the Department of Veterans Affairs and the Department of Defense Uniformed Services University of the Health Sciences in medical education.

The National Health Service Corps: Clinician Recruitment and Service to Underserved Populations

The mission of the National Health Service Corps (NHSC) is to improve the health of the nation's underserved by: 1) uniting communities in need with caring health professionals and 2) supporting communities' efforts to build better systems of care.¹⁷²

NHSC scholarship programs and loan repayment program finance the medical education of physicians and other health professionals who agree to practice in underserved areas after completing their training. The NHSC began with the Emergency Health Personnel Act of 1970 (Public Law 91-623) when a few U.S Public Health Service Commissioned Corps Officers and civil servants were assigned to practice in underserved areas.¹⁷³ In 2001, the Health Resources and Services Administration reported that 25 percent of the National Health Service Corps scholarships and loan repayment awards had gone to underrepresented minorities. More than 27,000 primary care clinicians had been placed in HPSA (Health Professional Shortage Areas) by NHSC by 2005, and 4,600 clinicians were in rural and urban communities nationwide serving 5 million people; NHSC retention rates have averaged 75-80 percent.¹⁷⁴

For FY 2006, the House bill included \$126.8 million for the National Health Service Corps, the same amount as the President's Budget and \$4.7 million less than FY 2005 appropriations. This decrease in funding for NHSC was the result of proposed administrative cost savings; the number of awards was anticipated to remain the same.¹⁷⁵ This program, which provides direct service to the poor, continued to receive \$126 million in funding in FY 2007 and \$123.5 million in FY 2008. The previous Administration's budget in FY 2009 proposed \$120.9 million. Relative to need, the National Health Service Corps has been funded at a very modest level. An additional \$300 million was allocated in 2009 to expand the National Health Service Corps. The President and the Congress need to make an ongoing commitment to the National Health Service Corps with yearly funding appropriations that meet authorization levels.

The NHSC was reauthorized through 2012 as part of the Health Care Safety Net Act of 2008 (H.R.1343) with votes by the Senate on September 24 and the House on September 25, 2008.¹⁷⁶ Scholarship and Loan Repayment Programs appropriations authorized are:

- \$131.5 million for FY 2008
- \$143.3 million for FY 2009
- \$156.2 million for FY 2010
- \$170.3 million for FY 2011
- \$185.6 million for FY 2012

The Act reauthorizes both the Community Health Centers Program of the Public Health Service Act. (Sec.330) and the Rural Health Care Programs (Sec.330A), and also mandates several studies:

- A School-Based Health Center Study by the U.S. Comptroller General
- A Health Care Quality Study of Community Health Centers by the Health Resources and Services Administration in collaboration with the Agency for Healthcare Research and Quality
- A Study of Integrated Health Systems Model for the Delivery of Health Care Services to Medically Underserved and Uninsured Populations by the Government Accountability Office
- A Study on Volunteer Enhancement (extending Federal Tort Claims Act coverage to health care professionals who volunteer to furnish care to patients of health centers by the Government Accountability Office).

Health Professions Education and Training Programs

Programs in health professions education are authorized under Titles VII and VIII of the Public Health Service Act. The programs include 1) student loans, 2) health professions training for diversity, 3) training in family medicine, general internal medicine, general pediatrics, 4) interdisciplinary community-based linkages, and 5) health professions and the public health workforce.

STUDENT LOANS. The Health Resources and Services Administration of the Department of Health and Human Services administers affordable Student Loan Programs for health professionals. Other agencies in the Department of Health and Human Services also have student loan programs, as does the Department of Education.

The Health Education Assistance Loan (HEAL) Program Loan Insurance. Loans made by participating lenders were insured from 1978 through 1998 for eligible graduate students—in schools of medicine, osteopathy, chiropractic, dentistry, optometry, podiatry, public health, veterinary medicine, pharmacy, as well as programs in health administration and clinical psychology. Recipients could refinance their HEAL loans from 1994 through September 30, 2004, when HEAL financing was terminated.¹⁷⁷

The Health Professions Student Loan (HPSL) Program. Funds are awarded to accredited schools of dentistry, pharmacy, optometry, podiatric medicine, and veterinary medicine.¹⁷⁸

The Primary Care Loan (PCL) Program. Accredited schools of allopathic and osteopathic medicine receive funds for students who agree to enter and complete primary care residency training, complete training within four years of graduation, and practice in primary care for the life of the loan.¹⁷⁹

Loans for Disadvantaged Students (LDS) Program. These funds are awarded to eligible HPSL and PCL students from disadvantaged backgrounds (as defined by DHHS).¹⁸⁰

The Nursing Student Loan (NSL) Program. Funds are awarded to accredited schools of nursing under Title VIII of the Public Health Service Act.¹⁸¹

Loan Repayment Programs. The Faculty Loan Repayment Program, the National Health Service Corps Loan Repayment Program, the Nursing Education Loan Repayment Program, the National Institutes of Health Loan Repayment Programs, and the Indian Health Service Loan Repayment Programs are other programs administered by the Department of Health and Human Services.

Other Loan Programs. Other loan programs open to health professional students as well as undergraduate and graduate students include: Federal Perkins Loans, Federal Pell Grants, the Direct Loan Program, and the Federal Family Education Loan (FFEL) Program administered by the Department of Education; both the FFEL and Direct Loan programs consist of what are known as Stafford Loans (for students), PLUS Loans (for parents), and Consolidation Loans. Stafford loans may be subsidized or unsubsidized, with subsidized loans not accruing interest while a student is in school. Changes in these programs are proposed in the Student Aid and Fiscal Responsibility Act (H.R. 3221), which was approved by the House of Representatives in September 2009 and now awaits movement in the Senate.

Other Options for MD Training Funding Support. Admission to the Medical Scientist Training Program (MSTP), which is supported through the National Institutes of Health and exists in 32 medical schools, is highly competitive.¹⁸² The MSTP allows students to receive a maximum of six years of financial support, which can be used for tuition, educational expenses, and living expenses. MD/PhD Programs available at more than 80 medical schools allow a student to earn a medical degree and a PhD degree in an area pertinent to medicine.¹⁸³ Funding packages for these combined programs vary.

HEALTH PROFESSIONS TRAINING FOR DIVERSITY. These programs are important to increasing diversity in medical schools:

The Centers of Excellence (COE) Program. Established in 1988, the goal of the COE Program is “to assist eligible schools in supporting programs of excellence in health professions education for underrepresented minority individuals.”¹⁸⁴ Grants are awarded competitively to professional and graduate programs, including medical schools, where enrollment of URMs is significantly higher than the national average. The COE Program also includes support for recruitment and retention of URM students, as well as for faculty development. In FY 2006, 215 URM students

graduated from professional schools and more than 1,000 participated in research on minority health issues and cultural competence training to provide care to diverse populations; 252 of the participants practiced or received training at clinical sites in medically underserved communities.¹⁸⁵ In FY 2006 and 2007, four COE grants were awarded. Funding for the COE Program stood at \$33.6 million in 2004. By FY 2007, funding had dropped to \$11.9 million. Funding increased to \$12.8 million in FY 2008. The former Administration proposed eliminating all funding for this program in the FY 2009 budget.

Scholarships for Disadvantaged Students. Medical students are eligible for the Scholarships for Disadvantaged Students, which were established in 1990. The purpose of this program is “to increase diversity in the health professions and nursing workforce by providing grants to eligible health professions and nursing schools for use in awarding scholarships to financially needy students from disadvantaged backgrounds, many of whom are underrepresented minorities.”¹⁸⁶ Of the schools funded in FY 2007, 47 percent demonstrated a commitment to primary care, 67 percent were committed to enrolling URMs, and 64 percent were committed to graduating students who practice in medically underserved communities.¹⁸⁷ In FY 2004, the funding level was \$47.5 million. By FY 2006, it had dropped to \$46.6 million, and in FY 2007 funding was at the same level. By FY 2008, it was \$45.8 million. The former Administration proposed eliminating all funding for this program in the FY 2009 budget.

The Faculty Loan Repayment Program and Minority Faculty Fellowship Programs. These programs, which were funded at \$1.289 million in 2007 and \$1.266 million in FY 2008, provide funds directly to physicians and other health professionals who pursue academic careers. President Bush proposed eliminating the \$1.266 million in funding in his FY 2009 budget.

The Health Careers Opportunity Program (HCOP). Established in 1972, this program assists both students and participating allopathic and osteopathic schools of medicine, dental schools, and graduate clinical psychology programs. The goal of the program is “to increase the number of individuals from disadvantaged backgrounds entering and graduating from health and allied health professions programs.”¹⁸⁸ Although HCOP funding has been limited in recent years (about \$4.0 million in FY 2007 and \$9.8 million in FY 2008), the program has provided significant opportunities for students from disadvantaged backgrounds to complete their professional education.¹⁸⁹ Funding in FY 2004 was \$12.0 million. The program focuses on intervening early and throughout the educational pipeline to enhance the applicant pool of academically prepared and competitive students. The former Administration proposed eliminating all funding for the HCOP program in FY 2009 and in earlier budgets.

INTERDISCIPLINARY, COMMUNITY-BASED LINKAGES. The Area Health Education Center (AHEC) Program. The Basic AHEC program was established in 1972, with the Model State Supported Program initiated in 1993. The Health Professions Education Partnerships Act of 1998 reauthorized the AHEC programs. Through cooperative agreements with accredited medical and nursing schools, the AHEC programs encourage them to establish and maintain “community-based training programs in off-campus rural and underserved areas.”¹⁹⁰ The programs conduct community-based training for health professions students as well as health care practitioners, and provide exposure to health careers to students in grades 9 through 12. In FY 2007, there were 14 Basic AHEC Programs with 41 Centers and 39 Model AHEC Programs.¹⁹¹

Between FY 2003 and FY 2008, more than 200,000 high school students received AHEC career training of more than 20 hours (i.e., summer programs); more than 1,300 physicians and 2,000 nurses received continuing education training.¹⁹² Participants over the four-year period averaged 37,671 health professions students, 50,813 students in grades 9-12, and 1,772 primary care residents.¹⁹³ The budget focuses on activities that fund the placement of more doctors, nurses, and other health care professionals in the regions of the country that face shortages. The AHEC programs may be supported entirely by state and local resources in the future. The funding history shows \$29.2 million in FY 2004, declining to \$28.2 million in FY 2008. The former Administration's 2009 FY Budget eliminated funding for the AHEC Program.

HEALTH PROFESSIONS DIVERSITY AND COMMUNITY-LINKED TRAINING PROGRAMS LABELED INEFFECTIVE AND ZEROED OUT EACH YEAR IN THE FORMER ADMINISTRATION'S BUDGET REQUEST. The former Administration's FY 2009 Budget also proposed eliminating "the Federal portion of all liquid assets" of the HPSL, the PCL, LDS, and NSL, requiring "participating institutions to return the Federal capital contribution of revolving funds not yet dedicated to students."¹⁹⁴ The House and Senate Appropriations Committees did not act on this proposal, and final appropriations bills were not passed for FY 2009 before September 30, 2008, the end of the federal fiscal year.

The note in the budget justification for the Appropriations Committees for the FY 2009 about the former Administration's requests follows:

This is a net decrease of \$252.1 million. Funding has been reduced for activities that have demonstrated no impact on the placement of health professionals in underserved areas and invest resources to activities that have proven to be effective. Funding has been eliminated for the Health Professions Training for Diversity programs, the Training in Primary Care Medicine and Dentistry program, the Interdisciplinary, Community-Based Linkages and Public Health programs, and the Preventive Medicine and Dental Health Programs. Other sources of funding through partnerships are available to meet anticipated needs as the PART (Program Assessment Rating Tool used by the Office of Management and Budget) rated the training programs as ineffective. The FY 2009 Budget supports expanding direct health care services in high-need areas. It is anticipated that programs will be supported through State, local resources or private foundations in the future.¹⁹⁵

As the Health Resources and Services Administration budget justification notes:

Most of the Health Professions' Title VII and Title VIII programs were reviewed as a unit in 2002 using the Program Assessment Rating Tool (PART)...These programs in the aggregate, received a rating of ineffective.¹⁹⁶

The benefits of Title VII and Title VIII funding for health professions education were described in 2001 by Henderson and Scanlon in an evaluation of the programs in Arkansas, Minnesota, and Texas, for the National Conference of State Legislatures:

Although most grantees among the states receive minimal funding, the average duration of these funds is significant and suggests that these programs are effectively educating and placing health professionals for underserved communities and populations.¹⁹⁷

At that time the appropriations for Title VII and VIII were at a level of more than \$300 million annually (FY 2001). Over the next five years, the level of funding for Title VII was decreased, and Title VIII programs were strengthened. The former Administration proposed elimination of all Title VII funding on several occasions.

Despite Congress's awareness of their importance, the \$145.2 million budgeted for Title VII programs in FY 2006 was less than the FY 2005 appropriation of \$154.4 million.¹⁹⁸ The \$9,733 million budget request by the former Administration for FY 2007 Title VII programs represented a 93 percent reduction from the FY 2006 level.¹⁹⁹ The budget eliminated funding for all of the Title VII programs, with the exception of Scholarships for Disadvantaged Students, which was cut by 79 percent to just \$10 million in funding. In FY 2008, funding for Title VII programs fell to \$144.7 million.

A number of the findings in a 2003 report to The California Endowment by Grumbach et al., summarizing the DHHS programs in the Bureau of Health Professions/HRSA, the NIH, CDC, and the Indian Health Service, as well as private foundation programs and California-specific funders, are particularly relevant to this study:²⁰⁰

- African Americans, Latinos, and Native Americans remain extremely underrepresented in the health professions and health professions schools²⁰¹
- Despite the considerable resources invested in diversity programs, academic achievement and entry into the health professions by underrepresented minorities have not increased significantly²⁰²
- Underrepresented minority students are more likely than non-URMs to come from low-income families, and are therefore disproportionately affected by the rising costs of higher education and adverse trends in the availability of financial aid²⁰³

REAUTHORIZATION OPTIONS FOR RESTRUCTURING TITLE VII PROGRAMS AND FUNDING. The AAMC has been active in joining with other organizations (e.g., the Federation of Associations of Schools of the Health Professions {FASHP}) to encourage Congress “to approach federal funding of these Title VII programs as part of a comprehensive federal health professions workforce strategy.” In a letter to Senator Edward Kennedy, Chairman, Committee on Health, Education, Labor, and Pensions and Senator Michael Enzi, Ranking Member on Health, Education, Labor, and Pensions on July 28, 2008, the AAMC joined with other members of the Federation to make the point that:

The statutory authority for these programs by the Health Professions Education Partnerships Act of 1998 (P.L. 105-392) expired in September 2002. In FY 2006, the Programs sustained a 51.5 percent cut in federal funding. The President's budget request

for FY 2009 recommends eliminating all funding for the Title VII programs.²⁰⁴

The letter contains several recommendations to the Committee:

Create a new structure for the primary care medicine and dentistry program. Award grants “preferentially, but not exclusively, to applicants that enter into a formal relationship and submit a joint application with a Federally Qualified Health Center (FQHC), an FQHC-Look Alike, Area Health Education Center (AHEC), or a clinic located in a Health Professional Shortage Area (HPSA) or Medically Underserved Area (MUA) or a clinical practice setting in which at least 40 percent of its patients are either uninsured or supported by Medicaid. This new structure will help guide health professionals to underserved settings and will emphasize the inter-professional nature of health care, as FQHCs and AHECs create access to services in underserved areas and across health professions disciplines.”²⁰⁵

Develop a new program under primary care medicine and dentistry. Award “grants to schools or departments to administer demonstration projects centered on improving the quality of primary care in selected emphasis areas of national need (e.g., management of chronic disease, cultural competency, rural health, prevention, and response to bioterrorism). Improving the primary care education curriculum to respond to the changing demands of medical practice and the health care delivery systems is an essential part of bolstering the workforce in underserved areas, and this program will support these educational innovations.”²⁰⁶

Retain the current Title VII training for diversity programs—including the Centers of Excellence (COE), Health Career Opportunity Program (HCOP), Faculty Loan Repayment Program (FLRP), Minority Faculty Fellowship Program (MFFP) and Scholarships for Disadvantaged Students (SDS)—“and allow all FASHP members’ institutions to be eligible to participate in these programs. These academic-based programs foster the recruitment, retention, and advancement of underrepresented minorities and disadvantaged students in the health professions. Together, the programs form a health professions pipeline by promoting awareness of the health professions to elementary, secondary, and undergraduate students, and providing mentorship, academic, and financial support for the students enrolled in health professions programs. Additionally, FASHP notes the critical need for increased development of underrepresented minority faculty, as these mentors help to create a nurturing environment that allows minority health professions students to successfully prepare to provide care in their communities. Considering the shortage of minority faculty in health professions schools, FASHP recommends the creation of a new program to support demonstration projects designed to increase the number of underrepresented faculty.”²⁰⁷

Create a new structure for grants under the interdisciplinary, community based program. Award “grants preferentially to projects that combine the academic interests of two or more health professions. All FASHP members’ institutions should be eligible to participate in these programs. These grants would support academic-based programs that assist all health professions institutions in the development of organizational

infrastructure, such as faculty development, curriculum, and residencies that focus on state or national priorities (e.g., geriatrics, primary care, and health promotion and wellness) and are inter-professional in nature.”²⁰⁸

Create a new program under the interdisciplinary, community-based linkages heading. Support “information technology improvements that will allow multiple academic institutions to join in the development of interprofessional educational programs. This program will improve access in rural and other areas to health professions across the country.”²⁰⁹

Create a service-obligated scholarship or loan repayment program modeled after the National Health Service Corps. Provide “scholarship and loan support in return for a commitment to work in local public health offices/agencies with shortages of public health workers.”²¹⁰

Address inefficiencies in Title VII loan programs. “These programs offer long-term, low-interest loans for economically disadvantaged and underrepresented minority students in the health professions. Unfortunately, certain aspects of these loan programs prevent them from having their intended impact, such as extended service requirements and harsh default penalties.”²¹¹

Adding a program to expand postbaccalaureate medical education programs should be a part of any reauthorization package.

Minority Opportunities in Research Training

Part of the mission of the National Institutes of Health (NIH) is to educate and train the next generation of biomedical, behavioral, and clinical scientists. As the NIH notes in its agency Performance Goals for FY 2009, the “overall goal of the training program is to maintain a population of scientists that is well educated, highly trained, and dedicated to meeting the Nation’s future health-related research needs.”²¹² The specific Capacity Building and Research Resources goal is:

By 2012, recruit, train, and retain a diverse population of highly trained scientists in biomedical, behavioral, and clinical research using research training grants, fellowships, career development awards, and student loan repayment programs.²¹³

NIH sponsors a number of minority research training programs across the educational and career continuum—from undergraduate opportunities, to community college student support, postbaccalaureate programs, predoctoral support, PhD student funding, postdoctoral fellowships, faculty development, and institutional development support. Faculty members at minority-serving institutions also are able to develop competitive research programs in biomedical and behavioral research. Over the period from 1999-2003, a National Research Council of the National Academy of Sciences’ assessment of NIH’s minority research and training programs noted that nearly 50,000 minority trainees had participated in NIH research training programs.²¹⁴

MINORITY OPPORTUNITIES IN RESEARCH (MORE) WITHIN THE NATIONAL INSTITUTE OF GENERAL MEDICAL SCIENCES. The Division of Minority Opportunities in Research (MORE) within the National Institute of General Medical Sciences (NIGMS), NIH²¹⁵ administers:

- Minority Access to Research Careers (MARC)
 - Undergraduate Student Training in Academic Research (U-STAR) Awards
- Minority Biomedical Research Support (MBRS)
 - Research Initiative for Scientific Enhancement (RISE) Program
 - Initiative for Maximizing Student Diversity (IMSD) Program
 - Support for Competitive Research (SCORE) Program
- Minority Special Initiatives(SI)
 - Bridges to the Baccalaureate Program
 - Bridges to the Doctorate Program
 - Postbaccalaureate Research Education Program (PREP)
 - Institutional Research and Academic Career Development Awards
 - MARC Predoctoral Fellowships
 - NIGMS Individual Predoctoral Kirschstein-NRSA Fellowships to Promote Diversity in Health-Related Research
 - MARC Faculty Predoctoral Fellowships
 - MARC Faculty Senior Fellowships
 - MORE Faculty Development Awards
 - Research on Interventions that Promote Research Careers

Programs for organizations include MARC Ancillary Training Activities Grants, Native American Research Centers for Health, and Support for Conferences and Meetings.

In FY 2007, MARC institutional research training grants supported approximately 576 undergraduate students, “many of whom attended Historically Black Colleges and Universities (HBCUs) or historically black health professions schools. Additionally, through its Ancillary Training Activities program that supports meetings, conferences, technical workshops and other training activities, the MARC Branch supports partnership with professional societies, and other scientific and educational organizations.”²¹⁶

The MBRS Branch supports undergraduates at minority and minority-serving institutions. In FY 2007, the RISE program supported the research development of more than 1,055 underrepresented students.²¹⁷ After a working group of the National Advisory General Medical Sciences Council advised the NIGMS to “rebalance its MORE portfolio to place greater emphasis on student development and training” in FY 2006, the MORE program reorganized and refocused programs “to better achieve the anticipated outcomes and ensure that students at minority/minority-serving institutions develop the knowledge and skills needed to move to the next stage of their academic path in pursuit of a research career.”²¹⁸

Support for the MORE Programs within NIGMS stood at \$126.9 million in FY 2005, \$125.0 million in FY 2006, \$125.7 million in FY 2007 and \$125.6 in FY 2008, with FY 2009 estimates

at \$125.6.²¹⁹ The MORE Programs within the NIGMS are only one group of minority research training programs funded through the NIH.

OTHER NIH MINORITY RESEARCH OPPORTUNITIES. The NIH also supports scientists conducting research on health disparities and funds an undergraduate scholarship program for disadvantaged students, which is neutral with respect to race and ethnicity.²²⁰ The central focus of the National Center on Minority Health and Health Disparities (NCMHHD) is its 88 Centers of Excellence, the more than 1,400 Loan Repayment Program awardees, and 25 Community-Based Participatory Research program grantees. Other NIH Institutes and Centers have well-developed minority research programs. The programs may be funded through institutional or individual awards and various grant mechanisms.

ASSESSING NIH MINORITY RESEARCH AND TRAINING PROGRAMS. In 2001, the National Center on Minority Health and Health Disparities (formerly the Office of Research in Minority Health) requested that the National Research Council of the National Academy of Sciences undertake an independent Phase 3 assessment of NIH minority research training programs. (A Phase 1 assessment had been completed in 1993 and a Phase 2 assessment in 1997 by the Office of Research on Minority Health in the Office of the Director of NIH.)

The charge for the Phase 3 assessment was to address the following questions:

1. Do the NIH Minority Research Center Training Programs work?
2. Which minority programs and which features of minority programs have been most successful in helping individual students and faculty members move a step forward toward productive careers as research scientists?
3. What minority programs have been least successful and why?
4. What additional factors contribute to minority trainee success, including characteristics of individual participants and the academic institutions at which they received NIH research training support and/or obtained their terminal degree?
5. How can a system be set up that would better address assessment questions in the future?²²¹

The Assessment Committee authors noted in the summary of the report released in 2005 that some principles need to be taken into account in discussing minority training program success:

- More than one family generation is needed to establish a research training pipeline that is both attractive to minorities and successful in producing large numbers of PhD-level scientists
- Building capacity and sustaining minority interest in science require the visible promotion of role models. Such persons may include science teachers, professors, medical doctors, entrepreneurs, and others, who open a window to science careers and opportunities to which young minds might not otherwise have been exposed

- The research training pipeline is necessarily leaky. Those who exit the pipeline early to become part of the scientific workforce are not program failures
- The research pipeline is not always a straight line. Some will exit the pipeline only to return some years later
- Programs designed for those who are in early career stages should endorse a broad definition of success. Programs for trainees at later career stages may adopt a more highly prescribed definition of success²²²

The top-most recommendations made by the Committee for the Assessment of NIH Minority Research Training Programs were:

- The NIH Director should articulate a set of clear and measurable training goals and objectives specific to minority training. The director should take into account the mission of NIH and the integral role of research training in attaining both societal goals (e.g., health and well-being, the ability to support oneself and one's family, community development) and research goals. Such a policy should be responsive to society's workforce needs in their broadest sense, with an understanding that contributions to society derive from all parts of the career stage pipeline²²³
- NIH should commit to the continued funding of minority-targeted research training programs. Although the committee cannot substantiate this recommendation in quantitative terms for reasons described throughout this report, it does so in qualitative terms, using survey data that were collected from trainees and program administrators who are the programs' primary informants. The following reasons underlie this recommendation:
 - These programs have added many minorities to our science workforce.
 - The elimination of these programs would likely diminish the new minority scientists entering the scientific workforce.
 - The trainees interviewed indicate overwhelmingly that these programs benefited them. These programs provided research experiences, financial support, and mentoring that were critical to their career success.
 - Mentoring is a critical part of the career development of all scientists, and is particularly important for minority trainees. Trainee survey data suggest that the diversity of mentors is greater in the minority-targeted programs than in the non-targeted programs. Atkinson et al.²²⁴ found that, when rating mentoring relationships both mentors and mentees rated their relationships more positively when they were matched for race or ethnicity²²⁵
- The training policy of the NIH institutes and centers in conducting these programs should emphasize the development of trainees who have already demonstrated promise in the sciences, so that they can overcome barriers to becoming productive investigators²²⁶
- The NIH training policy should also emphasize the development of other trainees—those without demonstrated science promise—in order to add to the pipeline of trainees interested in pursuing science careers²²⁷

- The committee of minority training program coordinators should establish appropriate guidelines and measures for evaluating NIH minority research training²²⁸
- Further study of the relative effectiveness of minority-targeted versus non-targeted programs should be carried out by the NIH institutes and centers under coordination from the Office of the Director²²⁹
- The Director of NIH should administer the funds for evaluation, data collection, and marketing²³⁰

Medicare, Medicaid, and Graduate Medical Education

The largest federal expenditures for medical education by far are at the graduate level through the Medicare program's DGME (Direct Graduate Medical Education) and IME (Indirect Medical Education). In addition to Medicare support for Graduate Medical Education (GME), 45 states and the District of Columbia support GME through their Medicaid programs, with at least 50 percent of the dollars provided by the federal government.

Medicare GME funds go to approximately 1,200 teaching hospitals (with the bulk of the funds received by 120 major medical school teaching hospitals), and these funds support close to 100,000 medical residents annually. Medicare has provided the means for hospitals to import thousands of International Medical Graduates (IMGs), including U.S. citizens who go abroad for their medical training, to fill vacant residency positions. Considered in terms of current market pressures, and disregarding society's future physician requirements in the U.S. and in other countries, this is perceived by some to be a low-cost alternative to the creation of new medical schools and the expansion of enrollment in the nation's existing schools—both actions that over time have demonstrably furthered opportunity for students underrepresented in medicine.

Medicare expenditures in FY 2008 for GME were \$8.4 billion, including \$2.7 billion for the DGME or direct support of residents' salaries and faculty supervision of the residents and \$5.7 billion for IME, in contrast to the \$300 million of discretionary funds appropriated by Congress for federal support of health professions education in 2001. As a recent Congressional Research Service report notes, "There are no federal reporting requirements to document Medicaid GME payments by states. Survey data show that such costs (federal and state) totaled nearly \$3.2 billion in 2005 representing 7% of Medicaid inpatient hospital expenditures nationwide."²³¹ Expenditures by the Department of Veterans Affairs for hospital and medical care of veterans included over \$1 billion for salaries of residents and faculty supervision.

The availability and magnitude of Medicare and Medicaid GME payments were among the former Administration's justifications for proposed reductions in (or the elimination of) funding for Title VII health professions education programs in the HRSA budget justifications from 2002-2005.²³² Legislation to increase Medicare's resident limits was introduced in February 2007 (The Resident Physician Shortage Reduction Act-S.588/H.R.1093).²³³ The legislation would add approximately 1,200 additional cap slots to the national resident limit, phasing the increases in over a 5-year period. States with resident physician to 100,000 population ratios below the national median would be eligible to increase their resident caps, but could not increase caps 25 percent over the number of residents needed to bring the state up to the national median.²³⁴ The Secretary of Health and Human Services would be required to determine if

hospitals would be able to fill the positions in a three-year period and whether the positions would be in primary care, preventive medicine, or geriatrics.²³⁵

Department of Veterans Affairs' Role in Medical Education and Training

The Department of Veterans Affairs has played a significant role in both medical education and graduate medical education for more than fifty years. Currently, the VA supports 8,800 positions for physicians in residency training, accounting for approximately 9 percent of the graduate medical education in this country. The VA is also involved in the training of thousands of health professional students, in over 4,000 programs, in affiliation with over 1,200 colleges and universities,²³⁶ including thirty-two Historically Black Colleges. The VA has initiated three new residency training programs to strengthen ties with Historically Black Colleges, Hispanic-serving institutions, and American Indian and Alaska Native Tribal Colleges and Universities.²³⁷

Department of Defense Uniformed Services University of the Health Sciences

The Department of Defense operates the Uniformed Services University of the Health Sciences, including its medical school, and provides up to 5,000 scholarships through the Armed Forces Health Professions Scholarship Program (HPSP). Many students in the Uniformed Services University are recipients of the HPSP scholarships.²³⁸ In contrast to the military academies (Annapolis, West Point, Colorado Springs), the Uniformed Services University of the Health Sciences does not have a distinguished record of ethnic/racial diversity in enrollment. The Department of Defense administers a significant graduate medical education program in the Army, Navy, and Air Force Hospitals.

Higher Education

The President has made investment in education and education reform high priorities for his administration. The Secretary of Education is moving forward with new administrative and legislative initiatives. The House of Representatives has approved the Student Aid and Fiscal Responsibility Act of 2009 (H.R.3221), which contains amendments to the Higher Education Act of 1965 and other provisions, and has referred the bill to the Senate committee on Health, Education, Labor, and Pensions. The College Cost Reduction and Access Act (CCRAA) of 2007 and the Higher Education Opportunity Act (HEOA) of 2008 were parts of ongoing reauthorization of the Higher Education Act of 1965.

The College Cost Reduction and Access Act (CCRAA) of 2007

The College Cost Reduction and Access Act (CCRAA) of 2007 (Public Law 110-84) was passed as part of the budget reconciliation process, cutting more than \$20 billion from the Federal Family Education Loan Program (FFELP) to increase funding for Pell Grants and improve terms and conditions of student loans for borrowers.²³⁹ The provisions affect colleges and universities, as well as undergraduate, graduate, and professional students and their families, including medical students and residents, and lenders.

Titles of the Act are:

- Title I-Grants to Students in Attendance at Institutions of Higher Education
- Title II-Student Loan Benefits, Terms, and Conditions
- Title III-Federal Family Education Loan Program
- Title IV-Loan Forgiveness
- Title V-Federal Perkins Loans
- Title VI-Need Analysis
- Title VII-Competitive Loan Auction Program
- Title VIII-Partnership Grants

The Higher Education Opportunity Act (HEOA) of 2008

The Higher Education Opportunity Act (Public Law 110-315) reauthorizes the Higher Education Act of 1965. The bill was five years late and had 14 extensions of the statutory deadline before final enactment.²⁴⁰ One commentator on higher education issues noted:

If a bill's impact or importance were measured by its length or the amount of time Congress spent working on it, the Higher Education Opportunity Act of 2008 (HR 4137) would be one for the ages. At more than 1,150 pages, the bill is about 20 times longer than the Higher Education Act of 1965 that it modified, creating 64 new programs and touching on issues as diverse as the availability of Pell Grants and illegal downloading of digital music and video. And the legislation, which finally passed both the House and the Senate by overwhelmingly margins..., has been in discussion on Capitol Hill in one form or another, for most of this decade.²⁴¹

The Act includes eleven Titles:

- Title I-General Provisions
- Title II-Teacher Quality Enhancement
- Title III-Institutional Aid
- Title IV-Student Assistance
- Title V-Developing Institutions
- Title VI-International Education Programs
- Title VII-Graduate and Postsecondary Improvement Program
- Title VIII-Additional Programs
- Title X-Private Student Loan Improvement Act
- Title XI-Studies and Reports

Several studies and reports mandated in Title XI of particular interest to policymakers are:

- Study on Foreign Graduated Medical Schools
- Analysis of Federal Regulations on Institutions of Higher Education
- Study of Minority Male Academic Achievement
- Study of the Impact of Student Loan Debt on Public Service

Several other provisions of the HEOA are special interest to medical schools; colleges and universities; undergraduate, graduate, and professional students, including medical students and residents; and lenders of education loans.

Have the CCRAA of 2007 and the HEOA of 2008 Addressed Key Issues related to Diversity in Medical Education?

The CCRAA of 2007 and the HEOA of 2008 contain a panoply of programs and initiatives. The laws increase fiscal year funding authorizations for programs and initiatives assisting higher education institutions, including minority-serving institutions, and their students and families. These laws also enhance student loans, increasing fiscal year authorizations and maximum amounts of loans, as well as establishing benefits, conditions, and terms of loans. Finally, the laws curb deceptive practices and profiteering of lenders and guarantors and establish new requirements related to institution-lender arrangements.

If funding appropriations follow funding authorizations over the next fiscal years, there is hope that the combination of program and funding efforts, as well as student financial assistance, will improve the chances for all students of moving along the higher educational continuum to and through medical school.

One of the most critical questions is: will the increases in student financial aid and changes in the terms of student aid be enough to ease the financial and debt burden of undergraduates, graduate students, and medical students and residents, so that low-income students of all races and ethnicities are able to apply, enroll, and graduate from the schools of their choosing and pursue careers without an intolerable debt burden?

According to a 2004 Congressional Research Service Report for Congress, which provides an excellent summary and evaluation of the federal Pell Grant Program, although the number of Pell grantees has increased by 1.5 million since 1999 to over 5.3 million in 2004, and federal expenditures for Pell Grants totaled \$13.1 billion in FY 2004, there are still serious problems.²⁴² This subject was brought to the general public's attention by a November 2006 editorial in *The New York Times*, entitled "Public Colleges as Engines of Inequality," which emphatically states:

...the obvious first step would be to boost the value of the federal Pell Grant program—a critical tool in keeping college affordable that the federal government has shamefully ceased to fund at a level that meets national need.²⁴³

Instead of increasing the funding for Pell Grants, two new grant programs were signed into law on February 8, 2006 by President Bush for a small group of Pell Grant recipients: 1) Academic Competitive Grants for freshman and sophomore college students and 2) National Science and

Mathematics Access to Retain Talent (SMART) Grants for students in the junior and senior years.²⁴⁴ On September, 17, 2008—a little more than a month after President Bush signed the HEOA into law on August 14, 2008, and just less than a year after he signed the CCRAA on September 27, 2007, and just before Congress passed a continuing resolution on September 27, 2008, to fund federal government FY 2009 expenditures at FY 2008 levels through March 6, 2009—*The New York Times*' Dillon and Lewin wrote that Pell Grants were facing a shortfall of \$6 billion.²⁴⁵ In their article, they quote Thomas P. Skelly, the Department of Education's Director of Budget Services, who prepared a memorandum to Congress outlining the causes for the shortfall.²⁴⁶ More people are going to college. More people are applying for student aid. (By July 31, 2008, 800,000 more students had applied for Pell Grants than had applied a year earlier.) More people who qualified for aid are enrolling in school.

Dillon and Lewin wrote that in 2008, more than 6 million low-income college students will receive Pell Grants ranging from \$431 to \$4,731. These increases combined with accumulated shortfalls are what is causing the overall shortfall, even though Congress appropriated \$14 billion for Pell Grants for FY 2008. The authors went on to note:

While the grants are only available to the neediest students—9 out of 10 recipients have family incomes of \$40,000 or less—the number of students seeking all kinds of federal aid is growing rapidly. In the first six months of 2008, almost nine million students nationwide completed the federal aid applications required for federal grants and loans, a 16 percent increase over last year.²⁴⁷

Congress' September 27, 2008 continuing resolution included an additional \$2.5 billion in funding for Pell Grants, as well as \$15 million in grants to assist higher education institutions damaged by natural disasters, as well as waivers of matching funds.²⁴⁸ Federal stimulus grants added additional funds in 2009.

The Association of American Medical College's Analysis in November 2007 of what the CCRAA means for physicians notes that the law “changes the structure of loan repayment by changing the definition of economic hardship, using a new income-based repayment program, and a new public-service loan forgiveness program” that “will affect medical students and residents.”²⁴⁹ The AAMC analyzed five loan terms and conditions before and after CCRAA:

- Standard 10-year repayment
- Economic hardship deferment
- Forbearance
- Income-based repayment
- Public-service loan forgiveness

Only the last two terms and conditions did not exist before CCRAA.

The AAMC notes that all medical residents will qualify for income-based repayment regardless of income or debt, based on the assumption that the average 1st-year annual resident stipend is \$44,753 and the average medical school graduate debt is \$139,517 (about \$34,000 subsidized) at 6.8 percent interest.²⁵⁰ The resident's starting monthly loan payment would be \$368 and total repayment would be \$242,841.²⁵¹ “Public Service” was being further defined by the Department

of Education. Employers who are 501(c)(3)s are eligible.

Changes in the economic hardship definition make it unlikely that a medical resident can qualify, since the deferment considers only a borrower's income. To qualify, an individual must earn less than \$15,315 year (couple, \$20,535). Before the CCRAA, two-thirds of new graduates qualified for economic hardship deferment under the debt-to-income ratio pathway (one-third were not eligible).

Baum recommends three fundamental changes in student aid:

1. The programs should be simpler, with fewer separate programs and consistency in the rules throughout;
2. Aid should be more effectively targeted, particularly to increase emphasis on educational opportunities; and
3. Aid programs should be designed not only to further postsecondary enrollment but also to improve both academic preparation and persistence to degree. The prognosis for the achievement of increased diversity in the health professions remains bleak, especially in medicine, without greater investments of both federal and state funds in student financial aid.²⁵²

Student Aid and Fiscal Responsibility Act of 2009 (H.R.3221)

The House of Representatives approved the Student Aid and Fiscal Responsibility Act of 2009 (H.R. 3221) on September 17, 2009 and referred it to the Senate Committee on Health, Education, Labor, and Pensions on September 22, 2009. The purpose of the bill is to amend the Higher Education Act of 1965. The bill has several other purposes and five education-related titles:

- Title I-Investing in Students and Families
- Title II-Student Loan Reform (Stafford and Perkins Loans)
- Title III-Modernization, Renovation, and Repair
- Title IV-Early Learning Challenge Fund
- Title V-American Graduation Initiative

H.R. 3221 proposes reforms to: 1) increase college access and completion through Pell Grants and other grants, 2) simplify student financial aid forms, 3) change Stafford and Perkins Loan programs to allow for non-profit lenders and Direct Loans from the Department of Education. The bill also includes provisions for grants to modernize and repair public schools, an Early Childhood Challenge Fund, and an American Graduation Initiative.

Elementary and Secondary Education

No Child Left Behind Act of 2001

The No Child Left Behind Act of 2001 (Public Law 107-110) is the latest revision of the Elementary and Secondary Education Act of 1965. The ESEA was scheduled for reauthorization in 2007. When the act was signed, the pledge was made to eliminate the gap in educational achievement between Black and White students, and between poor and middle-class students, by 2014. The law includes ten Titles:

- Title I-Improving the Academic Achievement of the Disadvantaged
- Title II-Preparing, Training, and Recruiting High Quality Teachers
- Title III-Language Instruction for Limited English Proficient and Immigrant Students
- Title IV-20th Century Schools
- Title V-Promoting Informed Parental Choice and Innovative Programs
- Title VI-Flexibility and Accountability
- Title VII-Indian, Native Hawaiian and Alaska Native Education
- Title VIII-Impact Aid Program
- Title IX-General Provisions
- Title X-Repeals, Re-designations, and Amendments to Other Statutes

The task of upgrading the quality of primary and secondary education is enormous, but there has not been a strong enough commitment by former Administrations or Congress either to provide the funds necessary for effective implementation or to define a national standard for proficiency. In spite of the importance of elementary and secondary education to later academic achievement, federal investments in education are comparatively low, far below those for medical care, for example. In the FY 2007 budget, the Department of Education's total outlays were \$66.4 billion,²⁵³ in contrast, federal Medicare outlays in this fiscal year totaled \$370.8 billion.²⁵⁴

Although part of the federal government's role is to compensate for low levels of state and local spending on elementary education, current policy allocates No Child Left Behind Title I funds (targeting children in low-income areas) analogous to state spending: for example, the State of Arkansas receives less than half the amount per pupil than is provided for Massachusetts.²⁵⁵ The federal government permits each state to define proficiency and, as a result, many states have reduced their standards, to allow themselves "to label uneducated students as educated."²⁵⁶

Judgments regarding the impact of the initiative have been mixed: A number of recent evaluations suggest that since the enactment of the No Child Left Behind Act very little actual progress has been made nationally in closing the achievement gap between low-performing students (e.g., Black and Hispanic) and those who are at or above the proficiency level (e.g., White, Asian). In reviewing these recent studies for *The New York Times*, Sam Dillon notes:

The reports and their authors, in interviews, portrayed an educational landscape in which test-score gaps between Black and Hispanic students, and whites, appear in Kindergarten and worsen through 12 years of public education.²⁵⁷

In his excellent review of the issues related to the achievement gap, Paul Tough examines the relevant research on factors affecting children's learning, the differences between the learning experiences at home of poor and middle-class children, the lessons learned from the experiences of Charter Schools, and the role of the federal government.²⁵⁸ In studies comparing the results of national testing in public schools with the results achieved in a small number of Charter Schools (currently enrolling about 12,000 students), the latter appear to have improved student performance significantly. Reviewing these studies, Tough believes that much can be accomplished, and he concludes his article with this assessment:

Although the failure of No Child Left Behind now seems more likely than not, it is not too late to succeed. We know now, in a way we did not know when the law was passed, what it would take to make it work. And if the law does, in the end, fail—if, in 2014, only 20 or 30 or 40 percent of the country's poor and minority are proficient, then we need to accept that its failure was not an accident and was not inevitable, but was the outcome we chose.²⁵⁹

Reauthorization of the Elementary and Secondary Education Act of 1965

Elementary and Secondary Education Act reauthorization is again on the agenda, with stakeholder meetings scheduled for fall 2009 by the Department of Education. There have been many earlier calls for improvements with reauthorization. The Department of Education,^{260, 261} the National Education Association,²⁶² the National Science Foundation,²⁶³ the National Science Board,²⁶⁴ the Commission on No Child Left Behind,^{265,266} 144 organizations representing civil rights, religious, children's, disability, and civic organizations signing a Joint Organizational Statement on No Child Left Behind,²⁶⁷ and many single agencies and groups have put forward statements about problems with provisions of the act or recommendations for the reauthorization of the act or other legislation (e.g., All Students Can Achieve bill).

Several themes run through these statements and recommendations:

- Set high achievement standards consistent with state content and achievement standards and with nationally recognized professional and technical standards^{268,269,270, 271}
- Strengthen state assessment and accountability systems by using multiple up-to-date measures or indicators in addition to standardized tests, allow states to measure students' growth in achievement as well as their performance in relation to pre-determined levels of academic proficiency; and improve data systems^{272, 273, 274, 275}
- Ensure that all children, particularly the most disadvantaged, have access to an education that will prepare them to succeed in the 21st century. Federal focus should be on high-quality, early childhood education and child care, parental involvement and mentoring programs, as well as access to quality health care^{276,277}
- Identify schools in need of assistance and provide assistance to them to develop effective interventions instead of labeling and punishing them^{278, 279, 280}

- Provide teachers, principals, schools, school districts, and states with support and resources that they need to help students succeed^{281, 282, 283}

It is too early to predict how the No Child Left Behind Act will affect future opportunities in medical education for those students underrepresented in medicine. However, supporting English Language Learners (both immigrants and migrants); improving education for migrant children; strengthening programs for American Indians, Native Hawaiians, and Alaska Natives; ensuring that high schools prepare students for college and the workforce; strengthening Advance Placement programs, including those in science; and increasing the supply of effective math and science teachers through mathematics and science partnerships are important considerations that will help students move successfully along the educational pathway to medical school. These mandates need to be incorporated into reauthorization of the Elementary and Secondary Education Act of 1965.²⁸⁴

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- ²⁶⁷ National Center for Fair and Open Testing. FairTest. Joint Organizational Statement on No Child Left Behind Act. October 21, 2004. Available at: <http://www.fairtest.org/joint%20statement%20civil%20rights%20grps%2010-21-04.html> Accessed September 27, 2008.
- ²⁶⁸ National Center for Fair and Open Testing. October 21, 2004.
- ²⁶⁹ Commission on No Child Left Behind. July 18, 2008.
- ²⁷⁰ Commission on No Child Left Behind. 2007. p. 166.

- ²⁷¹ U.S. Department of Education. April 2008.
- ²⁷² Ibid.
- ²⁷³ Commission on No Child Left Behind.2007. p.162.
- ²⁷⁴ National Education Association.
- ²⁷⁵ U.S. Department of Education. April 2008.
- ²⁷⁶ National Education Association.
- ²⁷⁷ Commission on No Child Left Behind. 2007. 168-169.
- ²⁷⁸ National Education Association.
- ²⁷⁹ National Center for Fair and Open Testing. October 21, 2004.
- ²⁸⁰ Commission on No Child Left Behind.2007. p. 165
- ²⁸¹ Ibid. p. 161.
- ²⁸² National Education Association.
- ²⁸³ National Center for Fair and Open Testing. October 21, 2004.
- ²⁸⁴ Commission on No Child Left Behind. 2007.pp161-162,166-168.



Center of Excellence in Diversity in Medical Education Leadership, 2005
Courtesy of Stanford University School of Medicine Center of Excellence in
Diversity in Medical Education



CHAPTER 4

California's People:

Demographic Transformation, Educational Trends, and Challenges for Medical School and Physician Diversity

Introduction

California's population is the largest and most racially and culturally diverse in the nation. In the 2000 Census, California officially became one of the first "majority minority" states—no single racial or ethnic group constitutes a majority, but collectively minority groups now make up a majority of the state's population. Of the state's 34 million people in 2000, 47 percent of California's people identified as White alone, not Hispanic or Latino.^{*1} Hispanics or Latinos of any race represented 34 percent.² Asians represented 12 percent, Blacks or African Americans, 7 percent, Native Hawaiians and Other Pacific Islanders, 0.7 percent, and American Indians and Alaska Natives, 2 percent.^{†3} Those identifying as Some Other Race accounted for 17 percent and those identifying as Two or More Races, for 5 percent. More than a quarter of Californians said that they were foreign born, and nearly 40 percent of those aged five years and over were reported to speak a language other than English at home.⁴ This chapter describes the growth and change in California's population from the 1960s through 2000s, particularly the change in the racial/ethnic makeup of the state, as a backdrop for discussions of K-12 and postsecondary education issues for California and their implications for increasing medical school and physician diversity.

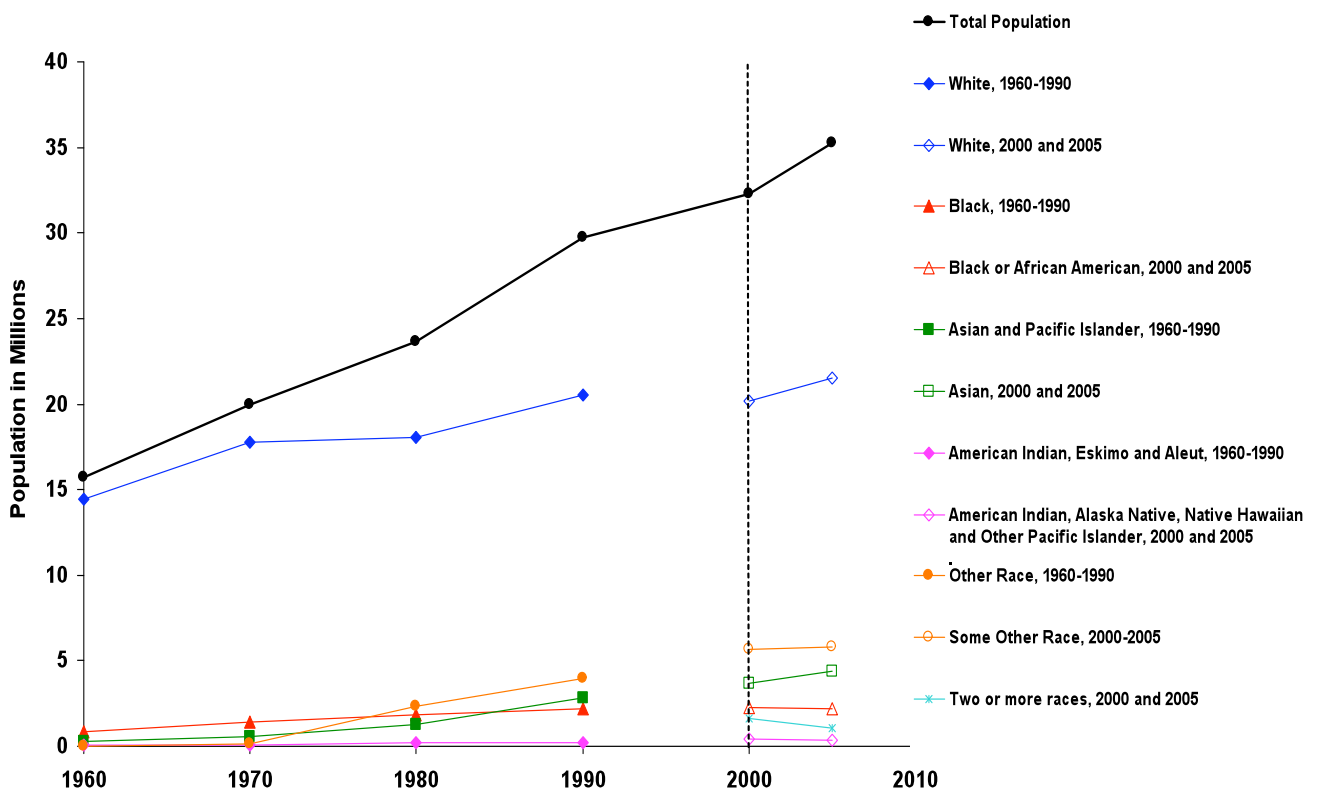
* The 2000 Census gave people new options for identifying their race and ethnicity. First, they had the option of stating whether they were of Hispanic or Latino origin or not. Then they had the option of choosing one race from a list of racial categories, Some Other Race for categories not listed, or two or more races.

† These Californians indicated that they identified with one race alone or with this race and one or more other races.

California's Population, 1960s-2000s: Growth and Change

In 1960, California's population stood at 15.7 million. By 2005, the population had reached 35.3 million, more than double its size in 1960 (Figure 4-1). The growth in the state's population is largely the outcome of the growth of its racial and ethnic minority populations. While the White population increased by 49 percent, the Black population grew by 145 percent, and the Asian population, by 1,271 percent over this period.^{5, 6}

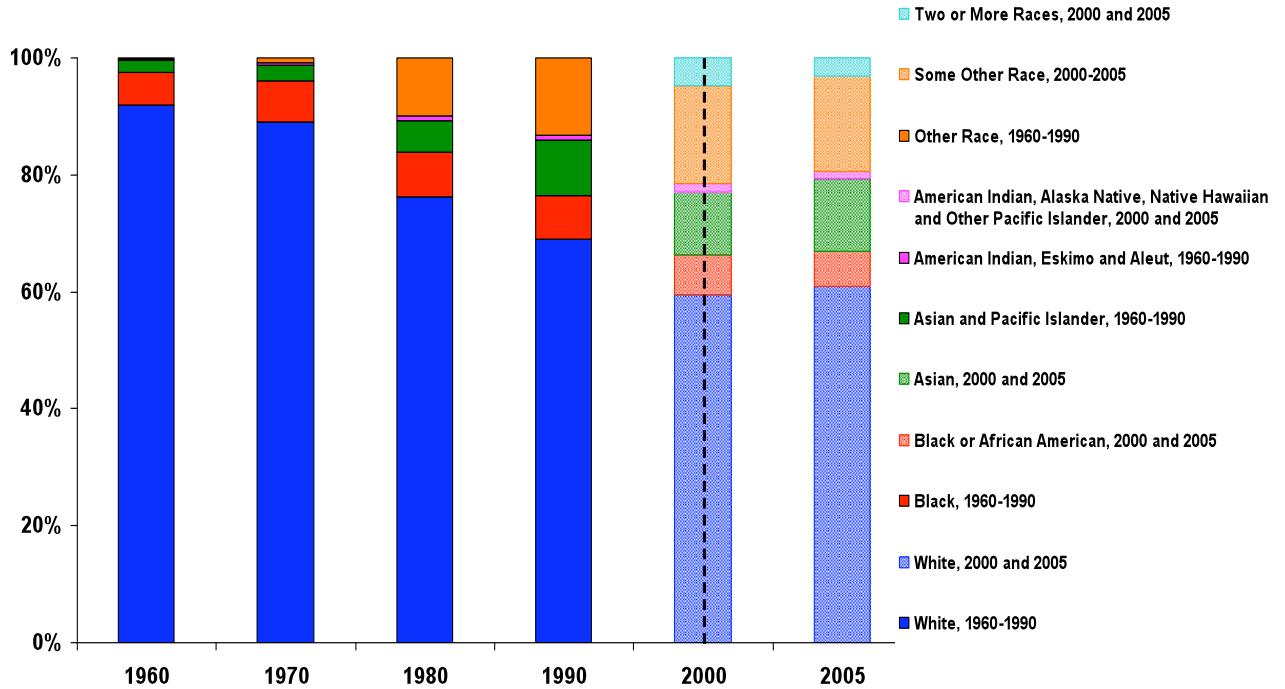
Figure 4-1
California Population by Race, 1960 - 2005



Note: 1970 Hispanic origin based on Spanish language determined from 15% sample. 2005 data are subject to sampling variability. Definitional changes in racial/ethnic categories occurred in 2000 Census, and categories are not directly comparable to prior years.

Sources: U.S. Census Bureau. Population Division. Working Paper #56. C Gibson and K Jung. Census 2000 Summary File 1; U.S. Census Bureau. 2005 American Community Survey

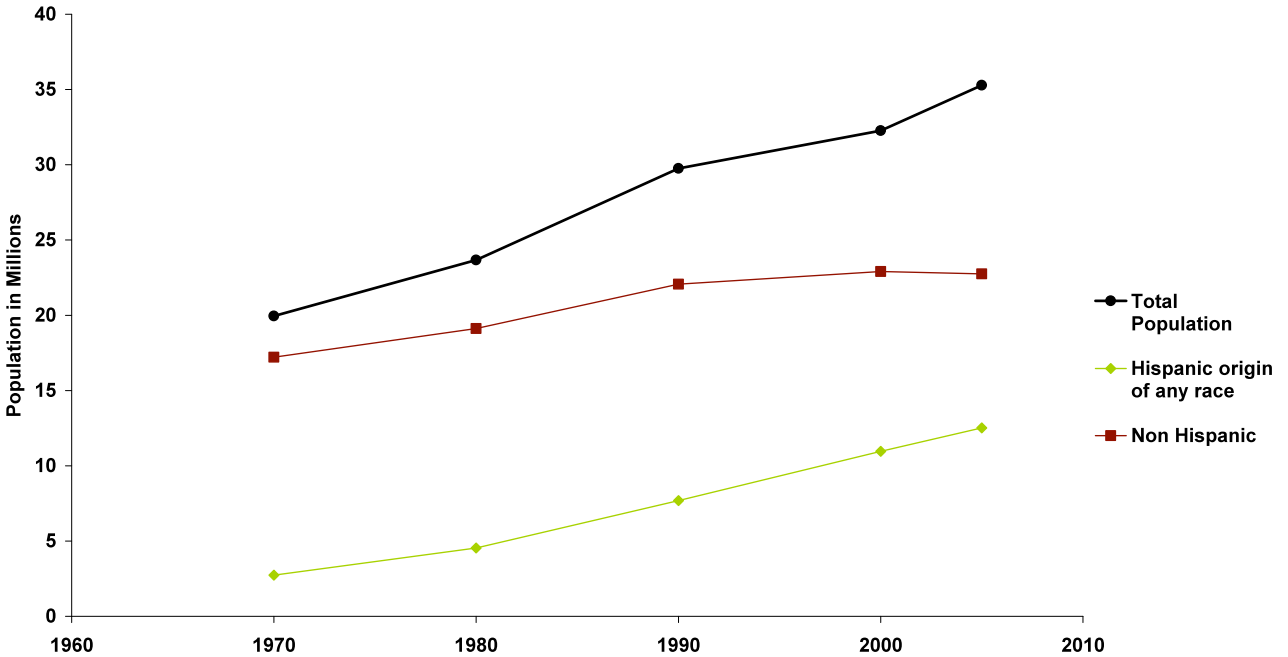
Figure 4-2
California Population by Race as a Percent of Total Population, 1960-2005



Note: Definitional changes in racial/ethnic categories occurred in 2000 Census and categories are not directly comparable to prior years. 2005 data are subject to sampling variability.
 Sources: U.S. Census Bureau. Population Division. Working Paper #56. C Gibson and K Jung. Census 2000 Summary File 1; U.S. Census Bureau. 2005 American Community Survey

In addition to the sheer increase in the size of California’s population, the composition of the population has changed dramatically since 1960 (Figure 4-2). In 1960, Whites accounted for 92.0 percent; Blacks, 5.6 percent; Asians and Pacific Islanders, 2.0; and American Indians, Eskimos, and Aleuts, 0.2 percent, of the population.⁷ Information about those of Hispanic origin was unavailable. Whites have represented a declining proportion of the population over the decades. Asians have accounted for an increasing proportion, as have American Indians, Alaska Natives, and Native Hawaiians and Other Pacific Islanders. Blacks have represented from 6 to 8 percent of the population over the 1960-2005 period. Those identifying as Other Race have increased.

Figure 4-3
California Population by Hispanic Ethnicity, 1970-2005

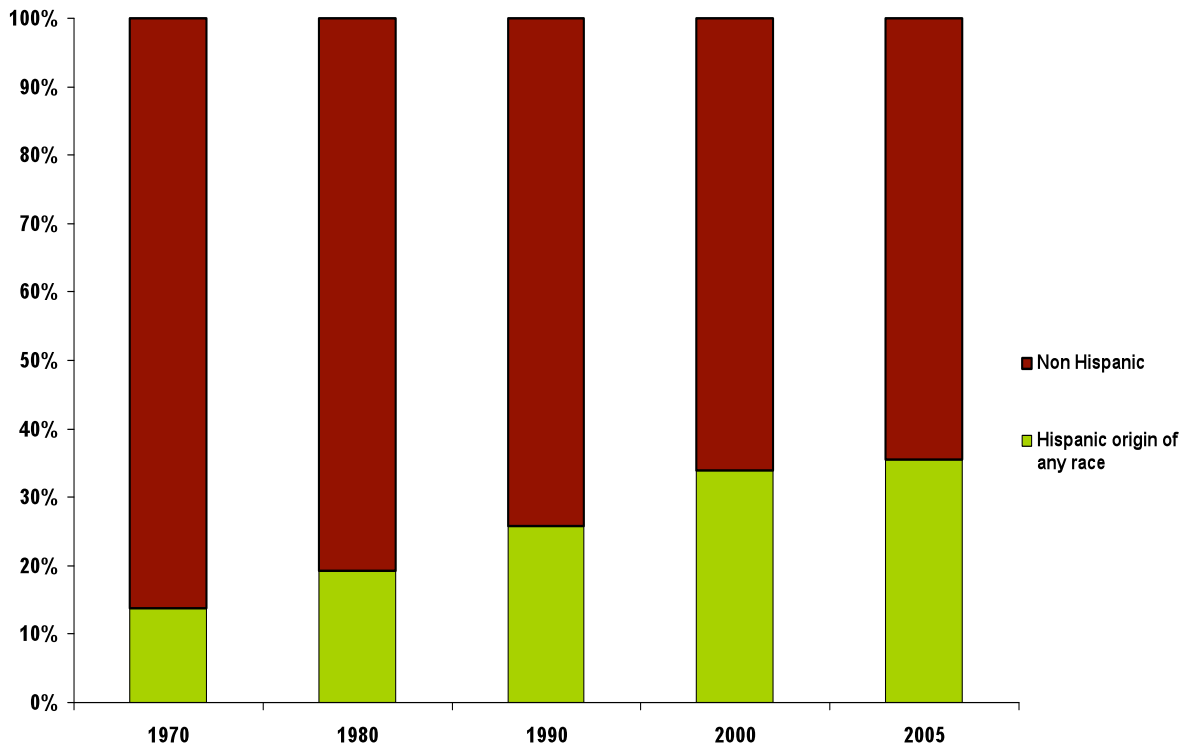


Note: 1970 Hispanic origin based on Spanish language determined from 15% sample. 2005 data are subject to sampling variability.

Sources: U.S. Census Bureau, Population Division, Working Paper #56. C Gibson and K Jung. Census 2000 Summary File 1; U.S. Census Bureau. 2005 American Community Survey

In 1970, there were an estimated 2.7 million Hispanics in California; by 2005, there were 12.5 million (Figure 4-3). Since 1970, the Hispanic population has increased by 357 percent, while the non-Hispanic population has increased by 32 percent.^{8,9}

Figure 4-4
California Population by Hispanic Ethnicity as a Percent of Total Population, 1970-2005



Note: 1970 Hispanic origin based on Spanish language determined from 15% sample. 2005 data are subject to sampling variability.
Sources: U.S. Census Bureau. Population Division. Working Paper #56. C Gibson and K Jung. Census 2000 Summary File 1; U.S. Census Bureau. 2005 American Community Survey

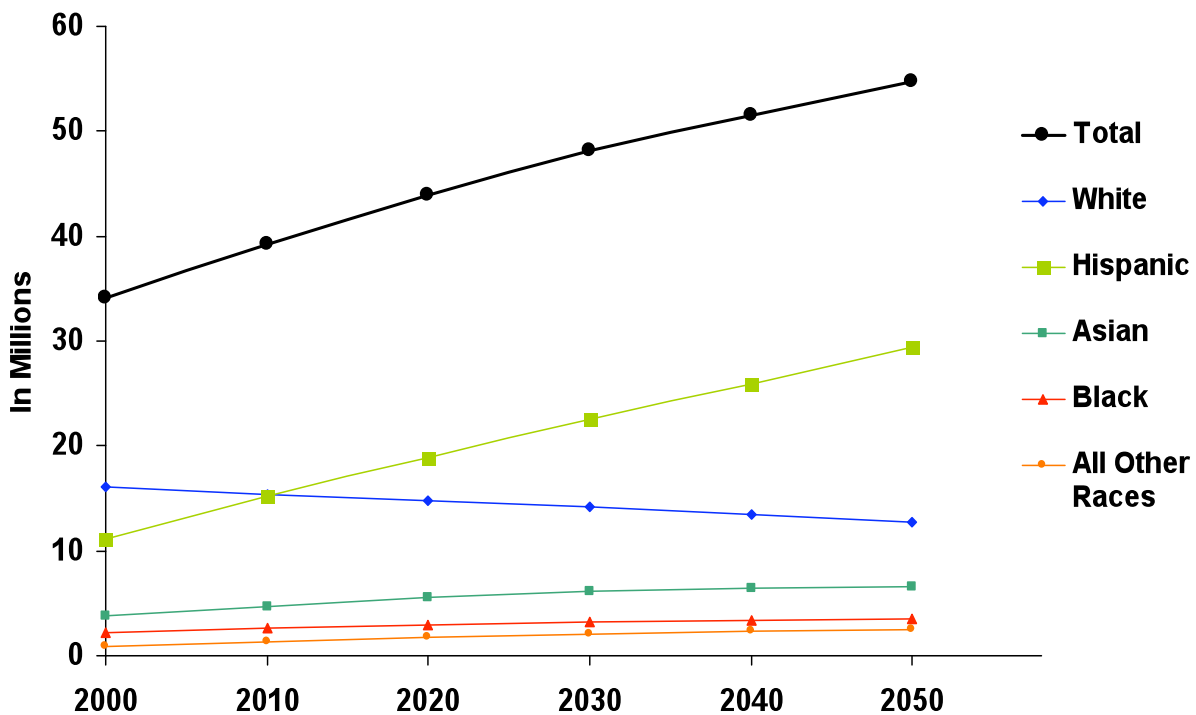
In 1970, those of Hispanic origin were estimated to represent about 14 percent of California's population; by 2005, Hispanics accounted for almost 36 percent of the population (Figure 4-4).

Population Projections through 2050

Just as the U.S. population is expected to continue to grow in size and diversity, so is California's, albeit at an accelerated pace. Between 2000 and 2020, California's population is expected to grow by 29 percent, compared to 19 percent nationally.^{10,11} The California Department of Finance predicts that the state's population by 2020 will be nearly 44 million; in 2000, it stood at 34 million (Figure 4-5).¹²

The Hispanic population is expected to increase by 70 percent by 2020, the Asian population, by 49 percent; the Black population, by 32 percent. All Other Races are expected to increase by 82 percent, with the American Indian and Alaska Native population increasing by 219 percent and the Pacific Islander population by 66 percent. The proportion of the population that is White non-Hispanic is expected to decline by 8 percent.¹³ By 2050, California's population is projected to be nearly 55 million with the Hispanic population by far the largest group, accounting for nearly 30 million people.

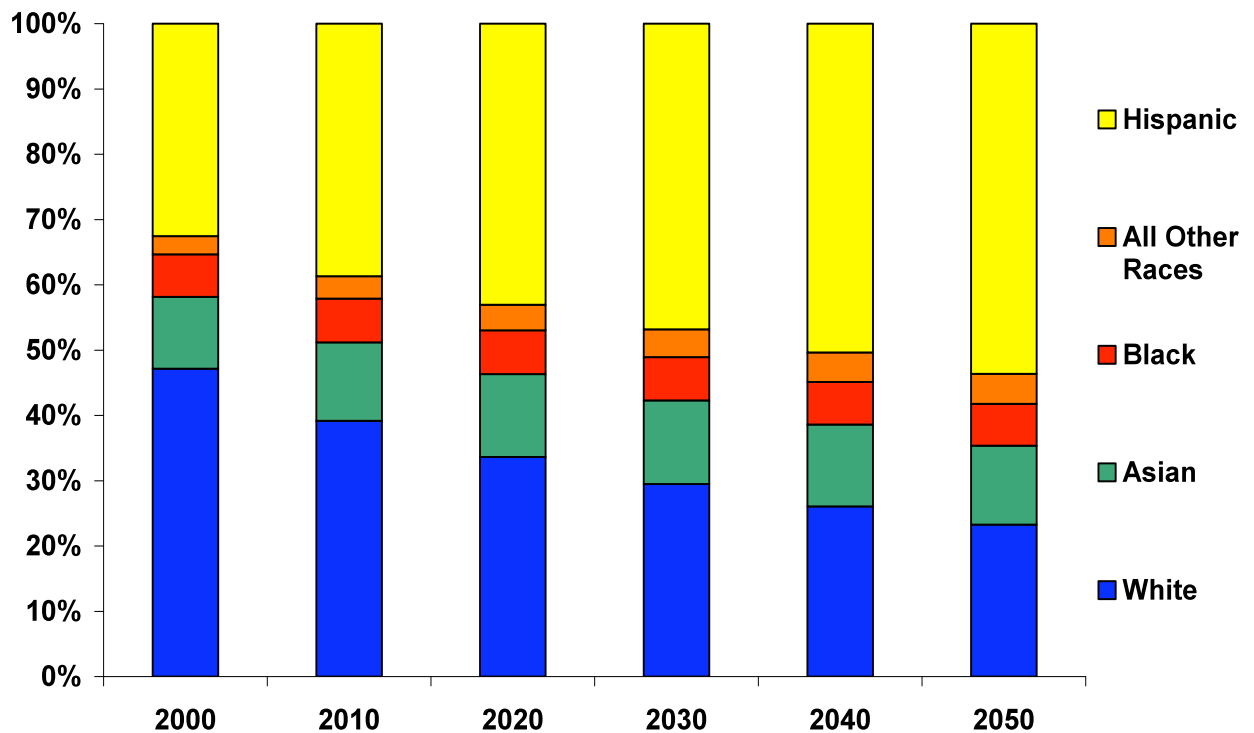
Figure 4-5
Projected California Population by Race and Hispanic Origin, 2000-2050



Note: All Other Races includes American Indian, Other Pacific Islander and Multiraces.

Source: State of California. Department of Finance. Population Projections by Race/Ethnicity, Gender and Age for California and Its Counties 2000-2050. May 2004

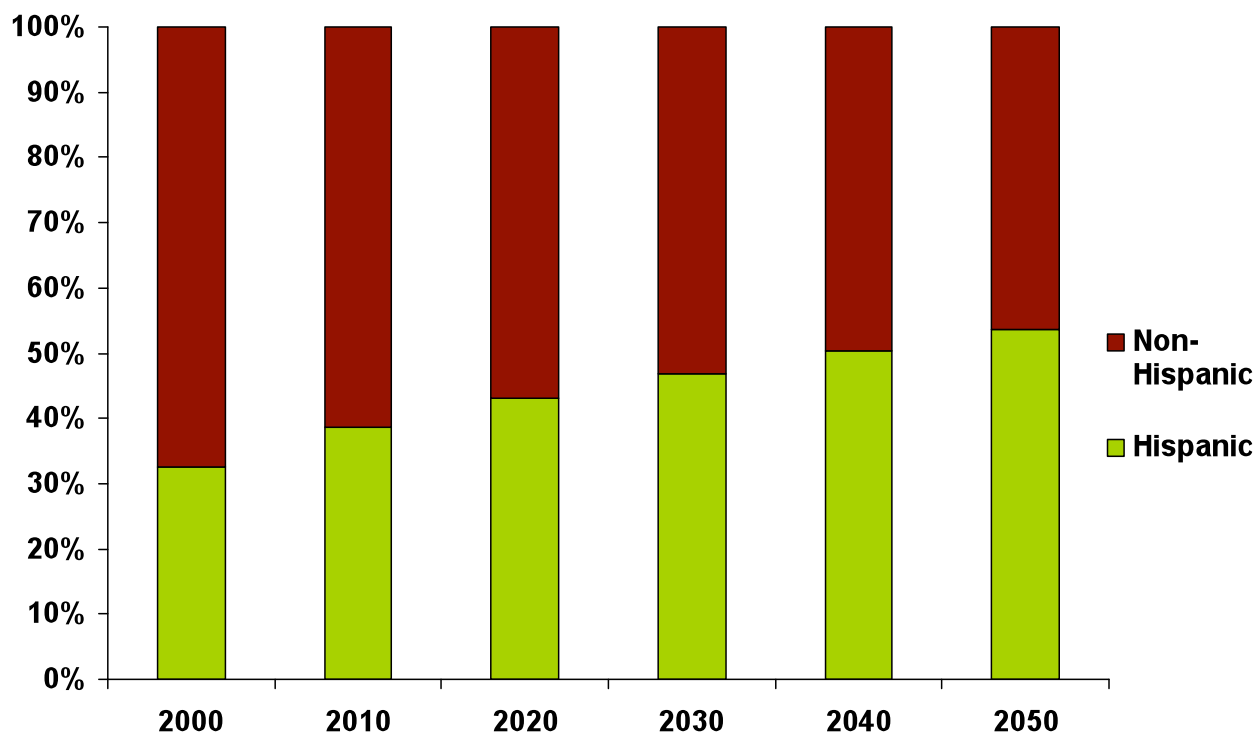
Figure 4-6
Projected California Population by Ethnicity and Race as a Percent of Total Population, 2000-2050



Note: All Other Races include American Indians, Other Pacific Islanders, and Multiraces.
 Source: State of California. Department of Finance. Population Projections by Race/Ethnicity, Gender and Age for California and Its Counties 2000-2050. May 2004

Between 2000 and 2020, the White non-Hispanic population will decline from 47 percent to 34 percent as a proportion of California's population (Figure 4-6). The Asian share of the population is expected to increase from 11 percent in 2000 to 13 percent in 2020. The Black population is expected to remain relatively unchanged at around 6.5 million people, or 7 percent of the population.¹⁴ All Other Races will increase to about 4 percent of the population. By 2050, Whites are expected to account for less than a quarter of California's population.

Figure 4-7
Projected California Population by Hispanic Origin as a Percent of Total Population, 2000-2050



Source: State of California. Department of Finance. Population Projections by Race/Ethnicity, Gender and Age for California and Its Counties 2000-2050. May 2004.

Hispanics of any race are expected to increase from 33 percent in 2000 to 43 percent of the population in 2020 (Figure 4-7).¹⁵ By 2050, people of Hispanic origin will account for 54 percent of California’s population.

California’s Student Population and Trends in K-12 Education

Several dynamics in California make the state’s K-12 education and postsecondary education of special concern in terms of the impact—now and in the future—on diversity in California’s medical schools.

K-12 Education: California’s Challenges

California faces several challenges in K-12 education. These challenges are related to the size and complexity of its public education system, the diversity of its students, and the great differences among its students in their experience as learners.

First, California's public education system today is immense.¹⁶ In 1960-1961, California's K-12 enrollment stood at 3.4 million. After increasing steadily for more than 15 years, total enrollment in California's schools began to decline in 1974-1975, dropped until 1984-1985, and increased to 6.3 million in 2004-2005, leveling off and even declining in some areas during 2005-2006 and 2006-2007.¹⁷

Second, the state's public education system is complex. There are 9,500 schools, governed by almost 1,000 elected school boards and regulated by a complicated Education Code. Financing is controlled largely by the State Legislature and the governor.¹⁸

Third, California's student population is diverse in several respects. Today almost half (48.1 percent) of California's K-12 students are Hispanic (and Hispanic students are expected to form the majority by 2009-2010); non-Hispanic Whites account for 29.4 percent; Asians, 8.1 percent; Non-Hispanic Blacks, 7.6 percent; Filipinos, 2.6 percent; American Indians, 0.8 percent; and Pacific Islanders, 0.6 percent.¹⁹

Twenty years ago, non-Hispanic Whites accounted for 51.0 percent of total enrollment; Hispanics, 29.6 percent; non-Hispanic Blacks, 9.2 percent; Asians, 7.0 percent; Filipinos, 2.0 percent; American Indians; 0.7 percent; and Pacific Islanders, 0.5 percent.²⁰

Fourth, California's students differ greatly in their experience as learners and socioeconomically. One quarter of all California students are English learners—they need to learn English to succeed in school.²¹ This rate is five times the national rate.²² Of the English learners, about 80 percent are Spanish speakers; others speak Vietnamese, Pilipino or Tagalog, Cantonese, Hmong, or another of the 55 languages reported.²³ More than half (52.3 percent) receive compensatory education. Almost half of all California K-12 students (49.8 percent) receive free or reduced-price meals.²⁴

Educational Achievement: Measuring and Improving Academic Performance in K-12 Education in California

Clearly, high achievement in elementary, middle school, and high school levels is a stepping stone to greater likelihood of being able to apply to, be admitted to, and to succeed in medical school. Educational attainment and achievement, as we noted in Chapter 2 of this report, are determined not only by a student's ability and family support, but also by the community and neighborhood in which s/he or h/she lives. The school district in which a child is educated has a major impact on the education s/he receives, and on the level of education that s/he is likely to attain.

The API (Academic Performance Index): Base and Growth Scores

California has both state and federal accountability measures reflecting academic performance and improvement. The foundation of California's integrated educational accountability system is the state's Academic Performance Index (API), the federal Adequate Yearly Progress (AYP), and the Program Improvement system mandated by the No Child Left Behind Act of 2001. The

API is a numeric index, or scale, ranging from a low of 200 to a high of 1,000, that reflects a school's or local educational agency's performance level, based on the results of statewide testing.²⁵

The API measures academic performance at the school, district, county, and state levels through standardized test scores, high school exit exam scores, dropout and graduation rates, and student attendance data.²⁶ Another part of California's accountability system is the Immediate Intervention/Underperforming Schools Program (II/USP),²⁷ which provides financial support to select low-performing schools, along with the Governor's Performance Awards Program (GPA), which provides rewards to all schools that show strong improvement or high API achievement. Use of the API began in 1999, and annual reports reflect a consistent rise in median API scores statewide.²⁸ The overriding issue facing California education today, according to the State Superintendent of Public Instruction, is:

...the achievement gap that exists between traditionally higher- and lower-scoring subgroups of children. Student subgroups are defined by ethnicity, socioeconomic, and disability status as well as whether or not a student is an English learner....While our schools are showing steady overall progress, I am deeply concerned that significant gaps exist between the API results for different subgroups of students.²⁹

Since the API system began, California's schools have been expected not only to meet schoolwide academic targets, but also student subgroup targets. In the 2006-2007 year, there has been a focused effort to narrow achievement gaps, including increasing growth targets for subgroups to 80 percent of the schoolwide target and 5 percent growth toward an API of 800.³⁰

Table 4-1 shows the nearly steady increase from 1999 through 2006 in the percentage of elementary schools, middle schools, and high schools with base APIs at or above the statewide performance target of 800.

Table 4-1
Percentage of Schools with 1999-2006 Base APIs at or Above
the California Statewide Performance Target of 800

Year	Elementary Schools	Middle Schools	High Schools
1999	13.1	10.7	4.9
2000	19.9	13.8	5.5
2001	20.9	14.6	5.3
2002	20.1	12.7	4.0
2003	26.3	15.6	7.4
2004	26.4	17.3	7.0
2005	31.8	20.6	11.9
2006	34.6	23.9	13.6

Source: California Department of Education. News Release, March 27, 2007.

Table 4-2 shows the statewide 2006 base performance overall and by student subgroup. Scores of Asians, Filipinos, Non-Hispanic Whites, and Pacific Islanders rank highest. Scores of American Indians/Alaska Natives, Hispanics, socially disadvantaged students, English learners, Non-Hispanic African Americans, and students with disabilities rank lower.

Table 4.2
California Statewide 2006 Base APIs Overall and for Student Subgroups

	Score
Overall	721
African American (not Hispanic)	635
American Indian or Alaska Native	691
Asian	847
Filipino	808
Hispanic or Latino	656
Pacific Islander	714
White (not Hispanic)	801
Socioeconomically Disadvantaged	654
English Learners	637
Students with Disabilities	518

Source: California Department of Education, News Release, March 27, 2007.

Table 4-3 shows that 2007 growth API is highest in Grades 2-6 for all subgroups, but particularly for Asians, Filipinos, and Non-Hispanic Whites. Growth API is lowest for all groups in Grades 9-11.

Table 4-3
California 2007 Growth API Overall and by Subgroup and by All Grades and Grade Group

	All Grades	Grades 2-6	Grades 7-8	Grades 9-11
Overall	727	761	720	689
African American (not Hispanic)	643	688	629	596
American Indian or Alaska Native	696	727	688	664
Asian	852	880	861	814
Filipino	813	849	814	768
Hispanic or Latino	665	702	651	621
Pacific Islander	719	765	709	669
White (not Hispanic)	805	840	807	765
Socioeconomically Disadvantaged	662	697	647	616
English Learners	645	689	622	590
Students with Disabilities	528	581	504	464

Source: California Department of Education. Growth API 2007 Academic Performance Index Report. November 5, 2007.

Comparing California's K-12 Educational Outcomes with Other States' Outcomes

How does California compare with other states? The National Assessment of Educational Progress (NAEP) is the primary way comparable state-by-state assessments are made.³¹ All states, as part of this assessment, must test a sample of their fourth and eighth grades in reading and math.

Of the five most populous U.S. states (California, New York, Texas, Illinois, and Florida), California was the only state to have its students score below average on every NAEP test they took in 2005.³² “California ranked among the bottom six states on every test its students took. In 2005, half of fourth graders and 40 percent of eighth graders scored below basic in reading. In math, 29 percent of fourth graders and 43 percent of eighth graders scored below basic.”³³ In 2002, eighth graders scored below average in writing and in 2000 below average in science.

The good news from recent NAEP reports is that between 2003 and 2005 California's Hispanic/Latino students were found to be making strides—fourth graders (in reading) and eighth graders (in reading and math)—that were greater than those for the state as a whole.³⁴

One of the most comprehensive recent reports about these and other educational issues is the *California Educational Opportunity Report 2007*, developed by the UCLA Institute for Democracy, Education, and Access (IDEA) and the University of California All Campus Consortium on Research on Diversity (ACCORD).³⁵ Key findings identified in this report are:

1. A national opportunity gap. California lags behind most other states in providing fundamental learning conditions as well as in student outcomes.
2. A racial opportunity gap. Within California, African American and Latino students are far more likely to attend schools that lack fundamental learning conditions than their white and Asian peers.
3. A restricted flow through the “mathematics pipeline.” The flow of students through California's middle school and high school math curriculum is slowed by students' lack of access to reasonably sized classrooms, rigorous coursework, and well-trained teachers.
4. Systemic problems. Inadequacy and inequality are found throughout California. The state's educational problems are most severe in schools serving the highest proportions of African American and Latino students.
5. Worse outcomes for the Class of 2006. The consequences of poor learning conditions were greater for young people in the Class of 2006 in part because as the first class to face the California High School Exit Exam they were the first class to experience a “diploma penalty.” In 2006, California graduated a smaller proportion of its 9th grade cohort than the proportion in any cohort of 9th graders graduating since 1997.³⁶

The report notes that in fall 2002 more than 520,000 students were enrolled as 9th graders in California; in 2006, fewer than 350,000 Californians graduated from high school—a third of the 9th grade class was lost.³⁷

Other recent reports underline California’s national opportunity gap. When Education Week released its annual *Quality Counts* reports for improving K-12 education in January 2007, it also released state highlights reports, entitled *From Cradle to Career: Connecting American Education from Birth Through Adulthood*.³⁸ *Quality Counts* examines the “state of state educational policymaking” using a combination of state data and interviews with experts. In this 11th annual report, *Quality Counts* began to monitor state efforts across educational sectors and students’ “readiness” to move from one sector to the next.

A “chance-for-success index,” developed by Editorial Projects in Education of the Educational Research Center, is based on 13 indicators that “highlight whether young children get off to a good start, succeed in elementary and secondary school, and hit crucial educational and economic benchmarks as adults.”³⁹

California ranks 34th among the 50 states overall on the “chance-for-success” indicators. Table 4-4 provides highlights for California using the “chance-for-success” index.

Table 4-4
California Highlights: Chance-for-Success Index: 2007

Success Indicators	California Average %	National Average %
Family income —Children from families with incomes at least 200% of poverty level	57.6	59.8
Parent education —Children with at least one parent with a postsecondary degree	37.2	42.5
Parental employment —Children with at least one parent working full time, year-round	68.4	70.6
Linguistic integration —Children whose parents are fluent English speakers	62.3	84.3
Preschool enrollment —Three- and four-year olds enrolled in preschool	45.5	44.8
Kindergarten enrollment —Eligible children enrolled in kindergarten programs	78.3	75.3
Elementary reading —Fourth grade public school students proficient on NAEP*	21.4	29.8
Middle school mathematics —Eighth grade public school proficient on NAEP	21.8	28.5
High school graduation —Public high school students who graduate with a diploma	71.0	69.6
Postsecondary participation —Young adults enrolled in postsecondary education or with a degree	49.6	47.8
Adult educational attainment —Adults with a two-or four-year postsecondary degree	38.9	37.4
Annual Income —Adults with incomes at or above national median	53.6	50.0
Steady employment —Adults in labor force working full time and year round	64.5	67.2

Source: Editorial Projects in Education Research Center. EPE Research Center. Education Week. California. From Cradle to Career: Connecting American Education from Birth Through Adulthood. Quality Counts, 2000. January 2007

* National Assessment of Educational Progress

California High School Exit Examination (CAHSEE) Results

Results of the 2006-2007 California High School Exit Examination (CAHSEE)^{*} were released by the State Superintendent of Public Instruction in August 2007, with both promising and less promising themes. On the positive side, the percentage of students overall meeting CAHSEE requirements for the Class of 2007 in May 2007 was 93.3 percent, a 2.1 percent increase over the percentage for the Class of 2006 at the same point in time.⁴⁰ This improvement was reflected in all major subgroups of twelfth graders: African-American students made the largest gain (4.7 percent); Hispanics/Latinos, the second largest, (3.1 percent), and economically disadvantaged students, a more modest gain (2.6 percent).⁴¹

^{*} California state law requires all public high school students to pass the CAHSEE to receive a high school diploma. Students must take the CAHSEE for the first time in grade ten. Students who do not pass the test in tenth grade have two opportunities in grade eleven and three opportunities in grade twelve to pass.

On the less positive side, as the State Superintendent noted:

The data we are releasing today, like the results of our STAR (Standardized Testing and Reporting), ... tell us that we still need to find ways to better prepare all students to pass the CAHSEE so that they will be better prepared for life after high school, whether they are headed to college or go directly into a career....As illustrated in the results on standards-based tests for students in grades two through eleven, the achievement gap remains and economic factors are just part of the story.⁴²

He went on to say that the data show that:

even when you account for poverty, a greater percentage of poor white students are passing the English-language arts (ELA) portion of the exit exam than African American students who are not poor. The same holds true in math when comparing the results of white students who are economically disadvantaged to African American or Latino students who are not classified as poor. For example, not economically disadvantaged African American sophomores in the Class of 2009 as first-time test takers were 4.0 percentage points higher than the same subgroup of first-time test takers in the Class of 2006. Still this increase to 65.3 percent for the math portion of the CAHSEE is nearly 9 points below the passing rate of their economically disadvantaged white peers.⁴³

However, again on a more positive note, the data show that Hispanic/Latino and African American sophomore students had significant gains in passing rates in English-language arts as first-time test takers over the past four years regardless of their economic status.⁴⁴

One of the most promising results was that gains made by students in economically disadvantaged racial/ethnic subgroups over time, as compared to those made by students in the same subgroups who were not poor, were in many cases greater, even though passing rates for the poor students remained much lower.⁴⁵

Table 4-5 shows passing rates for economically disadvantaged groups by ethnicity, and Table 4-6 shows rates for students who are not economically disadvantaged. There are substantial differences in passing rates for all racial/ethnic groups between those who are economically disadvantaged and those who are not, but every economically disadvantaged group was able to improve scores with experience over time.

Table 4-5
Comparison of Passing Rates on the California High School Exit Examination (CAHSEE) for Economically Disadvantaged First-time Test Takers (Grade 10) by Ethnicity

Ethnicity	Class of 2006	Class of 2007	Class of 2008	Class of 2009	Percent change, 2006-2009
American Indian or Alaska Native	60.4	59.8	65.4	65.1	4.7
Asian	73.2	75.3	76.6	76.1	2.9
Pacific Islander	61.8	66.2	66.9	67.6	5.8
Filipino	77.9	79.3	80.1	82.3	4.4
Hispanic or Latino	56.3	60.4	62.0	61.9	5.6
African American or Black	54.1	55.6	59.1	58.6	4.5
White	72.6	74.2	75.9	75.1	2.5

Source: California Department of Education. News Release, Table 4, August 23, 2007.

Table 4-6
Comparison of Passing Rates on the California High School Exit Examination (CAHSEE) for Not Economically Disadvantaged First-time Test Takers (Grade 10) by Ethnicity

Ethnicity	Class of 2006	Class of 2007	Class of 2008	Class of 2009	Percent change, 2006-2009
American Indian or Alaska Native	80.8	81.6	84.6	83.2	2.4
Asian	91.5	92.2	92.8	92.6	1.1
Pacific Islander	76.1	80.1	80.7	80.9	4.8
Filipino	89.5	90.4	91.5	90.7	1.2
Hispanic or Latino	71.9	74.4	75.4	75.3	3.4
African American or Black	69.5	72.2	71.9	72.7	3.2
White	91.1	91.8	92.3	92.1	1.0

Source: California Department of Education. News Release, Table 5. August 23, 2007

Educational Disparities in California— from High School to College to Graduate and Professional Education

One of the most compelling pictures of education in California comes from an analysis of Stanford University’s Center for Comparative Studies in Race and Ethnicity. Center investigator Alejandra Lopez analyzed race and educational attainment in California for adults 25 and older using 2000 Census profiles and 1990 Census data for comparison.⁴⁶ Rates of educational attainment were summarized at the county and regional levels on completion of a high school diploma or equivalency certificate (GED), bachelor’s degree, and graduate/professional degree for major ethnic and racial groups in California.

Major findings emerging from this analysis are:

1. At the time of the 2000 Census, 76.8 percent of California’s total population age 25 and older had completed high school or received a GED, 26.6 percent had earned a bachelor’s

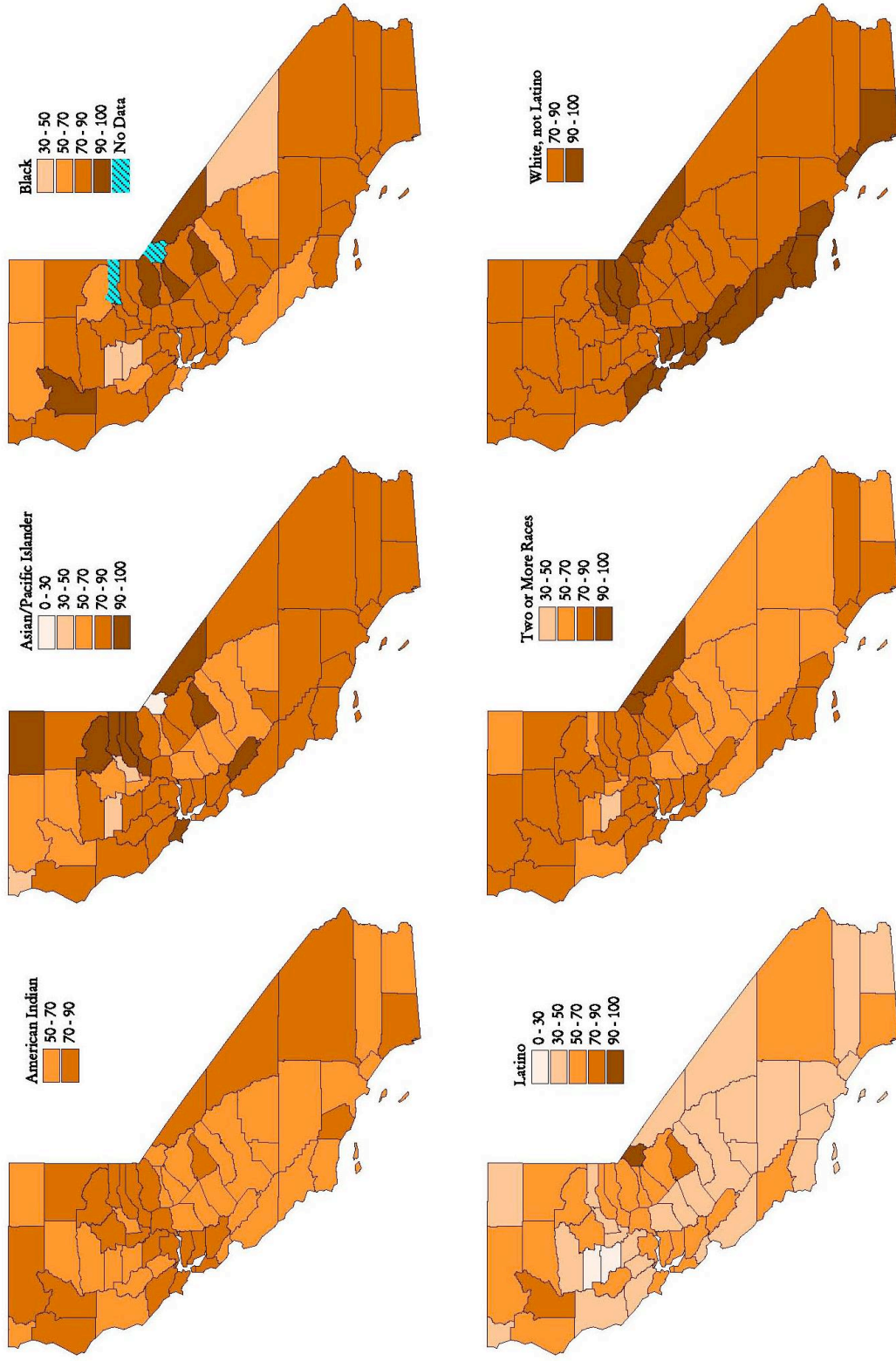
degree, and 9.5 percent had a graduate or professional degree.⁴⁷ Corresponding U.S. rates in 2000 were 80.4 percent, 24.4 percent, and 8.9 percent.⁴⁸ California, Texas, Florida, and New Jersey were states with cities with a large percentage of people with less than a high school diploma.⁴⁹ Several states, including California, had cities and counties with the greatest number of people with doctoral degrees, usually those that were homes to universities.⁵⁰

2. Californians who identified as Hispanics/Latinos or as Some Other Race in 2000 had the lowest levels of educational attainment at all three levels.⁵¹ For those who identified as Hispanics, the rates for high school diploma or GED stood at 39.0 percent, bachelor's degree, 5.1 percent, and graduate or professional degree, 2.6 percent. For those of Some Other Race, the corresponding rates were 36.3 percent, 4.0 percent, and 1.7 percent. Whites, Blacks, Asian/Pacific Islanders, those of Two or More Races, and American Indians in descending order had the highest levels of educational attainment.⁵²
3. The 2000 figures for educational attainment represent an increase at all levels for Californians since 1990, when 76.2 percent had completed high school or had a GED, 23.4 had a bachelor's degree, and 8.1 percent had a graduate or professional degree.⁵³ In general, rates of educational attainment at all levels increased for all race groups, with the exception of American Indians, whose rate of high school diploma completion rate dropped from 71.4 to 67.5 percent from 1990 to 2000.⁵⁴
4. Rates of educational attainment increased most at all levels for Whites from 1990 to 2000—a 39.7 percent increase in graduate or professional degrees, a 33.0 percent increase in bachelor's degrees, and a 10.7 percent increase in high school diplomas and GEDs.⁵⁵
5. The lowest rates of increase for Californians between 1990 to 2000 were among American Indians and Hispanics/Latinos.⁵⁶ For American Indians, rates were -5.4 percent for high school completion, 3.0 percent for bachelor's degrees, and 1.6 percent for graduate and professional degrees; for Hispanic/Latinos, 3.8 percent for high school completion, 9.1 percent for bachelor's degrees, and 8.4 percent for graduate and professional degrees.
6. The San Francisco Bay Area led all eight regions analyzed in the state in educational attainment in 2000, with 84 percent of the population having received a high school diploma, 37.4 percent, a bachelor's degree, and 14.1 percent, a graduate or professional degree. The Central Valley region had the lowest rate (67.9 percent) of educational attainment in terms of those with high school diplomas; the Eastern Mountain and Northern California regions had the lowest rate for bachelor's degrees (7.7 percent); and the Northern California region had the lowest rate for graduate and professional education (5.8 percent).⁵⁷

The California county map sets in Figure 4-8 through Figure 4-10 show educational attainment at the high school, bachelor's degree, and graduate/professional degree levels by race and by county, with shading from light to dark indicating lower to higher rates of attainment.

Figure 4.8

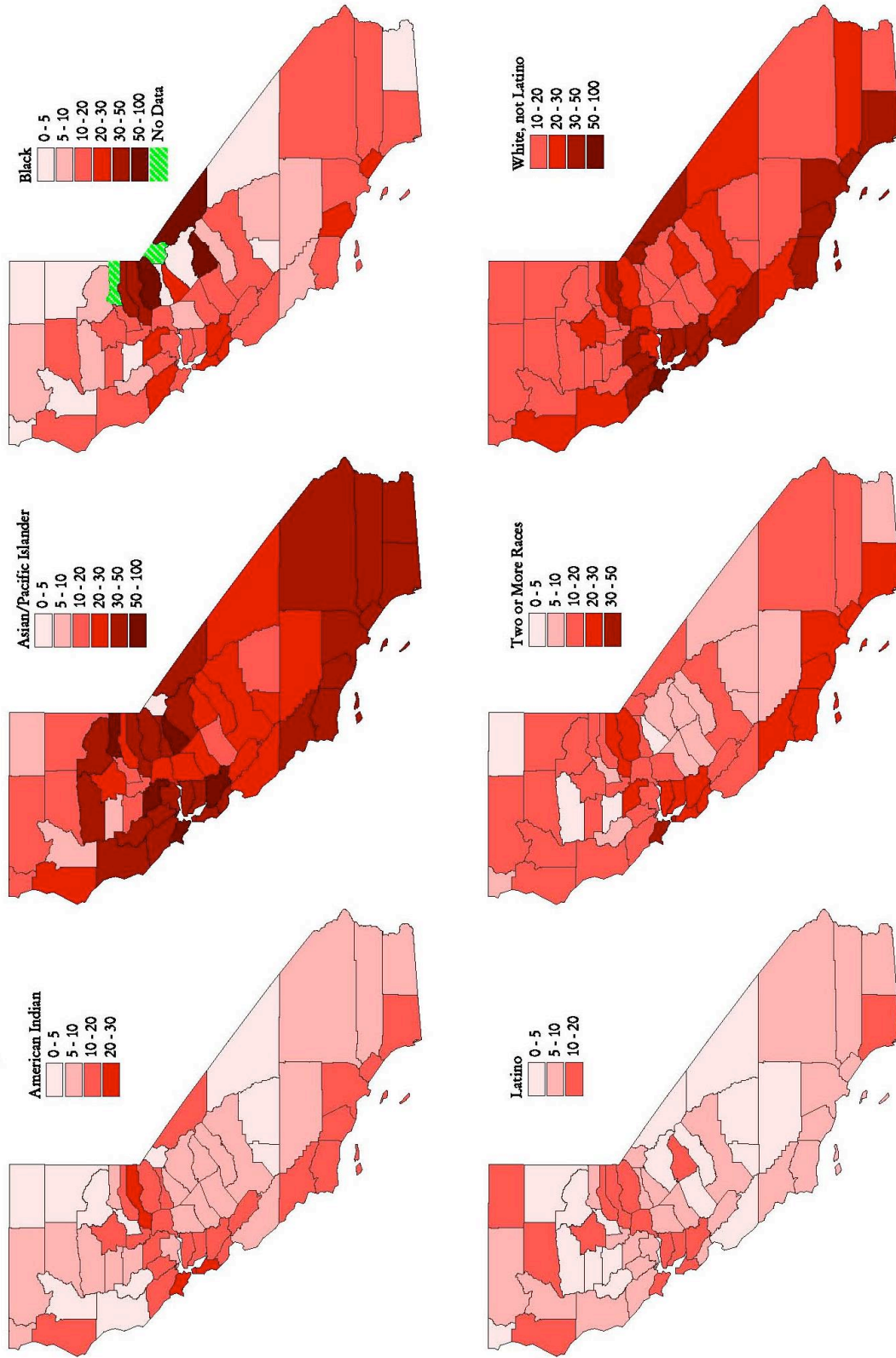
High School Completion Rates Across Race -- 2000



Source: Lopez, A. Race and Educational Attainment in California: Census 2000 Profiles, No. 11, October 2002
Center for Comparative Studies in Race and Ethnicity, Stanford University. www.stanford.edu/dept/csre

Figure 4-9

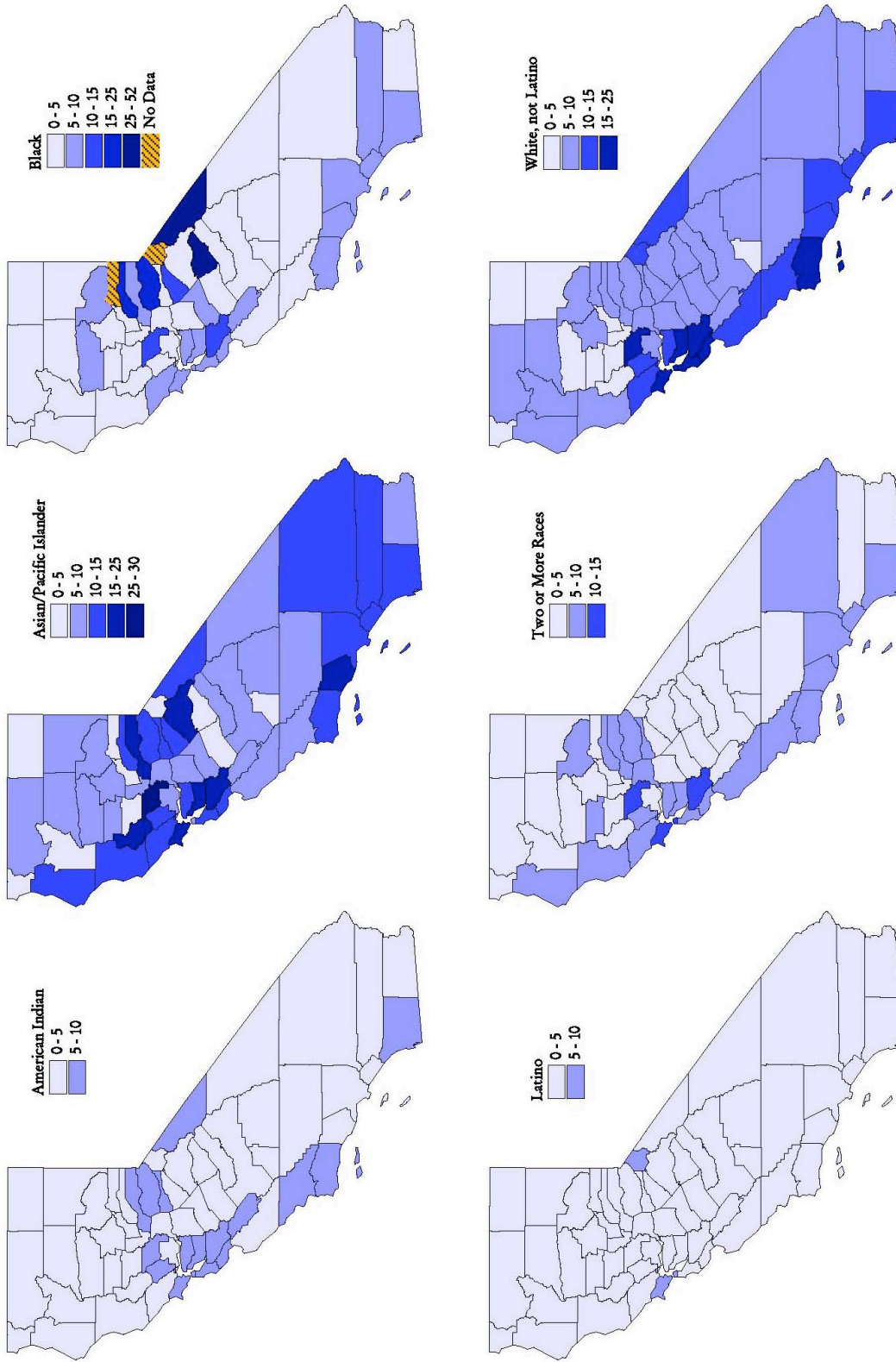
Bachelor's Degree Attainment Rates Across Race -- 2000



Source: Lopez, A. Race and Educational Attainment: in California: Census 2000 Profiles, No. 11, October 2002
Center for Comparative Studies in Race and Ethnicity, Stanford University. www.stanford.edu/dept/csre

Figure 4-10

Graduate/Professional Degree Attainment Rates Across Race -- 2000



Source: Lopez, A. Race and Educational Attainment: in California: Census 2000 Profiles, No. 11, October 2002
Center for Comparative Studies in Race and Ethnicity, Stanford University. www.stanford.edu/dept/cstre

High School Completion Rates for those 19 to 25 Years Old

An indirect measure of how well California's K-12 system is doing in bringing students up to the minimum level required to enter the postsecondary system is the percentage of 19-25 year olds with a high school diploma.⁵⁸ A December 2007 study report on high school completion rates in California by the California Postsecondary Education Commission provides insight into the variability of educational attainment with age and time of entry and residency in the United States.⁵⁹

In 2005, the report notes, nearly 90 percent of California residents 19-25 years of age who were born in the United States or entered before their school years had a high school diploma.⁶⁰ Asian males and females had the highest rates (96 percent), followed by White females (94 percent) and males (93 percent), African American females (91 percent) and males (87 percent), and Latino females (83 percent) and males (79 percent).⁶¹

For Californians between 19 and 25 years of age who entered the U.S. at school age or as adults, the overall high school completion rate was found to be significantly lower—82 percent.⁶² When the rates were analyzed by race, however, for this group of 19-25 year old Californians, African Americans had the highest rates, 98 percent for males and 95 percent for females. Asians had the next highest rates, 94 percent for females and 93 percent for males. Whites followed with 93 percent for females and 89 percent for males. Latinos' rates were sharply lower at 54 percent for females and 45 percent for males.⁶³

To put the statistics for Latinos who entered the U.S. at school age or as adults in perspective, the report notes that only about one-third of Latinos who turned 18 in the 1960s have a high school diploma, compared with nearly half of those who turned 18 between 1998 and 2005.⁶⁴ This progress for immigrants in past decades is balanced, however, by downward trends for Latinos born and educated in the U.S., which are lower for people who turned 18 between 1998 and 2005 than for those who turned 18 during the period from 1990 through 1997.⁶⁵

For both young Latino and African American males who lived and were educated in the U.S., there is a particularly strong drop in the percentage with a high school diploma between those who turned 18 between 1980 and 1997, and those who turned 18 between 1998 and 2005.⁶⁶

A February 2008 report of the California Dropout Research Project, *Solving California's Dropout Crisis*,⁶⁷ estimates that in 2005-2006 there were 349,191 graduates from California's high schools, and that four years earlier, there were 520,287 ninth graders. These data suggest that only about two-thirds of California's students graduate on time, and more than 170,000 drop out or fail to graduate.⁶⁸ The California Department of Education reported that 70,000 students dropped out for that same period of time, and that the graduation rate was 88 percent.⁶⁹ The U.S. Department of Education's and other agencies' estimates are substantially lower, ranging from 65 to 74 percent.⁷⁰

The exact number of students who fail to graduate in California remains unknown because the state is still developing a system that can accurately calculate the proportion of entering ninth grade students who graduate four years later.⁷¹

Opportunity to Learn in High School

Michael W. Kirst, Ph.D., Professor Emeritus of Education and Business Administration at Stanford University, has written about overcoming educational inequality by improving secondary education linkages with broad-access postsecondary education.⁷² He begins by noting:

High school graduates who enter postsecondary education may never have had the opportunity to learn (OTL) what is necessary for college success. OTL means that the curriculum content necessary to reach particular academic standards must be presented to students (e.g., high school exit exam). OTL proponents emphasize that all students must be taught by well-prepared teachers the curriculum content necessary for college readiness. State academic standards require specific educational resources and conditions for children to reach proficiency, including certain instructional materials, technologies, teacher qualities, and facilities. A missing ingredient in the recipe of high standards for college preparation is the assurance that all children will receive the classroom instructional opportunities to achieve the level of college readiness.^{73,74,75}

Kirst goes on to say that conditions in some high schools are so seriously inadequate that they cannot provide an equal opportunity for a quality education. These conditions include:

- Lack of qualified teachers
- High teacher turnover rates
- Poor working conditions for teachers
- Shortages of educational materials, including textbooks
- Poor physical facilities, and
- Ineffective programs that involve parents.⁷⁶

Students come to their college experience from widely different experiences in high school—experiences that leave some students not only poorly prepared academically, but also lacking basic knowledge about college requirements. Some believe that open enrollment two-year community colleges, for example, must “take everyone,” and that these colleges are “pretty much like high school.”⁷⁷ Others believe that their minimum high school courses and exit exam will be sufficient preparation for four-year broad access colleges.⁷⁸

The fact is that many high school students come unprepared for the problems and challenges of college. California Community College remediation rates from high school are at about 70 percent—90 percent for math and 75 percent English.⁷⁹ California State University’s remediation rate is nearly 60 percent for incoming freshmen.⁸⁰

Dr. Kirst believes that “(i)mprovements in the K-16 system require simultaneously looking down from higher education to secondary schools as well as up the pipeline.”⁸¹ He goes on to say, “A key issue is whether K-12 exit-level and post-secondary entrance-level signals and incentives are delivered to students in isolation from one another, or through interaction and reinforcement.”⁸² He points the way to four policy levers that states, K-12 schools and districts, postsecondary

institutions, and the federal government can pursue to improve the transition from high school to college for students in broad-access postsecondary education:

1. Align coursework and assessments from early grades through grade 14 or later.
2. Integrate goals from K through 16 in state financing of education.
3. Develop high-quality data systems that span the K-16 continuum.
4. Establish accountability systems that connect K-12 and postsecondary education.⁸³

College Readiness

Students who complete high school may or may not be ready to enter college and to succeed in completing college—if and when they get there. Several factors are involved in college readiness, including satisfactorily completing required courses in high school, taking and passing required college entrance tests, availability of college preparatory courses at students' high schools, and preparation and resources offered to students taking courses and exams. The California Postsecondary Education Commission examined four measures of college readiness in a recently released report.⁸⁴ The four measures are:

1. The proportion of high school students who took the SAT Reasoning Test and ACT* exams in 2004-2005 and their test scores;
2. The percentages of 2007 tenth and eleventh graders who scored “proficient” or “advanced” on the California Standards Test (CST) Algebra I exam;
3. The total numbers of 2005-2006 high school graduates who completed a-g courses; and
4. The total numbers of 2006-2007 ninth through twelfth graders who took college preparatory level math and science course completion.⁸⁵

The SAT and ACT, standardized tests used throughout the country, are regarded as indicators of student success in college. The a-g requirements are high school courses required to be admitted to a University of California or a California State University campus.[†] College preparatory math and science courses are upper-level high school courses in these subject areas, as defined by the California Department of Education.[‡]

* ACT test results for 2005-2006 were not available at the time of publication.

† The a-g courses are high school courses required for entrance to UC or CSU campus. Students must complete courses from each of these categories: History and Social Science, English, Mathematics, Laboratory Science, Language other than English, Visual and Performing Arts, and College Preparatory Electives. Students must complete courses in each of these categories.

‡ College preparatory math and science courses are designated as those in the following categories: Intermediate Algebra, Advanced Math, First Year Chemistry, and First Year Physics.

Major findings of this analysis revealed great variations by student gender and race in the four measures examined:

1. SAT and ACT exams. Of all twelfth graders, 35.9 percent enrolled took the SAT and 9.9 percent, the ACT. For the SAT, 40.4 percent of females took the exam, compared to 31.4 percent of males. For the ACT, nearly twice as many females (12.7 percent) took the test as males (6.8 percent). Participation in the SAT by race showed that Asians (57.0 percent) led the proportion of test takers, followed by Whites (32.6 percent), African Americans (28.0), and Latinos (20.0 percent). SAT scores averaged 1,020 overall for the test takers, with males having an average of 1,050 and females, 997. Whites' average score was 1,085; Asians', 1,063; Latinos', 899; and African Americans', 869.⁸⁶
2. California Standards Test Algebra I. Overall, 8.0 percent of tenth graders and an additional 5.0 percent of eleventh graders scored "proficient" or higher on this test. Males and females scored at these same levels. Asians' scores showed 19.0 percent proficient or higher in tenth grade and an additional 12.0 percent in eleventh grade. Whites' scores showed 13.0 percent proficient or higher in tenth grade and another 8.0 percent in eleventh grade. Nine percent of Native Americans scored at or above proficient in tenth grade and an additional 6.0 percent in eleventh grade. Among Latino students in tenth grade, 6.0 percent were proficient or higher and an additional 4.0 percent in eleventh grade. Among African American students, 5.0 percent scored proficient in tenth grade and another 4.0 percent in eleventh grade.⁸⁷
3. The a-g courses. Of all 2005-2006 high school graduates, 35.8 percent of students completed these courses, with 39.9 percent of females and 31.4 percent of males completing them. Among Asians, 59.7 percent completed the courses. Course completion was lower among other racial groups: Whites (40.1 percent), Latinos (25.5 percent), African Americans (25.5 percent), and Native Americans (23.5 percent).⁸⁸
4. College Preparatory Math and Sciences. Of all 2006-2007 ninth through twelfth graders, 30.2 percent were enrolled in some type of college prep math course and 18.7 percent in a college prep science course. Math courses had 32.3 percent of females enrolled and 28.1 percent of males; science courses had 19.7 percent of females and 17.7 percent of males. Fifty-seven percent of Asian students took college prep math and 34.0 percent took college prep science. Corresponding numbers for math and science for Whites were 34.8 percent and 20.6 percent; for African Americans, 23.8 percent and 15.9 percent; for Latinos, 22.5 percent and 15.9 percent.⁸⁹

College-going Rates of Public High School Graduates in the California Postsecondary Education System

California's Postsecondary Education System is one of the largest public higher education systems in the world. In 2007, the system had 10 University of California campuses with an enrollment of

220,034; 23 California State University campuses with an enrollment of 433,017; and 109 California Community Colleges with an enrollment of 1,583,271.^{90,91} Each of the segments of the system has a different educational mission.

Table 4-7 presents information about college-going rates in 2007 of California public high school students entering as first-time freshmen to segments of the postsecondary educational system. The college-going rates of graduates of public high schools who enter different segments of this system as first-time freshmen vary greatly by race and ethnicity, as well as by gender in some cases. In 2007, there were 346,407 graduates of public high schools in California. Of these graduates aged 19 years and younger, 167,164 (47.0 percent) became first-time freshmen at one of the segments of California's postsecondary education system.⁹² By far the greatest number, 98,844 (28.5 percent) entered California Community Colleges; the next greatest number, 38,764 (11.1 percent) entered the California State University system.⁹³ The University of California became home to 25,191 (7.3 percent) of all California public high school students entering in 2007 as first-time freshmen.⁹⁴

Table 4-7
2007 College-going Rates of Public High School Students by Ethnicity and Gender to California Public Colleges and Universities

Ethnicity	Gender	Public	UC	CSU	CCC	Total #	UC	CSU	CCC	Total %
Asian/Pacific Islander	Men	20,288	4,463	2,887	6,226	13,576	22.0%	14.2%	30.7%	66.9%
	Women	20,091	5,448	3,123	4,891	13,462	27.1%	15.5%	24.3%	67.0%
	Total	40,379	9,911	6,010	11,117	27,038	24.5%	14.9%	27.5%	67.0%
Black	Men	11,721	351	1,096	4,091	5,538	3.0%	9.4%	34.9%	47.2%
	Women	13,755	679	2,117	4,278	7,074	4.9%	15.4%	31.1%	51.4%
	Total	25,476	1,030	3,213	8,369	12,612	4.0%	12.6%	32.9%	49.5%
Filipino	Men	5,954	520	1,021	2,130	3,671	8.7%	17.1%	35.8%	61.7%
	Women	5,784	748	1,285	1,887	3,920	12.9%	22.2%	32.6%	67.8%
	Total	11,738	1,268	2,306	4,017	7,591	10.8%	19.6%	34.2%	64.7%
Latino	Men	59,740	1,910	4,681	18,814	25,405	3.2%	7.8%	31.5%	42.5%
	Women	68,208	3,083	7,597	21,147	31,827	4.5%	11.1%	31.0%	46.7%
	Total	127,948	4,993	12,278	39,961	57,232	3.9%	9.6%	31.2%	44.7%
Native American	Men	1,346	41	116	435	592	3.0%	8.6%	32.3%	44.0%
	Women	1,510	93	195	483	771	6.2%	12.9%	32.0%	51.1%
	Total	2,856	134	311	918	1,363	4.7%	10.9%	32.1%	47.7%
White	Men	68,115	3,499	6,321	18,133	27,953	5.1%	9.3%	26.6%	41.0%
	Women	69,895	4,356	8,325	16,329	29,010	6.2%	11.9%	23.4%	41.5%
	Total	138,010	7,855	14,646	34,462	56,963	5.7%	10.6%	25.0%	41.3%
Statewide Totals	Men	167,164	10,784	16,122	49,829	76,735	6.5%	9.6%	29.8%	45.9%
	Women	179,243	14,407	22,642	49,015	86,064	8.0%	12.6%	27.3%	48.0%
	Total	346,407	25,191	38,764	98,844	162,799	7.3%	11.2%	28.5%	47.0%

Source: California Postsecondary Education Commission. California College-Going Rates by Ethnicity and Gender. 2007 College-Going Rates to Public Colleges and Universities.

For freshmen entering California Community Colleges, rates were highest for Filipino males (35.8 percent), Black males (34.9 percent), Filipino females (32.6 percent), and Native American males (32.3 percent).

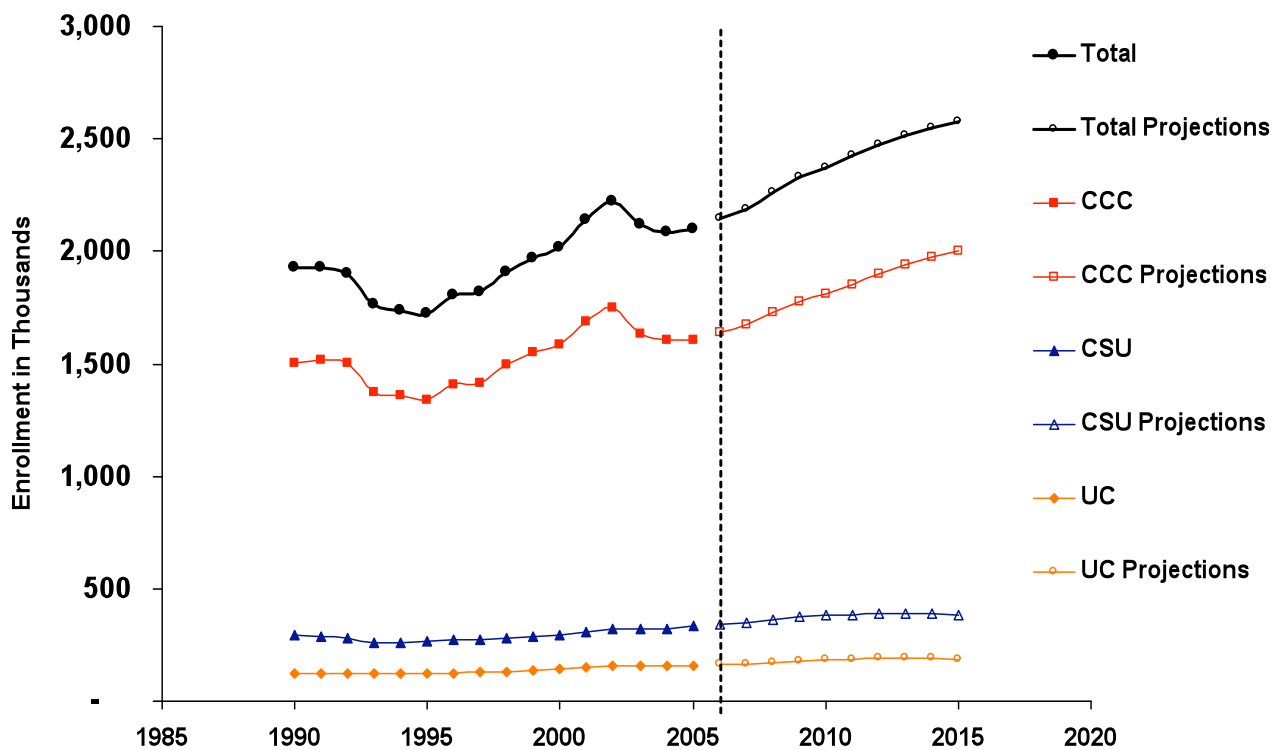
For freshmen entering the California State University system, rates were highest for Filipino females (21.8 percent) and males (17.1 percent). Asian and Pacific Islander females (15.3 percent), and Black females (15.1 percent).

College-going rates for University of California first-time freshmen were highest among Asian and Pacific Islander females (27.1 percent) and males (22.0 percent) and Filipino females (12.9 percent).

In 2007, the lowest college-going rates for first-time freshmen 19 years old and younger graduating from California public high schools and entering the California Postsecondary System were for Black and Native American males (3.0 percent) and Latino males (3.2 percent) entering the University of California.

Figure 4-11 shows trends in total undergraduate enrollment from 1990 through 2005 and projections through 2015, with enrollment increases for California Community Colleges dominating.

Figure 4-11
California Public Undergraduate Enrollment and Projections



Note: UC and CSU report fall census enrollment, and CCC reports fall term-end enrollment. UC enrollment excludes Health Sciences.

Source: State of California, Department of Finance, California Public Postsecondary Enrollment Projections, 2006 Series, Sacramento, California, December 2006.

California Community Colleges: The Challenge of Providing a Successful “Point of Entry” to Education, the Workforce, and the Economy

As Kirst notes, community colleges are the “point of entry” into higher education for many students, not only in California, but across the United States.⁹⁵ More than 45 percent of undergraduates in the U.S. now attend community colleges, which represents a 10 percent increase in the past decade.⁹⁶ Fast-growing states—California, Texas, and Florida—account for the growing numbers of community college students.⁹⁷

Community colleges, including those in California, serve a large proportion of racial/ethnic minority, low-income, first-generation college students. For some students, these colleges are not just a “point of entry,” but the only path to a college education and upward job and economic mobility. Many community college students, 72 percent according to a recent American Council on Education study,⁹⁸ expect to get a four-year college degree, but fewer than a quarter (23 percent) achieve this goal.

The mission of the California Community Colleges is to provide:

- Associate degrees and certificates shown to increase earnings and enable students to move forward in their professional development.
- Transfer education to public and private colleges and universities.
- Basic skills and English language proficiency for increasing numbers of students.
- Economic and workforce development to meet the ever-increasing demands of career-oriented young people, adult learners, and incumbent workers.
- Lifelong learning and educational opportunities for all Californians.⁹⁹

In California, 76 percent of 1999-2000 degree-seekers did not achieve within six years any of the goals that they had when they entered community college—receiving an Associate Arts/Associate Science Degree, receiving a certificate, or transferring to a four-year institution.¹⁰⁰ Although Latinos had the highest college-going rates to California Community Colleges in 2006, they had among the lowest completion rates; 82 percent did not complete a degree, obtain a certificate, or transfer to a four-year college.¹⁰¹ Blacks’ completion rates were even lower— 85 percent did not achieve any of the three goals.

If community colleges are the route to upward educational and workforce mobility in California, then the goal of providing open-access education must be matched with the goal of college degree completion. As it stands, California Community Colleges are rewarded by state funding arrangements based on an “open door” access model—increases in student enrollment—not on student degree completion.¹⁰² So, the “student churn business model” of education prevails in community colleges. “... (I)t costs less to let students drop out than to provide the intensive student services to help unprepared students persist.”¹⁰³ California ranks 46th in the nation in degrees/certificates per 100 students enrolled in two-year colleges.¹⁰⁴

The California State University System: The Challenge of Providing Remediation and Striving for Excellence

Four-year colleges and universities across the U.S. are in the process of transferring their remediation responsibilities to community colleges, and several state legislatures are no longer funding remediation at four-year institutions.¹⁰⁵ Officials of the California State University System announced on March 13, 2007 that “there is no realistic likelihood of achieving the Trustees goal of 90 percent readiness in both subjects (mathematics and English) by fall 2007.”¹⁰⁶ In fall 2006, 63 percent of entering freshmen were proficient in mathematics, a decline of one percent from the previous year, and 55 percent were proficient in English, the same percentage as 2005.¹⁰⁷

The mission of the California State University is:

- To advance and extend knowledge, learning, and culture, especially throughout California.
- To provide opportunities for individuals to develop intellectually, personally, and professionally.
- To prepare significant numbers of educated, responsible people to contribute to California’s schools, economy, culture, and future.
- To encourage and provide access to an excellent education to all who are prepared for and wish to participate in collegiate study.
- To offer undergraduate and graduate instruction leading to bachelor’s and higher degrees in the liberal arts and sciences, the applied fields, and the professions, including the doctoral degree when authorized.
- To prepare students for an international, multi-cultural society.
- To provide public services that enrich the university and its communities.¹⁰⁸

The average four-year graduation rate for California State University students who began their first term in 2000 with a full-time course load was the same as for comparative institutions nationwide (12 percent); the average five-year graduation rate for students whose first term included a full course load was 33 percent, about 5 percent higher than the nationwide average for comparable institutions.¹⁰⁹ Graduation rates increased among students who maintained full course loads over first, second, and third years, with four-year rates at 29 percent and five-year rates at 61 percent.¹¹⁰ Five-year graduation rates varied by gender; there was a nine point gap between females (47 percent) and males (38 percent), but these rates were comparable to ten-point gender differences reported by comparable institutions nationwide.¹¹¹ Graduation rates varied sharply among racial/ethnic groups—Whites had the highest five-year rate (47 percent), followed by Asians (38 percent), Latinos (33 percent), and Blacks (22 percent).¹¹²

Some California State University campuses had higher rates than others in terms of the percentages of Latino and Black five-year graduates. Latinos at CSU Stanislaus (44 percent), CSU Monterey Bay (40 percent), CSU San Bernardino (37 percent), CSU Fullerton (33 percent), and CSU Bakersfield (30 percent) had the highest rates; Blacks at CSU East Bay (26 percent), CSU San Bernardino (21 percent), CSU Northridge (19 percent), and CSU Dominguez Hills (18

percent) had the highest rate.¹¹³ In 2007, California ranked 47th in the U.S. in bachelor's degrees per 100 students enrolled.¹¹⁴

The University of California: The Challenge of Providing More Equal Educational Opportunities at the Top Tier to a Diverse Population

The University of California stands at the top of the three tiers of California's Postsecondary Education System, and it is challenged with providing more equal educational opportunities to an increasingly diverse student population.

The mission of the University of California is:

To serve society as a center of higher learning, providing long-term societal benefits through transmitting advanced knowledge, discovering new knowledge, and functioning as an active working repository of organized knowledge. That obligation, more specifically, includes undergraduate education, graduate and professional education, research, and other kinds of public service, which are shaped and bounded by the central pervasive mission of discovering and advancing knowledge. (From the University of California Academic Plan, 1974-1978)¹¹⁵

A GROWING GAP FOR CALIFORNIA PUBLIC HIGH SCHOOL GRADUATES IN UNDERREPRESENTED GROUPS AND NEW FRESHMEN ENTERING THE UNIVERSITY OF CALIFORNIA. Twenty years ago in 1989, underrepresented minorities accounted for about 29.6 percent of California's public high school graduates, while underrepresented minorities among new University of California freshmen stood at about 21.3 percent; the gap between the two was 8.2 percent.¹¹⁶ By 2007, the URM proportion of California's public high school graduates had grown to 45.1 percent, and URMs among University of California entering freshmen accounted for 24.4 percent of the class; the gap between the two was 20.7 percent.¹¹⁷

UNEQUAL OPPORTUNITIES AND UNEQUAL ACCESS. As a recent report of the Undergraduate Work Team of the Regents Study Group on University Diversity notes:

...unequal opportunities characterize the educational landscape in California. These educational disparities, which predate Proposition 209, are severe, large, and extensive, and associated with racial/ethnic and socioeconomic factors. These disparities are reflected in "a-g" completion rates, availability of UC-approved advanced coursework in California public high schools, the availability of qualified teachers and access to school resources, including: safe and properly equipped school facilities, textbooks (both quality and quantity), and counselors and other sources of college-preparation information and guidance.¹¹⁸

Student access to the University of California is unequal in many ways. Rates of admission vary sharply between public and private high schools, as well as among individual high schools, both public and private. Investigators at the University of California Institute for Labor and Employment, formerly a multi-campus research unit, conducted a study released in 2003 of student access to the University of California.¹¹⁹

The major findings of this study of graduates admitted to the University in 1999 were:

1. The average admission rate for non-sectarian private schools was almost three times the rate for public schools.
2. Public schools in affluent communities have unusually high admission rates.
3. Public schools with primarily White and Asian student bodies also have unusually high admission rates.
4. Recent policy interventions aimed at equalizing admission rates across schools by raising the floor or increasing the admission rates of the lowest schools are unlikely to have much impact on unequal access to the University of California, since they “do nothing to reduce the yawning gap between the majority of schools and the small elite tier of public and private schools at the top.”¹²⁰

The authors note that inequalities of access to the University of California have implications for racial and ethnic inequality in terms of academic achievement and income, both of which have been increasing.¹²¹

RECENT TRENDS IN NEW CALIFORNIA RESIDENT FRESHMEN ADMITS BY RACE AND ETHNICITY AT THE UNIVERSITY OF CALIFORNIA. During the period from fall 1997 through 2007, the overall proportion of underrepresented groups (e.g., American Indian, African American, Chicano/Latino/Other Hispanic) increased from 18.6 percent in 1997 to 22.9 percent in 2007. However, the proportion for individual groups has declined—from 3.8 percent in 1997 to 3.6 percent in 2007 for African Americans, and from 0.8 percent to 0.6 percent in 2007 for American Indians.¹²² Only the proportion of Chicano/Latino/Other Hispanic group increased—from 14.1 percent in 1997 to 18.7 percent in 2007.¹²³

When the distribution of underrepresented groups is reviewed campus by campus over the 1997-2007 period, the number of freshman admits shows a sharp decline of African Americans entering UC Berkeley—from 525 students in fall 1997 to 190 students in 2004, with increases from 2005 onward. In 2007, the number stood at 298. UCLA also showed a sharp decline in new resident freshmen entering beginning in fall 1997 when 485 African American freshmen entered; in 1998 the number was 292, in 2004, it was 196. By 2007, it had climbed to 358, still well below the 1997 number.

Among the factors directly affecting these downward trends among some racial/ethnic groups were the 1995 UC Board of Regents SP-1 Resolution forbidding a consideration of race ethnicity in admissions in and the California voters’ approval of the anti-affirmative action ballot initiative, Proposition 209 in 1996.

DISPARITIES IN GRADUATION RATES FROM THE UNIVERSITY OF CALIFORNIA BY RACE AND ETHNICITY. The average four-year graduation rate at the University of California was 46 percent for students who in 2000 took a full course load in their first term, a percentage that is slightly higher than that at comparable institutions nationwide, 45 percent.¹²⁴ The average five-year graduation rate

for students who began their first term with a full course load was 74 percent, which is above the nationwide average of 66 percent for comparable institutions.¹²⁵ If students maintained a full course load for their entire first year, their graduation rate was 79 percent; if they maintained a full course load for the first, second, and third years, their rate climbed to 89 percent.¹²⁶

Five-year graduation rates at the University of California vary by race/ethnicity and gender. Among students who maintained a full course load during their entire first year, Whites had a rate of 80 percent; Asians, 79 percent; Latinos, 72 percent; and Blacks, 67 percent.¹²⁷

UC campuses with the highest five-year graduation rates for Latinos were UC Santa Barbara (76 percent), UCLA (75 percent), and UC Riverside (71 percent). Those with the highest rates for African Americans were UCLA (71 percent), UC Santa Barbara (71 percent), and UC Berkeley (70 percent).¹²⁸

Overall, males had a five-year graduation rate of 76 percent and females, a rate of 81 percent.¹²⁹

BACHELORS' DEGREES IN BIOLOGICAL AND BIOMEDICAL SCIENCES AT THE UNIVERSITY OF CALIFORNIA. Over the period from 1997 through 2006, somewhere between 4,300 and 5,300 students each year graduated from the University of California with bachelor's degrees in biological and biomedical sciences.¹³⁰ Since many of these students are likely to apply to University of California medical schools at Davis, Irvine, Los Angeles, San Diego, and/or San Francisco, trends in the gender and racial/ethnic makeup, as well as the size of this applicant pool are important in terms of the number of underrepresented resident applicants to the medical schools.

Table 4-8 shows that Native Americans and Blacks have the fewest students completing bachelor's degrees in biological and biomedical sciences at the University of California over the 1996-2007 year period. The number of Native Americans completing degrees has increased overall during the past ten years; however, the number of Blacks has remained fairly stable. The number of Latino graduates has increased.

Table 4-8
Number of Students Completing Biological and Biomedical Sciences Bachelor's Degrees at the
University of California, 1997-2006, by Gender and Race/Ethnicity

Year	Gender	Asian/ Pacific Islander	Black	Filipino	Latino	Native American	Other	White	Non- resident alien	NR	Total
1997	Male	1,048	49	93	178	10	39	907	26	82	2,432
	Female	1,094	58	144	190	6	44	986	46	96	2,664
	Total	2,142	107	237	368	16	83	1,893	72	178	5,096
1998	Male	1,019	45	94	190	15	34	811	38	106	2,352
	Female	1,078	51	138	208	11	57	921	44	131	2,639
	Total	2,097	96	232	398	26	91	1,732	82	237	4,991
1999	Male	941	38	127	183	11	65	760	31	181	2,337
	Female	955	54	144	208	11	64	878	38	183	2,535
	Total	1,896	92	271	391	22	129	1,638	69	364	4,872
2000	Male	761	43	136	159	11	53	709	23	191	2,086
	Female	874	53	159	218	14	56	908	40	270	2,592
	Total	1,635	96	295	377	25	109	1,617	63	461	4,678
2001	Male	784	35	117	180	18	58	710	27	93	2,022
	Female	1,000	68	152	199	18	73	946	50	104	2,610
	Unknown	1	0	0	0	0	0	0	0	0	1
	Total	1,785	103	269	379	36	131	1,656	77	197	4,633
2002	Male	638	38	98	136	9	43	663	29	128	1,782
	Female	964	67	155	204	18	57	856	47	169	2,537
	Unknown	0	0	0	0	0	0	0	0	1	1
	Total	1,602	105	253	340	27	100	1,519	76	298	4,320
2003	Male	645	38	90	159	7	55	601	37	143	1,775
	Female	983	68	166	236	21	51	900	47	150	2,622
	Unknown	1	0	0	0	0	0	0	0	1	2
	Total	1,629	106	256	395	28	106	1,501	84	294	4,399
2004	Male	643	29	92	145	5	43	632	34	128	1,751
	Female	1,065	62	208	263	10	69	877	61	150	2,765
	Unknown	0	0	0	0	0	0	0	0	5	5
	Total	1,708	91	300	408	15	112	1,509	95	283	4,521
2005	Male	749	38	87	163	7	56	642	39	126	1,907
	Female	1,253	62	183	265	18	87	900	79	164	3,011
	Unknown	0	0	0	0	0	0	0	1	9	10
	Total	2,002	100	270	428	25	143	1,542	119	299	4,928
2006	Male	843	39	135	160	10	59	686	55	108	2,095
	Female	1,355	68	220	256	25	83	952	82	165	3,206
	Unknown	0	0	0	0	0	0	0	1	16	17
	Total	2,198	107	355	416	35	142	1,638	138	289	5,318

Source: Adapted from Custom Data Report. Degrees by Discipline for the Last Ten Years (1997-2006). Biological and Biomedical Sciences. Bachelor's Degrees. University of California. California Postsecondary Education Commission, January 26, 2008. NR=No Response.

Only one of the University of California campuses—Davis—was ranked among the top fifty U.S. colleges and universities in the numbers of bachelor's degrees in biological and biomedical sciences awarded to Blacks in 2007.¹³¹ Several UC campuses—Davis, Santa Barbara, San Diego, Santa Cruz, and Los Angeles—ranked in the top thirty in numbers of degrees awarded to Native Americans.¹³² For Latinos, all of the UC undergraduate campuses were included among the top-ranked producers, as were several California State University campuses.¹³³

Building Bridges for California's Students on the Educational Pathway to Medical School

Beginning in the late 1960s and continuing through to the present, several types of efforts are being made to enhance academic skills, particularly in math and science, and to provide other types of support to low-income and minority students, as well as to other students. These efforts are aimed at students all along the educational continuum from kindergarten to medical school:

- Students in pre-school, elementary school, and secondary school
- Students in combined high school/college/medical school programs
- Students who have completed high school and are college eligible
- Students who have been admitted to a college or university
- Students in two- and four-year colleges
- Students who have completed their baccalaureate degrees and are aiming for medical school
- Students who have been accepted to medical school and planned to matriculate as first-year students
- Students who have been rejected by medical schools and are committed to reapplying and gaining entry.

Bridge-building Efforts and Their Common Features

Grumbach and colleagues in their 2003 report, *Strategies for Improving the Diversity of the Health Professions*, described these efforts as follows:

- Programs, or major initiatives, by government or private foundations providing funding for institutions to employ a number of interventions to “operationalize” the program. An example is the Health Career Opportunities Program (HCOP) funded for many years by the Department of Health and Human Services Health Resources and Services Administration’s Bureau of Health Professions.¹³⁴
- Interventions, or activities occurring at the institutional level to implement educational or policy change. An example is “using funding from the HCOP program, a school, or consortium of schools may develop an intervention to boost math and science achievement among college students or to prepare post-baccalaureate students for medical school.”¹³⁵
- Intervention strategies, or the particular components of an intervention. An example is a college enrichment intervention that may include strategies of mentoring, exposure to the health professions, and analysis of study techniques.¹³⁶

These investigators identified common features of programs:

- Personal and/or academic counseling
- Academic remediation/intervention
- Academic enrichment
- Parent involvement

- Social support
- Mentoring
- Scholarship support.¹³⁷

Grumbach et al. also catalogued federal programs, privately funded programs with a national scope, and California-specific programs, both publicly and privately supported.¹³⁸ Most important, they examined evidence of intervention effectiveness for different types of interventions at various stages along the educational pathway. Programs described in the report include Alliances for Graduate Education and the Professoriate, Area Health Education Centers, the Association of Hispanic-Serving Health Professions Schools, Bridges to the Future Program, Centers of Excellence, Center of Research Excellence in Science and Technology, Disadvantaged Faculty Loan Repayment, Loans to Disadvantaged Students, Health Careers Opportunity Program, Health Education and Training Centers, Health Professions Partnership Initiative, Historically Black Colleges and Universities Undergraduate Program, Kids into Health Careers, and others.

Assessing Problems and Progress

Among the major findings of the *Strategies for Improving the Diversity of the Health Professions* report are the following:

1. Lack of basic educational opportunities and achievements for many minority groups is the fundamental problem leading to the underrepresentation of these groups in the health professions.
2. There is considerable opportunity for better coordination among agencies that fund and implement programs designed to improve the educational success of URM students and increase their participation in the health professions.
3. The majority of health science-related interventions for URMs at the high school and college level focus on career goals of biomedical research and medicine.
4. There is a paucity of high-quality research evaluating the effectiveness of these interventions in improving educational achievement and advancement for URMs and disadvantaged students.
5. The few rigorously conducted research studies that have been performed do consistently indicate that interventions can have a positive impact.
6. Despite the considerable resources invested in diversity programs, academic achievement and entry into the health professions by URMs have not increased significantly.
7. Funders interested in promoting greater racial and ethnic diversity in the health professions face a dilemma in deciding how to prioritize resources between ‘upstream’ early education pipeline interventions and ‘downstream’ pipeline

interventions targeting students near the health professional stages of their education.¹³⁹

The Vital Role of Federal and State Government and Private Foundations

Federal and state government and private foundations all play vital roles in California in programs, interventions, and intervention strategies designed to increase the diversity of health professionals.

The California Endowment has taken a leadership role for many years, sponsoring research, programs, and collaborative actions to support policies addressing health disparities among Californians, access to linguistically appropriate and culturally competent care, and the need to increase diversity among health professions students and practitioners in the state. The focused Program in Medical Education (PRIME), developed in partnership with the University of California Office of the President, is an example of a successful effort to link health workforce needs in California, health care needs of underserved populations, and medical education.

The California Wellness Foundation also has made diversity in the health professions a priority funding area.

The California HealthCare Foundation plays a major role in funding efforts related to access, quality, cost, financing, and provision of health care in California and has supported our efforts in this study to conduct additional analyses and disseminate information designed to revitalize diversity efforts of medical schools.

Educational Outreach Efforts and California's Public Universities and Colleges

Educational outreach programs involving the University of California at a systemwide level, the California State University System, California Community Colleges, and K-12 schools are critical links for students in enhancing educational achievement and attainment. Educational outreach programs were given new urgency by the Board of Regents of the University of California as a way to mitigate the effects of the Regents' 1995 resolutions, SP-1 and SP-2, forbidding affirmative action within the University, and Proposition 209, the 1996 "California Civil Rights Initiative," which was approved by voters and prohibited a consideration of race, sex, color, ethnicity, or national origin in the operation of public employment, public education, or public contracting.

An Outreach Task Force convened by the Regents in 1996 recommended new strategies and sharp increases in state funding supporting an expansion of programs in its 1997 report.¹⁴⁰ The Task Force focused on two goals: 1) improving opportunities for California students in educationally disadvantaged circumstances to achieve UC eligibility and be admitted to the University, and 2) contributing to the academic enrichment of UC campuses through a diverse student body.¹⁴¹ In 1999, Governor Gray Davis asked the University to add to these efforts by being involved in teacher development programs that would support the implementation of new academic standards and accountability in the state's K-12 schools.

Expanding Educational Opportunity: A Status Report on the Educational Outreach and K-12 Improvement Programs of the University of California, released in 2001, noted that the University's efforts had shifted to emphasize two objectives: 1) investing in the long-term educational capacity of K-12 schools; and 2) improving student diversity in the University of California.¹⁴² To meet these objectives, programs were concentrated in four areas:

1. Student-centered programs that provide academic enrichment through tutoring, mentoring, college advising, college preparatory coursework and educational experiences beyond the classroom for K-12 students;
2. School partnerships that offer curriculum development, direct instruction, community engagement and other assistance to many of California's lowest performing schools
3. Professional development programs that increase the skills and effectiveness of teachers in their subject matter; and
4. Enrichment and informational programs for K-12, Community College and graduate and professional students to facilitate ongoing educational opportunities.¹⁴³

At the time of the 2001 status report, 100,000 students were participating in UC-led student-centered programs, 256 low-performing schools with enrollments of more than 165,000 students were involved in UC partnerships, and more than 70,000 teachers were being served by California Professional Development Institutes and Subject Matter Projects.¹⁴⁴ In 2000, state and University of California support for the programs totaled \$184,987 million with \$107,805 earmarked for teacher professional development and school capacity programs.¹⁴⁵ Funds for these programs, however, began a steady decline in 2001.

In fall 2002, University of California President Richard Atkinson called for a Strategic Review Panel to:

- Assess the effectiveness of the University's outreach programs;
- Recommend desirable changes to its overall outreach plan;
- Set reasonable short- and long-term goals for the University in pursuing its outreach agenda, given the dimension of the educational disparities in California and the University's resources and expertise; and
- Recommend a new working alliance with the state's K-12 educators and with California community colleges.¹⁴⁶

In the 2003-2004 state budget, education outreach funds were cut by \$33.3 million, a fifty percent reduction in remaining state funding for UC outreach to K-12 schools and students.¹⁴⁷ President Atkinson said at that time:

This is a deeply distressing cut. These programs have been the heart and soul of the University's effort to improve academic achievement and college preparation in California's public schools. They are the very programs the Regents sought to expand

when race-conscious admissions policies were eliminated at UC. This cut essentially returns us to the level of funding we had before our expansion began five years ago.¹⁴⁸

The 2005-2006 budget continued \$17.3 million in state funding for UC's academic preparation programs. However, the Governor's message indicated that this funding was "on a one-time basis, with the understanding that the University will work with the Administration to fully evaluate the cost-effectiveness of each program and eliminate those that cannot demonstrate an adequate return on investment."¹⁴⁹

In the 2006-2007 budget, the Governor removed the approximately \$17 million in state funding, leaving \$12 million in UC resources for the educational outreach programs.¹⁵⁰

In the 2007-2008 budget, the Governor removed \$19.3 million in state funding requested to help fund UC's educational preparation programs. University President Robert Dynes noted, "These programs are critical to providing the pathways to college that a state like California depends upon for its economic and social vitality, and we will aggressively seek continuation of state funding for them."¹⁵¹ Again, the educational outreach program's funding was limited to \$12 million in internal UC resources.

In the 2008-2009 budget, with the state experiencing a \$14 billion shortfall, the University requested \$5 million for an "Educational Imperative," a new initiative designed to address key issues for California's K-12 schools by partnering with the K-12 schools, California State University, and others by using "research-based, technology-focused," policy-informing approaches."¹⁵² The Governor's 2008-2009 budget did not include the \$5 million to meet this request. Then University Provost and Executive Vice President, Wyatt R. (Rory) Hume, said:

Throughout its history, UC has mobilized its teaching, research, and public service mission to respond to crises that have confronted California's economic prosperity and the quality of life of its citizens. The University's recent long-range planning efforts have resoundingly concluded that it must now do the same to meet today's education crisis.¹⁵³

California Superintendent of Public Instruction Jack O'Connell described the systemic and persistent achievement gap "the most intractable issue facing public education today."¹⁵⁴ At the November 13-14, 2007 Achievement Gap Summit in Sacramento, he went on to say:

The movement to high standards for all students has made a powerful, positive difference for all groups of students. We've shed light on the achievement of all student groups, and thanks to the work of our teachers and schools, we've seen significant improvement across the board. But the data also show that the achievement gap is not closing, nor is it solely based on poverty. We have a racial achievement gap as well....Our test scores show that African American students and Latino students who are not poor are achieving below the levels of white students who are poor.

These are some of the programs in California that are attempting to address these gaps:

PRE-COLLEGE PROGRAMS. Some math and science programs have addressed issues of “equity and excellence” in education by attempting to increase the number of underrepresented students, many of whom are first-generation students, who graduate from high school with the interest and preparation to enroll in and graduate from four-year colleges in the fields of math, science, engineering, and technology.¹⁵⁵ The sequence of course-taking in these programs is: math through calculus; science through biology, chemistry, and physics; four years of college-prep English; three years of social studies, and three years of a foreign language.¹⁵⁶ In addition, AP courses are recommended for students. This rigorous high school curriculum is almost identical to that reported by *The Condition of Education* to eliminate the first-generation gap in persistence to a college degree.¹⁵⁷

MESA is the oldest and most successful of these programs. The Mathematics, Engineering, and Science Achievement program, was established in 1970 and is administered by the University of California.^{158,159} The program began in Oakland, California as an outreach program for UC Berkeley with partnerships with private industries needing engineers and other scientists. MESA’s results have been remarkable—90 percent of MESA high school graduates attend college; 60 percent major in math or science-based fields.¹⁶⁰ Today MESA works with University of California, California Community Colleges, the California State University, the Association of Independent Colleges and Universities, and the California Department of Education, corporate partners, community-based education centers, school districts and individual schools. MESA California is a founding member of MESA USA.

COSMOS, or the California State Summer School for Mathematics and Science program, is a pre-college residential program at UC Irvine and UC Santa Cruz that gives high school students access to UC scientists, laboratories, and advanced topics.¹⁶¹

The Puente Project provides “teaching, counseling, and mentoring to increase the number of educationally underserved students who enroll in four-year colleges and universities, earn their degrees, and return to the community as mentors and leaders for future generations.”¹⁶²

EAOP, the Early Academic Outreach Program, works with more than 80,000 high school students who attend more than 500 middle and high schools. More than a quarter of the historically underrepresented student body at the University of California are EAOP alumni.¹⁶³

The Pre-Collegiate Academy provides “academic enrichment, service learning, and a six-week summer residential experience for high-achieving, low-income junior and senior high school students from Los Angeles.”¹⁶⁴ There are currently 22 participating schools. Students take math and writing courses, are tutored by University of California, Berkeley undergraduates, and learn how to write college essays. They also participate in leadership seminars, community service projects, college seminars, and cultural events. During their second summer session, students have a 10-day reunion on the Berkeley campus and get help preparing for the college admissions process. Students who apply to UC Berkeley and gain admission become Incentive Awards Scholars, a program developed in 1992, and receive \$30,000 scholarships, attend meetings and workshops about student life, and have advisors in Financial Aid and Student Affairs offices.¹⁶⁵

College Track, a privately supported effort, “engages students over the course of eight years, from the summer before high school through college graduation.”¹⁶⁶ Working with high schools in East Palo Alto, San Francisco, and Oakland, the program has been successful in several ways: 100 percent of high school graduates have been admitted to college, and 90 percent of the 229 students who have entered college through the program have either graduated or are still pursuing a degree. The program expects a 75 percent graduation rate over a six-year period; which compares to a national rate of 24 percent for first-generation college graduates.¹⁶⁷ College Track has three major program areas: Academic Affairs, Student Life, and College Affairs.

COLLEGE-ELIGIBLE ASSISTANCE PROGRAMS. Both University of California and California State University campuses have outreach programs that target programs to student populations with historically lower persistence and graduation rates.¹⁶⁸ The Educational Opportunity Program (EOP) provides “admission, academic, and financial assistance” to eligible undergraduate students.¹⁶⁹ UC Santa Barbara’s EOP has been instrumental in the campus having the highest graduation rates among African American and Latino students.¹⁷⁰ The EOP Summer Transitional Program Enrichment Program (Summer Bridge) now recruits faculty and staff outside EOP counselors to assist in the Program. This has encouraged faculty and staff from other student service departments, such as Health Education and Campus Learning Assistance (CLAS) to participate.¹⁷¹

GRADUATE AND PROFESSIONAL SCHOOL ACADEMIC PREPARATION PROGRAMS. The purpose of the (G&PS) programs is to “identify high-caliber economically and educationally disadvantaged students and prepare them for careers as future academics, researchers, specialists, practitioners and leaders.”¹⁷² There are four programs designed to raise student achievement levels and provide them with the skills and experience that they need to compete for admissions to graduate and professional programs: 1) the Summer Research Internship Program (SRIP) prepares students for graduate programs across all UC disciplines; 2) UC LEADS (Leadership Excellence through Advanced Degrees) aims at engaging diverse graduate students in STEM (Science, Technology, Engineering and Math) disciplines, so that they can become leaders in academia, industry, and government; 3) Law School Preparation Programs prepare undergraduate and graduate students for law school and beyond; and 4) Postbaccalaureate Medical School Programs aim “to increase the number of physicians who are likely to practice in underserved areas of California, and to increase the number of culturally competent and capable physicians practicing in California.”¹⁷³

Postbaccalaureate Medical School Programs. Today there are nearly 100 postbaccalaureate premedical programs in the United States.¹⁷⁴ Seventeen of these programs are in California, and 5 of the 17 are administered by University of California medical schools at Davis, Irvine, Los Angeles, San Diego, and San Francisco. Grumbach and Chen designed a retrospective cohort study to assess whether the programs are effective in increasing medical school matriculation rates for program participants.¹⁷⁵ The cohort included 265 participants in the programs in the 1999-2002 academic years and a control group of 396 college graduates who applied to the program but did not participate. Of the program participants, two-thirds were underrepresented minorities and half came from families in which neither parent had attended college. The outcome analyzed was matriculation by 2005 in an accredited U.S. medical school. Results of the assessment showed that 67.2 percent of participants and 22.5 percent of the control group had

matriculated into medical school. This study indicates that these programs appear to be effective in increasing medical school matriculation for underrepresented minorities and those coming from families without high levels of educational attainment.

Challenges for California's Medical School Diversity

California's medical schools, both public and private, have faced formidable challenges in the past, and they face formidable challenges now and in the future in terms of reaching parity among groups underrepresented in medicine and their numbers in California's general population in the state and in geographic regions of the state. Assessing trends by race and ethnicity and URM status has also become more difficult as the Census, the Association of American Medical Colleges, and individual medical schools have changed methods used to collect data on racial/ethnic status.

University of California Medical Schools

Trends in First-year Enrollment by Race and Ethnicity and URM Status, 1990-2007

Our analysis of medical school trends in California focuses on the years from 1990 through 2007. We utilize data provided by the University of California Office of the President, Division of Health Sciences and Health Services (formerly the Division of Health Affairs). During this period, California's public medical schools have experienced both increases and decreases in total annual enrollment and in the number of URM first-year enrollees.

In 1990, total annual first-year class enrollment at the University of California's five medical schools at Davis, Irvine, Los Angeles, San Diego, and San Francisco stood at 598* and the total number of URM† students was 87, or 15 percent. By 1992, total enrollment had dropped to 569, and the number of URMs had increased to 117, or 21 percent of the entering class.¹⁷⁶ The period from 1992 through 2000 was a period of steady decline in the total number of URM first-year enrollees at UC medical schools, with the greatest declines between the years 1995 and 1996 and 1998 and 1999.¹⁷⁷ By 2000, total first year class enrollment was 569 and total URMs numbered 61, or 11 percent.

During the period from 2001 through 2007, total first-year class enrollment at the five medical schools, including the three affiliated medical education programs at Drew-UCLA, UC Berkeley-UCSF, and UC Riverside-UCLA, ranged from a low of 628 in 2003 to a high of 675 in 2007.¹⁷⁸ The greatest number of URM‡ students enrolled in a single year was 143, or 21 percent of the students entering in 2007.

* This total first-year enrollment figure does not include entering students at medical education programs at Drew-UCLA, UC Berkeley-UCSF, and UC Riverside-UCLA.

† URMs were defined during this period as American Indians/ Alaska Natives, Blacks, Mexican Americans/Chicanos, and Mainland Puerto Ricans.

‡ URMs were defined during this period as American Indians/Alaska Natives/Native Hawaiians, Blacks, Mexican-Americans/Chicanos/Other Hispanics/Latinos reporting single or multiple race/ethnicity due to changes that the AAMC made in methods used to collect data on racial/ethnic status.

From 2003 through 2007, there was a small and steady increase in the total number of URM students at UC medical schools. Blacks and Hispanics made gains, even though their total numbers in entering classes remained small. American Indians, Alaska Natives, and Native Hawaiians experienced both year-to-year increases and declines. In 2007, there were 39 entering Blacks, 84 Hispanics, and 5 American Indians, Alaska Natives, and Native Hawaiians across the five schools and their affiliated programs. In 2003, there were 30 Blacks, 56 Hispanics, and 5 American Indians, Alaska Natives, and Native Hawaiians.

Compared to their numbers in 2007 estimates of California's general population, individual URM groups—Hispanics (Mexican Americans, Chicanos, Other Hispanics/Latinos), Blacks, American Indians, Alaska Natives, and Native Hawaiians—remained underrepresented among the 2007 entering medical school class of the University of California's five medical schools at Davis, Irvine, Los Angeles, San Diego, and San Francisco.

- Hispanics accounted for 12 percent of UC entering medical students in 2007 vs 36 percent of California's population in 2007 estimates.¹⁷⁹
- Blacks accounted for 6 percent of entering UC medical students in 2007 vs. 6.2 percent of California's population in 2007 estimates.¹⁸⁰
- American Indians, Alaska Natives, and Native Hawaiians accounted for 0.7 percent of entering UC medical students in 2007 vs. 1.1 percent of California's population in 2007 estimates.¹⁸¹

This underrepresentation persists for the University of California medical schools as a group, even though there are variations among the campuses in first-year enrollment of URM students. For example, URM students in 2007 accounted for 20 (19 percent) of a total of 105 enrollees at UC Davis, 15 (14 percent) of a total of 104 enrollees at UC Irvine, 15 (12 percent) of a total of 121 enrollees at UCLA, 23 (17 percent) of a total of 134 enrollees at UC San Diego, and 44 (30 percent) of 147 enrollees at UCSF.

The Greenlining Institute's Spring 2008 report, *Representing the New Majority: Part III: A Status Report on the Diversity of the University of California Medical Student Body*,¹⁸² Timothy Bates' and Susan Chapman's May 2008 paper *Diversity in California's Health Professions: Physicians* from UCSF's Center for the Health Professions;¹⁸³ and Ann Steinecke's analysis "After Affirmative Action: Diversity at California Medical Schools"¹⁸⁴ provide additional and extensive analyses of trends in diversity at California medical schools from 1990 through 2006 or 2007.

2008 First-year Enrollment Update by Race and Ethnicity and URM Status

In 2008, total enrollment for University of California medical schools and their three affiliated programs at Drew-UCLA, UC Berkeley-UCSF, and UC Riverside-UCLA increased to 697, representing a 3 percent increase over total enrollment of 675 in 2007.¹⁸⁵ This increase represents growth in enrollment in the PRIME (Program in Medical Education) program at UC Irvine,

UCSF, and UCLA. The total number of URM* first-year enrollees at all UC campuses in 2008 was 138 or 20 percent. There were 7 American Indian/Alaska Native/Hawaiian Natives representing 1 percent of all students, 42 Black students representing 6 percent of all entering students, and 75 Hispanics representing 11 percent of students. Among UC campuses in 2008, UCSF and UCLA had the greatest percentage of URMs, 23 percent and 22 percent, respectively.

California's Private Medical Schools

Trends in First-year Enrollment by Race and Ethnicity and URM Status, 1990-2007

Trends for the three California private medical schools—Loma Linda, Stanford, and the University of Southern California—show annual total first-year enrollment increases from 361 in 1990 to 422 in 2007, with both upswings and declines in total enrollment and in URM enrollment over this period.^{186,187, 188} The percentage of URMs enrolled as first-year students at private medical schools stood at 13 percent in 1990 and 16 percent in 2007. URM† percentages ranged from 8 percent to 15 percent from 1990 through 2000 with stable trends from 1990 through 1992 and both increases and declines from 1993 through 2000. URMs‡ accounted for 13 percent of total enrollment in 2001 and 16 percent in 2007.

The years from 2003 forward show small increases in the total number of URMs enrolled as first-year students by California's private medical schools. In 2007, Hispanics represented 44, or 10 percent, of 422 total enrollees in California's private medical schools; Blacks, 20 (5 percent); and American Indians, Alaska Natives, and Native Hawaiians 4 (1 percent). (Chapter 8: Case Studies of UCSF and Stanford University Medical Schools provides a detailed analysis of trends in applicants, accepted applicants, matriculants, and graduates of these two schools.)

2008 First-year Enrollment Update by Race and Ethnicity and URM Status

In 2008, total enrollment for California's private medical schools stood at 410, a small decline from 2007.¹⁸⁹ The total number of URMs§ entering in 2008 was (22 percent), a sharp increase from 16 percent in 2007, accounted for by increases in all URM groups—Blacks, Hispanics, and American Indians/Alaska Natives/Native Hawaiians. All private medical schools showed increases from 2007 to 2008 in the percentage of URMs in their entering classes. URMs increased at Loma Linda from 19 to 21 percent; at Stanford, from 14 to 17 percent; and at the University of Southern California, from 15 to 25 percent.¹⁹⁰

* URMs were defined during this period as American Indians/Alaska Natives/Native Hawaiians, Blacks, Mexican-Americans/Chicanos/Other Hispanics/Latinos reporting single or multiple race/ethnicity due to changes that the AAMC made in methods used to collect data on racial/ethnic status.

† URMs were defined during this period as American Indians/Alaska Natives, Blacks, Mexican Americans/Chicanos, and Mainland Puerto Ricans.

‡ URMs were defined during this period as American Indians/Alaska Natives/Native Hawaiians, Blacks, Mexican-Americans/Chicanos/Other Hispanics/Latinos reporting single or multiple race/ethnicity due to changes that the AAMC made in methods used to collect data on racial/ethnic status.

Physician Diversity in California

As the diversity of California's general population, its student population, and its patient population has grown, the need to have a health care workforce, including a physician workforce, that reflects this diversity and is culturally and linguistically competent, has become increasingly compelling.

Key findings from *Physician Diversity in California: New Findings from the California Medical Board Survey*, a March 2008 report by Grumbach, Odom, and Moreno et al.,¹⁹¹ from an analysis of survey responses from more than 60,000 physicians who are active in patient care in California and no longer in training underline this need for diversity.

The Underrepresentation of Latinos and African Americans among California Physicians Remains Severe

California Medical Board survey findings confirm the severe underrepresentation of Latinos and African Americans in the state's physician workforce. The disparity is particularly severe for Latinos, who now constitute more than one-third of the state's population, but in this survey represented only 5.2 percent of the physicians.¹⁹² Blacks represented only 3.2 percent of the workforce, but 7.0 percent of the state's population.

California Has Very Few Physicians of Samoan, Cambodian, and Hmong/Laotian Ethnicity

These ethnic groups should be identified as being underrepresented in medicine and more actively recruited into the profession. Such findings show that "(a) major strength of the California Medical Board survey is the unprecedented ability to examine variations within major ethnic groups. This is particularly an asset for detecting variations within Asian ethnic groups and revealing specific Asian ethnicities that are underrepresented in medicine."¹⁹³

Minority Physicians in California Play a Key Role in Underserved Communities

"Minority physicians in California are much more likely than White physicians to practice in Medically Underserved Areas, Health Professions Shortage Areas, communities with high proportions of minority populations, and low-income communities. This pattern is particularly true for the traditionally underrepresented physician ethnic groups (e.g., African Americans, Latinos, and Native Americans), but also holds true to a lesser degree for physicians from other non-White ethnic groups."¹⁹⁴

Minority Physicians in California Are Much More Likely than White Physicians to Work in Primary Care

More than 40 percent of minority physicians practice in generalist primary care fields (i.e., family medicine, general medicine, general pediatrics), compared with 30 percent of White physicians. As concerns grow about the primary care crisis in California, this finding demonstrates another strategic role of minority physicians in the state.¹⁹⁵

California Physicians Speak Many Languages in addition to English

Nearly one in five physicians in the state reports fluency in Spanish, including many non-Latino physicians. Fluency in Asian languages is largely limited to physicians of Asian ethnicity.¹⁹⁶

Physician Supply in California

A more recent assessment of California's physicians funded and released by the California HealthCare Foundation in June 2009, and conducted by Grumbach and colleagues, Chjattopadhyay and Bindman,¹⁹⁷ had four major findings:

The Overall Supply of MD Physicians in the State Is Lower than Expected

The American Medical Association (AMA) Masterfile data estimates about 80,000 actively practicing physicians in California. Using California Medical Board data, this assessment estimates 66,480 MD physicians.¹⁹⁸

The Number of Primary Care Physicians Actively Practicing in California Is at or Below Estimated Needs

Thirty-four percent of physicians reported that they were practicing in primary care, which is about 20 percent lower than the number estimated by AMA data, and amounts to 59 primary care MD physicians per 100,000 population. A number of studies estimate that the number of primary care physicians needed is in the range of 60 to 80 per 100,000. Of California's 58 counties, only 16 have primary care physicians within the needed supply estimate; in four counties the range is less than half this range.¹⁹⁹

An Abundance of Specialists Is Practicing in the State

Sixty-seven percent of active physicians reported practicing as non-primary care specialists. With 115 specialist physicians per 100,000 population, California is above the upper range of estimated need of 105 per 100,000, and more than half of the state's counties are above the bottom level of need of 85 per 100,000 population.²⁰⁰

Rural Counties Suffer from Low Physician Practice Rates, and from a Diminishing Supply of Physicians

Central Valley and Inland Empire counties have a low supply of physicians. Other problems of rural counties are an aging physician supply and difficulties recruiting younger physicians.²⁰¹

Realizing California's Potential as a Diverse State

California's potential as a diverse state was expressed nearly twenty years ago by the California Postsecondary Education Commission in a report to the California Legislature.²⁰²

The demographic shifts occurring in California provide the opportunity for California to create a society that reflects the racial, ethnic, cultural, and linguistic vibrance and vitality of its changing population....Such a society can be described as 'synergistic'...California is part of a world that is becoming increasingly international, interdependent, and multicultural....Groups within the California population that are distinguished by specific socioeconomic, racial, ethnic, linguistic, and gender characteristics remain whole, but aspects of each group's culture become part of a shared world view.

The undergirdings of this shared world view are:

1. Awareness of and appreciation and respect for the values and strengths that all individuals, groups, cultures, and perspectives contribute to this State.
2. A recognition of the need to learn about the cultures that comprise this State in order that Californians can work, live, and participate together in developing a healthy and productive society.
3. A recognition of the need to learn about the cultures that comprise this State in order that Californians can work, live, and participate together in developing a healthy and productive society.
4. A concerted effort to gain 'a personal familiarity, sensitization, and comfort with' all the cultures in our society.

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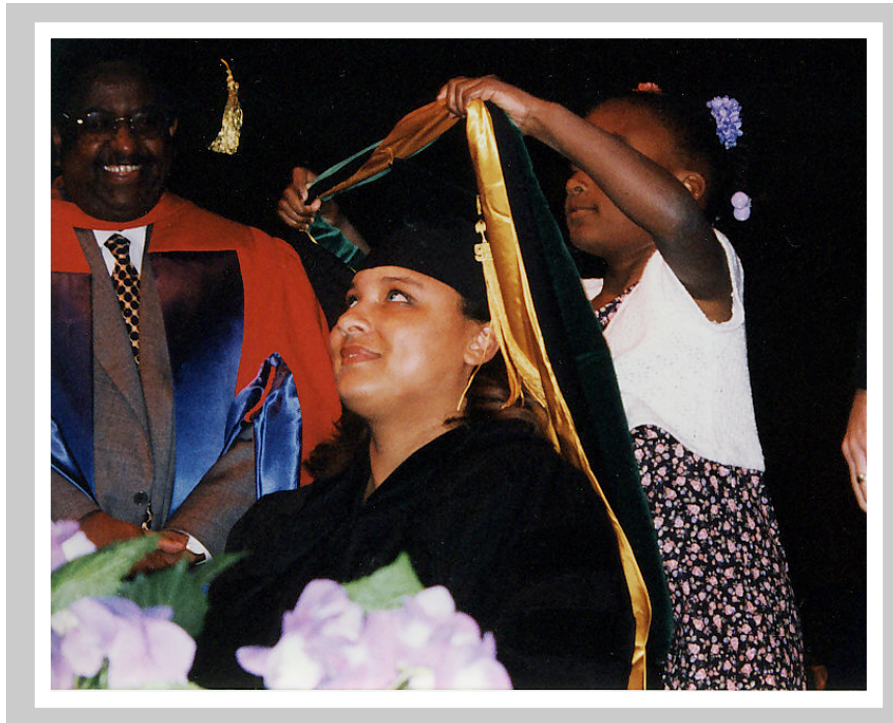
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Families share in Commencement, Class of 1999
UCSF School of Medicine



CHAPTER 5

California's Changing Policy Context

Introduction

This chapter describes the policy context of diversity in medical education in California. We examine geographic, economic, demographic, social, cultural, historical, and political factors that make up this context. California is the nation's third largest state in area after Alaska and Texas. Rich in natural resources, California has a varied terrain, with numerous mountain ranges, fertile valleys, hot deserts, and a long coastline that features rugged shorelines and sandy beaches. While many simply think of the north-south divide in California, the state may be divided into four—or as many as 14—distinct regions, each marked by differences in geography, economy, population, and political behavior.^{1,2,3,4} The urbanized coastal region tends to be more liberal politically, while the majority of the population in the greater Central Valley and the Imperial Valley is more conservative on issues such as affirmative action, immigration, and environmental regulation. In this chapter, we begin by discussing California's economy and continue by describing the state's dynamic growth, increasing diversity, history of discrimination and ethnic exclusion, as well as civil rights efforts in the 1960s. We continue with a discussion of policies that have affected elementary, secondary, and higher education in California, and politics in California, focusing on the effects of hyper-pluralism and participatory democracy through the state's ballot initiative process.

California's Economy: The Nation's Leader

The State's Economic Diversification and Growth, Fluctuations in the Economy, and the Importance of Federal Subsidies

The size of California's economy; the importance of agriculture in fluctuations in the economy, particularly through the Great Depression of the 1930s; the unrestrained economic growth after World War II; the recession of the early 1970s and the more severe recession of the early 1990s and early 2000s, which included the Silicon Valley and the later "dot com" collapse; and the current housing boom and bust; all have had, or will have, a significant impact on the University of California and Stanford University, and their ability to recruit, educate, and graduate diverse student bodies.

California has several distinct economic regions, from Hollywood (entertainment) to the Central Valley (agriculture), Silicon Valley (electronics and biotechnology), and Napa and Sonoma counties (viticulture). Along the West Coast, the weather is temperate with fog in the north and plenty of sunshine down south. The summers are notoriously hot in the Central and Imperial Valleys, and winter brings snow to the mountains of the Sierra Nevada on the state's eastern border. Smog, a less attractive aspect of the climate, occurs mainly in urban areas in Southern California and in the Central Valley. California's pleasant and varied climate has contributed significantly to both the number of people the state has attracted and their modes of industry. Occupations that have utilized the state's natural resources have contributed to the development of a broad economic base and to increasing sociopolitical diversity include mining, logging, and agriculture. Over time, the mining industry, like Southern California's oil production, has been diminishing in importance. Logging in the northern forests and agriculture, which is practiced on a wide scale, are other major industries. The rich harvests of California's farms produce everything from cotton, rice, and nuts, to wine and table grapes, citrus and other fruit, and vegetables. Agriculture is a major California industry, accounting for \$36.6 billion in revenues in 2007,⁵ and California leads the nation in agricultural revenues, accounting for more than the combined totals of revenues of Texas and Iowa, number two and three, respectively, in revenues.⁶

Other important industries include aerospace, light manufacturing (computer hardware and software), insurance, real estate, trade, and tourism. California's gross domestic product (GDP) was about \$1.8 trillion in 2007, or 13 percent of the U.S. GDP.⁷ The politics around water—a key resource—has often been divisive. The state imports billions of gallons of water annually from the Colorado River to irrigate crops in the Imperial Valley and to meet the needs of Southern California's growing population.

Federal subsidies have played a significant role in California's economy. These include federal land grants to the Central Pacific Railroad in 1864; federally funded research grants since World War II to California's university hospitals and research institutes (the University of California and Stanford University have been major recipients); defense spending, especially during World War II and the Cold War; federal subsidies for agriculture (e.g., cotton, rice); and infrastructure (e.g., highways, dams, and waterways), particularly in the 1950s and 1960s.

California's economy is the nation's leader and ranks eighth among the nations of the world.⁸ The state's ports, particularly Los Angeles, Long Beach, and Oakland, are among the busiest in the U.S. As the nation's biggest exporter to Asia, California's economic well-being is dependent, in part, on the health of Asian economies. As Lawrence notes: "California's modern economy has four characteristics: post-industrialism, change, diversity, and a two-tier structure."⁹ The post-industrial economy has emphasized electronics, biotech, research, education, entertainment, finance, trade, tourism, insurance, and real estate. While defense, aerospace, and related industries show a decline, California's agricultural sector remains the nation's largest in terms of more than fifty crops and livestock commodities.

Income disparity is increasing between high-salaried, white-collar professionals and low-wage, non-union agricultural and service workers, whose numbers in the state are growing. California's estimated median household income in 2007 was \$59,928, ranking eighth in the nation; however,

there are wide disparities in median household incomes among California counties, with estimated income in 2007 in Santa County ranking highest at \$84,360 and lowest in Imperial County at \$31,912.^{10, 11}

California's Population Growth, Diversity, and History of Discrimination

The Modern History of California: A Growing Population, Increasing Diversity, and the Impact of Federal Policies

California Is Ceded to the United States: The Treaty of Guadalupe Hidalgo

The modern history of California began on February 2, 1848 when the United States and Mexico signed the Treaty of Guadalupe Hidalgo, ending the Mexican-American War. The United States had administered California as an occupied territory in time of war, from its conquest by the United States in 1846 until the 1848 treaty. In return for the payment of \$15 million in cash, all of the Mexican territory north of the Rio Grande, including California, was ceded to the United States; the claims by Mexican citizens against the United States were settled with an additional \$3.5 million.¹²

The Gold Rush: The First Great Population Wave in Modern History

During the Gold Rush of 1849, California's population underwent an abrupt transformation, growing from less than 10,000 to nearly 100,000 in one year. California's premier historian, Kevin Starr, tells of the long-term impact of this hectic start:

In just about every way possible—its internationalism, its psychology of expectations, its artistic and literary culture, its racism, its heedless damage to the environment, its rapid creation of a political, economic and technological infrastructure—the Gold Rush established for better or for worse, the founding patterns, the DNA code, of American California.¹³

There was bitter debate in Congress about statehood for California, due to conflicts over the issue of slavery. In what became known as the “Compromise of 1850,” it was decided to admit California as a free state. (Texas had been annexed as a slave-holding state and Utah and New Mexico were to be granted territorial status with no reference to slavery.) President Millard Fillmore signed the bill admitting California as the 31st state on September 9, 1850.¹⁴

By 1851, the state's non-native population had reached 255,000, and San Francisco had become a major city. The westward migration from the Midwest, East, and South that resulted in California's rapid settlement was made possible, to a great extent, by the construction of the transcontinental railroad. Strong federal incentives in the form of land grants made construction of the railroad feasible. The enormous job of building the railroad tracks from California to Utah was undertaken by the Central Pacific Railroad of California, which used Chinese laborers who

“for reasons of racial exclusion had been marginalized out of main stream employment.”¹⁵ Among the four founders of the Central Pacific Railroad of California (Huntington, Hopkins, Crocker, and Stanford) was Leland Stanford, Sr., founder of Stanford University.¹⁶

At the dawn of the 20th century, nearly half of California’s population of 1,485,053 was settled in the San Francisco Bay area; Los Angeles had a little over 100,000 residents, and San Diego, only 18,000.¹⁷ The population of Los Angeles increased ten-fold between 1900 and 1930, from 102,470 to 1,238,048; African Americans, Japanese Americans, and Mexican Americans were in the minority, and most of the city’s inhabitants were from the Midwest (90 percent of European descent).¹⁸

Immigrants, Migrants, and the Great Depression: The Second Wave

The development of agriculture drew large numbers of migrant laborers to the Monterey Peninsula, the Great Central Valley, and to Southern California’s Imperial Valley. People of many different nationalities and races: Chinese, Filipinos, Japanese, and East Indians, African Americans, Mexicans, and Whites arrived. During the Great Depression, more than 300,000 White agricultural workers migrated to California from the dust bowls of Oklahoma, Arkansas, Texas, Kansas, and Missouri.¹⁹ By 1930, the state’s population had jumped to 5.7 million, up from 3.4 million in 1920.²⁰ The number of Mexican Americans in Los Angeles grew, between 1920 and 1930, from 33,644 to 97,116. In the early 1930s, the federal government forcibly repatriated thousands of Mexican immigrants, including their American-born children, in part as a response to the oversupply of workers during the Depression.²¹

World War II and Post-War Population Growth: A Third Wave

Between 1940 and 1950, California’s population increased by more than 50 percent, from 6.9 million to 10.6 million.²² Among the 1.6 million people who moved to California during World War II were large numbers of African Americans, many of whom were serving in the military or employed by the defense industries, particularly in ship building. Over a million more people migrated to California within the first two post-war years, from July 1945 to July 1947.²³

In 1952, Congress passed the Immigration and Nationality Act, which affirmed national origin as the principal criterion for determining the status and eligibility of immigrants. Immigration remained limited in California, as well as in the rest of the United States, until the mid-1960s.²⁴

By 1960, California’s population had grown to 15.7 million,²⁵ including 1.3 million foreign born. Ninety-two percent of its residents were White; about 6 percent were Black; 2 percent were Asian and Pacific Islander; 0.2 percent were American Indian and Alaska Native, and 0.1 percent, Other Races. Separate data for Hispanic populations were not yet collected by the Census.²⁶

In late 1962, with 17 million inhabitants, California became the nation’s most populous state, surpassing New York State.²⁷

The Immigration and Nationality Act Amendments of 1965: The Impact of a Fourth Population Wave

A dramatic change in federal immigration policy in 1965 had profound implications for California. On January 15, 1965 in a Special Message to Congress on Immigration, President Johnson stated, “The principal reform called for is the elimination of the national origins quota system. That system is incompatible with our basic American tradition.”²⁸ Upon signing the Immigration and Nationality Act Amendments, which became Public Law 89-236 on October 3, 1965,²⁹ the President observed: “This bill says simply that from this day forth those wishing to immigrate to America shall be admitted on the basis of their skills and their close relationship to those already here.”³⁰ As well as abolishing the criteria of national origin, the new law limited the total number of immigrants to 290,000 individuals per year.³¹

Few could have predicted the changes in immigration trends that followed. From 1960 to 2000, 25 million migrants entered the United States, one of four countries (the others are Australia, Canada, and New Zealand) admitting migrants for permanent resettlement.³² In 1960, the U.S. foreign-born population stood at 9.7 million; by 2000, it had increased to 35 million.³³ As the leading host country in the world both in 1960 and in 2000, the United States had accepted a steadily increasing number of immigrants, with the average annual number in the 1990s over 750,000.³⁴ By the early years of the 21st century, the number had grown to one million per year.³⁵ The U.S. Census Bureau estimated in 2003 that the foreign-born population represented nearly 12 percent of the U.S. population.³⁶ More than half (53 percent) of the foreign-born population was born in Latin America, a quarter (25 percent) in Asia, 14 percent in Europe, and 8 percent in other regions; more than two-thirds of those from Latin America came from Central America, including Mexico.³⁷ The foreign-born population is highly concentrated in a few states—with six states having populations of one million or more—and metropolitan areas.³⁸

California is home the greatest number of foreign-born (more than 9 million) and the greatest percentage (27 percent) of foreign-born in the United States.^{39,40} Census Bureau estimates show that the greatest numbers of foreign-born in the state are from Mexico (3.9 million), the People’s Republic of China (418,710), Vietnam (418,250), El Salvador (359,675), Korea (268,450), Guatemala (211,460), the Philippines (225,605), India (198, 200), Iran (158,615), and Taiwan (151,775).⁴¹ The Los Angeles (4.7 million) and San Francisco (2 million) metropolitan areas are home to three-quarters of California’s foreign-born.⁴²

The Impact of the Immigration Reform and Control Act (IRCA) of 1986

Many immigrants coming to the United States and California over the period from 1960 through the early years of the 21st century had come with high expectations for greater educational and employment opportunities, a determining factor for immigration that has endured. A great number of immigrants, however, took low-wage jobs as laborers, service workers, and seasonal farm workers. A large majority of Mexicans who entered the United States during the two decades before the passage of the Immigration Reform and Control Act (IRCA) of 1986⁴³ and were undocumented immigrants chose to return to their homes—over 23 million of almost 28 million.⁴⁴ The IRCA gave amnesty to nearly 3 million undocumented workers, mainly Mexicans and Central Americans, half of whom were employed in California. However, the increased

strength and vigilance of the U.S. Border Patrol inherent in the Act's enforcement had unexpected consequences—millions of undocumented persons were unable to cross the border back to their home countries and re-cross the border to return to the U.S., and their numbers in California rose sharply.⁴⁵

In 1970, California's nearly 20 million inhabitants were still predominantly White (89 percent), with 7 percent Black, and 3 percent Asian and Pacific Islander, and less than 1 percent American Indian and Alaska Native; 14 percent of the population (2.7 million people) was estimated to be of Hispanic origin of any race, based on a 15 percent sample using "Spanish language" as a marker for ethnicity.⁴⁶ By 1980, the state's population had increased to 23.7 million. Dramatic changes in the ethnic makeup of California's population were evident in the following decade.

California Becomes a "Majority Minority" State

In 1990, the total population of California stood at 29.7 million with 7.7 million people (26 percent) of Hispanic origin of any race, 2.8 million (9 percent), Asian and Pacific Islander, with Filipinos and Chinese accounting for half of this population.^{47,48} By 2000, the state's population stood at 34 million and 47 percent of California's people identified as White alone, not Hispanic or Latino.⁴⁹ Hispanics or Latinos of any race represented 34 percent.⁵⁰ Asians represented 12 percent, Blacks or African Americans, 7 percent, Native Hawaiians and Other Pacific Islanders, 0.7 percent, and American Indians and Alaska Natives, 2 percent.⁵¹ Those identifying as Some Other Race accounted for 17 percent and those identifying as Two or More Races, for 5 percent.

The Record of Racism, Ethnic Exclusion, Discrimination, and Early Civil Rights Protections

The State's Constitutional Inequities

California's long history of discrimination based on race, ethnicity, and gender antedated its establishment as a state in 1850. California's State Constitution granted the franchise only to White males; White women were granted property rights, independent of their husbands or fathers; and African Americans, Chinese, and American Indians were denied any of the rights of citizenship. Until 1879, Spanish was designated as one of the state's two official languages.⁵²

The major groups to experience discrimination were American Indians, Asians, Mexican Americans, and African Americans.⁵³ As Starr observes:

* The 2000 Census gave people new options for identifying their race and ethnicity. First, they had the option of stating whether they were of Hispanic or Latino origin or not. Second, they had the option of choosing one race from a list of racial categories, Some Other Race for categories not listed, or two or more races.

† These Californians indicated that they identified with one race alone or with this race and one or more other races.

So, too, was American California founded on racial distinctions and repressions: the disenfranchisement of blacks and Asians, the aggression against Mexican land titles, the lynch law in the mines that seemed to have special preference for Hispanic victims. The lynching of Chinese in Los Angeles in October 1871 and the “Chinese Must Go” crusade that followed, most strongly in San Francisco, continued to give evidence of the proclivity, as did the anti-Japanese “White California” movement of the early twentieth century, culminating in the segregation of Japanese school children in San Francisco, the barring of Japanese immigrants from land ownership and the incarceration of Japanese Americans during World War II.⁵⁴

The Chinese Exclusion Acts and the Alien Land Act

Prior to 1875, anyone from a foreign country could enter the United States freely and take up permanent residence, and immigrants came to the United States in large numbers, particularly from Europe. Discrimination against immigrant minority groups began to be expressed in both national and state policies. Congress passed the Chinese Exclusion Acts of 1882, 1892, and 1902, and later in the 1920s limited immigration from South and Central Europe as well as Asia. The Alien Land Act, passed by the California Legislature in 1913 and augmented in 1920, prohibited *issei* (first-generation Japanese) from owning property, and the Immigration Act of 1924 barred Japanese immigrants from the United States.⁵⁵

Japanese Internment during WW II: President Roosevelt's Executive Order 9066

At the onset of the U.S. involvement in World War II, following the Japanese attack on Pearl Harbor, President Roosevelt issued Executive Order 9066 on February 19, 1942, authorizing the War Department to remove dangerous or suspicious individuals from military areas.⁵⁶ After Congressional hearings, the wholesale evacuation of Japanese aliens and Japanese American citizens from the western half of California, Oregon, and Washington and the southern third of Arizona was soon undertaken. By July 1942, more than 100,000 Japanese had been consigned to internment camps, where they remained for the next three years; however, *nisei* (second-generation Japanese Americans) were allowed to volunteer for the draft—and many served in the most decorated unit in the U.S. Army.⁵⁷

The Bracero Program: Another Type of WWII Federal Policy

Also during World War II, California found itself short of agricultural workers and participated actively in the federally sponsored *Bracero* Program that brought Mexican workers to the United States during harvest season for the next two decades until 1964.⁵⁸

The California Fair Employment Practices Commission and the Fair Employment and Housing Act

Racial prejudice in California remained strong in the post-war years, although segregation was based in practice and not on law. Medical schools admitted only very few women, Jews, or Blacks; hospitals—while not segregated—were not integrated institutions; schools were segregated because housing was segregated.

The Fair Employment Practices Commission, created after Governor Edmund G. “Pat” Brown, Sr.’s reelection in 1962, carried out a number of studies that revealed the hardships and inequities faced by many African Americans in California. Governor Brown’s biographer, Ethan Rarick, described the situation related to race relations in California in the early 1960s:

Californians liked to think of their state as a bulwark of tolerance, a beacon of light and justice by comparison with unenlightened parts of the country. The reality was less exalted. Blacks and whites were sharply divided in California, a divide so complete that it might as well have been decreed by law, as it was in the Deep South. In most cities, whites and blacks simply did not live near one another.⁵⁹

Governor Brown accepted the Commission’s recommendations that the state’s role be expanded, and that a strong fair housing law be enacted and supported. This support led to the effort by Assemblyman W. Byron Rumford to draft legislation. After numerous delaying tactics in the State Senate, the Legislature passed a fair housing bill, the Rumford Housing Act, late in 1963.⁶⁰ The Fair Employment and Housing Act (FEHA), also enacted in 1963, contains the California Fair Housing Law (The Rumford Housing Act).⁶¹ In the fall of 1964, California’s dissatisfied voters, many of them older White property owners, passed Proposition 14, nullifying the Rumford Act.⁶² In 1967, the State Supreme Court nullified Proposition 14.

The Watts Riots: August 1965

The Watts riots in Los Angeles began on August 11, 1965.⁶³ The riots rapidly escalated and went on for days; a curfew was imposed that included one-tenth of Los Angeles and 13,000 National Guard troops were mobilized. Ethan Rarick notes, “More than any other single event, the Watts riot took the bloom off California. That spring and summer the state had still been celebrated as the acme of modern productivity and achievement.”⁶⁴

Proposition 187: Providing a Focus for Californians’ Anti-Immigrant Sentiment: 1994

We have already noted the increased immigration of Mexicans and Central Americans to the United States after the 1965 Immigration Act amendments and the legalization of immigrants through the IRCA of 1986. By the 1990s, a strong anti-immigrant sentiment had developed in California, focused on illegal immigrants. However, in their bias, people often did not distinguish between legal and illegal immigrants. Proposition 187: Illegal Aliens: Ineligibility for Public Services, a state ballot initiative withdrawing all public services (with the exception of emergency medical services) from undocumented persons, was strongly supported by Governor Pete Wilson and approved by voters (59 to 41 percent) in November 1994.⁶⁵ Proposition 187, like Proposition 14, was later found to be unconstitutional by the U.S. District Court and the U.S. Court of Appeals for the Ninth Circuit.⁶⁶

California Governor Pete Wilson Leads the Nation in Taking an Anti-affirmative Action Stance in Public Education, Public Employment, and Public Contracting: 1995

In June 1995, Governor Pete Wilson issued Executive Order W-124-95 to End Preferential Treatment and to Promote Individual Opportunity Based on Merit.⁶⁷ The executive order led directly to action by the Board of Regents of the University of California in approving Resolutions SP-1 and SP-2 on July 20, 1995. In a sharp reversal of progress in increasing diversity, the Regents voted 14 to 10 to forbid consideration of race, religion, sex, color, ethnicity, or national origin as a criterion for admission to the university or to any program of study for all nine UC campuses, as well as in employment and business practices.⁶⁸ After the Regents' action, Governor Wilson and Regent Ward Connelly moved the so-called "California Civil Rights Initiative" to a statewide vote in November 1996, and the ballot initiative Proposition 209 was passed by a vote of 54 to 46 percent.⁶⁹

California's Education Policies

The Master Plan for Higher Education and the Changing Scenario of Funding for K-12 and Higher Education

In California, until the 1960s, policies for elementary and secondary education (and also for community colleges) were determined largely at the local school district level. In 1960, after several years of detailed planning and a strong push from Governor Edmund G. "Pat" Brown, Sr., the State Legislature passed the Master Plan for Higher Education, designating the roles of the University of California, the State Colleges, and the Community Colleges and establishing overall policies allocating academic responsibilities (e.g., admissions policies, granting of Ph.D.s and professional degrees).⁷⁰

The Master Plan for Higher Education

The Master Plan also guaranteed every California high school graduate a tuition-free college education. After its enactment, state spending for the University of California more than doubled and spending for the state colleges tripled. During Governor Brown's tenure (1959-1967), four new state colleges and three new UC campuses were built—a record unmatched by any subsequent governor.⁷¹ We discuss subsequent developments related to the University of California in detail in Chapter 6: The University of California: The Changing Policy Context of a Public University.

The Serrano v. Priest Decision: Funding K-12 Education with Local Property Taxes Is Ruled Unconstitutional

In the 1970s, the state began to assume a greater role in the financing of elementary and secondary education. On August 30, 1971, in the case of *Serrano v. Priest*, the California Supreme Court found the system of financing K-12 education by local property taxes to be

unconstitutional, ruling that it treated children unequally.⁷² It was impossible to restructure the state tax system until the school financing problems could be resolved, and when the Legislature failed to resolve the crisis, Governor Ronald Reagan called for a broader tax base to finance the schools. He also warned that advocates of property tax relief would take their case to the voters, through the initiative process, if the Legislature didn't act.

Proposition 14: An Early Attempt at Property Tax Relief

One of the advocates of property tax relief, the Assessor of Los Angeles County, did just that: Proposition 14, known as the "Watson Initiative," was placed on the November 1972 ballot to provide property tax relief and other tax changes. Thanks to the opposition of Governor Reagan, Assembly Speaker Moretti, and the other leaders, the measure failed. Eventually, the Legislature passed a compromise bill to provide property tax relief and a record increase of \$332 million in school financing,⁷³ resulting in the increase in the state's share of state financing for elementary and secondary education to 40-45 percent.

Proposition 13: Property Tax Relief Achieved as well as an Increasing State Share of Education Funding

The drive for property tax relief was not eliminated by the policy adopted in 1972. The *Serrano v. Priest* decision by the California Supreme Court and Proposition 13 are at the root of current problems; Lawrence described the result of the passage of Proposition 13 in 1978:

...The consequences were dire, with property taxes cut by 57 percent, local services were slashed. Local government, especially counties and school districts, became increasingly dependent on state 'bailouts' to fill in revenue shortfalls.⁷⁴

The state's share in the financing of elementary and secondary education (K-12) increased from 40-45 percent to about 60 percent; local taxes provided 24 percent, and federal funds, 10 percent.

Other State Propositions Supporting Education

Voter initiatives related to education financing after 1978 included: Proposition 84 in 1984, establishing a state lottery with 34 percent of ticket sales dedicated to education; Proposition 98 in 1988, guaranteeing that K-12 education would receive no less than 40 percent of annual General Fund spending; Proposition 1A in 1998, providing \$6.7 billion in general obligation bonds for K-12 school and classroom construction; and Proposition 1D in 2006, the Kindergarten-University Public Education Facilities Bond Act of 2006, which provided \$10.4 billion in funding for school construction and repair over the next ten years as well as for other purposes, including medical education.^{75,76}

Educational Consequences of State Policy Decisions

The consequences of the various policy decisions have been recently described by Stanford Professor of Education, Emeritus, Michael Kirst, who has focused on the disjunction between high school and college education.⁷⁷ One of the key problems to be addressed in educational

policy is the inadequate, unequally distributed state financing of K-12 education and of the community colleges. Education financing policies have effectively erected barriers to higher education for students below the median family income, and these policies disproportionately affect underrepresented minorities. A second problem identified by Kirst is the lack of correlation between content that is taught in high school and the prerequisites for admission to California Community Colleges, the California State University, and the University of California.

It is apparent that these state financing and educational policies must be addressed in order to achieve a sustained increase in diversity in medical schools and in the health professions overall. California still permits 3.3 percent of its school districts, all in wealthy areas in Santa Clara, San Mateo, and Marin counties, to retain their property taxes and not put them in the state pool, which is then redistributed by the state. All of these districts also receive additional funds from parents, booster clubs, and foundations, which further exacerbates inequalities in funding for education.⁷⁸

The Politics of California

Understanding the Complexity of the State's Politics

The story of the politics in California is not a simple one.^{79,80,81,82} David Lawrence explores four theories from political science that need to be considered in understanding the complexity of California's politics: 1) democratic theory, 2) elite theory, 3) pluralist theory, and 4) hyper-pluralism.⁸³

In his review of democratic theory, Lawrence notes that the theory is founded upon representative democracy, whereby elected representatives ultimately reflect the views of the electorate. The California Constitution reflects this perspective: it established various institutions of government (e.g., the Legislature, the Governor) that are selected by, and responsible to, the state's voters. The constitution also has a "bill of rights." Representative governments depend on an informed public, which is more and more difficult to achieve in a state with such a culturally and linguistically diverse population.

The elite theory is based on the idea that society is divided into a rich and powerful minority, which rules, and a less wealthy, weaker, majority. The military-industrial complex described by President Eisenhower has long had great influence on policy at the national level and was very influential in the development of California during and after World War II. Corporations have also long exercised an undue influence on policy both nationally and in California; the railroads and agribusiness are just two examples. Certain powerful corporate interests, such as tobacco and insurance, have suffered defeats through the voter initiative process in California.

Pluralist theory posits that there are many groups competing for power. Literally hundreds of interest groups, many of them stressing individual issues, vie for power in California. Some business interests continue to maintain their influence, in part through sizeable donations to candidates and political parties. The unions representing California's prison guards, firefighters

and policeman, teachers, and nurses currently have considerable political influence. California has had its share of policy entrepreneurs, such as the anti-tax crusader, Howard Jarvis; the “Three strikes and you’re out” initiative leader, Mike Reynolds; and Rob Reiner, a Hollywood director who led the successful effort to increase tobacco taxes to support education.

Hyper-pluralism seems to increasingly characterize California politics:

...In this view, power is thinly scattered, not just widely or unevenly scattered as previous theories would suggest. The exercise of political power has become a highly competitive tug-of-war involving institutions, policymakers, political parties, numerous interest groups and voters.⁸⁴

Understanding the Effects of California's Politics: Hyper-Pluralism and Participatory Democracy

Many Special Interests, Little Consensus on Mutual Interests, and Less Agreement on Actions to Solve the State's Problems

In his discussion of hyper-pluralism, Lawrence focuses on individualism;⁸⁵ the growth of single-issue politics; the growing diversity of cultures (e.g., there are at least 100 distinct ethnic groups in California); the fading of majoritarianism (e.g., the state budget must be approved annually by a two-thirds vote, meaning that a minority exerts an undue influence on the budget); and structural conflict. Both term limits in the Legislature and the willingness of interest groups to bypass the Legislature and go directly to the voters, further compound the problem.

As a result of a constitutional amendment passed during the Progressive Era when Governor Hiram Johnson (1911-1917) called a special election, California is one of more than twenty states that now permit ballot initiatives introduced by citizens, a form of participatory democracy.* The voters have the power to adopt their own laws through the initiative process, even modifying the constitution; they can approve or disapprove of laws passed by the State Legislature (e.g., Fair Housing); and they can fire elected officials, as in the recall of Governor Gray Davis in 2003.

Proposition 13: Property Tax Limitation—reducing property taxes and limiting the future taxing power of all public agencies in California—was approved by 64 percent of voters in June 1978.⁸⁶ Observing the progress and the impact of participatory democracy, Peter Schrag, author of two books on politics in California, notes that Proposition 13:

* “On October 10, 1911, by way of a special election called by Governor Hiram Johnson, the initiative process was established in California by a margin of 168,744 to 52,093 votes cast for Senate Constitutional Amendment (SCA) 22. The contents of the 1911 constitutional amendment, and all other issues relating to voting, initiatives, referendum and recall, can be found under Article II of the California Constitution. Prior to 1911, citizens in California voted only on measures and acts that were placed on the ballot by the Legislature. ... (T)he direct initiative process, allows a citizen the option to bypass the Legislature and go straight to the public in an effort to place an issue of interest on the ballot for voter approval or rejection. The process adopted in 1911, which is still in use today, requires the proponent to obtain an official title and summary of the proposed initiative from the Attorney General.” Source: California Secretary of State. Initiatives. A History of California Initiatives: 2002. page 3.

... set the stage for the Reagan era, and became both a fact and a symbol of a radical shift in governmental priorities, public attitudes and social relationships that is as nearly fundamental in American politics as the changes brought about by the New Deal.⁸⁷

In a shift from a representative democracy to popular or participatory democracy,⁸⁸ the pace of the statewide voter initiatives picked up significantly after 1978, and has further accelerated since 1992.

Three words—“dysfunction, disinvestment, disenchantment”—are used by Schrag to describe what has happened to California in the forty-plus years that our study reviews.⁸⁹ In 1962, equipped with a modern, professional state government, in both the executive and legislative branches, California was a national leader in the size of its population and in the magnitude of its public investment in roads and water systems, parks, universities, and public schools. These developments had occurred under both Republican and Democratic governments.

The state was among the leaders in civil rights, and the nation’s most liberal abortion law was signed in 1967 by Republican Governor Reagan. It is thought provoking in terms of the state’s change in policy direction—and public investment—that by the time of the 1994 enactment of California’s Proposition 184 (the “Three strikes and you’re out” initiative mandating life imprisonment after a third felony conviction), spending on prisons in the state exceeded spending on higher education. The prison population in California has risen since the end of the 1960s, from 25,000, to 164,000 35 years later, and the share of the state budget spent on prisons has nearly doubled, from 4 percent to just under 8 percent in 2004-2005.⁹⁰

The most serious sociopolitical problem now facing the State of California, and by extension the University of California, is the shift from representative government to “direct” or “participatory” democracy. This shift has contributed to the state policy-making process becoming increasingly dominated by special interests; the anti-tax attitude of many voters, the Republican Party’s anti-tax policy at the national and state levels; and anti-immigrant attitudes, as well as continued racism and discrimination.

Over the past years, the statewide ballot initiative process has incrementally replaced action by the California Legislature. Table 5-1 shows the number of statewide ballot initiatives proposed since the governorship of Pat Brown (1959-1967) and Table 5-2 provides a list of the selected initiatives that have influenced the functioning of the California Legislature, the governance and funding of the University of California, health care in California, civil rights, immigration, and education.^{91,92,93,94}

Table 5-1 Number of California Statewide Ballot Initiatives, 1959-2006

Governor	No. of Initiatives
Edmund G. "Pat" Brown, Sr. (1959-1967)	1
Ronald Reagan (1967-1975)	3
Edmund G. "Jerry" Brown, Jr. (1975-1983)	3
George Deukmejian (1983 to 1991)	9
Pete Wilson (1991-1999)	18
Gray Davis (1999-Oct 2003)	9
Arnold Schwarzenegger (Oct 2003-November 2006)	43

Sources: Lawrence D: 2003: p. 295; California Secretary of State.2006: pp. 30-35 Schrag P.2006: pp. 322-323: California Secretary of State. Prior Voter Information Guides Nov 1996-Nov 2008
http://www.sos.ca.gov/elections/elections_i.htm

Governor Arnold Schwarzenegger, a Republican, has embraced the initiative process, initially, in part to thwart Democratic legislators. The Governor was unsuccessful in his attempt to bypass the legislature via the initiative process in 2005, and he cooperated with the Legislature on the November 2006 ballot, which contained five statewide bond issues designed to raise the funds needed over the next decade to rebuild the state's infrastructure (including roads, levees, schools, and rapid transit.) Most important, from the standpoint of the University of California, was Proposition 1D, the Kindergarten-University Public Education Facilities Bond Act of 2006, which was approved by voters and provided \$10.4 billion in funding for school construction and repair over the next ten years.⁹⁵ Funds from the proposition are included for the Community Colleges, the State Universities, and the University of California. The University of California received \$800 million, including \$200 million for its medical schools, including the Program in Medical Education (PRIME). This is a focused medical education program designed to increase enrollment in University of California medical schools to meet California health workforce needs, particularly in meeting needs of diverse underserved communities in different regions of the state. Another positive action by the Governor and the legislature was the addition of \$2 billion to the state budget for elementary and secondary education.

Table 5-2 Selected Statewide Ballot Initiatives in California, 1960-2006

Year	Proposition No.	Issue	Governor
1966	1A	Legislative Reform—Converted the state’s part-time citizen legislature into a full-time professional legislation.	Edmund G. “Pat” Brown, Sr. (1959-1967)
1970	1	University of California Health Sciences Facilities Construction Program Bond Act of 1969—To provide \$246 million for major building construction, equipment, and site acquisitions for the purpose of providing health facilities for several University of California campuses DEFEATED	Ronald Reagan (1967-1975)
1970	5	Regents, University of California: Public Meetings—Requires that all meetings of the Regents be open to the public, subject to such exceptions and notice requirements as may be provided by statute.	
1970	8	Taxation for Schools and Social Welfare—Requires state to provide from sources other than property taxes not less than 50% of the cost of public schools and 90% of cost of social welfare services DEFEATED	
1972	1	State School Building Aid and Earthquake Reconstruction and Replacement Bond Law of 1972—Authorized issuance and sale of \$350 million in bonds.	
1972	1	Community College Construction Program Bond Act of 1972—Authorized the issuance and sale of \$160,000 million in bonds for construction under the Community College Act of 1967	
1972	5	Appointment of Regents—Requires appointment to be approved by a majority of the State Senate.	
1972	2	Bonds to Provide Health Care Facilities—Provided \$156 million for construction, site acquisition, and equipment for health facilities at the University of California.	
1972	21	Student School Assignment—Provides that no public school student shall because of his race, creed, or color be assigned to or be required to attend a particular school.	

Year	Proposition No.	Issue	Governor
1974	4	Regents, University of California—Adds VP of Alumni Association as ex officio member; adds two additional members appointed by Governor with approval by Senate. Reduces terms from 16 to 12 years after 1978. Allows Regents' appointment of one faculty member of institution of higher education and one student to board. Requires Regents to be persons reflecting economic, cultural, and social diversity of state, including ethnic minorities and women. Provides for an advisory committee which the Governor must consult in selection of Regent appointees.	
1974	16	Student Tuition, University of California—Empowers the Legislature to determine whether students enrolled at UC should be charged for instruction and instructional facilities and the amount of the charge. DEFEATED	
1978	13	Property Tax Limitation—Reduced property taxes by 57 percent, shifted power to state government, required 2/3 vote to raise taxes.	Edmund G. Brown "Jerry" Brown, Jr. (1975-1983)
1979	4	Limitation of Government Appropriations—Sharply limited state spending.	
1984	37	California State Lottery—A constitutional amendment creating a state lottery and providing that 34% of the proceeds be distributed to public education (K-12 and colleges and universities).	George Deukmejian (1983-1991)
1986	63	Official State Language—Declared English as the official language of the state	
1988	98	School Funding for Instructional Improvement and Accountability— Requires state to spend at least 40 percent of its General Fund on K-12 schools and community colleges and to increase spending related to enrollment increases and cost of living	
1990	140	Limits on Terms of Office, Legislators' Retirement, Legislative Operating Costs— Set limits of three two-year terms for assemblymen, and two four year terms for state senators. Also cut staff.	
1994	187	Illegal Aliens: Ineligibility for Public Services. Verification and Reporting--Denied illegal aliens and their children the right to public education and other public services. Declared unconstitutional by federal court.	Pete Wilson (1991-1999)

Year	Proposition No.	Issue	Governor
1996	209	Prohibition Against Discrimination or Preferential Treatment by State and Other Public Entities (The “California Civil Rights Initiative”)—An anti-affirmative action constitutional amendment prohibiting consideration of race, sex, color, ethnicity, or national origin in the operation of public employment, public education, or public contracting. Upheld in 9 th Circuit Court of Appeals.	
1996	218	Voter Approval for Local Government Taxes. Limitations on Fees, Assessments, and Charges—Voters have right to vote on local taxes. Local government seeking assessments required to meet three specific requirements.	
1998	227	Education: Public Schools. English as a Required Language of Instruction—Sharply curtailed bilingual education in the state’s schools.	
1998	10	State and County Early Childhood Development Programs. Additional Tobacco Surtax—Raised state tobacco taxes to fund a range of state and local early childhood development programs.	
2000	39	School Facilities. 55% Local Vote Bonds, Taxes. Accountability Requirements—Lowered approval required from 66 percent to 55 percent for local borrowing, especially for school bonds.	Gray Davis (1999-Oct 2003)
2002	49	Before and After School Programs. State Grants—Designed to take \$445 million from state general fund for after school programs in any year when state revenues increased.	
2003	54	Classification by Race, Ethnicity, Color, or National Origin—Constitutional amendment prohibiting state and local government from using race, ethnicity, color, or national origin to classify current or prospective students, contractors or employees in public education, contracting, or employment operations—DEFEATED	

Year	Proposition No.	Issue	Governor
2006	1D	Kindergarten-University Public Education Facilities Bond Act of 2006—This \$10.4 billion bond issue provided needed funding to relieve public school overcrowding and to repair older schools, improve earthquake safety and fund vocational educational facilities in public schools. Funds will also be used to repair and upgrade existing public college and university buildings and to build new classrooms to accommodate the growing student enrollment in the California Community Colleges, the University of California, and the California State University. Appropriates money from the General Fund to pay off bonds.	Arnold Schwarzenegger (Oct 2003- Nov 2006)
2006	88	Educational Funding. Real Property Parcel Tax. Initiative, Constitutional Amendment and Statute—DEFEATED	

Sources: Schrag P.2006; Lawrence D. 2003; California Secretary of State. December 2002, 2003, 2004, 2005, 2006; University of California. Hastings College of Law Library. California Ballot Propositions Database, 1911-2003. Available at: http://library.uchastings.edu/ballot_pdf/index.html Accessed September 3, 2008.

California's Current Fiscal Crisis

The Governor's and the Legislature's extraordinary difficulty in 2008 and 2009 in working together to come to agreement on state budgets and to provide appropriations for the State of California, including the University of California, was exacerbated by a severe nationwide economic downturn and huge budget shortfalls in California before and after passage of the FY 2009-2010 budget. The delay in approval of the state's FY 2008-2009 budget was the longest in the history of the state—more than a hundred days—and posed severe problems. State workers, health care providers, including public hospitals and clinics dependent on Medi-Cal funding, and education at all levels experienced problems. The requirement that the budget be approved by two-thirds of the Legislature and the inability of the Governor and the Legislature to work productively together due to a small group of legislators' refusal to accept the Governor's or the Legislature's proposals were major causes of the Legislature's unprecedented delay in approving the budget.

On February 20, 2009, Governor Schwarzenegger signed a package of bills designed to close the \$42 billion state budget gap, including reductions to the rest of the FY 2008-2009 budget and the FY 2009-2010 budget approved by the Legislature. The University of California sustained \$115 million in new cuts representing new permanent funding reductions, bringing the total immediate budget challenge to the University to \$450 million.⁹⁶ Underfunded enrollment, elimination of funds for increases in enrollment in the PRIME program, as well as elimination of funds for capital facility projects necessary to support enrollment growth are among budget issues facing the University.⁹⁷

Both higher education and K-12 education have been severely affected by these budget reductions.⁹⁸ California Community Colleges had COLAs and student fee increases eliminated; The California State University received a 10 percent across the board cut. K-12 education was cut more than \$11.6 billion.⁹⁹ Six ballot propositions, some focused on increasing revenues and on education were on the May 2009 ballot. Five of the six measures were defeated. The sixth measure, which forbids salary increases for the Governor and legislators during years when there are budget shortfalls. Deep cuts in education at all levels are to follow.

On July 1, 2009, the Governor and the Democratic and Republican members of the Legislature could not agree on ways to resolve a remaining \$26.3 billion budget shortfall. The state began issuing IOUs to private contractors after the Governor declared a fiscal emergency on July 2.¹⁰⁰ On July 28, 2009, the Governor signed budget amendments to the FY 2008-2009 and FY 2009-2010 to address the shortfall.¹⁰¹ The University of California announced in July 2009 that it would use a combination of furloughs, deferred hiring, and cuts in academic programs to make up for an \$813 million reduction in state financing.¹⁰² In November 2009, the University proposed increases in tuition and fees to its undergraduate, graduate, and professional degree programs to close a remaining budget gap of \$535 million as well as requesting \$913 in state funds for FY 2010-2011 to restore cuts from earlier years.^{103,104} On November 18, 2009, the Legislative Analyst's Office predicted that the budget shortfall would be \$20.7 billion —\$6.3 billion in the 2009-2010 fiscal year and another \$14.4 billion gap in the FY 2010-2011 beginning next July 1, 2010.¹⁰⁵

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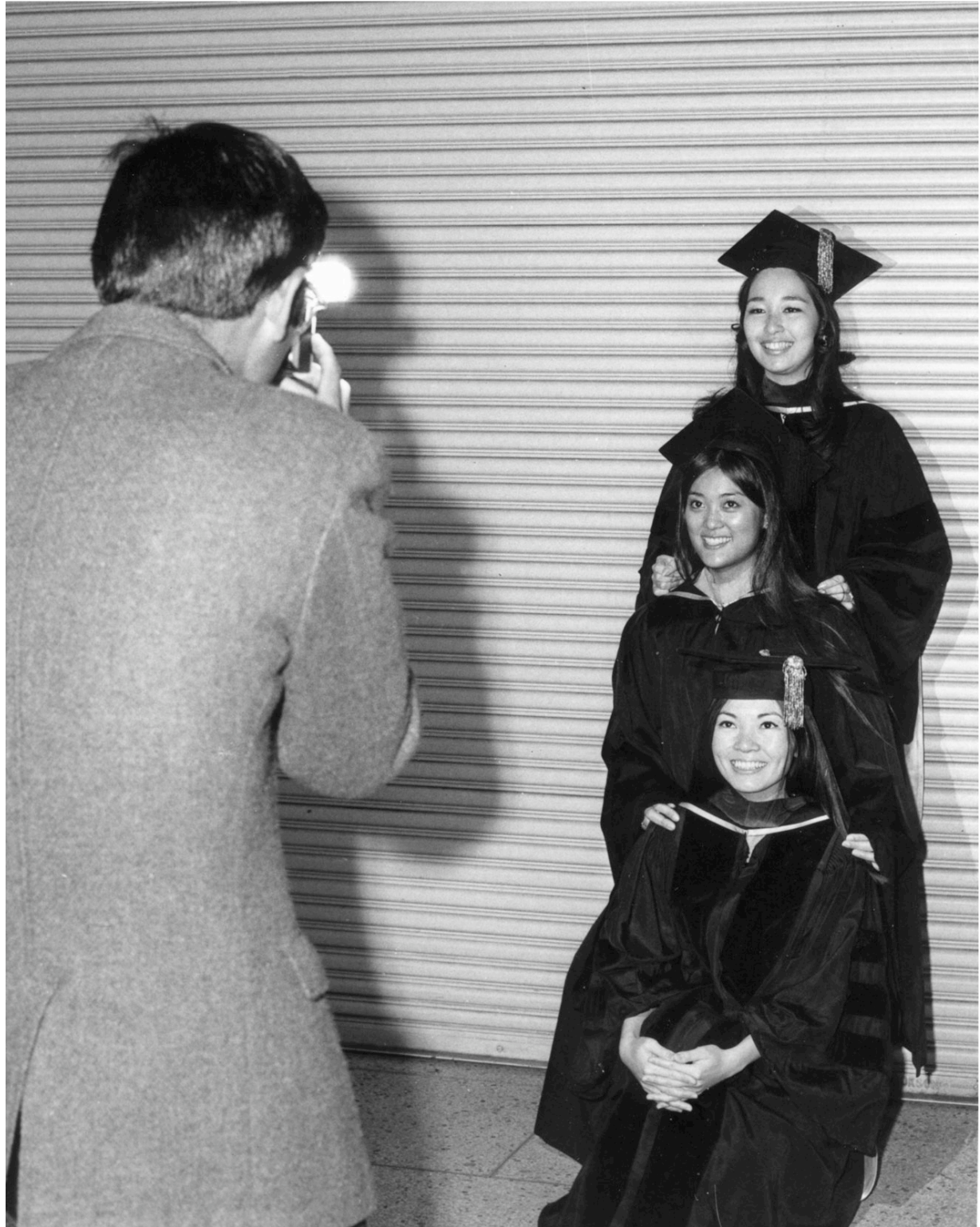
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Commencement, members of Class of 1971, UCSF School of Medicine
Courtesy of UCSF Library and Center for Knowledge Management, Archives and Special Collections



CHAPTER 6

The University of California: The Changing Policy Context of a Public University

Introduction

This chapter provides an overview of the University of California (UC), its 141-year history, its leaders, and the social, economic, and political challenges faced by the University that affect diversity in its medical schools. Specific decisions of the University's Board of Regents are reviewed, as well as special University reports related to diversity, including reports to the state Legislature, and reports from and to the Board of Regents, the Office of the UC President, and the UC Academic Senate. We consider the policy context of the University of California, because in examining the progress in increasing diversity in the student body of the School of Medicine, University of California, San Francisco (UCSF), we found it necessary to look at this progress within the broader context of the public university system of which UCSF is a part. Although graduate programs are clearly important in relation to diversity within the medical schools, we have not examined diversity within these programs. Nor have we assessed faculty and staff diversity within the University.

Establishing the University of California: Setting the Future Course for a Public University

Governor Henry H. Haight signed legislation on March 23, 1868 that established the University of California and entrusted its governance to the Regents of the University of California, a corporate body. The 1868 Organic Act founding the University recognized that "it shall be the duty of the Regents, according to population, to so apportion the representation of students, when necessary, that all portions of the State shall enjoy equal privilege therein."¹

In his inaugural address, as President of the University of California in November 1872, Daniel Coit Gilman echoed this view when he said:

... the charter and the name declare that this is the 'University of California.' It is not the University of Berlin nor of New Haven which we are to copy; it is not the University of

Oakland nor of San Francisco which we are to create; but it is the University of this State. It must be adapted to this people, to their public and private schools, to their peculiar geographical position, to the requirements of their new society and their undeveloped resources. It is not the foundation of an ecclesiastical body or of private individuals. It is 'of the people and for the people.' It opens the door of superior education to all...²

The University as a Public Trust

After considerable debate during the 1878 state constitutional convention, the University of California became a public trust, and its autonomy was guaranteed under the new state constitution approved by the voters of California on May 17, 1879. In his memoirs, the late University of California President Clark Kerr wrote:

The Organic Act establishing the University in 1868 sought to protect it from 'sectarian, political or partisan' influence. Yet from the very beginning the university was subject to all three. The state constitution of 1879 also declared that the University 'shall be entirely independent of all political and sectarian influence,' but bitter struggles continued.³

The University Beset by Political Struggles from the Start

In his foreword to Clark Kerr's book, Neil J. Smelser, University Professor of Sociology, Emeritus, University of California, Berkeley, summed up some of the political struggles:

The whole of the university's history has been marked by political heat: The political campaign by California agriculture and trade union interests in the late nineteenth century to make the University an 'applied' institution, the post World War I Red Scare, which precipitated the University's adoption of required American history and American institution courses, the left wing political activism of the depression years, resulting in adoption of the restrictive Rule 17, the efforts to impose a loyalty oath on faculty in the McCarthy years, the Free Speech Movement, and racial advocacy in the 1960's, the fight over divestment of university funds in South Africa in the 1980's, the Regents' vote to prohibit racial and related categories and admission criteria in 1995 and the subsequent passage of Proposition 209 by the voters of the State of California.⁴

The political struggles continue and—just as in the past—many are focused on money, particularly state appropriations. State funds are the core of the University of California's resources. In 1887, to augment the University's endowment income, the Legislature levied a tax of one cent for every \$100 of taxable property in the state, and this tax was doubled, to two cents, a decade later. Donations have also been important from the earliest days of the University. More than half of all UC's landholdings were the result of private donations.⁵ Particularly important in terms of this report was Dr. H. H. Toland's 1873 donation of the Toland Medical College, which had been established in San Francisco in 1864, including property worth about \$100,000, for the University to use as a medical school. The donation was accepted, the deed transferred to the Regents, and in 1873 the college became the Medical Department of the University of California.

After San Francisco's catastrophic earthquake and fire of 1906, the first two years of instruction in basic sciences were transferred to the Berkeley campus, and remained there until 1958.⁶

Laying the Cornerstone for the University's Scientific Mission

Except for President Gilman (1872-1875), the University of California did not have strong leadership in its early years. The ambivalent attitude of the Legislature toward higher education handicapped the development of UC Berkeley.⁷ During its first thirty years, the University of California had seven presidents. An early development of great importance to the University was the recruitment in 1875 of the distinguished geologist and soil chemist Eugene Hilgard as Professor of Agriculture. He persuaded the agricultural interests that a scientific emphasis at the University would be of greater benefit than a trade school emphasis, and he won the support of farmers and their representatives in the legislature to the University's cause. The College of Agriculture and other colleges in the fields of mining, civil engineering, and chemistry soon emerged as top-quality institutions, and there were many other strong departments.

The Emergence of the Modern University of California

Power Passes from the Board of Regents to the President

The modern University of California emerged under the vigorous leadership of President Benjamin Ide Wheeler, who served as President from 1899 to 1919. Under his leadership, there was a delegation of academic leadership to the President from the Board of Regents, although the Regents retained control of non-academic affairs. Clark Kerr described this as "The Wheeler-Sproul Academic Senate Model."⁸ By the end of the century, the University of California was ranked among the top six universities in the United States.⁹

Expanding the University's Research Focus and Seeding the Development of General Campuses

During President Wheeler's tenure, the University Farm was founded in 1905 at Davis, which became a general campus, UC Davis, in 1959. In 1912, the Marine Station was established at La Jolla. The station later became the Scripps Institute for Biological Research, then the Scripps Institute of Oceanography and, still later, part of UC San Diego's new general campus in 1959.¹⁰ The Los Angeles branch of the University of California (UCLA) was established in 1919, when Governor William D. Stephens signed legislation transferring the Los Angeles State Normal School buildings and grounds on North Vermont Avenue to the University of California. The current Westwood site was selected as the Los Angeles campus six years later, and classes began there in 1929.¹¹ UCLA's medical school was established in 1947. The Regents established the position of Chancellor for UCLA and UC Berkeley in 1952, and UCLA was given equal status with Berkeley in 1958.

Power Passes from the President to the Academic Senate

A faculty revolt in 1919, at the end of President Wheeler's tenure, resulted in the delegation of powers over educational policy and academic affairs from the President to the Academic Senate in 1919-1920 and established the faculty's very strong role in academic affairs, a role that continues to this day. Following President Wheeler, the University of California was led by David Barrows (1919-1923) and William Wallace Campbell (1923-1930).

Robert Gordon Sproul, the first UC alumnus to guide the University, served from 1930 to 1958. President Sproul's leadership was outstanding. He was considered to be very effective politically with members of the Legislature, alumni groups, and the public, and he worked well with the Academic Senate. In 1934, the University's excellence was recognized when the American Council on Education ranked the graduate programs the equal of any in the country. This excellence was exemplified by faculty such as G. N. Lewis, who had been appointed as UC Berkeley's Dean of Chemistry in 1912, and Ernest O. Lawrence, who was appointed Professor of Physics in 1928. Dr. Lawrence's path-breaking studies in atomic physics led to the development of the cyclotron and his receipt of the Nobel Prize.¹² Under Professor Lawrence's leadership, the UC Berkeley Physics Department had become the best in the country prior to World War II and it played a central role in the war-time Manhattan Project and the development of the atomic bomb.

Politics Plays a Growing Role

Although President Sproul was an outstanding leader of the University, left-wing agitation during the Great Depression of the 1930s resulted in Rule 17, restricting free speech and political activity on campus, being adopted by the Regents in 1936. Later, Rule 17 limited Chancellor of UC Berkeley Clark Kerr's actions in the fall of 1952, and also in 1956, when he was forced to prohibit Adlai Stevenson, the Democratic presidential candidate, from speaking on campus.

The issues and conflicts that triggered the Free Speech Movement on the Berkeley Campus in 1964 had their roots in Rule 17, even though as Chancellor, and later as President of the University of California, Clark Kerr had eased many of its restrictions. The University was deeply involved in a very divisive political struggle; in 1966, the Republican candidate for governor, Ronald Reagan, stated that he would "clean up the mess at Berkeley."¹³ Soon after he took office as Governor, at his first Regents meeting on January 20, 1967, he was instrumental in the Board of Regents' firing Clark Kerr.

The political leadership of California was moderate Republican in the years following World War II. The University of California under UC President Sproul (1930-1958) had the support of both Governors Earl Warren (1943-1953) and Goodwin Knight (1953-1959). From 1943 to the late 1950s, the UC student body more than doubled in size, from 18,800 to 44,000, and faculty growth kept pace. Edmond G. "Pat" Brown, Sr., was Governor (1959-1967) during Clark Kerr's tenure as UC President (1958-1967) and after the Master Plan for Higher Education in California was approved in 1960, the University expanded further and the current multi-campus structure was established.

The University Continues to Grow, Expanding to Ten Campuses

From 1960 through the present day, the University has grown more than four-fold—increasing from under 50,000 students to more than 200,000 in 2008, and most of this growth was at the undergraduate level.¹⁴ Teaching and research were ongoing at various sites linked to UC Berkeley (Davis, Riverside, and La Jolla) and these sites became the foundations for general campuses: UC Riverside (1954), UC Davis (1959), and UC San Diego (1959). The teacher's college at Santa Barbara, part of the University since 1944, also became a general campus in 1959. UC San Francisco became a separate campus for Health Sciences in 1964, and two new campuses (UC Santa Cruz and UC Irvine) were established in 1965. The addition of campuses, between 1958 and 1965, followed A 1957 Board of Regents decision resulted in the addition of three new campuses between 1958 and 1965—UC Santa Cruz, UC Irvine, and UC San Diego.¹⁵

In 1958, President Kerr established the position of Provost in San Francisco to better coordinate the programs in Dentistry, Medicine, Nursing, and Pharmacy, and all Deans then reported to the Provost. In 1964, President Kerr converted the position of Provost to Chancellor and established UCSF as the ninth UC campus.¹⁶ The University of California remained a nine-campus system for forty years. The Regents authorized planning for an additional campus in the Central Valley in 1988, and selected the Merced site in 1995. The founding Chancellor was appointed for UC Merced, the tenth campus, in 1999 and the first students were admitted in 2005.^{17,18}

During the late 1950s, Governor Brown had urged President Kerr to move forward with the development of the Master Plan for Higher Education.¹⁹ Approved by the Regents and the California Legislature, and signed by the Governor on April 17, 1960, the Master Plan was an historic achievement. By setting new admissions policies, the Master Plan created the opportunity for any high school graduate in California to attend college and—potentially—to graduate from the University of California, tuition free.

The plan also clarified the respective roles of the University of California, the State Colleges (later called State Universities), and the Community Colleges. All California high school graduates became eligible for admission to the community colleges; the top 33.3 percent of high school graduates (instead of the top 50-60 percent) were eligible for the state colleges; and the University of California would accept the top 12.5 percent (instead of the top 15 percent). Transfer opportunities were created to enable movement of students within the system, and California State scholarship programs were expanded.²⁰

Under The Master Plan for Higher Education, exclusive responsibility in higher education for doctoral level education, including medical education, was delegated to the University of California. The only exception, a doctoral degree in education, was granted to the California State University System by the Legislature and the Governor on September 22, 2005.²¹

Growing University Enrollment and Expansion of Medical Education

During the 1960s, there was remarkable growth in enrollment, and the academic excellence of the University of California continued. The addition of three new medical schools, (UC Davis, UC San Diego, and UC Irvine) and the expansion of enrollments at UCLA and UCSF medical schools created opportunities to recruit underrepresented minorities and women without taking places away from White male students. From 1958 to 1970, the number of first-year enrollments in UC medical schools increased from 171 students in 1958-1959 to 428 in 1969-1970, and total annual instructional expenditures rose from \$7.4 million to \$35.7 million, with state expenditures increasing from \$3.65 million to \$13.1 million during this period for UCSF alone.²²

Declining Public and Political Support for the University

The 1964 Free Speech Movement at UC Berkeley and the 1965 Watts riots in Los Angeles were two events that influenced the politics of California and the University of California toward the end of Governor Pat Brown's term. Immediately after Clark Kerr was fired in 1967, Harry Wellman, a distinguished University faculty member, became acting President. In 1968, in the midst of the Governor Reagan's negative reactions toward the University and the tumult of continuing student demonstrations about the Vietnam War, civil rights, and other divisive issues, Charles Hitch, former UC Vice President for Finance, was appointed as UC President by the Board of Regents.

Hitch had the difficult task of sustaining broad public and political support for the University of California. Student unrest and disturbances on the UC campuses—particularly at UC Berkeley, UCLA, UC Santa Barbara, and UC San Diego—angered the public and diminished support for the University of California. The tragic outcome of the student demonstration at People's Park in Berkeley is among the most extreme examples of the authorities' reaction to campus tension and violence during this period. California's right-wing shift, partly a reactionary backlash, has had a lasting effect.²³

On November 18, 1968, President Hitch spoke to the Assembly of the Academic Senate:

Our basic problem is the chasm on so many issues between public opinion and University opinion. The differences that divide us within the University community are much less than the differences which divide us from society. This chasm is created by many things. I will mention only four:

1. Bewilderment and outrage at the tactics of student activists, and a belief that they are aided and abetted by many faculty and condoned by weak and vacillating administrators.
2. Growing disillusionment with research—coupled with a belief that the faculty is interested only in research to the neglect of its most important function.
3. What appears to the public to be the radicalization of campuses—faculty and students—and a belief that the new generation is being deliberately indoctrinated in radical, violent, and revolutionary doctrines.

4. The escalating costs of higher education—coupled with a widespread taxpayer revolt. Many taxpayers and legislators are looking for good excuses and rationalizations not to raise taxes.

It is not a pretty picture—but I do not think I am exaggerating. It constitutes *our* problem. I am not at all suggesting that we simply cater to public opinion, but there are two things that we have to do: The first is to make sure that our house is in order; and the second is to be in a position to persuade the public that it *is* in order. I cannot do these things alone. I need the help, cooperation, and understanding of the University community. The irony is that never before has there been such need for public support of universities—burgeoning enrollments, urban crisis problems—and even the minimal support is not there.²⁴

The Beginning of Affirmative Action in the 1960s

The Early Role of the University of California

The University of California's development of affirmative action policies in the 1960s can best be understood by looking at their historical context. John Aubrey Douglass, a historian at UC Berkeley's Center for Studies in Higher Education, noted in a paper in 1999:

The University of California...is one of the few public universities in the United States that has been designated a *public trust* within a state constitution, and thereby not directly subject to legislative prerogatives and edicts. Admissions policy has historically been viewed as the purview of the faculty and the institution. Since the chartering of the University of California in 1868 by the State of California, admissions policies have attempted to balance what can be called the UC's 'social contract' with the idea of a meritocracy. What has changed over time is the definition of this social contract, and the appropriate methods used to evaluate the academic abilities of a student.²⁵

On one hand, the University's charter expressly states that it is to serve "all of California's people" and, on the other hand, it is clear that, as Douglass notes, from the start, the University was to be "selective in its admissions policies...to focus on advanced training and research, reflecting the emerging model of the American research university."²⁶

In the 1960s, for the first time, "taking affirmative action" related to the race/ethnicity of its students, faculty, and staff emerged as a part of the University's social contract, with passage of the Civil Rights Act of 1964 and pressure from California legislators and advocacy groups. In the 1930s, however, the Regents and the Academic Senate had developed a policy that forbade tracking of racial identity as being "in conflict" with making academic and hiring decisions without regard to "ethnic background."²⁷ So in 1963, when Governor "Pat" Brown requested ethnic data on UC employees, the University refused.²⁸ To comply with Title VI of the Civil Rights Act of 1964, the University began in 1966 to collect data on race and ethnicity. Data on the general population of California were also more readily available, and disparities between

California's growing Mexican and Asian populations and the University's student populations became apparent.

Just as student enrollment was burgeoning under the new Master Plan for Higher Education, and new admissions policies (i.e., requiring the SAT) had been put in place to raise UC eligibility standards, the University was faced with growing demands to increase enrollment of racial/ethnic minorities. As Douglass recounts:

In 1968, the same year that the SAT was adopted, the University's Board of Regents approved Special Action enrollment to 4 percent, to explicitly expand the enrollment of students 'whose ethnic or economic background has disadvantaged them.' ...Yet this marginal use of Special Action as a tool for expanding diversity proved insufficient.²⁹

In 1974, the Legislature mandated "an eighth general principle" for admissions for the University of California, the State Colleges, and the Community Colleges:

University enrollment should reflect the racial, ethnic, gender, and economic composition of California's high school graduates.³⁰

The UC Campuses Move Forward with Affirmative Action Policies

Affirmative action policies designed to recruit, enroll, and retain more underrepresented minorities in the health professions schools were developed at UCSF in the mid-1960s, largely as a result of faculty leadership in the School of Medicine, with strong pressure from the Black Caucus after its establishment in 1968 and the list of demands made by the Black Student Union and the Black Caucus in November 1968. (See Chapter 8: Case Studies of Diversity: UCSF and Stanford University Medical Schools.)

Chancellor Willard Fleming approved policies related to these demands in December 1968, particularly the goal of achieving 25 percent underrepresented minority annual enrollment in the professional schools. By 1969, the UCSF School of Medicine had become a national leader in affirmative action, moving rapidly toward increased diversity in admissions. All UCSF professional schools had begun to make progress in terms of outreach and recruitment of students and in employment (in the non-faculty ranks). The health science faculties, however, remained largely White, with some Asian faculty in the Pharmacy School.

UCLA, and then UC Davis, UC Irvine, and UC San Diego, followed UCSF's example in implementing affirmative action. Whereas UCSF set a goal for minority student admissions that was based on a percentage of total admissions, UC Davis devised a different type of admissions policy: a specific number of places was set aside and reserved for minority students and a separate admissions process was developed for minority students.

The legality of the use of this quota system and this separate process in admissions policy was challenged first by Allan Bakke, a White applicant who had twice been denied admission to the medical school. The first challenge was heard in the California Superior Court in Yolo County California, and the second, in the California Supreme Court; in both cases, the courts found that

UC Davis's admissions policies constituted racial discrimination and violated Bakke's rights to equal protection under the California Constitution. The University of California decided to prepare an appeal to the U.S. Supreme Court. In 1978, in the landmark case of the *Regents of the University of California v. Bakke*, the U.S. Supreme Court also ruled these admissions processes unconstitutional. However, the Court expressly stated that the race could be considered as one factor, among others, in the admissions process. Justice Lewis F. Powell, Jr. stated in his opinion in the *Bakke* case that a properly devised admissions program involving the competitive consideration of race and ethnic origin allowed the university to achieve a diverse student body, and that the educational benefits that flowed from a diverse student body were compelling for the university in achieving its educational mission.

Political and Funding Support for the University

The Legislature's support for the University of California declined during the years when Governor Ronald Reagan, a Republican (1967-1975), and Governor Edmund G. "Jerry" Brown, Jr., a Democrat (1975-1983), were in office.

State Funding for the University Declines

Competition for the state's General Fund increased in the 1960s and 1970s. The costs to the state of the federal-state funded Medicaid program (Title XIX of the Social Security Act enacted in 1965 and implemented in California in 1966) increased rapidly, requiring an increasing share of the state's General Fund. The second major factor was passage of Proposition 13 in 1978, which dramatically reduced property taxes and limited future taxing power of all public agencies in California. As a result, many of the costs of K-12 education and local government were shifted to the state.³¹

Proposition 13 and the Tax Payer Revolt: The Impact on the University and Education in California

In 1978, the state government had a \$5 billion dollar surplus, and California's economy was booming. In Southern California especially, property values were rising rapidly and the analogous rise in property assessments resulted in higher taxes and tax revenues at the local and state levels, fueling the campaign for property tax relief. Politicians of both parties converted to the new tax-cutting ideology, and no one embraced the idea more than Governor Jerry Brown, who advocated the "era of limits."

California voter approval in 1978 of Proposition 13, the anti-property tax initiative, influenced a wide range of policies, changing certain responsibilities of governments within the state, and profoundly impacting the governance of the State of California. The state replaced local school districts in assuming primary responsibility for the financing of elementary and secondary public education, using budget surpluses to partially compensate for the \$7 billion loss of property tax revenues formerly allocated to local school districts and local governments. Long-term problems ensued for the University of California because of the increased competition for appropriations from the state General Fund.

The passage of Proposition 13 represented, first and foremost, a lack of leadership on the part of Governor Jerry Brown, and to a lesser extent, of the Legislature because it had not exercised its power to deal with and resolve the property tax issue. If legislators had acted in a timely manner to deal with the rapid increase in property taxes, it is likely that the impetus for the initiative's emergence would have been lacking. The long-term impact of the reduction in tax revenues following Proposition 13's enactment has been described as the "Mississippification" of California.³²

In the aftermath of 1978 "tax-payer revolt" and the U.S. Supreme Court's *Bakke* decision, the University reviewed its admissions policies, including those in its medical schools. Bringing their policies in line with the *Bakke* decision, the legitimacy of diversity as an educational goal was recognized and the right of the University to consider race and ethnicity in pursuit of this goal was established.³³ UC schools reevaluated their admissions policies and refocused their effort to increase the enrollment of underrepresented minorities.

The trend that began in the mid-1960s and intensified after the passage of Proposition 13 in 1978 continued with the passage of Proposition 98 in 1988, which guaranteed a minimum of 40 percent of the state's General Fund each year to public schools (K-12) and Community Colleges.³⁴ The result was a decline in state funds as a percentage of the total University of California budget from 47 percent in 1965 to 24 percent in 1996. As a result, the UC campuses had to generate more of their financing through student fees, private fundraising, federal research and development projects, and ancillary enterprises.³⁵ Since 1970, discretionary appropriations for UC have declined, from 7 percent of the General Fund expenditures to the level of 3.5 percent in the late 1990s, while the percentage of California's budget devoted to its burgeoning penal system has risen.³⁶

Other Sources of University Support: Federal Dollars for Research and Patient Care

In the face of fiscal adversity, the University also began to expand its efforts in private fundraising, with some success. The intellectual life of the University continued to thrive, and NIH and private support enabled further expansion of research. Enrollments at UC increased, as did the proportion of underrepresented minorities. The financial stringency of the Reagan-Brown years did not affect the UCSF campus as adversely as it did the general campuses, because of increased NIH funding for biomedical research; also, the hospital and the clinical faculty benefited from the growth in revenue for patient care derived from Medicare and Medicaid.

Renewed State Commitment to UC Funding

In 1983, the same year that Republican George Deukmejian became Governor, David Gardner (President of the University of Utah) was appointed UC President. The new President persuaded the Governor and the Legislature to increase UC's 1984-1985 operating budget by 30 percent, the largest budget increase in a single year in University history. This was the first in a series of strong UC budgets, which included construction funds, between 1983 and 1993.³⁷

Budget Increases Come to a Halt

The generous budget increases of the 1980s came to a halt in the early 1990s when the state's economy entered one of its cyclical downturns, which proved to be the worst since the Great Depression. UC enrollment had reached 163,102 in 1993, having increased Systemwide and particularly at UCSD, UCI, and UCSC.³⁸ The shortfall in the UC budget (the difference between the budget requirements and the Legislature's actual appropriations) came to nearly one billion dollars annually.

Plans for building three new campuses, proposed by President Gardner in 1988, stalled, and a decision was made to proceed slowly with the planning for the UC Merced campus. Due to the recession, a variety of "belt-tightening" measures were instituted, including three early retirement programs, reductions in administrative expenses, deferred salary increases, and higher student fees.

After the 1994 earthquake in the Northridge district of Los Angeles, California received a huge infusion of federal earthquake recovery funds. Hospitals (including UCLA's teaching hospital) and damaged freeways and other infrastructure were repaired and rebuilt; thousands of new jobs were created; and the economy began to grow. However, the improved economy did not prove to be a boon to the University of California. UC's state-funded budget in FY 2008-2009 was a little more than \$3 billion a year.³⁹ The University's substantial state budget cuts in the 1990s and in the early 2000s have resulted in a drop in per-student funding from \$15,830 in 1990-1991 to \$9,560 in 2009 dollars.^{40,41} State and national economic downturns beginning in 2007 have led to cuts to the University of more than \$800 million in FY 2008-2009 and FY 2009-2010. (See Chapter 5: California's Changing Policy Context.)

Challenges to the University's Affirmative Action Policies and Practices

On May 20, 1988, the Regents adopted a Policy on Undergraduate Admissions that stated in part:

Mindful of its mission as a public institution, the University of California...seeks to enroll on each of its campuses, a student body that, beyond meeting the University's eligibility requirements, demonstrates high academic achievement or exceptional personal talent, and that encompasses the broad diversity of cultural, racial, geographic, and socio-economic backgrounds characteristic of California.⁴²

U. S. Department of Education Office for Civil Rights Investigations

From 1988 through 1992, the University of California's affirmative action practices were challenged in a series of U.S. Department of Education investigations.^{43,44} The Department's Office for Civil Rights investigated admissions procedures at the UC Berkeley and the UCLA campuses in 1988, in response to complaints that Asian admissions were being capped by the two schools, and that their admissions policies placed too much emphasis on extracurricular

activities and other “subjective” criteria.⁴⁵ Early in 1989, without indicating that guidelines had been put in place to limit Asian admissions, Berkeley Chancellor Michael Heyman apologetically acknowledged the decline in Asian undergraduate enrollment. He announced plans to change admission policies to place more emphasis on academic achievement and affirmed that the university’s admissions policies would be made public for the first time. In 1991, Asians entering their freshman year at Berkeley outnumbered Whites for the first time.

In September 1992, Berkeley’s Boalt Hall School of Law was charged with “shielding minority applicants from competition with white students” to meet “affirmative action quotas” in 1988-1990.⁴⁶ Even though the school denied wrongdoing, it agreed in the future not to separate applicants by race.

At UCLA, the outcome of the Department of Education’s investigation was announced in October 1990: 75 graduate departments were cleared and one graduate department was found to have discriminated against Asians.⁴⁷ The U.S. Department of Education also investigated similar claims at Harvard during this time and found no evidence of wrongdoing.

Governor Pete Wilson's Executive Order W 124-95

In 1994, Pete Wilson, California’s Governor from 1991-1999, was reelected while supporting the controversial Proposition 187, a measure to end all public services (except emergency medical services), including public schooling, for undocumented immigrants and their children. (In 1999, most of its provisions were invalidated, having been ruled unconstitutional by the U.S. District Court and the U.S. Court of Appeals for the Ninth District.)⁴⁸

During his successful reelection campaign in 1994, Governor Wilson had spoken out against “race-based and gender-based preferences” in public employment and university admissions.⁴⁹ In June 1995, he issued Executive Order W-124-95 to End Preferential Treatment and to Promote Individual Opportunity Based on Merit.⁵⁰ Governor Wilson’s expressed rationale for the executive order was:

State governmental programs and practices which grant special preference based on race and gender in employment and contracting...have expanded beyond even the requirements of current law.⁵¹

The executive order, he said, was in “the interest of promoting an equal opportunity and truly color-blind society and eliminating excessive state regulations and requirements”⁵² and required several specific actions by state government, including:

- State agencies shall not discriminate in employment decisions on the basis of race, gender, creed, color, religion, national or ethnic origin, marital status, or physical or mental disability.
- Educational agencies, including the State Board of Education, the California Community Colleges, the California State University, and the University of California, as well as all other branches of State government are requested to comply with the intent and requirements of this executive order.⁵³

Schrag describes the political heat affecting UC at the time:

Equally significant, in 1995, just as the recession of the early 1990s was ending (and the state's minority population was rising rapidly), Governor Wilson strong-armed the UC Regents into ending affirmative action in admissions and faculty recruiting, and the University was deeply shaken again."⁵⁴

The University of California Board of Regents' Resolutions: SP-1 and SP-2

On July 20, 1995, after 12 hours of heated debate, the Board of Regents of the University of California approved two resolutions deemed necessary to comply with the Governor's Executive Order: SP-1 Policy Ensuring Equal Treatment Admissions and SP-2 Policy Ensuring Equal Treatment Business Practices and Employment.⁵⁵ The Governor, who was President of the Board of Regents, was among the Regents voting to approve the resolutions.

A rationale for approving SP-1 was that "in January 1995 the university initiated a review of its policies and practices, the results of which support many of the findings and conclusions of Governor Wilson."⁵⁶ The Regents also noted that "it is in the best interest of the university to take relevant actions to develop and support programs which will have the effect of increasing the eligibility rate of groups which are 'underrepresented' in the university's pool of applicants as compared to their percentages in California's graduating high school classes."

SP-1: Policy Ensuring Equal Treatment Admissions

Section 1. The president, with the consultation of the Board of Regents, shall appoint a task force representative of the business community, the university, other segments of education and organizations currently engaged in academic 'outreach.' The responsibility of this group shall be to develop proposals for new directions and increased funding for the Board of Regents to increase the eligibility rate of those currently identified in section four. The final report of this task force shall be presented to the Board of Regents within six months after its creation.

Section 2. Effective January 1, 1997, the University of California shall not use race, religion, sex, color, ethnicity or national origin as a criterion for admission to the university or to any program of study.

Section 3. Effective January 1, 1997, race, religion, sex, color, ethnicity or national origin shall not be a criterion for admissions in exception to UC eligibility requirements.

Section 4. The president shall confer with the Academic Senate of the University of California to develop supplemental criteria for consideration by the Board of Regents which shall be consistent with section one. In developing such criteria, which shall provide reasonable assurances that the applicant will successfully complete his or her course of study, consideration shall be given to individuals who, despite having suffered disadvantage economically or in terms of their social environment (such as an abusive or otherwise dysfunctional home or a

neighborhood of unwholesome or antisocial influences), have nonetheless demonstrated sufficient character and determination in overcoming obstacles to warrant confidence that the applicant can pursue a course of study to successful completion, provided that any student admitted under this section must be academically eligible for admission.

Section 5. Effective January 1, 1997, not less than fifty (50) percent and not more than seventy-five (75) percent of any entering class on any campus shall be admitted solely on the basis of academic achievement.

Section 6. Nothing in section one shall prohibit any action which is strictly necessary to establish or maintain eligibility for any federal or state program, where ineligibility would result in a loss of federal or state funds to the university.

Section 7. Nothing in section one shall prohibit the university from taking appropriate action to remedy specific, documented cases of discrimination by the university, provided that such actions are expressly and specifically approved by the Board of Regents or taken pursuant to a final order of a court or administrative agency of competent jurisdiction.

Section 8. The president of the university shall periodically report to the Board of Regents detailing progress to implement the provisions of this resolution.

Section 9. Believing California's diversity to be an asset, we adopt this statement: Because individual members of all of California's diverse races have the intelligence and capacity to succeed at the University of California, this policy will achieve a UC population that reflects this state's diversity through the preparation and empowerment of all students in this state to succeed rather than through a system of artificial preferences.

SP-2: Policy Ensuring Equal Treatment Business Practices and Employment

Section 1. The president of the University of California is directed to oversee a system-wide evaluation of the university's hiring and contracting practices to identify what actions need to be taken to ensure that all persons have equal access to job competitions, contracts and other business and employment opportunities of the university. A report and recommendations to accomplish this objective shall be presented to the Board of Regents before December 31, 1996.

Section 2. Effective January 1, 1996, the University of California shall not use race, religion, sex, color, ethnicity, or national origin as a criterion in its employment and contracting practices.

Section 3. Nothing in section one shall prohibit any action which is strictly necessary to establish or maintain eligibility for any federal or state program, where ineligibility would result in a loss of federal or state funds to the university.

Section 4. Nothing in section one shall prohibit the university from taking appropriate action to remedy specific, documented cases of discrimination by the university, provided that such actions are expressly and specifically approved by the Board of Regents or taken pursuant to a final order of a court or administrative agency of competent jurisdiction.

Prior to the approval of SP-1 and SP-2, the University had long been considered one of the best public institutions of higher education in the world and UC medical schools ranked in the top eight schools nationally in the percentage of the 1990-1994 graduates who were underrepresented minorities.⁵⁷ Approval of SP-1 and SP-2 by the Regents set the stage for the introduction of the statewide ballot measure Proposition 209 and its approval by the voters in November 1996. The combination of these measures created a “chilling effect” on underrepresented applicants and enrollment at the undergraduate, graduate, and professional school levels within the University of California.

In February 1996, a 35-member Task Force on UC Outreach began its deliberations and initiated a review of the University’s “current outreach goals, strategies, programs, and activities.”⁵⁸ The Task Force obtained and analyzed statewide and national data on student achievement and the effects of outreach programs on college readiness. The Task Force found that educational disadvantage was “a significant obstacle to expanding minority enrollment in higher education.”⁵⁹ In its report to the Regents, The Task Force proposed two goals for University outreach:

1. Contribute to the academic enrichment of UC campuses through a diverse student body; and
2. Improve opportunities for California students in disadvantaged circumstances to achieve eligibility and to enroll at UC campuses.⁶⁰

The Task Force proposed a four-point outreach strategy:

1. School-centered partnerships
2. Academic development programs
3. Informational outreach
4. University research and evaluation.⁶¹

Proposition 209: Prohibition against Discrimination or Preferential Treatment by State and Other Public Entities (The “California Civil Rights Initiative”)

The support of Governor Wilson and UC Regent Ward Connerly was instrumental in the success of the anti-affirmative action statewide voter initiative approved in November 1996, Proposition 209: Prohibition against Discrimination or Preferential Treatment by State and Other Public Entities (The “California Civil Rights Initiative”). The text of Proposition 209 stated⁶²:

Section 31 is added to Article I of the California Constitution as follows:

- SEC. 31. (a) The state shall not discriminate against, or grant preferential treatment to, any individual or group on the basis of race, sex, color, ethnicity, or national origin in the operation of public employment, public education, or public contracting.
- (b) This section shall apply only to action taken after the section's effective date.

(c) Nothing in this section shall be interpreted as prohibiting bona fide qualifications based on sex which are reasonably necessary to the normal operation of public employment, public education, or public contracting.

(d) Nothing in this section shall be interpreted as invalidating any court order or consent decree which is in force as of the effective date of this section.

(e) Nothing in this section shall be interpreted as prohibiting action which must be taken to establish or maintain eligibility for any federal program, where ineligibility would result in a loss of federal funds to the state.

(f) For the purposes of this section, 'state' shall include, but not necessarily be limited to, the state itself, any city, county, city and county, public university system, including the University of California, community college district, school district, special district, or any other political subdivision or governmental instrumentality of or within the state.

(g) The remedies available for violations of this section shall be the same, regardless of the injured party's race, sex, color, ethnicity, or national origin, as are otherwise available for violations of then-existing California antidiscrimination law.

(h) This section shall be self-executing. If any part or parts of this section are found to be in conflict with federal law or the United States Constitution, the section shall be implemented to the maximum extent that federal law and the United States Constitution permit. Any provision held invalid shall be severable from the remaining portions of this section.

These events had far-reaching consequences, as Laird notes:

Two of the most cataclysmic national events in the history of the struggle over affirmative action took place in California in 1995 and 1996. One was the vote by the Regents of the University of California in July 1995 to end affirmative action. The other was passage of Proposition 209 by the voters of California in November 1996. The action of the UC Board of Regents and the decisions by the voters of California were both wholly unprecedented actions by a University governing board or a state electorate. They shook the entire nation, and they still strongly influence the debate over affirmative action across the country.⁶³

University Initiatives to Increase Diversity after SP-1 and Proposition 209

The Medical Student Diversity Task Force, 1999-2000

After 1995, there was a steady decline in admission of underrepresented minorities to UC medical schools. The entering medical school classes in 1992 had included 117 underrepresented minorities (21 percent), and this number had declined to 63 by 1999 (11 percent).⁶⁴ This decline prompted University of California's President, Richard C. Atkinson to appoint a 14-member statewide Medical Student Diversity Task Force, in October 1999, to examine the cause of this sharp decline and to recommend steps that the UC medical schools might take to encourage more minority students to choose health science careers and to help to prepare them for admission to California's medical schools, both public and private.

The Medical Student Diversity Task Force submitted its report to President Atkinson on November 1, 2000.⁶⁵ The Task Force Special Report on Medical Student Diversity included 18 key findings.⁶⁶ Among the top-most findings were:

1. California is the most racially and ethnically diverse state in the nation. (finding # 1)
2. The California underrepresented minority applicant pool is small and decreasing relative to the population. (finding #5)
3. The lack of diversity in American medical schools is long standing. (finding #6)
4. Efforts by U.S. medical schools to increase diversity have had periodic success. (finding #7)
5. Until the early 1990's, California medical schools were among the leaders in the efforts. (finding #8)
6. Challenges to affirmative action have impacted medical school admissions. (finding #9)
7. The overwhelming majority of applicants to California (medical) schools cannot be accommodated. (finding #11)
8. The University of California is often unable to match the financial packages offered by other medical schools. (finding #14)

The other findings focused on access to health care, health disparities, and factors influencing admission.

The report included recommendations in four areas: 1) premedical education, advising, and outreach; 2) medical school admissions and financial aid; 3) medical school curriculum and climate; and 4) continuity of leadership for the future.⁶⁷

These findings and recommendations are similar to those of the Sullivan Commission⁶⁸ and other national reports over the past nearly fifteen years.^{69,70,71,72,73,74,75}

A University-Foundation Partnership to Increase Medical School Diversity and Meet the Health Care Needs of Diverse Populations

Focused Programs in Medical Education (PRIME)

President Atkinson's 2000 Task Force Special Report stimulated The California Endowment to invite the UC Office of the President to submit a proposal to implement the recommendations of the report. This process led to the establishment of focused programs in medical education to educate and train students interested in providing care to diverse underserved populations in urban and rural areas and to increase medical school enrollment to meet the need for physicians in the state and its regions. The first of these programs, UC Irvine's PRIME-LC (Program in Medical Education for the Latino Community), designed to serve underserved, low-income Latino populations, began in July 2004. To implement the PRIME, initial funding was provided by The California Endowment, and state funding was included in the Regents' budget and the Governor's January 2005 budget and then the 2006 ballot initiative Proposition ID.

The increase of eight new positions for UC Irvine's PRIME-LC represented the first enrollment growth in UC medical schools in 25 years, although California's population had grown by more than 15 million during this period. Planning for the PRIME on other UC campuses proceeded after the establishment of PRIME-LC at UC Irvine. The emphasis of all the PRIME efforts is meeting the needs of underserved communities, and the program on each campus has a different focus: at UC Davis, it is on rural health and telemedicine, at UCSD, research on health disparities and health equity, at UCSF, the urban underserved, and at UCLA, health care disparities and medically underserved populations.

UCSF began its pilot program in medical education for the urban underserved (PRIME-US) in September 2006. The Program creates a special track—for ten new entering medical students each year for the next four years—providing a medical education experience concentrating on care of the urban underserved population. The UCSF program includes the Joint UCSF-UC Berkeley Medical Program, a partnership of UCSF and the UC Berkeley School of Public Health, in which students spend their first three years at UC Berkeley and their clinical years at UCSF. PRIME-US is a five-year medical education program that focuses on meeting the health care needs of indigent, inner-city communities and inspiring future physician leaders in the field.⁷⁶

Each UC PRIME program received some state support through Proposition 1D, approved by the voters in November 2006. UCSF was slated to receive \$35 million of the \$200 million that the bond measure provided to the UC system for medical education aimed at boosting access to health care for underserved populations.⁷⁷

Identifying Issues Related to the Changing Picture of Diversity within the University

In addition to the Medical School Diversity Task Force report, a great number of reports were developed over the period from 1998 through 2008. Some have been requested by the UC Office

of the President or the UC Regents; others have been prepared for discussion within the University, and still others have been requested by the California Legislature.

Several reports were a direct response to SP-1 and SP-2 and Proposition 209: *UC Outreach: Systemwide Perspective and Strategic Plan* (September 1998),⁷⁸ *University of California Outreach 1998: Annual Report on the Outreach Efforts of the University of California* (May 1999),⁷⁹ *Expanding Educational Opportunity: A Status Report on the Educational Outreach and K-12 Improvement Programs of the University of California* (Fall 2001),⁸⁰ *Report of Findings and Recommendations for Increasing Access and Promoting Excellence: Diversity in California Higher Education* (May 2002),⁸¹ *Undergraduate Access to the University of California After the Elimination of Race-Conscious Policies* (March 2003).⁸²

Additional reports have been developed on Education Partnerships (February 2003),⁸³ UC Health Professions and Outreach (March 2003),⁸⁴ Graduate and Professional School Admissions (December 14, 2003); the Eligibility and Admissions Study Group Final Report to the President (April 2004), The Report to UC Regents Committee on Educational Policy on Undergraduate Eligibility and Admissions (July 2005);⁸⁵ the Council of UC Staff Assemblies Report to the UC Regents 2004-2005 (July 2005);⁸⁶ the Graduate and Professional School Admissions and Diversity report (January 14, 2005);⁸⁷ the UC Health Sciences Education: Workforce Needs and Enrollment Planning report (April 2005),⁸⁸ UC's Shrinking Pipeline: A Look at Underrepresented Minorities in the UC Pipeline (March 2006),⁸⁹ and "Equal Opportunity in Higher Education: The Past and Future of Proposition 209: A Symposium sponsored by the School of Law, UC Berkeley (October 2006).⁹⁰

Reports submitted to the Legislature included the University of California Response for SB 177, Research and Curriculum Directed toward Diversity and Inclusiveness at the University of California (March 1, 2003),⁹¹ and the University of California Medical School Admissions and Shortages in the California Health Care Workforce (February 2005).⁹²

Post-Proposition 209 Analyses: Assessing the Impact on Undergraduate Education at the University of California and Its Medical Schools and Recognizing the Imperative to Act

The University's Undergraduate Education Experience from 1995 through 2002

The March 2003 report, *Undergraduate Access to the University of California after the Elimination of Race-Conscious Policies*, summed up the University's experience with anti-affirmative action policies and their effect on the University's undergraduate students:

The experience of the University of California over the past seven years indicates that in a highly selective institution, implementing race-neutral policies leads to a substantial decline in the proportion of entering students who are African American, American Indian, and Latino. At UC, these declines have been partially mitigated by programs designed to increase enrollments of students from low-income families, those with little family experience with higher education, and those who attend schools that traditionally do not send large numbers of students on to four-year institutions. Increases in the

numbers of underrepresented minority students graduating from California high schools, combined with substantial expansion of enrollment capacity at several UC campuses, have led to overall increases for some groups within the University of California as a whole. However, underrepresented students remain a substantially smaller proportion of those admitted to and enrolled at the University's most selective campuses—UC Berkeley and UCLA—than they were before the elimination of race-conscious policies. Additionally, the gap between the percentage of underrepresented minority students graduating from California high schools and the percentage enrolling at the University of California has widened.⁹³

Since UC Berkeley and UCLA, in particular, are primary feeder schools to UC medical schools, trends in UC undergraduate education are of particular concern in efforts to increase diversity in UC medical schools.

The 2003 report summarized strategies that were put in place over the period from 1995 through 2002 “designed to enhance academic preparation of UC students and to maintain access for low-income students, those from disadvantaged families and schools, and those from underserved geographical areas of the state”:

- expansion of outreach to, and educational partnerships with, K-12 schools, designed to increase preparation for all students and address the achievement gap between students from different backgrounds;
- expansion of the criteria the University employs to define academic achievement;
- implementation of the “Eligibility in the Local Context” (ELC) program, which seeks to identify and enroll the top 4 percent of students in all of California's high schools, including rural and urban schools that have not traditionally sent significant numbers of students to the University;
- expansion of the University's enrollment of community college transfer students, combined with enhanced outreach and academic support to students enrolled in community college;
- adoption of the Dual Admissions Program (DAP) (to be implemented in 2003), which seeks to further increase community college transfers by extending a guarantee of admission to students who graduate in the top 12.5 percent of their high school class and successfully complete lower division work at a California Community College;
- implementation of the comprehensive review admission policy, which encourages UC campuses that cannot admit all UC-eligible applicants to broaden the conception of merit embodied in their selection policies and to more fully review each applicant; and
- replacement of the admission test battery currently required by the University with tests that are more closely related to the high school preparatory curriculum and that send a clear message that the University will use admissions tests to identify students who have taken challenging courses and done well in them, rather than to measure undefined notions of “aptitude” (to be implemented in 2006).⁹⁴

University of California Undergraduate Applications, Admits, and Statement of Intent to Register, 1997 and 2008

In February 2008, the University of California announced that it would keep its commitment to offer a place at one of its campuses to all undergraduate applicants who meet the University's eligibility requirements.⁹⁵ A record of 121,005 students applied for freshman or transfer admission to UC in 2008. This number represented a 7.7 percent increase in California freshman applications and 7.1 percent increase in California transfer applications over 2007.

In April 2008, the University reported that for the third year in a row, it had offered admission to a record number of high school seniors—60,008 offers went to incoming freshman for fall 2008, compared to 57,318 for fall 2007.⁹⁶ Admission to the University of California is restricted by state policy in the Master Plan for Higher Education to the top one-eighth (12.5 percent) of the state's graduating high school seniors. American Indians represented 334 (0.6 percent), African Americans, 2,305 (3.8 percent), and Chicano/Latinos, 12,432 (20.7 percent) of 2008-2009 admits.

In June 2008, the University announced that more than 38,088 Californians had announced their intent to enroll as UC freshmen.⁹⁷

A snapshot of underrepresented students in 2008 and 1997 (before SP-1 and Proposition 209 became effective with the class of 1998) shows that:⁹⁸

- At the Universitywide level, underrepresented minority students (American Indians, African Americans, and Chicanos/Latinos) made up 9,029 (23.7 percent) of California freshmen offered admission to the UC system and intending to enroll in 2008, compared to 4,575 (17.7 percent) in 1997.
 - American Indians accounted for 180 (0.5 percent) of California freshmen in 2008 and 212 (0.8 percent) in 1997.
 - African Americans accounted for 1,464 (3.8 percent) of freshmen in 2008 and 983 (3.8 percent) in 1997.
 - Chicanos/Latinos accounted for 7,385 (19.4 percent) of freshmen in 2008 and 3,380 (13.1 percent) in 1997.

At the highly competitive campuses—UC Berkeley and UCLA—the picture for underrepresented students in 1997 and 2008 is different, although UCLA has made progress in the period from 2006 through 2008, particularly among African American students.

- At UC Berkeley, underrepresented students accounted for 651 (16.1 percent) of California freshmen in 2008, compared to 770 (21.8 percent) in 1997.
 - American Indians accounted for 19 (0.5 percent) of incoming California freshmen in 2008 and 25 (0.7 percent) in 1997.
 - African Americans accounted for 144 (3.6 percent) of freshmen in 2008 and 258 (7.3 percent) in 1997.
 - Chicanos/Latinos accounted for 488 (12.0 percent) of freshmen in 2008 and 487 (13.8 percent) in 1997.

- At UCLA, underrepresented students accounted for 1,028 (21.6 percent) of California freshmen in 2008, compared to 851 (21.8 percent) in 1997.
 - American Indians accounted for 13 (0.3 percent) of freshmen in 2008 and 40 (1.0 percent) in 1997.
 - African Americans accounted for 235 (4.9 percent) in 2008 and 211 (5.4 percent) in 1997.
 - Chicanos/Latinos accounted for 780 (16.4 percent) in 2008 and 600 (15.4 percent) in 1997.

In 2007, the first year that UCLA began using a holistic approach for reviewing freshmen applicants, the campus experienced an increase in the admission of African Americans, American Indians, and Chicano Latinos.

University of California Medical School's First-year Enrollment, 1997 and 2007

The picture of first-year enrollment at the five UC medical schools in 1997 and 2007 shows:

- A total of 72 (12.7 percent) underrepresented minorities (American Indian and Alaska Natives, Blacks, Mexican American/Chicanos, and Mainland Puerto Ricans) in the fall class of 1997 among a total of 569 first-year enrollments.*
- A total of 143 (21.0 percent) underrepresented minorities in these groups plus Other Hispanics/Latinos in the fall class of 2007 among a total of 675 first-year enrollments.†

Differences in reporting of race/ethnicity and changes of definition of those underrepresented in medicine, as well as additional enrollments in 2007 make direct comparisons difficult. However, the UC medical schools' first-year enrollment for those underrepresented in medicine, as they are now defined, appeared in 2007 to be recovering to levels well before the passage of SP-1 and Proposition 209.^{99, 100} In 1992, for example, 117 URMs accounted for 21 percent of the entering class of 569—the highest percentage in the 1990s. UCSF with URMs representing 30 percent of a total enrollment of 147 led the UC medical school campuses in 2007.‡

* The total enrollment number for 1997 does not reflect joint medical education programs at UCSF and UCLA.

† The total enrollment number for 2007 reflects enrollment in the Drew-UCLA, UC Riverside-UCLA, and UC Berkeley-UCSF joint medical education programs, as well as increased enrollment due to implementation of PRIME (Program in Medical Education) at UCSD, UCSF, and the UC Berkeley-UCSF joint program in 2007.

‡ The UCSF School of Medicine Admission's Office uses different methods to identify race and ethnicity. The school reported entering class URM percentages of 28 percent in 2006, 35 percent in 2007, and 28 percent in 2008.

Reengagement of the Board of Regents in Assessing and Addressing Diversity within the University of California

In September 2007, the University Undergraduate Work Team of the Study Group on University Diversity released its recommendations and observations.¹⁰¹ This report was one of several reports submitted in September 2007 by the Study Group on University Diversity to the UC Regents, including an overview report,¹⁰² a report on UC faculty diversity,¹⁰³ a report on campus climate,¹⁰⁴ a report on graduate and professional school diversity,¹⁰⁵ and an update for the Regents Study Group on Diversity by the UC Staff Diversity Council.¹⁰⁶ In April 2008, a report of the Staff Diversity Council was released,¹⁰⁷ and in July 2008, a report on faculty diversity in the health sciences.¹⁰⁸

DIVERSITY AND UNDERGRADUATE EDUCATION. The Undergraduate Work Team made fourteen recommendations to be endorsed by the UC Regents. The recommendations included those on K-14 education, UC academic preparation partnerships and intervention, UC eligibility, campus freshman and transfer admissions selection, post-admission recruitment/yield activities and financial support, student support, and Proposition 209 and disparate impact legal issues.¹⁰⁹

- Recommendation #1: Achieving Greater Diversity Within the University of California Is of Compelling Interest.
- Recommendation #2: UC Needs a Comprehensive Education Pipeline Repair Plan.
- Recommendation #3: California Greatly Needs More Qualified School and College Counselors.
- Recommendation #4: A Strong, Stable, and Steadfast Commitment to Academic Preparation Programs Must Be Part of UC's Plan.
- Recommendation #5: UC Should Rethink How It Determines UC Eligibility.
- Recommendation #6: UC Campus Admissions Should Align to Best Practices.
- Recommendation #7: Further Streamlining of UC Admissions Would Support Best Practices in Admissions.
- Recommendations #8: Transfer Admissions Is a Necessary Part of UC's Comprehensive Education Pipeline Repair Plan.
- Recommendation #9: UC Should Better Compete for the Best and Brightest From California's Diverse Communities.
- Recommendation #10: UC's Campuses that Qualify Are Encouraged to Seek Federal Status as Hispanic-Serving Institutions.
- Recommendation #11: UC's Financial Aid/Scholarship Packages Should Be More Competitive for Underrepresented Students.
- Recommendation #12: Greater Diversity at UC Will Require Institutionalizing a Supportive Climate, with Accountability.
- Recommendation #13: Optimizing UC's Capacity to Achieve Its Diversity Goals Requires Careful Analysis of Legal Obligations.
- Recommendation #14: Disparate Impact Should Be Eliminated by All Appropriate Means.

On May 15, 2008, highlights of this report, as well as a report on “disparate impact,” were presented to the Committee on Educational Policy of the Board of Regents.¹¹⁰

1. The University loses underrepresented minority students “at every stage of the admissions process,” particularly with respect to two features of UC’s eligibility requirements (i.e., completing a-g course and test-taking requirements).¹¹¹
2. “Thirty-seven percent of California high school graduates overall complete the University’s a-g eligibility requirements, but only 16 percent of underrepresented minority students complete them, primarily because of a lack of availability of these courses in their schools.”¹¹²
3. “UC eligibility rates for African American and Chicano/Latino students have been around 5 percent since 1983, except for 2001 when 5.5 percent rates were estimated for Chicano/Latino high school students and 2003 when 6.5 percent rates were estimated for Chicano/Latino students and 6.2 percent for African American students.”¹¹³
4. The “opportunity gap between the greater proportion of African American, Chicano/Latino, and Native American students graduating from California’s public high schools and the lesser proportion of new African American, Chicano/Latino, and Native American UC freshmen” narrowed in the 1980s but has widened substantially after the passage of the Regents’ SP-I Resolution in 1995 and Proposition 209 in 1996.¹¹⁴
5. “The historical ratio of UC eligibility rates between groups with the highest rates and those with the lowest rates raises the possibility of Title VI federal “adverse impact” concerns—the overall impact of practices that results in significantly higher proportions of members of minorities and other protected groups being rejected for admissions.”¹¹⁵
6. “Adverse impact can be indicated when the percentages for the lowest group are 80 percent or less of the group with the highest percentages (disparate impact); since 1983, eligibility rates for African Americans and Chicanos/Latinos have been far below the 80 percent guideline—in the neighborhood of 16 percent.”¹¹⁶
7. Both Title VI governing federal funding and California Government Code Section 11135 are legal sources for the principle of disparate impact. The three tests for disparate impact are: 1) to determine whether a practice (e.g., admissions policy) results in substantial disparate impact; 2) to determine whether or not the practice is educationally justified; and 3) to determine whether or not alternative practices would meet the same objective (e.g., highly selective admissions policies) but would have less impact and must be substituted.¹¹⁷
8. “The question of whether or not Proposition 209 has had an impact on disparate impact analysis is undetermined given that the impact is not fully defined by the courts.”¹¹⁸

9. “Under federal law, the University has an affirmative duty to be self-scrutinizing about policies and practices that may have unwarranted disparate impact and to evaluate proactively whether there are equally effective but less discriminatory alternatives.”¹¹⁹
10. Not only do underrepresented minorities have low UC eligibility rates, they also have low admission rates at all UC undergraduate campuses, with African Americans having the lowest rates across all campuses.¹²⁰
11. High school inequalities are among the chief reasons for inequalities among racial/ethnic groups at the undergraduate level, “but while the K-12 system is broken, it is not broken equally for everyone.”¹²¹
12. “Disparities in access to UC strongly reflect patterns of socioeconomic, racial/ethnic, and geographic inequity among the state’s high schools. Some high schools offer students virtually no chance of generating a UC admissions offer,” while others that produce only 20 percent of California’s high school graduates receive 49 percent of UC freshman admission offers.¹²²
13. “Advance placement course offerings also show disparate availability; three times as many of these courses are offered at high schools where few students received free or reduced cost lunches”¹²³
14. The “will and resources to remedy educational inequality have been insufficient for the task, both prior to and since Proposition 209. UC has not sustained the effort to mount a strong, stable, and steadfast commitment to academic preparation programs....For every year since 2001, these programs have been slated for either cuts or total elimination. Yet, the available research shows that academic preparation programs are effective in spite of the context of diminished support.”¹²⁴
15. Besides challenges facing UC in eligibility and admissions, “UC faces challenges recruiting underrepresented minorities that do surmount those barriers and are accepted. African Americans take UC offers to a lesser degree, particularly among the top third in terms of grades and test scores. UC also loses Chicano-Latinos to community colleges...”¹²⁵
16. UC is triply disadvantaged in recruiting underrepresented students:
 - First, the students are more likely to borrow, and borrow more heavily than non-underrepresented students.
 - Second, low-income and underrepresented minority students show greater price sensitivity.
 - UC’s overall net cost advantage is narrowest for underrepresented minority students. Private universities are able to target their aid for underrepresented minority students to meet non-fee costs, while UC cannot.¹²⁶

17. “UC can achieve greater diversity, but it will take vision, bold leadership, and collective effort with accountability.”¹²⁷

Time to Act: The Academic Senate Proposal to Reform University of California Freshman Eligibility Policy. In June 2008, the Assembly of the Academic Senate adopted recommendations for changes in the freshman eligibility requirements proposed by the Academic Council based on a proposal by the Senate’s Board of Admissions and Relations with Schools (BOAR).¹²⁸ At the July 16, 2008 meeting of the Regents, this proposal was presented to the Committee on Educational Policy. The presentation noted that the May 15, 2008, Regents Meeting represented a call to action for three reasons:

- The University acknowledged that there are disparate outcomes in eligibility and campus admissions selection.
- The University should not wait for schools to repair themselves.
- The University has failed in its responsibilities and has a charge to act.¹²⁹

The Academic Senate proposed three changes in the current eligibility policy based on the following principles and policy undergirding UC admissions:

- UC admissions should be awarded primarily on the basis of academic achievement during the pre-college years;
- Assessment of this achievement should be based on multiple sources of evidence;
- Assessment of achievement should account for the circumstances in which it occurred; and
- All of California’s college-ready students, regardless of background, should be afforded the chance to have their qualifications fairly and accurately assessed for purposes of admissions to UC.¹³⁰

The three changes were:

- Elimination of the requirement that students take two SAT subject examinations. Individual majors and colleges would still be free to recommend submission of specific SAT subject test scores, as they are now, but failure to do so would not affect a student’s eligibility status.
- Creation of a new category of students “Entitled to Review (ETR).” To achieve ETR status, students would need to complete, by the end of 11th grade, a prescribed 11 of the required 15 a-g courses (with the expectation that all 15 would be completed before enrollment), achieve a minimum GPA (without weighting for honors course), and take the SAT or ACT with Writing. Students in this category could be entitled to a comprehensive review at each campus to which they apply, but would not be guaranteed admissions through the referral process.
- Revision of the composition of the guaranteed referral pool to include those ETR students who fall in the top 9 percent of California graduates as determined by a statewide GPA/test score index, or within the top 9 percent of graduates from their high school (ELC). Based on data from the 2003 CPEC eligibility study, BOARS estimates that these

two pools would overlap substantially, and together would constitute roughly 9.7 percent of California public high school graduates.¹³¹

On February 5, 2009, the Board of Regents approved these measures for undergraduates recommended by the Academic Senate, as well as establishing a minimum level of financial assistance for students with household incomes below the state median of \$60,000.¹³² In effect, the pool of high school students eligible for comprehensive review would be broadened to include those with 3.00 GPA in required courses, and admission would be guaranteed to at least one UC campus to the top 9 percent of graduates statewide (compared to the 12.5 percent previously) and the top 9 percent of their high school classes (compared to 4 percent previously).¹³³

DIVERSITY AND GRADUATE AND PROFESSIONAL EDUCATION. The Work Team on Graduate and Professional School Diversity reported to the Educational Policy Committee of the Regents on March 20, 2008.¹³⁴ The Work Team focused on three aspects of diversity—race and ethnicity, gender, and citizenship and national origin. Key findings related to race/ethnicity and medicine included the following:

- The proportion of underrepresented minorities at UC decreases at each stage of academic study and accomplishment—from baccalaureate degrees awarded, to newly enrolled students in graduate and professional studies, to doctoral degrees awarded, to post-doctoral students, to new ladder faculty hires, and total ladder faculty.¹³⁵
- The proportion of URM new enrollments in all three UC professional school programs—business, law, and medicine—showed a sharp decline after 1995. UC medical and law school programs have shown improvement. For example, UCSF’s 2007 entering class included more than 30 percent URMs. UCSF’s new PRIME-US program, combined with alumni outreach efforts, may account for this improvement.¹³⁶
- A multitude of programs are needed to effect change. For medical schools, these programs include postbaccalaureate reapplicant programs, systemwide pipeline programs (e.g., UC LEADS [Leadership Excellence through Advanced Degrees]), summer research programs, PRIME programs, and outreach to community colleges, California State University, and K-12 schools involving students and alumni.¹³⁷

The Work Team made more than thirty recommendations in five key areas:¹³⁸

- Leadership—Strong leadership is critical to increasing diversity at the postbaccalaureate levels.
- Academic planning—Diversity will not thrive unless it is incorporated into academic planning at the graduate, professional, and postdoctoral levels.
- Resource allocation and assessment of Departments and Schools—Resource allocation is essential to influence departmental behavior and demonstrate the University’s commitment to diversity.
- Recruitment and retention—Campuses and departments can do more to promote a competitive, diverse pool of applicants and to retain matriculated students.
- Accountability—Increased accountability at the campus, division, and departmental levels is a key component to increasing graduate and professional student diversity.

2009 ANNUAL ACCOUNTABILITY REPORT ON DIVERSITY. In September 2009, the President of the University responded to the Board of Regents' policy established in 2007 that the President report annually on the status of diversity at the University. This Annual Accountability Sub-Report on Diversity was presented at a Joint Meeting of the Long Range Planning Committee and Educational Policy Committee at the November 2009 Board of Regents meeting.¹³⁹ Observations about the report, which included narratives from the UC campuses as well as figures on staff, student (undergraduate, graduate, and professional), and faculty diversity, were:

1. Trend lines for diversity indicators are very slow to move, and only give the University the most general idea of progress (or lack thereof).
2. Process indicators that can be monitored in the near term and could give the University measurable indicators on improvement that are likely to impact the trend lines over time are lacking. The 2010 diversity report will include new process measures.
3. Detailed snapshots serve to refine the University's understanding of race/ethnicity and gender, and can provide direction for areas of further study.¹⁴⁰

Diversity is now included as a core competency in the new Performance Management Review Process for senior managers, including Chancellors, a policy approved by the Regents in July 2008.¹⁴¹

During the presentation to the Regents, UCLA Chancellor Gene D. Block spoke about UCLA's success in increasing the number of Black and Hispanic/Latino undergraduate students over the period from 2006-2009.¹⁴² He also described the difficulty of enrolling underrepresented students in the top holistic rank admission categories, because UCLA could not compete with scholarship packages offered by private universities. He pointed to the importance of the efforts of The Alliance for Equal Opportunity in Education, a community organization working to ensure equal access for African Americans at UCLA and throughout the UC system, the Black Alumni Association, and the California Community Foundation in raising awareness and funds for scholarships. Dr. Block also described the successful pilot school project, a partnership with the Los Angeles Unified School District. The UCLA Community School opened on September 9, 2009 in the Ambassador Hotel, where Robert F. Kennedy was assassinated in 1968, to 360 K-5 students, with plans to increase enrollment to K-12.¹⁴³ Teachers at the school have been trained by a team of UCLA education faculty under a formal agreement. Dr. Block cautioned that further reductions in state support necessitating enrollment reductions would adversely affect enrollment of underrepresented students.

Chancellor Timothy P. White of UC Riverside also spoke to the Regents about the success of increasing diversity on the Riverside campus, which now has federal status as a Hispanic-Serving Institution, opening the door to federal funding available to these institutions.¹⁴⁴ He emphasized that closing racial/ethnic gaps in education was not only about access for underrepresented groups, but also about key educational outcomes. Riverside has been successful in reducing point gaps in graduation rates between Blacks and Latinos and other racial groups; 44 percent of undergraduate students have Pell Grants. Dr. White described the use of learning communities, which allow students to move as a cohort, strengthening academic and social ties and evaluation data showing student participation in the learning communities improves student achievement. He noted Vorris Nunley, Assistant Professor of English at

Riverside said, “Riverside gets it right. Diversity is not just numerical and compositional. There are cognitive and developmental aspects to diversity. It has changed the way I teach.”

A summary of the status of activities related to the ten recommendation of the Staff Diversity Council and the Study Group on University Diversity was appended to the Annual Accountability Sub-report on Diversity.¹⁴⁵

1. Leadership

- Strong leadership is critical to creating a campus climate that fosters equal opportunity and diversity
- Recognize leaders who establish effective programs that model UC’s ethical values and support the growth and placement of a diversity leadership pipeline
- Develop a comprehensive systemwide talent management and leadership development plan aligned with affirmative action and diversity program goals
- UC’s campuses that qualify are encouraged to seek federal status as Hispanic-serving Institutions—Done (UC Riverside)

2. Accountability

- Increased accountability at the campus, division, and department levels
- Require the President of the University to report annually to the Regents on the status of diversity at the University—Done
- Ensure systemwide management accountability for diversity goals, and for employee development—Done

3. Recruitment and Retention of Diverse Staff

- Clarify the UC job structure, including career paths and related skills/competencies so that employees can more easily navigate the system and institutional progress can be measured
- Standardize systemwide data and reporting requirements to support locations’ ability to track talent across organizational boundaries

4. Recruitment and Retention of Diverse Faculty

- Campuses can do more to promote faculty diversity through recruitment, hiring, and retention practices

5. Recruitment and Retention of Diverse Graduate Students

- Campuses and departments can do more to promote a competitive, diverse pool of graduate applicants and to retain matriculated students

6. Recruitment and Retention of Diverse Undergraduate Students

- UC needs a comprehensive education pipeline repair plan
- Transfer admissions is a necessary part of UC’s comprehensive education repair plan
- A strong, stable, and steadfast commitment to academic preparation programs must be part of UC’s plan

- UC should better compete for the best and brightest from California’s diverse communities
 - UC’s financial aid/scholarship packages should be more competitive for underrepresented students
 - UC should rethink how it determines UC eligibility—Done
 - California greatly needs more qualified school and college counselors
7. UC Campus Admissions Should Align to Best Practices
- Further streamlining of UC admissions would support best practices in admissions
 - Optimizing UC’s capacity to achieve its diversity goals requires careful analysis of legal obligations
 - Disparate impact should be eliminated by all appropriate means
8. Regularly Assess Campus Climate
- Address unhealthy climate factors
 - Address risks raised by claims of discrimination and lack of attention to diversity.
 - To create and sustain an inviting, supportive and nondiscriminatory work environment at each location, publicize the Principles of Community and administer a climate survey at least every four years
 - Greater diversity at UC will require institutionalizing a supportive climate, with accountability
9. Academic Planning
- Diversity will not thrive unless it is incorporated into academic planning at every level
10. Apply Funding and Support
- Resource Allocation and Faculty Rewards-Resources and rewards are essential to influence faculty and departmental behavior and demonstrate the University’s commitment to diversity and equal opportunity
 - Resource Allocation and Assessment of Departments and Schools—Resource allocation is essential to influence departmental behavior and demonstrate the University’s commitment to the diversity of graduate and professional school students
 - Enhance and create programs to support success

Linking California's Health Workforce Needs to University Health Sciences Education

A number of important developments in the past several years point the way toward future policies to promote diversity in medical education within the University of California. Among the findings contained in the highly significant report, *University of California Health Sciences Education: Workforce Needs and Enrollment Planning*,¹⁴⁶ submitted to the President by the Universitywide Health Sciences Committee and presented to the Board of Regents on March 16, 2005, were:

1. A statewide shortage of health care providers, that will continue to worsen, with a shortage of 17,000 physicians predicted in 10-15 years;
2. The importance of ethnic diversity and cultural and linguistic competence in the delivery of health care to diverse populations; and
3. The importance of the UC Medical Centers' hospitals and clinics as providers of health care.¹⁴⁷

The Committee suggested three options for addressing the physician shortage:

1. Increase medical school capacity and degree-producing programs.
2. Increase training of residents.
3. Provide incentives for physicians to settle in California.¹⁴⁸

In this report, we focus on the first of these recommendations. The last time that medical school enrollment was significantly expanded—from the mid-1960s to the late 1970s—nationally and in California there was a rapid increase in the enrollment of women and minorities. This opportunity needs to be made available again.

At the July 16, 2003, meeting of the Board of Regents discussing the Health Sciences Committee report at the Committee on Educational Policy, Dr. Michael Drake, then Vice President for Health Affairs, UC Office of the President (now Chancellor UC Irvine), described long-term issues facing medical education at the University of California:

Although California's population has grown by approximately 10 million people since 1980, UC trains fewer medical students and approximately the same number of residents as it did in 1982. Physician workforce needs must be met by the immigration of doctors from other states, as well as those from foreign countries. California ranks 38th among the 46 states with medical schools in the number of medical school graduates per 100,000 people. ...Planning for the future must encompass a long-term vision, as medical students devote 14-18 years to training before entering the work force. While the state currently produces approximately 1,400 physicians per year, 2,600 are needed to maintain the doctor-patient ratio. This lag may be seen in the primary care health professional shortages that exist in many locations throughout the state.¹⁴⁹

Dr. Drake also noted:

There is need for programs and policies to increase diversity among health care providers and to address the distribution of physicians with the state. The first step is to increase capacity at existing medical schools and replace some of the losses sustained in the early 1980's. The Program in Medical Education (PRIME), first implemented at the Irvine campus, is intended to complement the current curriculum and produce culturally and linguistically competent physicians to address needs in underserved communities. Programs are being developed at the Davis, San Diego, San Francisco medical centers.¹⁵⁰

Developing a University of California Systemwide Enrollment Plan for the Health Professions

The next step in this process was President Dynes' appointment of a special Advisory Council on Future Growth in the Health Professions, in December 2005.¹⁵¹ The Council was Co-Chaired by former UC Provost and Executive Vice President for Academic and Health Affairs Wyatt "Rory" Hume and Regent Sherry Lansing, and it was charged with reviewing the work of the Health Sciences Committee and developing a new Systemwide enrollment plan, including making recommendations for annual targeted growth by health profession (dentistry, medicine, nursing, optometry, pharmacy, public health, and veterinary medicine) through 2020.¹⁵² Included in the review were the five medical schools (UC Davis, UC Irvine, UCSF, UCLA, UCSD), and four small medical education programs located in Berkeley (the Joint Medical Program with UCSF), Fresno (affiliated with UCSF), Riverside (two years of basic science and final two years at UCLA), and the Charles R. Drew University of Medicine and Science (first two years at UCLA, last two clinical years at Drew). The Committee made its final report to the President in January 2007.

The Advisory Council took note of the fact that in the past four decades there has been essentially no growth in health professions programs in California.¹⁵³ This does not include the residency training program in UC hospitals and UC affiliated hospitals. "During the same period, California's population has increased by more than 16 million (i.e., approximately 81 percent) and UC undergraduate enrollments have increased by approximately 86,000 students, or 118 percent."¹⁵⁴

Several earlier studies reviewed by the Advisory Council projected a shortfall of 17,000 physicians by 2015.^{155,156,157} However, Janet Coffman and colleagues at the University of California, Berkeley, Nicholas C. Petris Center on Health Care Markets and Consumer Welfare in a June 2004 study did not project a serious physician shortage in the near future.¹⁵⁸ Four policy recommendations in this report¹⁵⁹ are particularly relevant to the issue of diversity:

- While the evidence does not suggest a need to significantly increase the overall supply of physicians in California, the distribution of physicians in the state would be improved by modestly increasing medical school and residency enrollment for the primary purpose of preparing physicians to meet the needs of underserved populations and communities.
- Policymakers should continue to support policies and programs aimed at increasing access to medical care in communities with an inadequate number of physicians. For

example, California could recruit more medical students and medical residents from underserved areas, provide more training in these areas, and expand loan repayment programs for physicians who practice in these areas.

- Policymakers should provide more funding for outreach and scholarship programs designed to increase the racial/ethnic diversity of the state’s physicians, medical students, and residents.
- Policymakers should ensure that physicians educated in California have the linguistic and cultural competence required to meet the health care needs of the state’s racially/ethnically diverse populations.

Planning for Increased Enrollment in Existing UC Schools and New Medical Schools

The Advisory Council recommended that “medical school enrollment growth occur in a stepwise fashion, beginning with growth in existing UC Schools and programs.”¹⁶⁰ Campus estimates suggested to the Council that the existing medical schools—with their current infrastructure—could accommodate approximately 325 students (mostly enrolled in PRIME programs) by 2020, and that with some additional infrastructure the schools could accommodate 450 more students. This would increase total enrollment by 775 new students in the five UC medical schools with approximately 180 new graduates annually.¹⁶¹

Preliminary proposals for new medical schools from UC Riverside and UC Merced were reviewed by the Advisory Council, and on November 16, 2006 the Regents approved the next phase of planning for a new medical school at UC Riverside, which has had a thirty-year history of a joint medical program with UCLA.¹⁶² The new school is projected to open in the fall of 2012 with an entering class of 90 new first-year students. The Council recommended a 34 percent increase in MD student enrollment from 2,564 students in 2005-2006 to 3,429 in 2020; the Council also recommended a comparable increase in medical residents over the same period.¹⁶³

The anticipation of a physician shortage in California has already led to the Regents’ approval of the establishment of the new medical school at UC Riverside and expanded enrollment in existing medical schools. Approved by the Board of Regents, the Program in Medical Education (PRIME) provides a means at UCI, UCSF, UCLA, UCD, and UCSD to increase enrollment and focus greater attention on health disparities, urban and rural underserved populations, and the needs of a growing population, and we are optimistic that the Governor and the Legislature will provide the University with the long-term support it seeks for these programs, even if short-term economic downturns and state budget constraints affect current funding.

The University’s Long-range Plans and Priorities and Diversity

The University has been engaged in a long-range planning effort involving a Long-Range Guidance Team, which made its report, *UC 2025: The Power and Promise of Ten*, to the

President in November 2006.¹⁶⁴ As former Provost Wyatt “Rory” Hume noted about the vision of the university presented in this report:

It is a university that is cross-disciplinary, nimble, innovative and responsive to the needs of society. And one that is grounded in a renewed social contract with the people of California that reaffirms UC’s founding land-grant mission and its commitment to serving all segments of the state’s diverse population.¹⁶⁵

The Guidance Team laid out eleven initiatives for consideration in meeting California’s most pressing needs:

- K-12 education
- Health care
- Science and technology innovation
- Graduate education
- Undergraduate education
- Affordable higher education
- Research
- Sustainable resources
- Global reach
- Efficient Systemwide business practices for UC
- Arts and culture¹⁶⁶

The University’s current action plan focuses on three objectives: 1) building its academic core, 2) reinvigorating its relationship with California, and 3) restructuring its administrative and business systems.¹⁶⁷

Current Systemwide academic planning priorities are:

- Long-range enrollment planning
- Systemwide research
- Undergraduate education
- Diversity
- Health
- Information technology
- K-12 educational imperative.¹⁶⁸

Priorities for reinvigorating its relationship with the people of California are 1) contributing to the restoration of K-12 education, 2) addressing the lack of diversity among UC’s faculty and students, and 3) developing alternatives for maintaining affordability of UC for undergraduates.¹⁶⁹

The need to increase diversity is a theme that runs through many of these plans and priorities. For the University of California, it is indeed a compelling need.

Expanding the University's Academic Health Science Centers' Role in Improving the Delivery of Health Care

In addition, the Regents will consider expanding the current role of the University's health science programs, particularly broadening the academic health science centers' traditional focus on research, education, and direct patient care to encompass improving the delivery of health care, including access to care, quality of care, and the costs of care.¹⁷⁰

These are major initiatives of the University of California and, if supported by the Board of Regents, the Governor, and the Legislature, will represent a major commitment that should improve education from K-12, to the Community Colleges, State Universities, and University of California.

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Student Orientation, Stanford University School of Medicine, Class of 1979
Courtesy of Office of Medical Development, Alumni Relations,
Stanford University School of Medicine



CHAPTER 7

Stanford University: The Changing Policy Context of a Private University

Introduction

Leland Stanford Junior University was established as an educational institution with high aims for excellence. As its founders envisioned, Stanford University has become an internationally acclaimed center for research, as well as for graduate and professional education. Stanford University has also become a leader in diversity in its undergraduate enrollment, and its medical school has provided leadership in efforts to increase diversity over the past forty years. In its early years, Stanford drew most of its students from California, and it had a liberal admissions policy of equal access for women, which was unusual for a university at the time. This policy was changed in 1899, due to apprehension that the rising enrollment of women, then 40 percent, might lead to the University's being marginalized as a women's college. After national social upheaval and a turbulent period of racial unrest affected Stanford in the 1960s and early 1970s, the university successfully implemented policies to increase minority enrollment in the medical school in the late 1960s and to advance diversity in undergraduate enrollment, eventually building a multicultural campus. In this chapter, we review Stanford's early history (1884-1916), its transformation from a regional university to a world-class research university (1916-1968), its pragmatic commitment to diversity and excellence (1968 through the present), and the University's strengths and challenges in the 21st century.

The Early Years (1884-1916)

Founding Stanford University

Senator Leland Stanford, Sr., a leader in business and politics in California, and his wife, Jane Lathrop Stanford, made the decision to found Leland Stanford Junior University after their only son died of typhoid fever in Italy in 1884. Senator Stanford and his attorney, Creed Haymond, drew up an Enabling Act (under which a university could be founded, endowed, and maintained in California through an ordinary deed of trust) that was approved by the California Legislature

and signed on March 9, 1885 by the Governor.¹ On November 11, 1885, the Founding Grant was executed, which established Stanford University, provided its endowment, defined its scope and organization, named its trustees, and formulated their powers.² The cornerstone for Leland Stanford Junior University was laid in 1887 and construction of the Inner Quad began.

At his first meeting on March 22, 1891, with David Starr Jordan, then President of the University of Indiana, Senator Stanford asked him to be the Stanford University's first President. Senator Stanford made his desires clear to Dr. Jordan: He hoped to develop in California a university of the highest order, a center of invention and research, where students should be trained for "usefulness in life," and Dr. Jordan accepted his offer."³

Commitment to the Liberal Arts and Sciences and the Applied Sciences

Three points were emphasized in the formal written statement, drafted by Dr. Jordan and approved by Senator Stanford, defining the terms on which Dr. Jordan meant to engage his faculty:

That the two great lines of work, the Liberal Arts and Sciences on the one hand and the Applied Sciences be both provided for from the first—the two be kept in close relation and equally fostered. The Liberal Arts will demand more teachers, the Applied Sciences more extensive apparatus.

That each professor be supplied as soon as may be with the books, apparatus, or machinery which he needs for instruction or for research.

That provision be made for the publication of the results of any important research on the part of professors or advanced students. Such papers may be issued from time to time as "Memoirs of the Leland Stanford Junior University."⁴

By June 1891, President Jordan had recruited the initial 17 faculty members, who were mostly from Midwestern universities. Jordan sought professors who combined abilities for teaching and research, and Stanford had a faculty of 49 in its second academic year.⁵

Autonomous Academic Departments and Student Admissions Policies

Stanford University was non-traditional. It was coeducational, non-denominational, and avowedly practical.⁶ President Jordan instituted innovative educational policies, and the University was organized on the basis of autonomous academic departments—"Each Professor Sovereign in his own Department."⁷ When Stanford first opened its doors, there were twenty-five separate small departments.⁸ Rather than providing the traditional curriculum of classical studies, Stanford offered the flexibility of the major subject system with electives.⁹ Its "major professor system" provided each student with the support of an advisor, the professor in their chosen major area of study, throughout their college years.^{10, 11}

Following the example of the University of California admissions process, Stanford accepted students who presented certification of graduation from high school and passed a sufficient number of entrance examinations. However, Stanford also accepted “specials”—promising students without these qualifications. The Pioneer Class of 559 students, admitted on October 1, 1891, included 147 “specials.” The number of “specials” was a cause of controversy (in contrast, the University of California had admitted only 76 “specials” among 520 students), and critics charged that Stanford had low admissions standards.^{12,13,14} After its first year, Stanford was described as “easiest to get into, hardest to stay in.”¹⁵

University Financial Straits

After Leland Stanford’s death in June 1893, the University’s finances were severely constrained by probate proceedings. Bank and business failures on June 27, 1893, touched off the Panic of 1893 and ushered in a severe nationwide depression.¹⁶ The federal government filed a lawsuit against the Stanford estate on May 26, 1894, seeking to establish stockholder liability for the repayment of construction loans made by the federal government to the Central Pacific Railroad at the time of its construction.¹⁷ Mr. Stanford, one of the company’s founders, had been the President of Central Pacific Railroad. The suit was settled—entirely in the estate’s favor—by the U.S. Supreme Court on March 2, 1896.¹⁸ Despite this favorable decision, the depression continued to pose serious problems for the University’s finances.¹⁹ President David Starr Jordan described this period, from Stanford’s death until the probate of his multimillion dollar estate was completed in 1898, as “six pretty long years.”²⁰

Jane Lathrop Stanford assumed the major leadership role in the governance of the University and control of its finances after her husband’s death. Responsibility for the curriculum, student admissions, and faculty recruitment remained in President Jordan’s hands. Although the two remained firm friends, they had basic disagreements on policy. One particularly contentious issue was the use of the University’s resources; Dr. Jordan advocated for faculty salary increases, and Mrs. Stanford favored expenditures for construction of the Outer Quad. Mrs. Stanford won this battle; however, she was not successful in her efforts to initiate a small tuition charge.

Changes in the University’s Founding Grant and Enabling Act

In 1899, without consulting President Jordan or the faculty, Mrs. Stanford initiated a revision of the University’s Founding Grant limiting the number of women enrolled to 500. The Founding Grant had specified that one of the duties of the Trustees was “to afford equal facilities and give equal advantages to both sexes.”²¹ The Pioneer Class in 1891 was approximately 75 percent men and 25 percent women and, by 1899, 40 percent of Stanford students were women. The decision to make this significant policy change was apparently based on Mrs. Stanford’s concern that Stanford might become marginalized as a women’s college, rather than become a world-class university as envisioned.

A financial problem, which developed in 1897 because of slight, but important, differences in the language of the Enabling Act and Stanford’s Founding Grant, required action by the California Legislature.²² The statewide vote on the proposition on November 6, 1900 favored the University by a two-to-one majority.²³ The “Stanford Act,” as it was called, “provided that residents of

California shall be charged no fees for tuition unless such fees be authorized by act of the legislature.”²⁴ This reaffirmed the University’s policy of not charging tuition. The Trustees assumed an active role in the governance of the University for the first time in June 1903, when Mrs. Stanford, then 75 years of age, transferred her authority under the Founding Grant to the Board of Trustees. She was elected to the Board of Trustees and was made its president. In 1904, the Academic Council was created, giving the faculty a formal voice in University governance. Mrs. Stanford’s death in Hawaii in 1905, was an unexpected blow to the University.

The Cooper Medical College Is Transferred to Stanford University

President Jordan and University of California President Benjamin Ide Wheeler discussed the establishment of a joint clinical medical school in San Francisco over a number of years, but President Wheeler and Stanford’s Board of Trustees disagreed on the terms of the collaboration, and both Universities moved ahead with separate plans. The property of Cooper Medical College in San Francisco was transferred to Stanford University in 1908, and instruction in the medical curriculum began in 1909. Doctor Ray Lyman Wilbur became Executive Head of the Medical Department and Chairman of the Medical Committee in 1911, and in 1912 the Stanford University took full charge of all the advanced and clinical instruction at Stanford’s new medical school in San Francisco.

Stanford’s Challenges in the Early Part of the 20th Century

After Stanford had recovered from the earthquake of 1906 and the task of establishing the Medical School was completed, President Jordan began to consider retirement in order to devote himself to the cause of world peace. During this period, Herbert Hoover, who had been a member of Stanford’s Pioneer Class, was appointed a lecturer in mining and engineering without pay in the Geology Department; a series of his lectures was published in 1909 as *Principles of Mining*.²⁵ In 1912, Hoover was elected to the University’s Board of Trustees.

The Trustees agreed to President Jordan’s retirement in 1913, appointing him to the post of Chancellor for a three-year term, and they announced a major plan for the University, which entailed the strengthening of the academic departments and the professional schools, increased emphasis on research, and limitations on enrollment, as well as extensive construction projects, including a new library and gymnasium.²⁶

John Casper Branner, a Professor of Geology, was named as President Jordan’s successor. (Professor Branner was 63 years old at the time of his appointment, and he would only hold office for two years.) President Branner and the Academic Council had opposed the acquisition of Cooper Medical College, but the Trustees did not accept their recommendation that it be turned over to the University of California after July 1, 1913.

Doctor Jordan’s appointment as Chancellor was not renewed in January 1916, because the Trustees were displeased with his outspoken anti-war views. At this time, the Dean of Stanford Medical School, Dr. Ray Lyman Wilbur, became the University’s third President. Doctor William Ophuls, who had been Cooper Medical College’s first full-time, salaried professor, filled his position as Dean.

In meeting the immediate challenges confronting the University, President Wilbur had the very strong support of the Trustees, including Herbert Hoover, his close friend from undergraduate years. Stanford's academic standing had slipped and the university's finances required urgent action.²⁷ Money had to be raised to meet the costs of the academic departments that had suffered financially because of the establishment of the medical school, and to offset the negative impact on enrollment caused by the war in Europe, which soon would also involve the United States. World War I was frustrating for Stanford, as it was for other universities.

The Development of a World-class Research University (1916-1968)

World War I and the Post-War Developments

The transformation of Stanford University from a highly regarded regional university to a world-class research university began in the 1920s under President Wilbur's leadership. Three major changes in university policy followed World War I. In 1920, all students were required to pay tuition of \$40 per quarter, in addition to various incidental fees. The faculty, at the urging of the Trustees, adopted the quarter system, which required freshmen and sophomores to be students of the University and not of a single department. A number of lower division requirements were instituted, which made early academic specialization impossible. The consolidation of academic Departments into Schools took place gradually after establishment of the Law School, the Medical School, and the Business School. In 1922, the first of the non-professional schools, the Biology School, was established.²⁸

Significant post-war developments at Stanford included the establishment of the Food Research Institute, funded by the Carnegie Corporation (a non-profit foundation), and Herbert Hoover's gift to the University of the extensive collection related to his war-time relief activities. This collection grew and became the Hoover Institution on War, Revolution and Peace, a public policy research center and library.²⁹ Another newcomer to the campus was the Stanford Home for Convalescent Children,³⁰ which many years later became the Lucile Packard Children's Hospital.

Financial Emergency in the 1930s

In 1929, President Wilbur took a leave of absence to serve in Herbert Hoover's Cabinet as Secretary of the Interior, resuming his duties full time at Stanford in 1933. The prolonged Great Depression seriously affected Stanford during the 1930s: Stanford's income from investments fell by about 20 percent, and enrollment also declined.³¹ In 1933, the nation's newly elected President, Franklin D. Roosevelt, created the Federal Emergency Relief Administration, and Congress appropriated funds that could be allocated to the states, including funds for financial aid for students in both public and private colleges and universities.

That same year President Wilbur declared a financial emergency at Stanford and the University (unlike Harvard and Yale) accepted federal funds for needy students.³² In June 1935, *The Atlantic Monthly* published an article ranking the nation's leading universities—and Stanford,

not among the top ten—was ranked twelfth, along with the University of Illinois, the University of Iowa, and Ohio State University.³³

Stanford's Early Partnerships with Industry

Professor Frederick (Fred) Terman, a radio engineer, was a key figure in the transformation of Stanford University to a premier research university. One of his major contributions was developing Stanford's relationships with innovative companies. In the 1930s, after his recovery from pulmonary tuberculosis, Professor Terman played a pivotal role in the lives of two of his students, Bill Hewlett and Dave Packard. Not only did he instruct them as students, but he also made it possible for them to survive economically during the Great Depression, and to set up their own company, Hewlett Packard, in 1938. The company was—and still is—one of the anchors of Silicon Valley and ranks among the world's leading companies.

President Wilbur, the Trustees, and many of the faculty viewed issues related to the university's relationship with private industry favorably. Stanford's most important tie with industry in the 1930s was with the Sperry Gyroscope Company. In 1938, Sperry, interested in the development, manufacture, and marketing of the Physics Department's Klystron microwave tube, contracted to pay royalties to Stanford. The University, in turn, committed a portion of the royalties to the Varian brothers and Bill Hansen, co-inventors of the Klystron. The relationship was not an easy one, because the attitude of some members of the Physics Department (i.e., Bill Hansen) was very favorable, while others (i.e., the Department's Chairman, Professor David Webster) were not enthusiastic about applied research.

Michael S. Malone described the importance of the Klystron in his book *Bill and Dave*:³⁴

Thus, the relationship of the Klystron proved to be a watershed moment, not only in the history of warfare, and in the story of the electronics revolution, but also at the Stanford University. The easy going college for sons and daughters (and very few of the latter, as Leland Stanford's original decree of the four-to-one male/female ratio was still in effect) had been transformed over the previous decade into a serious and important academic institution. Now, thanks to Fred Terman's Radio Lab and the Klystron project, Stanford would forever after be a World Center for engineering and business—and ultimately, for entrepreneurship.³⁵

During the 1920s and 1930s, the number of graduate students at Stanford increased substantially, from 283 in 1920 to 1,530 in 1930, reaching 1,782 in 1940. Undergraduate enrollment increased from 2,165 in 1920 to 3,103 in 1930; during the following decade enrollment growth slowed and the number of undergraduates reached 3,460 in 1940.³⁶

World War II and the Post-War Years

Doctor Donald Tresidder, President of The Yosemite Park and Curry Company and Chairman of the Stanford Board of Trustees, was selected to succeed President Wilbur, who after 26 years as President, became the second Chancellor of Stanford University on September 1, 1943. During his first few years in office, President Tresidder created the position of Vice President for Academic Affairs, and established both the University's Creative Writing Department, founded by Wallace Stegner, and the Stanford Research Institute. Lowen notes the emphasis that President Tresidder placed on strengthening Stanford's relationship with industry:

Between 1944 and 1946, he attempted to elaborate an administration structure, to create institutes and other organizations to attract industrial patronage, and to reorient particular university departments to serve better the interests of regional industry, particularly aeronautics, electronic, and oil companies.³⁷

Federal funding for research at Stanford increased significantly during his tenure, but President Tresidder did not succeed in attracting industrial patronage, which he also considered very important. One of the consequences of President Tresidder's actions was the reduction of departmental autonomy.

The Growing Importance of Federal Research Funding

The experience of World War II further increased the willingness of Stanford faculty to work with the federal government. Major academic war-related research and development was concentrated at the Massachusetts Institute of Technology, Harvard, Columbia, Caltech, the University of California, and the University of Chicago.³⁸ Stanford received modest support from the federal government for its engineering and physics research.

A number of faculty members were recruited to university-based, war-related research laboratories, including Professor Fred Terman, who went to Harvard to run the Radio Research Laboratory (RRL). Three federal policy developments related to biomedical research had a major impact on research funding at Stanford: the National Cancer Act of 1937, which authorized research grants to academic scientists; the Public Health Service Act of 1944, which authorized grants for research and training by the Public Health Service; and the dramatic post-war expansion of the National Institutes of Health (NIH) in funding for biomedical research and research training.

The appointment of Dr. Terman as Dean of Engineering in 1946 was critical to Stanford's development. Professor Terman significantly strengthened Stanford's relationship with the federal government, particularly with the Office of Naval Research (ONR). Federal contracts, focused on the development of the microwave tube and counter measures, were used to strengthen the Engineering Department's research and graduate training programs. With ONR support, Terman was able to meet the growing electronic industry's needs for well-trained employees as well as the needs of Stanford's basic and applied research program for support. Stanford did not have to seek industrial patronage, because it was well supported by government contracts.³⁹ After Stanford's clinical departments moved from San Francisco to the Palo Alto

campus in 1959, the medical school became one of the nation's leaders in terms of research funding.

After President Tresidder's sudden death in New York on January 28, 1948, Professor Alvin Eurich served as acting President, but he was not appointed to the job permanently, as the Trustees (Herbert Hoover, in particular) considered him too liberal politically. In 1949, J.E. Wallace Sterling, then director of the Huntington Library in Pasadena, became Stanford's next President. Cold War tensions were rising. When the Korean Conflict began in 1950, Stanford was well positioned to take advantage of the increasing number of government research grants.⁴⁰ President Sterling was an enthusiastic supporter of Fred Terman and appointed him to the post of University Provost in 1955.

Steeple of Excellence

Professor Terman's concept of "steeples of excellence" reflected the very high standards he maintained, both for academic departments and individual faculty members.⁴¹ As Provost, he began to apply his ideas more broadly, and he continued to strengthen the University by utilizing the overhead from federal grants and contracts to build a number of strong departments, which, in turn, were able to compete successfully for federal grants and contracts.⁴² These efforts diminished departmental autonomy and were the subject of controversy; many faculty members, including Nobel Prize-winning economist Kenneth Arrow, objected to the narrow focus of federal funding.

Planning for the Stanford Linear Accelerator (SLAC) was one of the period's major developments. President Eisenhower supported the project and asked Congress for a \$100 million appropriation for its construction in 1955. Completed in 1967, the SLAC was federally funded, but fully controlled by Stanford physicists. The rapid expansion of Stanford Industrial Park during the 1950s began with a lease of land to Varian Associates, manufacturers of linear accelerators, in 1951. Stanford began another commercial venture in 1954—construction of a fifty-store regional shopping center.⁴³

School of Medicine Departments and Facilities Are Consolidated on Stanford's Main Campus

The Lane Library and the clinical departments of Stanford's Medical School were transferred from San Francisco to the main Stanford campus in 1959. This move, first approved by the Trustees in 1953, was to shift dramatically the medical school's focus—away from clinical teaching and toward research, postdoctoral training, and subspecialty (tertiary) care. A new hospital, the Palo Alto-Stanford Hospital, was established to serve both the medical school and the community, and facilities for the medical school, including classrooms, laboratories, clinics and offices were constructed adjacent to the hospital. The medical school curriculum was extended from four to five years, and with the support of the NIH, its emphasis on research was greatly increased. Later, in 1968, the University assumed full financial and managerial responsibilities for its own hospital, while continuing admitting privileges for community-based physicians.

During Dr. Sterling's tenure, Stanford University continued its evolution from an important regional university into a world-class research university. It has maintained this stature to the present day. On March 24, 1967, Dr. Sterling announced his retirement, as he began his nineteenth year as President. Looking back, summarizing the challenges met during his tenure, he observed that the doubling of student enrollment after World War II was probably the most important achievement. He noted the success of the \$100 million fundraising campaign in 1963, as well as the development of the Stanford Industrial Park and the Stanford Shopping Center, the overhaul of the curriculum, and the establishment of overseas campuses. He also pointed out that Stanford graduate programs had risen in national ranking from thirteenth to third place within a decade. In addition, the move of the medical school's clinical departments from San Francisco to the Stanford campus and the construction of the teaching hospital and medical school laboratories, classrooms, and offices were major accomplishments.

The Commitment to Diversity and Excellence (1968 through the present)

Campus Turmoil in the Mid-to Late 1960s and Early 1970s

The nationwide social upheaval during the 1960s affected Stanford as well as many other universities. The assassination of President John F. Kennedy on November 22, 1963, the Civil Rights Movement, and protests against the Vietnam War and the military draft were prominent among events and causes that fueled a tumultuous atmosphere on the campus. In the early 1960s, some Stanford students participated in the national Civil Rights Movement, particularly in the Freedom Vote Campaign in Mississippi. Aaron Henry, leader of the Freedom Democratic Party, addressed Stanford students in October 1964.

The Civil Rights Act of 1964 required that institutions receiving federal funds be desegregated. Although Stanford was not considered a segregated institution, its lack of any affirmative action efforts, with respect to student enrollment and faculty appointments, engendered student activism in the mid- to late 1960s. On May 19, 1966, there was a campus anti-war rally as well as a night-long sit-in in President Sterling's office.⁴⁴

Stanford began to seek Black candidates for admission. In 1967, there were 37 Black freshmen. By 1968, the voices of Black student activists were added to those of the anti-draft protesters.⁴⁵ After the April 1968 assassination of Dr. Martin Luther King, Jr., the University administration responded promptly to the Black Student Union's demands for more forthright affirmative action and agreed to make a concerted effort to increase minority representation in the student body, the faculty, and staff as a whole, as well as in the medical school.

On December 1, 1968, Kenneth Pitzer, President of Rice University, became President of Stanford University. The atmosphere on campus continued to be highly charged. There were more anti-war protests, the faculty voted to end all credit for ROTC, and police were summoned on campus to end a sit-in at Encina Hall. In May 1969, the Trustees terminated Stanford's relationship with SRI (formerly the Stanford Research Institute), because of its emphasis on applied research, much of it related to the military. Violent protests continued and Dr. Pitzer

resigned, to be replaced by Provost Richard Lyman on September 24, 1970. Upheavals persisted and, in April 1971, a bomb damaged President Lyman's office, Black students pressed demands on the medical school, and a controversial faculty member was fired.⁴⁶ After President Nixon ended the draft in 1972, riots and violence on campus decreased dramatically and campus life returned to a more normal routine.

Stanford's Commitment to Affirmative Action

Doctor Lyman provided strong leadership for the University. During his tenure, research expanded and enrollment increased, particularly in graduate programs. He encouraged the buildup of the University's affirmative action program. In 1972, the Provost's Office assigned the first Faculty Affirmative Action Officer, and resources were provided to enable the hiring of a number of top-quality minority and female scholars.

Increases in minority enrollment were gradual, and the Law faculty rejected student demands for minority enrollment quotas. When the 1978 *Bakke* case challenged race-conscious admissions, Stanford was among the leaders in defense of affirmative action, and joined Columbia, the University of Pennsylvania, and Harvard in submitting an *amicus* brief to the U.S. Supreme Court. (See Chapter 8: Case Studies of Diversity: UCSF and Stanford University Medical Schools for a full discussion of the development of policies on affirmative action and diversity within Stanford medical school.)

Stanford's Success in Patenting and Licensing Faculty Discoveries and Inventions

President Lyman left Stanford in 1980 to become President of the Rockefeller Foundation, and Professor Donald Kennedy was his successor. Stanford's research and graduate programs continued to flourish during the 1980s. The Bayh-Dole Act of 1980, enabling universities to patent federally funded research advances, hastened the movement of discoveries from university laboratories to the marketplace, and the ties between universities and industry were further strengthened.^{47,48,49} Stanford proved to be one of the most successful universities in the nation in patenting and licensing faculty inventions.⁵⁰ Although controversy arose regarding Stanford's use of overhead from federal research funds in the 1980s, the University was cleared completely of any wrongdoing.

Renewing the University's Commitment to Diversity

In 1986, the Faculty Senate formally approved the "special consideration" clause (first recommended in the 1968 Study of Education at Stanford) targeting four groups of applicants to the University: children of alumni, children of faculty and staff, outstanding athletes, and members of certain minority groups—African Americans, Mexican Americans, and Native Americans. As the student body became more diverse, there was increased racial tension and strife on campus. President Kennedy created the University Committee on Minority Issues (UCMI) in 1987 to examine problems, and the Committee's 1989 report made bold recommendations for actions to renew the university's commitment to affirmative action.

Between 1982 and 1990, the percentage of Asian students enrolled also increased—from 7 percent to 24 percent. During the 1990s, the development of Stanford as an exemplary multicultural community continued, and the university thrived academically; it ranked among the nation’s best universities along with Harvard and UC Berkeley.

In 1992, the Stanford Trustees chose Gerhard Casper, University of Chicago Provost, as President Kennedy’s successor. President Casper appointed Condoleezza Rice, then a Professor of Political Science, to the post of Provost. Enrollment of minorities in graduate programs in 1994 was 60 percent higher than in 1988, although this proportion still fell short of ambitious 1989 UCMJ goals.

The University in the 21st Century

Private Fundraising: Sustaining the University’s Mission and Priorities

In April 2000, Provost John Hennessy became the University’s tenth President. He has continued many of the traditions initiated by President Sterling, including fundraising from the private sector. President Sterling’s 1963 \$100 million dollar fundraising effort was followed by others. In 2005, the campaign for undergraduate education raised more than \$1 billion. In October 2006, President Hennessy announced the \$4.3 billion Stanford Challenge fundraising campaign:

The scope and complexity of social and scientific challenges have grown immensely in recent decades. Universities are uniquely positioned to address these complexities. And I believe Stanford is uniquely prepared among universities—by its breadth of scholarship, entrepreneurial heritage and pioneering faculty—to provide research and real-world approaches to address many of these issues. This campaign will not only provide the resources to do so, I believe it will galvanize the Stanford community to meet the commitment by Jane and Leland Stanford ‘to promote the public welfare by exercising an influence on behalf of humanity and civilization’.⁵¹

The Stanford Challenge now includes three components: 1) Seeking Solutions—initiatives to advance human health, the environment and sustainability, international peace and security, and multidisciplinary research across the university; 2) Educating Leaders—improving K-12 education, engaging the arts and creativity, and strengthening Stanford’s undergraduate and graduate programs; and 3) Sustaining a Foundation of Excellence—core support to sustain Stanford’s breadth of excellence in teaching and research and annual giving across the university.⁵²

Balancing Tuition Increases with Student Aid

Stanford’s tuition increases after 1960 posed problems for low-income students, including those who are minorities. Tuition fees of \$1,005 in 1960-1961 increased to \$2,400 in 1970-1971, to \$6,285 in 1980-1981, and to \$14,280 in 1990-1991. By 2000-2001, tuition had increased to \$24,441.⁵³ In 2008-2009, tuition stood at \$36,030.⁵⁴ However, student financial aid has also increased over time. In March 2006, Stanford Dean of Undergraduate Admission and Financial

Aid, Richard Shaw, announced that: “Families with annual incomes of less than \$45,000 will not be expected to contribute to the cost of tuition at Stanford University, and the requirements for middle-income families will be cut in half.”⁵⁵ Stanford announced in February 2008 major changes in its financial aid policies: “(P)arents with incomes below \$100,000 will no longer be required to pay tuition. In most cases, their parental contribution will not exceed the costs of room and board (about \$11,000 for the current academic year). Parents with incomes below \$60,000 will not be required to pay any costs, including room and board, books and travel expenses.”⁵⁶

Building on Its Strengths and Facing Economic Challenges

Stanford University’s development as a world-class research institution came about through its strong faculty and outstanding Presidential leadership combined with the indispensable ingredient of federal policies supporting research in universities, especially after World War II. The most important current external policy challenge for Stanford University concerns the largest source of operating revenues for the University: federal funding for research. In 2006-2007, sponsored research generated \$994 million, which represented 33 percent of Stanford’s income. Federal research funding affects the University as a whole, particularly the medical school, which currently is among top-ranked schools in terms of NIH grants. The President’s FY 2010 Budget and the American Recovery and Reinvestment Act of 2009 support increased funding for NIH, but future funding remains uncertain with the nation in a sharp economic downturn. An additional challenge is the effect of the economic decline on the decline in the University’s endowment, which has been said to be in the range of 20-30 percent.

Another upcoming economic challenge relates to Stanford University Hospital and Clinics, a university-owned, non-profit corporation, and the Lucile Packard Children’s Hospital, also a University-owned teaching hospital. Possible reduction of Medicare payments to teaching hospitals and rising costs make the Stanford Hospital vulnerable, although it has done quite well in the last few years (generating net income of \$115 million from total revenues of \$1.4 billion in 2006). Lucile Packard Children’s Hospital is also vulnerable, because of the low rate of Medi-Cal reimbursement and the increasing number of Medi-Cal beneficiaries.

Initially, Stanford University required the support of the California Legislature and the voters of California but, unlike the University of California, Stanford, as a private institution, has not been negatively affected by state ballot measures such as Proposition 13 (1978), which slashed local property taxes, and Proposition 209 (1996), which banned affirmative action in all state agencies, including the University of California.

Today Stanford is not hobbled by the anti-affirmative action policies adopted by the UC Regents in 1995 and California voters in 1996, which have had such an adverse effect on the diversity of the UC Berkeley and UCLA undergraduates. With the growth in student financial aid, and the high priority that has been given to recruiting minorities, the University has become increasingly diverse. The student body for the undergraduate Class of 2012 is 31.5 percent, White; 19.8 percent, Asian American; 10.5 percent, African American; 7.9 percent, Mexican American; 6.7 percent, other Hispanic; 7.2 percent, international; 3.2 percent, Native American; 0.8 percent, Native Hawaiian; 3.1 percent, Other; and 9.5 percent, “declined to state” their race/ethnicity.⁵⁷

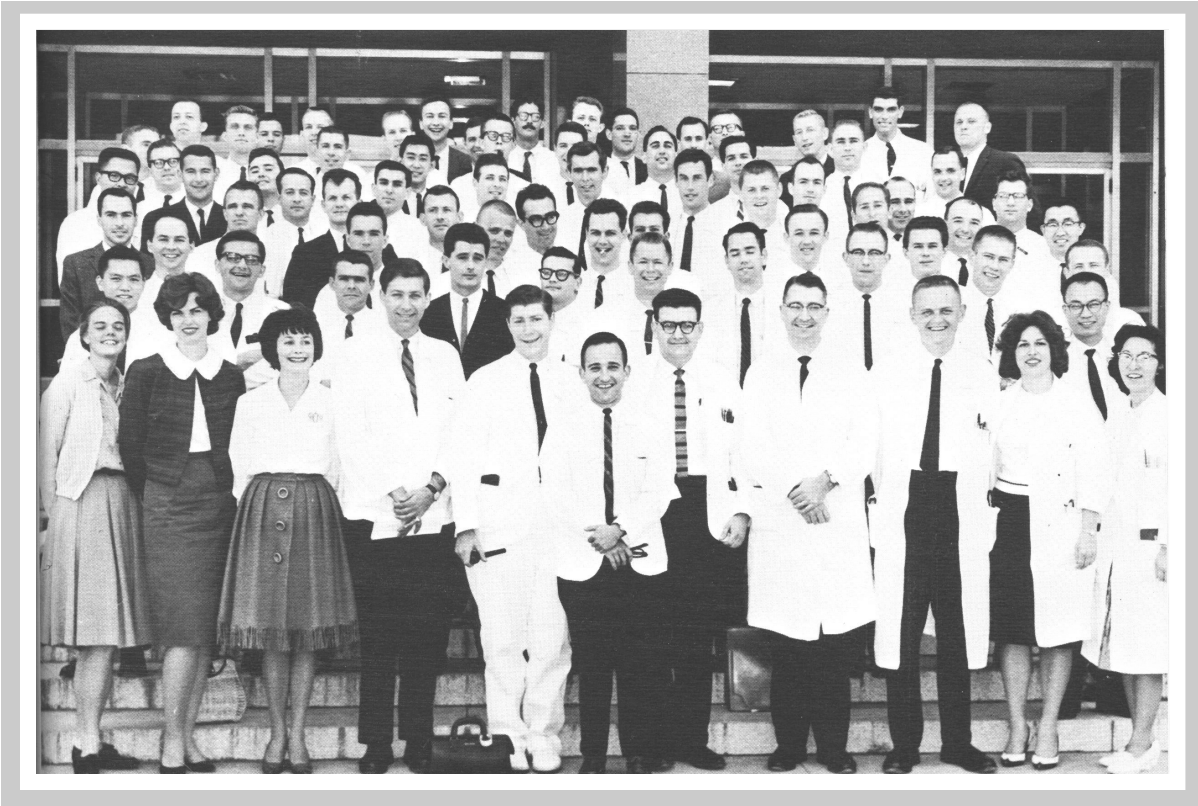
More progress has been made toward increasing diversity in Stanford's undergraduate enrollment than in some health sciences graduate programs (e.g., molecular and genetic medicine) or in faculty appointments.

Stanford's current faculty of 1,878 is 75.0 percent male and 25.0 percent female; 1,488 (79 percent) are non-minority; 276 (15.0 percent) are Asian; 47 (3 percent) are African American; 60 (3 percent) are Hispanic; 4 (<1 percent) are Native American; and 3 (<1 percent) are unidentified.⁵⁸ Like many universities, including the University of California, Stanford's faculty profile does not reflect the diversity of the general population—or of Stanford's undergraduate enrollment—and a strong commitment by the University will be required to bring about increases in faculty diversity.

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Class of 1964, UCSF School of Medicine
Courtesy of UCSF Library and Center for Knowledge Management
Archives and Special Collections



Class of 1958, Stanford School of Medicine
Courtesy of Office of Medical Development, Alumni Relations, Stanford School of Medicine



CHAPTER 8

Case Studies of Diversity: UCSF and Stanford University Medical Schools

Introduction

This chapter tells the story of diversity at two California medical schools, the University of California, San Francisco (UCSF) School of Medicine and Stanford University School of Medicine. Fledgling schools founded in San Francisco in the mid-19th century, both schools are now world renowned. The first part of the chapter describes the early shared history of the two medical schools, from their beginnings as proprietary schools through their evolution as university-affiliated and then university-based schools, and provides a snapshot of the schools in 1960 to show them in historical context. Next we discuss how the two schools, one public and one private, developed early policies to increase racial/ethnic diversity among their students in the 1960s and 1970s. We highlight key events during this period and available data on enrollment by race/ethnicity for the schools. Using data provided by the Association of American Medical Schools (AAMC), we then present trends in applicants, acceptants, matriculants, and graduates by race and ethnicity for the two medical schools from 1974 through 2005, as well as updates for 2006 and 2007, and first-year enrollment data for 2008. UCSF and Stanford medical schools both have developed over a period more than forty years mission-driven, multidimensional approaches to enhancing diversity. The schools have developed and modified policies on outreach and recruitment, admissions, retention, the MD curriculum, student financial aid, the campus environment, educational and health care partnerships, and cross-cultural education and training. We conclude by describing five common themes that, from our perspective, characterize UCSF's and Stanford's institutional efforts to increase diversity in the past and point the way to future success in meeting challenges of increasing the diversity of medical students, trainees, faculty, and staff. The chapter includes reflections of UCSF and Stanford administrators, faculty members, and former students from key informant interviews and oral histories.

An Early Shared History

The School of Medicine of the University of California, San Francisco, and Stanford University's School of Medicine share a history dating back to the mid-1800s. In 1858, Dr. Elias Samuel Cooper established the first medical school on the Pacific Coast in San Francisco as the Medical Department of the University of the Pacific.¹ A class of 13 students attended the first session in May 1859 with "lectures in *materia medica*, chemistry, physiology, anatomy and medical jurisprudence."^{2,3} In 1861, Dr. Levi Cooper Lane, a nephew of Dr. Cooper, joined the faculty of the Medical Department of the University of the Pacific, which was the first college chartered in California.⁴ Dr. Cooper's death in 1862 was followed in 1864 by suspension of Medical Department faculty activities, and University of Pacific faculty joined Dr. Hugh Toland in his efforts to found a medical school.

There were rivalries between the two institutions that became the University of California, San Francisco, School of Medicine and Stanford University School of Medicine. The rivalries involved competition between the evolving institutions to match each other in the reputation and size of their faculty, the adequacy of educational and clinical facilities, the number of students, as well as arguments about the need for two medical schools in San Francisco (or in California), proposals for merging the schools within the University of California, and leadership in the community, the state, and nationally related to medical education, which was undergoing continuing reform.⁵

School of Medicine, University of California, San Francisco

The Toland Medical College, a proprietary school, opened its doors in San Francisco in 1864, with "clinical instruction and dissecting experience as the centerpiece of Toland's educational program...."⁶ The first class of eight students was drawn mostly from the Medical Department of the University of the Pacific. Some of the faculty of the Department were asked to serve at the Toland Medical College and Drs. Levi Cooper Lane, Henry Gibbon, Sr., and John F. Morse joined the faculty.⁷ Lectures were given at San Francisco City and County General Hospital, where "a senior student examines the patient; announces the diagnosis and prognosis and views about treatment before class, discussion follows, complete clinical histories are kept and there are broad opportunities for autopsies."⁸ By 1870, Toland Medical College had a class of thirty students, and 45 students had graduated with a doctor of medicine degree after two four-month lecture courses.

In 1873, Toland Medical College became the Medical Department of the University of California, a major step in the evolution of the college, and 23 students were enrolled in the first class. In 1874, the Regents of the University of California adopted a resolution stating that "young women offering themselves for admission and passing the required examination must be received to all the privileges of the Medical Department."⁹ From 1876 on, many women matriculated in the Medical Department of the University of California, and in the five decades that followed about 10 percent of each graduating class was female.¹⁰ (The Medical College of the Pacific faculty voted in 1876 to accept women, and through the next decade, several women were to graduate annually.¹¹) The Medical Department of the University of California was joined by other Affiliated Colleges—the California College of Pharmacy in 1873, a Department of

Dentistry in 1881, and a Hospital Training School for Nurses in 1907.¹² By 1895, land to expand the San Francisco Parnassus campus to accommodate growing needs had been donated, and by 1897, with support of the California Legislature, construction was underway.

The next crucial step in the evolution of medical education within the Medical Department of the University of California was seeking and obtaining support to develop a foundation in academic basic science. This meant securing ongoing University support for laboratories and equipment and for recruiting and hiring full-time faculty to head new departments and to teach the pre-clinical sciences—*anatomy, physiology, and pathology*—to medical students and others, as well as to engage in research. By 1903, these goals had been accomplished. By 1904, admission standards were raised for students wishing to enter the University of California Medical Department. All applicants were required to have “at least two full years of college before admission. Specifically required were the study of chemistry, physics, biology, and English, French, or German.”¹³ The new admission requirements resulted in a precipitous drop in both applicants and matriculants. Only nine students entered the Class of 1905 compared to 33 students in 1904. However, the University of California Medical Department was soon to find ample support for the investments that had been made. In 1912, the name of the Medical Department of the University of California was changed to the University of California, College of Medicine; in 1915, the College was designated officially as the University of California Medical School.¹⁴

School of Medicine, Stanford University

Several physicians originally affiliated with the Medical Department of the University of the Pacific resigned from the Toland Medical College faculty in 1870, deciding to reorganize their former Medical Department, which in 1872 became the Medical College of the Pacific, with a connection to the University City (College) of San Francisco.¹⁵ Some Toland students followed the faculty.¹⁶ Over the period from 1872 through 1882, the Medical College of the Pacific embarked upon a series of educational and curricular reforms.¹⁷ These included increasing the length of time and the range of subjects of the annual required lecture course; securing hospital privileges at the San Francisco City and County Hospital, the U.S. Marine Hospital, and St. Mary’s Hospital; opening a free public clinic; developing a formal, one-year postdoctoral internship program at the San Francisco City and County Hospital; and responding to the 1876 request of the newly formed Provisional Association of American Medical Colleges to increase the number of annual lecture courses required to three and the time required for each from four to five months.¹⁸

In 1878, the School adopted the “system of education” of the Medical School of Harvard University, which had been tested for a number of years. Both the Medical College of the Pacific and the Medical Department of the University of California adopted what was then a “three-year graded course of medical instruction.”¹⁹ Announcing the decision to adopt the Harvard system at a meeting of the California State Medical Society in San Jose on April 17, 1878, Dr. H.S. Orme of Los Angeles made a report from the Society’s Committee on Medical Education:

This is also gratifying to our sense of local pride, as every true Californian must feel a deep interest in the development and culture of all those who enter upon the study of our

profession, and especially in the youth of this coast. These schools (the Medical College of the Pacific and the Medical Department of the University of California) are attaining high rank, and we have reason to hope will soon be second to none in America.²⁰

During the decade from 1872 to 1882, the Medical College of the Pacific was troubled by a continuing need to find adequate quarters and a stable affiliation with a university. The University College affiliation failed as the school fell on financial hard times. In 1882, this problem was solved when the Cooper Medical College was incorporated as an independent, proprietary school.²¹ An impressive new building in San Francisco, a gift of faculty member Dr. Levi Cooper Lane, housed the school.

At about the same time, the President of the University of California made a proposal to merge the two schools, with faculty appointments in the Medical Department of the University of California promised to each member of the Cooper Medical College. This proposal was rejected by Dr. Lane:

(H)e was opposed to the proposed union... in his opinion there was room for the two schools... (T)he friendly rivalry which existed between them was beneficial to both; they could keep up the standard of medical education, but if they united other and inferior schools would surely rise up to take the place of one of them. When the matter was brought up in his faculty Dr. Lane summarily closed the incident by saying that if anyone wished to accept the appointment he had best do so at once.²²

Discussions between Dr. Lane and David Starr Jordan, President of Stanford University, about the consolidation of the Cooper Medical College with the University began as early as 1901 and negotiations continued with Directors of the College and the Trustees of the University until November 1906 when a special committee of the Directors and the Trustees made a recommendation “that the Board of Trustees of the Leland Stanford Junior University accept the Cooper Medical College properties for the maintenance of a professional medical school...”²³ The full consolidation of Cooper Medical College with Stanford University, including the transfer of buildings, facilities, and the Lane Library, did not occur until July 1, 1912.²⁴

During earlier discussions in 1906, President Jordan had proposed establishing a “graduate school of medical research” in the Cooper facilities, rather than consolidating the existing Cooper Medical College with Stanford.²⁵ At that time, there was no American graduate school focused exclusively on medical research. The suggestion was that the school be “devoted exclusively to the teaching of graduates in medicine and to medical research,” and “collaboration with the University of California, in the formation of a joint medical school...insuring the command of medical education upon the Pacific Coast under university control.”²⁶

Discussions also took place between President Jordan and University of California President Benjamin Ide Wheeler in 1906 about providing separate pre-clinical instruction for medical students under the auspices of each school, but joining for clinical instruction and research at the Medical Department of the University of California.²⁷ These discussions continued in 1909 and in 1910 after the Flexner Report asserted that one medical school was sufficient for the state of California and that another at Stanford was not needed:

There is no need of it from the standpoint of the public; it must, if adequately developed, become a serious burden upon the finances of Stanford University. The question arises whether Stanford could not do well to content itself with the work of the first two years at Palo Alto and to co-operate with the State University in all that pertains to the clinical end.²⁸

Finally after years of discussion and formal proposals among the Medical Department of the University of California, the Cooper Medical College, the Board of Regents of the University of California, and the Board of Trustees of Stanford University, negotiations about a merger came to an end when Stanford's Board of Trustees rejected the Regents' May 14, 1914 proposal because, in President Jordan's words, the offer "was practically an ultimatum that a union was possible only upon a basis in which the control of the united schools was in the hands of (the University of California)."²⁹

The Two Medical Schools in the Early 1960s: The Climate for Change

UCSF and Stanford medical schools were poised at the edge of an exciting new time in the late 1950s and early 1960s. They had consolidated their basic science and clinical departments on their main campuses in the late 1950s, UCSF in San Francisco and Stanford in Palo Alto. They were recruiting faculty to head these departments from outside the medical schools, many of whom would become the research superstars of the next decades. Other new faculty would take on leadership roles not only in research, but also in teaching and as clinicians. Some would take on major roles as administrators in addition to their academic roles, and they would become motivators and innovators in terms of the development of policies to increase diversity in the medical schools.

Early Development of Policies Related to Affirmative Action and Diversity at UCSF and Stanford University Medical Schools, 1960s and 1970s

UCSF Chronology of Key Events

Questions for the President of the University of California and the Provost of the University of California San Francisco Medical Center, 1963

On June 13, 1963, Clark Kerr, President of the University of California, received a letter from Lieutenant Governor Glenn M. Anderson in the Office of the Governor Edmund G. "Pat" Brown:

During my many trips throughout the State of California, I have had many questions asked me concerning the policy of the University of California Medical School. I find

myself defending the University, but I really don't have the facts. Therefore, I should appreciate your supplying me with some facts and statistics if this is at all possible. I should like to have any available statistics on the medical schools in Berkeley, San Francisco, and Los Angeles as to source, family background, etc. of the medical students. I would also like a breakdown of the number of students of Oriental, Negro, Mexican, etc. ancestry who have been admitted to the medical schools...³⁰

President Kerr's office requested this information from the campuses, even though University regulations at this time forbade the campuses to request information relating to "any applicant's race, religion, or other matters regarded as being of a personal nature," as Dr. J. B. Saunders, Provost of the University of California San Francisco Medical Center, pointed out in a confidential memorandum to the President's office on July 16, 1963.³¹

Dr. Saunders attached a report of entering first-year medical students from 1954 through 1963 (Table 8-1) to the memorandum, but cautioned about the usefulness of these data without having information on the applicant pool for each of these years.

Table 8-1
Entering Students, University of California San Francisco Medical Center, 1954-1963

Year	Oriental	Negro	Women	Total
1954	3	1	2	76
1955	4	1	9	76
1956	7	—	7	78
1957	10	—	6	78
1958	9	1	10	100
1959	9	—	10	100
1960	6	—	13	100
1961	6	—	8	100
1962	9	3	8	100
1963*	5	1	14	100

Source: Office of the Provost, University of California San Francisco Medical Center, July 16, 1963

* Later Committee on Admissions Reports indicate 102 in entering class in 1963.

He also noted, "It may interest you to know that for some years we have had faculty members of Oriental and Negro ancestry serving as members of the Admissions Committee of our School. Doctor T.N. Burbridge, Jr., the President of the San Francisco unit of the NCAAP, is a member of our Admissions Committee."³²

More questions were soon to come to Presidents of Institutions of Higher Education from the U.S. Commissioner on Education as the agency moved to implement Title VI of the Civil Rights Act of 1964. On December 31, 1964, a memorandum outlining Department of Health, Education, and Welfare regulations, assurances, and other information was released.³³ This was the first guidance made available to universities and colleges about steps they would need to take to comply with Title VI regulations, including providing data on race and ethnicity.

The Ad Hoc Committee to Plan Scholarship Aid to Underprivileged Students, 1964

Appointed by Dr. Saunders on June 1, 1964 “to plan scholarship aid to underprivileged students,” the Committee outlined three tenets in its report to the Provost:

- First: The San Francisco campus has a unique and completely unexplored opportunity to develop a program to attract students to the health professions.
- Second: The attraction of persons of other than the dominant ‘white-middle class-European’ cultural background to the University of California Medical Center will have a broadening and enriching effect on the intellectual life of the campus.
- Third: There is no justification for lowering the present high standards of the University in any way, to attract students or for any other reason. The intent would be to attract superior students of whatever origin, who might not otherwise recognize their opportunities in the health sciences.

The Committee also made seven recommendations, which stressed:

- the value of cultural diversity
- the need to develop recruiting teams to interest qualified students in the health sciences
- the benefit of campus visits by potential students (“One Day Health Science Scholarships”)
- the usefulness of movies in recruiting
- the need for contacts with groups outside the University
- the need for grants-in-aid funds for financially needy students
- the value of publicity about the program.

Early Recruiting Trips: The Search for Potential Applicants, 1964, 1966, and 1967

UCSF School of Medicine Dean (1983-1989) Rudi Schmid describes the early recruiting trips.³⁴ In 1964, Thomas N. Burbridge, a School of Medicine Associate Professor of Pharmacology, made a one-man recruiting trip to 20 Southern colleges explaining to more than 1,100 students the great opportunities for minority students in the health professional schools at UCSF:

...Unfortunately, his recruiting efforts were quite unsuccessful and, to boot, outside Jackson, Mississippi, his car was hit by several shots that narrowly missed his head. Commented Dr. Burbridge, ‘I just would never again take a car with a California license plate through the South.’

Two years later, Burbridge made another recruiting trip to traditionally Black colleges in the South, sponsored this time by the UCSF Chancellor. As a result, the School of Medicine received 31 applications from black students, nine of whom were accepted and five were enrolled in the medical school class of 1967. A third recruiting trip in 1967

netted 26 black applicants resulting in eight acceptances and seven admissions for the class of 1968.

Educational Opportunity Program Announced by UC Office of President to Aid UC Campuses, 1964-1965

The University's Educational Opportunity Program was authorized in 1964-1965 to encourage disadvantaged youth to enroll in the University.³⁵ The UC administration announced that campuses could apply for funds for: 1) educational opportunity awards to students from culturally disadvantaged groups to encourage these young people to continue their education and to help them overcome obstacles along the way; 2) projects organized by students and faculty to identify, assist, and motivate California high school students who are members of culturally disadvantaged groups and who have demonstrated intellectual promise to qualify for admission to the University.³⁶ Temporary funds for EOP were made available to all campuses, including UCSF, in 1965-1966. UCSF received \$11,540 earmarked for Projects for Educational Opportunity and \$5,795 for a Community Service Project Office. UCSF received additional Community Service Project funds in 1966-1967:

Students, working in cooperation with the Dean of Students, already have begun, on a preliminary basis, a tutorial program directed toward economically disadvantaged students of Polytechnic High School. The major purpose of this activity is to identify and help students who appear to have potential to benefit from higher education."³⁷

A Cadre of UCSF Faculty Support, 1967

On January 6, 1967, five members of an informal faculty group of ten, called "the Committee," met at the home of Dr. Isidore Edelman to consider a program to encourage Negro students to apply for admission to the professional schools at the University of California Medical Center.³⁸ The group discussed one idea in depth, a "pathway approach," encouraging students to apply to Graduate School on the San Francisco campus in an area of interest, spending a year there, and then deciding whether to continue in Graduate School to gain a Master's Degree or a Doctoral Degree or apply to one of the professional schools (Medicine, Pharmacy, or Dentistry). Many of those on "the Committee" played, or would go on to play, active roles on the Committee on Educational Policy and the Admissions Committee. By the fall of 1967, a proposal "for the gradual increase of enrollment of black students became operational in the School of Medicine."³⁹

Black Caucus and Black Student Union Demands, 1968

On April 4, 1968, Dr. Martin Luther, King, Jr., was assassinated in Memphis, Tennessee. On May 4, 1968, a meeting in UCSF's Cole Hall attracted about 400 people—three-quarters of all African Americans on the UCSF campus, many of them "basement people," janitors, maids, laundry workers, kitchen workers, and patient escorts.^{40,41} The Cole Hall meeting and the meetings, confrontations, and challenges that followed gave birth to the Black Caucus in May 1968.

The Black Caucus is a forum open to all Black men and women on this campus. Here they may openly express themselves regarding matters of race as they affect life on campus and the community. The Caucus will serve as an instrument for the formation of a Black consensus on those racial matters that affect every person on this campus. This consensus will be presented to the administration for appropriate action.⁴²

The first list of Black Caucus demands submitted to UCSF Chancellor Willard C. Fleming in May 1968 focused on basic workers' rights issues, for example, the right of all campus personnel to use restroom facilities on the floor on which they were working instead of being restricted to facilities in the basement as many workers were.

On November 18, 1968, the Black Student Union and the Black Caucus presented demands related to all UCSF health professions schools that:⁴³

1. A minimum number of places (25 percent of total places) be reserved in the fall of 1969 for minority students "defined as Blacks, Mexican Americans, and American Indians" in all schools and a commitment be made by each of the schools to no less than 25 percent in subsequent years' classes.
2. Adequate financial support "for tuition and fees, room and board be provided those who are in need of such aid."
3. The deadline for applications for fall classes of 1969 be extended to May 31, 1969.
4. Faculty be recruited from the minority community and hired as full time professors.
5. A Minority Students' Admissions Committee be formed for each school separate from and independent of the present admissions committee to select students to fill places, process all minority applications, conduct all minority interviews, and make final decisions on acceptance of minority students to fill these places. The composition of the committee would include two minority professionals from their school, two minority professionals from the local community chosen by the Black Student's Union—Black Caucus, and two representatives from the school administration and/or faculty. The operations of the Committee be fully financed by the school and that adequate resources be made available by the UCSF to publicize the program.
6. A minority person be hired full time to conduct, coordinate, and actively recruit minority group applicants and the program be fully financed.
7. The Student Committee for Minority Recruitment be adequately financed until the minority recruiter is hired full time.
8. Minority students be guaranteed housing either on campus or off campus with "as little difficulty as non-minority students."

9. A reply to demands be received December 2, 1968.

UCSF Administration and School of Medicine Responses to Black Student Union-Black Caucus November 1968 Demands

Chancellor Fleming responded to the Black Student Union-Black Caucus Demands on December 5, 1968, enclosing excerpts from the Deans' reports.⁴⁴ Support from the School of Medicine was strongest, with Dean Stuart Cullen asserting:

Through the effort of students and faculty, this School of Medicine enrolled in 1968 more minority students than any other school in the country with the exception of Howard and Meharry. I am dedicated to the School's program to increase these numbers and to continue with an aggressive, full-scale effort to admit more students from those economic backgrounds and ethnic groups that are now inadequately represented in the medical and allied health professions.⁴⁵

A faculty resolution on December 2, 1968, also supported the Dean in "continuing implementation of the School's program to increase the numbers of students from these minority groups."⁴⁶ Chancellor Fleming indicated that the Schools agreed to nearly all of the demands. Most important was the campus commitment to a "goal" of admitting 25 percent minorities in each entering class in the four schools. There were, however, some important exceptions to the agreements:

1. The University could not accept the definition of "minorities" as "Blacks, Mexican-Americans, and American Indians" proposed, since it clearly violated Title VI of the Civil Rights Act of 1964 in discriminating against some groups.
2. UCSF adopted the definition of "minorities" as "persons who are socio-economically different from the majority of persons and who because of such socio-economic difference would without special assistance be unable to pursue a course of higher education or able to do so only with disproportionately greater difficulty."⁴⁷
3. A special Minority Students' Admissions Committee would be formed and function as a subcommittee of the regular Admissions Committee. The Minority Students' Admissions Committee would be composed of two minority students, two minority professionals from the local community, and two members of the faculty. This committee would review minority applications and conduct interviews with applicants, and make recommendations to the Admissions Committee.
4. Final decisions on the admissions of all students will continue to be made by the Deans or the Faculty Councils of the Schools.

Chancellor Fleming concluded the memorandum with these statements:

It is my belief that these understandings represent a consensus among the students, faculty, and administration of this Medical Center (1) that there is a responsibility to

increase the numbers from certain minority groups in the health professions and (2) that there will be broadening of admissions standards, but there will be no reduction of standards for either admissions or graduation. I believe that these understandings provide the means whereby students, faculty, and administration can work together to accomplish these goals we have set for ourselves.⁴⁸

The Committee on Admissions of the School of Medicine in a memorandum to Dean Cullen about the demands of the Black Student Union and Black Caucus made several statements in support of the Dean's and Chancellor's statements.⁴⁹ In addition, the Committee made this statement about the importance of postbaccalaureate or prematriculation academic support:

The Committee on Admissions in its original deliberations on admission of minority applicants envisioned that in achieving a substantial increase in minority enrollment, students would be accepted whose academic background might differ considerably from that of their classmates. In order to help assure successful completion of medical school by a maximum number of admitted students, it was suggested that special programs were desirable, especially during the summer before medical school classes began. For the past two years the majority of minority applicants have spent ten to twelve weeks on this campus during the summer, many of them engaged in a work-study program, and each of them assigned to a faculty preceptor.⁵⁰

Laying the Groundwork for Increasing Opportunities for High School Students, College Students, and Medical Students before Matriculation

An ad hoc Committee for the Study of Admissions Procedures was in place in January 1968, as well as an Educational Opportunity Program Coordinating Council, and an active Students Committee for Minority Recruitment that planned visits in fall 1968 to 130 California junior colleges, colleges, and universities to meet with Black and Mexican-American student groups.⁵¹ A "companionship program," pairing a high school or college student with a UCSF student, to encourage students to complete high school or college, further their education, and possibly pursue the health sciences was also in place.⁵² Teams of medical students also were going on recruiting trips throughout California supported with donations from the UCSF Chancellor's office, setting up "Big Brother relationships" to help students understand the steps to admission.⁵³ Through the Neighborhood Youth Corps, high school students were working in UCSF labs, offices, and departments as well as taking informal summer classes with UCSF students mentoring small groups of students. A Summer Colloquium in Health Sciences was initiated in the summer of 1968 as a formal class for any qualified student who had been accepted to UCSF medical school. This allowed students to receive work-study funds to work part time in Medical Center laboratories, attend lectures, and receive orientation, guidance, and instruction from preceptors.⁵⁴ It was also a way for students to meet medical school colleagues and faculty.

UCSF's Early National Leadership among Medical Schools

The Annual Meeting of the AAMC was held in Houston October 31-November 4, 1968. Dean Cullen reported on December 6, 1968, to the Advisory Board of the School of Medicine the five recommendations accepted by AAMC member schools at the Annual Meeting:

1. Medical schools must increase their output of physicians. All schools should immediately increase the number of entering students, accelerating expansion by redistributing temporarily the use of existing resources.
2. Medical schools must admit increased numbers of students from geographic areas, economic backgrounds and ethnic groups that are now inadequately represented.
3. Medical schools must individualize the education of the physician to fit the students' varying rates of educational achievement, various educational backgrounds and differing career goals.
4. Medical school curricula should be developed by interdepartmental groups that include participation of students. Curricula should be ratified by the faculty as a body rather than by individual departments.
5. The medical schools must now assume a responsibility for education and research in the organization and delivery of health services.⁵⁵

Steps toward many of these goals were already underway at UCSF. In 1965, UCSF instituted a major curriculum revision.⁵⁶ Instruction in the first and second years of the basic science curriculum was more closely integrated, with emphasis on interdepartmental and interdisciplinary courses. A consolidated course in the second year constituted an "Introduction to Clinical Medicine," and the fourth-year curriculum featured a 12-week program, "Ambulatory and Community Medicine," conducted in conjunction with the Outpatient Clinic and extending into the community with patients receiving care and students involved in care following individual patients through diagnosis and treatment. The fourth year also provided for a quarter for elective activities, either research or clinical, on campus or elsewhere in the community or abroad.

In March 1969, Philip R. Lee, M.D., former Assistant Secretary of Health and Scientific Affairs, U.S. Department of Health, Education, and Welfare (1965-1969), became the third Chancellor of UCSF. Dr. Lee was a strong supporter of affirmative action and provided strong support to UCSF's campus-wide affirmative action efforts during his tenure as Chancellor from March 1969 through September 1972.

At a meeting of the Executive Committee of the School of Medicine on November 6, 1969, Dr. John Wellington, Associate Dean for Student Affairs and Chair, Admissions Committee, and Dr. John Watson, Assistant Dean, reported on the AAMC Annual Meeting of October 31 through November 3, 1969, noting that there was a large increase overall in attendance at the meeting, including many students, that students were playing an active role in demanding

improved care for clinic patients, and that federal funds for loans and grants to students were being cut.⁵⁷ UCSF School of Medicine Dean Cullen voiced open support for increasing minority enrollment at this meeting, both challenging and encouraging other member schools to do what UCSF was doing. Dean Cullen had been a vocal supporter of these efforts for several years. In 1966, Dr. Wellington and he had attended an AAMC conference focused on minority recruitment, and he was proud to report that a number of minority students had been admitted for 1967 as a result of recruiting trips of Dr. Burbridge.

Dr. Wellington and David Wren, Jr., a UCSF medical student, had prepared a presentation for the AAMC meeting, “The Rationale of Minority Medical Student Selection.”⁵⁸ They described the steps UCSF had taken in increasing minority applicants and matriculants:

Many schools have said in the past, and many are still saying that they are willing, in fact anxious, to admit greater numbers of minority students, but there are so few (or no) qualified minority applicants. This is the position in which the University of California School of Medicine in San Francisco found itself in 1964, when there occurred a growing faculty ground-swell of interest in recruiting more minority students. (We) believe that it is worth recounting the story of what happened during the next 5 years as a concrete example of what can be done to increase the enrollment of minority medical students.⁵⁹

UCSF Campus Protests

From the time of the assassination of Dr. Martin Luther King Jr., in spring 1968, there had been Civil Rights and Vietnam War protests on the campus and in the community. On December 2, 1968, a child’s casket was carried across Parnassus Avenue to Millberry Union Plaza to protest Black children who had died because of inadequate medical care.⁶⁰ On May 12, 1970, the faculty held an emergency meeting to discuss an Academic Senate resolution supporting employees, students, house staff, faculty, and other members of the campus community in non-violent protests of the U.S. invasion of Cambodia on May 1, 1970 and the killing and wounding of students by the Ohio National Guard at Kent State University on May 4, 1970.⁶¹ On May 13, classes were suspended.

Increasing Minority Student Enrollment, Entry Class Size, and Research Support at UCSF

The Los Angeles Times published an article, “UC Leads Effort to End Bias in Medical Field: Center in S.F. Makes Students and Doctors Aware of Racial Issues,” on August 24, 1969.⁶² The article underlined the point that Dean Cullen made earlier that “except for the two predominantly Negro medical colleges—Howard in Washington, DC and Meharry in Nashville, Tenn.—the percentage of minority freshmen medical students at San Francisco next year will be the nation’s highest.”

Not only was minority student enrollment increasing, but the entry class size of UCSF medical school was also rapidly increasing, from 100 during the period of the early 1960s to 130 during the period from 1966 through 1969 to 146 in 1972 to a high point of 148 in 1975. One of the major reasons for this increase in class size was the federal Health Professions Educational

Assistance Act of 1963 and its amendments, which provided for both basic and special improvement grants to schools of medicine, including funds to increase their enrollment, for medical facilities, and for loan and scholarship assistance to medical students.

Table 8-2 provides a picture of UCSF enrollment by ethnic origin during the period from 1969 through 1973.

Table 8-2 Entering Students by Ethnic Origin, UCSF Medical School, 1969-1973

Ethnic Origin	1969	1970	1971	1972	1973
Black	22	21	20	15	18
Chicano/Mexican American	6	12	10	18	16
Chinese	4	7	10	10	5
Japanese	3	7	3	3	2
American Indian	1	1	1	0	1
Filipino	3	0	1	2	0
Other Race/Ethnicity (i.e., Samoa, 1971; Korean, 1972; Middle Eastern, 1,1973, East Indian, 1, 1973))	—	—	1	1	2
Caucasian EOP	—	—	5	0	—
Other (i.e., Caucasian)	91	86	83	97	102
U.S. Citizens	128	129	132	143	145
Foreign	2	5	2	3	1
Total	130	134	134	146	146

Source: UCSF School of Medicine, Reports of the Committee on Admissions, 1968-1969 through 1973-1974

Note: EOP=Educational Opportunity Program

By 1971, the applicant pool had already shifted from a statewide to a national pool and applicants and interviews were increasing; there were 812 interviews among the 2,300 applicants in 1971, 300 more interviews than in 1969, and 200 more than in 1970.⁶³ The Admissions Committee was maturing and developing policies and practices to deal with an increasing workload. At the same time, UCSF medical school was excelling in another area. The AAMC ranked the school 5th in the nation in terms of the amount of sponsored research/full-time faculty members.⁶⁴ In May 1973, the AAMC reported that UCSF had the largest representation among U.S. medical schools of both minorities and women.

Report on Minority Programs of the University of California, 1972

On February 10, 1972, Vice Chancellors from three UC campuses, UC Irvine, UCSF, and UC San Diego, forwarded a report to the Office of the President and other campuses on the Educational Opportunity Program, which had been initiated in 1965, and other minority programs at the University.⁶⁵ The report looked back on progress in recruiting and enrolling minority students over the previous seven years, and urged University administration “at the highest levels” to take action in five areas:

1. Reaffirm the University’s commitment to equal educational opportunity... by pledging itself to a goal of minority student enrollment which approximates the percentage of

minority students graduating from the high schools and junior colleges of the State of California.

2. Increase public awareness concerning the goals and realities of the University's campus-based minority-oriented programs.
3. Initiate innovative new programs, including high prestige scholarship programs for high school and junior college students, expansion of 'regularly admissible' student programs, and programs for returning veterans.
4. Expand career development for minority staff.
5. Place significantly higher priority on faculty affirmative action.

Other recommendations were to seek state General Fund support to expand the Educational Opportunity Program, which had been funded through student fees and the Regents Opportunity Fund, as well as major foundation support for pilot programs and U.S. Office of Education support.

The Black Caucus's Continuing Conversations with UCSF Administration

As UCSF continued its affirmative action efforts, the Black Caucus continued to present demands to successive Chancellors. These demands crosscut issues related to students, residents, faculty, and employees. Among demands presented to Chancellor Philip R. Lee in May 1971 were demands to:

1. Establish an Affirmative Action Unit reporting directly to the Chancellor responsible for monitoring affirmative action programs, goals, and timetables for all departments, contractors, and suppliers and for enforcement related to non-compliance.
2. Accelerate the recruitment of additional Black faculty, with a specific faculty Affirmative Action Program.
3. Set a 25 percent goal for recruitment of minorities in internship and first-year residency programs.
4. Provide additional housing and financial aid to minority students.⁶⁶

Dr. Lee responded that an Affirmative Action Office would be developed, housing problems would be reviewed and resolved, scholarship funding was now available from the Bank of America's New Student Loan Program and National Medical Fellowships, and Deans and administrators would address the issues of recruitment of minority interns and residents.⁶⁷

Dr. Julius Krevans, Dean of the School of Medicine (1971-1982) and UCSF Chancellor (1982-1993), had written to Chancellor Lee on June 24, 1971, about improving house staff recruitment:

The School's record of success in the recruitment of minority students ranks first in the nation.

The reasons for success are:

- The program was initiated by our faculty with strong commitment by students, faculty, staff, and administration.
- The program was begun approximately three years earlier than other schools.
- A cooperative effort and ambience has prevailed since the inception of the program.

The principles underlying the success of our medical student program include:

- An active recruiting effort to increase the size of the applicant pool.
- Involvement of students, faculty, staff and administration in recruiting efforts which include personal contacts, in addition to more traditional mechanisms.
- Minority student, faculty, and community representation on the Admissions Committee to improve the evaluation of minority applicants.⁶⁸

Black Caucus actions in 1972 contributed to more changes in University and UCSF policies and practices affecting students, faculty, and staff. The Office of the President of the University of California issued an affirmative action policy after meeting on campus with the Black Caucus. Space on the UCSF campus was made available to campus groups, and changes were made in the makeup and process of the Admissions Committee's minority subcommittees after meetings with Deans.⁶⁹

With a new UCSF administration headed by Chancellor Francis Sooy (1972-1982), the Black Caucus again focused attention on demands not met in 1972 and 1973. Issues discussed included the decline in Black student candidates in the professional schools, inadequate representation of Black house staff and faculty, and lack of Blacks in managerial and decision-making positions.⁷⁰ Dr. Sooy responded to an earlier communication on December 15, 1972, to Ms. Leothea Hill, Chairman of the Black Student Union and Mr. Freeman Bradley, Chairman of the Black Caucus:

The goal of 25 percent minority admissions is still a goal we are striving to attain. It was reached by the School of Medicine for the two years 1969-1970 and 1970-1971...During the early part of the recruitment program on this campus, the competition from other institutions was much less than it is today. It is clear...that when 27 black students are accepted and 18 decline, as they did for enrollment in the Medical School, competition is difficult. A major reason for this is our inability to offer firm financial aid commitments as early as other institutions, many of them private, or to offer as much. I am sure you are aware of the pressures on the University and the Federal budgets for student aid funds. This is a continuing problem on which we will continue to work. No minority student has been forced to leave because of financial pressures.⁷¹

By March 1974, the affirmative action program for the UCSF campus had been approved by the President of the University of California, with specific new responsibilities for department chairmen and service chiefs in the recruitment of faculty.⁷²

Black Caucus actions in working directly with UCSF administration on critical issues related to staff, students, and faculty in the late 1960s and 1970s have a legacy that has continued in the 1980s, the 1990s, and through to the present day. In 1989, the Council of Minority Organizations (COMO) was formed to provide a forum for campus groups working to shift the balance for minority groups; COMO defined a minority group as “a group that is disadvantaged with respect to the dominant group in terms of social status, education, employment, wealth, and political power.”⁷³ The purposes of COMO⁷⁴ are:

- To provide a forum for discussion to strengthen ties between UCSF minority organizations on issues of mutual concern.
- To provide access to information at the campus and Office of the President level.
- To provide a standing mechanism to deal with issues that arise out of conflict.
- To promote the general welfare of minorities at UCSF by organizing forums and other special events and by fostering cross cultural exchange activities.
- To encourage a uniform and consistent flow of information to all minority organizations from all levels of campus and systemwide administration.

In addition to the Black Caucus, members of COMO were: the Latin American Campus Association (LACA), which had been working alongside the Black Caucus since 1969 “to sensitize the UCSF campus community to the culture, interests, and needs of the Latino community,” the United Filipino Employees’ Association (UFEA), active since 1971 “to give voice and to and promote the social, cultural, intellectual, and moral well being of the Filipino community;” the Native American Health Alliance (NAHA), active since 1986 in addressing “issues of concern to native students, staff, and faculty, and the UCSF administration,” with a mission to “advance representation of Native Americans on campus and promote cultural awareness;” and the Asian Pacific American Systemwide Alliance (APASA, an umbrella organization for the UC system, active since 1988 in working “to strengthen the professional and social relationships within the campus community and promote the diverse cultural heritages of the Asian Pacific people at UCSF.”⁷⁵

The Bakke Case and the University of California, Davis, School of Medicine, 1974-1978

On December 2, 1974, Dean Krevans informed the Advisory Board of the UCSF School of Medicine of the ruling of the California Superior Court in Yolo County in the *Bakke v. University of California* case.^{76,77} The court ruled that the special admissions program of the School of Medicine at the University of California, Davis, discriminated against Allan Bakke, a White applicant, because of his race in violation of the Fourteenth Amendment of the California Constitution.

The UC Davis School of Medicine has two separate admissions committees, a Regular Admissions Committee and a Special Admissions Committee.⁷⁸ The special committee was made up of minority students and predominantly minority faculty members, and all students admitted through this committee were minorities. In effect, the school had a dual admissions process and applied different admission standards for those admitted under the special and

regular programs. In addition, 16 of the 100 entry school places were reserved each year for minorities. Dean Krevans noted that the University would appeal the Superior Court's decision.

On September 16, 1976, the Supreme Court of California announced its decision in the *Bakke v. University of California* case, in which both Allan Bakke and the University brought complaints.⁷⁹ The court held that the special admissions program, "as administered by the University, violates the constitutional rights of nonminority applicants because it affords preference on the basis of race...."⁸⁰

On November 15, 1976, the U.S. Supreme Court suspended for 30 days the California Supreme Court order calling on the University to discontinue the special admissions program.⁸¹ The reason for the suspension was to allow the University time to file an appeal with the U.S. Supreme Court.

The outcome of the U.S. Supreme Court's consideration of the *Regents of the University of California v. Bakke* case announced on June 28, 1978, was that the Court invalidated the special admissions program used by UC Davis, but allowed the consideration of race in admission decisions.⁸² (The U.S. Supreme Court *Regents of the University of California v. Bakke* case in described in detail in Chapter 1.)

The U.S. Supreme Court *Bakke* decision had implications for all institutions of higher education, public and private, including all of the University of California campuses and its medical schools.

On July 31, 1978, Chancellor Sooy, Vice Chancellors, and Deans met with the University of California's General Counsel, Donald Reidhaar, about the implications of the *Bakke* decision on admissions policies and procedures.⁸³

In the General Counsel's lengthy statement of July 19, 1978, he noted:

Within the University of California, particularly at the graduate and professional level, establishment of admissions criteria, and to a large extent admissions procedure, is the responsibility of the faculty....⁸⁴

The Academic Senate, in the case of the professional schools, has delegated to the faculties of the several schools authority and responsibility for establishing criteria for admission. Typically, the Dean of the school appoints an admissions committee with responsibility for implementing admissions policy and conducting the admissions process. In most cases this includes making admissions decisions. All of this is consistent with the views expressed by Justices Powell and Blackmun that admissions decisions are academic decisions (in the *Bakke* case) which should be made by educators and not the courts.⁸⁵

Because admissions policy and procedure are basically matters for determination on academic grounds in light of the educational objectives of the particular school or other academic unit, this office will not attempt to construct a model policy or procedure....⁸⁶

The General Counsel went on to say that avoiding a set-aside of places and a two-track system of processing applications in a “race-attentive admissions process” would be legally prudent, while using a “common set of admissions criteria administered by a process which affords all applicants an opportunity to compete for any of the places in the class” would be suggested.⁸⁷ He also suggested that:

...it would be useful and desirable for each professional school, graduate division, or other academic unit with responsibility for conducting admissions to develop a carefully prepared statement of admissions policy and procedure. Such a document might include an articulation of the objectives to be served by the school’s admissions practices. To the extent that the school desires to achieve diversity in its student body, I would suggest that the various types of diversity sought, including racial or ethnic diversity, be identified in the policy and procedure for the guidance of admissions committees.⁸⁸

He concluded his statement by saying:

In light of the Court’s holding that race and ethnicity can be considered in the admissions process, and given the latitude which the Bakke (decision) reserves to educators for making admissions decisions, I am confident that the University can effectively pursue the objective of enhancing professional and graduate educational opportunities for members of minorities who have been, for far too long, underrepresented in these programs and the professions.⁸⁹

UCSF administrators concluded in July 1978 that the *Bakke* decision had no effect on its admission programs, since none of the schools, including the medical school, used a quota system or admissions process similar to that the Court had declared invalid.⁹⁰

Stanford Chronology of Key Events

Stanford’s Early Efforts to Increase Minority Applicants, 1964-1965

In November 1964, the President of Stanford University, J.E. Wallace Sterling, appointed a committee to:

explore ways in which this University can be useful in promoting educational opportunities for Negroes and other minority groups, either working through Stanford or in discovering ways to raise the quality of Negro and minority education in general.⁹¹

Several activities were already underway in the summer of 1965. Stanford faculty were volunteering for a summer institute to assist chemistry teachers from predominantly Negro colleges in updating their knowledge and skills. A National Science Foundation grant “to help broaden awareness of opportunities and challenges of science and medicine for high school students from minority racial groups” permitted 32 ninth and tenth grade students from Ravenswood High School to attend a six-week summer course at Stanford medical school in 1965 with faculty from biochemistry, genetics, infectious diseases, medical microbiology,

medicine, pediatrics, pharmacology, and surgery to participate.⁹² The NSF-funded program grew out of a pilot program with 10 students in the summer of 1964. Plans were to expand the NSF-funded program to other high schools to assure an “interracial composition” of the student group. The faculty hoped to:

provide sufficient incentives, guidance and help to enable highly able students who for economic, cultural or educational reasons would not otherwise do so, prepare and qualify for a college and professional education. Preference is given to those achieving below expectation as indicated by school counseling services and science and mathematics teachers.⁹³

Stanford teaching assistants and graduate students were involved in another six-week program at Stanford for Ravenswood students to improve their reading, writing, social science, and math skills.

Leadership within the Medical School, 1964-1965

During his tenure as Dean of Stanford’s School of Medicine (1957-1964), Dr. Robert H. Alway was instrumental in bringing top scientists to Stanford, doubling the size of the faculty, and emphasizing research as “the lifeline of medicine” and its vital importance in the medical school curriculum, at the bedside, and at the bench.⁹⁴ He also was known for his emphasis on high standards and the quality and excellence of Stanford’s medical students. In 1964, Dr. Alway advised that the AAMC “should influence the premedical curriculum toward more intensive mathematics, science, philosophy, etc. and subsequently more intensive courses in the basic preclinical sciences in medical school.”⁹⁵ Stanford at that time had a Five Year Curriculum with three and one-half years of basic science and two years of clinical study. It was within this context that talks began among the faculty about ways to increase minorities in the medical school.

A “group of faculty had gotten to know each other (and) talked about the (Vietnam) War and all the Civil Rights Movement,” Dr. Leon Rosenberg, Professor of Immunology, Emeritus, who had been a member of the Minority Admissions Committee in the 1970s, reflected during an interview in 2004.⁹⁶ “This group of faculty actually, at some point, got to be meeting as a group of faculty” to discuss what could be done to create a way to recruit and admit Black students “and... then this got to the then dean and a subcommittee or committee was put together.”⁹⁷

Dr. Sidney Raffel served as Acting Dean in 1964-1965, and Dr. Robert J. Glaser began as Dean in 1965 and served through 1970. These early faculty discussions led later to more formal proposals and resolutions approved by the faculty of the School of Medicine.

School of Medicine Committee on Minority Student Problems, May 1968

As Dr. Roy Maffly, Professor of Medicine, Chair of the Minority Admissions Committee (1973-1977), Chair of the Committee on Admissions (1981-1983), and Associate Dean for Student Affairs (1983-1993), recalled in 1990.⁹⁸

It was shortly after the assassination of Martin Luther King in May 1968 that a School of Medicine Committee on Minority Student Problems met for the very first time. Its charge by then-Dean Robert Glaser was ‘Recruit more minority students in the School of Medicine.’

There was one Black student (class of 1968) in the School at the time...and no Hispanics. Nor was there any recollection whether there were any Native Americans....The school’s record on applications was not much better. A total of 1,307 students applied for the 1967-1968 academic year; 11 were identified as ‘Negro,’ which was less than 1 percent of the applications. Class size was 64*.

The Committee on Minority Student Problems, initiated by the Dean and the Medical School Executive Committee and including faculty and students, met regularly through September 1968 to consider how best to recruit more minority students, including doubling the size of the entering class from 64 to 128, or after that proposal was rejected, adding fewer places.⁹⁹

Black Student Union Demands, October 1968

In early October 1968, Robert Illa, the only Black student in the medical school’s class of 1968, presented a list of demands from the Black Student Union of Stanford, asserting that faculty actions “lacked a sense of urgency.”¹⁰⁰ The demands included:

1. Reserving ten places in the entering class for minority group students.
2. Providing adequate financial support, including tuition and room and board, for students.
3. Establishing a separate Minority Student Admissions Committee independent of the Regular Admissions Committee with power to admit minority students.

Faculty Senate Resolutions to Promote Minority Recruitment and Admissions, October and November 1968

The Faculty Senate of the School of Medicine moved quickly to adopt unanimously a number of resolutions to promote minority enrollment at meetings on October 5, 12, 18, and 26 and November 1, 1968, including the following actions:¹⁰¹

1. Inaugurating a special program for increasing the enrollment of minority group students to the School of Medicine, starting with the class of students entering in September 1969.
2. Defining “minority group students” as “students of educationally deprived racial or cultural groups in this country.”

* “Entering class size” and the number of students matriculating in a given year often differ in admissions records that we reviewed. For example, the entering class size is cited in some documents as 64 during the period from 1966 through 1968, while other documents note that there were 66 matriculants in 1966, 76 in 1967, and 67 in 1968.

3. Reserving ten places in the entering class for minority group students. (If ten students were not found for this special program, any unfilled places may be offered to students from the regular applicant pool.)
4. Maintaining the same requirements for individual course completion and graduation for all students admitted, whether by special admissions policy or regular policy.
5. Strengthening the implementation of this program with a tutoring program specifically designed by the Stanford Medical School student body and Stanford University Faculty to assist minority group students, on request, with their studies and their course work.
6. Forming a Search Committee for Minority Students, with a Chairman to be elected annually, comprised of nine members (three selected by the Black Student Union, three by the Mexican-American Student's Confederation, and three by the Committee of Five[the Steering Committee of the Faculty Senate]) to assist the Committee on Admissions in the following ways:
 - recruit minority applicants
 - participate in interviews and evaluations
 - recommend guidelines for evaluation of qualifications
 - recommend to the Committee on Admissions applicants for admission to the special program.
7. Making available adequate resources to publicize this program, aid the Search Committee in its efforts, provide financial aid to the students admitted, and assist the tutoring program.
8. Maintaining the special program for admissions for a period of five years after which the Faculty Senate would evaluate the program and recommend policy.

Early Success in Increasing Minority Applicants and Enrollment, 1969

The Search Committee for Minority Students was successful. By the time the committee was formed in December 1968, the minority program had generated publicity and 63 minority candidates had applied to the school, compared to nine the year before.¹⁰² The Chairman of the Committee, Dr. Jose Aguilar, traveled to the Southwest and assisted a few Mexican-American students in visiting the Stanford campus.¹⁰³ In addition, members of the Mexican-American Students Confederation helped interview and screen candidates; Paul Williams, another Committee member and a Black Student Union member, met with Black students who visited campus and contacted and counseled others by phone.¹⁰⁴ As the Committee reviewed minority applicants, they considered such criteria as: “1) evidence of academic achievement and promise for further attainment, 2) motivation for medicine, 3) consideration of how far the candidate had journeyed to reach a decision to apply to medical school, and 4) evidence of humane concern for the existing problems in the student’s minority group community.”¹⁰⁵

There were differences of opinion about the importance of individual criteria and the goal of the minority program. Some members of the Search Committee for Minority Students felt that

admitting minority students whose intent was to return to their communities to practice medicine should have the highest priority. Dr. Leon Cohen, a member of the Search Committee as well as the Regular Admission Committee, disagreed. He held the view that “Stanford can make a major contribution to the health care of minority communities by producing minority professors of medicine and deans of medical schools, commissioners of health, and directors of health care plans.”¹⁰⁶

The success of the Search Committee is borne out by the numbers of applicants and first-year enrollees. There were 139 minority applicants for the 1969 class, with ten minority students enrolled in the entering class, representing almost 14 percent of the total of 73 students in the entering class of 1969, up from a total entering class of 67 students in 1968.^{107,108,109} (The number of entering class positions was increased from 64 to 74 to accommodate ten minority students.)

Modifying the Minority Admissions Program, June 1969

On June 30, 1969, the Faculty Senate voted to dissolve the Search Committee for Minority Students and recommended to the Dean that he establish a select committee “to further the goals of the special program for increasing minority enrollment in the School of Medicine.”¹¹⁰ The Faculty Senate also clarified the composition and charge of the new Committee, criteria for medical school admission, recruitment, the student role, and reporting requirements. The new Committee on Minority Admissions, which became operational in 1970, was to:

consist of nine voting members; six from minority communities, each of whom shall be a recognized professional in the field of health or education, appointed by the Dean. The Dean shall invite nominations from minority groups and individuals. In addition, the Dean shall appoint two faculty members and the senate, one faculty member to the Committee.”¹¹¹

Five students were added to the Committee as non-voting members. The Faculty Senate noted that “(t)he general and overriding criteria for the selection of students shall be the motivation, ability and preparation to complete successfully the course of studies leading to the M.D. degree. The Committee may develop and use techniques for evaluating students with respect to these criteria...”¹¹²

Significantly, the Senate rejected the suitability of the following criteria determining admission: the degree of present or anticipated ‘activism’; the prior commitment or lack of it to any specific type or area of medical practice; whether or not a student may be admitted to another medical school; and the professional or financial status of the student’s family.¹¹³

The Faculty Senate urged the Dean “to support in every way possible the Committee... in its recruiting program, so that we may develop a large pool of qualified applicants from minority groups.”¹¹⁴

By 1970, the number of minority applicants had grown to 291, and ten minority students were enrolled in an entering class of 78.^{115, 116, 117}

Stanford's Early National Leadership through the 1970 AAMC Task Force on Minority Student Opportunities in Medical Education

The AAMC organized a Task Force early in 1970, supported by a grant from the Alfred P. Sloan Foundation, to assist medical schools in developing mechanisms and programs to increase participation of minorities.¹¹⁸ This Task Force was chaired by Bernard W. Nelson, M.D., Associate Dean and Chairman, Committee on Admissions (1967-1970), School of Medicine, Stanford University. The AAMC Task Force on Minority Student Opportunities in Medical Education issued a *Report of the AAMC Task Force to the Inter-Association Committee on Expanding Educational Opportunities in Medicine for Blacks and Other Minority Students* on April 22, 1970.¹¹⁹

The Task Force Report set the course for medical schools in several ways:

- The Task Force defined “minorities” as “those racial or cultural groups underrepresented in U.S. medical schools as Black Americans, Mexican Americans, American Indians, and Mainland Puerto Ricans.”¹²⁰
- The Task Force defined the long-term goal for minorities in medicine as:
...to achieve equality of opportunity by reducing or eliminating inequitable barriers and constraints to access to this profession which have resulted in a representation of racial minorities in the medical profession much less than their representation in the U.S. population....¹²¹

Blacks at that time comprised 2.2 percent of all physicians as contrasted to 11-12 percent of the U.S. population.¹²² The report notes as well that “a disproportional representation of minority students exists in medical schools as well (2.8 percent minority representation [of total enrollment] as compared to 11-12 percent in the U.S. population).”¹²³

- The Task Force proposed a short-term goal:
U. S. medical schools increase the representation of minorities in the M.D. programs from 2.8 percent (of total enrollment) in 1970-1971 to 12 percent in 1975-76.^{*124}

The challenge for medical schools, including Stanford and UCSF, was to achieve a steep increase in first-year enrollment of minorities in medical school every year for five years.

* The figure of 12% for all minorities was based on data for Blacks only, because AAMC indicated that “information on other minority groups was not available. Therefore, the comparable goal for total first-year minority enrollment should have been 16%.”

Increasing Class Size, Minority Applicants, and Minority Matriculants

Stanford's School of Medicine Faculty Senate voted in 1971 to again increase the size of the entering class by ten in 1972, noting that "any increase in class size should include minority and women students."¹²⁵ In 1971, minority applicants dipped to 238 and 12 minority students were enrolled in the entering class, representing 16 percent of the total class of 77.^{126,127} The number of minority applicants rose sharply in 1972 to 417 and again in 1973 to 485, with 14 minority matriculants accounting for 16 percent of a class of 86 in 1972 and 20 matriculants in 1973, accounting for 22 percent of the class of 89 students.

**Table 8-2 Selected Minority Applicants and Matriculants
Stanford Medical School, 1969-1973**

	1969		1970		1971		1972		1973	
	App	Mat	App	Mat	App	Mat	App	Mat	App	Mat
Black	109	6	197	4	151	4	276	4	292	11
Chicano	30	4	83	6	78	7	128	9	166	8
Native American	0	0	11	0	9	1	13	1	24	1
Total selected minority	139	10	291	10	238	12	417	14	485	20
Grand total	2,005	73	3,717	78	4,131	77	4,131	86	4,553	89

Sources: Report of the Committee on Minority Admission-1973-74. Stanford University School of Medicine; Report of the Committee on Admission-1973-74.

The First Report of the Senate Committee on Admissions Policy (SCAP)

On June 9, 1972, the Faculty Senate of the School of Medicine passed the following resolution.

The Senate establishes the Committee on Admissions Policy as a standing committee; its membership to be appointed annually by the Committee of Five, with a charge to review periodically general admissions policy and to review and make recommendations regarding all special admissions programs. The Minority Admissions Program is to be reviewed and recommendations submitted to the Senate in the Spring of 1973.¹²⁸

The Senate Committee on Admissions Policy (SCAP) included ten faculty members, a consultant on Chicano Affairs from the Dean's Office, and four student members appointed by the Stanford Medical Students Association. From 1971-1972 through 1980-1981, the SCAP played an important role in monitoring and assessing medical school admissions activities and making recommendations to the Faculty Senate on policies and procedures. Each year, the Committee had a stated charge. In its first-year, 1971-1972, the Committee's charge was:

1. to determine criteria for admissions to Stanford Medical School in light of stated and unstated academic goals.
2. to establish procedures for the composition of the Admissions Committee and its procedures.
3. to review admissions procedures and some attempts at establishing methods for evaluation of effectiveness.¹²⁹

The Faculty Senate approved the following general requirements for candidates to Stanford Medical School based on the Committee's recommendations:

That the Admissions Committee select a student body which is most likely to benefit from the particular form of medical education offered at Stanford.... We would therefore recommend that every candidate for admission to Stanford Medical School satisfy two requirements:

1. The capacity to become a superior physician.
2. The capacity, though not necessarily the stated career goal, of entering academic medicine with its three facets of patient care, teaching, and research.¹³⁰

The SCAP's Five-year Evaluation of the Minority Admissions Program

The SCAP's detailed report of its evaluation of the first five years of the Minority Admissions Program, which was issued on April 13, 1973, noted in the summary section of the report that the program had been successful in two important ways: students' academic performance had been satisfactory and the students had enriched the environment of the medical school.¹³¹ The report's findings fell into four categories: 1) selection of students, 2) financial features, 3) educational features, and 4) student performance. The report made nine general recommendations:

1. Continue the Minority Admissions Program.
2. Retain a separate Minority Admissions Committee, but encourage greater interaction with the Regular Admissions Committee.
3. Increase the minimum goals for admitted students to 20 percent of the entering class.
4. Broaden the definition of eligible minority groups to include Americans of Spanish surname.
5. Increase administrative help to the Minority Admissions Committee.
6. Take steps to encourage minority applications and to actively recruit applicants who are accepted.
7. Improve the distribution of financial aid to all students whether minority or non-minority.
8. Vigorously seek funds to increase the total aid which is available.
9. Substantially increase support to the minority pre-medical programs at Stanford.¹³²

The report also discussed the difference between a "quota" and a "minimum goal" in terms of the number of minority students to be admitted in an entering class, and referred to a memorandum prepared by James V. Siena, Legal Advisor to the President of Stanford University.^{133,134} Mr. Siena noted that:

A quota, as the term is generally understood, is a fixed goal which drives decisions. As to admissions, a quota says that we will take X number of a certain group regardless of qualifications. If the answer to that is that we always fill our quotas with qualified applicants, the rejoinder is that there is then no need for the quota.¹³⁵

A specific recommendation of the report dealt with a special tutorial service for minority students. When all minority students in the medical school were queried through a survey that

was part of the evaluation of the Minority Admissions Program, the great majority of respondents expressed negative sentiments about a “special” service for minorities. The recommendation was that tutoring, formal or informal, should be available to all students on a departmental basis.¹³⁶

Recruitment Strategies in a Changing Environment

The SCAP evaluation noted that Stanford in the years from 1969 through 1972 had attained twice the national average in the percentage of minorities in its entering class.¹³⁷ Success in attracting and admitting Chicano applicants—almost half the Chicano national pool was applying to Stanford by the fall of 1973—accounted in large part for Stanford’s success in attracting minorities. The proportion of the U.S. minority pool* applying to Stanford (18 percent) was greater than that of the nonminority pool (12 percent) in the fall of 1973, but the SCAP report noted that 86 percent of Black applicants in the U.S. and 83 percent of American Indian applicants did not apply to Stanford.¹³⁸ (By comparison, UCSF claimed in fall 1973 a similar share (19 percent) of the national pool of minority applicants; however, UCSF had greater numbers of Black and Chicano applicants, 254 and 180, respectively, than Stanford, 219 and 153, respectively, to its 1974-1975 entering class, while Stanford had a greater number of Native American applicants, 28, compared to UCSF’s 19.)^{139,140} The SCAP report also noted that a diminishing proportion of Stanford’s minority acceptants were matriculating at the medical school.¹⁴¹ Among the potential reasons cited for this trend were “the student’s image of Stanford, financial concern, geographical preference, increasing number of applicants per student, and active recruitment by other schools.”¹⁴²

One recruitment recommendation from the SCAP evaluation was for Stanford “to institute its own recruitment program for accepted (and hence desirable) applicants.”¹⁴³ A second was that “the ability to successfully recruit minority applicants (would) depend in part on the availability and visibility of minority faculty members, and the need to increase the number of minority faculty members in the Medical School remains a matter of urgent concern.”¹⁴⁴ A third was that, “a student who applies to Stanford should have a clear and accurate picture of the School, its goals, its areas of capability and excellence and its limitations.”¹⁴⁵

Providing information about the school is important not only to attract students, but also to facilitate the process of self-selection of students. Material which accurately describes the curricular and intellectual foundations of the school aids in self-selection. Any special program features should be emphasized in the catalog and in the supplemental materials because they would better define the institution and hence facilitate the self-selection process. These supplemental materials should be sent at an early date in the application season to all identifiable minority pre-medical students, not only those at Stanford but throughout the country.¹⁴⁶

* The national minority pool is defined here as including only selected minorities (Blacks, Chicanos, and Native Americans).

Students Challenge Stanford's Commitment to the Minority Admissions Program

In his history of minorities in the Stanford School of Medicine written in 1990, Dr. Roy Maffly, Chairman of the Minority Admissions Committee from 1973 through 1977, recalls several times during the 1970s when students challenged administrators about the medical school's commitment to minorities.¹⁴⁷ The *Stanford Daily* in 1973 reported Stanford medical students asserting that "The existence of the Minority Students Admissions Program was threatened by executive directive."¹⁴⁸ In 1975, Dr. Maffly noted that minority students raised concerns about the future of the Minority Admissions Program, and in 1976 students protested when the Faculty Senate considered making changes to the program as the *Bakke* case had begun to work its way through California courts.¹⁴⁹

Changes in Stanford's Admissions Process in Response to the U.S. Supreme Court Bakke Decision

There had been extensive discussions about modifying the admissions process developed by Stanford's School of Medicine since 1973 as the *DeFunis v. Odegaard* case (See Chapter 1) and the *Bakke* case unfolded. The SCAP was specifically charged in 1977-1978 with "developing recommendations to the Faculty Senate for increasing minority admission opportunities into the current admissions process within the mandates of the Bakke decision."¹⁵⁰ The SCAP made several recommendations to the Faculty Senate. Those approved by the Senate included policies and procedures regarding:

1. The size and composition of a single Admissions Committee: 17 members including 12 faculty members (11 full time and 1 voluntary) without stipulation related to minority or nonminority status, 2 minority faculty members, and 3 students;
2. The review of applications through computer sorting and folder review by three Admissions Committee subpanels (a general subpanel, a MSTP [Medical Scientist Training Program] subpanel, and a minority subpanel);
3. The selection of candidates for interviews by two members of appropriate subpanels after consideration of the Admissions Committee;
4. The final selection of a candidate pool based on the weighing of several factors (i.e., GPA and MCAT scores, other evidence of scholarly achievement, potential for outstanding performance in terms of leadership qualities, independence, desire to succeed, "physicianly" qualities, minority status, distance traveled in the context of social and/or economic disadvantages, and gender); and
5. The immediate acceptance of 50-60 outstanding candidates with the goal of admission of an average of 30 of these "super accepts" into the entering class of medical school.¹⁵¹

The aim of policies of the Faculty Senate was “to obtain a pool of superior candidates who will be about equally qualified and sufficiently diverse to permit the final selection of a balanced and diversified class.”¹⁵²

Other Modifications of Admission Policies

In 1978-1979, the SCAP was charged with reviewing the admissions policies put in place in 1977-1978 by the Faculty Senate and answering several questions:

1. What are the admission goals of Stanford Medical School?
2. Considering these goals, which elements (e.g., MCATs, ethnic identification, etc.) of the various admissions processes have a strong predictive value for success in achieving these goals?
3. What should be the extent of participation of nonfaculty (students and minority individuals inside and outside the university) in all phases of the admissions process?
4. Should a weighting system for voting be incorporated at any of the levels of admission?¹⁵³

The Faculty Senate approved the following statement of Goals:

The Admissions Committee of Stanford University School of Medicine views as its prime obligation the identification and selection from an outstanding applicant pool those individuals who show most promise for accomplishing imaginative innovations in medicine. Such individuals should have the potential to create new knowledge and new ways of applying existing knowledge. The promise of creativity is paramount whether it be related to basic science or clinical research, teaching, direct patient care or the interaction between medicine and society. In the context of (these goals), Stanford University School of Medicine will remain a leader in the training of minority physicians.¹⁵⁴

The Senate also approved the creation of a Director of Admissions position, an increase in the number of members of the Admissions Committee to 21 (adding two clinical and one basic science faculty member and one student member), the expectation that faculty members would serve on the Admissions Committee for two or three years, and the assumption that service on the Admissions Committee would take precedence over service on other University, medical school, and departmental committees.¹⁵⁵

In its final year, 1980-1981, the SCAP was charged with simplifying the admissions process and assessing its cost.¹⁵⁶ The Faculty Senate, acting on the Committee’s recommendations and noting the recent adoption of the medical school’s Statement of Educational Mission, reaffirmed the goals of the selection process:

...preference should be given to the recruitment and selection of students who are academically outstanding and are judged likely to pursue research interests, make careers in academic medicine, or become ‘leaders in the clinical practice of scientific medicine.’ The Statement commits us ‘to provide opportunities for as many students as possible to prepare themselves for careers in research and teaching in the various branches of basic, clinical, and social medicine.’ While recognizing the practical unlikelihood that a majority of our students will become academicians, the Senate reaffirms the unique research orientation of this School, and strongly desires to see an increasing fraction of our graduates become basic medical scientists, clinical investigators, and academicians.¹⁵⁷

The Senate also limited the number of applications reviewed by the Committee on Admissions; gave the Committee discretion to admit or reject applicants without an interview; gave preference to applications of children of medical alumni, faculty, and staff; created a Minority Admissions Advisory Panel and a Medical Scientist Training Program Advisory Panel to provide advice to the Director of Admissions and the Committee on Admissions, as well as a designee of the Stanford Medical Alumni Association as a liaison; and instituted use of a supplemental Stanford application form after a computer screen and scoring of American Medical College Application Service (AMCAS) applications.

UCSF and Stanford Medical School Trends, 1974-2007

Trends by Race and Ethnicity and URM Status, 1974-2001 and 2002-2005

As in Chapter 2 in the analysis of U.S. medical school trends, this analysis of trends for UCSF and Stanford medical schools is based on data made available through the AAMC and aims to show trends over the periods from 1974 and 2001 and 2002 through 2005 for selected racial/ethnic groups—Whites, Asians, and URMs (Underrepresented Minorities/Underrepresented in Medicine)—as well as new racial/ethnic categories that were used beginning in 2002 (Other Race, Multiraces). All figures depicting trends by selected race/ethnicity and URM categories show a break between data points for 2001 and 2002 for all groups to reflect changes in definitions used by AAMC.* (See Chapter 2 for more details on these changes.) Selected updates are provided through 2007, and first-year enrollment data by race and ethnicity are presented for 2000- 2008.

* For 1974-2001, URMs (Underrepresented Minorities) are defined as Blacks, Mexican Americans, Other Hispanics, Puerto Ricans, and American Indians and Alaska Natives. For 2002-2005, URMs (Underrepresented in Medicine beginning in June 2003) are defined as Hispanics (Mexican Americans, Cubans, Other Hispanics, and Multi-Hispanics) and non-Hispanic Blacks, American Indians, Alaska Natives, Native Hawaiians, and Other Pacific Islanders alone. For 2002-2005, Whites are defined as non-Hispanic Whites alone. For 2002-2005, Asians are defined as non-Hispanic Asians alone. Race/ethnicity and URM categories are not directly comparable for the two time periods, 1974-2001 and 2002-2005.

Applicants, 1974-2005

Trends in the number of applicants to UCSF and Stanford medical schools generally mirror national trends, with periods of great increases and declines over the period of more than thirty years (Figures 8-1 and 8-2).

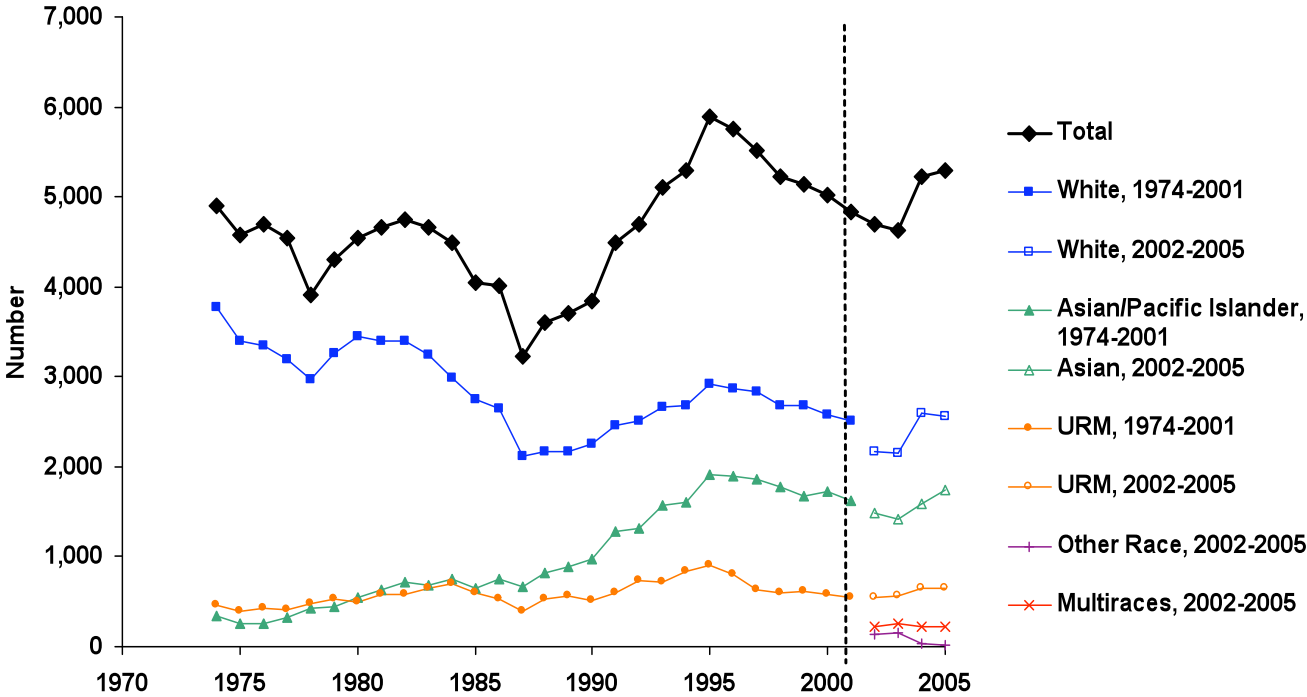
Applicants to UCSF increased overall during the period from 1974 through 2007. Applicants were at the lowest point, 3,232, in 1987, reached a peak of 5,886 in 1995, and declined steadily until 2004, when the number of applicants again began to increase. In 2004, total applicants stood at 5,222, increasing to 5,298 in 2005, 5,591 in 2006, and 6,233 in 2007, for a 19 percent increase over the period from 2004 through 2007.

Applicants to Stanford also increased overall during the period. They were at their lowest point, 3,949, in 1988 and at their peak, 7,015, in 1995, with both increases and decreases thereafter until 2004, when total applicants stood at 5,222. Applicants increased to 5,648 in 2005, 5,986 in 2006, and 6,457 in 2007, representing a 24 percent increase over the 2004-2007 period.

Also similar to the national picture, the number of White applicants declined overall, the number of Asian applicants increased dramatically, and the number of URM applicants also increased at both UCSF and Stanford, but much less substantially and with more year- to-year variation.

Between 1974 and 2001, Asian and Pacific Islander applicants increased by 370 percent at UCSF and by 663 percent at Stanford. From 2002 through 2005, Asian applicants alone increased by 17 percent at UCSF and by 13 percent at Stanford. URM applicants also increased over the 1974-2001 period; there was an 18 percent increase for URM applicants at UCSF and a 24 percent increase in applicants at Stanford.

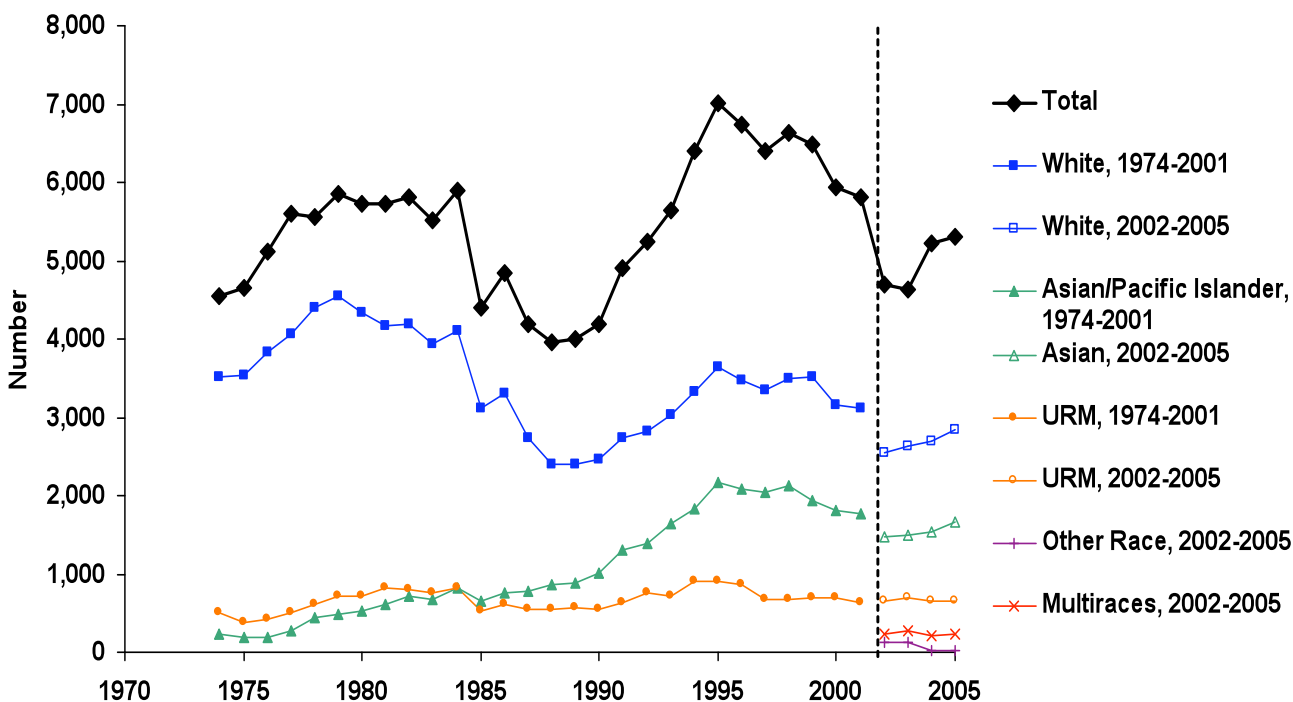
Figure 8-1
Applicants to UCSF by Race/Ethnicity and URM Status, 1974-2005



Note: Race/ethnicity and URM categories are not directly comparable for the two time periods, 1974-2001 and 2002-2005. Race/ethnicity is reported only for U.S. citizens and aliens with permanent resident visas; prior to 1981 only U.S. citizens were included.

Source: AAMC Data Warehouse: Applicant Matriculant File, as of August 31, 2006.

Figure 8-2
Applicants to Stanford by Race/Ethnicity and URM Status, 1974-2005



Note: Race/ethnicity and URM categories are not directly comparable for the two time periods, 1974-2001 and 2002-2005. Race/ethnicity is reported only for U.S. citizens and aliens with permanent resident visas; prior to 1981 only U.S. citizens were included.
 Source: AAMC Data Warehouse: Applicant Matriculant File, as of August 31, 2006.

Similar to overall trends for U.S. medical schools, the composition of the applicant pool has changed over the period from 1974 through 2005 for both UCSF and Stanford.

The composition of the applicant pool is similar for UCSF and Stanford.

White applicants declined as a proportion of total applicants, and Asians and Pacific Islanders as well as URMs increased. In 1974, Whites accounted for 77 percent of all applicants at both UCSF and Stanford; in 1985, they accounted for 68 percent at UCSF and 71 percent at Stanford. By 1995, Whites accounted for 50 percent of applicants at UCSF and 52 percent at Stanford, and in 2005, for 48 percent and 54 percent of applicants, respectively.* (The percentage of White applicants in all U.S. medical schools stood at 82 percent in 1974 and 58 percent in 2005.)†

The proportion of Asian and Pacific Islander applicants grew dramatically at both schools, comprising 7 percent of all applicants at UCSF and 5 percent at Stanford in 1974, 16 percent and

* Percentages do not add up to 100% because percentages for Unknown and Foreign categories are not included during 1974-2001, and Multirace and Other Race categories are not included from 2002-2005.

† Changes in the definitions of racial/ethnic ethnic categories do not allow direct comparisons of the groups in the two periods 1974-2001 and 2002-2005.

15 percent, respectively, in 1985, and 32 percent and 31 percent, respectively, in 1995. Asians alone accounted for 33 percent at UCSF and 31 percent of applicants at Stanford in 2005.

In 1974, URMs accounted for 9 percent of total applicants at UCSF and 11 percent at Stanford. By 1985, this number had increased to 15 percent at UCSF and 12 percent at Stanford. In 1995, URM applicants accounted for 15 percent of all applicants at UCSF, about the same as the figure for medical schools nationally, and 13 percent at Stanford. However, by 2005, URM applicants had dropped to 12 percent of total applicants at both UCSF and Stanford, below the proportion of applicants nationwide of 15 percent.*

Applicants, 2006-2007 Updates

Data from AAMC's Data Warehouse Applicant Matriculant File as of January 30, 2008, which was provided by the Division of Health Sciences and Services, Office of the President of the University of California, show sharp increases in total applicants for both UCSF and Stanford during 2006 and 2007. At UCSF, total applicants stood at 5,298 in 2005, increasing to 5,591 in 2006, and 6,233 in 2007 for an increase over the 2005-2007 period of 18 percent. Total applicants at Stanford increased by 14 percent over the 2005-2007 period, from 5,648 in 2005 to 5,986 in 2006, to 6,457 in 2007.

The composition of the applicant pool at UCSF by race and ethnicity in 2006 was: Whites, 49 percent; Asians, 32 percent; Blacks, 3 percent; and Hispanics, 9 percent. There were 17 (0.3 percent) Native American applicants in 2006. Foreign, Native Hawaiian and Other Pacific Islander, Multiple non-Hispanic race, and Unknown categories (combined in an "Other" category) accounted for a total of 7 percent. There were only slight variations from 2006 to 2007 in the composition of the applicant pool.

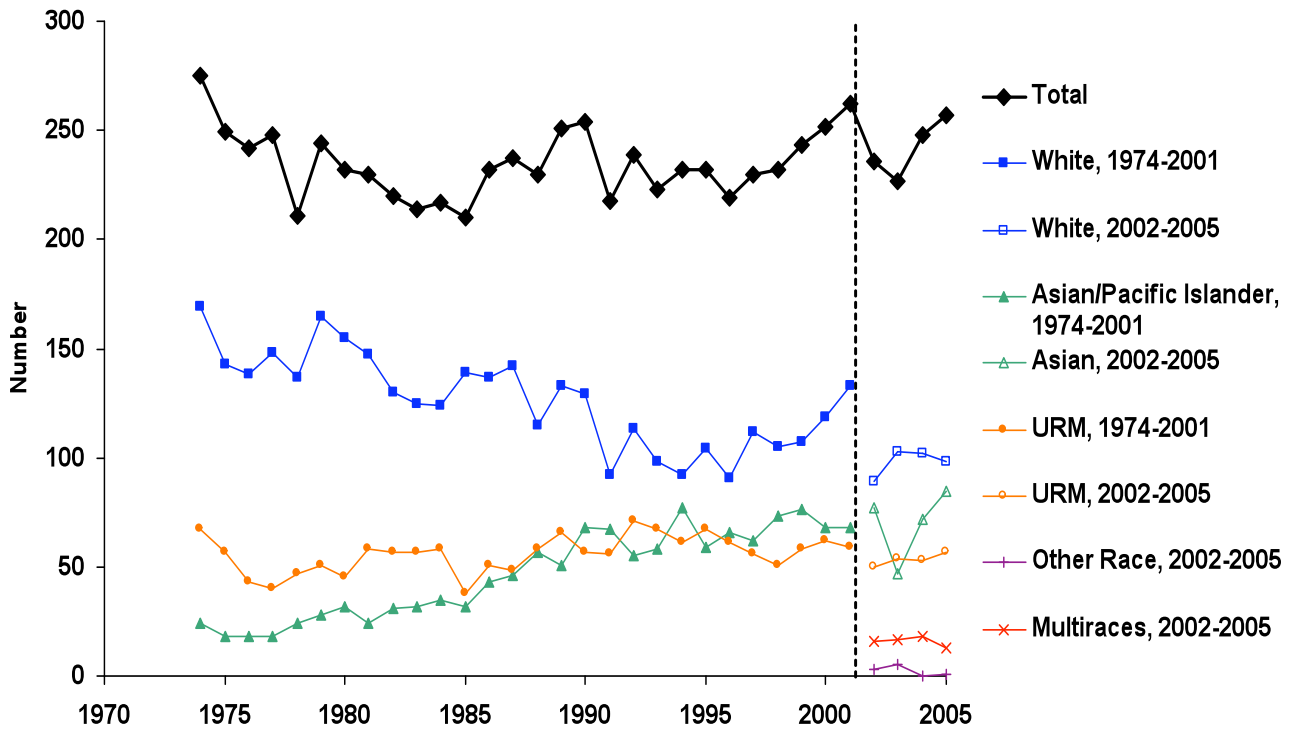
Stanford's applicant pool racial/ethnic breakdown in 2006 was: Whites, 50 percent; Asians, 29 percent; Blacks, 4 percent; and Hispanics, 8 percent. There were 17 (0.3 percent) Native American applicants in 2006. The "Other" category accounted for 10 percent. Like UCSF's applicant pools, there was little variation in the composition of Stanford's pools in 2006 and 2007.

Acceptances (Accepted Applicants, Acceptants, Acceptees), 1974-2005

The total number of acceptances at the two medical schools has varied, as has the number of acceptances among different racial/ethnic groups, sometimes rising and falling sharply from year to year (Figures 8-3 and 8-4). Over the period from 1974 through 2005, the number of acceptances for Whites has declined overall at UCSF and Stanford, similar to national trends. Asians and Pacific Islanders experienced an overall increase in acceptances both at UCSF and Stanford over the period. URM acceptances show upswings and downswings at the two schools.

* Changes in the definitions of racial/ethnic ethnic categories do not allow direct comparisons of the groups in the two periods 1974-2001 and 2002-2005.

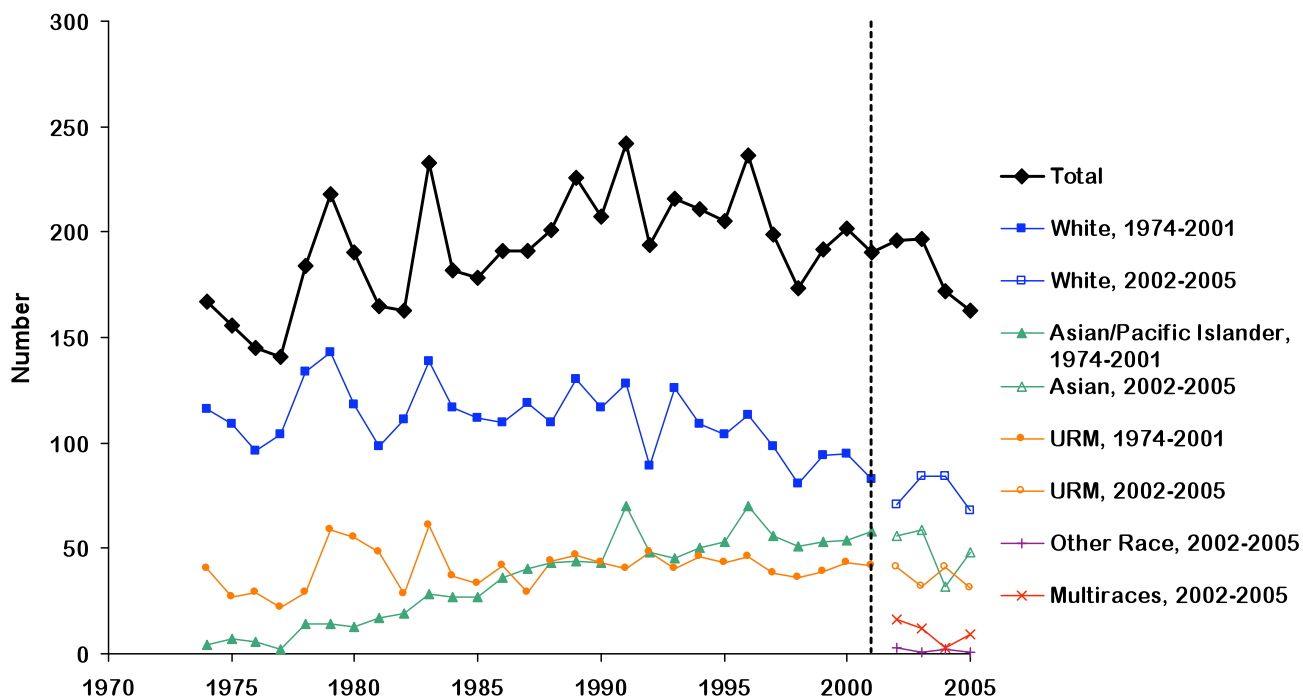
Figure 8-3
Acceptances to UCSF by Race/Ethnicity and URM Status, 1974-2005



Note: Race/ethnicity and URM categories are not directly comparable for the two time periods, 1974-2001 and 2002-2005. Race/ethnicity is reported only for U.S. citizens and aliens with permanent resident visas; prior to 1981 only U.S. citizens were included.

Source: AAMC Data Warehouse: Applicant Matriculant File, as of August 31, 2006.

Figure 8-4
Acceptances to Stanford by Race/Ethnicity and URM Status, 1974-2005



Note: Race/ ethnicity and URM categories are not directly comparable for the two time periods, 1974-2001 and 2002-2005. Race/ethnicity is reported only for U.S. citizens and aliens with permanent resident visas; prior to 1981 only U.S. citizens were included.

Source: AAMC Data Warehouse: Applicant Matriculant File, as of August 31, 2006.

The distribution of acceptances by race/ethnicity at the two medical schools has shifted many times over the period of analysis, but with Whites accounting for a declining proportion of acceptances overall and Asians and Pacific Islanders for an increasing proportion of all acceptances, and URMs showing a variable pattern. At UCSF, URMs accounted for 24 percent of acceptances in 1974, 14 percent in 1985, 29 percent in 1995, and 22 percent in 2005. At Stanford, URMs accounted for 24 percent of all acceptances in 1974, 19 percent in 1985, 21 percent in 1995, and 19 percent in 2005.

Acceptances (Accepted Applicants, Acceptants, Acceptees), 2006-2007 Updates

The number of acceptances at UCSF varied only slightly. There were 257 acceptances in 2005, 246 in 2006, and 251 in 2007. At Stanford, there was greater variation, with the number of acceptances standing at 163 in 2005, 186 in 2006, and 194 in 2007, representing an increase of 19 percent over the 2005-2007 period.

In 2006 at UCSF, Whites accounted for 39 percent of acceptances; Asians, for 25 percent; Blacks, 9 percent; and Hispanics, 19 percent. There was one Native American acceptance in 2006, the “Other” category accounted for 9 percent of acceptances. White and Asian acceptances declined from 2006 through 2007; Black acceptances increased, and Hispanic acceptances increased in 2006 only to decline in 2007.

Stanford’s distribution of acceptances by race and ethnicity also showed changes among groups over the 2006-2007 period. White acceptances stood at 44 percent in 2006 and 38 percent in 2007; Asians, 28 percent in 2006 and 36 percent in 2007; Blacks, 6 percent in 2006, and 4 percent in 2007; Hispanics, 12 percent in 2006 and 8 percent in 2007; the “Other” category, 10 percent in 2006 and 13 percent in 2007. There were no Native American acceptances in 2006 and three in 2007. Asians experienced the greatest percentage gain in terms of the proportion of acceptances at Stanford over the 2006-2007 period. Blacks and Hispanics experienced the greatest declines.

Matriculants, 1974-2005

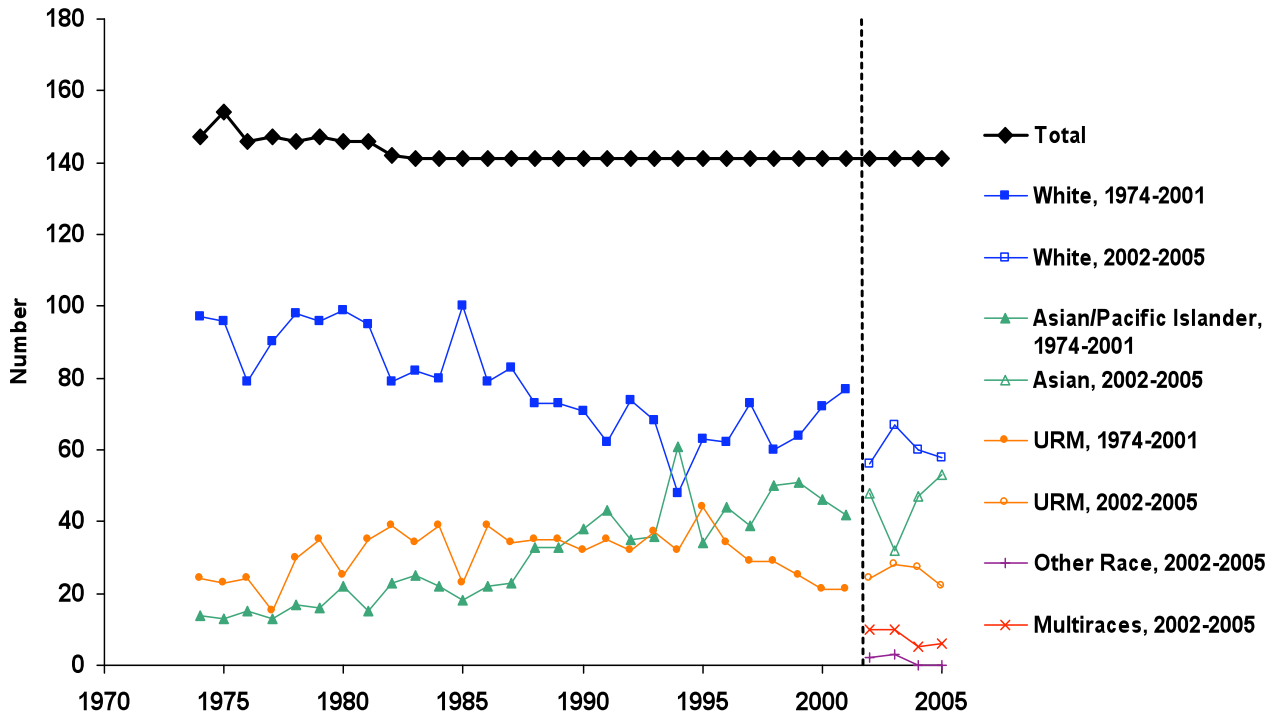
Except for slight increases and decreases at UCSF and a sharp decline for Stanford early in the 1974-2005 period, the size of the medical schools’ entering classes has remained virtually unchanged over this period (Figures 8-5 and 8-6).

At UCSF in 1974, White matriculants made up 66 percent of the class of 147, 71 percent of a class of 141 in 1985, 45 percent of the class of 141 in 1995, and 41 percent of the entering class of 2005. Asians and Pacific Islanders accounted for 10 percent of the entering class in 1974, 13 percent in 1985, 24 percent in 1995, and Asians alone for 38 percent in 2005. In 1974, 24 URM matriculants accounted for 16 percent of the entering class of 147; in 1985, 23 URMs accounted for 16 percent of the entering class of 141; in 1995, there were 44 URMs, accounting for 31 percent of the class of 141; and in 2005, 22 URMs, accounting for 16 percent of the class of 141.

At UCSF, the pattern for URM matriculants shows a long period, from 1978 through 1995, interrupted by only two sharp downturns (in 1980 and 1985), when the number of URM matriculants ranged from 30 to 44 students, or from about 20 to 31 percent of the entering classes.

For more than two-thirds of the years from 1974 through 2007, the percentage of URM matriculants at UCSF was between 20 and 25 percent of the entering classes, and in five of these years, it was between 26 and 31 percent.

Figure 8-5
Matriculants to UCSF by Race/Ethnicity and URM Status, 1974-2005



Note: Race/ethnicity and URM categories are not directly comparable for the two time periods, 1974-2001 and 2002-2005. Race/ethnicity is reported only for U.S. citizens and aliens with permanent resident visas; prior to 1981 only U.S. citizens were included. Source: AAMC Data Warehouse: Applicant Matriculant File, as of August 31, 2006

At Stanford in 1974, Whites made up 68 percent of the entering class of 95, 63 percent of the class of 86 in 1985, 50 percent of the class of 86 in 1995, and 44 percent of the class of 86 in 2005. Asian and Pacific Islanders accounted for 4 percent of the class of 1974, 17 percent in 1985, 23 percent in 1995, and Asians alone for 28 percent in 2005.

There were 20 URM matriculants at Stanford in 1974 in an entering class of 95 accounting for 21 percent of the class; in 1985, there were 13 URM or 15 percent of the entering class of 86; in 1995, there were 22 URM or 26 percent in the class of 86, and in 2005, 16 or 19 percent of the class of 85.

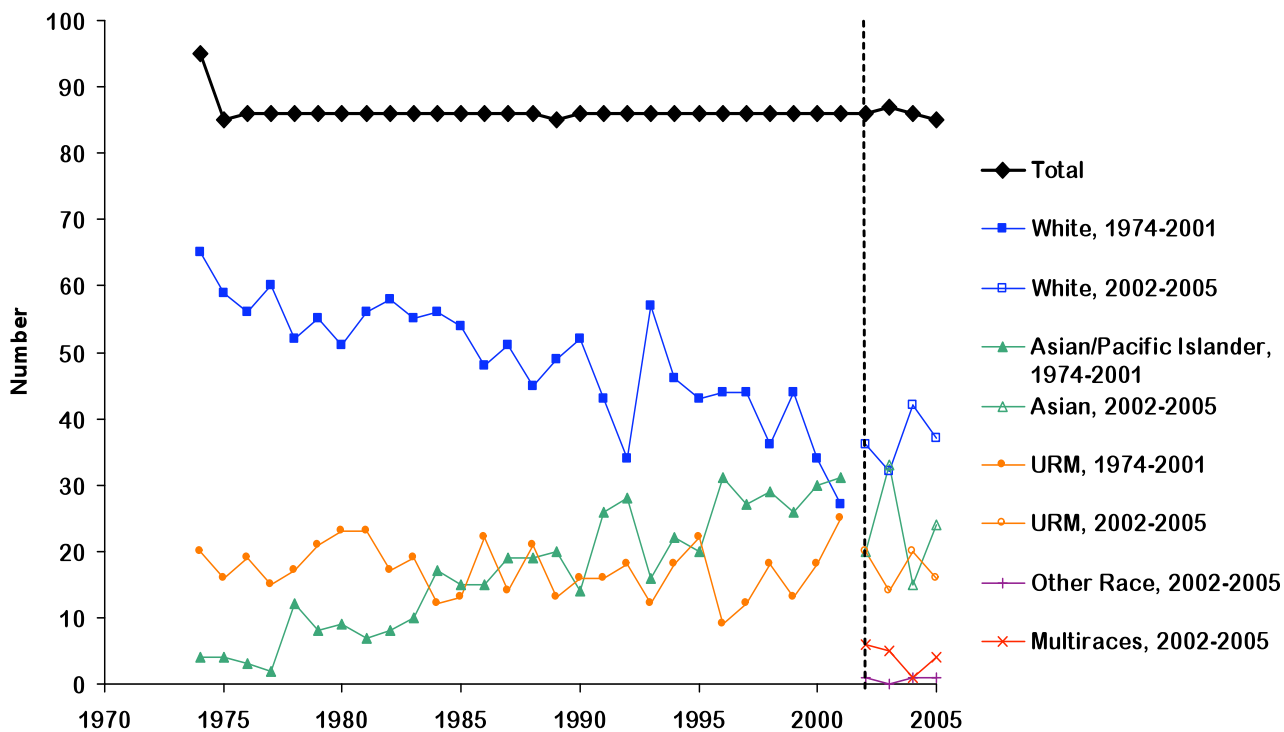
Stanford's URM matriculant picture shows more variation than UCSF's, with many short downswings and upswings over the 1974-2005 period and numbers of URM matriculants ranging from 9 to 25 students, or from 10 to 30 percent of the entering class.

For two-thirds of the years from 1974 through 2007, Stanford had 20 percent URM in its entering classes, and for five of those years, from 25 to 30 percent.

The number of URM matriculants at UCSF dropped sharply after 1995, when the University of California Board of Regents SP-1 resolution and then Proposition 209 went into effect, but the

number has rebounded sharply after 2005-2006. At Stanford after 1995, there was a sharp upturn and then a downturn in URM matriculants and a subsequent rebound.^{158,159}

Figure 8-6
Matriculants to Stanford by Race/Ethnicity and URM Status, 1974-2005



Note: Race/ethnicity and URM categories are not directly comparable for the two time periods, 1974-2001 and 2002-2005. Race/ethnicity is reported only for U.S. citizens and aliens with permanent resident visas; prior to 1981 only U.S. citizens were included.

Source: AAMC Data Warehouse: Applicant Matriculant File, as of August 31, 2006.

The total number of URM in an entering class is small at both schools—at UCSF in recent years ranging from the mid-20s to the mid-40s and at Stanford, from the low to high 20s. In recent years, UCSF has had 9-17 Black students in an entering class, 20-25 Hispanics, and one American Indian; Stanford has had 2-4 Blacks, 10-17 Hispanics, and 1-2 American Indians.

Matriculants, 2006-2007 Updates

UCSF’s entering class size increased from 141 in 2005 and 2006 to 147 in 2007. This increase in enrollment was due to the entry of six students to the PRIME-US (Program in Medical Education—Urban Underserved). The size of the entering class at Stanford was 86 in 2006 and 2007.

At UCSF, the racial/ethnic composition of matriculants over the period shifted, with both Asians and Whites declining as a proportion of the entering classes and Blacks, Hispanics, and “Other” matriculants increasing. One Native American entered the class of 2006 and two in 2007.

At Stanford, the racial/ethnic breakdown also shifted. Asian matriculants increased as did matriculants in the “Other” category. Black and Hispanic matriculants declined, as did White matriculants.

First-year Class Enrollments, URM Trends, 2000-2008

The Division of Health Sciences and Services within the University of California’s Office of the President hosts regular meetings of all California medical schools, public and private, to discuss trends in applications, acceptances, and matriculants, as well as other issues, such as the changing method of the American Medical Colleges Application Service (AMCAS) in collecting racial/ethnic data in 2002 and the changing AAMC definition of URM from Underrepresented Minorities to Underrepresented in Medicine in 2003.

Each California medical school campus also provides data to the Division of Health Sciences and Services. Data from October 2008 for first-year class enrollments for underrepresented minorities and other Hispanics/Latinos for UCSF and Stanford medical schools for the 2000-2008 period are presented in Table 8-4. See Notes for the Table for an explanation of the data source and categorization of the data.

**Table 8-4
First-year Class Enrollments, 2000-2008
Underrepresented Minorities and Other Hispanics/Latinos**

	UCSF		Stanford	
	#	%	#	%
Fall 2008				
Single race/ethnicity reported				
Amer Ind/Alask Nat/Nat Haw	1	0.7	1	1.2
Black/African Amer	15	9.8	2	2.3
Mexican Amer/Chicano/Other Hispanic/Latino	19	12.5	12	13.9
Multiple race/ethnicity reported	0	0	0	0
Total URMs & Other Hispanic/Latino	35	23.0	15	17.4
Total First-year Class	152		86	
Fall 2007				
Single race/ethnicity reported				
Amer Ind/Alask Nat/Nat Haw	2	1.4	1	1.2
Black/African Amer	17	11.6	2	2.3
Mexican Amer/Chicano/Other Hispanic/Latino	23	15.6	9	10.5
Multiple race/ethnicity reported	2	1.4	0	0.0
Total URMs & Other Hispanic/Latino	44	29.9	12	14.0
Total First-year Class	147		86	
Fall 2006				
Single race/ethnicity reported				
Amer Ind/Alask Nat/Nat Haw	1	0.7	1	1.2
Black/African Amer	9	6.4	4	4.7
Mexican Amer/Chicano/Other Hispanic/Latino	20	14.2	12	14.0
Multiple race/ethnicity reported	4	2.8	0	0.0
Total URMs & Other Hispanic/Latino	34	24.1	17	19.8
Total First-year Class	141		86	
Fall 2005				
Single race/ethnicity reported				
Amer Ind/Alask Nat/Nat Haw	0	0.0	2	2.3
Black/African Amer	6	4.3	4	4.7
Mexican Amer/Chicano/Other Hispanic/Latino	13	9.2	13	15.1
Multiple race/ethnicity reported	6	4.3	0	0.0
Total URMs & Other Hispanic/Latino	25	17.7	19	22.1
Total First-year Class	141		86	
Fall 2004				
Single race/ethnicity reported				
Amer Ind/Alask Nat/Nat Haw	0	0.0	1	1.2
Black/African Amer	8	5.7	7	8.1
Mexican Amer/Chicano/Other Hispanic/Latino	16	11.3	12	14.0
Multiple race/ethnicity reported	5	3.5	0	0.0
Total URMs & Other Hispanic/Latino	29	21.0	20	23.3
Total First-year Class	141		86	

* The UCSF School of Medicine Admissions Office uses different methods to identify race and ethnicity. The school reported entering class URM percentages of 28 percent in 2006, 35 percent in 2007, and 28 percent in 2008.

Table 8-4 Cont'd
First-year Class Enrollments, 2000-2008
Underrepresented Minorities and Other Hispanics/Latinos

	UCSF		Stanford	
	#	%	#	%
Fall 2003				
Single race/ethnicity reported				
Amer Ind/Alask Nat/Nat Haw	2	1.4	1	1.1
Black/African Amer	10	7.1	3	3.4
Mexican Amer/Chicano/Other Hispanic/Latino	10	7.1	13	14.9
Multiple race/ethnicity reported	10	7.1	0	0.0
Total URMs & Other Hispanic/Latino	32	22.7	17	20.0
Total First-year Class	141		87	
Fall 2002				
Single race/ethnicity reported				
Amer Ind/Alask Nat/Nat Haw	1	0.7	1	1.2
Black/African Amer	4	2.8	5	5.8
Mexican Amer/Chicano/Other Hispanic/Latino	17	12.1	13	15.1
Multiple race/ethnicity reported	5	3.5	0	0.0
Total URMs & Other Hispanic/Latino	27	19.1	19	22.1
Total First-year Class	141		86	
Fall 2001				
Single race/ethnicity reported				
Amer Ind/Alask Nat/Nat Haw	1	0.7	3	3.5
Black/African Amer	7	5.0	5	5.8
Mexican Amer/Chicano/Other Hispanic/Latino	13	9.2	17	19.8
Multiple race/ethnicity reported	N/A	N/A	N/A	N/A
Total URMs & Other Hispanic/Latino	21	15.0	25	29.1
Total First-year Class	141		86	
Fall 2000				
Single race/ethnicity reported				
Amer Ind/Alask Nat/Nat Haw	1	0.7	3	3.5
Black/African Amer	11	7.8	5	5.8
Mexican Amer/Chicano/Other Hispanic/Latino	9	6.4	10	11.6
Multiple race/ethnicity reported	N/A	N/A	N/A	N/A
Total URMs & Other Hispanic/Latino	21	15.0	18	21.0
Total First-year Class	141		86	

Source: Division of Health Sciences and Services, Office of the President, University of California. Campus Medical School Submissions. Revised October 2008

Notes (from the Division of Health Sciences and Services, Office of the President, University of California): the American Medical College Application Service (AMCAS) made a significant change in the methodology used to collect racial/ethnic data. Prior to 2002, individuals could self-identify as a member of only one race/ethnicity; in 2002 information about ethnicity (Hispanic, non-Hispanic) was collected independently of race, and more than once race could be reported. The data reported in this table were extracted from the AMCAS, but minor adjustments were made because some medical schools utilized their own data systems to correct the AMCAS data. The definition of URMs is provided by the Association of American Medical Colleges (AAMC) and includes American Indians, Alaskan and Hawaiian Natives, Black/African Americans, Mexican Americans/Chicanos and Puerto Ricans (mainland). Other Hispanics/Latinos are included in the count of URMs because definitive counts of Hispanics/Latino subgroups could not be derived using the new collection methodology and Other Hispanics/Latinos are a significantly underrepresented minority in California. The combination of "white" (race) and Hispanic or Latino (ethnicity), or "other" (race) and Hispanic or Latino (ethnicity) are counted as Mexican Amer/Chic/Other Hisp/Lat, while Hispanic or Latino in combination with any other race is counted as "Multiple race/ethnicity." The "Multiple race/ethnicity" reported category includes individuals who reported at least one URM group.

Graduates, 1979-2005

Medical schools have very high graduation rates. Nearly all who matriculate graduate. Thus, graduation trends mirror those of medical school matriculants four or more years after entry.

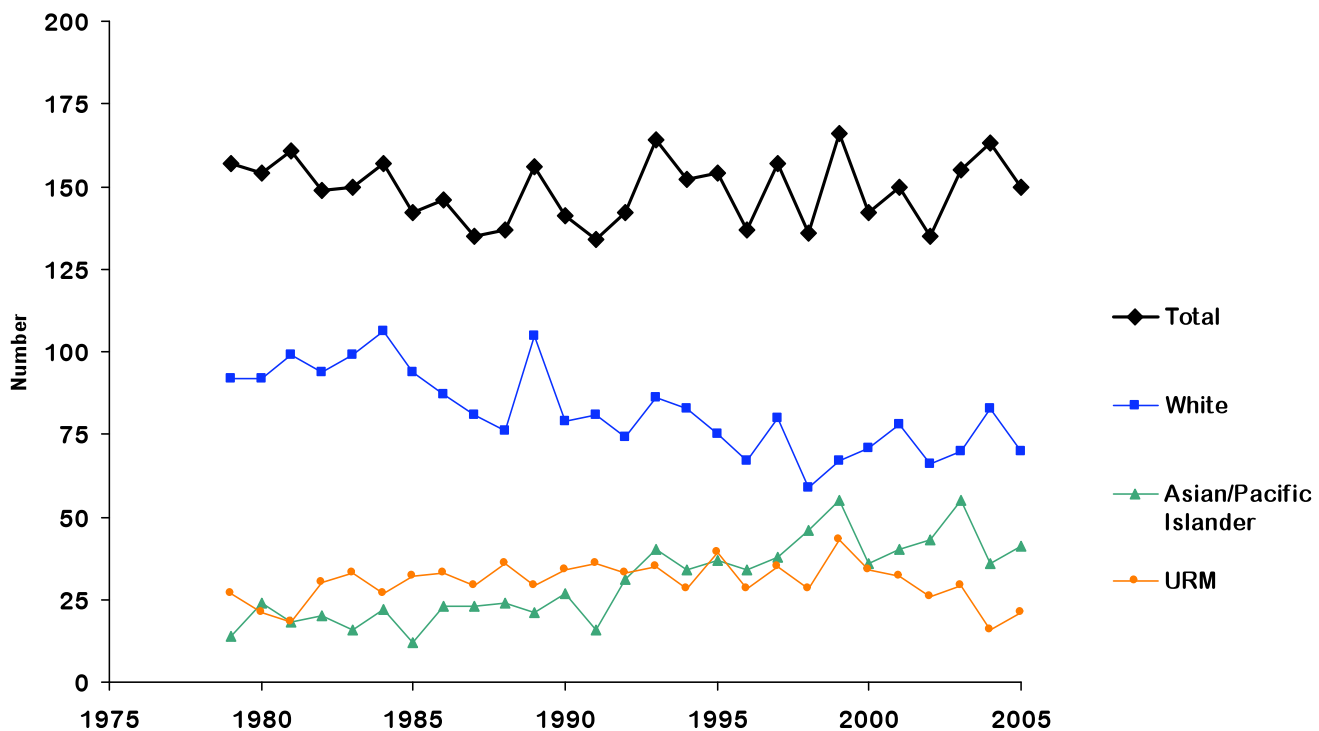
Whites exhibited an overall decline in the number of graduates from both UCSF and Stanford, from 92 in a graduating class of 157 in 1979 to 70 in a class of 150 in 2005 at UCSF, and from 55 in a class of 80 in 1979 to 22 in a class of 68 in 2005 at Stanford.

Asians and Pacific Islanders and Asians alone experienced a sharp increase, from 14 in 1979 to 34 in 1995 to 41 in 2005 at UCSF, and from 5 in 1979 to 27 in 2005 at Stanford.

The pattern for URM among graduates shows increases and declines both at UCSF and Stanford, reflecting earlier increases and declines in matriculation. In 1979, there were 27 URM graduates; in 1995, 39; in 2005, 21 at UCSF, with a steep drop from 43 in 1999 to 34 in 2000, reflecting the drop in URM matriculants after 1995. At Stanford, there were 10 URM graduates in 1979, 19 in 1995, and 10 in 2005.

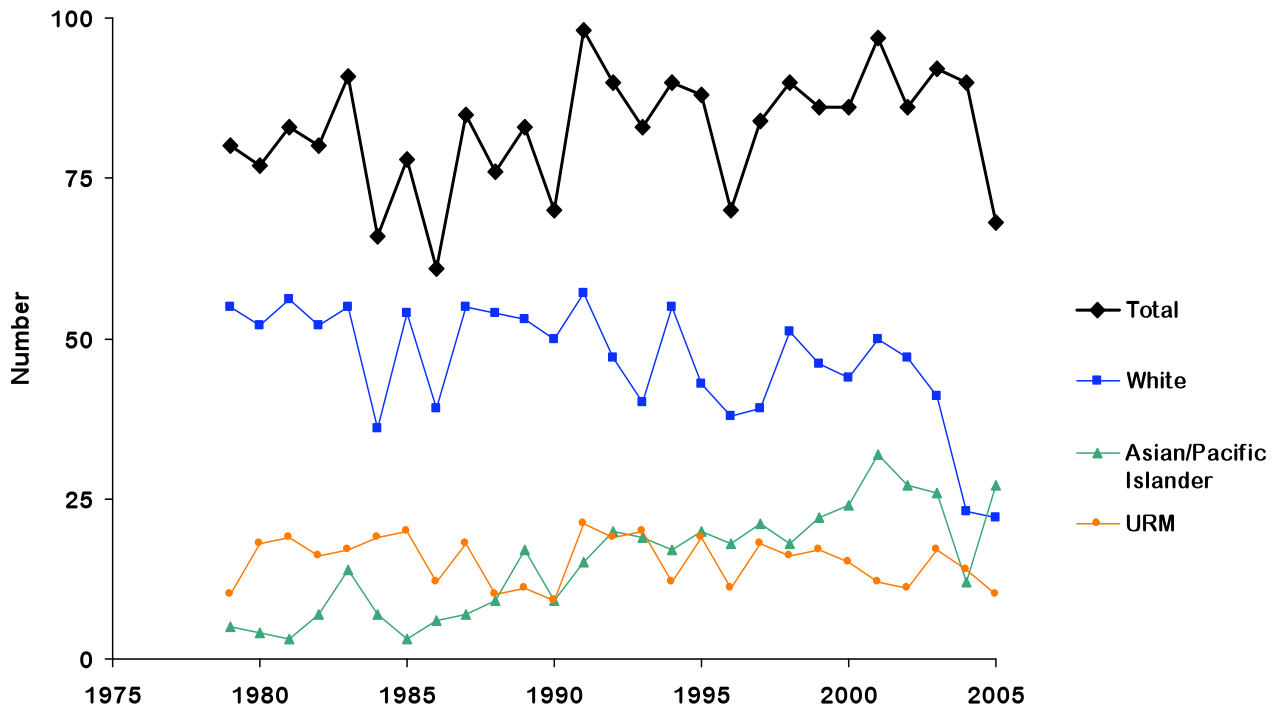
In terms of the composition of graduating classes over the 1979-2005 period. Whites declined as a proportion of graduating classes at both UCSF and Stanford, from 59 percent in 1979 to 47 percent in 2005 at UCSF, and from 69 percent in 1979 to 32 percent at Stanford in 2005. Asians increased as a percentage of graduating classes at both UCSF and Stanford, accounting for 9 percent at UCSF and 6 percent at Stanford in 1979 and 27 percent at UCSF and 40 percent at Stanford in 2005. URM graduates accounted for 17 percent of graduates at UCSF and 13 percent at Stanford in 1979, 25 percent at UCSF and 22 percent at Stanford in 1995, and 14 percent at UCSF and 15 percent at Stanford in 2005.

Figure 8-7
Graduates from UCSF by Race/Ethnicity and URM Status, 1979-2005



Note: URMs are defined for this period as Blacks, Mexican Americans, Other Hispanics, Puerto Ricans, and American Indians and Alaska Natives. Races and ethnicities are reported only for U.S. citizens and aliens with permanent resident visas; prior to 1981 only U.S. citizens were included.
 Source: AAMC Data Warehouse: Applicant Matriculant File, as of August 31, 2006.

Figure 8-8
Graduates from Stanford by Race/Ethnicity and URM Status, 1979-2005



Note: URMs are defined for this period as Blacks, Mexican Americans, other Hispanics, Puerto Ricans, and American Indians and Alaska Natives. Races and ethnicities are reported only for U.S. citizens and aliens with permanent resident visas; prior to 1981 only U.S. citizens were included.

Source: AAMC Data Warehouse: Applicant Matriculant File, as of August 31, 2006.

Graduates, 2006-2007 Updates

In 2006, the racial/ethnic breakdown of UCSF’s graduating class of 142 was: 50 percent were White; 39 percent, Asian; 3 percent, Black; 8 percent, Hispanic/Latino; and 3 percent, American Indian/Alaska Native. URMs represented 14 percent of the class. At Stanford, the Class of 2006 included 99 graduates, and the racial/ethnic breakdown was 41 percent, White; 30 percent, Asian; 2 percent, Black; 14 percent, Hispanic/Latino; and 4 percent, American Indian/Alaska Native. URMs accounted for 20 percent of the class.

The Class of 2007 at UCSF included 154 graduates; 51 percent were White; 29 percent, Asian; 4 percent, Black; 10 percent, Hispanic/Latino; and 2 percent, American Indian/Alaska Native. URMs accounted for 16 percent of this class. Stanford’s 2007 class included 74 graduates with Whites representing 46 percent of the class; Asians, 36 percent; Blacks, 8 percent; Hispanics/Latinos, 12 percent; and Native Hawaiians and Other Pacific Islanders, 1 percent. URMs represented 21 percent of the class.

Difficulties in Analyzing Trends in Race and Ethnicity and URM Status

Several difficulties are encountered in analyzing data on medical school trends in race and ethnicity and URM status. These include changes in choices available to applicants in self-identifying their ethnicity and race on AMCAS applications from 2001 to 2002, changes in AAMC definitions of groups underrepresented in medicine in 2003, changes in AAMC methods of aggregating and reporting data on race and ethnicity derived from AMCAS from 2001 to 2002 through to the present, medical schools' use of their own data systems to capture data on race and ethnicity, and differing methods used by individual medical schools and analysts to identify race and ethnicity and groups to include as URMs.

The UCSF School of Medicine Admissions Office, for example, uses a combination of methods to identify race and ethnicity, including a consistent method of choosing a primary identity when mixed race/ethnicity is involved.¹⁶⁰ The school reported entering class URM percentages of 28 percent in 2006, 35 percent in 2007, and 28 percent in 2008, figures that are higher than those provided by the UC Office of the President, Division of Health Sciences and Services and based on data from AAMC's Applicant-Matriculant file.

UCSF and Stanford University Medical Schools: Mission-driven, Multidimensional Approaches to Enhancing Diversity

Over a period of more than four decades, UCSF and Stanford medical schools have developed mission-driven, multidimensional approaches that have the potential to enhance diversity. The two schools have established—and modified—policies, practices, and programs in several areas to increase and sustain diversity. The schools have also developed infrastructures (e.g., Admissions Offices, Offices of Student Affairs, Offices of Diversity and Leadership, Offices of Medical Education, Offices of Outreach and Academic Advancement, Offices of Curricular Affairs) to support these efforts.

The purpose of this section of the report is to lend perspective to the development of these efforts over time and to provide examples of the type and breadth of efforts. The section also includes observations over the period from the 1960s through the early 2000s about developments in key areas from oral history and key informant interviews, undertaken as part of this study, with administrators, faculty, and former students of UCSF and Stanford medical schools. We review the following areas:

- Mission—Medical School Mission and Educational Mission
- Outreach and Recruitment
- Admissions
- Retention: Student Support
- Medical School Curriculum
- Student Financial Aid
- Campus Environment

- Educational and Health Care Partnerships
- Cross-cultural Education and Training

Mission

The missions of UCSF and Stanford medical schools have evolved over time, shaped by advances in medicine and science, the schools' roles as public and private institutions, their major sources of funding, and university, campus, and medical school leadership. The schools' current general missions and educational missions are:

University of California, San Francisco

MEDICAL SCHOOL MISSION (2009). "The UCSF School of Medicine strives to advance human health through a fourfold mission of education, research, patient care, and public service."¹⁶¹

EDUCATIONAL MISSION OF THE MEDICAL SCHOOL (2009). "The educational mission of the UCSF School of Medicine is to prepare medical students from diverse backgrounds for excellence and leadership in patient care, research, education, and public service."¹⁶²

Changes in UCSF Faculty and Medical School Leadership in the 1950s and early 1960s: Changes in the Mission of UCSF Medical School

In the 1950s, there were no policies as such that I can remember that were directed towards diversity or minority education. But, in the State of California, what did open up these questions eventually was a decision to build Moffitt Hospital and the medical science buildings. This decision was extremely important, because it was accompanied not only by an increase in facilities, but also by a change in the nature of the campus.

Prior to 1950, the campus was oriented primarily towards, that is, the last three years in San Francisco (the first year was at Berkeley), the education and training of practicing doctors. It had only limited academic commitments, and the campus was responsibly managed by people who for the most part, trained and worked at UCSF for a long time. Most of the chairmen of the clinical departments had been educated at the UCSF campus, got their clinical training there, became faculty members, and so on.

Coincident with the decision to build the new buildings, Moffitt and the medical science buildings, and as a result of some initiatives by some of the senior faculty at UCSF, the State was persuaded to provide two floors. One floor was for a new cardiovascular research institute and the other, for a new institute of cancer research. At the same time that these were developing, there was a move to recruit department chairmen and institute directors from other institutions.

The whole process of changing the leadership and the nature of the faculty began with this relatively small movement, which was to establish a metabolic research center and to recruit someone from outside. That was the first, the opening wedge in what subsequently happened. When I was recruited in 1952, I was one of the first people to be recruited at an assistant professor level. In the mid- and late 1950s (and early 1960s) is when department chairmen and institute directors were recruited from the outside.

That brought Holly Smith and Julius Comroe and Bert Dunphy..., so by the early 1960s, when the medical sciences buildings were finished, the first-year faculty was moved from Berkeley to San Francisco. That brought in a substantial group of what might be called basic science scholars, and they contributed to the advancement and standards for academic accomplishment.

So by the early 1960s, although there were some carry-overs in some of the more specialized smaller departments, the campus had already undergone a change, and there was a kind of diversity, not so much in terms of minority representation, but in terms of intellectual representation.

Isidore S. Edelman, M.D.

Robert Wood Johnson, Jr. Professor Emeritus of Biochemistry and Molecular Biophysics, Columbia University College of Physicians and Surgeons, 2000-2004

Founder and Director, Columbia Genome Center, 1991-2000

Chair, Department of Biochemistry, Columbia University College of Physicians and Surgeons, 1978-1989

Professor of Biophysics and Samuel Neider Research Professor of Medicine, 1967-1978, UCSF School of Medicine

Professor of Medicine, UCSF School of Medicine, 1960-1978 and Associate Director, Cardiovascular Research Institute

Associate Professor of Medicine, UCSF School of Medicine, 1954-1960

Assistant Professor of Medicine, UCSF School of Medicine, 1952-1954

Chief of Medical Service, San Francisco General Hospital

UCSF Diversity in U.S. Medical Schools Oral History Series Interviews, July 16, 2002

UCSF's Mission in 1964

When I came to UCSF in 1964, it was a venerable medical school, celebrating its 100th anniversary exactly that year. But it was largely a regional medical school, which turned out physicians for California and did this quite competently, but made no pretense of trying to compete in scholarship and medical research or innovations in education with the leading medical schools of the nation.... In fact, I think the general consensus was that it ranked as somewhere around 30th or 40th in the nation.

The new wave of people who came in the early 1960s and mid-1960s, many of them from the bigger Eastern schools, began to try to shift that priority more towards turning out those who were interested in medical research and medical education, not to the exclusion of those in practice, because the vast majority of our graduates would always, and appropriately, be in the practice of medicine in some of its forms. But the feeling was that here are the opportunities, the assets that had been given by the citizens of California, that we should be contributing to the overall growth of medicine and medical science in the nation and should be competing with Johns Hopkins and Harvard and Yale and the other centers.

Lloyd H. "Holly" Smith, Jr., M.D.

Professor of Medicine, Emeritus, UCSF School of Medicine

Associate Dean, Admissions UCSF School of Medicine, 1985-1994

Professor and Chair, Department of Medicine, UCSF School of Medicine, 964-1985

UCSF Diversity in U.S. Medical Schools Oral History Series Interview, February 20, 2003

University of California Medical Schools: Obligation of a Public University to Meet Health Care Needs

There is an obligation of the University of California medical schools to meet the health care needs of California. That is one of the reasons these schools were created—not just to educate the students. We took over three public hospitals and play a large role in one other, San Francisco General Hospital, even though we don't have the financial responsibility. Stanford doesn't have that obligation. It's in a sense a national school. It's got this vision of training future faculty, training leaders.

Philip R. Lee, M.D.

UCSF Chancellor, Emeritus, 1969-1972

Professor of Social Medicine, Emeritus, UCSF School of Medicine, 1969- 1994

Founder and Director, Emeritus, Institute for Health Policy Studies, UCSF School of Medicine, 1972-1993

M.D., Stanford University School of Medicine, 1948

A.B., Stanford University, 1945

UCSF Diversity in U.S. Medical Schools Key Informant Interview, July 30, 2003

Mission of UCSF: Should Universities Address Major Social Problems?

The other thing that really was so positive was the whole commitment of the school to collectively address important issues. Now, for example, the year before I came to UCSF (1970), I went to the Association of American Medical Colleges meeting. The plenary speakers—it was a symposium on the interface between society and the medical school—were Walter Reuther, the labor union leader, Kingman Brewster from Yale, Mayor Joseph Alioto from San Francisco. The topic was, ‘Should the university address major social problems or should it deal just with academic things?’ Why shouldn’t it do both? So, here was this school—UCSF—they weren’t talking about diversity or affirmative action; they were talking about store-front clinics and care of poor and that kind of thing. But, here also was this school which was taking on this issue of underrepresented groups of people in medicine and some other issues—medical care in the Mission (District of San Francisco). And, at the same time, it was already very successful in basic research. That’s what I liked, that they were doing both.

Julius R. Krevans, M.D.

Chancellor, Emeritus, UCSF, 1982-1993

Dean, Emeritus, UCSF School of Medicine, 1971-1982

Professor of Medicine, UCSF School of Medicine, 1971-2002

UCSF Diversity in U.S. Medical Schools Oral History Series Interviews, June 5, 2002 and July 11, 2002

Stanford University

MEDICAL SCHOOL MISSION (2009). The mission of Stanford University School of Medicine is “to be a premier research-intensive medical school that improves health through leadership and a collaborative approach to discovery and innovation in patient care, education, and research.”¹⁶³

EDUCATIONAL MISSION OF THE MEDICAL SCHOOL (2009). The mission of Stanford University School of Medicine’s medical education program is “to educate students to become outstanding clinicians with the passion and skills to improve world health through research, innovation, and leadership.”¹⁶⁴

Stanford Medical School in 1959: The Goal of the School—To Train Leaders in Medicine

Stanford Medical School, when it moved to Palo Alto from San Francisco, the goal was to train leaders in medicine. And that would mean, in particular, people who would be interested in careers in research and academic medicine. Parenthetically, everybody that I knew who thought about this recognized we were never going to train eighty future professors of some medical specialty. (We knew) that people went into medicine and were going to practice medicine, and many of them would not go into academic medicine. But the nature of the curriculum was supposed to be designed—the experience was supposed to be—to have people trained to be academicians, to be interested in academic medicine. And courses were taught with an intention to convey the history of the field and how you got to be where you are now and why. It was very exciting.

Bernard Nelson, M.D.

Professor Emeritus, Preventive Medicine and Biometrics, University of Colorado Health Sciences Center
Chancellor, University of Colorado Health Sciences Center, 1986-1992
Consulting Associate Professor, Family, Community, and Preventive Medicine, Stanford School of Medicine
Assistant Professor, Medical Microbiology, Stanford University School of Medicine, 1968-1974
Chairman, AAMC Task Force on Minority Student Opportunities in Medical Education, 1969-1970
Chairman, Committee on Admissions, Stanford University School of Medicine, 1967-1970
M.D. Stanford University, 1961
A.B. Stanford University, 1957

UCSF Diversity in U.S. Medical Schools Oral History Series Interview, March 9, 2004

The move of the medical school to Palo Alto in 1959 had far-reaching consequences. As a 1990 memorandum to Dr. David Korn, then Dean of the School of Medicine, notes:

... the Medical School's relocation on the main campus (facilitated) integration of the basic and clinical sciences and interaction with faculty in the humanities and sciences. With this move, the Medical School switched to a full-time faculty system, leaving most clinicians in San Francisco. These new faculty were all researchers. Thus when Stanford Medical School moved, its entire character changed, as did its curricular goals. Flexibility and a research orientation remained central throughout subsequent curricular alterations.¹⁶⁵

Stanford Medical School in 1959: The Aspiration of the Students

I think that the bulk of (the students) did not have any research aspiration. They hadn't come to Stanford because they thought that they were going to a research institution. The tradition of the university was as a clinical institution with some research going on...

Leon T. Rosenberg, Ph.D.

Professor of Microbiology and Immunology, Emeritus, Stanford University School of Medicine
Member, Admissions Committees, Stanford University School of Medicine, 1969
Dr. Rosenberg came to Stanford as a postdoctoral fellow in 1959 and retired as Professor in 1993. He served on numerous University and medical school committees, including the Minority Admissions Panel, of the Committee on Admissions.

UCSF Diversity in U. S. Medical Schools Oral History Series Interviews, February 5, 2004 and July 8, 2004

Twenty years after the 1959 move, Stanford's Medical School Faculty Senate adopted a statement to describe the educational mission of the School of Medicine. This statement was revised in 1985.¹⁶⁶

Stanford Medical School's Educational Mission in 1985

The Stanford University School of Medicine provides an educational environment that encourages intellectual diversity and offers stimulation and opportunity for self-motivated students who are interested in developing a scholarly, investigative approach to problems in medicine.

The educational aims of the school are:

- (1) To assure that all our students acquire a sound basis for clinical excellence and for leadership in whatever branch of medicine they enter;
- (2) To develop in all our students an understanding of how laboratory and clinical research provide an essential basis for improvements in the diagnosis and treatment of disease;
- (3) To provide opportunities for as many students as possible to prepare themselves for careers in research and teaching in the various branches of medicine.

The admissions process is directed to the selection of individuals who will most benefit from this environment. Recognizing that minorities and women are underrepresented in the medical profession, and especially in academic medicine, the School has a strong commitment to identify, recruit, and educate such students.

Defining Themes in Medical Schools' Missions Today: A Social Justice Agenda and a Quality of Care Agenda

There are two defining themes that have tremendous merit, and they're not the same. One is a social justice agenda. We need to prepare people to care for the people of our nation. The data are clear. Our nation is changing. We are not providing care equally across the board. And it's not just access, but it's more than that. We know that it's not enough to just have insurance, it's not enough just to have certain educational levels or economic levels. Bad things can still happen to you in this country because of your color.

So I think, you know, in terms of the social justice agenda, it's imperative that we prepare as many educational institutions as we can to work with hospitals that provide care for people without insurance. And that's not new. We have a whole history of that, but I believe that we have a moral obligation. How do we prepare people to care for people (who have no source of care and no way to pay for care)?

There's another compelling agenda—the quality of care agenda. We need to understand cultural competency and linguistic competency to provide quality services for all Americans. It's more in the realm of, how do we provide the services as much as what services are provided. This is an area in which we really need to do remedial work, because the undergraduate institutions have really not taught the histories. I don't believe that they've taught the histories of the people of this country and so, you know, the young learner of North Dakota...how does he or she know these things, you know, and how do we expect them to know these things if the histories are not there?

Ronald D. Garcia, Ph.D.

Program Director, Center of Excellence in Diversity and Health Careers Opportunity Program, Stanford University School of Medicine, 1992-
Executive Committee, Office of Diversity and Leadership, Stanford University School of Medicine, 2004-
Assistant Dean for Minority Affairs, Stanford University School of Medicine. 2001-
Associate Director, Primary Care Associate Program, 1988-
A.M. Education, Stanford University, 1971
A.M. Psychology, Stanford University, 1977
Ph.D., Educational Psychology, 1977

UCSF Diversity in U.S. Medical Schools Key Informant Interview, January 15, 2004

Outreach and Recruitment

Both UCSF and Stanford have developed a wide array of outreach and recruitment activities aimed toward a number of target audiences: 1) students (i.e., K-6, middle school, and high school students, undergraduate students, postbaccalaureate students, accepted medical students); 2) parents; 3) high school advisors; 4) high school science teachers; 5) high schools as partners; 6) college and university premedical advisors; and 7) colleges and universities as partners.

A number of different methods are used to reach these target audiences: 1) knowledge and skills building through formal didactic instruction; 2) experience-based and service-based learning; 3) web-based information and education; 4) one-on-one and group interaction; 4) tutoring; 5) coaching; 6) mentoring; 7) meetings; and 8) conferences. These activities are carried out by staff, faculty, medical students, members of student groups, and medical school alumni.

Among outreach and recruitment activities at UCSF and Stanford are: 1) science and health education programs; 2) medical school campus visits and tours; 3) individual visits and conferences with premedical advisors; 4) premedical student conferences, fairs, and other activities; 5) college visits; 6) individual meetings with prospective applicants, applicants, and acceptants; 7) acceptant weekends; and 8) postbaccalaureate and early matriculation programs.

Revised and New Standards on Diversity from the Liaison Committee on Medical Education and Implications for Outreach and Recruitment

Outreach and recruitment programs at UCSF and Stanford as well as those at other medical schools take on added importance in view of both revised and new standards on diversity issued by the Liaison Committee on Medical Education (LCME), the accrediting authority for M.D. programs in U.S. and Canadian medical schools, which is sponsored by the AAMC.

The revised standard, adopted at the LCME's meeting on June 3-5, 2008,¹⁶⁷ became effective on July 1, 2009:

Revised standard MS-8: Each medical school must develop programs or partnerships aimed at broadening diversity among qualified applicants for medical school admission.

Annotation: Because graduates of U.S. and Canadian medical schools may practice anywhere in their respective countries, it is expected that schools recognize their collective responsibility for contributing to the diversity of the profession as a whole. To that end, schools should work within their own universities and and/or collaborate with other institutions to make admissions to medical education programs more accessible to potential applicants of diverse backgrounds. Schools can accomplish that aim through a variety of approaches, including, but not limited to, the development and institutionalization of pipeline programs, collaborations with institutions that serve students from disadvantaged backgrounds, community service activities that heighten awareness of and interest in the profession, or academic enrichment programs for applicants who may not have taken traditional pre-medical coursework.

At its meeting on February 5-7, 2008 the LCME adopted a new standard and annotation,¹⁶⁸ which also became effective on July 1, 2009:

New Standard IS-16: Each medical school must have policies and practices to achieve appropriate diversity among its students, faculty, staff, and other members of its academic community, and must engage in ongoing, systematic, and focused efforts to attract and retain students, faculty, staff, and others from demographically diverse backgrounds.

New Annotation: The LCME and CACMS (Committee on Accreditation of Canadian Medical Schools) believe that aspiring future physicians will be best prepared for medical practice in a diverse society if they learn in an environment characterized by, and supportive of, diversity and inclusion. Such an environment will facilitate physician training in:

- Basic principles of culturally competent health care
- Recognition of health care disparities and the development of solutions to such burdens
- The importance of meeting the health care needs of medically underserved populations
- The development of core professional attributes, such as altruism and social accountability, needed to provide effective care in a multidimensionally diverse society.

Each school should articulate its expectations regarding diversity across its academic community in the context of local and national responsibilities, and regularly assess how well such expectations are being achieved. Schools could include the following elements of diversity in their planning, but not limited to: gender, racial, cultural and economic. Schools should establish focused, significant, and sustained programs to recruit and retrain diverse students, faculty members, staff, and others.

University of California, San Francisco

Among the earliest of science and health education outreach efforts at both UCSF and Stanford were relationships with students from local high schools. Science and health education programs and relationships at both UCSF and Stanford have evolved and expanded over the years with some becoming innovative national models of science education. UCSF medical school began various activities (e.g., tutoring, “big brother” programs, youth science programs) with students from the Polytechnic High School in San Francisco in the late 1960s. UCSF’s outreach activities now extend to nearly all schools in the San Francisco Unified School District, high schools in other parts of the state, California State University campuses and California Community Colleges, and University of California-sponsored science education programs and networks.

SCIENCE AND HEALTH EDUCATION PARTNERSHIP (SEP). UCSF announced in October 2008 that it had received a \$1.3 million grant from the National Center for Research Resources, part of the National Institutes of Health, to expand the University’s Science and Health Education Partnership (SEP), which was founded in 1987 and is housed in the Department of Biochemistry and Biophysics as a collaboration between UCSF and San Francisco Unified School District designed to provide high-quality science learning opportunities for K-12 students. The new grant, one of 16 awarded nationwide, will enable UCSF to implement the Pathways project, which brings together local high school teachers and UCSF faculty for a year-long intensive effort “to promote equity and diversity in the scientific workforce.”¹⁶⁹ SEP is funded through competitive federal, private, and state awards amounting to more than \$10 million since 1989.

The goals of the program are: 1) to support teaching and learning among teachers, students, and scientists; 2) to promote an understanding of science as a creative discipline, a process, and a body of integrated concepts; 3) to contribute to a deeper understanding of partnership; 4) to provide models and strategies for other institutions interested in fostering partnerships between scientific and education communities.¹⁷⁰ Each year, SEP coordinates the efforts of more than 300 UCSF participants who contribute approximately 10,000 hours of service with more than 400 San Francisco Unified School District teachers and their students, representing 80-90 percent of

the District's K-12 schools. In 2007-2008, twenty high school students spent time working in UCSF labs on scientific research and learning about the college application process. The High School Summer Internship Program, one of many SEP partnerships, targets students for whom the internship will make a "critical difference" in the student's life. In many cases, students will be the first in the family to consider going to college. Of the nearly 100 students participating in the internship program since 2000, 92 percent have enrolled in college and 70 percent have completed or are working toward science degrees. The internship program is funded by grants from the Howard Hughes Medical Institute and the Silicon Valley Community Foundation.

CALIFORNIA SCIENCE PROJECT (CSP). The UCSF SEP is part of the California Science Project (CSP), which has 18 regional sites designed to meet local educational needs. The CSP provides opportunities for teachers to: 1) develop and enhance science content knowledge and pedagogical skills necessary to implement the State Board of Education science standards; 2) identify exemplary teaching practices in science classrooms and provide a forum for communicating them to teachers statewide; 3) maintain and support intellectually vibrant and mutually supportive professional communities for teachers of science; 4) develop school-based leadership teams of teachers and K-12 administrators committed to improving science programs; 5) provide contracted services to schools and districts; and 6) examine and develop research on learning, knowledge, and educational materials.¹⁷¹ The CSP is a University of California Office of the President based project. "The CSP has taken a leadership position in the delivery of high-quality, standards-based science instruction to the English Learner (EL) population."¹⁷²

THE CENTER FOR SCIENCE AND EDUCATION OPPORTUNITY (CSEO). Founded in 1999 as part of a network of UC outreach programs to improve UC eligibility and enrollment rates among educationally disadvantaged California youth, this UCSF program is located within the campus Graduate Division and coordinates programs to help students explore their academic interests, prepare academically for college, learn how to apply and finance their education, and decide which college is best for them.

INSIDE UCSF. UCSF resumed Inside UCSF in October 2008, after a three-year hiatus due to lack of funding. An annual outreach program to students at local two- and four-year colleges interested in pursuing health or science careers, the program is a day-long event. The program targets students of color and features UCSF student panels (medicine, nursing, pharmacy, dentistry, and Graduate Division), interactive workshops, and a reception with faculty and staff.¹⁷³

LATINO CENTER FOR MEDICAL EDUCATION AND RESEARCH (LACMER), UCSF FRESNO. A unit of the UCSF Fresno Medical Education Program, LaCMER was founded in 1996 with support from UCSF and the Bureau of Health Professions, Health Resources and Services Administration. The mission of the Center is to assist individuals to become physicians and other health care professionals, who will ultimately return to the San Joaquin Valley and provide culturally competent health care services to the medically underserved. The Center works with public schools in Fresno County to create an educational pipeline by recruiting, mentoring, and tutoring Latino students who are educationally disadvantaged.

The Doctors Academy at Sunnyside High School in Fresno and a Junior Doctors Academy located at Terronez, Sequoia, Kings Canyon and Washington Colony middle schools are two of these educational programs. The Doctors Academy is a challenging school-within-a-school program for students interested in health. The program provides extended academic, personal, and career counseling as well as test preparation through summer school enrichment programs; rigorous accelerated classes with an emphasis on math, science, and writing; weekly tutorial support from CSU Fresno pre-med students; Saturday academies and workshops; special counseling and support services; parent empowerment workshops; medical or health practitioner mentors; clinical placement in medical, science or health settings; special consideration for scholarship at CSU Fresno and consideration for early admission to the UCSF School of Medicine. As part of the pipeline program, CSU Fresno offers an extension of the pipeline at the undergraduate level. LaCMER also works with Latino physicians by providing fellowships to allow training to develop strong research and teaching skills.

POSTBACCALAUREATE PROGRAM. UCSF, a member of the California Postbaccalaureate Consortium (other members include UC Davis, UC Irvine, UCLA, UCLA/Drew, UC Riverside, and UC San Diego), offers a comprehensive postbaccalaureate program. Designed for individuals who have been unsuccessful in gaining admission to medical school or who have completed the required undergraduate course work, but feel they need more background before initiating the medical school application process, the program seeks to attract individuals from disadvantaged backgrounds or underserved communities. Course offerings include an academic skills workshop, intensive MCAT review, assistance in preparing medical school applications, science courses at San Francisco State University, and seminars on health care issues in underserved communities. The program is limited to 17 applicants in 2008-2009. Since 2000, about 93 percent of participants in UCSF's program have been accepted to medical school—57 percent to California medical schools and 49 percent to UC medical schools.

Raise Your Sights

First you need to have someone say, 'Have you considered if this is a viable possibility for you?' (You may not easily get that in your family, so maybe it's a high school teacher. Maybe it's someone in a program that you spend the summer with working with talented kids from disadvantaged backgrounds saying, 'Raise your sights, raise your sights, raise your sights.' A mentor. And then I think it's... enormously helpful to see people like (you) a few steps ahead and a lot ahead.

Molly Cooke, M.D.

Professor of Medicine and William G. Irwin Endowed Chair, Director, Academy of Medical Educators, UCSF, 2000-Senior Scholar and Co-Director, Study of Medical Education, Carnegie Foundation for the Advancement of Teaching, 2005-Intern, Resident, Chief Resident, Medicine, UCSF School of Medicine, 1977-1981
M.D., Stanford University School of Medicine, 1977
B.S. Biology, Stanford University, 1973

UCSF Diversity in U.S. Medical Schools Key Informant Interviews, June 5 and 16, 2003

The Importance of an Excellent Public School Education

I went to a public high school in Cincinnati that was a magnet school, sort of like Lowell High School in San Francisco. It was a good school and it was as good an education as you could get in any of the private schools and most of the people had money. If they could get their kids in that school, they went there. They didn't go to private school. So you could get a good public education. It's very hard now to get a good education in the inner city schools. In the private schools you're going to come out so much better. And so I think that makes a difference.

Roger Peeks, M.D.

Physician Specialist/Assistant Professor of Medicine, Stanford University School of Medicine, 1981-1996 Assistant Dean of Student Affairs, Stanford University School of Medicine, 1983-1996

M.D., Stanford University School of Medicine

1978 Internship and Residency, Internal Medicine, 1978-1981, Stanford University Hospital

UCSF Diversity in U.S. Medical Schools Key Informant Interview, December 16, 2003

Changing the K-12 System

A quarter of our kids drop out of high school. Okay. I was a high school dropout. I was on the streets. I know what that's like. I was lucky to have a second chance....

But, you know, I feel very passionately that we need to change the system that we embrace. We need to pursue excellence in education, especially in science and technology, especially with the minority students, because what we don't want to have is a further divided society where only a few have the knowledge and those few are very unlikely to be minorities if you look at the statistics.

I think the curricula have to change radically. I think we have to stimulate children to love science. We have to be more innovative in how we deliver the product. You know, we should have them as engaged and interested about a chemistry experiment as they are in a basketball game.

Richard H. Carmona, M.D., M.P.H.

17th Surgeon General of the United States, U.S. Department of Health and Human Services, 2002-2006

Distinguished Professor of Public Health, Mel and Enid Zuckerman College of Public Health, University of Arizona, 2006-

M.D., UCSF School of Medicine, 1977

UCSF Diversity in U.S. Medical Schools Key Informant Interviews, January 10, 2003 and February 14, 2003

Changing the High School Culture

There is also a program in Fresno—the Doctors Academy—a science academy, where if a student graduates from high school and goes on to be successful at university, will get a special early consideration in applying to UCSF. So, this stimulated the parents and the teachers to really invest much more in the students interested in higher education, not just medicine. So that sort of thing has a positive outcome, but that's just one out of this huge state....

So the high school culture has to change. Certainly we can attempt to have better high school courses, to encourage high school counselors to really look at the individual students and encourage them. I know one of our residents came from a small school in the Valley and he got recruited from Harvard. The Harvard guy said, 'We're going to give you a scholarship to Harvard.' His high school counselor said, 'You're not going to make it. We'll see you back here.' And it made him so goddamn mad that no matter how lonely he was in Boston, he said, 'I'm not going back.'

Henry J. Ralston, III, M. D., Ph.D.

Professor and Chairman, Department of Anatomy, UCSF, 1973-1997
Professor, Department of Anatomy, UCSF 1997-
Associate Dean, Admissions, UCSF School of Medicine, 2001-2005

Diversity in U.S. Medical Schools Key Informant Interview, July 23, 2003

Stanford University

Stanford's medical school is favored by its location on a general campus with undergraduate, graduate, and professional schools, including a School of Education and many community-oriented science and general education efforts not only within the medical school, but also outside it (e.g., Science in Service, Stanford College Prep, the East Palo Alto Stanford Academy within the Haas Center for Public Service, the Office of Science Outreach). There is a volunteer potential of nearly 18,000 students in the 2008-2009 academic year, which creates many opportunities for path-finding and bridge-building opportunities. The medical school had a summer science program (e.g., formal didactic lectures, laboratory work) with students from Ravenswood High School in East Palo Alto beginning in 1965 and now has several exemplary programs.

THE STANFORD MEDICAL YOUTH SCIENCE PROGRAM (SMYSP). Beginning with seven students from East Palo Alto in 1987, two Stanford premedical students, Michael McCullough and Marc Lawrence, and a new Stanford associate professor of medicine, Dr. Marilyn Winkleby, established a program that is now a national model and one of the few academic enrichment and mentoring programs for low-income and minority high school students that has been evaluated in terms of its effect on educational and career choices.^{174,175,176} Funded initially with a \$10,000 grant from the Henry J. Kaiser Family Foundation, the SMYSP enlisted its first student-participants by Dr. Winkleby's home visits to their parents. The next year, SMYSP was extended to high schools in 18 Northern California counties; 23 students were enrolled and the program became a residential program with Stanford undergraduates as counselors, and workshops in SAT preparation, writing college essays, and obtaining college financial aid were provided.

By 1995, 200 at-risk students who had participated in SMYSP had graduated from college, and the program received a \$100,000 grant from the MacDonnell Foundation, which enabled SMYSP to develop an enhanced program with five themes: college week, human biology, human development, medicine and society, and complementary medicine.¹⁷⁷ More private funds followed the success of the program, and in 1996 The California Endowment awarded SMYSP \$400,000 to replicate the program at UC San Diego and expand the program. The College and Health Options: Ideas Creating Excellence (CHOICE) program was developed, beginning a series of college prep workshops for students living in the Central Valley. With funds from the National Institutes of Health and the Fund for the Improvement of Post Secondary Education (FIPSE), SMYSP has extended its reach to more high schools in Northern and Central California, including the Minority K-12 Initiative for Teachers and Students (MKITS).

Both the University-based Summer Residential Program and the School-based Program, which are part of SMYSP, have been evaluated since their inception.¹⁷⁸ The five-week biomedical pipeline program recruits 24 very low-income students each year from more than 250 California high schools for classroom instruction, anatomy practicums, hospital field placements, research projects, and college admissions advising.¹⁷⁹ By 2008, the program has been completed by more than 400 students and 96 percent have been followed for up to 19 years through annual surveys. The majority are from underrepresented groups—33 percent Latino, 22 percent African American, 4 percent Native American; 100 percent have been from low-income families; many have poor academic preparation; 100 percent have graduated from high school; 99 percent have been admitted to college; 82 percent have graduated from four-year colleges (compared to 15 percent of low-income youth in California); 50 percent attend or have completed medical or graduate school at top-tier universities (Stanford, Harvard, UC Berkeley); and 44 percent have become health professionals in medicine, dentistry, pharmacy, public health, and mental health.¹⁸⁰

STANFORD SUMMER RESEARCH PROGRAM (SSRP) IN BIOMEDICAL SCIENCES. This eight-week residential internship program is open to undergraduates who wish to prepare for and enter Ph.D. programs in the biosciences. Participants work with a faculty member and a lab mentor to develop and carry out a research project. A research symposium with student posters and presentations concludes the program. Field trips, graduate education workshops, and social outings are also part of the program. Both the Ph.D. Program in Biosciences and the School of Medicine are “dedicated to training students from diverse backgrounds for careers in the biological and biomedical sciences, and the promotion of diversity in graduate education through outreach and mentorship programs is a key facet of the School of Medicine’s strategic plan.”¹⁸¹

Eligible candidates are American citizens/permanent residents enrolled at undergraduate institutions who, by reason of their culture, class, race, ethnicity, background, work and life experiences, and/or skills and interests would bring diversity to graduate study in the biomedical and biological sciences. The program especially encourages applications from African Americans, Hispanic/Latino Americans, Native Americans, Pacific Islanders, and others whose backgrounds and experiences would bring diversity to the field.¹⁸²

CENTER FOR CLINICAL IMMUNOLOGY AT STANFORD SUMMER INTERN PROGRAM. After a fund was created ten years ago by a private contribution to the Center for Clinical Immunology, an interdisciplinary group, and additional donations were garnered, this eight-week nonresidential program was launched in 2001 with ten students interested in biology from San Francisco Bay Area high schools.¹⁸³ The program, which includes research projects with graduate student or faculty mentors, as well as introductory lectures and biosafety instruction, now attracts twenty students each summer from twenty local high schools.

STANFORD SUMMER PREMEDICAL STUDENT PROGRAM (SPSP). Formerly funded through the Health Careers Opportunity Program, Bureau of Health Professions, Health Resources and Services Administration of the U.S. Department of Health and Human Services, this program was committed to developing “a diverse health care workforce to serve underserved and disadvantage populations.”¹⁸⁴ This six-week residential program was for sophomore and junior high school students from low-socioeconomic backgrounds, limited educational opportunities, first-generation college students, citizens or permanent residents, and those who are in good academic standing.¹⁸⁵ The curriculum included daily academic classes, labs, workshops, and evening and weekend events. Cell biology courses, anatomy lectures and labs, a critical review of medical literatures, health research projects, academic advising sessions, academic strategies for success, personal statement writing, guest lecturers on minority health issues and health disparities, medical school admissions workshops, mock medical school interviews, and civic and political action workshops made the curriculum strong from academic, practical, and motivational standpoints.^{*186}

EARLY MATRICULATION PROGRAM. The goal of this program is “to increase the number of underrepresented minority and disadvantaged students who pursue careers as leaders in academic and clinical medicine.”¹⁸⁷ Offered in the summer quarter before students enter their first year of medical school, the program provides an early introduction to the medical school curriculum, research opportunities, and the medical school community, including both faculty and fellow students. In a recent quarter, the program provided students with a preview of each of the scholarly concentrations that are part of the medical school’s curriculum and an opportunity to connect with faculty in the concentrations. The program also provides coursework in histology and biochemistry and explores careers in academic medicine.

* Personal communication, Ronald D. Garcia, Ph.D., Program Director, December 8, 2008. This program has been discontinued due to a lack of funding.

Summer High School Science Program at Stanford 1965

'Under the direction of Dr. Leonard Herzenberg, thirty-two ninth and tenth grade students from Ravenswood High School will attend a six-week course at Stanford Medical School in the summer.' So we had a summer program. And here's a picture of all the students and faculty members who were involved. With Leon's help, we talked to one of the medical students who helped and found him and contacted him and he's an activist now living in Berkeley. Anyway, it was 1965.

Leroy H. "Roy" Maffly, M.D.

Professor of Medicine, Emeritus, 1970-1992, Stanford University School of Medicine
Associate Dean for Student Affairs, 1983-1992, Stanford University School of Medicine
Chairman, Committee on Admissions, 1981-1983, Stanford University School of Medicine
Chairman, Minority Admissions Committee, 1973-1977, Stanford University School of Medicine
Chairman, Faculty Senate, 1974-1975, Stanford University School of Medicine
M.D. UCSF School of Medicine, 1952
Intern and Resident in Medicine, UCSF School of Medicine, 1952-1954

UCSF Diversity in U.S. Medical Schools Oral History Series Interviews, March 2 and July 16, 2004

More about Stanford's Summer High School Science Programs

A National Science Foundation grant supported a summer program for high school students in and around the area, and these students were given a formal set of lectures and would work in labs around campus. The picture that I have is of Paul Berg and me, as the two faculty, and his technician and Mr. Cole, who was the East Palo Alto science teacher and students. There were about twenty-five students. The program, lasted, I think, for about five or six years. I had in my lab for that whole period of time some East Palo Alto students who were working with me.

Leon T. Rosenberg, Ph.D.

UCSF Diversity in U.S. Medical Schools Oral History Series Interviews, February 5 and July 8, 2004

Being Taken Under the Wing as an Undergraduate at Stanford

I got there, and I'll tell you, this is why I became pre-med. I got there and what impressed me right away were the Hispanic medical students who came to talk to us.... The Hispanic faculty also took us— the Hispanic freshmen—under their wings, so you have a very close advising system. You have medical students who meet the freshmen from day one. Engineering students and law students, too. Don't get me wrong. There were no organizations. It was the family of the Hispanic students at the time.

Their organized network was based on discipline, so if you were a pre-med you came down to meet the medical students. I met them. They just impressed upon me the fact that a pre-med curriculum was very structured. There was science, there was math and here are the steps ... I don't think they told me everything, but it was enough for me to know that, okay, I had worked in a hospital for the two years previously. My mother had become a nurse. I was a messenger and knew the doctors and the interns in a local hospital and, I thought, 'I can do this.'

Elena V. Rios, M.D., M.S.P.H.

President and CEO, National Hispanic Medical Association

President, National Hispanic Health Foundation

Member, El Centro Chicano Alumni Hall of Fame, Stanford Alumni, 2006

Co-founder, California Chicano/Latino Medical Association

M.D., UCLA School of Medicine, 1987

B.A., Human Biology and Public Administration, Stanford University, 1977

UCSF Diversity in U.S. Medical Schools Key Informant Interview, November 19, 2003

The Head Start Model

There is the analogy of Head Start. I think the same will apply to our efforts. I would like to look here at Stanford at where you can do this, in terms of creating and starting at the undergraduate level and moving all the way through completion of fellowship. For some, have a path of years, you know, more than a year with lots of deviations around it, downstream. So that's the next part that we're going to work on. I think that will be helpful to all students but it will also be helpful to minority students as well.

Philip A. Pizzo, M.D.

Dean, Stanford University School of Medicine, 2001-

Carl and Elizabeth Naumann Professor of Pediatrics and Microbiology and Immunology. 2001-

UCSF Diversity in U.S. Medical Schools Key Informant Interview, July 30, 2003

Challenges in Recruitment at Stanford

My intuition, just by looking at what the applicant pool looks like and what they say they want to do in the future, is that the number of students who are members of underrepresented minorities who have as their current career choice academic medicine is relatively smaller than the number in non-underrepresented students, and that's because the career choice isn't seen as one that is traditional for them.

Gabriel Garcia, M.D.

Professor of Internal Medicine and Hepatology, Stanford University School of Medicine
Associate Dean for Medical School Admissions, Stanford University School of Medicine, 1999-
Director, Committee on Admissions, 1998-
Faculty Director, Haas Center for Public Service, 2006-
Faculty, Center of Excellence in Diversity, 1993-
Intern, Medical Resident, and Chief Resident, Stanford University School of Medicine, 1977-1981

UCSF Diversity in U.S. Medical Schools Key Informant Interview, December 5, 2003

The Early Matriculation Program

We had organized groups that sort of helped students fit in, and then we had the Early Matriculation program.... that helped them. And again, that was a chance because a lot of student groups haven't had a chance to do research as undergrads because of where they come from. Either they didn't know or they had to work, or they had to struggle and they didn't have time to do research. This was the chance that introduced them to research, so they could find out what it was about. We would also give them some coursework, so they would have less course load during the fall when they came and so they would have time to do research as well. So this was a way of getting minority students into what Stanford wanted them to do, which was research.... It was a good program and I think we got some students who really just got into it and loved it, where I don't think they would have before, hadn't had exposure to it before, and became real researchers and lifelong and probably are faculty members now because of that experience.

Roger Peeks, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, December 16, 2003

Creating Connections between Minority Students and the Faculty with the Early Matriculation Program

I think one of the things that the Early Matric Program did, and this was since '84, is that it made the connection between minority students and the faculty, so when things came up to the Faculty Senate, the faculty were no longer distanced from minority students. They had at least a contact. And I think, unfortunately, in many institutions still, there's not that close contact. We're much more viable here in that we're a smaller school, smaller student numbers, and I think that that has helped quite a bit.

Fernando S. Mendoza, M.D., M.P.H.

Chief, Division of General Pediatrics, Stanford University School of Medicine, 1996-
Professor of Pediatrics and Service Chief, Lucile Packard Children's Hospital at Stanford, 2001-
Associate Dean of Minority Advising and Programs, Stanford University School of Medicine
Office of Student Affairs, 1983-
Principal Investigator, Center of Excellence in Diversity, 1992-
Co-Chairman, Minority Admissions Advisory Panel, Admissions Office, Stanford University School of Medicine, 1983-1990
Executive Board, Hispanic-Serving Health Professions Schools
M.P.H. Harvard University School of Public Health, 1979
Internship and Residency in Pediatrics, Stanford University School of Medicine, 1975-1978
M.D., Stanford University School of Medicine, 1975

UCSF Diversity in U.S. Medical Schools Key Informant Oral History Series Interviews, March 25 and May 12, 2004

Tackling the Pipeline Issue

I think that the only way one can tackle the pipeline issue, because it doesn't seem to be able to solve itself, is for the medical schools and others to try to establish programs within the undergraduate campus which guarantee the student's admission.

Bernard Nelson, M.D.

UCSF Diversity in U.S. Medical Schools Oral History Series Interview, March 9, 2004

Other Outreach and Recruitment Activities: University of California, San Francisco and Stanford University

COLLEGE CAMPUS RECRUITING VISITS BY MEDICAL SCHOOLS. In the 1960s and 1970s, recruiting trips to predominantly Black colleges and universities in the South and East by UCSF, as well as trips to Hispanic-Serving Institutions in the Southwest by Stanford and later trips to California colleges are examples of some of the earliest recruitment efforts of UCSF and Stanford medical schools. Faculty acting independently, faculty involved in admissions, and medical students were involved in these early trips.

GROUP VISITS TO MEDICAL SCHOOL CAMPUSES. Both UCSF and Stanford Schools of Medicine coordinate visit and tours of the campus for high school students, high school counselors, premedical students, undergraduate clubs or organizations, and premedical advisors.

MEDICAL SCHOOL ADMISSIONS WORKSHOP. The Office of Outreach and Academic Advancement of UCSF's Office of Medical Education has for many years sponsored an annual workshop for students throughout California to assist them in 1) developing a competitive application, 2) understanding the application process, 3) experiencing a day in the life of a medical student, and 4) learning about the UCSF Postbaccalaureate Program. The workshop attracted approximately 200 students in the 2006-2007 academic year.

COMMUNITY COLLEGE WORKSHOPS AND OTHER OUTREACH ACTIVITIES. Conducting workshops at local community colleges and supporting outreach activities aimed at encouraging undergraduates to apply to medical school or to consider completing training necessary to qualify for graduate education in the sciences are other ways UCSF and Stanford engage students at different points along the educational pathway to medical school.

PREMEDICAL CONFERENCES, FAIRS, AND OTHER ACTIVITIES. At UCSF, the External Programs Office of the Office of Medical Education helps to coordinate the participation of the Associate Dean for Admissions, Admissions staff, and medical students in these activities.

STANFORD UNIVERSITY MINORITY MEDICAL ALLIANCE (SUMMA). This alliance, which convened its 17th premedical conference in 2008, is "a coalition of Stanford medical students, including representatives from the Student National Medical Association (SNMA), the Latino Medical Student Association (LMSA), and Stanford American Indigenous Medical Students (SAIMS) committed to recruiting and retaining underrepresented medical professionals."¹⁸⁸ Each year, SUMMA hosts "the largest minority premedical conference" on the West Coast, drawing 400-600 participants.¹⁸⁹

PREMED OF COLOR COMMUNITY. Stanford also sponsors this web resource founded in 1999 by two participants in a Summer Medical Education Program at the University of Washington has now been extended nationwide.

STATEWIDE CONFERENCE FOR PREMEDICAL ADVISORS. This conference is another way that UCSF and Stanford strengthen the medical schools' relationship with undergraduate colleges and universities in California.

ACCEPTED STUDENTS WEEKEND. This weekend began at both UCSF and Stanford as an annual opportunity to welcome to campus accepted students to an entering class. In 2007, UCSF hosted 29 underrepresented minority students and 79 non-minority students.

STUDENT ORGANIZATION CONTACT WITH NEWLY ACCEPTED STUDENTS. The UCSF campus has both registered campus organizations and medical school student interest groups, many of which are related to the diversity of groups on the campus (e.g., Black Student Health Alliance, Student National Medical Association, Latino Medical Student Association at UCSF, Native American Health Alliance, and Vietnamese Student Association). Members of these groups often meet with newly accepted students to answer questions, provide information, and encourage the students to attend UCSF. Stanford medical school has nearly 40 student groups, including both special interest and cultural groups, with SUMMA being the most active coalition group.

Putting the Pieces Together at Stanford

So there were many, many, many pieces of the program that developed, not in one beautiful final package, but over a period of time. Somebody would say, 'Well, I think we ought to send some people down to New Mexico and Arizona and Louisiana and this, that, and the other place,' and it sort of became an annual event. And so it accreted.

David Korn, M.D.

Senior Scientific Officer, Division of Biomedical and Health Sciences Research, Association of American Medical Colleges, 1997-

Carl and Elizabeth Naumann Professor and Dean, Stanford School of Medicine, 1984-1995

Vice President, Stanford University, 1986-1995

Professor and Chair, Department of Pathology, Stanford School of Medicine, 1968 to 1995

UCSF Diversity in U.S. Medical Schools Key Informant Interview, December 17, 2003

Faculty and Student Recruiting Trips

I tended to go myself at the beginning and then we would send Xavier students and then other members of the (Admissions Committee) went.... Morehouse in Atlanta. Stanford and Harvard because they were always feeders (to UCSF) and then to UCLA and Berkeley and San Francisco State. Lots of places had pre-meds and produced students for us. We did it on the cheap, so we would target places that we happened to be. So, I'd go for an ophthalmology meeting to Atlanta so we would go to Morehouse. I didn't encounter reluctant faculty. We made probably dozens of trips a year between faculty and students. We made them conveniently.

Michael V. Drake, M.D.

Chancellor, University of California, Irvine, 2005-

Vice President for Health Affairs, University of California Systemwide, 2000-2005

Steven P. Shearing Professor of Ophthalmology, UCSF School of Medicine, 1998-2005

Senior Associate Dean for Admissions and Extramural Academic Programs (UCSF-Fresno Medical Education Program, UCSF Outreach), UCSF School of Medicine, 1998-2000

Associate Dean for Admissions and Student Programs, UCSF, 1993-1998

Assistant Dean Student Affairs, UCSF, 1991-1993

M.D., UCSF School of Medicine, 1975

A.B., Stanford University, 1974

UCSF Diversity in U.S. Medical Schools Key Informant Interview, February 10, 2003

The Importance of Being Identified by High School Counselors

I think of what my story (would have) been if I hadn't been identified by my high school counselor. I think that that's the sort of unfortunate thing about our education system. It doesn't identify people, and almost everybody, if they work hard, can do what they think they can accomplish, but it's raising it to the next level. It's increasing what they think they can accomplish.

Leon T. Rosenberg, Ph.D.

UCSF Diversity in U.S. Medical Schools Oral History Series Interviews, February 5 and July 8, 2004

SUMMA Is a Way to Bring Groups Together

One thing that we did in the early to mid-1980s was try to bring groups together. I suggested to the groups, because they had their own individual groups, to have sort of a unified council. So that, I think, became eventually what is now SUMMA. What they do primarily is put on a major event to recruit students. Five or six hundred students come from across the state, and they've done it every year. It's been mostly the students, but part of it was my concern is that they would work together. As an Associate Dean for Student Affairs, I was concerned. They need to work together, they need to see their commonalities, and I think that was a creation to kind of keep group unity.

At a retreat at Asilomar, what was very well done by them is that they were very open about some of their issues, and we ended up having a very interesting process where people divided up. The groups ended up being African American groups, Latinos, men, women, gays, Native Americans. The facilitator asked each group to formulate what they thought were the most important things, and I think what that did for us is, we affirmed the idea that there were many commonalities. But there were some differentiating points that each group had, and that each group wanted to let the whole group, everybody else, know.

Inclusive of the gay students that were minority, one really pointed statement that was made is that they said to the groups, ' We put up with things from you that we would not put up from anybody else, but we do so because we want to be part of the group.' And I think that that was both very touching and provided reflection for them to see that their group, their closeness, has to overcome some of their own biases with each other. I think that that, again, was a positive step. We've done some of those things in the past in different ways, but I think that shows, at least my hope is, that this continues to formulate a sense of inclusiveness, rather than a sense of separation.

Fernando S. Mendoza, M.D., M.P.H,

UCSF Diversity in U.S. Medical Schools Oral History Series Interviews, March 25 and May 12, 2004

Combined California Medical School Recruitment Efforts

We have combined recruitment programs funded by The California Endowment through the University of California Office of the President, Division of Health Affairs (now the Division of Health Sciences and Health Services), and about 225 people attend recruitment fairs. We focus mainly on pre-med advisors and a lot from the state colleges and the community colleges. We have 75 or 80 students that the advisors themselves nominate to bring, so it's not as much of an open student advising program. If we could make the advisors know what our programs were for all medical schools in California, and really keep them up to snuff, have them go through simulated admission exercises etc, we'd build some institutional knowledge into that advising base.

Michael V. Drake, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview February 10, 2003

Getting a C in Organic Chemistry in College—Does it Disqualify a Student from Applying to Medical School?

There are programs for counselors in undergraduate schools, especially community colleges, small colleges, public as well as private schools, trying to let them know what the realities are, what we're looking for in medical school and also trying to change the gatekeeper mentality of some of these schools.

We know for a fact that at some schools if a student gets a C in organic chemistry, they're told they're never going to be a doctor, which is outrageous. And so getting them to try to realize that your life is not over if you get a C in organic chemistry. To that end, you have to get the advisers knowledgeable enough to encourage the students to continue.

Now the Dean at Loma Linda School of Medicine did a very interesting study. He looked at the students coming in, underrepresented minorities and Caucasian students and roughly where the numbers were. So there's a group of minority students and a group of majority students and... a much greater attrition of minorities in the first two years, primarily because they're having more trouble with science courses, because a lot of them came from mediocre high schools without taking courses.

But those students who survived the first two years did as well or better as those majority students who got through the first two years.

Henry J. Ralston, III, M.D., Ph.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, July 23, 2003

The Importance of Pre-med Advisors

I had no pre-med advisor whatsoever. And I was in Engineering so I wasn't like a pre-med, but I knew a lot of pre-meds. I don't remember ever hearing anybody talk about pre-med advisors or getting help. I think it helps tremendously. I think a lot of the pre-med advisors who've done it for a long time know a tremendous amount about what it takes to get in, they know a tremendous amount about each individual school. They talk to the people in Admissions so they are a very good source of information.

Roger Peeks, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, December 16, 2003

Success of UCSF Recruitment Weekends

Eighty or maybe 90 percent of the students who came that weekend enrolled the next fall in the school. Now not all the students that we had admitted came that weekend, but of the ones who came, they loved it. They had a great time. Plus, an unintended positive side effect—the students here and faculty here who worked on putting together the weekend, had to describe to our guests what it was we loved about being here. So on Monday after having the weekend of talking to people about what a great place this was, we all felt great about where we were and our choices and so the morale on campus, I think, was as high as it had been in memory.

Michael V. Drake, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, February 10, 2003

Admit Weekend at Stanford

It pays off especially if you only bring out the students that are already accepted so you're spending money on people with a high likelihood of getting in. Whereas all the other recruitment things you do, where you go out to visit colleges, half the people you talk to are not going to be able to get in anyway, where you're talking about places like Stanford and UCSF that are so highly selective. So it's targeting your money and putting it to best advantage where it's going to be the best use, at the very end of the pipeline.

Roger Peeks, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, December 16, 2003

Competing for the Same Applicants

We'd bring in students for a weekend and give them quite a nice show to try and compete for them, since Harvard and Yale and everybody were recruiting for the same pipeline. So we actually went into some vigorous recruiting. We had admissions teams, a staff, who would regularly every year visit some of the major pipeline schools, in the Southwest, in the South, some of the Historically Black Colleges to try to get their counselors aware that we were looking for these kids and we would encourage them if they had the capability to apply. So we did an active sales job.

David Korn, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, December 17, 2003

Making the Case for Continuing Federal Support of Medical School Outreach Activities

If we can sustain both the interest level on the part of the medical school administration and faculty and then the people who are doing the work in these outreach programs, if we can sustain the support for that and then help make the case in Washington... that killing those programs or allowing those programs to die on the vine is paramount to cutting off the new generation of potential health science professionals..

Cornelius L. Hopper, M.D.

Vice President of Health Affairs, Emeritus, University of California Systemwide Administration, 1983-1999
Special Assistant to the President, Health Affairs, University of California Systemwide Administration, 1979-1983

UCSF Diversity in U.S. Medical Schools Key Informant Interview, July 21, 2003

Admissions

UCSF and Stanford medical schools have developed and modified their admissions criteria, including admissions requirements, as well as steps in the admissions process, and the size, composition, and function of Admissions Committees over the period from the 1960s through the present. In general, the medical schools' admissions criteria have become more comprehensive and more explicit, including both cognitive and non-cognitive criteria.

The admissions process has become more individualized, more comprehensive, and more systematized as the number of applications has grown and medical schools, including UCSF and Stanford, began to participate in AMCAS (American Medical College Application Service), the centralized application processing service for first-year applicants to U.S. medical schools. The process has also been shaped, as we have seen in earlier chapters of this report, by decisions of the U.S. Supreme Court and state laws about factors (e.g., race and ethnicity) that may be taken into account in admissions decisions of public and sometimes private universities, as well as about the admissions process itself (e.g., the use of quotas, the use of separate admission committees, and the use of separate admissions processes for minority and majority applicants).

The underlying questions shaping medical schools' admissions criteria, admissions processes, and the outcome of admissions are:

- What expectations does the school have for its students and graduates in terms of their medical school experience, future training, careers, and contributions as physicians?
- What expectations does an applicant have about his/her own experience in medical school, possible future direction in training, career, and contributions as a physician?
- What factors in an applicant's education and background make for a "good match" between an applicant and the school, given the interrelated missions of the medical school (e.g., education and training, research, patient care, and public service), its educational mission, the curriculum of the school, and the learning environment?
- What "mix" of students is the school looking to admit, given its interrelated missions, in an entering class?

What Kind of Medical Students Should We Be Turning Out?

There are at any time, certainly at all the times that I've been a faculty member, a variety of interest groups among the faculty who say, 'We should be turning out medical students of type X or type B.' Right now, the most vocal interest group here (at UCSF) concerns itself with physician scientists.

We're a top-tier medical school, but we do not produce nearly the percentage of graduates who go into academic medicine....All of us want to reproduce ourselves, and everyone knows that the product of the medical school has much less to do with curriculum and much more to do with admissions policies.

So, the same conversation happens when people get concerned about why the American public is so dissatisfied with their interactions with their physicians, and we forget these...health care system concerns. Why do (people) find their doctors remote and technically oriented?

Well, people immediately go back to who are we admitting, and what are the goals of the people that we are admitting. So, we admit a diverse class, and then we try and make sure that everyone—the highly empathic people have the technical skills and the respect of the body of knowledge that they need and the very technically, scientifically oriented people have at least enough people skills to get them through their residency.

So, I do think that there is some conversation between the two groups and even in this dual governance system like ours, in the end they both report up to a common structure with the dean on one hand and a sort of faculty council, on the other hand.

Molly Cooke, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, June 16, 2003

Changing UCSF Focus

Well, the philosophy (in the 1960s and 1970s) was to be a leading health care provider, and that was the major focus. Then the whole emphasis changed to recruiting people who could be biomedical scientists, leaders in academic surgery. That was through, I think, the early nineties. I remember when I became Dean (in 1983), I was impressed with how developed the whole UCSF was in its scientific focus, but how very little effort was spent on the social and behavioral sciences....Soon after I became Dean, the lack of primary care physicians became a major issue....We got a grant to integrate the primary care programs in teaching, and that was a major program for us. I supported it eagerly, because we thought, you know, this is also one way we could influence and widen the UCSF vision. And the program was very successful. We also put a lot of effort to develop the Center for Health and Community.

Rudi Schmid, M.D., Ph.D.

Dean, Emeritus, UCSF School of Medicine, 1983-1989

Professor of Medicine and Director, Emeritus, Division of Gastroenterology, Department of Medicine, UCSF School of Medicine, 1966-(?)

UCSF Diversity in U.S. Medical Schools Oral History Series Interview, February 28, 2003

Taking a Mission-driven Approach to the Admissions Process at Stanford

(At Stanford), what they decided to do was to define what they considered to be the mission of the school in very clear terms. Secondary to that, they tried to change the picture of what sort of student would produce that end product they were looking for. They then said, 'What are the qualities of that student that would get us closer to this end product?' So, with each of the (characteristics) that they thought contributed to making the kind of student that they wanted, they found a way to roughly quantify. Then everyone who is on their Admissions Committee had to go through a training program.... 'From the perspective of the mission that they have at the time, what do you assess? How do you interview an applicant from this mission-oriented approach?' They emphasized to the people on the Admissions Committee that when you are interviewing an applicant, always remember that, at the same time, an applicant is interviewing you. So, the interview process is a very important part of the recruitment process, and they see it from the very beginning.

Lonnie R. Bristow, M.D.

Chair, Committee on Institutional and Policy-Level Strategies for Increasing the Diversity of the U.S. Health Care Workforce, Institute of Medicine of the National Academies, Washington, D.C., 2002-2004

Co-Editor with B.D. Smedley, A. S. Butler, *In the Nation's Compelling Interest: Ensuring Diversity in the Healthcare Workforce*, The National Academies Press, 2004

President, American Medical Association, 1995-1996

Practicing Physician, Internal Medicine, 1958-1998

Residency, Occupational Medicine, UCSF School of Medicine, 1979-1981

Internship, San Francisco City and County Hospital, 1957-1958

UCSF Diversity in U.S. Medical Schools Key Informant Interview, June 6, 2003

What Does a Successful Stanford Medical School Graduate Look Like? Making a Match between the Medical School and the Student

The concept of Stanford's being an institution to promote leaders in academic medicine is not new, and the fact that we've had a number of research programs that were available to students is not new either. As for the students, they would communicate with me and say, 'You know, we know what we want to do, we know what the school wants us to do, but how can you sort of make it happen? How do we put this together?' By and large, through their own networks they find ways of doing it, but a lot of time it winds up being hinged on connecting with a mentor.

I've had students who have come in with no research experience. An African American male who came in and he had no research experience, and he really wasn't all that tuned in to doing much in that area. He began with our Early Matriculation Program and just blossomed. He just took off and got sort of excited by the energy and excitement of getting involved in things that were new in terms of the investigative process.

He wound up with multiple publications before he got out of here. So, you know, I would say he would be a very successful person, because he got in touch with the area that he was passionate about and then he was able to pursue it successfully. I think about the academic part, but when I think of success it's not just graduation. That's kind of the easy one. Have they expanded on their passion, have they put together experiences, have they developed relationships, have they found ways to solve problems, to get things accomplished and maintain reasonable relationships? Because sometimes that really doesn't happen.

Ronald D. Garcia, Ph.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, January 15, 2004

Defining Success in Recruiting and Admitting Students at Stanford

To better define success in a way that talks about achieving a degree of professionalism, achieving a skill set, a set of knowledge and attitudes that will make you a good professional. Not putting a timeline on it is as important as putting a progress line on it, an achievement line on it. And making sure that when you choose students for their enthusiasm, for their advocacy, for things outside of the classroom, that you provide for them outlets that will continue that enthusiasm and allow the advocacy to continue. No matter where they choose to seat themselves in the spectrum of service. So we need to make sure that they can participate in a level of activity for which we chose them in the first place.

Gabriel Garcia, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interviews, December 5, 2003

Admissions Criteria

ACADEMIC AND TEST REQUIREMENTS. Admissions criteria at medical schools across the country, including UCSF and Stanford, have undergone several changes over the period from the 1960s through the present. Academic admissions requirements, however, have changed very little, in terms of premedical science course requirements, except to have become more extensive. In addition, almost all medical schools, including UCSF and Stanford, now require applicants to

complete the MCAT (Medical College Admission Test), which now includes verbal reasoning, physical sciences, biological sciences, and writing sample sections.

UCSF School of Medicine in the 1960s. At UCSF, in 1969, academic requirements included 3-4 years of college preparation as well as the following premedical course requirements:¹⁹⁰

English Composition and Literature: Four years of study, one of which must be at a college level.

Mathematics: One year of calculus in either secondary school or college.

Chemistry: One year of general chemistry with laboratory and one semester or two quarters of organic chemistry at the college level. If advanced placement has been obtained in college, physical chemistry is advised.

Physics: One full year, with laboratory, in college.

Biology: One full year, with laboratory, in college, including vertebrate zoology.

The MCAT was also required of applicants by UCSF in 1969.

Stanford School of Medicine in the 1960s. In 1967, Stanford University School of Medicine's "Information for Applicants" noted:

While certain premedical science courses are required for admission, it is not advisable to view the undergraduate years as specific preparation for professional education in medicine. Rather they should provide a liberal education which will enable a student to assume broad responsibilities of leadership expected of a physician quite apart from his professional competence.¹⁹¹

Required premedical science courses were:

Biological sciences—15 quarter or 10 semester units

Chemistry—24 quarter or 16 semester units, including organic chemistry

Physics—12 quarter units or 8 semester units.¹⁹²

Other requirements were also noted:

Knowledge of a modern foreign language and of mathematics through calculus is recommended, but not required....In general, it is the feeling of the Committee on Admissions that a four-year program leading to a baccalaureate degree is the best preparation for the study of medicine....Under unusual circumstances, a candidate will be considered for admission after three years of college.¹⁹³

Stanford also required the MCAT.

UCSF School of Medicine Today. UCSF's and Stanford's academic admission requirements are both more extensive and more explicit today. UCSF's required premedical science course requirements include¹⁹⁴:

General chemistry, one year with laboratory—12 quarter units
Organic chemistry—8 quarter units
Physics, one year with laboratory—12 quarter units
General biology, one year with laboratory,
including study of vertebrate zoology—12-15 quarter units

Information for applicants also notes: "Courses in vertebrate embryology, genetics, cell physiology, or comparative vertebrate anatomy, with laboratory, will satisfy biology requirements."¹⁹⁵ Applicants are also advised:

We also recommend that premedical students take mathematics courses, upper-division biological science courses, humanities courses, and English composition courses.... This does not mean that we encourage students to pursue a smattering of knowledge in a great many subjects. Rather, we believe that you gain the richest, most satisfying intellectual experience from the in-depth study of a subject that captures your passion.¹⁹⁶

Applicants to UCSF may be admitted without a bachelor's degree and receive a bachelor of science degree in medical sciences after completing the first three terms of the curriculum leading to an M.D. degree. Again, applicants are required to take the MCAT.

Stanford School of Medicine Today. Stanford now requires that an applicant has completed an undergraduate degree by the time of matriculation. Stanford's academic course requirements,¹⁹⁷ all with appropriate laboratory work, include:

Biologic sciences, one full academic year
Chemistry, two full academic years, including organic chemistry
Physics, the equivalent of one full academic year

Information for applicants notes:

Knowledge of a modern foreign language, specifically Spanish or Asian languages, and course work in behavioral sciences, calculus, physical chemistry, and, in particular, biochemistry, are recommended.¹⁹⁸

The MCAT is also required.

OTHER REQUIREMENTS FOR BOTH UCSF AND STANFORD MEDICAL SCHOOLS: TECHNICAL STANDARDS (ESSENTIAL ABILITIES AND CHARACTERISTICS). Both UCSF and Stanford are now required by the Liaison Committee on Medical Education (LCME) as a condition of accreditation to delineate technical standards for admission, promotion, and graduation.¹⁹⁹ These standards reflect "essential abilities and characteristics," which are defined as "certain minimum physical and cognitive abilities and sufficient mental and emotional stability to assure that candidates for admission, promotion, and graduation are able to complete the entire course of

study and participate fully in all aspects of medical training, with or without reasonable accommodation.”^{200,201} UCSF includes five categories of abilities and characteristics among its technical standards: 1) observation, 2) communication, 3) motor function, 4) intellectual-conceptual, integrative and quantitative abilities, and 5) behavioral and social attributes. Stanford includes these same five categories plus a sixth, ethical and legal standards.

FACTORS CONSIDERED IN INITIAL REVIEW OF APPLICATIONS AT UCSF AND STANFORD MEDICAL SCHOOLS. UCSF currently lists on its School of Medicine website eight factors that the Admissions Committee considers in initial reviews of applications: 1) GPAs, 2) MCAT scores, 3) State of legal residency, 4) Applicant’s personal statement, 5) Extent and depth of extracurricular activities, 6) Work experience, 7) Honors and awards, and 6) Student’s background.²⁰² Stanford medical school does not list factors of this initial review on its website, but it has documented its entire admissions process and outcome (including the process and outcome related to minority applicants) in Annual Reports from the Office of Admissions to the Senate of the Stanford Medical School Faculty Council from the early 1970s to the present. Stanford’s preliminary review assessed in 2001 ten variables: 1) MCAT Biological Sciences score, 2) MCAT Verbal Reasoning Score, 3) MCAT Physical Sciences Score, 4) Science GPA, 5) Quality of undergraduate school, 6) Age, 7) Sex, 8) Disadvantaged Status, 9) Underrepresented Minority, and 10) Graduate School.²⁰³

SELECTION FACTORS AT UCSF AND STANFORD MEDICAL SCHOOLS. UCSF currently notes on its website information for applicants:

Selection is based on an appraisal of those intellectual and personal characteristics that the Admissions Committee regards as desirable for prospective medical students and physicians. Both cognitive (primarily academic) and non-cognitive factors, such as the applicant’s statement and extracurricular activities, play an important part in the selection process. Based on the evaluation of these factors, a limited number of applicants (500) are selected for review.²⁰⁴

Stanford currently advises applicants:

The School of Medicine is most interested in candidates who have a desire to move the field of medicine and biomedical sciences forward, and whose past accomplishments show evidence for originality, creativity, and a capacity for independent, critical thinking. These skills and attitudes will serve you well as you embark on a career requiring lifelong learning. Evidence of innovation and leadership in the applicant’s background is most valued.²⁰⁵

In the 1985-1986 admissions season at Stanford medical school, File Review Criteria and Scoring Notes were laid out for Admissions Committee members.²⁰⁶ The criteria were:

- Breadth of education
- Originality, creativity
- Research and scholarship
- Non-academic accomplishments

- Personality, leadership, commitment, humanitarianism.

The Admissions Process

Both UCSF and Stanford* now have multi-step admissions processes:

- 1) Applicants complete on-line AMCAS applications
- 2) AMCAS forwards applications to medical schools
- 3) Initial reviews of AMCAS applications
- 4) Invitation to applicants to submit a Stanford Supplemental Application and Recommendations (3-6) or a Secondary Application and Recommendations (minimum of 3) to UCSF
- 5) Invitations to applicants for personal interview
- 6) Personal interviews
- 7) Notification of acceptance or placement on wait list.
- 8) Applicants provide transcripts
- 9) Admit (or acceptant) weekend
- 10) Orientation for entering class

At Stanford, personal interviews were first incorporated into the admissions process in the 1960s. UCSF had interviews in place as part of the process during the 1960s.

Admissions Committees have grown in size, diversity of Committee and subcommittee or panel representation (i.e., faculty representing different clinical and basic sciences and medical students), and in the formality of Committee functions and procedures. At UCSF, for example, on December 2, 1968, a special meeting of the faculty of the School of Medicine was called to discuss and act on a policy for admission of minority applicants to the School of Medicine.²⁰⁷ Doctor John Wellington, Chair, Committee on Admissions, summarized “existing admissions policies, which take into account undergraduate academic record, MCAT score, and an aptitude as estimated in an interview with two members of the Admissions Committee.”²⁰⁸ There are 30 committee members divided into two subcommittees, each of which makes recommendations about the interviews by members of the subcommittee. The recommendation to create a Minority Students Admission Committee as one of the subcommittees was discussed and approved by the faculty. In the 1970s, the Admissions Committee continued to evolve.

* Stanford University School of Medicine has an Early Decision Process.

UCSF Medical School Admissions Infrastructure in the Late 1960s and 1970s

I came in September 1969, so I came three years after the medical school had initiated serious efforts to diversify the student population.... When I was recruited, I decided to wear two hats: to be in the Department of Biochemistry and in the Dean's office, and within a year, I became Associate Dean.... At that time, it was John Wellington and I. We had everything. We had Student Affairs, Curricular Affairs, and Admissions, and somewhere along the line, we decided to split it up into independent freestanding units, because we were having to be judge, jury, and executioners.

John A. Watson, Ph.D.

Professor of Biochemistry, Emeritus, UCSF School of Medicine, 2001-
Professor of Biochemistry and Biophysics, UCSF School of Medicine, 1984-2001
Associate Dean, Admissions, UCSF School of Medicine, 1973-1980
Associate Dean, Student Affairs, UCSF School of Medicine, 1969-1970
Assistant Professor of Biochemistry and Biophysics, UCSF School of Medicine, 1969-1976

UCSF Diversity in U.S. Medical Schools Oral History Series Interviews, May 21 and June 12, 2003

Changes in the Admissions Process and the Admissions Committee at UCSF in the 1970s

The nuances were broadening as were the importance of the non-cognitives and diversifying the committee.

John A. Watson, Ph.D.

UCSF Diversity in U.S. Medical Schools Oral History Series Interviews, May 21 and June 12, 2003

Diversity of Admissions Committee and Diversity of "Products" at UCSF beginning in the mid-1980s

Yes, we wanted a diverse Admissions Committee. It was really five different admissions committees, a system of micro-committees, not so micro. We wanted different opinions, because there isn't a standard 'product' of a medical school. We want people ranging from a superb generalist, practicing in some small Northern California town to the next Nobel Prize winner for discovering a more rational treatment for cancer, or someone who is a splendid neurosurgeon at UCLA, you know, or someone in public health, concerned about AIDS in Africa. The desired 'product' is someone with high competency, imagination, and contributions to society, broadly conceived, rather than in one single 'product.'

And that's one of the problems with trying to measure the efficacy of medical education. First of all, there are heterogeneous people coming in and how do you compare someone who is a splendid practitioner in Northern California and someone who is a neurosurgeon at UCLA? I mean, these are totally different categories. You can't say you have one that is more successful than the other.

Lloyd "Holly" Smith, Jr., M.D.

UCSF Diversity in U.S. Medical Schools Oral History Series Interview, February 20, 2003

Today, at UCSF there are about 80 faculty members representing a broad cross section of clinical and basic sciences as well as medical students on the Admissions Committee; 65 percent of the Committee members are faculty members and 35 percent, students.²⁰⁹ The Committee has moved in recent years from five differentiated panels to five undifferentiated panels, with each panel reviewing a cross section of applicants, rather than a group of applicants with specific interests (e.g., pursuit of M.D./Ph.D. degrees).²¹⁰ This represents a change from the process of the Admissions Committee from mid-1980s through the mid-1990s, when the Committee had a system of “micro-committees.”

Not Only in the Business of Producing Good Doctors at Stanford

I think that as we look at medical schools and medical education at this juncture in history, we generally try to make different rules and results. I am a fan strongly of intervention applied to these students and for institutions to carry out interventions that will make them different in quality.

But I feel that Stanford should not only be in the business of producing good doctors, because there are many that can do that. But we should be about something else in addition to that. We should have that as a core value, but we should really be trying to produce people who are going to be trendsetters and leaders. We've got a record of success in that. Thirty percent of our graduates over the decades...are academic greats. The number that I've been aiming for is 50 percent. I would like to see that happen, and I would like to see it across our diversity board as well, and across the path of missions and disciplines.

Philip A. Pizzo, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, July 30, 2003

These Are Our Values, These Are Our Methods

Most of the people in admissions that I know would probably say at some point you have to state, '(These are) what our values are and these are the methods that we have to make sure our values are translated well and to do it in front of a national audience gives your values and methods some visibility.'

Gabriel Garcia, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, December 5, 2003

Admissions Criteria, the Admissions Process, and Medical Student Support at Stanford

Most schools use the standardized tests—MCATs and grade point averages—as a hurdle that an applicant must get over and they're very pleased when that hurdle is set as high as possible. They take great pride in being able to say well, the average applicant that was accepted at our school had MCATs of such and such...

Now what Stanford does is that you set very clearly a range of MCAT scores. Students who are in this range are capable of having a positive educational experience at Stanford. Now they need a little support here and there and we will provide that support if they have the capacity. So, they use the (MCAT range) not to keep people out, but to help them find people (who) can do it.

Now let's look at the non-standardized testing attributes that we think are important. As I've said before, they have a way of roughly quantifying each of those...when they are about to decide who to admit to the school and who not to accept to the school ...

But then, they go further and they provide the supporting infrastructure for the students to make sure that they then succeed. What I found fascinating is that they have been able to document over the last decade or so that the differences between the scholastic efforts of these students can be mitigated to the point where the students that they've provided this additional support to will write as many papers as the rest of the class, have them published, and what not....

They're not the only (school) that does that. There are other schools but the fascinating thing to me is that the ones I am aware of frequently are private schools and they (focus) on this sense of mission and commitment, at times more aggressively than publicly funded schools.

Lonnie R. Bristow, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, June 6, 2003

Another View of Criteria Used to Select Medical Students

You look at grades, MCATs, letters of recommendation, then you have an interview. We all knew that grades are bunk. I mean, they don't predict anything. From every meeting I ever went to as far back as whatever, all the studies said that grades don't predict performance in medical school.

The only thing grades predict is grades.

They don't predict anything about whether you'll be a good doctor, a responsible doctor, whether you like being a doctor and so forth. And the same thing is true of MCATs. And not only are (grades) not predictive, but we knew from our own experience that there had been grade inflation. Grade inflation continued, and the standards at different schools were entirely different. Some schools had very rigid standards, and a "B" means a lot; in other schools, an "A" doesn't mean a thing. It depends on the course and so forth and so on.

Bernard Nelson, M.D.

UCSF Diversity in U.S. Medical Schools Oral History Series Interview, March 9, 2004

Selection Criteria—“Measurable” vs. Individualized Criteria at Stanford

We (looked at) how far a person has “traveled,” what they’ve done in their own behalf, and how they’ve taken advantage of what opportunities they did have. (These) were more important than the kind of measurable criteria, which we felt were not very relevant to anything.

Leon T. Rosenberg, Ph.D.

UCSF Diversity in U.S. Medical Schools Oral History Series Interviews, February 5 and July 8, 2004

The Importance of Individual Attention and Judgment in Admissions

But this process needs really individual attention and individual judgment...because you don’t have the sort of objective indicators to fall back on. And the other thing is, it took a lot of institutional work. It took work to educate and sensitize the leadership and the faculty. It took work in terms of designing transition programs to make (students’) entry into the first year more comfortable, less frightening, get them some fellowship money, so they could take a quarter or two quarters, a semester off, and play with some research project....There were all these things and they weren’t mandatory. Nothing was mandatory but they were strongly encouraged.

David Korn, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, December 17, 2008

The Problem with Quantifying Passion

I think to be a good physician you have to have passion.... What I learned in the Admissions Committee was I saw many brilliant people come through and they had high GPAs and high MCATs and glowing letters, but what they lacked was a passion and the problem we had was, there was no way of quantifying that....To me, there is no direct correlation with your grades or your MCATs, how good a physician you’re going to be.

Richard H. Carmona, M.D., M.P.H.

UCSF Diversity in U.S. Medical Schools Key Informant Interviews, January 10 and February 14, 2003

On Being Academically Qualified

You know, once you have people who are academically qualified, it doesn’t really help in the middle of the night to be more academically qualified. It helps to be thorough and pleasant and reliable.

Molly Cooke, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interviews, June 5 and 16, 2003

More on the Admissions Committee at UCSF from the mid-1980s through the mid-1990s

Each of the five Admissions Committee panels had about six or eight people on it. Every panel had students on it. And we would send out a request for those who were interested in joining the admissions process and it was heavily oversubscribed. A large number, despite all the work involved. The students were deeply interested in this, and so we had to hold interviews and decide which students would be given the privilege of doing all this work for free, in addition to their regular academic responsibilities...And they had the same vote as a senior professor. And that was very important so that they would take it as seriously as the rest of us do.

I think I changed the chairs of a number of the panels, and we also had meetings to discuss what we were trying to do, trying to get some sense of cohesion. I think most of them were general panels. I think we had about three general panels. I haven't looked back at this, but—and then we had one panel where we sent candidates who seemed to be particularly interested in science, who were strong that way, more likely to go into research....And then we had a panel which was enriched with a number of minority people. Now, not all minority candidates went to that panel, but it was enriched—because we didn't have a large number of minority faculty to use, so we wanted to make the best use of them. I think everybody was inside. Maybe there were clinical faculty members, but not from other campuses and not just from the community unconnected with the campus. (In 1968, the first minority panel contained members of the community as well as minority students.)

Lloyd H. "Holly" Smith, Jr., M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, February 10, 2003

Serving on the UCSF Admissions Committee as a Medical Student

I was chosen. It was a begrudging thing to commit to because I knew how serious it was. As a medical student, you also feel you can't shortchange it because of what we just went through. We knew that it was opening and closing doors for people and that could be a permanent close.

The Admissions Committee did an extraordinary job imparting the seriousness of it to the members of the committee. But you also saw that through the process—if you didn't advocate for the person that you reviewed, they weren't going to get in and you realized that after the first meeting.

So then I would think, 'Is it fair that they shouldn't get in?' Feeling comfortable making those kinds of decisions was difficult, but after you'd done three or four of them, you realized that you actually had an opinion that was valid, and you realized that other people were accepting people that reflected their vision so you could reflect your vision.

Getting to that point was the big hurdle for me—realizing that it's okay to try to be an advocate for those people you really thought were important to have in the class or important to be physicians, and also realizing that even the people that you would not have accepted had they come through you, have a place in medicine.

Eric Goosby, M.D.

CEO and Chief Medical Officer, Pangaea Global AIDS Foundation, 2001-
Deputy Director, National AIDS Policy Office, 2000-2001
Interim Director, National AIDS Policy Office, White House, 1997-1998
Director, Office of HIV/AIDS Policy, Public Health Service, U.S. Department of Health and Human Services, 1994-2001
Chief Resident, Primary Care Program, UCSF Moffitt Hospital, 1981
Internship and Residency, Internal Medicine, UCSF Clinics and Hospitals, 1978-1981
Gold Headed Cane Honor Society for Exemplary Clinical Skills, UCSF School of Medicine, 1978
M.D. Degree, UCSF School of Medicine

UCSF Diversity in U.S. Medical Schools Key Informant Interview, March 31, 2003

A Good Admissions Process: Reflections about UCSF's Process in the 2000s

There are many eyes. So, it's a human system. We're 75 human beings, so it's not perfect. I think it works pretty well. Most people like the system. Quite a few who are applicants, even those who are turned down, will likely say, 'That's one of the most humane admissions processes, despite the fact that I didn't get into UCSF.' People actually say that.

Henry J. Ralston, III, M.D., Ph.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, July 23, 2003

Making Admissions Committee Service a Priority for All Faculty at Stanford

What does Stanford do, besides having this commitment from the top? What they have done is, they have said, 'People who are on the Admissions Committee will have standing.' The head of the school has said, 'Everybody at some time on this faculty is going to have to take part in this admissions process.' So it's not a question of, well, you know, I'm sorry, I'm too busy. At some point in time, everyone has to take part in it.

Lonnie R. Bristow, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, June 6, 2003

Taking Risks in Admitting Students

I can remember Leon (Rosenberg) stressing this. 'Gamble, gamble! So, you lose a few.' People would always worry about how much you are going to hurt a Black student you bring in who fails, and it'll ruin their lives. Of course, the Black students, if you ever ask them, they just tell you what a pile of crap that is. Excuse the expression, but I think it fits. I don't mean to say that it's different for Chicano students. But that attitude was one that Leon helped me see. So, when you ask—you do look for something obviously. You don't want to bring in the obvious failure, but you bring in somebody you think has got a good chance.

Leroy H. "Roy" Maffly, M.D.

UCSF Diversity in U.S. Medical Schools Oral History Series Interviews, March 2 and July 16, 2004

Every Student is a Risk

I like to take the position that every student is a risk.

John A. Watson, Ph.D.

UCSF Diversity in U.S. Medical Schools Oral History Series Interviews, May 21 and June 12, 2003

Role of Interviews in Admissions Process

I came to the personal conclusion that the interview was *the* main factor in the admissions process and overweighed just about everything else. The members of the committee were certainly aware of that, and I think were just as fair as they could possibly be.

I am not demeaning them in any way, but I also think that human nature is such that there are basic, almost hidden ideas or patterns of thinking that we have, that tend to influence—everything else being equal—what goes on.

It became clearer and clearer to me, an understanding of this force, if you will, or this pattern, that with some experience on the Admissions Committee, I could, almost after the presentation had been made, know who would vote for and who would vote against. It was the same information that they were getting, the same written information and second-hand information.

John S. Wellington, M.D.

UCSF Diversity in U.S. Medical Schools Oral History Series Interviews, February 19, 2003 and December 6, 2004

After the Interviews—Knowing How to Choose

I think that the process we had—we'd vote them up or down after we had a chance to read the interview reports. The first year an (Admissions) Committee member would feel confident that they knew what to do. By the end of the third year, they'd be the first to admit that they didn't know how to pick them. And the reason that would happen is they would get to know the students they admitted and all these students they thought were going to be barn burners, most of them weren't. And the ones that they had doubts about, they were stellar.

Bernard Nelson, M.D.

UCSF Diversity in U.S. Medical Schools Oral History Series Interview, March 9, 2004

The Interview Process at UCSF

Well, we controlled it in several ways. First of all, we couldn't interview 5,500 people and do it properly, so we cut down the number of people who could be interviewed. We said arbitrarily, we could only interview about 550 to 600, maybe 10 percent of the applicants, and it was very tough to get it down to that number.

And so each panel was told that they could have only about this many applicants to be interviewed. But, once that decision was made, interviews were done in *depth*. Each candidate was interviewed for an hour by two different people, preferably those who were of somewhat different backgrounds from each other, and also we had what were called blind interviews. In other words, the person who was interviewing the candidate had never read their file. So, we wanted them not to be prejudiced for or against. We wanted the candidate to come in and sit down, and the interviewer would know only their name.

Lloyd H. "Holly" Smith, Jr., M.D.

UCSF Diversity in U.S. Medical Schools Oral History Series Interviews, February 20, 2003

Influence of Deans on Admissions Policies

Deans' involvement in the process—'hands on' versus 'hands off' the Admissions Committee and subcommittees and Deans' agendas of recruiting more (or less) of one type of student (e.g., science/research versus clinical). Dean's attitudes (may change) over time. Speaking of one dean, he became a real champion of the process so that by his second year as dean, if not the third, he gave us a \$10,000 a year grant for recruitment that we could use as we wished. He sponsored our first minority weekend, which was at my house, and maybe it was something he wanted us to do permanently. I felt it was a part of the process, and I enjoyed talking with him and felt that he was receptive. By his second year, he was calling minority students from his home on Saturday to try to recruit them to come to the institution so he became a real champion of the efforts.

Michael V. Drake, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, February 10, 2003

Influence of the Director of Admissions

I think quite often what's happened is that the Director of Admissions has had a major impact, and the unseen force has been that person. I think that while we had some very good people, and I don't know that I want to point any fingers at anybody, but necessarily what happens is that you end up having a Director of Admissions who is not sympathetic. So, while the institution may be sympathetic, as is shown by wringing of the hands, the execution of the process is so dependent on the Director of Admissions.

Leroy H. "Roy" Maffly, M.D.

UCSF Diversity in U.S. Medical Schools Oral History Series Interviews, March 2 and July 16, 2004

On Becoming Involved as Associate Dean for Admissions

I'd been Chairman of Medicine for 21 years, and I thought I'd had plenty of direct medical administrative responsibility..... And when I got into my 60s and had more than two decades of that I thought, well, maybe I should do something else for a change. I wanted to stay here at UCSF. I was deeply interested in the institution, and I thought I'd had some experiences that could be useful, and so I was offered (the position) of Associate Dean. And then the question was, what should I do to be useful other than offering unsolicited advice?

It was a vital position. My own feeling then, as it is now, about the quality of the graduates of the medical school: it is much more dependent upon the quality of the people who enter it than what we do to them during four years of captivity. If you bring superb people in, they will survive almost any curriculum and so I felt that that was the single most important committee on the campus. It has a product. Most committees have no product. They have a report they just file away and nothing happens but this has 141 products.... And you can see the product sitting there fresh-faced and eager in September.

Lloyd H. "Holly" Smith, Jr.

UCSF Diversity in U.S. Medical Schools Oral History Series Interview, February 20, 2003

Experience Before Joining the Admissions Committee at Stanford

Actually, I didn't have any experience with medical school admissions before I joined the (Admissions) Committee, but I had a lot of experience with admissions at the residency level and at the postdoctoral fellowship level, because I was part of the committee that selected medical residents and part of the committee that selected postdoctoral fellows from that group. It was when I got elected to the Faculty Senate that was the first time that I began to think about school-wide issues, rather than what made sense at the departmental and divisional level. That's when I decided that I would begin to participate in the medical student process. I was asked by the then director of the Faculty Senate, who asked me to join the committee with the ultimate goal of my learning enough to be the chair, and I thought that would be a good fit for me.

Gabriel Garcia, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, December 5, 2003

The Challenge of Continuing to Increase Diversity in Admissions

It requires continued attention and perseverance and caring...I think it's still a good challenge. It's not as challenging as it was. The need was much deeper, and I felt that it was much more deeply felt. I think we made progress. I knew it would take more than 25 years when we started; we always talked about 25 years....But I think progress has been made, which is nice to see. And there's still more progress that can be made...but if they don't come to your medical school, it's okay if they go to UCSF. The sense that if they don't get into your school, they'll get in somewhere. It gives you the sense of including minorities across the board, if the national pool of physicians is your goal. Yes, that's really the biggest goal of all.

Leroy H. "Roy" Maffly, M.D.

UCSF Diversity in U.S. Medical Schools Oral History Series Interviews, March 2 and July 16, 2004

Change in UCSF Admissions Policies

Policies had been established over a period of twenty years when I started (1993), and then they were modified by the Admissions Committee. There was an Executive Committee of about half a dozen people that would meet every few weeks. It would continually adjust and modify policy. The subcommittees (or panels) themselves, of which there were five, would meet and talk about things that would affect the policy decisions based on individual cases. Some of those would lead to the discussions that would make it to the Executive Committee. Some would just kind of titrate and modify the committee as it sat. Each summer, the Executive Committee and members who chose to voluntarily attend a half-day session would talk about the last year's process and suggest changes for the future. In my days, those changes would come to our office and the deans would sort of make a decision about which ones to implement. But it really was an accurate process of students and faculty, cases of (individual) students to general cases to policies to change.

Michael V. Drake, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, February 20, 2003

UCSF Admissions Committee Size and Composition: Adding Diversity to the Committee

The big committee was very interactive. We could put in the personal time to be able to look at (applicants') characteristics...because we had 75 people on the committee. The other thing that the big committee (did) is allow us to use students and, during my time, we increased the number of students from 20 percent to 33 percent. Students work about as well as the faculty, and the student body is more diverse. The diversity of student applicants to be on the committee was a really important criterion in choosing who we were going to have. So, assuming that all of our students were roughly equally qualified and that 50 or 60 each year would volunteer to be on the committee, we would look for ultimate balance on the committee by mixing the students with the faculty. And they were quite a big help. So educating the faculty was one thing. Being able to diversify the committee by adding students was another—having the community broadly invested in the process because they were part of it.

Michael V. Drake, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, February 20, 2003

Change in UCSF Admissions after SP-1 and SP-2 and Proposition 209

When I was admissions dean in 1999, we had successfully tuned our admissions program so we made as many offers to minority students as we did in 1994...within one or two. So we had, in the wake of SP-1 and SP-2 (in 1995) and in the wake of Proposition 209 (in 1996), we had tuned our process so that without affirmative action we were making the same number of offers we made before.

We were proud of that. But we found that we were yielding only half the students we were yielding before, because the students were choosing to go elsewhere. So, from a 70 percent yield, the highest in the country,...we were very proud and happy about that, we went down to about 38 percent yield and our numbers went from 35 to 40 underrepresented minority students a year to the low 20s....

And I said our real issue now was retention and yield, so it was no longer making sure we had admissions policies that would attract students, it was to get students that we had admitted to, in fact, choose the University of California.

Michael V. Drake, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, February 20, 2003

Changes in the University's Infrastructure to Support Diversity

So, I believe that the university has to change its definition of itself, so that that the infrastructure of the university has to change so that it is more inclusive. So the programs or policies that we support will be things that will help make changes in diversity a part of a change in the infrastructure of the university. How? More people in high positions. More people in medium positions. More people in low positions. A clear recognition of the importance of cultural sensitivity and governance. Changes in the curriculum. Perhaps budgetary stimuli towards being successful in diversifying.

Michael V. Drake, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, February 20, 2003

Populating Positions of Academic Leadership with People Who Represent the Demography of this Country

You know, as a research-intensive medical school, what we think of is creating people who will populate academic medicine in leadership positions in this country in the future. If you want to create a society that is non-discriminatory, then you must, in fact, have opportunities for all members of society. So, having a student body that will feed into those positions in universities, I (think) will end segregation.

What we really want to do is to think about it and say, 'If those positions of leadership today are, in fact, being held by people who don't represent our country's demography, then there must be some reason why this is occurring, and most of us feel that there have been race and ethnic inequities in distribution in educational opportunities. So if you change that in such a way that the opportunities are there, then you will populate positions of leadership by people that represent us. When you talk to admissions officers, you will feel is it okay to choose a student with the expectation of what he or she will become?...So, is it a good outcome of our educational policies? You better believe it.

Gabriel Garcia, M.D

UCSF Diversity in U.S. Medical School Key Informant Interview, December 5, 2003

Stanford's Approach to Increasing Diversity

I started in '74, so it would have been '73, '74 when I was applying. 'Diversity' was a hot topic. Most of the medical schools were trying to track more minorities into the schools, so it was a big deal....My class at Stanford had the highest number of minority students, highest percentage of minority students, I think, ever....

The way Stanford has approached the whole minority admissions program is a model. One of the things that kept me interested and kept me there was that I think they really wanted to do it. ...I think it was not paying lip service to it. When I say Stanford really wanted to do it, I don't know if it was the whole school that wanted to do it but there were enough people that wanted it to happen and really wanted it to happen that made it....

Roy (Maffly) was the one who, I think, first of all who really got it started. I think having somebody that was a well-respected faculty member, who everybody respected and also everybody liked, because Roy, it's hard not to like Roy. Everybody liked him, everybody had respect for him. Everybody knew that he wanted to do the right thing, and he was an academician and that he cared about quality. To have somebody like that really support and want the minority program to work is what made it happen.

The students were always involved, but the students arguing and standing up making statements doesn't go nearly as far as having a real faculty member they respect. And that's what really made the program work, I think. And it was never easy. It was a fight every year.

We always fought over the minority admissions program, and there were always people there who didn't want it to be, who wanted it to change. And there were people like Roy and John Steward who were on the faculty and really wanted it, believed in it, and would stand up for it that made it happen. And there were always people on the faculty who were opposed to it, and so there was always arguments about trying to protect it and there were some years where there were certain people who had power in the Faculty Senate where times were tougher than at other times.

Roger Peeks, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, December 16, 2003

Retention: Student Support

From the 1968-1969 Annual Report of the Student Welfare Committee of the UCSF School of Medicine²¹¹ and the 1974-1975 minutes of the Committee on Courses and Curriculum on the subject of Academic Advising of Medical Students at Stanford medical school^{212, 213} through today's easy-to-access information about student life and resources on medical schools' sophisticated websites and medical student portals, supporting students during their medical school years is a theme that runs through faculty, staff, and student discussions over a period of forty years.

In July 1986, Dr. Michael Drake, then a member of the UCSF Admissions Committee and Chair of the panel on underrepresented minorities, wrote to Dr. Lloyd "Holly" Smith on recruitment and retention efforts:

Two things come to mind when considering the next phase of this project. First, obviously, is to continue to do what is necessary to maintain a sufficient applicant pool, etc. Second, it is important that we support adequately those students who choose to attend here. I have a few ideas of ways that we might (effectively and inexpensively) enhance opportunities for all of our enrollees to excel in our environment.²¹⁴

More than twenty years later, Dr. Drake's "few ideas" about student support for underrepresented students at UCSF have expanded to include a broad range of efforts for all students at UCSF, Stanford, as well as students at other medical schools. Among these are academic support and enhancement (e.g., tutoring assistance, academic advising, prematriculation programs), mentoring, professional and career development, financial aid and management counseling, social and personal support (e.g., peer and group support), psychological support, and other health and well-being resources.

Student support activities have not only become more comprehensive and more structured over the years; they have also come to involve more staff and faculty working in more offices and departments within the medical schools. Many of these activities are reflected in the Liaison Committee on Medical Education's Standards for Accreditation of Medical Education Programs Leading to the M.D. Degree.²¹⁵ There are standards for Student Services for Academic and Career Counseling, Financial Aid Counseling and Resources, Health Services and Personal Counseling, with revised standards noting that students must have access to preventive, diagnostic, and therapeutic health services.^{216, 217}

University of California, San Francisco

UCSF'S STUDENT WELFARE COMMITTEE. This early Committee addressed such issues as student participation in academic affairs, student appeals related to dismissal from the School of Medicine, the organization of Student Faculty Groups to improve communication, house staff welfare, student health, student housing, and student involvement in planning for a new curriculum. Dr. John Watson noted: "It was a broad committee and it had a lot of different people on it and we just dealt with all these issues. We were the body interested in the overall ecology and the health of the students in the different arenas."²¹⁸

UCSF'S ADVISORY COLLEGE PROGRAM. The goals of this program, which is now entering its sixth year, are to help students: 1) foster closer relationships with each other and their advisors, 2) access resources and make career decisions in an informed way, and 3) enhance students' personal and professional development.²¹⁹ The four colleges include students from all four years of medical school and are headed by two faculty mentors, who represent a broad range of backgrounds and clinical specialties and meet with students one-on-one, in small groups, and at Advisory College social events throughout their four years of medical school. UCSF Careers in Medicine, which provides students with UCSF-specific information, is also linked to the AAMC Careers in Medicine site providing general information.²²⁰ Career Advisors mentor students through residency options.²²¹ All three programs are designed to support students' professional and career development.

UCSF'S MEDICAL STUDENT WELL-BEING PROGRAM. Providing free, confidential counseling services to students, this program supports student wellness, including mental and physical health, and spiritual, financial, environmental, and social well-being.²²²

UCSF'S UNDERREPRESENTED IN MEDICINE MENTORING PROGRAM. The Office of Outreach and Academic Advancement within the Office of Medical Education supports “mentoring for medical students, residents, and faculty members by hosting six workshops on topics including: Coming of Age in Medicine: Navigating Medical Training; Good Son/Good Daughter: Family Loyalty and Professional Demands; Sex in the City: Relationships in Medicine; and Roots and Wings: Where we Come From and Where We’re Going; Race, Class, and Gender Politics on the Wards and Beyond.”²²³

Stanford University

STANFORD'S COMMITTEE ON COURSES AND CURRICULUM. This early Committee reviewed different approaches to student advising that had been taken since the autumn of 1968, when Stanford medical school's “elective” curriculum went into effect. These approaches included “advisory teams” consisting of preclinical and clinical faculty as well as medical students, pairs of faculty advisors assisted by clinical students, a “board of freshman advisors” for first-year students and a faculty advisor selected by students during their second to fifth years, and advising done by the Office of Student Affairs.

The Committee considered such problems as the faculty's lack of clarity and comfort in their role as advisors, the lack of availability of faculty to serve as advisors, the amount of time required for a faculty member to become familiar with a complex curriculum and become a competent advisor, and experiences in the Office of Student Affairs detailing particular student problems.

The Committee outlined goals of the advising program, proposed a centrally located advisory program in the Office of Student Affairs, and recommended increased efforts by the Office of Student Affairs to publicize the availability of faculty advisors, additional faculty in clinical disciplines for graduate education, the participation of medical students in an organized way in academic advising through preclinical and clinical panels, and increased opportunities to discuss curriculum and courses during Orientation Week.

STANFORD'S COMMITTEE ON THE WELL-BEING OF MEDICAL STUDENTS. In the late 1980s, there was a Committee on the Well-Being of Medical Students (CWBMS) comprised of medical students and faculty members with a Bluejeans Subcommittee.^{224, 225} In 1986-1987, the Subcommittee raised a number of concerns about issues preceding and including preclinical Year 1, for example, deciding which medical school to choose, housing, transportation, financial planning and financial aid, and personal issues). Concerns specific to Year 1, for example, improving opportunities for students to meet one another, students' orientation to the anatomy lab, the importance of Faculty Preceptor Program, student support groups, research opportunities (Faculty Research Interest List), summer opportunities, preclinical curriculum student advising, confidentiality of student records, minority medical students concerns, lack of an official

statement on affirmative action policy, and lack of information in required preclinical courses on health care needs of different cultural communities.

The Committee on the Well-Being of Medical Students was already involved in sponsoring small self-sustaining student support groups, new student orientation and clinical student orientation, Lifestyles in Medicine panels, Stress Reduction/Relaxation Workshops, Summer Opportunities Panels, a Humanities Group, the Faculty Preceptor Program, and lunch with the Dean. In 1987-1988, the CWBMS's efforts were focused on a student support panel related to medical student impairment; optimizing trust, respect, and cooperation among preclinical students; and recreation facilities. CWBMS was successful in establishing a medical center ombudsman's office, working with Administration to develop a multipurpose resource and lounge area, and conducting surveys of students' experiences with financial aid and clinical clerkship expectations and evaluations.

STANFORD'S MD STUDENT ADVISING SYSTEM. Four advising deans are selected with student input in this system. Each student is assigned a primary academic advising dean who works with the student throughout medical school.²²⁶ The Medical Student Life Advisor, a position established in 2005 within the Office of Medical Student Development, provides students with a confidential resource about issues that impact life decisions, well-being, and academic performance.²²⁷

STANFORD'S OTHER STUDENT SUPPORT SERVICES. Comprehensive student health services, accessible education services, religious life services, and dispute resolution services are also available to medical students.²²⁸

Administrators, faculty, and former students from UCSF and Stanford interviewed during the course of this study had many perspectives on efforts needed to support and retain students.

Retention Begins with Recruitment

I think that retention first starts with appropriate recruitment and making sure that those that you bring in are qualified and motivated to complete the program.

Richard H. Carmona, M.D., M.P.H.

UCSF Diversity in U.S. Medical Schools Key Informant Interviews, January 10 and February 14, 2003

Retention

Retention is very dependent on the quality of intake, because if you bring in people who are destined to fail you can have all the good intentions about retaining in the world and it isn't going to work. So these things are linked.

David Korn, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, December 17, 2003

Stresses of Medical School—the First Year—and the Urgent Need for Students to Succeed

To begin with, the first year of medical school is stressful for everybody. The last thing in the world I ever want to do is repeat that first year of medical school. It was terrible. Maybe it still is terrible. I don't know. Secondly, since the recruitment effort was national rather than local, there were all of the problems that students at that age of 21, 22, 23 have in simply learning to live in a new community, fairly large separations from family. Thirdly, there was concern that some of these students had deficits that had to be made up, not because of intellect but because the nature of their educational experience and finally, there was a sense that it was urgent that these students be successful.

Isidore S. Edelman, M.D.

UCSF Diversity in U.S. Medical Schools Oral History Series Interview, July 16, 2002

The Importance of a Single Person in Student Affairs in Supporting an Entire Class of Students

There was a woman in Student Affairs in the School of Medicine (at UCSF) who had the ability to take people under her wing and care for them in a way that was really extraordinary. Not intrusive, but kind of like an older sister or a family member, you know, the confidante aunt or something like that.

But she really targeted every student, there were a hundred of us, everybody felt that they had a personal relationship with her. And I think that went a long way to transition, every minority student that was accepted, but also every student. It made us feel like a family.

You had intimate kind of access—a relationship with someone at the medical school the day you started and you maintained the relationship for four years. It wasn't just that first year. She had an attitude that said, 'I'm going to show you the ropes. Let me know what your problems are. If I can't figure them out, I'll help you figure them out,' and she really took that to heart.

'You're part of us now.' That was conveyed on the first day, by her and by the Chancellor. I can remember his talk the first day. 'You're part of us now and we're there for you and we're going to get you through this.' So there was a real excitement. You felt, as I said, embraced by the school on multiple levels.

Eric Goosby, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, March 31, 2003

Role as a Teacher and Mentor

I always saw my role as well, we dug a hole, planted the seed, nurtured it, and got it up to a certain height, then it was the role of somebody else. But my role was to get it so that I knew it was stable and steady. What society needs more of, I think, is people to plant seeds and nurture.

John A. Watson, Ph.D.

UCSF Diversity in U.S. Medical Schools Oral History Series Interviews, May 21 and June 12, 2003

Finding People like Me Who Followed a Path like Mine

For underrepresented minorities, the idea that I can find people in this medical school who are like me and whose road has been like mine is very important.

Gabriel Garcia, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, December 3, 2003

I Don't See Enough People like Me

Even the under-prepared students who struggle are enormously talented people fundamentally, and they look at the faculty and think, 'You know, I don't see enough people like me to convince me that this is within the realm of possibility for me.' The students will say that. I've talked with a lot of our students and that's what they've said. For example, internal medicine is having problems. People look at the salary and the work hours, and a lot of the people who would have gone into internal medicine without a thought before are choose something else....When students who have one additional consideration, look at our faculty and see four African Americans, they say...

Molly Cooke, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interviews, June 5 and 16, 2003

Mentoring and Faculty Success

If you think about what is still the main currency for success in the faculty, it's mentorship. And if you think about what we're talking about is people in mentoring programs, people who mentored students, and people who mentored other colleagues about this idea. It is the politics of life. Politics is nothing more than mentoring larger populations, and how well you do that is really determined by your ideas, your ability to communicate, and how good a person you are.

Fernando S. Mendoza, M.D., M.P.H.

UCSF Diversity in U.S. Medical Schools Oral History Series Interviews, March 25 and May 12, 2004

Mentoring and the Family

Mentorship is very key and mentorship for underrepresented minorities is especially key. I always thought it was important that the students should have more than one mentor, probably somebody who would mentor them on their career and somebody who was there for them on big things—on philosophy of life and to discuss life. And that's why we have a number of programs...(In one program), we have a mentor who has a group of students and they're a "family," and they stay a family throughout and that has been very successful. They have dinner meetings. They have social meetings. There is a one-to-one relationship.

Haile Debas, M.D.

UCSF Diversity in U.S. Medical Schools Oral History Series Interview, January 31, 2003

Diversity Has a Face and a Family behind It

So when they come here (to Stanford) and they see that it's not just page 22 in the catalogue but it has a face and has a family behind it. This is the kind of school I want to go to. That's a very powerful statement....And to see it in action is very powerful.

Gabriel Garcia, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, December 3, 2003

Peer Mentoring and Support

You see, I think one of the great things, when you have a significant number of underrepresented minorities, they become advisors to each other. When the numbers decline, there is not a critical mass to support themselves. Our students will tell you, you know, in the exit interview, medical students will say what was the most important things you value, and they will say, 'The diversity of the student body.' It is interesting.

Haile Debas, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, January 31, 2003

Critical Mass

The concept of critical mass is not easy to enumerate, because it's sort of a number but it's also enough so that you have a sense that you won't be the only person there. You won't be the only person who has to speak for your ethnic or racial group. You won't be the only person to give an opinion about how you feel and to make sure that people recognize that there is a variation and grading of opinions.

Gabriel Garcia, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, December 3, 2003

Helping Students Realize that They're Not Alone

I think the more you can help students, residents, and practicing physicians realize that they are not alone, the stronger they will perform in what they're doing....It took me a long time to realize that and I think the educational community has to understand that. These are not crutches, these are ways to be successful and that's where the emphasis has to be.

Lonnie R. Bristow, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, June 6, 2003

Really Getting to Know the Students

I think that there's a foundation here where you really get to know these students. We're not stretching them to the point of stressing them, but we talk with them lots about what they're really having trouble with. We make them think a lot about taking care of people who are dying, and we see them with each other and how they respond to tears or to anger. Those relationships will put the faculty in close connection with a small number of students....

Molly Cooke, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interviews, June 5 and 16, 2003

Support for All Students

I want all students to be able to say, 'I have difficulty navigating this because I've never been in a system like this.' Some of them are going to get good advice from peers, and some of them are not going to get good advice from peers, so you really need an institutionally led navigation exercise and that has to include academic advisory support, counseling, all that kind of stuff.

Gabriel Garcia, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, December 3, 2003

Helping Students Learn to be Successful

Mentoring programs are terribly important. Helping students to learn how to be successful in studying is terribly important, and it's been said by lots of people but different ethnic groups, for example, approach studying differently. It shouldn't be a shock or surprising. Asians tend to study in groups, and African Americans frequently tend to study alone and they have to be taught to have a group which would interact. Where that's been done, they have found that they get excellent academic performance from it, so its a question of creating an environment with guidance to let them know that this is the way to be successful in what (they) want to do. This is how to be successful.

Lonnie R. Bristow, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, June 6, 2003

Core Advisors at Stanford

What we put in place was a group of core advisors. They meet with students and say, 'What are you going to do while you're here? Let's anticipate your success. Let's anticipate where you're going to need some extra help and then try to link people.' It's not necessarily that the advisors are going to provide the answers. They are going to provide the links to the answers, and we think that that works much better. We instituted this system from the system at Duke and the University of Rochester.

Gabriel Garcia, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, December 3, 2003

Stanford Was a Supportive Community for Everybody

The thing that was successful about Stanford was that it was a very supportive community for everybody. When Fernando (Mendoza) and I, when we came into the Dean's office, we were put there so that the minority students would feel more comfortable coming...; they thought it would be better if they had minority deans in there. I think that was just a part of their whole nurturing nature.

They really wanted to make sure the students had whatever it took to get them to wherever they wanted to be. So whatever the student wanted, it was our job to sort of help them find out how to get there, and if they didn't exactly know what they wanted, we'd talk to them to try to help them find out what it was that they wanted. One of the four Deans in Student Affairs met with each student.

We divided students up so all the first-year students got a one-on-one with one of the Deans early. Just to get to know them. And all the minority students went to either Fernando or me but we also saw non-minority students, too. We saw everybody. It was just a way of getting them introduced, and it was just a very open door so anytime anybody wanted to they could come in. It was very easy to see somebody. So the whole environment, I think, at Stanford was a very nurturing environment for all the students.

Roger Peeks, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, December 16, 2003

Expectations of Students at Stanford

The expectation is: 'We know that you're going to enter, but we don't necessarily expect you to graduate in four years. In fact, what we'll let you do is use as many of the resources that we can at Stanford and use them well. Putting financial aid programs in place will allow you to do that without going into financial debt, which is a very important piece of that obviously.'

Allow those students to acculturate to medicine, acculturate to the new language, and acculturate to the profession at their own pace. In order for them to do that, we allow them to find something that we value and something that will be of value to them. We try to create in those students, number one, a set of expectations that is important for us and consistent with the mission of our school. Two, hopefully the reason why they're here is that they want to participate in these activities. Three, they can participate in a way that they can balance the classroom work with activities outside the classroom in a way that spaces out the intensity of the learning.

Gabriel Garcia, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, December 3, 2003

Medical School Curriculum

Many factors have combined over the past four decades to bring about changes in the curricula in medical schools throughout the nation, including UCSF and Stanford. Each of these schools has taken its own path, developed its own process, and contributed its own innovations in medical education over these decades. In each case, the MD curriculum derives from the medical school's interrelated missions in education and training, research, patient care, and community or public service.

Factors Influencing Changes in Medical Education

The transformation of medicine's scientific and clinical knowledge base, a revolution in technology affecting the diagnosis and treatment of disease, and an expanding biomedical and clinical research base with the potential for translation from bench to bedside to community and back again are among the powerful forces influencing changes in medical education.

Other vital forces have been new and emerging behavioral, social science, and information science fields (e.g., bioethics, behavioral medicine, preventive medicine, health economics, health services and health policy research, and medical informatics), all with implications for the organization, delivery, and financing of health care.

There has been as well a growing emphasis on the need to practice evidence-based medicine as well as culturally sensitive and competent medicine and to improve not only access to health care, but also the quality and outcomes of care both by individual physicians and from a systems perspective.

As basic, biomedical, and clinical research and patient care assumed dominance for faculty and medical schools, teaching undergraduate medical students competed for faculty attention. There was a lack of incentive for teaching.

An evolution in the pedagogy of medical education and medical school leadership has helped to change this circumstance. At UCSF, the Academy of Medical Educators in 1999 was “the first medical school entity in the country to encourage interdisciplinary approaches to undergraduate medical education, provide funding for innovative educational programs, support gifted teachers, and sponsor faculty development.”²²⁹ The Academy’s path-breaking efforts have led to other successful efforts to revitalize teaching and reengage faculty in teaching.

There have also been changing standards, some quite recent, for medical schools’ functions and structures, including standards for educational objectives of their MD programs, by the Liaison Committee on Medical Education (LCME),²³⁰ and for graduate medical education by the Accreditation Council for Graduate Medical Education (ACGME).²³¹ Recent educational technology advances have also moved medical schools toward a digitally managed curriculum.

Calls for Reforms in Medical Education

Medical schools over the past twenty years have received all too regular demands that they change the way they educate their students.²³² The *GPEP Report* and the *ACME-TRI Report* from the AAMC,^{233,234} as well as *The New Biology and Medical Education: Merging the Biological, Information, and Cognitive Sciences* and *Adapting Clinical Medical Education to the Needs of Today and Tomorrow* from the Josiah Macy, Jr. Foundation,^{235,236} the American Medical Association’s *Future Directions for Medical Education*,²³⁷ and the Hastings Center’s *The Goals of Medicine: Setting New Priorities*.²³⁸ Most recently, the Carnegie Foundation for the Advancement of Teaching launched in 2005 a three-year Professional Preparation of Physicians study as part of its Preparation for the Professions Program.²³⁹ The study’s central focus is on the professional development of physicians-in-training at three points in their clinical education: 1) early exposure to “doctoring,” 2) third-year clerkships, and 3) residency.²⁴⁰ Research questions include those focused on:

- Curriculum: How does the formal and informal curriculum support the development of knowledge, skills, and professionalism?
- Pedagogy: What teaching/learning methods facilitate learning of knowledge, skills, and values in clinical education?
- Learning: How do students/residents learn to think, perform, and act like a physician? What are the common struggles and transitions that students/residents encounter in becoming physicians?
- Assessment: How are the knowledge, skills, and professionalism of students and residents assessed?
- Context: How are current university and practice environments affecting teaching and learning for students and residents? What should medical education be doing differently?

Molly Cooke, M.D., Director of the Academy of Medical Educators (now named the Haile Debas Academy of Medical Educators), and David Irby, Ph.D., Vice Dean for Education within

the UCSF School of Medicine, are Senior Scholars at the Carnegie Foundation for the Advancement for Teaching and Co-Directors of the investigation.

In a 2006 article, “American Medical Education 100 Years after the Flexner Report,” in *The New England Journal of Medicine*, Dr. Cooke, Dr. Irby, William Sullivan, and Kenneth Ludmerer describe medical education as being in “a perpetual state of unrest.”²⁴¹ Much of the unrest, the authors point out, has been criticism of the emphasis in the curriculum on scientific knowledge “over biologic understanding, clinical reasoning, practical skill, and the development of character, compassion, and integrity.”²⁴² The authors go on to say in their comments about learning medicine as professional education:

All forms of professional education share the goal of readying students for accomplished and responsible practice in service to others. Thus, professionals in training must master both abundant theory and large bodies of knowledge; the final test of their efforts, however, will be not what they know, but what they do. The purpose of medical education is to transmit the knowledge, impart the skills, and inculcate the values of the profession in an appropriately balanced and integrated manner.²⁴³

Much of the history of curricular change at UCSF and Stanford, as well as at other medical schools, can be described as efforts at different points in time and over time to fulfill this purpose. The MD curriculum, the learning environment within the medical schools, and expectations of—and for—students entering the MD programs have been and remain strong influences on who applies to the programs, including the diversity of applicants, and the varied contributions that graduates of the programs make.

Curricular Reform at the University of California, San Francisco

THE PATHWAYS TO DISCOVERY PROGRAM. UCSF is in the process of restructuring its learning experience through the Pathways to Discovery Program, which will incorporate undergraduate and graduate medical education as well as all schools at UCSF. The program is designed to expand opportunities for students, residents, fellows, and faculty members to pursue training for careers of inquiry, innovation, and discovery.²⁴⁴ Vice Dean for Education, David Irby, Ph.D., who first introduced the pathways concept at the UCSF School of Medicine’s 2006 Leadership Retreat, has noted that the program “builds on existing academic programs and capitalizes on the strengths of all UCSF schools. The goal is not just to produce great physician-scientists, but future leaders and innovators.”²⁴⁵

The Pathways are:

- Clinical and Translational Research
- Global Health
- Health and Society
- Health Professions Education
- Molecular Medicine

The Pathway Program Principles are:

1. Pathways will promote the advancement of discoveries, inquiries, and innovations that lead to improvements in human health.
2. Each pathway includes a rigorous course of study and requires a substantial commitment from trainees.
3. The pathways program is available to professional and graduate students from all four professional schools, to residents, and to clinical fellows.
4. Mentoring of trainees is a key component of the pathways program.
5. The pathways program has been designed to streamline additional time required in training.
6. The Pathways to Discovery Program is an elective program and participation is voluntary.²⁴⁶

The format of a pathway includes coursework, a mentored project, and the production of a legacy to the UCSF community and/or to health and health care at large.²⁴⁷ A wide variety of potential project topics and formats are available (e.g., traditional biomedical, clinical, or social science investigation, the development of a new part of a curriculum, an innovation of a new method to deliver health care in an underserved community in the U.S. or abroad, or analysis of proposed health care legislation).

The pathways program builds on the success of earlier UCSF School of Medicine curricular reform efforts initiated by Dean Haile Debas in 1997 after Liaison Committee on Medical Education accreditation reports had repeatedly “criticized (the school) for lack of instructional innovation and curriculum oversight.”²⁴⁸

MD CURRICULAR REFORM: THE POLICY STRUCTURE. An Office of Medical Education was established within the School of Medicine in 1997. The office has provided a focus for curricular development coordinated by the Office of Curricular Affairs and has taken on many other responsibilities since that time, including faculty development, instructional technologies, and educational evaluation and research. Other areas of responsibility include admissions, outreach and academic advancement, graduate education, continuing medical education, community-based education, international programs, and student affairs. Curriculum reform committees report to the Committee on Curriculum and Educational Policy, a subcommittee of the UCSF School of Medicine Faculty Council. Two steering and policy committees—the Essential Core Steering Committee and the Clinical Studies Steering Committee—oversee integration, content quality and consistency, and course evaluation reports in the first and second year block courses and all the third and fourth year clinical experiences including the transition between the Essential Core and the clinical years.²⁴⁹ Theme Advisory Groups examine longitudinal inclusion of such topics as behavior, culture, epidemiology, ethics, genetics, geriatrics, health policy, medical informatics, medicine and humanities, patient simulator, and prevention and meet regularly with block design committees.

MD CURRICULAR REFORM: THE PROCESS. In 1998, under the leadership of Vice Dean Irby, the school undertook a five-phase curriculum change process, which members of the reform team describe as being linked to an eight-step leadership model.²⁵⁰ The phases included: 1) establishing a compelling need for curricular change with leaders creating a sense of urgency and building a guiding coalition to act; 2) envisioning a bold new curriculum with leaders developing a vision and communicating it broadly; 3) designing the curriculum and obtaining the necessary approvals with leaders empowering broad-based action and generating short-term wins; 4) developing specific courses for the new curriculum with leadership continuing to empower broad-based action, generating short-term wins, consolidating change, and producing more change; and 5) implementing and evaluating change with leaders further consolidating gains, producing more change, and anchoring new approaches in the institution.²⁵¹

MD Curriculum Reform: The Content. Four outcome learning objectives were initially adopted for the MD curriculum in 1998:²⁵²

1. A capacity for self-evaluation and moral reflection to sustain a lifetime of responsible, committed, and compassionate practice of medicine.
2. A commitment to continuing learning and to teaching patients and colleagues.
3. An understanding of the scientific foundations of medicine, with particular attention to common diseases and life-threatening emergencies.
4. A mastery of core clinical skills needed to evaluate and care for patients.

MD program objectives (i.e., the educational experiences providing medical students with core knowledge, skills, and attitudes) were organized at UCSF to coincide with competencies adopted in 1999 by the Accreditation Council for Graduate Medical Education (ACGME).²⁵³

- Patient Care
- Medical Knowledge
- Practice-Based Learning and Improvement
- Interpersonal and Communication Skills
- Professionalism
- Systems-Based Practice.

The Essential Core. A major change in the curriculum was to replace eight parallel departmental basic science courses with an Essential Core of interdisciplinary block courses organized around central systems or themes as well as key cases during the first two years of medical school. In the first-year Essential Core, the students now have these blocks:

- Prologue: an introduction to essential anatomy, physiology, biochemistry, molecular and cell biology, epidemiology, social and behavioral science, and pharmacology.
- Major Organ Systems: an integrated approach to investigating the cardiovascular, pulmonary, and renal systems.

- Metabolism and Nutrition: an investigation of the gastrointestinal system, endocrinology, and metabolic issues, with additional emphasis on prevention of disorders in these areas and on counseling for nutritional health.
- Brain, Mind, and Behavior: a comprehensive overview of general principles in neuroscience, neurology, and psychiatry.²⁵⁴

In the second year, the blocks now include:

- Infection, Inflammation & Immunity (I-3): an overview of microbiology, immunology, and infectious disease as well as public and international health issues.
- Mechanisms, Methods & Malignancies (M-3): an in-depth and innovative look at the pathology and therapy of major human cancers, and a broad exploration of relevant disciplines, including epidemiology, genetics, hematology, culture, behavioral sciences, ethics, and complementary and alternative medicine.
- Life Cycle/Epilogue: a study of the human developmental sequence, considering special topics in childhood and adolescent medicine, men's and women's health, and aging. One day a week, in the Epilogue component, students review and integrate concepts presented earlier in the Essential Core through case-based study in large and small groups.²⁵⁵

The Foundation of Patient Care (FPC) block spans the entire Essential Core, covering clinical skills, professional development, and clinical reasoning.²⁵⁶

The Clinical Core. In the third and fourth years, Clinical Core studies include third-year required clerkships and fourth-year rotations. In addition to the introductory "preparation for the clerkships," four one-week intersessions, or integrated classroom instruction, are introduced between clerkship blocks.

Advanced Studies. A part of the Clinical Core in the fourth year these studies include advanced clinical rotations, blocks for scholarly research, and learning teaching skills.²⁵⁷

The Digital Curriculum and Digital Curriculum Management. In 2001, the need for a curriculum management tool that incorporated curriculum planning and oversight led to the adoption of Ilios, a web-based application that supports faculty, students, and staff with a multimedia learning materials database and a means of tracking course information and generating reports.²⁵⁸ Ilios is coordinated with the electronic curriculum, medRocket (later called IRocket).

MD CURRICULAR REFORM: LAUNCH, EVALUATION, AND CONTINUOUS IMPROVEMENT. After four years of planning, the new core curriculum was launched in 2001 as was a reconfigured third-year curriculum; the new second-year curriculum was rolled out in 2002; and a revised fourth-year curriculum, in 2003. After these major reforms were introduced, curricular review and reform continued at UCSF, shaped by year- to-year course evaluations and research, plans for curricular improvement, self-study for accreditation reviews for MD and GME programs, the LCME and ACGME review reports, as well as by UCSF School of Medicine's goal to continue its leadership in the field of medical education. Annual Reports of the Office of Medical Education from 2001-2002 through 2006-2007 show year-to-year progress in curricular reform,

refinements over the years, and results in the form of student scores on the USMLE Step 1 and fourth-year comprehensive clinical performance exams.²⁵⁹

UCSF's MD curriculum has shifted in the past decade, as it has at many other medical schools, toward integration of basic sciences and clinical studies, earlier clinical experiences (in the first and second years), longitudinal preceptorships in primary care settings, interdisciplinary courses on clinical skills and professional development, decreased lecture time, increased small-group learning experiences, increased use of clinical cases and problem-based learning, student-directed learning, and student advancement linking MD learning objectives to GME competencies, and digitally managed learning.²⁶⁰ The new Pathways to Discovery Program now provides students with opportunities to go beyond the core curriculum in areas such as basic or clinical research, community health, global health, and medical education.²⁶¹

DUAL DEGREES AND OTHER PROGRAMS. UCSF offers students several degree options in addition to the MD degree program:

- Medical Scientist Training Program (MSTP) (MD/PhD)—prepares students for careers as physician-scientists through a NIH-funded program supporting tuition and fees and stipend. Twelve students are admitted each year to the program.
- UC Berkeley-UCSF Joint Medical Program (MD/MS)—trains physician leaders in human, sociocultural, and bioethical contexts of health and disease. A five-year program with students completing three preclinical years and intensive research training at UC Berkeley and then choosing thesis topics in historical, social, ethical, epidemiological, or policy aspects of human health and disease and completing clinical core during two years at UCSF.
- UCSF-UC Berkeley Joint MD/MPH Program—allows students to earn an MPH between third and fourth years of medical school. Students take introductory coursework in public health, epidemiology, health policy and management, social and behavioral sciences and may select one of three concentration areas.
- MD with Thesis—provides an opportunity for students to pursue in-depth research in basic or clinical sciences, social sciences, ethics, and other areas and write a thesis.
- MD-PhD in History of Health Sciences Program—offers students an opportunity to earn a doctoral degree through the Department of Anthropology, History, and Social Medicine with a full payment of tuition and fees and a stipend for four years of graduate study. Students complete first two or three years of MD curriculum and then join the History of Health Sciences Program.
- Program in Medical Education for the Urban Underserved (PRIME-US)—a new program for students interested in working with underserved populations at an individual and a community level to equip them in becoming physician leaders in improving the health care and health of underserved communities as community-engaged clinicians, educators, researchers, and social policy advocates. The curriculum includes a core seminar series, community engagement program, clinical clerkships in underserved communities, a 5th year of study to pursue a Master's Degree; and a formal mentorship program.

Taking Pride in Clinical Training, Clinical Care, and Clinical Research at UCSF

We took pride (in the 1960s and 1970s) not only in our research accomplishments, but in our clinical training programs and in the quality of clinical care that we provided and our leadership in clinical activities, both at the clinical research and clinical service level.

Isidore S. Edelman, M.D.

UCSF Diversity in U.S. Medical Schools Oral History Series Interview, July 16, 2002

Getting Involved in the UCSF Undergraduate Medical School Curriculum in the 1980s

Every department in the medical school has students in which they are more interested than medical students. The reason for that is that medical students are transient recipients of the attention of most departments. The Department of Biochemistry is judged nationally not by how well the (faculty) teach biochemistry, but the quality of their graduate students. The (department spends) six or eight years with their graduate students, rather than three months with their medical students. Similarly, in the Departments of Medicine and Surgery, the interns and residents who study for years and emulate their teachers' careers, are those who we are judged by nationally.

So it's up to the Dean's office, usually, or a few dedicated individuals to focus sharply on undergraduate curriculum. I got involved...got interested really probably in the 1980s when I was a member of the GPEP (General Professional Education of the Physician). So that's the first time I really sat down and thought seriously about undergraduate medical education other than appointing people to organize this course and that course.

Lloyd H. "Holly" Smith, Jr., M.D.

UCSF Diversity in U.S. Medical Schools Oral History Series Interview, February 20, 2003

Changing Medical Education in the 1990s

New curricula were developed (in the 1990s and 2000s) in many schools, and ours (at UCSF) was one of the best. They emphasized multidisciplinary, small-group teaching, self-learning, and early contact with patients. But the foundation for this new curriculum was actually set when students began to see patients early in the first day and then followed them to gain longitudinal experience.

Haile Debas, M.D.

UCSF Diversity in U.S. Medical Schools Oral History Series Interview, January 31, 2003

Bringing Behavioral and Social Sciences into the Curriculum

One of the hallmarks of the curriculum is that we have brought in behavioral and social science as well as the basic and clinical sciences, so that is the triangle that we were trying to incorporate. Frankly, it's the hardest thing to do.

David M. Irby, Ph.D.

Vice Dean for Education, Office of Medical Education, UCSF School of Medicine 1997-present
Dean's Executive Committee, UCSF School of Medicine, 1997-present
Committee on Curriculum and Educational Policy, UCSF School of Medicine, 1997-present
Clinical Clerkship Operations Committee, UCSF School of Medicine, 1997-present
Graduate Medical Education Committee, UCSF School of Medicine, 1997-present
Governing Board for Continuing Medical Education, 1997-present

UCSF Diversity in U.S. Medical Schools Key Informant Interview, May 21, 2003

Medically Competent Diversity Education

I would hope that young men and women come to medical school...embracing diversity, but once they're there, we have to give them medically competent diversity education, so that they understand the difference between when I have an Apache grandfather in front of me from the reservation versus a Wall Street banker with a doctorate in economics. How do I deal with those two people? How do I interact?

Richard H. Carmona, M.D., M.P.H.

UCSF Diversity in U.S. Medical Schools Key Informant Interviews, January 10, 2003 and February 14, 2003

Approach to Curriculum Design

As a curriculum design approach, what we try to say is, 'At each phase of training, what is required for the next phase?' So, we've said, in the first two years, which we call our Essential Core Curriculum, the defining characteristic, the objectives, for that must be, 'What does the student need to know to be able to start the clerkship?' At the end of the clerkship, the question is, 'What do they need for advanced studies?' And then for advanced studies, the question is 'What is required to prepare them to be an effective intern?' So, within that continuum, there is a sort of competency development process. We have several competencies to be worked on within the Clinical Core (medical knowledge, practice-based learning and improvement, systems-based practice, professional communication, and patient care and communication with patients). In our case, it's sort of learning, teaching, and scholarship. It's sort of that continuing process of growth and finally, professionalism.

David M. Irby, Ph.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, May 21, 2003

Curricular Reform at Stanford University

Stanford University School of Medicine, like UCSF, has been engaged over the past decade in

curricular reform of its MD program. A School of Medicine faculty retreat in February 1999 concluded with “a call for major reform of the medical and graduate student curricula and a renewed focus on the school’s educational mission.”²⁶² Organizer of the retreat, Phyllis Gardner, M.D., Senior Associate Dean for Education, said:

...the goal will be to develop a simplified, coordinated core curriculum for medical students, eliminating the course redundancies and overlaps that now exist, while still giving students leeway to go in different directions....We would encourage our students to differentiate themselves as leaders, to become deep scholars.²⁶³

Another goal of the reform was to encourage medical students “to spend an extra year in a scholarly endeavor that would be paid for by the school. This could be a year spent in basic research, bioengineering, informatics, techno-entrepreneurship or community service.”²⁶⁴ Students would earn a second degree for these studies. Spurred by the LCME’s 1998 report criticizing “the condition of (Stanford’s) educational facilities,” and a letter to Stanford President Gerhard Casper from the LCME urging him “to improve the state of the school’s classrooms, library, and computer system,” medical school Dean Eugene Bauer also promised leadership in developing a “comprehensive improvement plan for the educational facilities.”²⁶⁵

MD CURRICULAR REFORM: THE POLICY STRUCTURE. The curriculum developed in 1983 was the responsibility of the Committee on Courses and Curriculum (now the Committee on Curriculum and Academic Policy [CCAP]) of the Faculty Senate with oversight of the curriculum by an Associate Dean for Academic Affairs.²⁶⁶ In 1990, an Office of Medical Education (OME) was established with a Director and a Senior Associate Dean for Education and Student Affairs responsible for education and student affairs for MD, PhD, and postdoctoral fellows; in 1992 an Associate Dean for Medical Education was appointed who was directly responsible for the education program for MD candidates.²⁶⁷ Office of Medical Education staff and responsibilities grew during the 1990s to include: 1) monitoring curriculum quality, 2) working to improve problem courses and clerkships, 3) encouraging curriculum innovation, and 4) assuring effective implementation of new programs and changes.²⁶⁸

Today the OME assists the CCAP in coordination of the curriculum.²⁶⁹ The OME assesses national trends and makes recommendations for curricular modification, sponsors meetings of course and clerkship directors, and contributes to faculty development by conducting workshops and education retreats. The OME manages the course and clerkship evaluation process, with all courses and clerkships reviewed by the CCAP and feedback provided to course and clerkship directors. The OME consists of the Associate Dean for Medical Education, the Assistant Dean for Medical Education, the Division of Evaluation, the Standardized Patient Program, Medical Student Research and Scholarship, the Educators for Care program, the Human Health & Disease course, and the Practice of Medicine course.²⁷⁰

In April 2000, the Faculty Senate appointed a Curriculum Reform Committee with basic science and clinical faculty, student, and ex officio members (the Senior Associate Dean, Associate Dean and the Director of Curricular Reform) and asked the committee to review the school’s nine-point statement of educational goals and report back to the Senate in June 2000.²⁷¹ In June 2000, the Faculty Senate gave the Curriculum Reform Committee a formal charge “to continue to

explore and refine curricular models to implement the mission and goals as revised and approved by the Medical School Faculty Council.”²⁷²

MD CURRICULAR REFORM: REVISING THE EDUCATIONAL MISSION AND EDUCATIONAL OBJECTIVES. The educational mission approved by the Faculty Council on June 14, 2000, was: “to educate future physicians and foster their capacity to make discoveries and lead innovation in the science and practice of medicine.”²⁷³ The educational goals approved for the MD program were:

1. To assure excellence in clinical medicine with emphasis on:
 - a. Understanding the traditional and emerging areas of biomedical and clinical sciences, including the etiology, prevention, diagnosis and treatment of disease.
 - b. Understanding the scientific theory and methodology that form the basis of medical discoveries.
 - c. Utilizing opportunities to explore research and teaching, both broadly defined, in various branches of medicine, with access to the full resources of Stanford University.
 - d. Using technology to manage information and knowledge effectively and efficiently.
2. To develop effective communication skills with patients, colleagues, and the public.
3. To promote leadership training in the various branches of medicine.
4. To promote ethical and moral behavior, the humane and caring practice of medicine and a sense of obligation to improve the health of the public.
5. To promote cultural competency in the science and practice of medicine.
6. To teach the skills necessary to sustain a lifetime of learning.²⁷⁴

The Committee developed and presented six curriculum reform models to the Faculty Senate:

- A mandatory five-year model that includes a year of research in a variety of medically related areas, ranging from basic science to humanities.
- A four-year-with-optional-fifth-year model with an opportunity for students to complete a master’s degree in a number of medically related areas.
- A four-year-with-optional-fifth-year model that maintains the flexibility of the current curriculum while rationally structuring the sequence of courses.
- A four-or five-year model based on semesters.
- A four-year model with an integrated bioscience core.
- A “fix-what’s-needed” model, putting aside the issue of curricular structure temporarily to first address curricular content.²⁷⁵

MD CURRICULAR REFORM: NEW LEADERSHIP. Stanford’s curriculum reform planning process, which, like UCSF’s, extended over a period of four years, occurred during a time when a new

Dean came to lead the School of Medicine. Doctor Philip Pizzo became Dean on April 1, 2001. and presented to department chairs and senior faculty his perspective on priorities for the medical school in the *Dean's Newsletter* on April 2, 2001.²⁷⁶ Under Education and Training, the first of ten strategic initiatives that he proposed for the medical school, the Dean noted the following directions:

1. Carry out a comprehensive review and renewal of the medical education curriculum with the overriding goal of educating future thought leaders by focusing on the development of physician-scientists and leaders in academic medicine and biomedical research, as well as related leadership opportunities in the public and private sectors. To achieve this it is necessary to define the core competencies of requisite knowledge that serve as the essential underpinnings for all MD students. This platform should then permit creative pathways for interdisciplinary education and individualized career development, including, for example, opportunities in: Basic and clinical sciences (broadly defined) including also bioengineering, computer sciences, biocomputation, informatics; Public Health/International Affairs; Advocacy/Public Policy/Government; Education; Law; Arts and Social Sciences; Religion and Ethics; Business/Health Care Financing.
2. Value the importance of outstanding clinical training at Stanford Medical Center and its valued affiliates at the VA Hospital and Santa Clara Medical Center in order to foster excellent clinical skills and knowledge in students and faculty.
3. Sustain and enhance the most outstanding Medical School-based Graduate Education Program which attracts the best students and that prepares them for success as leaders in academia or the public and/or private sector.
4. Create opportunities for graduate students to be acquainted with the principles and practice of clinical medicine in order to foster an understanding and interest in translational clinical research.
5. Develop a continuum for training physician-scientists that extends throughout medical school, graduate medical education and fellowship training. Such a program might be anchored in the M.D./Ph.D. curriculum. Further, efforts to expand the M.D./Ph.D. training program should be sought.
6. Review, expand, and seek to endow the Medical Scholars Program.
7. Seek new funding sources to support educators as well as Medical and Graduate School education programs.
8. Address faculty education opportunities that foster knowledge exchange, communication and research opportunities among basic and clinical investigators and clinicians, including, for example: Faculty retreats can help promote dialogue, collegiality and collaboration. In addition, a robust role for the “teaching attending”

which includes members of both the basic and clinical science communities can help forge new alignments.

9. Review and expand efforts in Continuing Medical Education to optimally engage and align community physicians with Stanford Medical School and Medical Center.

Dean Pizzo initiated a strategic planning process in September 2001, with a strategic planning workgroup on medical education.²⁷⁷ By the time of the Strategic Planning Retreat in February 2002, contributors to the medical education presentation included several groups (i.e., the Curricular Reform Committee and the Faculty Senate, the education retreat, GALE [Grant, Always, Lane, and Edwards buildings renovations] developers, education technologies group, Committee on Courses and Curriculum, the Dean and Senior Associate Deans, Medical Education Associate Deans).²⁷⁸

Four interrelated strategic initiatives were proposed for medical education:²⁷⁹

- Revise the curriculum to address weaknesses and build on strengths.
- Foster and facilitate teaching, advising, and mentorship.
- Develop facilities to meet future curriculum.
- Develop a community service program.

Initiatives for revising the curriculum were:²⁸⁰

- Identify core knowledge and skills required for all students
- Develop required majors (“scholarly tracks”) for all students to enhance independent research capabilities.
- Within scholarly tracks, develop research honors programs for a subset of students.
- Expand the clinical curriculum—particularly in the first years of medical school—to enhance pattern recognition.
- Develop a system of incentives to promote curricular change.

MD CURRICULAR REFORM: THE CONTENT. The revised MD curriculum “integrates basic science and clinical experience with in-depth study and independent research throughout the years of medical school.”²⁸¹ The curriculum consists of five blocks.²⁸²

1. Block 1: Foundations of Medicine—Essential building blocks for understanding medical sciences (the language of medicine) and their relevance for patient care.
 - Foundations of Medicine I (Year 1-Autumn)—Cells to Tissues, Molecular Foundation of Medicine, Genetics, Development & Disease Mechanisms, Gross Anatomy
 - Foundations of Medicine II (Year 1-Winter)—The Nervous System, Immunology in Health & Disease, Introduction to Human Health & Disease, Gross Anatomy of Head and Neck
2. Block 2: Human Health and Disease—Organ-based blocks and relevance to patient care.

- Human Health and Disease I (Year 1-Spring)—Pulmonary, Cardiovascular
 - Human Health and Disease II (Year 2-Autumn)—Renal/Genitourinary, Gastrointestinal/Liver-Skin, Endocrine/Reproductive Systems, Women’s Health
 - Human Health and Disease III (Year 2-Winter)—Brain and Behavior, Hematology, Systemic Infections
3. Block 3: Practice of Medicine I-VI—(Year 1 and Year 2-afternoon sessions two days/week)—Clinical learning to reinforce basic science concepts. Lectures, team learning, small group learning and discussion, clinical skills instruction, one-on-one instruction. Clinical problem-based cases, simulations with standardized patients, computer-based instruction. Topics are arranged around eight threads
 4. Block 4: Clinical Clerkships—(Years 2 [May], 3, 4, 5)
 5. Block 5: Translating Discoveries—Offered in later years of medical school, this block now under development will emphasize the importance of the newest advances in basic science for physicians.

The Scholarly Concentration Program, a new feature of the curriculum created by multidisciplinary groups of faculty, is a required, structured program of study in the MD curriculum. An area of academic focus, or a “major,” the concentrations provide students with independent, faculty-mentored scholarly experiences in areas of personal interest to develop critical thinking, skills in evaluating new data, as well as hands-on experience with research methods.²⁸³ The Scholarly Concentration program builds on the earlier Medical Scholars Program; nearly 90 percent of medical students took advantage of this program with most staying at least an extra year to accomplish this goal.²⁸⁴

Students declare their Scholarly Concentration programs no later than October of Year 2 in one of seven Foundation areas²⁸⁵:

- Bioengineering
- Biomedical Ethics and Medical Humanities
- Biomedical Informatics
- Clinical Research
- Community Health
- Health Services and Policy Research
- Molecular Basis of Medicine

Students may combine their Foundation area of interest with one of five Application areas:

- Cancer Biology
- Cardiovascular Pulmonary
- Immunology
- Neuroscience, Behavior, and Cognition
- Women’s Health

Students must complete 12 total Scholarly Concentration coursework units; they may apply for a Medical Scholars Research fellowship to support their Scholarly Concentration study for a period of six full-time quarters of research spanning three projects.²⁸⁶

Competencies and objectives for medical education at Stanford are organized around the following categories.²⁸⁷

- Knowledge of the Basic Medical Sciences and Organ Systems
- Ability to Apply Clinical Skills in the Care of Patients
- Promotion of Health Care That Appropriately Responds to Social, Cultural, and Health System Contexts within Which the Care Is Delivered
- Knowledge of the Foundations of Population and Evidence-based Medicine
- Commitment to Ethics and Professionalism
- Commitment to Personnel and Professional Development
- Commitment to an Area of Scientific and/or Clinical Inquiry

MD CURRICULAR REFORM: SUPPORTED BY 21ST CENTURY INFORMATION RESOURCES AND TECHNOLOGY: Stanford has made great strides in other areas closely linked to curricular reform—information resources and educational technology. Now with several technology service groups, the campus and the medical school have access to: 1) an infrastructure services group, 2) an educational technology services group, 3) privacy and data security, 4) web and news media services, 5) systems engineering and architecture, 6) administrative systems and technology, 7) the Lane Library and Knowledge Management Center, and 8) a finance and administration services group.²⁸⁸ The Stanford Center for Clinical Informatics (SCCI) and the Center for Immersive and Simulation Based Learning (CISL) support clinical, research, and educational missions. For nearly twenty years, the SUMMIT Lab in the School of Medicine carried out innovative educational technology work, including curriculum development, with students, faculty, and research groups; this work is now being carried on by the Innovations group of EdTech, the educational technology services group.^{289,290} EdTech provides access to the CWP (Curriculum Web Project) Curriculum Web Portal for curriculum content as well as for planning and support, classroom scheduling and support, teaching support, and video services.²⁹¹ A new Learning and Knowledge Center site and concept was approved by Stanford’s Board of Trustees in 2005.

MD CURRICULAR REFORM: DIRECT FUNDING FOR TEACHING AND TO REWARD CONTRIBUTIONS TO TEACHING. Providing an incentive for teaching was providing an incentive for curricular reform. This was another “leg of the stool” that Stanford medical school put in place as it moved toward launching the new curriculum. In fall 2003—to coincide with the launch—the School of Medicine revised the formula to provide 90 percent (up from 80 percent) of medical student and graduate student tuition to academic units for educational purposes, amounting to \$15.4 million for Fiscal Year 2004, as well as \$1 million toward “creative approaches to education and to help in the transition to the new curriculum.”²⁹²

MD CURRICULAR REFORM: LAUNCH, EVALUATION, AND CONTINUOUS IMPROVEMENT. Incoming freshman in September 2003 were the first to experience the new curriculum. A comprehensive

evaluation developed by the medical school's Division of Evaluation, established in 2004 as a framework for ongoing evaluation, involved students and faculty at various points in the course curriculum. Individual and group views on the courses and the curriculum as well as student performance and residency directors' ratings were part of the evaluation.²⁹³ Self-study preparation by the task force for the Liaison Committee on Medical Education review in 2005 provided another opportunity for the School of Medicine to engage in making improvements in the curriculum.²⁹⁴

By fall 2007, evaluation results of the revised curriculum showed that students who graduated that year had higher scores on medical board exams and greater match day success.²⁹⁵ The LCME report in 2006 from its fall 2005 visit gave Stanford medical school—and its Dean—high marks for curricular reform, financial investment in medical education, incentives and rewards for teaching, strengthened academic advising and student support, significant improvement in facilities and learning technology; and minimizing student debt; the accreditation body asked Stanford to report in 2007 on how it would resolve scheduling conflicts between students' regular classes and work in scholarly concentrations and an update on a new system for evaluating students' clinical skills.²⁹⁶ LCME's three areas of concern were: 1) a system for giving students feedback on their performance midway through their clerkships; 2) a way to monitor students' interactions with patients; and 3) the need to step-up efforts to recruit and retain a diverse faculty.²⁹⁷

DUAL DEGREE AND OTHER PROGRAMS. Stanford School of Medicine provides opportunities for dual-degree programs

- Medical Scientist Training Program (MSPT) (MD/PhD)—prepares students for careers in “academic investigative medicine” with individualized curricular and research programs during 5-year period of study. Nine to ten students admitted each year.
- Stanford-UC Berkeley Dual Degree in Public Health (MD/MPH)—students enrolled in the Scholarly Concentration in Community Health may apply for this collaborative program. Most students enter this one-year program after their second year in medical school and continue with the Scholarly Concentration project begun through their MPH research
- Master of Science in Medicine (PhD/MSM)—provides PhD candidates in chemistry, physics, bioengineering, and biology, as well as those enrolled in the various Biosciences PhD programs housed at the School of Medicine, with exposure to clinical medicine to foster translational research in the areas of Cancer/Stem Cells, Cardiovascular Disease, Neuroscience, and Immunity/Transplantation/Infection. Extends PhD study by one year. A limited number of students accepted each year.

Students also have the opportunity to pursue an MBA or JD on the Stanford campus.

Liaison Committee on Medical Education Accreditation Standards

UCSF's and Stanford's revisions in their MD curricula have been strongly influenced by new and revised accreditation standards of the LCME and the ACGME over the past decade. The

most recent (June 2008) LCME standards for accreditation of medical education programs leading to the MD degree address five areas: 1) institutional setting, 2) educational program for the MD degree, 3) medical students, 4) faculty, and 5) educational resources.²⁹⁸ New standards adopted by the LCME in February 2007, which became effective in July 2008, were related to the learning environment, service learning, and clinical and translational research.²⁹⁹

LEARNING ENVIRONMENT (STANDARD MS-31-A). Medical schools must ensure that the learning environment for medical students promotes the development of explicit and appropriate professional attributes (attitudes, behaviors, and identity in medical students).

SERVICE LEARNING (STANDARD IS-14-A). Medical schools should make available sufficient opportunities for medical students to participate in service-learning activities, and should encourage and support student participation.

CLINICAL AND TRANSLATIONAL RESEARCH (STANDARD ED-17-A). The curriculum must introduce students to the basic principles of clinical and translational research, including how such research is conducted, evaluated, explained to patients, and applied to patient care.

Revised standards, effective immediately, were adopted in February 2007 in the area of the educational program for the MD degree.

USE OF EDUCATIONAL PROGRAM OBJECTIVES IN COURSE DESIGN AND EVALUATION (REVISED STANDARD ED-1). The medical school faculty must define the objectives of its educational program. The objectives must serve as guides for establishing curriculum content and provide the basis for evaluating the effectiveness of the educational program.

OUTCOME-BASED OBJECTIVES AND EXPECTED COMPETENCIES (REVISED STANDARD ED-1-A). The objectives of the educational program must be stated in outcome-based terms that allow assessment of student progress in developing the competencies that the profession and the public expect of a physician.

CRITERIA FOR THE TYPES OF PATIENTS AND CLINICAL CONDITIONS ENCOUNTERED BY STUDENTS (REVISED STANDARD ED-2). There must be a system with central oversight to assure that the faculty define the types of patients and the clinical conditions that students must encounter, the appropriate setting for the educational experiences, and the expected level of student responsibility. The faculty must monitor student experience and modify it as necessary to ensure that the objectives of the clinical education program will be met.

In October 2006, the LCME approved technical revisions, effective immediately, related to medical students' participation in research and the educational program.

PARTICIPATION IN RESEARCH (STANDARD IS-14). Medical schools should make available sufficient opportunities for medical students to participate in research and other scholarly activities of the faculty, and encourage and support student participation.

EDUCATIONAL PROGRAM (STANDARD ED-5). The medical faculty must design a curriculum that provides a general professional education, and that prepares students for entry into graduate medical education.

EDUCATIONAL PROGRAM (STANDARD ED-5-A). The educational program must include instructional opportunities for active learning and independent study to foster the skills necessary for lifelong learning.

Several faculty members and administrators in Stanford's School of Medicine had reflections about the MD curriculum in their oral history and key informant interviews for this study.

Curriculum Reform

I think it's making the curriculum fit the mission and the personality of the school.

Gabriel Garcia, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, December 5, 2003.

Stanford's Five-year MD Curriculum

I thought the five-year curriculum was fantastic. As I said, it was one of the things that attracted me. I do think that, at least while I was Dean (1984-1995), over 75 percent of the students took five years or more to graduate. They weren't required to, but what we did was we made the fifth year attractive by charging them a tuition that was the same as a terminal graduate rate. So you pay for four years, and you get the fifth year for a very, very small additional tuition.

We encouraged the students all through those years to explore, to do things, even on the main campus. I was talking to one student, who was Hispanic, who was taking Master Painting courses over in the Art Department. Another student was doing Music because he'd been a music major at college. Others would take courses in the Engineering School or Business School, and we gave them the flexibility in the curriculum so that they could experiment. Or they could do research for a few quarters. I told them when I welcomed them as if they were graduate students and we wanted them to be. I said, "Get into a project, whether it's community health in Redwood City or East Palo Alto or a laboratory or something in between or epidemiology, whatever suits you." And so a lot of our students took advantage of it.

We had fellowship money for this. Even when they were doing their research in the four-year period, they were getting tuition remissions. So they could really cut their costs if they took more time, especially if they took time to do research and get the tuition remission. So there were a lot of subtle and not so subtle inducements to try to do that.... Now, most of them left after five years, but then you've got your M.D./Ph.D.s and double degrees of other kinds and they tailed out to six years, seven, some even eight. But I think that five years rather than four years opened up flexibility for the students to allow them to pursue their interests.

David Korn, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, December 17, 2003

Curricular Change at Stanford

Here in essence there are students entering these small groups and majors of scholarly concentrations from clinical research to health economics. What we want to do is foster their interests and passions in medicine. The observation made by many is that young people come to medicine wide-eyed and, during the years of drudgery, they kind of lose the glow of what it's all about. We think that if we can keep that fire brightly lit, by having people becoming interested—and it's really about them—that will help. I'm interested in young people who really want to make a difference, who are not just good students. We have the luxury, given the number of applicants that we have, but we want them to be driving to excel.

Philip A. Pizzo, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, July 30, 2003

New Ways to Communicate About Opportunities Offered in the Curriculum

The curriculum by itself, and if you look at the catalogue of courses, it's like shaking rocks in a can. But with a website, if you start talking about let's say, community-based opportunities. You can see that Stanford has opportunities to get involved in community-based research. We have outreach programs in middle schools, high schools, in colleges. We have clinics where people can go out and get early clinical experiences. All of those things are really curricula-based, because you get course credit for all of them. But the old school bulletins, which were a list of courses, that's really very dry. But this new, web-based presentation of who we are, I think it's much livelier and a much better way of presenting the curriculum—better than pencil and paper stuff. Well, you can see pictures of the Ravenswood Clinic. You see people there, who's around there, and I think that's pretty important.

Ronald D. Garcia, Ph.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, January 15, 2004

Curriculum Is Now Grounded in Clinical Science

You come in, you start out in medical school, your preclinical and clinical training, then you do residency, fellowship, and it's all broken up into differing expectations around them. What unfortunately happens is students lose the connection to the base of knowledge that they really should be grounded in. So, like other schools, our curriculum now has its basis in clinical science throughout.... This may help with the pipeline issue.

Philip A. Pizzo, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview July 30, 2003

Diversity and Interactive, Participatory Learning

If you've got a diverse class in a lecture, that's not as interesting as a diverse small group. You've just got to look at people being lectured at in a non-participatory way. So our learning moves into different venues, for example, problem-based learning, then diversity becomes even more important because there is interaction and then there is full participation, and so then you get exposed to different opinions.

Gabriel Garcia, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview December 5, 2003

On Teaching Cultural Competency

I've taught cultural competency as a course for a number of years now and one of the first things that I do is, I ask individuals to raise your hand if you were born outside of the U.S. and I'll get maybe 15 percent of the class. So then I'll say raise your hand if you had one parent born outside. It's like 40 percent. And then I'll say, raise your hand if you have one grandparent born outside the U.S., it's easy to get 70 percent. And so I say, now, keep your hand up and look around. And look around because we're going to be talking about diversity issues here, but I'm not talking about something abstract. I'm talking about us.

Ronald D. Garcia, Ph.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, January 15, 2004

Challenges for Stanford: Optimizing Quality and Balance in Education and Addressing Diversity

How do we balance the goal of training leaders and future physician-scientists/scholars and bioscience students with...the diversity of interests and individuals we admit to Stanford? What is the right balance of students planning for careers in academic, industry, clinical practice and others?...

We need to address ways to assure diversity in our medical student body within the context of our New Curriculum and our focus on training and developing physician scholars, scientists and leaders. This will require addressing the alignment between our institutional goals, the criteria of our admissions committee and the expectations and goals of prospective and admitted students. In tandem with assuring diversity in our entering classes, we will also recommend ways to assure the success of minority students while at Stanford.

Philip A. Pizzo, M.D.

Summary, Strategic Planning Leadership Retreat³⁰⁰
Stanford School of Medicine
January 31-February 2, 2008

Student Financial Aid

Over past decades, rising costs of medical education at both public and private universities have confronted potential applicants, applicants, and accepted applicants to medical school. Tuition and fees at public universities have been rising much more rapidly than those at private universities over the past twenty years (See Chapter 2: Increasing Access to U.S. Medical Schools for Diverse Populations: U.S. Demographic, Education, and Medical School Trends, 1960s-2000s, Graduate Medical Education, and the U.S. Physician Workforce.) In 2008-2009, median in-state tuition and fees at public medical schools were \$24,809 (an 8 percent increase from 2007-2008) and at private medical schools were \$43,360 (a 3 percent increase from 2007-2008), based on an AAMC survey with data available for 75 public and 48 private schools.³⁰¹

University of California, San Francisco and Stanford University

Fees at UCSF for 2008-2009 (9.75 months) for first-year California resident medical students were \$25,262 and tuition and fees for nonresidents, \$37,507; the total cost of attendance, including other educational expenses and living costs for students living off campus in non-University owned housing, are estimated at \$46,506 for California residents and \$56,422 for nonresidents.³⁰² At Stanford, 2008-2009 tuition (9.5 months) is \$43,389 for both residents and nonresidents and other non-tuition fees and off-campus living expenses are \$25,686 for a total cost of attendance of \$69,072.³⁰³ Ten years ago, In 1998-1999, UCSF's fees for entering medical school students who were California residents were \$10,080 and tuition and fees for nonresidents were \$19,464; at Stanford, tuition and fees for residents and nonresidents were \$27,982.^{304, 305}

Student financial aid includes grants, need-based and merit-based scholarships,* loans, work study opportunities, Veterans benefits, and other types of support (e.g., reduced or free tuition or elimination of family contributions toward costs).

The greater a medical school's dedicated or discretionary dollars to develop options for student financial aid that provide student educational opportunities, cut costs, or decrease debt burden, the greater the medical school's ability to attract and recruit the highly qualified students who the school most wants to enroll to meet its mission.

During 2008 several private medical schools—Duke, Harvard, the Lerner College of Medicine of the Cleveland Clinic—made announcements about raising endowments specifically for their student financial aid programs, eliminating family contributions for families with incomes below certain levels, or eliminating tuition.^{306,307,308} As we noted in Chapter 7: Stanford University: The Changing Policy Context of a Private University, Stanford also made major changes in its financial aid policies in 2008. Parents with incomes under \$100,000 will no longer be required to pay tuition; those with incomes below \$60,000 will not be required to pay any costs.³⁰⁹

Both UCSF and Stanford now face changing circumstances related to student financial aid. Rising institutional costs are pushing fees and tuition up faster than additional dedicated or discretionary dollars are becoming available for student financial aid. For UCSF, relatively low

* “Merit-based scholarships” are those for which financial need is not used to determine financial aid.

fees and tuition have kept student debt burden for both California residents and nonresidents low for many years, with limited institutional funds from the University of California and UCSF providing need-based grants to supplement students' federal loans. UCSF student debt burden has been rising, now averaging nearly \$100,000. (More than three quarters of all 2008 graduates from public medical schools have debt of \$100,000 or more, and more than 80 percent of private school graduates have debt in this range.³¹⁰) UCSF now faces front-end competition from both public and private medical schools that can provide more attractive financial aid packages (e.g., merit-based scholarships offering students payment of fees, tuition, living expenses, or other options that would substantially reduce student debt).

UCSF does not award merit-based scholarships, with the exception of a very few University of California Regents Scholarships that do not provide substantial dollar amounts of aid. UCSF also has limited institutional funds for need-based grants. The medical school has only recently made raising additional private funds for student financial aid a development priority. UCSF also has other limitations. It can assure aid for one year only to accepted students, who may then be able to negotiate with other schools after learning UCSF's offer. UCSF cannot assure the total costs of education. The University of California sets fees and tuition, which may change from year to year, and no campus, school, or program can guarantee students costs over the course of their education. UCSF School of Medicine fees for 2009-2010 were \$27,129 for first-year California resident medical students.³¹¹ The Regents approved student fee increases for undergraduate, graduate, and professional programs on November 19, 2009, with a 6.8 percent increase in UCSF medical programs.^{312, 313} The fee increases for undergraduate and graduate professional students will come in two phases, one in winter-spring 2010 and one in summer 2010.³¹⁴

Stanford has historically been—and remains—one of the medical schools with the lowest student debt burden among both private and public medical schools. However, during the past five years, average student debt has increased from about \$61,000 in 2004 to \$86,137 in 2008.³¹⁵ Generous endowments and private donations for student financial aid have allowed Stanford to supplement students' federal loan support with institutional funds through Basic Stanford grants, the Middle-Income Assistance Program, reduced tuition, free tuition for a fifth year for some students, and work-study programs, such as the Medical Scholars Research Program. In recent years, total grants have increased through additional work study program grants.³¹⁶ However, in 2008-2009, endowments for all schools, including Stanford, have been affected by a severe economic downturn. Stanford University's endowment is anticipated to decline by 20-30 percent in 2009.³¹⁷ Tuition increases have already been approved by the Board of Trustees for 2009-2010 for undergraduate, graduate, and professional school students. School of Medicine tuition will rise to \$45,018.³¹⁸ Like UCSF, Stanford's need-based approach to financial aid puts the medical school in competition with schools offering merit-based scholarships. Of the 13 School Consortium of private medical schools, 10 schools offer merit-based scholarships.³¹⁹

Stanford medical school will be exploring in 2009 a number of options to increase student financial assistance in ways that are consistent with its mission through its newly convened Task Force on Financing Medical Education.³²⁰

Both UCSF and Stanford are committed to meeting the needs of all students more effectively, and not “bargaining” with some students about competing offers that they have received from

other medical schools. In addition, UCSF has a commitment to meet the physician workforce needs of the state.

Both UCSF and Stanford face the same question: How do we develop options in student financial aid that are reasonable for our institution that allow us to continue to attract and enroll a diverse student body of the highest quality to meet our educational mission?

Where is Student Financial Aid Going to Come from for Public Medical Schools?

Our (UCSF) alumni, who give roughly \$400,000 to \$500,000 a year, like to give for medical education projects. They are generous when it comes to giving full student scholarships. Even half a million dollars a year, if you put that into principal and try to live off the interest, that's not a great deal of money. That's a problem. The State of California is not going to be able to come up with the money and so, where is the money going to come from? And barring an extremely wealthy alumnus who wants to give \$50 million to the school or something, I don't know where really large amounts of money are going to come from.

Henry J. Ralston, III, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, July 23, 2003

Full-tuition Scholarships from Private Medical Schools

There are things that Stanford is doing and other privates are doing, including full-tuition scholarships, which (UCSF) would love to be able to offer, but we can't do it.

David M. Irby, Ph.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, May 21, 2003

The Importance of Endowments for Student Financial Aid at Stanford

We were fortunate. Stanford had reasonable endowments that had been given for student financial aid..... I got some donors to endow Research Fellowships for minority students.

David Korn, M.D.

UCSF Diversity in U.S. Medical Schools, Key Informant Interview, December 17, 2003

The Importance of Student Financial Aid at Stanford

A lot of students who didn't think they could afford to go to Stanford found out they really could afford to go there, and actually once they got the whole research thing going it was like so cheap to go to Stanford. That really helped....That was one of the big selling points and one of the things that...even at the interview stage most of the students would ask about finances whether there were financial aid or their parents had to pay.

That was always a real big concern and so we talked about it a lot and that was one of the things that, I think, where we were really competitive. We had a real good financial aid package so we talked about that, all the information we sent to them. Whenever they would come we'd have one-on-one contact with them.

The other thing that I always stressed was, 'You don't know what your real financial aid package is going to be because it's all very personal, but if you try, that's going to be a big decision. You compare them and you get the financial aid package from us and we can give you ours as soon as you get accepted. And you get yours from another school and you set them down side by side and see what's going to make the difference.'...

We had federal loans. But the best loans we had were the Stanford loans because they had lower interest. If you can have some of that development money go toward financial aid and target someone for financial aid, that helps a lot.

Roger Peeks, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, December 16, 2003

Student Financial Aid and Values at Stanford

By essentially giving students tuition, it allows them to fund something that we value and something that will be of value to them. That will create in those students, number one, a set of expectations that are important for us and consistent with the mission of our school. Two, hopefully the reason they're here is that they want to participate (in these activities). Three, they can balance the classroom work with the research activities in a way that spaces out the intensity of the learning.

Gabriel Garcia, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, December 5, 2003

The Effect of Student Financial Aid and Indebtedness on Career Choices

I think (financial aid) does affect where (students) come, so there's no doubt in my mind that part of our success in getting students here is financial aid. The second is, once they're here, they're willing to take some risks in terms of their career paths because they're not going to come out with this huge indebtedness and I think that is an issue.

Philip A. Pizzo, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, July 30, 2003

Campus Environment

The environment of the campus includes both its internal and external environment. The internal environment is made up of the people who work, study, and seek services on the campus. This environment also includes campus leadership in administrative, academic, clinical, and support units; and campus facilities and resources, as well as University policies and practices. Formal and informal opportunities for people to communicate and interact around individual, group, and community interests and concerns are also part of the internal environment. The external environment includes the physical and geographical location of the campus, as well as the complex of social, economic, and political forces that at any given time surrounds the campus.

The campus environment is sometimes referred to as the “campus climate” or the “campus culture.” Culture in this sense can be defined as “the set of shared attitudes, values, goals, and practices that characterizes an institution or organization.”³²¹ Culture can also be regarded in a broader sense as “the set of values, conventions, or social practices associated with a particular field, activity, or social characteristic.”³²² Each medical school has its own “culture.” All medical schools also have the “culture” of the field of medicine and the “subcultures” of medicine and science dominant on the campus.

The importance of the environmental context has also been emphasized by John Watson, former Associate Dean of Admissions, UCSF School of Medicine, when he was discussing how to increase diversity:

One of the things I found out is that the impact of context in environment was important. (First), I felt that you could take UCSF, stand on the corner, preach, talk about concepts, and then how to do it...What we do in San Francisco is not easily transferable to Michigan or North Carolina. What they do in North Carolina would not be translated to here.... It's very context dependent. The student pools are different. The faculty mind set. The culture is different. They're different, so within each environment, people have to be able to come up with a system that will work within that place.³²³

The physical and geographical settings of the UCSF and Stanford campuses are vastly different. UCSF sits at the heart of one of the most densely populated and diverse U.S. cities, with a great range in the economic characteristics of its citizens and an estimated median family income in

2005-2007 of \$81,000.³²⁴ Stanford's campus in Palo Alto is in a small suburban community with a high estimated median family income (\$153,000) during this same period, a predominantly White and Asian population, and small Black and Hispanic populations.³²⁵

The environment of both campuses has been shaped by social changes in the 1960s and 1970s—civil rights laws, civil rights activism in the community, campus civil rights and anti-war activism—that altered forever who came to study at the medical schools, who worked at the schools, and who cared for the patients. These early changes laid the groundwork for such campus-wide bodies as the Office of Affirmative Action/Equal Opportunity/Diversity and the Chancellor's Advisory Committee on Diversity at UCSF and the Diversity and Access Office at Stanford and the Office of Diversity and Leadership and the Center of Excellence in Diversity in Medical Education within Stanford's medical school. The environment of both campuses has also been shaped by subsequent changes in the political and social environment, as well as and the policy environment for universities and medical schools of the 1980s, the 1990s, and the early 21st century.

At both UCSF and Stanford, we found that campus leadership related to diversity comes from many quarters, has many forms of expression, and varies greatly over time. Leadership “from the top” varies, given the priorities of university Chancellors and Presidents and medical school Deans and the academic, financial, social, and political issues that these leaders face. Leadership styles related to diversity also vary—from “pathfinder” to “committed, forward-looking, goal-oriented supporter,” to “maintenance-of-effort adherent,” to “cautious follower”—and how leadership is expressed within and outside the campus community. Leadership “from the middle and bottom up” comes from campus-wide and medical school administrative offices, academic department and division heads, individual faculty members, staff, students, student organizations, and standing and ad hoc advisory bodies. Leadership “from outside” comes from community and advocacy groups and individual spokespersons.

University of California, San Francisco

Campus-wide and medical school activities, including diversity initiatives, diversity websites, diversity celebrations and award ceremonies, diversity trainings, and diverse student organizations and interest group activities are all reflections of institutional changes at UCSF over many years that encourage diversity and inclusiveness on the campus. Recent examples of these activities at UCSF that help to shape the campus environment follow:

UCSF CAMPUS LEADERSHIP ON DIVERSITY. Chancellor J. Michael Bishop joined the UCSF faculty in 1968 and served as Chancellor from February 1998 through July 2009. In partnership with other leaders on the campus, he has supported diversity efforts over his tenure as Chancellor, as these words show:

I believe one of our noblest challenges is the need to honor and pursue diversity within every element of our campus community. It is imperative that those from diverse and disadvantaged backgrounds be properly represented in all walks of life, and in positions of authority and distinction. The shape of our future as a culture rests on that imperative.³²⁶

Executive Vice Chancellor and Provost since 2004, A. Eugene Washington, M.D., M.Sc., has played a key role in making diversity a campus-wide priority and working to provide leadership to the strategic planning process and implementation. Michael Adams, Director, Office of Affirmative Action/Equal Opportunity/Diversity, came to his position in 1988 and has provided leadership to an office with expanding responsibilities. The Chancellor's Advisory Committees on Diversity have also played a critical role in advancing policies and programs designed to affect the diversity of students, residents, postdoctoral fellows, faculty, and staff.

In October 2009, Sue Desmond-Hellmann, M.D., M.P.H., began her tenure as UCSF's ninth Chancellor. In one of her earliest messages to the campus community, Chancellor Desmond-Hellmann spoke about diversity:

UCSF's vision is to build upon its commitment to diversity by educating, training and employing a diverse faculty, staff, and student body.

As chancellor, I am committed to furthering this vision to ensure that UCSF continues to excel at the highest levels. Diversity is a defining feature of California. It is also a critical element of our campus life, as the interaction among people of different backgrounds is essential to achieving excellence in teaching, research, patient care and public service and to fulfilling our mission of *advancing health worldwide*.³²⁷

The Office of Affirmative Action/Equal Opportunity/Diversity. The Office has a campus-wide mission "to ensure that every individual connected to or seeking interaction with UCSF receives fair and equal treatment and opportunity."³²⁸ The Office is responsible for preparing affirmative action plans and reports on employment and business practices, providing equal opportunity complaint processing and conflict resolution, encouraging and sharing best practices in recruitment and hiring to enhance diversity, working in cooperation with UCSF schools and departments to develop cross-cultural education and training curricula, conducting campus-wide cultural sensitivity training sessions, providing diversity resources to schools and departments, and sponsoring and organizing diversity events.³²⁹

The Chancellor's Advisory Committee on Diversity. An ad hoc Task Force on Diversity and a Chancellor's Steering Committee on Diversity (1995-1997) preceded the establishment of the Chancellor's Advisory Committee on Diversity as a standing committee (1998). The committee is seen as a way to bring together representatives from across the campus to identify issues and recommend to the Chancellor ways to address issues related to UCSF faculty; staff; students, housestaff, and postdocs; infrastructure, and business subcontracting. During Chancellor Bishop's tenure, he convened in addition a Chancellor's Committee on Academic Diversity and a Chancellor's Executive Committee on Diversity. Several key recommendations were approved by the Chancellor and his Cabinet and have been implemented or are in process, with the origin of some recommendations dating back several years.^{330,331}

- Establish a commitment to diversity as an attribute of UCSF.
- Incorporate "diversity" into the campus mission statement.
- Have UCSF leaders take direct responsibility for promoting diversity as a part of the mission of UCSF.

- Improve the campus-wide discourse on diversity and affirmative actions.
- Establish principles that cultural and intellectual diversity should always be visible in all expressions of UCSF locally, nationally, and internationally.
- Host an annual Diversity Week Celebration.
- Reward schools and departments for faculty and staff diversity progress with a Best Practices Luncheon.
- Host a Diversity Art Inauguration and Celebration.
- Develop an effective and centralized database for accountability that extends across all campus schools, departments, and programs, allowing benchmarks to be established, monitoring, and evaluation.
- Re-establish the “Inside UCSF” program for student outreach.
- Develop an infrastructure to assist hiring supervisors and managers to be successful in meeting their workforce diversity objectives.
- Develop diversity infrastructure at the campus, school and department levels.
- Develop a campus-wide cultural competence curriculum for use of all schools.
- Establish a “Visiting Elective Program” for disadvantaged senior students interested in applying to UCSF GME programs and other graduate programs.
- Implement annual benchmark-based reporting by the Chancellor, each Dean, and the Medical Center CEO on the status of faculty, staff, and student and trainee diversity in the Campus/School/Graduate Division/Medical Center. Reporting will be in writing, presented in an annual public forum for the campus community, and posted on the campus website.

Leadership of Co-Chairs and members of the Chancellor’s Advisory Committee on Diversity and its subcommittees has been a critical factor over the years in advancing diversity at UCSF. The Chancellor’s Committee is staffed by the Office of Affirmative Action/Equal Opportunity/Diversity and also includes a Diversity Celebration Planning Committee to plan for UCSF’s campus-wide celebrations.

PRINCIPLES OF COMMUNITY FOR UCSF. In 2002, the Chancellor’s Committee on Student and Campus Life developed seven principles “to guide individual and group actions on campus.”³³²,
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- We affirm that members of the campus community are valued for their individual qualities and members are encouraged to apply their unique talents in creative and collaborative work.
- We recognize, value and affirm that social diversity contributes richness to the University community and enhances the quality of campus life for individuals and groups. We take pride in our various achievements and we celebrate our differences.
- We affirm the right of freedom of expression within the UCSF community and also affirm commitment to the highest standards of civility and decency toward all persons. We are committed to creating and maintaining a community where all persons who participate in University activities can work together in an atmosphere free of all forms of abusive or demeaning communication.
- We affirm the individual right of public expression within the bounds of courtesy, sensitivity and respect. We recognize the right of every individual to think and speak as

dictated by personal belief, to express individual ideas and to state differences with other points of view, limited only by University requirements regarding time, place and manner.

- We reject acts of discrimination, including those based on race, ethnicity, gender, age, disability, sexual orientation, and religious or political beliefs.
- We recognize that UCSF is devoted to public service and we encourage members of the campus community to participate in public service activities in their own communities and recognize their public service efforts in off-campus community settings.
- We affirm that each member of the campus community is expected to work in accord with these principles and to make individual efforts to enhance the quality of campus life for all.

These principles were approved by the Chancellor's Executive Committee in April 2002, and 17,000 postcard copies of the principles were distributed throughout the UCSF campus community. Banners were also displayed on campus buildings and locations, and in 2003 permanent plaques were placed in several locations.

UCSF SCHOOL OF MEDICINE TASK FORCE ON UNDERREPRESENTED MINORITIES. In 2004, the Dean convened a Task Force on Underrepresented Minorities chaired by J. Renee Navarro, Pharm.D, M.D. "to assess the status of underrepresented minorities within the school's training programs and faculty, reviewing UCSF programs and initiatives that support a diverse community, and identifying successful programs and unmet needs."³³⁴ In 2005, a report of the task force was completed and the School began to implement many of its recommendations, including those about staff diversity, the student pipeline, undergraduate medical education, graduate medical education, and faculty.

UCSF STRATEGIC PLAN. In 2005, Chancellor Bishop launched UCSF's first comprehensive campus-wide strategic planning effort. This two-year effort involved a Strategic Planning Board comprised of faculty, staff, students, residents, fellows, and postdoctoral scholars to oversee the creation of the strategic plan. Board members included representatives from the schools of dentistry, medicine, nursing and pharmacy, Graduate Division, Academic Senate, campus administration, and UCSF Medical Center.³³⁵ "The goals for the strategic plan were twofold: first, to develop a comprehensive, integrated plan based on academic priorities to guide UCSF's direction; and second, to collaboratively engage the UCSF community in the process."³³⁶ The plan, *Advancing Health Worldwide: A Strategic Plan for the University of California, San Francisco*, which was completed in June 2007, has seven strategic directions:

1. Fostering Innovation and Collaboration
2. Translating Discoveries into Improved Health
3. Educating Future Leaders
4. Providing Highest-Quality Care
5. Nurturing Diversity
6. Promoting a Supportive Work Environment
7. Serving Our Community³³⁷

The vision related to diversity is “to build upon our commitment to diversity” and the goal is “educate, train and employ a diverse faculty, staff and student body.”³³⁸ Three strategies are proposed to achieve this goal:

- Create a more diverse campus community.
- Ensure that UCSF continues to attract the best and most diverse candidates for all educational programs.
- Improve diversity among senior leadership.

Annual progress reports detailing implementation of strategic priorities, expected outcomes for the coming year, and challenges provide a way to track steps in implementation. Transparency, data systems to track progress, incentives, and accountability related to recruitment and retention of faculty, staff, and trainees are essentials.

UCSF DIVERSITY INITIATIVE. In 2005, the Chancellor appointed a campus-wide committee to develop a campus-wide strategy related to diversity and identify opportunities to enhance the long-term commitment to excellence and diversity. The campus launched a comprehensive initiative “to promote and nurture diversity at UCSF among faculty, staff, and trainees, coordinate outreach programs, and improve communication related to diversity” organized under the Office of the Executive Vice Chancellor and Provost.³³⁹ The initiative, announced in February 2007, included these 10 points:

1. Implement a comprehensive communication program and diversity webpage.
2. Establish a faculty database for conducting faculty searches.
3. Implement best practices for faculty searches.
4. Develop a comprehensive plan for staff recruitment and retention.
5. Develop a comprehensive program promoting diversity among trainees.
6. Develop a preliminary set of proposals on accountability and incentives.
7. Recruit a director of academic diversity.
8. Establish a coordinated outreach program.
9. Establish school-specific plans.
10. Incorporate recommendations from the Strategic Planning Initiative.³⁴⁰

In August 2007, Dr. J. Renee Navarro was appointed as Director of Academic Diversity “to lead UCSF’s efforts to implement initiatives to nurture and enhance diversity among faculty and trainees, who include students, residents, and postdoctoral scholars.”³⁴¹ Each year the Chancellor has convened a campus-wide meeting to discuss accomplishments, challenges and plans for the future. The April 2009 Leadership Panel provided a visible commitment of UCSF leadership to diversity, a forum to discuss diversity issues, and a demonstration of transparency and accountability about accomplishments and challenges in recruiting a diverse faculty, students, and staff.³⁴²

UCSF NURTURING DIVERSITY WEBSITE. In August 2008, UCSF launched a website <http://diversity.ucsf.edu/> with several features designed not only to provide comprehensive information about diversity on campus, but also to create a sense of diversity of people on campus.³⁴³ *Voices*, a video feature, profiles members of the campus community “to emphasize the importance of diversity in achieving UCSF’s fourfold mission of education, research, patient care, and community service.”³⁴⁴ The website also has a Champions of Diversity section recognizing the program that has honored more than 800 people; a facts and figures section providing data on gender, race, ethnicity of faculty, students, and staff over time; a research and reports section; and a news section. Diversity at UCSF is defined on the webpage:

Diversity refers to the variety of personal experiences, values and worldviews that arises from differences in culture and individual circumstance. Such differences include race, ethnicity, gender, age, religion, language, abilities/disabilities, sexual orientation, socioeconomic status and geographic origin, among others.³⁴⁵

The website was a collaborative effort of the UCSF Department of Public Affairs, the Office of the Executive Vice Chancellor and Provost, the Chancellor’s Committee on Academic Diversity, the Chancellor’s Advisory Committee on Diversity, the Chancellor’s Advisory Committee on Disability Issues, the Chancellor’s Advisory Committee on the Status of Women, and the Chancellor’s Advisory Committee on Gay, Lesbian, Bisexual and Transgender Issues.

Stanford University

STANFORD CAMPUS LEADERSHIP ON DIVERSITY. John L. Hennessy, Ph.D., Stanford’s tenth President, joined the Stanford faculty in 1977 and was inaugurated as President in October 2000.³⁴⁶ In 2005, in *Looking Backward, Thinking Forward: Reflections on 2000-2005 and the Future*, he noted:

One of the challenges that Stanford—and every other institution of higher learning in the country—has faced is the ongoing struggle to strengthen the gender and ethnic diversity of the professoriate.³⁴⁷

Dr. Hennessy also acknowledged in the five-year report:

At the same time, we have been trying to increase the diversity within our graduate student population. We recognize the critical role this plays in diversity in the professoriate and other leadership positions over time.³⁴⁸

Dr. Hennessy and Provost John Etchemendy issued a statement on faculty diversity in June 2001, enumerating steps that would be taken to diversify faculty.³⁴⁹ A campus diversity initiative was established that included the Faculty Women’s Forum, a committee on the status of women faculty, and committees on faculty, graduate students, undergraduate students, and staff, which were part of the activities of a Diversity Action Council appointed in 2002.³⁵⁰ Recommendations of the Council led to adding staff positions in the School of Humanities and Sciences, the School of Medicine, and the Office of the Vice Provost and Dean of Research and Graduate Policy as well as a Faculty Recruitment Office.³⁵¹

In April 2007, President Hennessy issued a reaffirmation of Stanford's commitment to Faculty Diversity.³⁵² He noted:

The University has established a Panel on Gender Equity and Quality of Life to follow up on the work of the Provost's Advisory Committee on the Status of Women Faculty and a Diversity Cabinet of senior administrators and faculty to explore ways in which we can foster and enhance gender, racial and ethnic diversity and equal opportunity for our faculty as well as other segments of the campus community. The Office of the Vice Provost for Faculty Development and Diversity is explicitly charged with overseeing the University's continuing efforts to further diversify the faculty.

He also acknowledged:

... no single policy is likely to be sufficient to achieve our goals. Instead, a concerted implementation of a variety of approaches is necessary to achieve an overall University culture that fosters effective diversity and that can serve as a national model for other universities. While we view this statement and these policies as an important first step, careful attention to practices and viewpoints throughout the faculty will be needed to make significant progress. We call upon all our colleagues to engage actively in this important effort.³⁵³

Stanford campus leadership in diversity, like that at UCSF, comes from many individuals—students, faculty, and staff—in organizations, offices, departments, and divisions within the University's seven schools, including the School of Medicine.

DIVERSITY WORKS AT STANFORD WEBSITE. This comprehensive and well-designed website <http://studentaffairs.stanford.edu/diversityworks> provides information to the campus community about offices at Stanford involved in the Diversity Works effort; diversity in academics and research; organizations and resources for undergraduate, graduate, and professional students; community organizations and resources; and resources for faculty, staff, and alumni.³⁵⁴

STANFORD SCHOOL OF MEDICINE STRATEGIC PLAN. In 2001-2002, Stanford School of Medicine Dean Philip Pizzo initiated a strategic planning process and annual strategic planning retreats. *Translating Discoveries: A Strategic Plan for the Stanford School of Medicine* lays out two overarching priorities:

- Curriculum reform and educational facilities
- Translational research and medicine.³⁵⁵

The plan is organized around strategic program areas: 1) medical education, 2) graduate education, 3) postdoctoral training, 4) research, 5) clinical care, 6) professoriate, 7) finance and administration, 8) information resources and technology, and 9) advocacy, public policy, and philanthropy.³⁵⁶ Diversity is addressed as a goal for medical students, graduate students, postdoctoral trainees, and the faculty.³⁵⁷

STANFORD SCHOOL OF MEDICINE OFFICE OF DIVERSITY AND LEADERSHIP. The Institute of Medicine's release in February 2004 of *In the Nation's Compelling Interest: Ensuring Diversity in the Health Care Workforce*,³⁵⁸ which explored institutional and policy-level strategies for increasing diversity, and Stanford campus-wide and School of Medicine self-study, led to the creation in November 2004 of an Office of Diversity and Leadership under the direction of Hannah Valentine, M.D.³⁵⁹ The mission of the office is:

- To promote with recruitment and retention of diverse faculty, students, trainees and staff representative of the communities in which we work and,
- To develop faculty to their full potential as academic and community leaders.³⁶⁰

A major emphasis of the office is on “new strategies to expand diversity in recruitment and retention of faculty and trainees who are currently underrepresented in academic medicine...”³⁶¹

Faculty, administrators, and former students from UCSF and Stanford spoke about the campus environment in oral history and key informant interviews.

UCSF's Reputation for Excellence and a Supportive Environment

1971-1972 was actually in many ways, the height of trying to recruit minorities and UCSF had a reputation of being a school that had a climate, an environment, that was nurturing for minority students, along with its reputation of excellence. It was my top choice, but there was no question that the sense that it was a welcoming climate contributed to it.

At that point UCSF, when you look at the numbers, it had more minorities and more African Americans than any other school except for Howard...and so it was doing very well. The person who interviewed me, and he was Associate Dean for Admissions...was an African American and I received calls from students who were African American.

A. Eugene Washington, M.D., M.Sc.

Executive Vice Chancellor and Provost, UCSF, 2004-

Professor, Department of Obstetrics, Gynecology and Reproductive Sciences and of Epidemiology and Biostatistics, UCSF School of Medicine, 1994-

MD, UCSF School of Medicine, 1976

UCSF Diversity in U.S. Medical Schools Key Informant Interview, May 12, 2003

People at UCSF Actually Seemed Interested in Having Me

I liked the atmosphere at UCSF. I thought it was a good place to go. I thought I would be comfortable and happy. What I liked about the atmosphere was that I knew that there was an active minority recruitment program (in the mid-1970s). I had friends who were a year ahead of me in college who mentioned that to me, so I got a chance to think about it...I felt that I was a scholarship athlete, because I've got people who actually seemed interested in having me.

Michael V. Drake, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, February 10, 2003

A Spirit of Openness and Tolerance at UCSF

There was diversity in the class, but certainly the faculty did not reflect that nor did the medical school reflect it. But at the same time there was a spirit of openness and tolerance that I found really refreshing. I'd interviewed at all of the big medical schools but it never came through at any other place as much as it came through at UCSF.

Eric Goosby, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, March 31, 2003

An Environment More Receptive to Me

I came to UCSF for most of my internship and first two years of residency for several reasons. One, I was looking for an environment that I thought would be less restrictive, more receptive to me as an individual....

Lonnie R. Bristow, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, June 6, 2003

The Campus Climate and Institutionalizing Diversity Activities

The climate issues are related to cultural celebrations, diversity training that departments have engaged in or plan to engage in, and any other creative ways to embrace difference and _ a climate of welcome to a diverse work force....What I appreciate about the leadership and folks who can make decisions is that they have gone with us to institutionalize some of these activities. They are no longer one-time programs....They're budgeting time and resources, for example, for new student orientation. Every school has embraced a diversity component to new student orientation and it gets rave reviews, school by school, class by class.

Michael B. Adams

Director, UCSF Office of Affirmative Action, Equal Opportunity and Diversity, 1988-

UCSF Diversity in U.S. Medical Schools Key Informant Interview, December 12, 2003

Benefits of Diversity

And I think today in particular there's all this push in the educational community in medicine of cultural sensitivity and, you know, you learn cultural sensitivity when you're in an integrated class....I think there's enormous instructional benefit and maturation benefit in working with colleagues, especially when you've got populations of patients you're learning from who are minorities. It's very helpful to watch how your minority students deal with their (patients') cultural issues. So I have no doubt that it's enriching, mutually enriching.

David Korn, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, December 17, 2003

More on the Benefits of Diversity

When I entered medical school at Rutgers, diversity was hardly the tenor of the day. I had 65 students in my class. Two were women. There was one African American student who came from Nigeria. Things were really different then and I've really watched them change. Medicine in some ways helped them to change. I feel enormously strongly that our role, particularly in medicine, is going to be better by having a much more diverse community in who we work with, study with, and who contributes to patient care. And, in fact, one of the attractions of Stanford is it's a small research-intensive school and it's been highly committed to this for a long time.

Philip A. Pizzo, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, July 30, 2009

Finding Community

So there was a good chance there would be somebody there that you could interact with, that you thought you'd get along with. Just because somebody is Black doesn't mean you're going to get along with them, but if there are ten or twenty Black people there there's a good chance that you'll fit in, that you'll feel comfortable at least with some of the people there. So having a community, I think, makes a difference, having enough numbers there that people feel comfortable makes a difference.

Roger Peeks, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, December 16, 2003

Educational and Health Care Partnerships

Both UCSF and Stanford have opportunities for medical students and residents to train in hospital inpatient and outpatient settings as well as in community health care settings with diverse patient populations. UCSF's teaching sites include those on the UCSF Parnassus Campus (Moffitt and Long Hospitals, Ambulatory Care Clinics, Langley Porter Psychiatric Institute), Mt. Zion/UCSF Medical Center, San Francisco General Hospital, the San Francisco Veterans Affairs Medical Center, San Francisco City Clinic, Kaiser Foundation Hospital, and other hospital and clinic sites in San Francisco, Oakland, Greenbrae, San Rafael, Santa Rosa, Salinas, Fresno, and other communities. Stanford's core teaching sites include Stanford University Hospital and Clinics, the Santa Clara Valley Medical Center, the Kaiser Permanente Santa Clara Medical Center, the Palo Alto Veterans Affairs Medical Center, as well as the Arbor Free Clinic and other community health care settings.

Cross-cultural Education and Training

During the past 10-15 years, UCSF and Stanford medical schools, as well as their affiliated health care teaching facilities, have been confronted by calls for attention to cultural and linguistic aspects of health and health care in the education and training of health professionals and in the provision of health care services. These calls have come in the form of new federal and state laws; accreditation standards for medical schools, graduate medical education programs, continuing education programs, and hospitals; and in guidelines and reports.^{362,363,364,365,366,367,368,369,370,371,372,373,374,375,,376,377}

One of the earliest calls for more support, both curricular and financial, to implement a practical approach for translating cultural anthropology concepts into clinical language for teaching and practice came from Arthur Kleinman and his colleagues, Leon Eisenberg and Byron Good.³⁷⁸ In 1978, they wrote persuasively of the importance of culture in health care in "Culture, Illness, and Care: Clinical Lessons from Anthropologic and Cross-Cultural Research," an article published in the *Annals of Internal Medicine*.³⁷⁹

Since that time, the importance of culture and language in health care has grown as the diversity of the population has grown and as health disparities among populations have become well

recognized. As Agency for Healthcare Research and Quality analysts noted in a supplement to *Medical Care Research and Review* in 2000, “A growing body of federal and state laws, regulations, and standards seeks to guarantee that health systems respond to...diverse linguistic and cultural needs by becoming ‘culturally competent....’”³⁸⁰ Making sure that the health care provided to this diverse population takes into account their linguistic and cultural needs constitutes a major challenge for health systems and policy makers.”³⁸¹

Assuring that medical students are engaged in ongoing cross-cultural, or multicultural, education and training is also a challenge for medical schools. Results of a survey of 126 U.S. medical schools reported in 2000 that 8 percent provided no instruction on cultural issues; cultural instruction was part of a larger course and consisted of one to three lectures in 87 percent of the schools; and this type of instruction was an elective in 16 percent of the schools.³⁸² A later study at Harvard and UCSF reported survey findings showing that medical students believed that faculty and student diversity was a positive component of their education.³⁸³ Eighty-seven percent of students responding stated that diversity enhanced classroom discussions and allowed a dialogue of alternative views; 77 percent said that a diverse classroom was more likely to lead to “greater understanding of medical conditions and treatments for disease/problems.”³⁸⁴ Lie, Boker, and Cleveland found that medical students found content on health disparities, community partnerships, stereotyping, and bias as content most often missing in their courses during the first three years of the curriculum.³⁸⁵

University of California, San Francisco

Cross-cultural, or multicultural, education and training activities at UCSF include school-specific, cross-school, and campus-wide activities involving students, residents, faculty, and staff. Our discussion here focuses on medical students, activities within the School of Medicine, and an example of cross-school activities involving the medical school and the School of Nursing. Within the School of Medicine, student opportunities include both required and elective courses for which academic credit is available, community partnerships offering volunteer opportunities, and projects or programs with a research or policy focus.³⁸⁶

SOCIAL AND BEHAVIORAL SCIENCES IN A NEW MD CURRICULUM. A new MD curriculum at UCSF, as we discussed earlier in this chapter, was launched in 2001. The curriculum is based on three stages—an Essential Core, a Clinical Core, and Advanced Studies. The Essential Core emphasizes an interdisciplinary, clinical case-based approach integrating basic, clinical, and social and behavioral sciences. The Essential Core features lectures, panel discussions, as well as large group and small group learning in Years 1 and 2. Developing Social and Behavioral Sciences (SBS) content for the Essential Core and incorporating this content into the new curriculum by faculty at UCSF was supported by two grants from The California Endowment, as well as grants from the California Wellness Foundation, and the UCSF Academy of Medical Education.³⁸⁷ Faculty used the National Standards for Culturally and Linguistically Appropriate Services (CLAS) in health care,³⁸⁸ as well as the American Medical Student Association’s model program, Promoting, Reinforcing, and Improving Medical Education (PRIME),³⁸⁹ and other reports and teaching materials to develop social and behavioral sciences content.

The work to integrate SBS content began with the Culture and Behavior (CAB) group, which then morphed into the SBS group. CAB had funding from the sources noted above. The current SBS group is funded by a K07 award, with Satterfield as the principal investigator from the National Institutes of Health (NIH) Office of Behavioral and Social Sciences Research (OBSSR). Year 5 of the project began in October 2009.

Five sociocultural themes and three behavioral themes were identified to span the nine blocks (Prologue; Major Organ Systems [Cardiovascular, Pulmonary, Renal]; Cancer; Brain, Mind, and Behavior; Infection, Immunity, and Inflammation; Metabolism and Nutrition; Life Cycle; Integration-Consolidation; and Foundations of Patient Care) during Years 1 and 2.³⁹⁰ The sociocultural themes are: 1) patterns of health and disease across populations; 2) ethnicity, gender, age, socioeconomic status, and health; 3) the cultures of medicine and health care institutions; 4) physician patient relationships, and 5) the experience of illness and/or health.

The behavioral themes are: 1) stress, distress, and coping; 2) understanding and facilitating behavioral change; and 3) personality and social context.³⁹¹ Satterfield, Mitteneus, Tervalon, and Adler, the UCSF faculty leading the effort, note in their description of UCSF's integration of social and behavioral sciences in the undergraduate medical curriculum that "Overarching and guiding principles of the biopsychosocial model and integrative, learner-centered teaching are incorporated" in each of these themes as they are presented in the blocks over the course of Years 1.³⁹²

In 2008-2009, the dedicated Social and Behavioral Science Sessions in Years 1 and 2 include the following:³⁹³

Year 1

Prologue:

- Orientation Diversity Workshop-I
- Biopsychosocial Model
- Bias, Race, and Medicine
- Influence of Socioeconomic Status on Health
- Biopsychosocial and Cultural Issues in Action: Patient Care Interview

Major Organ Systems

- Health Care Disparities

Brain, Mind, and Behavior

- Gender and Race Issues in Depression

Foundations of Patient Care

- Explanatory Model
- Patient Narrative

- Basic Communication Skills
- Medical History
- Cross Cultural Communications
- Cultural Forces Exercise
- Race in the Clinical Presentation

Year 2

Mechanisms, Methods & Malignancies

- Complementary and Alternative Medicine

Life Cycle

- Health Care Issues for LGBT People

Boards

- Diversity Workshop II (at the end of Year II during “Transitional Clerkship”)

Foundations of Patient Care

- Advanced Communications
- Culture and End of Life Care

In Years 3 and 4, Disabilities and Diversity are among topics covered.

Example courses are also laid out in the Social and Behavioral Theme Map. (Multimedia Learning Modules @ UCSF, developed at UCSF or licensed by UCSF and available to the campus community, include a large array of topics by discipline and by course, including the Social and Behavioral Sciences Theme Map.)³⁹⁴

Diversity II Workshop. Members of the School of Medicine SBS Group led by Rene Salazar, M.D., Assistant Professor of Medicine, and Director of Diversity for the Office of Graduate Medical Education, as well as the SBS sociocultural content leader for the undergraduate curriculum, used a model approach—HEALS— facilitating classroom discussions developed in the School of Nursing for a two-hour diversity session in 2008 and a second session in April 2009. There was rising interest among third-year medical students in the session, and feedback from students helped to inform the content of the session, which attracted about one-third of the class, most of whom were students underrepresented in medicine.

HEALS AND DIVA. The HEALS model had been developed earlier in the School of Nursing.³⁹⁵ In 1994, the Dean of the school established a Diversity in Action Committee (DIVA).³⁹⁶ The committee was initially made up of a volunteer group of faculty. In 2005-2006, the committee set as a goal “to examine how well we were meeting our commitment to diversity through out

pedagogy.”³⁹⁷ Kennedy, Fisher, Fontaine, and Holland, UCSF School of Nursing faculty, in their description of the process, note:

As an underlying assumption, we believe a school’s curriculum both shapes and reflects a climate of diversity. We also believe that when diversity is highly visible within the curriculum, there is a greater chance for increased comfort for diverse students to actively participate in learning and in the school community. We believe this will influence the comfort and sensitivity of students in working with diverse populations, as well as the recruitment and graduation of diverse nurses. A potential far-reaching goal is the creation of an academic setting whose diverse graduates would see it as a viable place to return and teach future generations of nurses.³⁹⁸

The UCSF School of Nursing study looked at diversity* content in core courses for all students, as well as master’s specialty, elective or cognate, clinical, and doctoral seminars as well as the integration of diversity throughout the elements of the syllabus.³⁹⁹ Investigators found shortcomings and challenges in their evaluation of diversity in the curriculum. They also found comments from students’ evaluations that indicated “a lack of understanding or awareness of faculty to effectively address the complexity of diversity in the curriculum. These included an inability to articulate the differences or to prepare nurses to effectively integrate diversity in the health care system.”⁴⁰⁰

Students’ evaluations were echoed by School of Nursing faculty when they met to review the study findings at a school retreat; one-third of faculty members said that “they lacked the skills and preparation to more fully address diversity in the classroom.”⁴⁰¹ At the 2006 School of Nursing retreat, the Curriculum Diversity Project was proposed with two objectives:

1. To develop a culture of humility within the learning environment in the School of Nursing.
2. To ensure that all faculty have the tools and comfort to engage issues of diversity.⁴⁰²

The DIVA group, led by Howard Pinderhughes, Ph.D, Associate Professor and Chair, Social and Behavioral Sciences, Michael Adams, Director, Office of Affirmative Action, Equal Opportunity and Diversity, and Susan Kools, R.N., Ph.D, Associate Professor, School of Nursing, looked at changes that might be needed in the school’s classroom climate and curriculum “to promote a feeling of inclusion and develop an optimal environment for learning.”⁴⁰³ DIVA developed a six-module training series, with five face-to-face, process-oriented modules and one online module.

The DIVA Training Program Module 1: Facilitating Emergent Classroom Discussion ⁴⁰⁴ suggests that teachers:

* The definition of diversity used in the study was: “Diversity refers to the variety of experiences and perspectives which arise from differences in race, culture, religion, mental or physical abilities, heritage, age, gender, sexual orientation, and other characteristics. UCSF values and promotes diversity because it enhances the education, workplace, and services to the public by this campus.” Chancellor’s Advisory Committee on Diversity, University of California, San Francisco, 2006.

(S)tart the course by establishing ground rules to establish “an atmosphere of humility, respect and shared ownership. This class is about *xx*, but issues of diversity or difference may come up. Things may be said that cause offense and I may miss it—or I may say something that you believe needs to be discussed. One process we may use to facilitate the discussion is HEALS.

Halt—Your responsibility (as the facilitator) is to halt the discussion. Options should include:

- Pause to consider the comment. You might ask the person to clarify the comment to help you understand it.
- Express appreciation for raising the issue, providing an opportunity to discuss an important element of care.
- Focus on the idea—deconstructing the comment, without placing the individual who makes the comment on the defensive.

Engage with the issue—who is/could be affected?

- Self check. Check the room—look for body language.
- Go there. Discuss the issue.
- Let’s talk about the issues embedded in this concept. Who might be affected?
- What are the health care implications?

Allow—trading opinions/stories/perspectives/articles/reactions

- Let people express their thoughts, beliefs, feelings and experiences Has anyone had relevant experiences?
- What are potential reactions one might have—personal, emotional, intellectual?

Learn—Listen to one another.

- Can we learn from one another’s experiences or observations?

Synthesize—Why does this discussion matter?

- Relate to health disparities/quality of care.
- How did this process of discussion work?
Allow for opportunity to talk more later? Give contact information.

The concept of “cultural humility” was articulated by Melanie Tervalon, M.D., M.P.H. and Jann Murray-Garcia, M.D., M.P.H.* in their 1998 article, “Cultural Humility versus Cultural Competence: A Critical Distinction in Defining Physician Training Outcomes in Multicultural Education.”

* Dr. Tervalon, a graduate of the UCSF School of Medicine, is a Pediatrician and Director for the National Diversity Institute for Culturally Competent Care at Kaiser Permanente. She and Dr. Murray-Garcia were both formerly fellows at the UCSF Institute for Health Policy Studies (now the Philip R. Lee Institute for Health Policy Studies).

...cultural competence in clinical practice is best defined not by a discrete endpoint but as a commitment and active engagement in a life-long process that individuals enter into on an ongoing basis with patients, communities, colleagues, and with themselves (L. Brown, MPH, Oakland health advocate, personal communication, March 18, 1994). This training outcome, perhaps better described as cultural humility versus cultural competence actually dovetails several educational initiatives in U.S. workforce training.... It is a process that requires humility as individuals continually engage in self-reflection and self-critique as life-long learners and reflective practitioners. It is a process that requires humility in how physicians bring into check the power imbalances that exist in the dynamics of physician-patient communication by using patient-focused interviewing and care. And it is a process that requires humility to develop and maintain mutually respectful and dynamic partnerships with communities on behalf of individual patients and communities in the context of community-based clinical and advocacy training models.⁴⁰⁵

ELECTIVE COURSE OPPORTUNITIES. There are numerous elective course opportunities in the Department of Family and Community Medicine, the Department of Obstetrics, Gynecology and Reproductive Sciences, and as Interdisciplinary Courses.

- Caring for the Underserved
- Communicating with the Latino Patient
- Contemporary Issues in Latino Health
- Disparities in African American Health
- Health Issues in the Asian-Pacific Islander Community
- Homeless Health Issues
- Male Physicians of Color
- Medical Cantonese: Communicating with the Cantonese Patient
- Medical Korean; Korean for the Health Professional
- Medical Mandarin
- Women Physicians of Color

UCSF FRESNO PROGRAMS. Five programs based at UCSF Fresno provide opportunities for medical students:

- Medical Spanish and Clinical Skills Program—offers conversational medical Spanish and basic skills building in the physical examination of adult and pediatric patients for 1st and 2nd year students.
- Medical Student Summer Research Program—provides two summer research opportunities for medical students between their 1st and 2nd years.
- Model Fresno Program—allows 3rd year students to gain continuity experience during three continuous primary care clerkship blocks working with Fresno's diverse community.
- Medical Student Traineeship/Fellowship—provides a fellowship experience of up to 12 months to train and mentor Latino medical students in research activities related to Latino community health through The Latino Center for Medical Education and Research (LaCMER)

- Summer Rural Preceptorship at UCSF Fresno—provides a four-week program for first or second-year medical students to gain full-time clinical experience in a preceptors’ clinical practice, as well as to visit schools, health department, and community agencies.

VISITING ELECTIVE SCHOLARSHIP PROGRAM. The Department of Medicine offers a Visiting Elective Scholarship Program to support fourth-year medical students who are underrepresented in medicine or who are interested in working with diverse populations.⁴⁰⁶ This program is designed to expose students to an academic internal medicine training program, promote student interest in applying to an academic internal medicine training program, provide faculty and house staff mentorship during clinical elective experience, and make efforts to have an inclusive pool of qualified applicants.

PATHWAYS TO DISCOVERY PROGRAM. Students with interests in health disparities and cultural aspects of health and health care have multiple opportunities to interact with faculty and other students. One of the new ways is through the Pathways to Discovery program,⁴⁰⁷ described under Medical School Curriculum in this chapter. Each of the five pathways provides: “1) curricula designed to prepare learners for innovation and in specific areas, 2) a mentored project, and 3) the creation of a legacy of lasting value to UCSF and broader communities.” The Pathway to Discovery in Health and Society (H&S) “prepares health professionals for careers in which they advance health by engaging society. Specifically, the H&S Pathway supports careers of innovation and discovery through the development of competency in the following substantive areas and skills:”⁴⁰⁸

- Areas: Health Disparities, Health Systems and Policy, Social and Behavioral Science
- Skills: Research, Leadership and Advocacy, Community Engagement

“The Pathways to Discovery Program encompasses several programs previously offered for students and residents in the School of Medicine: the Areas of Concentration (AoC) in Community Health and Social Advocacy, Health Care Systems and the Physician Leaders, and Social Sciences in Medicine, and Areas of Distinction (AoD) in Health Equities and Leadership and Health Systems.”⁴⁰⁹

OTHER OPPORTUNITIES FOR STUDENT INVOLVEMENT. Students also have opportunities for involvement with faculty in the Center for Health and Community, the Center on Social Disparities in Health, the Community Partnership Resource Center, the Philip R. Lee Institute for Health Policy Studies, the Medical Effectiveness Research Center for Diverse Populations, *Redes en Accion* (a national network engaged in cancer research to reduce impact of cancer on Latinos), the Multicultural LEARN Program (Linking Education, Action, and Research Networks), the Health Disparities Working Group, and the Center for Aging in Diverse Communities. They also may be involved in the San Francisco General Continuity Project (third-year students), as well as student clinics (the Homeless Clinics, Clinica Martin Baro, Hep B Clinic), the Wraparound Project (violence prevention in vulnerable communities).

Stanford University School of Medicine

Stanford's School of Medicine, like UCSF's, has developed a new MD curriculum within the last several years. The curriculum integrates basic science, clinical experience, and in-depth student independent research, and it consists of five blocks, as we described earlier in this chapter under the section, Medical School Curriculum. The first group of students to experience the new curriculum entered in the fall of 2003.

STANFORD'S APPROACH TO CROSS-CULTURAL EDUCATION AND TRAINING. Integrating multicultural learning experiences into the MD curriculum during preclinical and clinical years, while at the same time offering a rich array of elective courses and community clinical and service learning experiences, is the basic approach that Stanford takes to cross-cultural education and training.

MULTICULTURAL LEARNING IN THE REQUIRED PRECLINICAL AND CLINICAL CURRICULUM: BLOCKS 3 AND 4. As Clarence Braddock, III, M.D., M.P.H, F.A.C.P., Professor of Medicine; Associate Dean, Medical Education; and Associate Chief for Academic and Faculty Affairs, Division of General Medicine within the School of Medicine, noted:

We have an extensive required curriculum in multi-cultural practice; it does not, however, exist as a set of separate courses, but rather is interwoven into our preclinical doctoring course, called "Practice of Medicine," and into several clerkships. This reflects our view that topic areas such as this are more impactful if taught and reinforced as integrated into clinical practice, using experiential adult learning methods, rather than as separate or more passive forms of learning....

Our population health curriculum...is also integrated, required, and considered a complement to (the) more traditional cultural competence curriculum. We also have standardized patient assessments which examine the student's ability, for example, to elicit the patient's explanatory model of illness and to conduct an interview with appropriate use of an interpreter.⁴¹⁰

Practice of Medicine (Block 3). This block "extends throughout the first two years of medical school, interweaving core skills training in history-taking and the physical examination with four major threads addressing computers in the medical environment, nutrition principles, quantitative medicine, and the physician in society."⁴¹¹

"A variety of teaching formats are used, including large group lectures, small group (8-12 learners) discussions, smaller groups (2-3 learners) for clinical demonstrations, clinical problem-based cases, standardized patients, videotaping and feedback about clinical interviews, self-paced learning, and team learning to emphasize both individual accountability and group problem-solving."⁴¹²

"Throughout the curriculum, clinical correlations map directly back to the basic science content, whether in gross anatomy, molecular foundations of biology, or physiology. In the second year, problem-based learning cases apply the anatomy, biochemistry, pharmacology, and physiology

to clinical scenarios.”⁴¹³ Block 3 “replaced 12 previous courses, including: Physical Diagnosis A, B, and C, Physicians and Patients, Psychiatric Examination, Fundamentals of Clinical Investigation, and Health Policy” in the new curriculum.⁴¹⁴

Clinical Clerkships (Block 4). These required clerkships may begin as early as year 2 and may continue through years 3, 4, and 5 of medical school. General Medicine Core and General Surgery are completed during the first 12 months, as well as two other clerkships. Other clerkships include Critical Care, Family Medicine Core, Ambulatory Medicine, Neurology Core, Basic Gynecology and Obstetrics, Child Health, and Basic Core Psychiatry. Fundamentals of Clinical Care and Subinternships are selectives.⁴¹⁵

The Scholarly Concentration Program. Also a new feature of the curriculum and created by multidisciplinary groups of faculty, this is also required, structured program of study in the MD curriculum. Three of the seven Foundation areas (Biomedical Ethics and Medical Humanities, Community Health, and Health Services and Policy Research) have the potential to provide a cross-cultural education experience with an academic focus. The concentrations provide students with independent, faculty-mentored scholarly experiences in areas of personal interest to develop critical thinking, skills in evaluating new data, as well as hands-on experience with research methods.⁴¹⁶ Students declare their Scholarly Concentration programs no later than October of Year 2. Students must complete 12 total Scholarly Concentration coursework units; they may apply for a Medical Scholars Research fellowship to support their Scholarly Concentration study for a period of six full-time quarters of research spanning three projects.⁴¹⁷ Required and elective course work also is part of the required Scholarly Concentration study.

ELECTIVE COURSES WITH A SOCIAL AND CULTURAL MEDICINE FOCUS (INCLUDING ETHNICITY/GENDER/MEDICAL ANTHROPOLOGY, LANGUAGE, LINGUISTICS/COMMUNICATION). As an example, if a student chose the Foundation area Biomedical Ethics and Medical Humanities, he or she would be required to take two courses, but would also have a rich selection of elective courses⁴¹⁸ from which to choose:

- Ethnicity and Medicine Lecture Series
- Building Our Humanity: Culture, Emotions, and Medicine
- Physicians and Social Responsibility
- A. B.C. Medicine in a Multi-Cultural Global Society
- Social Class, Race/Ethnicity, Health
- Seminar on Women’s Health
- Health and Healing in South Asia
- Anthropology of Death and Dying
- Medical Anthropology
- Interpersonal Communication

These elective courses and many others are open to all medical students.⁴¹⁹

- The Medical Interview for Spanish Speakers
- Patient Advocacy in Community Clinics
- Oaxacan Health on Both Sides of the Border

- Leadership in Multicultural Health
- Early Clinical Experience in International Family and Community Medicine
- Medical Mandarin
- Queer Health and Medicine
- Integrative Medicine: A Primer for Future Doctors
- Providing and Evaluating Health Education for Underserved Children

Ethnicity and Medicine Lecture Series. This elective weekly lecture series is open to medical students, undergraduates, faculty, and staff. The goal of this course is to help health professionals provide culturally competent patient care.⁴²⁰ Largely didactic, the course is structured to focus on “the knowledge branch of the cultural competency formula,” with lectures addressing the “clinical skills” branch, and discussion focused on “skill building.”⁴²¹ The “knowledge base” course content includes:

- Social/cultural aspects of medicine
- Relevance of ethnicity in medicine
- Biomedical role in race/ethnicity
- Significance of socioeconomic status on health behaviors/ethnic groups
- Immigration/Migration

The course objectives⁴²² ask students to evaluate and conceptualize the course content in terms of:

- Awareness/Sensitivity
- Knowledge of Self
- Knowledge of Others
- Skill building
- Integration

Ronald D. Garcia, Ph.D., Senior Lecturer, Division of Family and Community Medicine, the long-time Course Director for the Ethnicity and Medicine Series, emphasizes several points about studying ethnicity and medicine in the course description⁴²³:

1. The difficulty of defining culture and the importance of broadly defining culture in the context of medicine.
2. The great intra-cultural variation among all cultural groups.
3. Understanding that stereotypes may result from the study of culture/ethnicity in medicine
4. Being aware that all people possess preconceptions, misconceptions, and biases regarding others.
5. Understanding self is key to understanding others.
6. The study of ethnicity/culture in medicine is vital to all health care providers.

7. Cultural competency is a lifelong process.
8. Ethnicity and race are distinct cultural variables.
9. There is no “cook-book” approach to cross-cultural medicine.
10. People have “multi-group” identification.
11. Ethnic categorization (e.g., Native American) has little meaning
12. Prejudice and discrimination still exist in the health care system.
13. Students often play a key role as teachers in adult learning, so that sharing thoughts, perspectives, and experiences is important.

PFEIFFER VISITING PROFESSOR LECTURE SERIES. Another important aspect of Stanford’s cultural competence education, this quarterly lecture series invites distinguished minority faculty members and scholars to come to Stanford and deliver academic presentations on minority health.⁴²⁴ Sponsored by the School of Medicine and the Center of Excellence in Diversity in Medical Education, the lecture series is scheduled to coincide with campus activities that celebrate the contributions of Latinos, African Americans, and Native Americans. All speakers are chosen by the School of Medicine’s minority medical student groups: the Stanford Raza Medical Student Association (SRMA), the Stanford National Medical Student Association (SNMA), and the Stanford American Indian Medical Students (SAIMS). Presentations are open to the Stanford community and the public in the Greater San Francisco Bay Area, and scholars meet with students, residents, fellows, and faculty during the academic year.

CLINICAL OPPORTUNITIES. Family Medicine, a required clerkship, provides an opportunity for students “to strengthen their cultural competence” through direct patient experience.”⁴²⁵ This clerkship contains a cross-cultural workshop module to help students learn about culturally influenced attitudes and beliefs and how health behaviors are affected. Topics covered include communication barriers, provider roles, alternative medicine, traditional health, health promotion and disease prevention. The workshop addressed topics identified as relevant to minority health in *Healthy People 2010*, the national health promotion-disease prevention initiative of the U.S. Department of Health and Human Services. The workshop also uses standardized patient models to stimulate clinic interactions. Clinical sites include the Arbor Free Clinic, the Pacific Free Clinic, Ravenswood Family Health Center, Stanford Hospital and Clinics, and Santa Clara Valley Medical Center.

The South County Community Health Clinic in East Palo Alto works with faculty within the School of Medicine’s Division of General Pediatrics and the Department of Obstetrics and Gynecology to provide health care to children and adolescents. This clinic is “a resource to the Center of Excellence in Diversity in Medical Education and Stanford medical students for their training in community health, health disparities, and cultural competence.”⁴²⁶

LEADERSHIP IN HEALTH DISPARITIES PROGRAM. This is a two-component program, which includes Stanford's Summer Early Matriculation Program as one component and a year-long monthly seminar series throughout the academic year to people who are leaders in the area of health disparities. The purpose of the program is to provide first-hand experience with leaders and help students understand how they achieved their positions and use their influence to improve people's health.⁴²⁷

FACULTY IN THE COMMUNITY AS MENTORS FOR RESEARCH, SCHOLARSHIP, AND SERVICE. The Office of Community Health links students with faculty mentors in community-based research, scholarship, and service with local and international communities.⁴²⁸

CENTER FOR EXCELLENCE IN DIVERSITY IN MEDICAL EDUCATION. The unifying force for many cross-cultural education and training activities within the Stanford School of Medicine, the COE was established in 1993 with the assistance of a grant from the Health Resources and Services Administration, U.S. Department of Health and Human Services.⁴²⁹ The goal of the COE is "to prepare the next generation of medical leaders to address the issues of health disparities."⁴³⁰ The primary initiatives of the COE are:

- Expanding the diversity of the health professions work force, especially in academic medicine.
- Promoting cultural competence in medical education for all trainees.
- Supporting scholarly projects in the area of health disparities.
- Developing leadership skills in students from diverse backgrounds.
- Working with faculty throughout Stanford University to eliminate health disparities,
- Enhancing the participation of alumni in the diverse activities of the School of Medicine

The COE has a distinguished group of faculty led by Dr. Ronald Garcia, Center Director. Other faculty include Dr. Braddock; Myriam Curet, M.D., Senior Associate Dean for Graduate Medical Education and Professor of General Surgery; Gabriel Garcia, M.D., Associate Dean of Admissions, Director of Haas Public Service Center, Professor of Medicine, Division of Gastroenterology, Fernando Mendoza, M.D., M.P.H., Associate Dean of Minority Advising and Programs, Professor of Pediatrics and Chief, Division of General Pediatrics; Oscar Salvatierra, M.D., Assistant Dean for Student Advising Emeritus Professor of Surgery and Pediatrics, former Chair, School of Medicine Faculty Senate; Hannah Valantine, M.D., Senior Associate Dean for Diversity and Leadership, Professor of Medicine, Division of Cardiology; and Char Hamada, Assistant Dean for Student Advising. Many of these faculty members have been at the center of Stanford School of Medicine's diversity efforts for decades.

Federal Mandates to Address Cultural and Linguistic Barriers to Health Care

A review of federal mandates, as well as other efforts to address cultural and linguistic barriers is helpful to put in perspective the efforts of UCSF and Stanford medical schools.

In 1994 in Public Law 101-527, the Congress had mandated the Office of Minority Health (OMH) within the Office of Public Health and Science of the Department of Health and Human Services to

...develop the capacity of health care professionals to address the cultural and linguistic barriers to health care delivery and increase access to health care for limited English-proficient people. Additionally this mandate directs OMH to support research, demonstrations, and evaluations to test new and innovative models aimed at increasing knowledge and providing a clearer understanding of health risk factors and successful prevention intervention strategies for minority populations.⁴³¹

In 1995, the OMH developed the Center of Cultural and Linguistic Competence in Health, a “center without walls,” which encompasses all existing and new policy, partnering, communications, service demonstrations, and evaluation activities related to cultural competency.”⁴³² Over the period from 1997 through 1999, the OMH engaged in the development of draft national standards, which were made available for public comment in December 1999, with final revisions published in December 2000.

Federal laws related to cultural competence include:

1. Title VI of the Civil Rights Act of 1964⁴³³—No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.
2. National Standards for Culturally and Linguistically Appropriate Services (CLAS) in Health Care⁴³⁴—Several CLAS mandates are current federal requirements for all recipients of federal funds:

Standard 4: Health care organizations must offer and provide language assistance services, including bilingual staff and interpreter services, at no cost to each patient/consumer with limited English proficiency at all points of contact, in a timely manner during all hours of operation.

Standard 5: Health care organizations must provide to patients/consumers in their preferred language both verbal offers and written notice informing them of their right to receive language assistance services.

Standard 6: Health care organizations must assure the competence of language assistance provided to limited English proficient patients/consumers by interpreters and bilingual staff. Family and friends should not be used to provide interpretation services (except on request by the patient/consumer).

Standard 7: Health care organizations must make available easily understood patient-related materials and post signage in the languages of the commonly encountered groups and/groups represented in the service area.

Standard 8: Health care organizations should develop, implement, and promote a written strategic plan that outlines clear goals, policies, operational plans, and

management accountability/oversight mechanisms to provide culturally and linguistically appropriate services.

Others standards are guidelines recommended by the federal OMH for adoption by federal, state, and national accrediting agencies. Standards 1, 2, 3, 8, 9, 10, 11, 12, 13 are guidelines for adoption for federal, state, and national accrediting agencies; Standard 14 is for voluntary adoption by health care organizations.

Definitions of Culture and Cultural Competence

Although definitions of “culture” and “cultural competence” vary among groups, there are two generally accepted definitions, both developed by mental health researchers Cross et al. two decades ago.^{435*†‡} These definitions have been used or adapted by others, including the OMH. Some limit discussion of culture and cultural competence to the health care of racial and ethnic minorities; others extend these concepts to care of other groups—women, the elderly, gays and lesbians, people with disabilities, and religious minorities.⁴³⁶

The Joint Commission for Accreditation and Certification of Health Care Organizations and Accreditation Standards related to Cultural Competence

The Joint Commission for Accreditation and Certification of Health Care Organizations is developing proposed accreditation requirements for hospitals “to advance effective communication, cultural competence, and patient-centered care with funding from the Commonwealth Foundation.”⁴³⁷ Another effort, the *Hospitals, Language, and Culture: A Snapshot of the Nation* (HLC) study, is being funded by The California Endowment.⁴³⁸ The Joint Commission has identified a number of existing accreditation standards that support the provision of care, treatment, and services in ways that aim to meet the cultural, language, health literacy, disability, and learning needs of individuals.⁴³⁹ The Requirements Related to the Provision of Culturally Competent Patient-Centered Care Hospital Accreditation Program (HAP)

*“Culture” is defined by Cross et al. as the “integrated pattern of human behavior that includes thoughts, communications, actions, customs, beliefs, values and institutions of a racial, ethnic, religious, or social group.”

† “Cultural competence” is defined by this same group as “a set of congruent behaviors, attitudes, and policies that come together in a system, agency or amongst professionals and enables that system, agency or those professionals to work effectively in cross-cultural situations.”

‡ The Culturally and Linguistically Appropriate Services (CLAS) Standards developed by the Office of Minority Health, Office of Public Health and Science of the U.S. Department of Health and Human Services have adapted the Cross et al. definitions based on information provided by Michael Katz, Consumer Protection Workgroup, Secretary’s Quality Initiative. U.S. Department of Health and Human Services Draft Report, 1998.

“Culture defines how health care information is received, how rights and protections are exercised, what is considered to be a health problem, and what type of treatment should be given. In sum, because health care is a cultural construct, arising from beliefs about the nature of disease and the human body, cultural issues are actually central in the delivery of health services treatment and preventive interventions. By understanding, valuing, and incorporating the cultural differences of America’s diverse population and examining one’s own health-related values and beliefs, health care organizations, practitioners, and others can support a health care system that respond appropriately to, and directly serves the unique needs of populations whose cultures may be different from the prevailing culture”

“‘Competence’ implies having the capacity to function effectively as an individual and an organization within the cultural beliefs, behaviors, and needs presented by consumers and their communities.”

include standards related to informed consent, patient assessment, and values, beliefs respected.⁴⁴⁰ The Commission has also done a crosswalk between the OMH's National Standards for Culturally and Linguistically Appropriate Services (CLAS) and the Joint Commission's 2009 Standards for the Hospital Accreditation Program across the accreditation areas of 1) management of human resources; 2) leadership; 3) provision of care, treatment, and services; 4) performance improvement; 5) record of care, treatment, and services; 6) rights and responsibilities of the individual; and 7) transplant safety.⁴⁴¹

The Agency for Healthcare Research and Quality Review of Options for Health Systems to Address Cultural Competence

The Agency for Healthcare Research and Quality reviewed the literature to identify techniques most often described as options for health systems in the area of cultural competence and reported their findings in 2000.⁴⁴² The techniques fell into nine categories:

- Interpreter services
- Recruitment and retention of minority staff
- Training (undergraduate or graduate medical or other professional school education, orientation for new staff)
- Coordinating with traditional healers
- Use of community health workers
- Culturally competent health promotion
- Including family and/or community members
- Immersion in another culture
- Administrative and organizational accommodations.

Unequal Treatment: The Institute of Medicine's Assessment of the Extent of Racial and Ethnic Differences in Health Care and Sources of Health Care Disparities

In 2002, the Institute of Medicine released its assessment of racial and ethnic differences in health care, sources of racial and ethnic disparities in health care, and recommendations about ways to eliminate these disparities.⁴⁴³ The major findings of this study, mandated by Congress in 1999, were:

1. Racial and ethnic disparities in health care exist and, because they are associated with worse outcomes in many cases, are unacceptable.
2. Racial and ethnic disparities in health care occur in the context of broader histories and contemporary social and economic inequality, and evidence of persistent racial and ethnic discrimination in many sectors of American life.
3. Many sources—including health systems, health care providers, patients, and utilization managers—may contribute to racial and ethnic disparities in health care.

4. Bias, stereotyping, prejudice, and clinical uncertainty on the part of health care providers may contribute to racial and ethnic disparities in health care. While indirect evidence from several lines of research supports this statement, a greater understanding of the prevalence and influence of these processes is needed and should be sought through research.
5. A small number of studies suggest that racial and ethnic minority patients are more likely than white patients to refuse treatment. These studies find that differences in refusal rates are generally small and that minority patient refusal does not fully explain health care disparities.⁴⁴⁴

Recommendations in the study report fell into the following categories:

General Recommendations:

1. Increase awareness of racial and ethnic disparities in health care among the general public and key stakeholders.
2. Increase health care providers' awareness of disparities.

Legal, Regulatory, and Policy Interventions

1. Avoid fragmentation of health plans along socioeconomic lines.
2. Strengthen the stability of patient-provider relationships in publicly funded health plans.
3. Increase the proportion of underrepresented U.S. racial and ethnic minorities among health professionals.
4. Apply the same managed care protections to publicly funded HMO enrollees that apply to private HMO enrollees.
5. Provide greater resources to the U.S. DHHS Office for Civil Rights to enforce civil rights laws.

Health Systems Interventions

1. Promote the consistence and equity of care through the use of evidence-based guidelines.
2. Structure payment systems to ensure an adequate supply of services to minority patients, and limit provider incentives that may promote disparities.
3. Enhance patient-provider communication and trust by providing financial incentives for practices to reduce barriers and encourage evidence-based practice.
4. Support the use of interpretation services where community needs exist.⁴⁴⁵
5. Support the use of community health workers.
6. Implement multidisciplinary treatment and preventive care teams.

Patient Education and Empowerment

1. Implement patient education programs to increase patients' knowledge of how to best access care and participate in treatment decisions.

Cross-Cultural Education in the Health Professions

1. Integrate cross-cultural education into the training of all current and future health professionals.

Data Collection and Monitoring

1. Collect and report data on health care access and utilization by patients' race, ethnicity, socioeconomic status, and where possible, primary language.
2. Include measures of racial and ethnic disparities in performance measurement.
3. Monitor progress toward the elimination of health care disparities.
4. Report racial and ethnic data by OMB categories, but use subpopulation groups where possible.

Research Needs

1. Conduct further research to identify sources of racial and ethnic disparities and assess promising intervention strategies.
2. Conduct research on ethical issues and other barriers to eliminating disparities.

The National Center for Cultural Competence's Rationale and Model for Cultural Competence

The National Center for Cultural Competence released in 2003 a policy brief on the Rationale for Cultural Competence in Primary Care.⁴⁴⁶ Reasons for needing cultural competence at the patient-provider level include:

- The perception of illness and disease and their causes varies by culture.
- Diverse belief systems exist related to health, mental health, healing, and well-being.
- Culture influences help-seeking behaviors and attitudes toward primary care providers.
- Individual preferences affect traditional and other approaches to primary care.
- Patients must overcome personal experience of biases within primary care systems.
- Primary care providers from culturally and linguistically diverse groups are under-represented in current service delivery systems.

The conceptual model proposed by the National Center for Cultural Competence for achieving cultural competence requires that organizations:

- Have a defined set of values and principles, and demonstrate behaviors, attitudes, and structures that enable them to work effectively cross-culturally

- Have the capacity to 1) value diversity, 2) conduct self-assessment, 3) manage the dynamics of difference, 4) acquire and institutionalize cultural knowledge, and 5) adapt to diversity and the cultural contexts of the communities they serve
- Incorporate the above in all aspects of policymaking, administration, practice/service delivery and involve systematically consumers/families.⁴⁴⁷

The Health Resources and Services Administration's Framework for Assessing Cultural Competence Efforts at an Organizational Level

The Health Resources and Services Administration's Office of Minority Health and Office of Planning and Evaluation have recently released a report, *Indicators of Cultural Competence in Health Care Delivery Organizations: An Organizational Cultural Competence Assessment Profile*.⁴⁴⁸ The purpose of the report is provide an analytic framework for assessing cultural competence in health care organizations, identify indicators that can be used with this framework, and assist in assessing the utility, feasibility, and practical application of the framework and its indicators.⁴⁴⁹ In the report, seven domains, or performance areas, as well as focus areas that characterize the domains, are identified (Table 8-5).

**Table 8-5
Organizational Domains and Focus Areas: Where to Look for Evidence of Cultural Competence**

Domains	Focus Areas
Organizational Values: An organization's perspective and attitudes regarding the worth and importance of cultural competence, and its commitment to providing culturally competent care.	-Leadership, investment, documentation -Information/data relevant to cultural competence -Organizational flexibility
Governance: The goal-setting, policymaking, and other oversight vehicles an organization uses to help ensure delivery of culturally competent care	-Policies
Planning and Monitoring/Evaluation: The mechanisms and processes used for: a) long- and short-term policy, programmatic, and operational cultural competence planning that is informed by external and internal consumers; and b) the systems and activities needed to proactively track and assess an organization's level of cultural competence.	-Client, community, and staff input -Plans and implementation -Collection and use of cultural-competence related information/data
Communication: The exchange of information between the organization/providers, and the clients/population, and internally among staff, in ways that promote cultural competence.	-Understanding of different communication needs and styles of client population -Culturally competent oral communication -Culturally competent written/other communication -Communication with community -Intra-organizational communication
Staff Development: An organization's efforts to ensure staff and other service providers have the requisite attitudes, knowledge, and skills for delivering culturally competent services.	-Training commitment -Training content -Staff performance
Organizational Infrastructure: The organizational resources required to deliver or facilitate delivery of culturally competent services.	-Financial/budgetary -Staffing -Technology -Physical facility/environment -Linkages
Services/Interventions: An organization's delivery or facilitation of clinical, public health, and health-related services in a culturally competent manner.	-Client/family/community input -Screening/assessment/care planning -Treatment/follow-up

Source: USDHHS, Health Resources and Services Administration. *Indicators of Cultural Competence in Health Care Delivery Organizations: An Organizational Cultural Competence Assessment Profile*.pp.2-3. Available at: <http://www.hrsa.gov/culturalcompetence/indicators/>

The AAMC's Tool for Assessing Cultural Competence Training in Medical Education to Meet LCME's Accreditation Standards for Cultural Competence

The Association of American Medical Colleges (AAMC) developed the Tool for Assessing Cultural Competence Training (TACCT) to help medical schools meet the Liaison Medical Committee on Medical Education (LCME) accreditation standard for cultural competence adopted in 2000:⁴⁵⁰

The faculty and students must demonstrate an understanding of the manner in which people of diverse cultures and belief systems perceive health and illness and respond to various symptoms, diseases, and treatments. Medical students should learn to recognize and appropriately address gender and cultural biases in health care delivery, while considering first the health of the patient.⁴⁵¹

This standard, noted with additional clarification in ED-21 and ED-22 in LCME’s accreditation standards, will be strengthened by one of the new diversity standards (IS-8) to become effective on July 1, 2009, which emphasizes training in “basic principles of culturally competent health care.”⁴⁵²

The AAMC’s 2005 report, *Cultural Competence*, states clearly that a cultural competence curriculum cannot just be added on to the existing medical school curriculum.⁴⁵³ The report notes:

For a cultural competence curriculum to be effectively put in place, there are certain institutional requirements:

- The curriculum must have the institutional support of the leadership, faculty, and students
- Institutional and community resources must be committed to the curriculum
- Community leaders must be sought out and involved in designing the curriculum and providing feedback
- The institution and its faculty need to commit to providing integrated educational interventions appropriate to the level of the learner
- A cultural competence curriculum must have a clearly defined evaluation process that includes accountability and evaluation (for example, evidence of a planning process to assure appropriate inclusion of material throughout the curriculum, details on curriculum process and content [including duration and types of educational experiences], specific student feedback, and consideration of outcomes assessment).⁴⁵⁴

The TACCT is a self-administered self-assessment tool with two parts. The first part, domains, is a way to monitor overall curricular offerings (where teaching is occurring); the second part, specific components, provides a framework to identify detailed knowledge, skills, and attitudes (what learning objectives are being met).⁴⁵⁵ Five content domains are identified in the TACCT assessment:

- Domain I—Cultural Competence—Rational, Context, and Definition
- Domain II—Key Aspects of Cultural Competence
- Domain III—Understanding the Impact of Stereotyping on Medical Decision-Making
- Domain IV—Health Disparities and Factors Influencing Health
- Domain V—Cross-Cultural Clinical Skills⁴⁵⁶

The report also identifies several models of effective cross-cultural communication and negotiation, including BATHE,⁴⁵⁷ BELIEF,⁴⁵⁸ Eliciting Patient Information and Negotiating,⁴⁵⁹ ESFT model for communication and compliance,⁴⁶⁰ ETHNIC,⁴⁶¹ Kleinman’s questions,⁴⁶² LEARN,⁴⁶³ Model for Cultural Competence in Health Care,⁴⁶⁴ and “Review of Systems” domains of the Social Context.⁴⁶⁵

The Accreditation Council for Graduate Medical Education's Competencies, Their Practical Implementation, and Cultural Competence

The Accreditation Council for Graduate Medical Education (ACGME) has set out six competencies as organizing principles that must be integrated into the graduate medical education curriculum:

1. Patient Care
2. Medical Knowledge
3. Practice-based Learning and Improvement
4. Interpersonal and Communications Skills
5. Professionalism
6. System-based Practice⁴⁶⁶

Under Interpersonal and Communication Skills, residents “must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals. Residents are expected to:

1. Communicate effectively with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds.
2. Communicate effectively with physicians, other health professionals, and health related agencies.
3. Work effectively as a member or leader of a health care team or other professional group.
4. Act in a consultative role to other physicians and health professionals.
5. Maintain comprehensive, timely, and legible medical records, if applicable.”⁴⁶⁷

ACGME has also developed a Facilitator’s Manual for Practical Implementation of the Competencies as part of its Outcome Project.^{468,469} Settings for teaching of cultural competence include clinical teaching, role modeling, case-based teaching, and interactive workshops or seminars using role plays.⁴⁷⁰

Other Information about Cultural Competence Curricula, Organizational Models, and Initiatives

Several other organizations have provided guidelines or other information on the development of cultural competence curricula, organizational models, and initiatives, including the American Medical Student Association,⁴⁷¹ the Henry J. Kaiser Family Foundation,⁴⁷² the Commission to End Health Care Disparities (the American Medical Association, the National Medical Association, the National Hispanic Medical Association, and 50 plus other leading health professional organizations).⁴⁷³

Several investigators, particularly over the period from 2000 through 2009, have developed reports of studies and presented views about cultural competence in peer-reviewed journals. These include the discussion of Horner, Salazar, Geiger et al.⁴⁷⁴ on promising approaches to improving cultural competence of health care professionals, as well as Kumagi and Lypson's assertion that cultural competence training needs to go beyond a traditional knowledge, skills, and attitudes approach to embrace a concept they describe as "critical consciousness, or critical awareness, of self, others, and the world and a commitment to addressing issues of social relevance in health care."⁴⁷⁵ Koehn and Swick argue for "transnational competence" as a model addressing the connection between migration and health disparities.⁴⁷⁶ Medical student perspectives on diversity and the cultural climate of one U.S. medical school are offered by Hung, McClendon, Henderson et.al.⁴⁷⁷ Other authors, including Beach, Price, Gary et al., have reviewed evaluations of educational interventions.^{478,479} Tervalon and Murray-Garcia question whether clinicians can ever be clinically competent through specific knowledge or training.⁴⁸⁰

California State Laws on Cultural and Linguistic Competency Education

California is one of several states that have passed laws (Maryland,⁴⁸¹ New Jersey,⁴⁸² Washington^{483,484}) or had legislation under consideration (Arizona,⁴⁸⁵ Georgia,⁴⁸⁶ Maryland,⁴⁸⁷ New York,⁴⁸⁸ Ohio⁴⁸⁹) related to cultural competence education and training for health professionals. Most often, the laws apply to medical students and continuing education for physicians.^{490,491,492}

In California, the Cultural and Linguistic Competency of Physicians Act of 2003 (AB 801) was signed into law in September 2003. This amendment to the Business and Professions Code (Division 2, Chapter 5, Article 10.5 .Section 2198.-2198.1) created a voluntary, fee-based program of physician education to be operated by local societies of the California Medical Association and monitored by the state Division of Licensing. The legislation also required the Division of Licensing to convene a workgroup including representatives of affected patient populations, medical societies, and community clinics.

Continuing Education: Cultural and Linguistic Competency (AB 1195) was signed into law in October 2005, also an amendment to the Business and Professions Code (Section 2190.1) required that effective July 1, 2006 "continuing medical education courses, except as specified, include curriculum in the subjects of cultural and linguistic competency in the practice of medicine...and (that) accreditation associations develop standards for the curriculum" before July 1, 2006.⁴⁹³ Courses shall address one or a combination of the following:

1. Cultural competency
2. Applying linguistic skills to communicate effectively with the target population
3. Utilizing cultural information to establish therapeutic relationships
4. Eliciting and incorporating pertinent cultural data in diagnosis and treatment
5. Understanding and applying cultural and ethnic data to the process of clinical care.
6. Linguistic competency
7. A review and explanation of relevant federal and state laws and regulations regarding linguistic access.

California's law does not mandate a certain number of hours of continuing education in cultural and linguistic competency as a condition of licensure reregistration for physicians. Nor does it mandate education and training of medical students.

In contrast, New Jersey's law requires six hours of instruction and

... that all medical schools in New Jersey provide include instruction to their current and future students in cultural competency. This instruction is required as a condition of receiving a diploma from a college of medicine in New Jersey. New Jersey medical schools are also required to provide cultural competency CME instruction for licensed physicians who were not required to and did not receive cultural competency training in their medical school curriculum. The required curriculum in cultural competency training has become more prevalent in medical schools since 2005.⁴⁹⁴

Themes from the Case Studies: Increasing Diversity at UCSF and Stanford

Five themes emerge from our case studies of institutional policy development related to affirmative action and diversity within UCSF and Stanford Schools of Medicine over the period from the early 1960s through the early 2000s. Case studies of the schools show that these schools were early national leaders in efforts to enroll those underrepresented in medicine, and remain so today, because of their capacity to:

1. Recognize and mobilize leadership from many quarters and of many different types to advance diversity within and outside their schools.
2. Link diversity efforts to excellence in meeting the medical schools' interrelated missions in education and training, research, patient care, and public or community service.
3. Revitalize efforts to increase diversity by renewing leadership over time to develop and modify a mission-driven, multidimensional approach focused on action in these policy areas:
 - outreach and recruitment
 - admissions
 - retention: student support
 - curriculum reform
 - student financial aid
 - campus environment
 - educational and health care partnerships
 - cross-cultural education and training
4. Support students over the educational and career continuum to increase and sustain diversity within and outside the medical school to develop physician leaders in

primary and specialty patient care, academic medicine, research (basic, biomedical, clinical, social and behavioral, health services, and health policy), and public and community service.

5. Make diversity part of strategic plans to increase diversity among faculty, trainees, students, and staff and create an infrastructure to assure implementation and accountability.

These themes characterize the medical schools' efforts in the past as well as provide a guide for efforts in the future.

Leadership from Many Quarters and of Many Different Types

Over the period from the 1960s through the early 2000s, leadership in advancing diversity at both UCSF and Stanford medical schools has come from many quarters and has been of many different types. Individual faculty members, students, employees, campus organizations, Chancellors, University Presidents, Regents and Trustees, Deans, the Academic Senate, the Faculty Senate, Admission Committee Chairs and members, Recruitment and Retention Committee Chairs and members, Diversity Advisory Committees and Task Force members, alumni, and others all have played roles that have influenced diversity at UCSF and Stanford medical schools. Not all have agreed—or agree today—on the means or ends of affirmative action, the consideration of race/ethnicity among many factors in the admissions process or, as Justice Lewis F. Powell, Jr. said in his opinion in the *Regents of the University of California v. Bakke* case, that in seeking the educational benefits that flow from a diverse study body the university “must be viewed as seeking a goal that is paramount in the fulfillment of its mission.”

Some leaders begin a dialogue. Some listen. Some make demands. Some answer the demands. Some gather data. Some make a case for diversity. Some, in questioning or opposing policies, open the way to the development of fairer, more equitable policies. Some work behind the scenes to design and implement these policies. Some make phone calls or write letters to diverse candidates encouraging them to enroll. Some play a key role in their positions of leadership within the university or medical school not only by making diversity a priority, but also by taking action. Some volunteer year after year for a diversity celebration. Personal and professional experiences, family histories, attitudes, beliefs, values, and other factors lead people to become involved in diversity-related issues. It is the sum of these activities and their interactive nature that at any given time makes for institutional leadership.

Faculty, administrators, and former students from UCSF and Stanford made these observations about leadership and diversity.

Grassroots Efforts, Visionary Leadership, and the Culture of Institutions

I think leadership is so important and there are the grassroots parts. When you get the grassroots efforts plus visionary leaders who understand the culture of the institution, they can...take the opinion leaders on campus and bring them along.

Michael V. Drake, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, February 10, 2004

The Black Caucus

The assassination of Martin Luther King, Jr.,...brought things appropriately to a crisis, and no one half awake at that moment could be but deeply concerned. And I think the Black Caucus was a very positive force here in sensitizing all members of the faculty to this glaring deficit in our school as reflected in society at large.

Lloyd H. "Holly" Smith, Jr., M.D.

UCSF Diversity in U.S. Medical Schools Diversity Oral History Series Interview, February 20, 2003

The Civil Rights Movement among Chicanos and the Path to Medical School

And the other thing that happened during that time in the late sixties (was) a lot of civil rights activities among Chicanos. Most of the civil rights in Chicanos were either the farm workers' activity, which I participated a little bit in, but really quite peripherally, and then a lot of student activities, and student activities were based on how to get kids to go on to college. And among those was the group called the Mexican-American Youth Organization, MAYO. I was initially vice president, when it (was) formed by one of the girls in my class, who was very much an activist. Her name was Lynn Hernandez. I helped her initially with this, and gathering other Chicanos, and then I became president of that group....

I knew that Pediatrics was the area I wanted to go into, because I thought that if you can help kids, you can help the future. And I think also, at that time, some of my classmates were going to Vietnam, and part of my decision was thinking, 'Well, if anybody needs help, it's the Chicano kids, and if their fathers are going to fight the war, then the least that this country can do is give health access and health care to their families, their kids.'

Fernando S. Mendoza, M.D., M.P.H.

UCSF Diversity in U.S. Medical Schools Diversity Oral History Series Interviews, March 25 and May 12, 2004

Contrasting 1970s and 1980s in terms of Recruiting and Admitting Minorities at Stanford

And then in 1983, which would have been two years after I started, I became Assistant Dean, because I had been involved—and clearly one of the reasons for me to do this was to affect medical students—and I tried to do as much as I could.... I think in the 1970s, as I point out in my discussions on what the school had done in affirmative action, it was really a question of, 'Can we recruit students?' And the key there was, 'Would they be successful?' And they were successful.

But the other key was, 'Are there champions?' And those champions were mostly White male professors, and one of them was, still is actually, Roy Maffly. John Steward helped, William Krueger. All those were people that—particularly Roy—that really pushed the idea of affirmative action and the program. Faculty who were willing to say, 'Yes, this is important,' or 'This can work.' They weren't going to be protesting, they were behind it.

Fernando S. Mendoza, M.D., M.P.H.

UCSF Diversity in U.S. Medical Schools Oral History Series Interviews, March 25 and May 12, 2004

Different Kinds of Leadership

You mentioned leadership; I'm not a leader kind of guy. I'm not a guy you'd pick out as being (a leader)—I'm not. Maybe I lead by example, or I lead by compromise, or I lead by not offending people—I hate to say not offending people. I'm not the one that stands up in front and convinces people—I'm not a politician, that's not my thing. But give me the opening, and give me the chance, and I'll work hard at getting it done.

Leroy H. "Roy" Maffly, M.D.

UCSF Diversity in U.S. Medical Schools Oral History Series Interviews, March 2 and July 16, 2004

Different Types of "Champions"

You can be a champion by just saying, 'Let's try this.' I don't think you have to be a knock down, drag out champion, but what I tell students is, "We have people on a spectrum—people that are always against you, no matter what, and people who are always for you, and then (there is) that big middle. And a pretty big middle, but you can win that, because that pretty big middle is usually rational. Their experiences are still flexible. And not that the people that are always against you are bad people, it's just their view of the world is different. Again, perhaps this is 'optimistic Fernando,' but—and these are kinds of individuals that are still decent people, and even some of those sometimes have experiences where they shift. But without experiences, there's no shift, and I think that that's what's happening.

Fernando S. Mendoza, M.D., M.P.H.

UCSF Diversity in U.S. Medical Schools Oral History Series Interviews, March 25 and May 12, 2004

The Importance of Faculty Commitment

I think it comes back to a level of commitment on the part of the faculty. Does the faculty buy in to the notion that having a diverse student body is important? And to the extent that that requires some extra attention from them that might take them marginally away from their research or whatever, are they willing to make that investment on long-range societal grounds? And the sense I had at UCSF was that was part of the ecology of the place.

Cornelius L. Hopper, M.D.,

UCSF Diversity in U.S. Medical Schools Key Informant Interview, July 21, 2003

UCSF Faculty Leadership in Affirmative Action

There was absolutely superb faculty leadership on the issue of affirmative action (in the 1960s and 1970s). Recruitment of people inside and outside the University brought people who created a climate of change and a focus on making UCSF a national med school, not just a regional good clinical medical school, and it was that group of faculty that was very supportive, I think, of affirmative action efforts, and it made it possible.

Philip R. Lee, M.D.

UCSF Diversity in U.S. Medical Schools Administrator's Roundtable Discussion, July 23, 2002

Early Faculty Discussions at Stanford on the Need to Recruit and Admit Minorities

...It was a temporary committee, and I think it was a group of people put together by the Dean to sit down and discuss, and come up with some kind of proposal. We were charged to make a serious effort to try to come up with a program that would work to increase enrollment....You know, let me put it this way: if the faculty had been opposed to our increasing the number of underrepresented minorities, it wouldn't have happened....

I think the focus of the discussion was really on two issues. One... people who thought about it all came to understand we did not have an adequate representation of minority candidates in the medical school, never had, and two, it was possible to design a program that would do better.

People had different ideas about how to go about that, but it was not hard to persuade people that you probably could come up with some scheme that you would end up with more than just an occasional minority candidate.....

Bernard Nelson, M.D.

UCSF Diversity in U.S. Medical Schools Diversity Oral History Series Interview, March 9, 2004

In a University, Nothing Works without the Faculty

Nothing in a university will work without faculty...buy-in, adoption, and ultimately leadership. I mean, you can force things on faculty, but then they're resentful and disgruntled and they kind of do the minimum they need to do to get by, whatever it is. Whether it's protecting human subjects in research or dealing with financial conflicts of interest or increasing the representativeness of the faculty or the student body. Faculty that don't buy in can kill it, and so over time the faculty saw that the process would work, they had constant reinforcement from the management.

David Korn, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, December 17, 2003

The Faculty and Diversity Policies

Faculty opinion is imperative as it comes through the decisions of the Faculty Senate and policies of the Dean's Office. I think that the faculty—and there are 900 of them—are very encouraging of the notion of diversity. Consequently, the school's policy is to promote diversity and to see diversity as part of excellence.

Gabriel Garcia, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, December 5, 2003

Systems Only Change Because Individuals Change the System

One of the things I talk about in this effort of diversity is that, diversity only occurs if there (are) personal interactions, and it doesn't occur by autocratic mandates or statements. It doesn't occur by "system change" or such. Systems change only because individuals change that system.

Fernando S. Mendoza, M.D., M.P.H.

UCSF Diversity in U.S. Medical Schools Diversity Oral History Series Interviews, March 25 and May 12, 2004

Showing Up and Advocating for Change

My sense is that if you want to move something, you have to show up and you have to advocate for the kind of changes you hope to see.

Gabriel Garcia, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, December 5, 2003

The Many Dimensions of Interest and Leadership

As a minority faculty member (whose) research focuses on ethnicity and pregnancy outcome, the issue of different peoples' experiences in our system is inherently of interest to me as a faculty member, as a (former) student, as a patient in the health care system.

Elena Fuentes-Afflick, M.D., M.P.H.

Professor of Pediatrics, Epidemiology and Biostatistics, UCSF School of Medicine, 1993-
Vice Chair, UCSF Academic Senate, 2007-2009
Pediatric Residency and Chief Residency, UCSF School of Medicine

UCSF Diversity in U.S. Medical Schools Key Informant Interview, October 16, 2002

Medical Students' Role at UCSF in 1960s-1970s

I think the thing we've not touched on at all yet are the students, medical students, and I think they played an enormous role in what happened....

John S. Wellington, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interviews February 19, 2003 and December 5, 2004

Medical Students' Role at Stanford

Here, too, and in fact, the initiation of this whole program was Black students coming and saying we need to do something, and that something was developed for African Americans, Latinos, and Native Americans. But I think it became important for the university to step forward, and luckily it had enough people of conscience, goodwill, and fair play. That's the American way, right?

Fernando S. Mendoza, M.D., M.P.H.

UCSF Diversity in U.S. Medical Schools Diversity Oral History Series Interviews, March 25 and May 12, 2004

Making a Difference for Minorities in this Country

I think, in essence, if we are going to make a difference in this country for minorities, you need to diversify the workforce, you need to educate the workforce. And that workforce doesn't come out of just a handful of schools; it comes out of a lot of schools, so we need to be able to spread that effort throughout. And I think the other thing is, and I think that it is happening here to some degree, we need to institutionalize that effort, so that it gets taken over and integrated by the institutions.

Fernando S. Mendoza, M.D., M.P.H.

UCSF Diversity in U. S. Medical Schools Diversity Oral History Series Interviews, March 25 and May 12, 2004

Being Seen as a Leader and a Model

(Diversity) is a very important goal (at UCSF), and when we meet we try to say to ourselves, we're not followers, we're leaders. Let's lead and let's take on this extra work. Yes, it's extra work and yes, we wonder if there's enough time to do it, but if we don't, who will? It will just languish. So we have taken on the attitude of success leads to responsibilities and see what we can do with them. Collaborate with others. The whole idea is collaboration and not doing it solo. And so, it's become a pretty decent model. We have gotten calls from other institutions, public and private, over time.

Michael B. Adams

UCSF Diversity in U.S. Medical Schools Key Informant Interview, December 12, 2003

Leadership in Helping All Students Attain Success at Stanford

The leadership at the university basically says, 'These are our values and these are the methods.' Once (students) are here, then the issues become more of, 'How can I develop the new set of skills and attitudes that go along with this career?' Setting up good mentoring, peer mentoring, class mentoring as well as faculty advising is really the way to do it. You asked me about how I define success. I define success in ways that are attainable by everybody who will eventually be a good contributor to the profession.

Gabriel Garcia, M.D.,

UCSF Diversity in U.S. Medical Schools Key Informant Interview, December 5, 2003

Taking Leadership in an Anti-affirmative Action Environment

There's such an anti-affirmative action movement now in this country and I tell people in all the meetings I go to that it (increasing diversity) can work, it can be done right and that it has to be done right and we don't have a choice...I strongly believe it can work. I believe it takes a great deal of effort. I don't believe it's numerical quotas, I don't believe it's objective quantitative test scores, I do believe you've got to talk to individuals...

David Korn, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, December 17, 2003

Linking Diversity Efforts to Excellence in Meeting the Medical Schools' Interrelated Missions

Both UCSF and Stanford medical schools have multiple missions—education and training, research, patient care, and community or public service. As a public institution, UCSF has a commitment to meet health workforce needs in California as part of its mission. As a private

institution, Stanford also helps meet these needs and makes other public service contributions. Over the past decades, these multiple missions have become inextricably linked.

The medical schools now have the challenge of attracting and educating diverse students who will develop the knowledge and skills to become leaders in patient care—including both primary care and specialty care—for diverse populations; leaders in basic, biomedical, clinical, social and behavioral science that will translate into an understanding of health disparities and improvements in health and health care; leaders in health services and health policy research, as well as health care management, to better understand ways to improve systems of care and the health of the public; leaders in public policy; and leaders in educating the next generations of physicians.

For both UCSF and Stanford, the MD curriculum, focused medical education programs, dual degree programs, the learning environment, as well as opportunities in graduate medical education and postdoctoral training provide many potential pathways for medical students, including those underrepresented in medicine.

Meeting Society's Health Needs

I think medical schools should really produce physicians that the society needs. And I think a diverse physician population is absolutely essential....The cultural differences in practice—this is critically important. The comfort level with which patients approach physicians. They may refuse to go. You know, if the Hispanic population has Hispanic physicians, they're much more likely to go to them. I think it's very important that we stress the responsibility of institutions. This has to really be in the national psyche.

Haile Debas, M/D.

Diversity in U.S. Medical Schools Diversity Oral History Series Interview, January 31, 2003

Research on Health Disparities in Native Americans

And then there may even be policy-making physicians, or ways that the health care system gets changed by these individuals that may improve access to care. I mean, case in point, my own research is on health care disparities in surgery in the Native population. So who would do that work if I wasn't here? I don't know, I don't know of anybody else that's interested in Native Americans and surgery and health care disparities. You know, it probably wouldn't happen, not right away.

Lori Arviso Alvord, M.D.

Associate Dean of Student and Multicultural Affairs, Dartmouth Medical School, 1997-
Assistant Professor of Surgery and of Psychiatry, Dartmouth Medical School, 1997- and 2002-
MD, Stanford University School of Medicine, 1985

UCSF Diversity in U.S. Medical Schools Key Informant Interview, December 15, 2003

Medical Schools Are Dynamic

In my perspective, unlike the university on campus, the medical school is a dynamic place. Dynamic, because it is always trying to catch up to meet the needs of society for health care. It's trying to engage science into a new process of patient care and helping people. It is trying to meet the social needs, which includes diversity, and it is trying to keep itself afloat above the economic turmoil. So, if there is going to be any place on campus that is going to be dynamic and problematic, it is going to be the medical school....Perhaps that challenge gives us more opportunity to make change...

Fernando S. Mendoza, M.D., M.P.H.

UCSF Diversity in U.S. Medical Schools Diversity Oral History Series Interviews, March 25 and May 12, 2004

Diversity Enhances the Mission of the University in Education and Training and Patient Care

I feel enormously strongly that our role, particularly in medicine, is going to be better by having a much more diverse community who we work with, study with, and who contributes to patient care. And, in fact, one of the attractions of Stanford is that it's a small research-intensive school and it's been highly committed to diversity for a long time.

Philip A. Pizzo, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, July 30, 2003

Medical Schools Renewing the Public Trust

Medical schools have to renew the public trust. We have to make sure that the public understands that we are serving them. And we try to serve them the best that we can by creating a body of knowledge to support policies that help them. So I would put it as a challenge to medical schools. How do we raise the public trust, and how do we become agents of change so that the kinds of things that we see would be good are things that the community equally values?

Gabriel Garcia, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interview, December 5, 2003

Revitalizing Efforts to Increase Diversity:
Renewing Leadership over Time to Develop and Modify a Mission-
driven, Multidimensional Approach

Both UCSF and Stanford medical schools have sustained a commitment to diversity as institutions for more than forty years. Through successive generations of Chancellors and

Presidents, Deans, and Associate Deans for Admissions, other administrative officers, faculty, staff, and students, there has been a cadre of leadership and support within the universities and the schools to sustain this commitment. Often leadership of administrators, faculty, staff, and students coalesces around a charge to an Admissions Committee, a strategic planning group, or an advisory group or task force on diversity. New participants are engaged. New assessments are made, often in view of the current medical school, university, state, and federal policy and funding context. New plans are laid. New approaches and efforts are tried or earlier efforts are refocused or intensified in one or more of the eight key policy areas:

1. Outreach and recruitment
2. Admissions
3. Retention and student support
4. Curriculum reform
5. Student financial aid
6. Campus Environment
7. Educational and health care partnerships
8. Cross-cultural education and training

UCSF and Stanford have both taken repeated steps over the decades to assess and revitalize their efforts in increasing diversity in their student bodies. For example, when underrepresented applicants to both medical schools declined in the mid- to late 1980s, both schools took action to reassess and intensify their recruitment efforts and increase efforts to enroll students that they had accepted. UCSF formed a Minority Recruitment and Retention Committee.⁴⁹⁵ Stanford's Committee on Minority Student Recruitment developed a report laying out recommendations to increase the size of the applicant pool and methods to increase the percentage of minority students matriculating.⁴⁹⁶

When the University of California Board of Regents' actions and state ballot initiative Proposition 209 and other factors caused a decline in underrepresented applicants and matriculants during the late 1990s through the early 2000s, UCSF medical school by 2007 was able to reach a new high in the percentage of URM matriculants to have the most diverse entering class in its history.⁴⁹⁷ Stanford medical school, too, has continued to reassess how to continue to attract and recruit those underrepresented in medicine, given its mission as a research-intensive institution. Some of UCSF and Stanford's greatest gains in URM matriculants came after initial intensive recruitment efforts in the mid- to late 1960s through the early 1970s. Others reflect renewed commitment after substantial downturns in the number of underrepresented students.

What is remarkable is that for more than two-thirds of the years from 1974 through 2007, the percentage of URM matriculants at UCSF was between 20 and 25 percent of the entering classes, and in five of these years, it was between 26 and 31 percent. For two-thirds of the years from 1974 through 2007, Stanford had 20 percent URMs in its entering classes, and for five of those years, from 25 to 30 percent.

Both schools remain challenged in terms of increasing the number of underrepresented students, residents, postdoctoral fellows, faculty, and staff at senior levels to revitalize leadership. However, over the course of this study from 2002 through 2009, we have witnessed first hand a revitalization of efforts to increase diversity at the University of California, at UCSF, within the UCSF School of Medicine, and at Stanford University and its School of Medicine. An indispensable ingredient to this revitalization has been a commitment at the highest levels of leadership to increasing diversity among students, trainees, faculty, and staff—and accountability and assurances at these levels—to the campus community, the university community, and the public that this commitment will be kept.

Supporting Students over the Educational and Career Continuum to Increase and Sustain Diversity within and outside the Medical School

UCSF and Stanford and other medical schools take several tacks in terms of attracting, recruiting, retaining, educating, and graduating their students, as well as in mentoring them as they come to critical decisions about graduate medical education and their careers. All students, including those underrepresented in medicine, potentially benefit from these efforts.

They “reach out” to potential applicants, sometimes as early as their elementary school years but more often in middle school, to engage them directly in activities designed to fascinate them about science and medicine, help them learn the basics of science through experience, and develop a love of science and service that often characterizes those who choose medicine as a career. School visits by medical students, campus visits by students, volunteer opportunities, health fairs, service learning projects, tutoring programs, and college and medical school “nuts and bolts” preparation programs are examples of such programs. Conferences with high school advisors and college counselors, targeted college campus recruiting, individual faculty meetings with potential applicants and applicants in their local areas are other ways that medical schools reach out.

The schools “build up” applicants and accepted students who are well along the educational pathway to medical school through postbaccalaureate and prematriculation programs providing academic and other types of support.

They “attract” medical school potential applicants, applicants, and accepted applicants, by the design of the curriculum; the learning experience; the learning environment; the availability of educational opportunities (e.g., PRIME, MD/MPH, MD/MS, MD/PhD[MSTP], MD/MSM); offers of student financial aid; word of mouth of current students, alumni, friends, and family members; campus visits; summer residential study programs; campus weekends for acceptants; telephone calls from Admissions Committee members and students to encourage acceptants to matriculate.

They “nourish” students by providing formal and informal academic, social, health, and career counseling support through faculty, peer, advisory college or “family” groups and through offices of medical education, academic affairs, student affairs, and diversity/minority affairs.

They “hold on” to their graduates through their residency years and postdoctoral fellowship study, recruiting them as faculty members and retaining them as the next generation of physician leaders within the medical schools.

They “seed” their graduates, postgraduates, and postdoctoral scholars to become physician leaders in community medicine, academic medicine, research, corporate medicine, global medicine, and government service in institutions throughout the country and the world.

Faculty, administrators, and former students discussed some of the challenges in increasing diversity along the educational and career continuum.

Diversity Challenges in Residency: Holding on to Our Own

So, I have to say that I think here, our problem is much less with retention (of medical students) than getting our trainees to the next step with the same diversity as the pool. So, our medical school factors are very diverse, but our residency programs are not diverse and our fellowships are less diverse. So, I think that’s a real problem. It’s this non-random, falling by the wayside. Now they go to other places and train. It’s not as though they leave medicine. And these are our own medical students and we know exactly what they can do and exactly what their backgrounds are, so why are they leaving?

Molly Cooke, M.D.

Diversity in U.S. Medical Schools Key Informant Interviews, June 5 and 16, 2003

Department Chairs and Diversity of Faculty and Residents

I think Department Chairs set the tone for how much they value diversity in all its aspects with respect to faculty members. How important is it to Department Chairs, for having a diverse faculty, for the kind of intern applicant that they accept? But also, apart from new hires, because new hires in general are junior people, so new hires might look better, but to look at senior leadership in departments. Who really gets put into positions of authority, because you can still move up the track, doing your own thing, but not be moving into a position of leadership. I think the Chairs give the overall tone for how much to talk or not talk about these issues. I mean, perhaps “taboo” is much too strong a word but, you know, how open are the discussions about these issues? Is it something that is discussed? Is it something that is not?

Elena Fuentes-Afflick, M.D.

Diversity in U.S. Medical Schools Key Informant Interview, October 16, 2002

Building Leadership

You somehow need to get everyone involved. One of the things that came out of the retreat, that we are now trying to do, is leadership groups. The idea came out of that retreat, but also, my experiences with some of the faculty suggests that people need to have knowledge, and that knowledge needs to be shared. This creates the potential for developing leaders. So, my idea was to get in different groups—Pediatrics, Surgery, Medicine, Psychiatry and perhaps others—and have senior faculty meet with junior faculty, fellows, residents, and medical students, so we would have potluck dinners....We are planning to do this, and sort of just discuss different things. A young faculty member can bring up issues about getting promoted, so everybody listens to that, everybody understands and starts to get acculturated to those issues. Or a medical student may say, 'How do I really shine on the boards?' So, then you get resident input, faculty input, fellows, and so the idea here, I think, is that leadership becomes academic leadership, comes from understanding the game, having social connections, having a sense that you are seeing somebody else like you, that you could be that person that you see as a leader.

Fernando S. Mendoza, M.D.

Diversity in U.S. Medical Schools Diversity Oral History Series Interviews, March 25 and May 12, 2004

Increasing Minority Faculty

So, the issue for me has been how do we get more minority faculty...is *first* to get more minority students in. The pipeline issues of the Health Careers Opportunity Programs are to get more minority students. The pipeline issues of the Center of Excellence is really to get students to be successful, and then to achieve, and hopefully then to consider academic careers and also to make faculty successful. The two ends of the spectrum we have, or at least what we have control over, are the medical school entry and what they do there. There the gatekeeper is the Director of Admissions and the Dean, and we can kind of work with that pretty well. So, we have the Early Matric Program, we have things to provide cultural competency through experiences in communities. We have stipends for them to do research in communities, if they can't get money from other sources; luckily, quite often, they get money from Stanford. And then we have, more recently, money for them to go present their work, so that they can feel like they are part of the faculty, etc. We have money for teaching cultural competency classes, so it is sort of a package to kind of bring together an academic diversity effort for medical students.

The other side is, we also are trying to interject ourselves into the other end, which is faculty, so what we try to do through the Center of Excellence—and have for a while—is to create opportunities for a faculty (member) to be more successful. One of the early ones was just to give them travel money to go to conferences. You know, that is how they develop social networks. Some of my time is to talk to them, to mentor them, to try to talk to (others about their) promotions and things. ...We have also run things like seminars, and funding seminars, and scientific writing, and we have done grant workshops. But as I was going to say, more recently what we have done is to focus on what we are calling development of an Individual Academic Plan...What that does is sets out, over the year or more, what faculty are going to accomplish.

Fernando S. Mendoza, M.D., M.P. H.

Diversity in U.S. Medical Schools Diversity Oral History Series Interviews, March 25 and May 12, 2004

Extending Science and Scholarship across Medical School into Graduate and Postgraduate Training

What I think the next wave of opportunity I'd like to see is that the same kind of continuity of both science and scholarship go across postgraduate training. So we're actually talking about how to extend the scholarly concentrations into residency and fellowship. I guess that would make a big difference as well because what happens is you lose your connection....

Philip A. Pizzo, M.D.

UCSF Diversity in U.S. Medical Schools Key Informant Interviews, July 30, 2003

Making Diversity Part of Strategic Plans

The Liaison Committee on Medical Education's new accreditation standard related to diversity, which became effective on July 1, 2009, states:

New Standard IS-16: Each medical school must have policies and practices to achieve appropriate diversity among its students, faculty, staff, and other members of its academic community, and must engage in ongoing, systematic, and focused efforts to attract and retain students, faculty, staff, and others from demographically diverse backgrounds.⁴⁹⁸

UCSF and Stanford Schools of Medicine both have developed strategic plans that include diversity of students, faculty, staff, and others as strategic directions or goals. Strategic plans with references to diversity are important because they establish institutional values related to diversity. However, these values must be translated into implementation plans with accountability of leadership at the campus-wide level and with Deans and their teams, Department heads, and Division chiefs within Schools of Medicine. UCSF's experience shows that the implementation plans in turn must be supported by data systems, transparency in sharing and analyzing data, regular monitoring with realistic appraisal of progress and problems, and resources to provide incentives, or they are unlikely to advance diversity, particularly for senior leadership staff, faculty, residents, and postdoctoral scholars. To augment its Nurturing Diversity Strategic Direction in its strategic plan, UCSF has also developed a 10-point Diversity Initiative.

Stanford uses annual Strategic Planning Leadership Retreats convened by the Dean of the School of Medicine to focus on themes in the Strategic Plan; update progress on strategic initiatives, goals, and implementation activities; and propose new initiatives.⁴⁹⁹ The School of Medicine's strategic planning process is also integrated with the departmental planning and budget process.⁵⁰⁰

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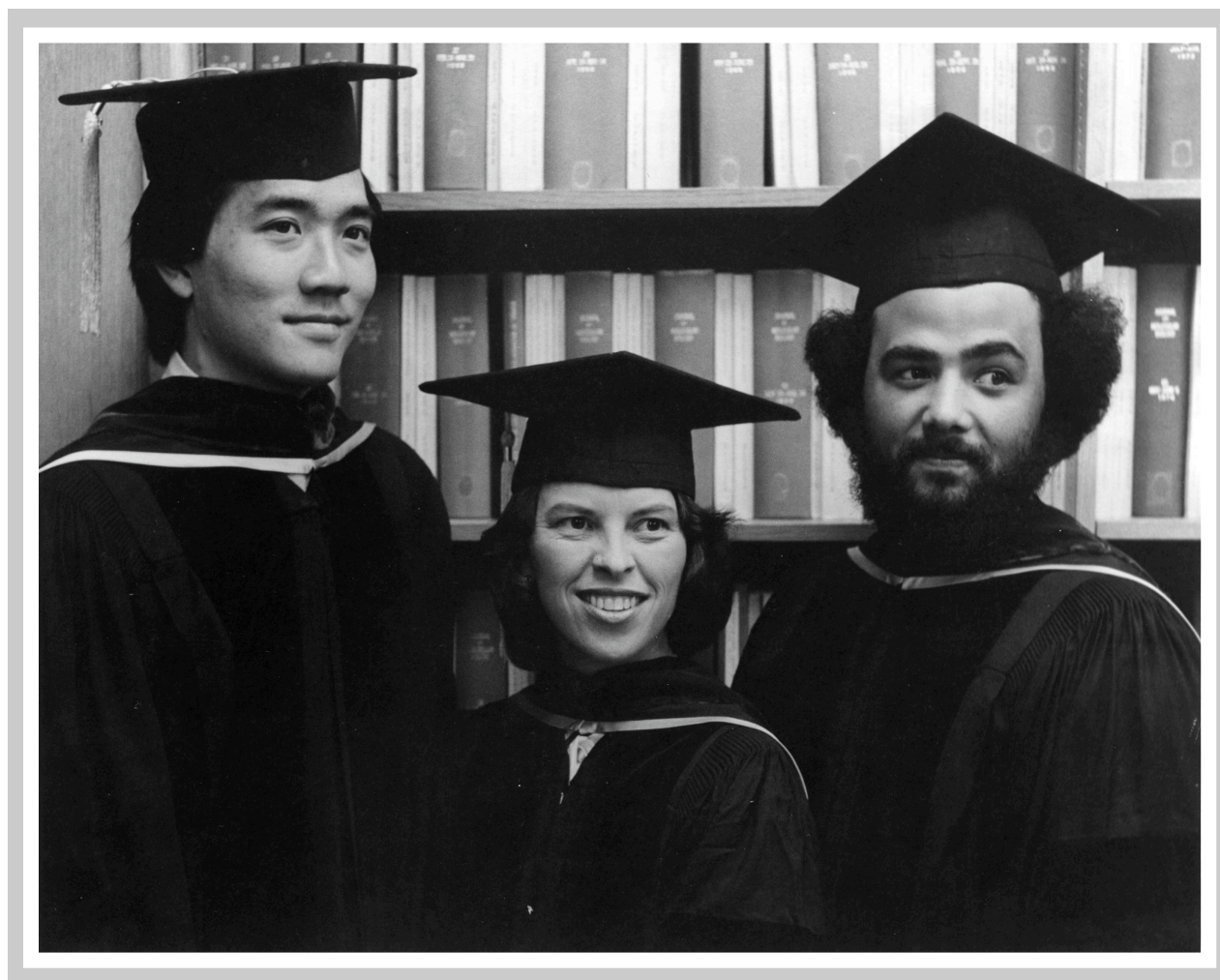
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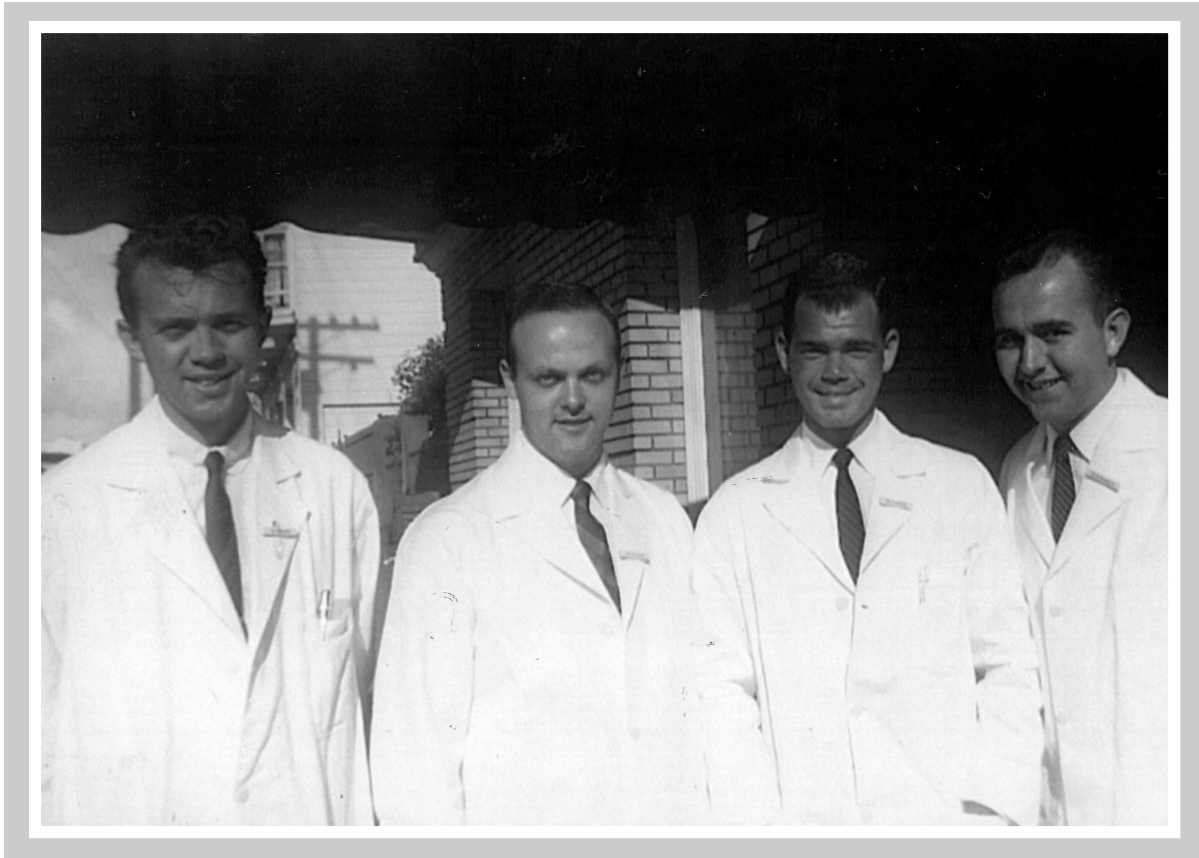
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Members of the Class of 1978, UCSF School of Medicine
Courtesy of UCSF Library and Center for Knowledge Management,
Archives and Special Collections



Members of the Class of 1959, Stanford University School of Medicine
Courtesy of Office of Medical Development, Alumni Relations,
Stanford University School of Medicine



Vietnam War Convocation, UCSF, May 1970
Courtesy of UCSF Library and Center for Knowledge Management,
Archives and Special Collections



Student Orientation, Stanford University School of Medicine Class of 1980,
Courtesy of Stanford University School of Medicine, Office of Communication and Public Affairs



Members of the Class of 2006, Stanford University School of Medicine
Courtesy of Stanford University School of Medicine,
Office of Communication and Public Affairs



Match Day for Stanford University School of Medicine, 2007 Graduates
Courtesy of Stanford University School of Medicine,
Office of Communication and Public Affairs



Match Day for Stanford University School of Medicine 2004 Graduates
Courtesy of Stanford University School of Medicine, Office of Communication and Public Affairs



SUMMA (Stanford University Minority Medical Alliance) Conference –
Students with Surgeon General David Satcher,
Courtesy of Stanford University School of Medicine, Office of Communication and Public Affairs



UCSF School of Medicine Students in Program in Medical Education for the Urban Underserved (PRIME – US) Courtesy of Office of Medical Education, UCSF School of Medicine and UCSF Office of Communication



CHAPTER 9

Recommendations: Opportunities for Action to Increase Diversity

Introduction

Many national and California reports with recommendations on diversity in medical schools and the health professions, as well as on the physician workforce, have been developed over the past fifteen years. Among the national reports are several from the Institute of Medicine,^{1,2,3,4} the Sullivan Commission Report,⁵ a report from Community Catalyst,⁶ reports from the Council on Graduate Medical Education,^{7, 8} a statement on the physician workforce from the Association of American Medical Colleges (AAMC) and other AAMC reports,^{9,10, 11} annual reports on results of the National Resident Match,¹² and several reports on physician supply and demand.^{13,14,15,16,17} There have also been reports and papers on international medical graduates.^{18,19,20,21} A national report from the University of California, San Francisco reviewed strategies to improve diversity in the health professions,²² and an annotated bibliography of evaluations of pipeline development programs to increase diversity in the health professions has been developed.²³

In California, several recent reports have been issued as part of The Connecting the Dots Initiative of The California Endowment.²⁴ There have also been reports from the California Office of Statewide Health Planning and Development,²⁵ The Greenlining Institute,²⁶ the University of California, San Francisco,^{27,28,29,30,31,32} the University of California, Berkeley,³³ and the University of California Office of the President.^{34,35,36,37,38}

Several documents providing guidance to medical schools and other institutions of higher education on research, legal, and educational policy foundations related to diversity have also been released.^{39,40,41,42,43,44,45}

We have reviewed the findings and recommendations of these reports and papers as well as documents providing guidance as part of our study. In the next section, we summarize major themes from the recommendations of major reports and the current context for action. In the following section, we identify opportunities for action for the UCSF and Stanford Schools of Medicine and other U.S. medical schools, the University of California, the State of California,

and the federal government based on recommendations from major reports as well as findings from our study.

Recommendations from Major Reports

1. Revitalize Efforts to Increase the Participation of Diverse Populations in U.S. Medical Schools to Provide Physician Leadership to Meet the Nation's and California's Health Care Needs.

There is a compelling need to revitalize efforts to increase diversity in U.S. medical schools, particularly the participation of those who remain underrepresented in medicine—Blacks or African Americans, Hispanics or Latinos, American Indians and Alaska Natives, Native Hawaiians and Other Pacific Islanders, and other racial and ethnic groups.^{46,47,48,49,50,51,52,53,54,55,56,57} The growth in the size and diversity of the nation and many of its states, including California, is outpacing the growth in enrollment among some groups, particularly Hispanics or Latinos, which are underrepresented in medicine. Educational and financial barriers keep many groups from medical school. Underrepresentation among medical students, trainees, faculty, and staff is a continuing and serious problem in medical schools. The physician workforce also lacks the benefits of diversity to meet the nation's and California's health care needs. Preparing a diverse workforce is an urgent priority to meet local, regional, state, and national needs. To meet these needs, the workforce must include diverse physicians in primary and specialty patient care; basic, biomedical, clinical, behavioral and social science research, health services and health policy research; education and training; and public service. The effort to increase diversity requires multiple strategies engaging public, private, and independent sector agencies and organizations.

2. Use Multiple Strategies to Increase Diversity in the U.S. and California Physician Workforce, Improve Specialty and Geographic Distribution, and Strengthen Medical Education in a Global Health Environment.

The goal of increasing diversity in the U.S. physician workforce is linked to issues related to physician supply and demand, as well as to the specialty and geographic distribution of physicians, in the U.S. and in other countries.^{58,59,60} The 21st century global health context is characterized by the immigration and migration of health professionals and students in the health professions. “Advancing health worldwide” is now the mission of the University of California, San Francisco, and many other academic health sciences centers have global health as part of their missions. Clearly, the diversity of the U.S. physician workforce is reflected not only in the diversity of graduates from U.S. allopathic and osteopathic medical schools, but also in the diversity of graduates from international medical schools, both U.S. citizens and those from other countries. More than one-quarter of all physicians in the U.S. workforce are international medical graduates, many providing primary and specialty care in underserved rural and urban

areas in the U.S.⁶¹ (Visa waivers may be obtained after conclusion of residency training by practicing in physician shortage areas.) Specialty choices in graduate medical education and career choices in type and location of practice differ for U.S. medical graduates and international medical graduates (U.S. citizens and non-U.S. citizens); these choices also vary by race and ethnicity. Several strategies must be considered for increasing the diversity of the physician workforce, as well as improving physician supply and specialty and geographic distribution to meet health care needs in the U.S. as well as global health care needs.

The Association of American Medical Colleges' AAMC Statement on the Physician Workforce in June 2006 called for a 30 percent increase in enrollment in U.S. medical schools, or 21,434 new matriculants, by 2015, through expansion of enrollment in existing schools and the development of new schools. Among other workforce recommendations that the AAMC set forth in this statement was:

The AAMC should continue to advocate for and promote efforts to increase enrollment and graduation of racial and ethnic minorities from medical school; and promote the education and training of leaders in medical education and health care from racial and ethnic minorities.

Increases in enrollment in existing medical schools and the establishment of new medical schools provide opportunities not only to recruit and enroll diverse students, but also to develop or modify missions—and curricula—to encourage medical education programs focused on meeting health care needs of diverse communities in urban and rural areas, research on health disparities, and training in cultural competence. Providing mentoring, role modeling, a variety of clinical and research opportunities, and other incentives, including scholarships and loan repayment programs, for students who are underrepresented in medicine and other U. S. medical students to enable them to consider a broad range of choices in their residency programs and careers are critical strategies for U.S. medical schools. There is concern, however, that U.S. medical school enrollment is not growing rapidly enough to meet its 2015 target, and that the demand for physicians in the U.S. by 2015 and through 2025 will rapidly outpace the ability of U.S. medical schools to meet the demand.

Several reports call for taking a comprehensive approach to the role of international medical graduates in the U. S. workforce, including both U.S. citizen international medical graduates and non-U.S. citizen international medical graduates, and in the workforce of their countries of origin. Among the strategies that have been proposed include: 1) examining Medicare funding for graduate medical education and caps on residency positions; 2) understanding more clearly the immigration pathways by which non-U.S. citizen international medical graduates enter and remain in the U.S. and areas of practice in primary and specialty care, underserved areas, and in academics; 3) continuing to develop collaborative educational programs between U.S. medical schools and those in countries outside the U.S. to advance training of international medical graduates that benefits trainees, the medical schools in their countries of origin, and the people in those countries; 4) developing residency orientation programs for U.S. citizen international medical graduates and non-U.S. citizen international medical graduates; and 5) increasing cultural and linguistic competence through cross-cultural education and training for U.S. medical graduates, U.S. citizen international medical graduates, and non-U.S. citizen international

medical graduates, residents, and U.S. medical school faculty and staff. These strategies represent opportunities for action by medical schools, state and federal government, international health organizations, professional and trade associations, accreditation and certification agencies, such as the Educational Commission for Foreign Medical Graduates, and foundations.

3. Align Health Care, Health Workforce, and Health Professions Education Policies in Health Care Reform.

The President has made health care reform one of his highest priorities and Congress is taking the lead in preparing health care reform legislation and moving it forward. On November 7, 2009, the House of Representatives approved the Affordable Health Care for America Act (H. R. 3962).⁶² On November 19, 2009, the Senate released the Patient Protection and Affordable Health Care Act (H.R. 3590, amendment in the Senate), the vehicle merging health care reform legislation passed by the Senate Finance Committee and the Senate Health, Education, Labor, and Pensions Committee that was used for debate in the Senate.⁶³ On December 24, 2009, the Senate approved the Patient Protection and Affordable Health Care Act. This bill is now being reconciled with the House bill. Both the House and Senate bills address issues related to health care access, quality, costs, and affordability.

The bills also contain provisions related to the health care workforce and health professions education and training. The bills extend authorization and increase appropriations for the National Health Service Corps and several Title VII and Title VIII health professions education and training programs, providing additional funds for scholarships, loans, loan repayment, and program operation. They provide grants to enhance academic capacity in primary care programs and for primary care residency training programs in community settings, and they redistribute unfilled residency slots for use as primary care slots. H.R. 3962 proposes increasing Medicaid payments for primary care services to match Medicare payments and also establishes an Accountable Care Organization Pilot Program, creating an alternative payment model within fee-for-service Medicare to provide an incentive for physician-led organizations that take responsibility for costs and quality of care, a Medical Home Pilot Program to expand and reorient the demonstration in Medicare to assess the feasibility of reimbursing for qualified, home-based primary care, and a new Independence at Home Demonstration Program to test a payment incentive for a delivery system that utilizes physicians and nurse practitioners to provide home-based primary care for chronically ill Medicare beneficiaries. This bill also has a number of provisions related to Indian health. H. R. 3590 proposes providing primary care practitioners and general surgeons practicing in health professional shortage areas with a 10 percent Medicare payment bonus for five years. These provisions will need to be examined carefully in terms of their potential to address critical issues related to access and quality of care, the health care workforce, and health professions education and training.

The Senate Finance Committee heard testimony in March 2009 on workforce issues in health care reform. Testimony underlined several issues: 1) the importance of access to comprehensive primary care for the effective functioning of the health care system;⁶⁴ 2) the shortage of primary care physicians (two-thirds of the U.S. physician workforce practices as specialists or in other areas);⁶⁵ 3) the lack of physicians practicing in rural and economically disadvantaged areas (most physicians practice in urban areas);⁶⁶ 4) a “dysfunctional physician payment reimbursement

system dominated by Medicare’s Resource Based Relative Value Scale (RBPVS) fee-for-service system”;⁶⁷ and 5) a “serious and growing shortage of U.S. medical school graduates choosing careers in primary care” (high levels of student indebtedness, low pay, lack of prestige, high patient volume, rushed care).⁶⁸ The Committee also heard that student loan forgiveness may be a useful stop-gap measure for encouraging careers in primary care, but is unlikely to be “a sufficient or durable measure in the absence of fundamental payment reform that improves the primary care practice environment.”⁶⁹

4. Enforce Accreditation Standards for Diversity and Cultural Competence in Medical Schools.

On July 1, 2009, the Liaison Committee on Medical Education’s (LCME’s) revised and new accreditation standards for diversity for medical schools became effective.⁷⁰ Now that these standards have been formulated, enforcement of the standards by LCME should provide an impetus for medical schools to assess the progress of diversity efforts and act to enhance efforts.^{71, 72}

Revised Standard MS-8: Each medical school must develop programs or partnerships aimed at broadening diversity among qualified applicants for medical school admission.

Annotation: Because graduates of U.S. and Canadian medical schools may practice anywhere in their respective countries, it is expected that schools recognize their collective responsibility for contributing to the diversity of the profession as a whole. To that end, schools should work within their own universities and and/or collaborate with other institutions to make admissions to medical education programs more accessible to potential applicants of diverse backgrounds. Schools can accomplish that aim through a variety of approaches, including, but not limited to, the development and institutionalization of pipeline programs, collaborations with institutions that serve students from disadvantaged backgrounds, community service activities that heighten awareness of and interest in the profession, or academic enrichment programs for applicants who may not have taken traditional pre-medical coursework.

New Standard IS-16: Each medical school must have policies and practices to achieve appropriate diversity among its students, faculty, staff, and other members of its academic community, and must engage in ongoing, systematic, and focused efforts to attract and retain students, faculty, staff, and others from demographically diverse backgrounds.

New Annotation: The LCME and CACMS (Committee on Accreditation of Canadian Medical Schools) believe that aspiring future physicians will be best prepared for medical practice in a diverse society if they learn in an environment characterized by, and supportive of, diversity and inclusion. Such an environment will facilitate physician training in:

- Basic principles of culturally competent health care
- Recognition of health care disparities and the development of solutions to such burdens
- The importance of meeting the health care needs of medically underserved populations
- The development of core professional attributes, such as altruism and social accountability, needed to provide effective care in a multidimensionally diverse society.

Each school should articulate its expectations regarding diversity across its academic community in the context of local and national responsibilities, and regularly assess how well such expectations are being achieved. Schools could include the following elements of diversity in their planning, but not limited to: gender, racial, cultural and economic. Schools should establish focused, significant, and sustained programs to recruit and retrain diverse students, faculty members, staff, and others.

The AAMC developed the Tool for Assessing Cultural Competence Training (TACCT)⁷³ to help medical schools meet the LCME accreditation standard for cultural competence adopted in 2000:

The faculty and students must demonstrate an understanding of the manner in which people of diverse cultures and belief systems perceive health and illness and respond to various symptoms, diseases, and treatments. Medical students should learn to recognize and appropriately address gender and cultural biases in health care delivery, while considering first the health of the patient.⁷⁴

This standard, noted with additional clarification in ED-21 and ED-22 in LCME's accreditation standards,⁷⁵ is strengthened by one of the new diversity standards (IS-8), which emphasizes training in "basic principles of culturally competent health care."

5. Provide Clear Guidance to Universities and Medical Schools in Meeting Legal Responsibilities under Federal and State Civil Rights Laws.

U.S. medical schools differ in the legal frameworks for their efforts to promote diversity.⁷⁶ There are medical schools in 44 states, the District of Columbia, and Puerto Rico. In all of these areas—except California, Florida, Michigan, Nebraska, and Washington—both public and private medical schools are guided in their admissions and other policies related to a consideration of race by the U.S. Supreme Court's June 2003 decision in *Grutter v. Bollinger*. The Court's opinion upheld as a binding precedent the opinion of Justice Lewis F. Powell, Jr., in the 1978 *Regents of the University of California v. Bakke* case, allowing race to be considered as one among many factors to permit universities to obtain the educational benefits that flow from a diverse student body to fulfill their educational mission. In 2008, 15 of the 130 accredited four-year public medical schools in the U.S. were prohibited by state laws from a consideration of race as well as of ethnicity, gender, color, and national origin in their admissions and other policies, including schools in two of the nation's largest and most diverse states (California and Florida). There is a need to clarify the relationship of Title VI of the Civil Rights Act of 1964 and regulations promulgated to enforce that law, state anti-affirmative action laws, and their impact on universities and medical schools, as well as to enforce federal and state laws on cultural and linguistic competency.

6. Renew University and Medical School Institutional Leadership and Accountability.

Renewed university and medical school institutional leadership and accountability are required to build the capacity of medical schools to develop comprehensive, mission-driven approaches to increase the number of those underrepresented in medicine among students, residents, postdoctoral fellows, faculty, and staff at all levels and to ensure cultural competence in medicine.^{77,78} Calls for commitment to diversity at the highest levels to bring about changes in the institutional culture of medical schools, colleges, and universities;⁷⁹ comprehensive strategies to improve the institutional climate for diversity;⁸⁰ mission statements that recognize the value of diversity in enhancing the mission;⁸¹ reconceptualizing admissions policies and practices;⁸² complementary strategies to increase diversity and ensure cultural competence;⁸³ strategic plans outlining specific goals, standards, policies, and accountability mechanisms;⁸⁴ and data collection, research, and evaluation⁸⁵ are repeated in recommendations of many reports.

7. Meet Increasing Challenges to Reduce Financial Barriers to Undergraduate Education and Medical Education.

Increases in the cost of undergraduate education, undergraduate debt burden, the cost of medical school at both public and private universities, and debt burden of medical school graduates pose increasing challenges for prospective applicants and acceptants and their families, as well as for medical schools. Costs of medical education in the form of tuition increases are increasing faster than medical schools' discretionary or dedicated dollars for student financial aid. "The trends toward increased tuition costs and decreased need-based aid have resulted in higher levels of unmet need for lower-income students."⁸⁶ Data suggest that underrepresented students have greater needs for financial support.⁸⁷ "Cumulative debt for University of California medical schools is particularly high and even higher for URM students, who borrow slightly more than white and Asian American students."⁸⁸

Medical schools that can provide payment of all costs of medical school or relief to families with incomes below certain income levels place medical schools that cannot offer such assistance at a competitive disadvantage in attracting and enrolling the diverse students that would help the school meet its interrelated missions. Loan forgiveness, tuition reimbursement, and loan repayment programs at the federal and state levels, as well as private sector programs, have been proposed as ways to increase incentives for physicians to work in underserved areas.^{89, 90, 91} There are proposals to increase financial aid funds for students and for health professions schools committed to training diverse student populations.⁹² The College Cost Reduction and Access Act (CCRAA) of 2007 (Public Law 110-084) and the Higher Education Opportunity Act (HEOA) of 2008 (Public Law 110-315) reauthorized long-time loan and grant programs as well as new programs aiding undergraduate, graduate, and professional students and their families, as well as colleges and universities, including minority-serving institutions.

The House of Representatives approved the Student Aid and Fiscal Responsibility Act of 2009 (H.R. 3221)⁹³ on September 17, 2009 and referred it to the Senate Committee on Health, Education, Labor and Pensions on September 22, 2009. The purpose of the bill is to amend the

Higher Education Act of 1965. The bill has several other purposes and five education-related titles. H.R. 3221 proposes reforms to: 1) increase college access and completion through Pell Grants and other grants, 2) simplify student financial aid forms, and 3) change Stafford and Perkins Loan programs to allow for non-profit lenders and Direct Loans from the Department of Education. The bill also includes provisions for grants to modernize and repair public schools, an Early Childhood Challenge Fund, and an American Graduation Initiative.

If reforms and funding appropriations follow funding authorizations over the next fiscal years, there is hope that the combination of program and funding efforts will improve the chances for all students of moving along the higher educational continuum to and through medical school. Increases in Pell Grants and changes in the terms of loan payment are already easing the way for some students.

8. Strengthen K-12 Education and Build Bridges on the Educational Pathway to Medical School.

Racial/ethnic disparities in educational attainment and achievement in the nation and in California begin early and persist over the educational continuum that leads to medical school.⁹⁴ To increase the number of underrepresented persons in medical school over the long term means enhancing the ability of students to acquire the knowledge, skills, and experience, as well as meet educational milestones and requirements for medical school in their K-16 education, so that a greater number of underrepresented students are able to successfully apply and be accepted to medical school.^{95, 96, 97,98,99} A range of “downstream” and “upstream” approaches, or pre-college, college-eligible, and college outreach programs, interventions, and intervention strategies are available, and some have been evaluated.^{100,101} Postbaccalaureate medical programs in California have been evaluated and have been found to be successful in helping students be accepted to medical school.¹⁰²

9. Develop Broad-based Coalitions among the Public, Private, and Independent Sectors to Support Diversity Efforts.

Efforts to increase diversity in medical schools, beginning in the mid-to late 1960s and continuing into the 1970s and again in the early 1990s, were successful because federal and state government policies in civil rights, health care, health workforce, and health professions education were aligned and linked with broad-based grassroots support, as well as foundation, professional and trade association, and advocacy organization support. In California, foundation support to the University of California has been critical to the development of the PRIME (Program in Medical Education), a focused medical education program directed to meeting the needs of urban and rural underserved and other diverse populations. Foundation support also has been important in raising the visibility of the problem of declining enrollment of underrepresented groups after the University of California Regents’ resolution SP-1 in 1995 and the passage of Proposition 209 anti-affirmative action measures and seeking ways to reverse this trend and address educational disparities affecting the pool of underrepresented groups. Calls for “mechanisms to garner support for diversity efforts,” including private entity collaboration with health professions educational institutions and broad coalitions to advocate to encourage these

institutions,¹⁰³ as well as engagement of “key stakeholders,” including businesses, foundations, and other private organizations,¹⁰⁴ “potential leadership (civil rights activist organizations, advocacy groups concerned with racial disparities in health and health care, community benefit advocates, consumer health organizations),”¹⁰⁵ and other coalition approaches¹⁰⁶ are frequent recommendations.

10. Bring Community Benefit by Increasing Diversity.

The “promotion of health”—a community benefit—has been identified as a charitable purpose of non-profit hospitals, and several states have developed regulations to increase the accountability of these hospitals using community benefit principles.¹⁰⁷ Some states require community needs assessments, solicitation of community input in community benefit plans, and a review of mission statements to reflect a commitment to addressing community health needs.¹⁰⁸ Health professions education institutions play an important role in meeting community health needs, by providing patient care and by training students. Developing community benefit principles or standards to support medical schools’ initiatives in increasing medical school diversity to increase health care workforce diversity is an approach recommended in several reports.^{109,110,111}

Opportunities for Action

UCSF and Stanford Schools of Medicine and other U.S. Medical Schools

Leadership and accountability of University Presidents or Chancellors, Provosts, campus-wide administrative office heads, medical school Deans, Deans’ office heads, Department and Division heads, and individual faculty members are required to increase diversity within medical schools. Engagement of medical students, residents, postdoctoral fellows, alumni, staff, advisory groups, and other campus groups is essential. Priority recommendations for a comprehensive approach to increasing diversity among applicants, students, trainees, faculty, and staff are:

1. Make the Commitment to Diversity an Institutional Priority and an Institutional Value Linked to Excellence in Meeting University and Medical School Missions.
2. Communicate the Commitment to Diversity, the Many Aspects of Diversity, and the Benefits of Diversity to the Campus Community, University and Medical School Alumni, and the Public.
3. Make Increasing the Diversity of Students, Trainees, Faculty, and Staff Part of University and Medical School Strategic Plans with Goals, Measurable Objectives, Methods, Lead Responsibilities, Tasks, Timelines, Data Systems for Monitoring, Accountability, Resources, and Incentives.
4. Have University and Medical School Leadership Share Progress and Problems in Meeting Goals and Objectives Openly and Regularly.

5. Use a Mission-driven, Multidimensional Approach to Revitalize Medical Student Diversity: Review and Renew these Major Policy and Program Areas:
 - Mission
 - Educational Mission
 - Outreach and Recruitment
 - Admissions
 - Retention: Student Support
 - Medical School Curriculum
 - Student Financial Aid
 - Campus Environment
 - Educational and Health Care Partnerships
 - Cross-cultural Education and Training
6. Use the Liaison Committee on Medical Education's (LCME's) Accreditation Standards for Diversity (MS-8 and IS-16) for Medical Schools as an Impetus to Review Diversity Efforts Related to Applicants, Students, Trainees, Faculty, and Staff.
7. Use LCME's Accreditation Standards for Cultural Competence (ED-21 and ED-22) and Models and Tools to Help Guide Renewed Efforts in Cross-cultural Education and Training and in Evaluation of Efforts.
 - Align Cross-cultural Education and Training Efforts for students, trainees, faculty, and staff with federal law in National Standards for Culturally and Linguistic Appropriate Services in Health Care (CLAS), Cultural Competencies of the Accreditation Council for Graduate Medical Education (ACGME), the Joint Commission's Hospital Accreditation Standards on Cultural Competence, and the Health Resources and Services Administration's Framework for Assessing Cultural Competence.
8. Develop a Support Structure over the Educational and Career Continuum to Increase and Sustain Diversity within and outside the Medical School.
 - Develop diverse physician leaders in primary and specialty patient care, community health service delivery, research (basic, biomedical, clinical, social and behavioral, health services, and health policy), education and training, and public service. The following are actions that might be undertaken by medical schools to increase and sustain diversity:
 - *Reach Out*—to diverse K-12 students to develop an interest in and fascination with science, basic and advanced science knowledge, and motivation, skills, and experience through service learning
 - *Build Up*—knowledge, skills, and experience with diverse K-12-16 students, applicants, and acceptants with pre-college, college-eligible, postbaccalaureate, and prematriculation programs
 - *Attract*—Use learning pathways, curriculum design, special educational opportunities, the learning environment, and student financial aid to attract

diverse applicants and acceptants to the medical school to meet its interrelated missions

- *Nourish*—diverse medical students, residents, and postdoctoral fellows through formal and informal mentoring as they come to critical decisions about graduate medical education and their careers
- *Hold on*—to diverse graduates through their residency years, postdoctoral fellowship study, recruiting them as faculty members and retaining them as the next generation of physician leaders
- *Seed*—diverse graduates and postdoctoral scholars to become physician leaders in community medicine, academic medicine, research, and government service in institutions throughout the country and the world

University of California

To increase diversity within the University of California's medical schools will require strong leadership as well as the accountability of the Board of Regents, the President, the Academic Senate, the Staff Diversity Council, and other University offices and groups. Priority recommendations for University undergraduate, graduate, and professional education; health professions education and the California health workforce; as well as University pre-college, college-eligible, and postbaccalaureate medical programs, are:

1. Make the Commitment to Diversity an Institutional Priority and an Institutional Value for the University of California to Assure Excellence in Meeting the University's Interrelated Missions in Education and Training, Research, Patient Care, and Public Service.
2. Use the 2009 Annual Accountability Sub-report on Diversity to the Board of Regents to Improve the Ability to Monitor Progress and Problems in Increasing Diversity within the University's Ten Campuses.
 - Develop and use process benchmarks in annual reports to give the President and Board of Regents measurable indicators on improvements likely to impact trend lines over time.
 - Request verbal presentations by Chancellors to the President and Board of Regents of highlighting information submitted as part of annual reports on diversity.
 - Use specific recommendations of the Staff Diversity Council and the Study Groups on University Diversity presented to the Board of Regents to profile campus progress and best practices in these areas in a consistent way:
 - Leadership
 - Accountability
 - Recruitment and Retention of Diverse Staff
 - Recruitment and Retention of Diverse Faculty
 - Recruitment and Retention of Diverse Graduate and Professional Students
 - Recruitment and Retention of Diverse Undergraduate Students
 - UC Campus Admissions Should Align to Best Practices
 - Regularly Assess Campus Climate
 - Academic Planning

- Apply Funding and Support
3. Provide Clear Guidance to Campuses in Meeting the University's Legal Requirements under Federal and State Laws: Title VI of the Civil Rights Act of 1964 and the California State Constitution Article 1, Declaration of Rights, Section 31 (a-f) and on Federal and State Laws related to Cultural and Linguistically Appropriate Services in Health Care and Cultural and Linguistic Competency.
 4. Continue to Review and Develop Policies to Increase Access to the University for Diverse Undergraduate, Graduate, and Professional Students, including Increasing Need-based Student Financial Aid.
 - Continue the UC Blue and Gold Opportunity Plan and increase funds available under this Plan.
 - Increase funding for Cal Grants A& B.
 - Explore the development of other federal, state, institutional, and private grants, gifts, and loans for students with high need.
 5. Review University Pre-College, College-eligible, and Graduate and Professional School Academic Preparation Programs, including the Postbaccalaureate Medical School Program, and Continue to Budget and Allocate Funds for these Programs.
 - Provide opportunities for students to develop a fascination with science and commitment to service.
 - Provide opportunities for students to acquire knowledge, skills, and experience in science and math, and research.
 - Provide opportunities for service learning.
 - Improve chances that diverse applicants committed to entering medical school will be accepted and enrolled.
 - Partner with foundations, University alumni, and other private donors to support these programs.
 6. Continue to Coordinate University Health Professions Education Policies with California Health Workforce Policies and Continue to Budget and Allocate Funds for PRIME (Program in Medical Education) and Other Increases in Medical School Enrollment.
 7. Continue to Make Diversity a Priority in the University's Systemwide Long-range Academic Planning.

State of California

Despite challenges posed by the current economic climate, the State of California has commitments to keep to the people of California now and in the future. Two basic commitments are to help assure that every Californian has access to a high-quality educational system and to help assure that every Californian has access to high-quality health care. The Governor is in a position to provide leadership in California in key policy areas—K-12 education, postsecondary education, health professions education, health planning and development, and health care. The California Legislature is also in a position to advance policies, including the appropriation of adequate funds to support essential programs in these areas. As the diversity of California’s general population, its student population, and its patient population has grown, the need to have a health care workforce, including a physician workforce that reflects this diversity and is culturally and linguistically competent has become increasingly compelling. Priority recommendations for the Governor, the State Superintendent of Public Instruction, the California Postsecondary Education Commission, the Secretary of Health and Human Services, other agencies, and the Legislature are:

1. Strengthen K-16 Education in California and Build Bridges on the Pathway to Medical School.
 - Make the California Department of Education’s first priority to improve educational achievement and attainment of all of California’s K-12 students to assure diverse workforce participation and a strong economic future for California.
 - Use policy levers to improve students’ transition from high school to college by engaging the California Department of Education and the California Postsecondary Education Commission to develop a plan to:
 - Align coursework and assessments from early grades through grade 14 or later.
 - Integrate goals from K through 16 in financing education.
 - Develop high-quality data systems that span the K-16 continuum.
 - Develop accountability systems that connect K-12 and postsecondary education.
 - Expand educational opportunity through educational outreach and K-12 improvement programs to improve diversity in the University of California:
 - Invest in the long-term capacity of K-12 schools and enhance student diversity in the University of California through:
 - Student-centered programs
 - School partnerships
 - Professional development
 - Enrichment and informational programs
 - Continue to budget and allocate state funds for University of California pre-college, college-eligible, and graduate and professional school academic preparation programs, including the Postbaccalaureate Medical School Program.

2. Improve Access and Quality of Health Care for all Californians by Coordinating California's Health Care, Health Workforce, and Health Professions Education Policies.
 - Address as an urgent priority the serious and continuing underrepresentation of Hispanic or Latino, Black or African American, American Indian and Alaska Native, and Native Hawaiian and Other Pacific Islander physicians in California:
 - Samoan, Cambodian, and Hmong/Laotian physicians are in very short supply. Add these groups to the list of underrepresented physicians.
 - Minority physicians in California play a major role in providing care in underserved communities, including Medically Underserved Areas, Health Professional Shortage Areas, and high-minority and low-income communities.
 - Minority physicians in California are more likely than White physicians to work in primary care (i.e., family medicine, general medicine, and general pediatrics)
 - Address as an urgent priority physician supply shortages in California, which are expected to reach 17,000 physicians by 2015.
 - Address physician geographic and specialty maldistribution, particularly the shortage of primary care physicians actively practicing in California.
 - Keep the state's commitment to invest in new public medical schools in California at the University of California, Riverside and the University of California, Merced.
 - Continue to provide state funding to the University of California for PRIME (Program in Medical Education), the focused program in medical education that prepares medical students to work with urban and rural underserved populations and other diverse populations and increases enrollment at University of California medical schools at Davis, Irvine, Los Angeles, San Diego, and San Francisco.
 - Engage the Office of Statewide Health Planning and Development, the California Healthcare Workforce Policy Commission, the Office of the President of the University of California and its five public medical schools, and the three private medical schools (Loma Linda, Stanford, and the University of Southern California) in creating a California Physician Workforce Development Plan.
 - Provide greater state investment in loan repayment programs, such as the National Health Service Corps/California State Loan Repayment Program and the Steven M. Thompson Physician Corps Loan Repayment Program:
 - Consider incentive plans to encourage more medical students to remain in California for graduate medical education and practice.
3. Enforce California Business and Professions Code Section 2190.1 4 (b-e) Related to Continuing Medical Education in Cultural and Linguistic Competency for Physicians and Surgeons (AB 1195, effective July1, 2006).

Federal Government

Federal leadership and policies in civil rights, health care, health workforce, health professions education, minority research and research training, higher education, and elementary and secondary education have been of great importance in fostering—or impeding—diversity in medical education. Presidential and Congressional leadership, as well as judicial leadership at the federal level, have played seminal roles in shaping policies. New Presidential and Congressional leadership provides new opportunities for action across several policy areas.

Civil Rights

The President leads a diverse nation and must exert strong and clear leadership on the importance of affirmative action and diversity. Assuring that all states, universities, and medical schools meet legal requirements under federal laws on nondiscrimination, the receipt of federal funds, and culturally and linguistically appropriate services in health care is critical. Priority recommendations for the President and Executive Agency Leadership (the Secretary of Health and Human Services, the Secretary of Education, the Attorney General), as well as the U.S. Commission on Civil Rights, and the Congress in the area of civil rights are:

1. Support Actively the U.S. Supreme Court’s 2003 decision in *Grutter v. Bollinger* on the Benefits of Diversity and the Use of Race-conscious and Race-neutral Practices.
2. Provide Clear Guidance to States and Institutions of Higher Education, including those with State Anti-affirmative Action Laws, on Compliance with Provisions of Title VI of the Civil Rights Act of 1964 and Regulations Promulgated to Enforce the Law.
3. Review, Revise, and Eliminate, if necessary, Previous Executive Orders and Statements of Administration Policy Affecting Civil Rights, including Affirmative Action and Diversity in Education, Employment, and Federal Contracting.
4. Assure Implementation and Enforcement of Earlier Executive Orders:
 - Executive Order 13160: Ensuring Equal Opportunity in Federally Conducted Education and Training Programs (June 23, 2000)
 - Executive Order 13166: Improving Access to Services with Limited English Proficiency (LEP) (August 11, 2000)
 - Executive Order 12250: Leadership and Coordination of Nondiscrimination Laws (November 2, 1980)
5. Enforce Federal Laws and Standards on Cultural and Linguistic Competence in Health Care Facilities:
 - Title VI of the Civil Rights Act of 1964
 - National Standards for Culturally and Linguistically Appropriate Services in Health Care (CLAS)

Health Care, Health Workforce, and Health Professions Education and Training

The President and the Congress are moving forward with health care reform. The House of Representatives approved Affordable Health Care for America Act (H.R.3962) on November 7, 2009, and the Senate began debating in late November 2009 provisions of the Patient Protection and Affordable Health Care Act (H.R.3590), the vehicle merging bills passed by the Senate Finance Committee and the Senate Health, Education, Labor, and Pensions Committee. On December 24, 2009, the Senate approved with amendment the Patient Protection and Affordable Health Care Act. The Senate and House bills must now be reconciled. A comprehensive approach to health care reform must address health workforce and health professions education and training issues, as well as access, quality, cost, and affordability issues, and the organization and delivery of care. Priority recommendations for the President, Executive Agency Leadership (Secretary of Health and Human Services), and the Congress are:

1. Improve Access and Quality of Health Care for All Americans by Taking a Comprehensive Approach to Health Care Reform that Addresses these Critical Issues:
 - The serious and continuing underrepresentation of Hispanic or Latino, Black or African American, American Indian and Alaska Native, and Native Hawaiian and Other Pacific Islander physicians in primary and specialty care, all types of research, and teaching to participate in the education and training of future generations of physicians.
 - The shortage of primary care physicians. Primary care is critical for access to care and for the effective functioning of the health care system. There is a shortage of primary care physicians—two-thirds of physicians are specialists or involved in other professional activities.
 - The serious and growing shortage of U.S. medical school graduates choosing careers in primary care for several reasons (i.e., high levels of student indebtedness, low pay, high patient volume).
 - The lack of physicians practicing in rural and economically disadvantaged areas, including Medically Underserved Areas, Health Professional Shortage Areas, and high-minority and low-income communities.
 - The lack of incentives for physicians to practice in alternative delivery and payment models that may enhance quality of care and help to contain costs.
2. Extend Authorization and Increase Annual Appropriations Levels for the National Health Service Corps.
 - Increase the amount of loan repayment and the flexibility of service.
 - Make annual appropriations meet increased authorization levels.
3. Reauthorize Title VII Health Professions Education and Training Programs and Increase Annual Appropriations Levels for these Programs.
 - Restructure these programs to better integrate diversity training programs; interdisciplinary, community-based programs; primary care medicine and dentistry

- programs; and student loan programs as part of a comprehensive federal health professions workforce strategy.
- Provide funding to support scholarships, loans, and grant support to enhance academic capacity in primary care (family medicine, general internal medicine, general pediatrics, and geriatrics), emphasizing support for disadvantaged students who are underrepresented in medicine and training in community-based settings, including medical home models and models coordinating physical, mental, and other health services.
 - Provide grant support to academic teaching centers to support resident training programs in community-based settings.
4. Reauthorize and Amend the Indian Health Care Improvement Act.
 - Authorize grants to tribes, tribal organizations, urban Indian organizations, and public and non-profit organizations for a Health Professional Recruitment Program for Indians to increase the supply of Indian health professionals for the Indian Health Service, and tribal and urban Indian health care centers.
 - Authorize programs to provide scholarships, loans, and loan repayment programs for pre-professional and professional assistance to Indians.
 5. Establish Accountable Care Organization, Medical Home, and Independence at Home Pilot and Demonstration Programs under Medicare.
 - Test these and other new delivery and physician reimbursement models that may improve quality and help to control costs.
 6. Increase Medicaid Reimbursement Rates for Primary Care Services to Match Medicare Rates.
 7. Strengthen the National Institutes of Health Minority Research and Training Programs Based on Recommendations of the National Research Council of the National Academies of Sciences' Assessment.
 8. Initiate a MedPAC (Medicare Payment Advisory Commission) Review of Medical School Policies for Graduate Medical Education (including those regarding U.S. International Medical Graduates and non-U.S. Citizen International Medical Graduates). Examine the effect of policies on diversity in the physician workforce and on enrollment in U.S. medical schools.
 9. Fund and Conduct Studies Mandated by the Higher Education Opportunity Act of 2008 Important to Policymakers:
 - Study on Foreign Graduate Medical Schools
 - Analysis of Federal Regulations on Institutions of Higher Education
 - Study of Minority Male Academic Achievement
 - Study of the Impact of Student Loan Debt on Public Service.

Higher Education

The President has made investment in education and education reform high priorities for his Administration. The College Cost Reduction and Access Act (CCRAA) of 2007 (Public Law 110-084) and the Higher Education Opportunity Act (HEOA) of 2008 (Public Law 110-315) are both parts of the reauthorization of the Higher Education Act of 1965. The House of Representatives approved the Student Aid and Fiscal Responsibility Act (H.R. 3221) with amendments on September 17, 2009, and the bill moved to the Senate Committee on Health, Education, Labor, and Pensions on September 22, 2009. Provisions of this bill would also amend the Higher Education Act of 1965. The CCRAA, the HEOA, and H.R. 3221 provisions affect undergraduate, graduate, and professional students and their families, including medical students and residents. Colleges and universities, minority-serving institutions, medical schools, and lenders are also affected. The laws reauthorize long-standing federal grant and loan programs, as well as set terms and conditions for loan programs, and authorize new programs providing support to individuals and institutions. H.R. 3221 proposes reforms to: 1) increase college access and completion through Pell Grants and other grants, 2) simplify student financial aid forms, and 3) change Stafford and Perkins Loan programs to allow for non-profit lenders and Direct Loans from the Department of Education. The bill also includes provisions for grants to modernize and repair public schools, an Early Childhood Challenge Fund, and an American Graduation Initiative. Priority recommendations for the President, the Secretary of Education, and the Congress are:

1. Provide Federal Financial Aid to Institutions and Individuals to Assure Opportunities to Pursue and Complete Undergraduate, Graduate, and Professional Education.
 - Assure maximal funding for the Pell Grant Program to meet added student demand and tie increases to increases in the Consumer Price Index plus 1 percent.
 - Assure appropriations at maximal authorized levels for Perkins Loans for undergraduate, graduate, and graduate students.
 - Assure appropriations at maximal authorized levels for Federal Direct Loan Programs (Direct Subsidized and Unsubsidized Loans, PLUS, Consolidation Loans). These programs include the Federal Direct Stafford Subsidized and Unsubsidized Loans, the Direct PLUS Loans, and the Direct Consolidation Loans. The U.S. Department of Education is the lender.
2. Strengthen Federal Institutional Support to Improve the Chances of Underrepresented and Disadvantaged Students Completing Postsecondary Education and Receiving Academic Enrichment in Sciences through Provisions of the College Cost Reduction and Access Act (CCRAA) of 2007, the Higher Education Opportunity Act (HEOA) of 2008, and the Student Aid and Fiscal Responsibility Act (H.R. 3221).
 - A New College Access and Completion Innovation Fund providing College Access Challenge Grants, a New State Innovation and Completion Grants program, and New Innovation in College Access and Completion Grants.
 - Institutional Support Programs to Assist Minority-Serving Institutions. American Indian Tribally Controlled Colleges and Universities, Alaska Native and Native Hawaiian-

Serving Institutions, Native American-Serving, Non-tribal Institutions, Asian American and Native American Pacific Islander-Serving Institutions, Historically Black Colleges and Universities and for Predominantly Black Institutions, and Promoting Postbaccalaureate Opportunities for Hispanic Americans.

- Existing and new programs (TRIO, STEM, YES Partnership Grants, Mathematics and Science Scholars Program, Patsy T. Mink Fellowship Program, and other programs) to provide support to youth to help them to progress from middle school to Postbaccalaureate Programs; to engage youth in Science, Technology, Engineering, and Mathematics through outreach and experiential learning; and to pursue doctoral study and careers in teaching.
- Graduate and Postsecondary Improvement Programs:
 - Improving College Enrollment by Secondary Schools
 - Improving Science, Technology, Engineering and Mathematics Education with a Focus on Alaska Native and Native Hawaiian Students
 - Pilot Programs to Increase College Persistence and Success
 - College Partnership Grants
 - Rural Development Grants for Rural Colleges and Universities
- Special Programs for Students Whose Families are Engaged in Migrant and Seasonal Farm Work

Elementary and Secondary Education

Reauthorization of the Elementary and Secondary Education Act (ESEA) of 1965 was scheduled for 2007. Last reauthorized as the No Child Left Behind Act of 2001 (Public Law 107-110), ESEA reauthorization is again on the agenda, with stakeholders' meetings sponsored by the Department of Education in fall 2009. There have been calls for improvements with reauthorization from many quarters. These include the Department of Education, the National Education Association, the National Science Foundation, the National Science Board, the Commission on No Child Left Behind, and 144 organizations representing civil rights, religious, children's, disability, and civic organizations signing a Joint Organizational Statement on No Child Left Behind. Many other agencies and groups have put forward statements about problems with provisions of the act or recommendations for the reauthorization of the act or other legislation. Continuing K-12 educational disparities among racial and ethnic groups in the nation and California, as well as the lack of emphasis on science education, seriously affect the pool of students who will be able to apply and successfully enter medical school.

1. Strengthen Provisions of the Elementary and Secondary Education Act of 1965 (No Child Left Behind Act of 2001) with Reauthorization to Improve K-12 Education in the Nation and States.
 - Set high achievement standards consistent with state content and achievement standards and with nationally recognized professional and technical standards.
 - Strengthen state assessment and accountability systems by using multiple up-to-date

measures or indicators in addition to standardized tests:

- Allow states to measure students' growth in achievement as well as their performance in relation to pre-determined levels of academic proficiency.
- Improve data systems.
- Ensure that all children, particularly the most disadvantaged, have access to an education that will prepare them to succeed in the 21st Century:
 - Focus on high-quality, early childhood education and child care, parental involvement and mentoring programs, as well as access to quality health care.
 - Address continuing K-12 educational disparities among racial and ethnic groups:
 - Support English Language Learners, both immigrants and migrants.
 - Strengthen programs for American Indians and Alaska Natives, and Native Hawaiians.
- Ensure that high schools prepare students for college and the workforce.
- Strengthen advance placement programs, including those in science:
 - Increase the supply of effective math and science teachers through Mathematics and Science Partnerships.
- Identify schools in need of assistance and provide assistance to them to develop effective interventions instead of labeling and punishing them.
- Provide teachers, principals, schools, school districts, and states with support and resources that they need to help students succeed.

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- ⁸⁶ Ibid. p.9.
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APPENDICES

Appendix 1
Diversity in U.S Medical Schools Archival Research
Libraries and Types of Sources Consulted, September 2002-August 2004*

Collection or source and years covered in collection:	Letters/memoranda/conference or published papers by/to/from Chancellors/Deans/faculty/ students/ campus organizations, concerning policies on recruitment/outreach, admissions, retention, student financial aid, campus environment			Reports on the results of recruitment, admissions, retention, student financial aid policies			Letters, memoranda, reports, speeches, editorials on medical school campus environment			Other		
	UC	UCSF	Stanford	UC	UCSF	Stanford	UC	UCSF	Stanford	UC	UCSF	Stanford
Bancroft Library	X	X								X	X	
UCOP Health Affairs Web-Site				X	X					X		
UCSF Archives: Black Caucus Papers, 1968-1980s	X	X			X			X				
UCSF Archives: Campus Organizations, 1960s-1980s								X			X	
UCSF Archives: History of the Health Sciences, 1970s-1980s;											X	
UCSF Archives: Dean's Office, 1960s-1970s	X	X		X	X			X			X	
UCSF Archives: Affirmative Action Papers, 1967-1982		X			X			X			X	
UCSF Archives: <i>Synapse</i> ** , 1960s-1980s								X				
UCSF School of Medicine Web-site, 2000s					X			X			X	
Stanford University, Lane Medical Library: John Steward papers, 1973-1979			X			X						X
Stanford University, Lane Medical Library: Office of Student Affairs S1DB1. 1959-1989			X			X						X
Stanford University, Lane Medical Library: <i>The Organ</i> ** (1973-1979)						X			X			X
Stanford University, Green Library: Faculty Senate Minutes, 1970s						X						X
Stanford University, School of Medicine Web-site, 2000s						X			X			X
Wellington papers^*		X						X				
Maffly papers^*						X			X			X
Plessus papers^*		X			X			X			X	

The "Other" category includes papers on: medical education in UC schools; 1960s-1980s; campus leadership; the creation of three new UC medical schools; 1960s; physician shortages; 1960s; UC and Title VI; 1960s-1970s; costs of medical education, 1960s; the "knowledge explosion," 1960s; types of specialty training, 1960s-70s; the demographics of California, 1960s; campus leadership; and the debate at Stanford over a separate office of minority affairs.

* We were also fortunate to have access to the Association of American Medical Colleges' Archives, 1968-2003.

** The medical student newspaper.

^* Papers loaned by former medical school administrators to the project for study.

Appendix 2
Diversity in U.S. Medical Schools
Key Informant Interview Subjects and Round Table Participants: UC and UCSF, September 1, 2002- August 31, 2004

UC Administrators	UCSF School of Medicine Administrators	UCSF School of Medicine Faculty	UCSF Staff and Members of the Black Caucus	UCSF School of Medicine Students
<p>-- Roxanne Andersen (Incentive Awards Program UC Berkeley) -- Fred Balderston, Ph.D. (Former V.P. UCOP) -- Ward Connerly (UC Regent) -- Michael Drake, M.D. (V.P. UCOP and former Associate Dean of Admissions, UCSF) -- Cornelius Hopper, M.D. (Former V.P. UCOP)</p>	<p>-- Dorothy Bainton, M.D. (Vice Chancellor, Academic Affairs) -- Mary Pat Cress (Former member of Office of Admissions) -- Haile Debas, M.D. (Dean of the School of Medicine) -- David Irby, Ph.D. (Vice Dean of Education) -- Frances Larragueta (Former member of the Office of the Dean) -- Frances Petrocelli (Former Assistant Chancellor) -- Kathleen Plessas, Director of Admissions -- Henry Peter Ralston (Associate Dean of Admissions) -- Edwin Rosinski, Ed.D. (Office of the Chancellor) -- John Watson, Ph.D. (Former Associate Dean of Admissions)</p>	<p>-- Molly Cooke, M.D. (Director, UCSF School of Medicine Dean's Academy of Medical Education)* -- Isidore Edelman, M.D. (Formerly Associate Director of the Cardiovascular Research Institute) -- Elena Fuentes-Afflick, M.D. (Pediatrics) -- A. Eugene Washington, M.D. (Obstetrics, Gynecology, and Reproductive Sciences)</p>	<p>-- Wendell Adams (Formerly of CVRI, Pharmacology, Physical Plant)*^ -- Freeman Bradley (Formerly of Cardiovascular Research Institute)*^ -- Elba Clemente-Lambert (Former member of Department of Neurology)** -- Walter Nelson (Formerly of Custodial Staff)*^ -- Joanne Lewis (Former member of Office of Affirmative Action)**</p>	<p>-- Donald Barr, M.D., Class of 1973 (Associate Professor, Sociology, Teaching and Program in Human Biology, Stanford University)^ -- Beverly Davenport (Ph.D. candidate, Department of Anthropology and former Student Affairs officer at UC Davis) -- Richard Carmona, M.D., Class of 1979, Surgeon General of the United States -- Eric Goosby, M.D., Class of 1978 (Chief Executive Officer, Pangaea Global AIDS Foundation) -- Melanie Tervalon, M.D., Class of 1980 (Director of Education, Oakland Children's Hospital)</p>

* Interviewed as both a former student at Stanford University and a current faculty member at UCSF.

** A participant in the Round Table held November 18, 2002.

*^ A participant in the Round Table held November 18, 2002 and January 27, 2003.

* ^^ Interviewed as both a former UCSF student and a current faculty member at Stanford University.

Diversity in U.S. Medical Schools

Key Informant Interview Subjects: Stanford University School of Medicine, September 1, 2002- August 31, 2003

Stanford University School of Medicine Administrators	Stanford University School of Medicine Faculty	Stanford University School of Medicine Students
<p>-- Gabriel Garcia, M.D., (Associate Dean for Medical School Admissions)</p> <p>-- Lawrence Crowley, M.D. (Former Dean of the Stanford University School of Medicine)</p> <p>-- Ronald Garcia, Ph.D. (Director of Center of Excellence and Comprehensive Health Careers Opportunity Program, Stanford University School of Medicine)</p> <p>-- David Korn, M.D. (Former Dean of the Stanford University School of Medicine)</p> <p>-- Fernando Mendoza, M.D. (Principal Investigator, Center of Excellence, Stanford University School of Medicine)</p> <p>-- Roy Maffly, M.D. (Former Associate Dean of Student Affairs, Stanford University School of Medicine)</p> <p>-- Roger Peeks, M.D., Stanford University Alumni, 1978 (Formerly Assistant Dean of Student Affairs)</p> <p>-- Philip Pizzo, M.D. (Dean, Stanford University School of Medicine)</p>	<p>-- Halstead Holman, M.D. (Fellowship Director, Division of Immunology and Rheumatology)</p>	<p>-- Molly Cooke, M.D., Class of 1977 (Director, UCSF School of Medicine Dean's Academy of Medical Education)*</p> <p>-- Lori Alvord, M.D., Class of 1985 (Associate Dean, Student Affairs and Multicultural Affairs, Dartmouth Medical School)</p> <p>-- Roger Peeks M.D. Class of 1978 (Medical Director Alameda County Medical Center)</p> <p>-- Rosaline Vasquez, M.D., Class of 1979 (Health Care Industry Consultant-Los Gatos, CA)</p>

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* Interviewed as both a former student at Stanford University and a current faculty member at UCSF.

Diversity in U.S. Medical Schools

Key Informant Interview Subjects: Stanford University School of Medicine and Stanford University, September 1, 2002- August 31, 2003

Stanford University Faculty	Stanford University Administrators
-- Donald Barr, M.D> (Associate Professor, Sociology, Teaching and Program in Human Biology, Stanford University)^ [^]	-- Robert Rosenzweig, Ph.D. (Former Associate Provost and an advisor to President Lyman, Stanford University)

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^{^^} Interviewed as both a former UCSF student and a current faculty member at Stanford University.

Diversity in U.S. Medical Schools
Key Informant Interview Subjects: Other Informants, September 1, 2002- August 31, 2003

Other Key Informants

Lonnie Bristow, M.D., Chair, Institute of Medicine study, “Institutional and Policy Strategies for Increasing Diversity of the Healthcare Workforce.”
Elena Rios, M.D., President, National Hispanic Medical Association.
Scott Bass, Ph.D., Dean, Graduate School and Vice Provost for Research & Planning at the University of Maryland, Baltimore County.
Jordan Cohen, M.D., President, Association of American Medical Colleges.

Appendix 3
 Diversity in U.S. Medical Schools
 Oral History Interview Subjects
 September 1, 2002- August 31, 2004

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Volume	UCSF Administrators	UCSF Faculty	Stanford Faculty & Administrators
1	<p>—Haile Debas, M.D., Professor of Surgery, Dean and UCSF Chancellor, 1993-2003</p> <p>—Rudi Schmid, M.D., Ph.D. Professor of Medicine, Emeritus, Dean, 1983-1989</p> <p>—Lloyd “Holly” Smith, M.D. Professor and Chair, 1964-1985, Department of Medicine, and Associate Dean, 1985-1994</p>		
2		<p>—Isidore Edelman, M.D., Professor Emeritus</p> <p>—Robert Fishman, M.D. Professor and Chair, Department of Neurology</p> <p>—Melvin Grumbach,, M.D., Professor and Chair, Department of Pediatrics</p> <p>—Richard Havel, M.D. Professor and Director, CVRI</p>	
3	<p>Julius Krevans, M.D. Dean 1971-1982 and UCSF Chancellor, 1982-1993</p>		
4A	<p>Philip R. Lee, M.D. Professor Emeritus and UCSF Chancellor, 1969-1972</p>		
4B	<p>Philip R. Lee. M.D., Professor Emeritus and UCSF Chancellor, 1969-1972</p>		
5		<p>John A. Watson, Ph.D. Professor of Biochemistry, Emeritus</p>	
6		<p>John S. Wellington, M.D. Professor of Pathology, Associate Dean, 1966-1973</p>	

Volume	UCSF Administrators	UCSF Faculty	Stanford Faculty & Administrators
7			Roy Maffly, MD Professor of Medicine Emeritus Chairman Minority Admissions Committee, 1973-1977, Chairman, Committee on Admissions, 1981-1983, Associate Dean, Student Affairs, 1983-1992
8			Fernando Mendoza, M.D., M.P.H. Professor of Pediatrics, Chief, Division of Pediatrics, Associate Dean of Minority Advising and Programs, 1983- Associate Dean of Student Affairs, 1993-
9			Leon Rosenberg, Ph.D. Professor of Immunology, Emeritus, Minority Admissions Committee, 1970s
10			Bernard Nelson, M.D., Assistant Professor , Medical Microbiology, 1968-1974, Chairman, AAMC Task Force on Minority Opportunities in Medical Education, 1970

Appendix 4

Selected Key Reports Related to Diversity in Medical Schools and the Health Professions and the Physician Workforce, 1994-2009

National Reports

Association of American Medical Colleges. *Medical School Enrollment Plans Through 2013: Analysis of the 2008 AAMC Survey*. Center for Workforce Studies. May 2009. Available at: <http://www.aamc.org/workforce/enrollment/enrollmentreport.pdf>

National Resident Match Program. Results and Data. 2009 Main Residency Match. April 2009. Available at: <http://www.nrmp.org/data/resultsanddata2009.pdf>

U.S. Department of Health and Human Services. Health Resources and Services Administration. Bureau of Health Professions. *The Physician Workforce: Projections and Research into Current Issues Affecting Supply and Demand*, December 2008. Available at: <ftp://ftp.hrsa.gov/bhpr/workforce/physicianworkforce.pdf>

American Medical Association. International Medical Graduates in the U.S. Workforce. A discussion paper. December 2008. Available at: <http://www.ama-assn.org/ama/pub/upload/mm/18/img-workforce-paper.pdf>

Association of American Medical Colleges. *The Complexities of Physician Supply and Demand Projections Through 2025*. November 2008. Available at: <http://services.aamc.org/publications/showfile.cfm?file=version122.pdf>

U.S. Government Accountability Office. *Primary Care Professionals: Recent Supply Trends, Projections, and Valuation of Services*. GAO-08-472T. Washington, DC. February 12, 2008. Available at: <http://www.gao.gov/new.items/d08472t.pdf>

American College of Physicians. *The Role of International Medical Graduates in the U.S. Physician Workforce: A Policy Monograph*. Philadelphia: American College of Physicians, 2008. Available at: http://www.acponline.org/advocacy/where_we_stand/policy/img_paper.pdf

Educational Commission for Foreign Medical Graduates. 2008 Annual Report. Available at: <http://www.ecfmg.org/annuals/ECFMG2008.pdf>

Association of American Medical Colleges. *Diversity in Medical Education: Facts & Figures 2008*, p.11. Available at: https://services.aamc.org/publications/index.cfm?fuseaction=Product.displayForm&prd_id=239&prv_id=295

U.S. Department of Health and Human Services. Health Resources and Services Administration, Bureau of Health Professions. *Physician Supply and Demand Projections to 2020*, October 2006. Available at: <ftp://ftp.hrsa.gov/bhpr/workforce/PhysicianForecastingPaperfinal.pdf>

Association of American Medical Colleges. AAMC Statement on the Physician Workforce. June 2006. Available at: <http://www.aamc.org/workforce/workforceposition.pdf>

Council on Graduate Medical Education. Seventeenth Report. *Minorities in Medicine: An Ethnic and Cultural Challenge for Physician Training: An Update*. U.S. Department of Health and Human Services. Health Resources and Services Administration. April 2005. Available at: <http://www.cogme.gov/17thReport/17.htm#execsum>

Council on Graduate Medical Education. *Physician Workforce Policy Guidelines for the United States* (Sixteenth Report). U.S. Department of Health and Human Services, Health Resources and Services Administration. January 2005. Available at: <http://www.cogme.gov/report16.htm#sumrec>

W.K. Kellogg Foundation. *Sullivan Commission Report: Missing Persons: Minorities in the Health Professions: A Report of the Sullivan Commission on Diversity in the Healthcare Workforce*. September 2004. Available at: <http://www.wkkf.org/default.aspx?tabid=94&CID=1&ItemID=10415&NID=85&LanguageID=0>

Institute of Medicine. *In the Nation's Compelling Interest: Ensuring Diversity in the Health-Care Workforce*. Committee on Institutional and Policy-Level Strategies for Increasing the Diversity of the U.S. Health Care Workforce. Board on Health Sciences Policy. BD Smedley, AS Butler, LR Bristow (eds). Washington: National Academies Press; 2004. Available at: <http://www.nap.edu/openbook.php?isbn=030909125X>

Grumbach K, Coffman J, Gandara P, Munoz C, Rosenoff E, Sepulveda E. *Strategies for Improving the Diversity of the Health Professions*. Center for California Workforce Studies, University of California, San Francisco and Education Policy Center, University of California, Davis. Woodland Hills, CA: The California Endowment; August 2003. Available at: http://www.futurehealth.ucsf.edu/pdf_files/StrategiesforImprovingFINAL.pdf

Gonzales P and Stoll B. *The Color of Medicine: Strategies for Increasing Diversity in the U.S. Physician Workforce*. Boston: Community Catalyst, April 2002. Available at: http://www.communitycatalyst.org/doc_store/publications/the_color_of_medicine_apr02.pdf

Institute of Medicine. *The Right Thing to Do, The Smart Thing to Do: Enhancing Diversity in the Health Professions. Summary of the Symposium on Diversity in the Health Professions in Honor of Herbert W. Nickens. M.D.* B Smedley, A Y Stith, L Coburn, C H Evans (eds) Washington DC: National Academy Press; 2001. Available at: http://books.nap.edu/catalog.php?record_id=10186

Institute of Medicine. *Balancing the Scales of Opportunity, Ensuring Racial and Ethnic Diversity in the Health Professions*. M Lewin and B Rice (eds). Washington DC: National Academy Press; 1994. Available at: http://www.nap.edu/catalog.php?record_id=4418

California Reports

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<http://www.chcf.org/documents/policy/FewerAndMoreSpecializedMDSupplyInCA.pdf>

The Connecting the Dots Initiative Reports.* Available at

<http://www.calendow.org/Article.aspx?id=2290>

Bates T, Hailer L, Chapman S. *Diversity in California's Health Professions: Current Status & Emerging Trends*. University of California, San Francisco Center for the Health Professions, March 2008.

From the Mouths of Leaders: Challenges and Opportunities to Increase Health Professions Workforce Diversity in California. The Public Health Institute and the University of California, Berkeley School of Public Health, September 2008.

Profiles in Leadership: A Review of Exemplary Practices to Increase Health Professions Workforce Diversity in California. The Connecting the Dots Initiative: A Comprehensive Approach to Increase Health Professions Workforce Diversity in California. The Public Health Institute and the University of California, Berkeley School of Public Health, April 2008.

If It's a Pipeline, Why Isn't There More Diversity at the Other End? Framing the Agenda for Health Professions Workforce Diversity. The Praxis Project, February 2008.

Foster K, Jenkins Y, Oxendine J, Herd D. *The Benefits of Diversity: An Exploratory Study*. The Connecting the Dots Initiative: A Comprehensive Approach to Increase Health Professions Workforce Diversity in California. The Public Health Institute and the University of California, Berkeley School of Public Health, June 2008.

The Connecting the Dots Initiative. A Comprehensive Approach to Increase Health Professions Workforce Diversity in California. Inquiry 7: Increasing the Diversity of the Health Professions K-12 Networks of Support. The Public Health Institute and the University of California, Berkeley School of Public Health. January 2008.

* In 2006, The California Endowment (TCE) funded The Connecting the Dots Initiative, a statewide initiative to increase diversity in the health professions. The University of California, Berkeley School of Public Health and the Public Health Institute received a grant from TCE to conduct a seven-part inquiry, develop reports, and engage in action-oriented activities to advance diversity at the local, regional, statewide, and national levels. For more information about The Connecting the Dots Initiative, contact The California Endowment, 1000 N. Alameda Street #250, Los Angeles, CA 90012 (213) 628-1001 or <http://www.calendow.org/>

Alvarado L, Capozza K, Jackson K, Russell. Diversity in the Health Professions: Annotated Bibliography. Public Health Institute, January 2008.

Increasing Diversity in California's Medical Schools. Center for the Health Professions, University of California, San Francisco, July 2008. Available at: http://futurehealth.ucsf.edu/pdf_files/chp_MDdiversity_comp6.pdf

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University of California. Office of Health Affairs. *A Compelling Case for Growth. Special Report of the Advisory Council on Future Growth in the Health Professions*. Final Report, January 2007. Available at: http://www.ucop.edu/hss/documents/rprt_jan2007.pdf

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Members of Class of 2006, UCSF School of Medicine
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