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Latino Physician Shortage in California:

The Provider Perspective

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EXECUTIVE SUMMARY

Previous research shows a disparity between the racial/ethnic composition of physicians in California and its increasingly diverse population. According to recent research by LPPI, it could take up to five centuries to fully address the Latino physician shortage if present trends continue (Hsu et al., 2018). This policy brief discusses the main barriers and sources of support identified by a sample of Latino pre-med students, medical school applicants, Latino medical students, and recently graduated Latino physicians. The analyses include the perspectives from a sample of health system and education administrators, academics and health care providers. Our research shows that the main barriers that contribute to the Latino physician shortage are: financial/opportunity cost, academic disadvantages, navigation, underrepresentation and citizenship. Sources of support such as tutoring, mentorship, exposure to the medical profession, and counseling provided by schools and colleges, student organizations, and pipeline programs are useful to partly overcome these challenges. Policymakers, advocates and stakeholders must address the barriers encountered by Latinos in the medical profession to meet the health care needs of all residents. Best practices from effective pipeline and pathway programs should be further studied and disseminated to address the shortage of Latino physicians in California.

BACKGROUND & CONTEXT

In 2015, Latinos became California's plurality population with approximately 15.2 million Latinos residing in the state. By 2050, Latinos are estimated to represent 44.5% of the state's population (DOF, 2018). While the Latino population continues to grow, the supply of Latino physicians has not caught up (Sanchez et al., 2015). Previous research shows that the number of underrepresented minorities admitted to California's medical schools has gradually declined since the approval of anti-affirmative action policies including Proposition 209, the 1996 ballot initiative that prohibited affirmative action in the state's public institutions. In 2014, Latino physicians comprised 4.7% of all physicians in California, while Latinos represented 38.4% of the state's population (Mertz et al, 1999; Hayes-Bautista et al, 2000). The scarcity of Latino physicians in California has led to a deficit of 54,655 Latino physicians that are required to achieve parity with Non-Hispanic Whites (Hsu et al., 2018).



METHODOLOGY

Data were collected through focus groups and individual phone interviews with Latino pre-medical students or medical school applicants (n=10), current Latino medical students (n=6) and Latino residents or practicing physicians (n=7). Table 1 shows the demographic characteristics of study participants who identified barriers and sources of support in California’s medical profession.

Table 1: Sample Characteristics

	Pre-med students or medical school applicants (%)	Medical students (%)	Residents or practicing physicians (%)
Age in years, mean (s.d.)	24.4 (3.2)	26.2, (1.3)	31.9 (2.9)
Female	70	83.3	57.1
Pre-med (4-year college)	60	83.3	85.7
PBP	30	50	14.28
Transfer from CC	30	16.6	28.6
Residency/fellowship	-	-	57.1
Clinical/academic practice	-	-	28.6
Focus on primary care	-	66.6	57.1
Public medical school	-	33.3	42.9
Born/raised in California	60	100	57.1
First gen college student	100	66.6	71.4
TOTAL	10	6	7

PBP: Post-baccalaureate program in a community college or four-year college CC: Community College Focus on primary care: Among practitioners who finished residency (Family Medicine, General Practice, General Internal Medicine, General Pediatrics, Gynecology and Obstetrics- <https://www.cms.gov/apps/glossary/default.asp?Language=English&Letter=P>).

We also conducted phone and in-person interviews with the following key informants:

Table 2: Role of Key Informants

Role	N
Researchers/academics	3
Dean of medical school admissions	1
Pipeline/pathway program administrators	3
Health care providers	2
Medical school director	1
Total	10

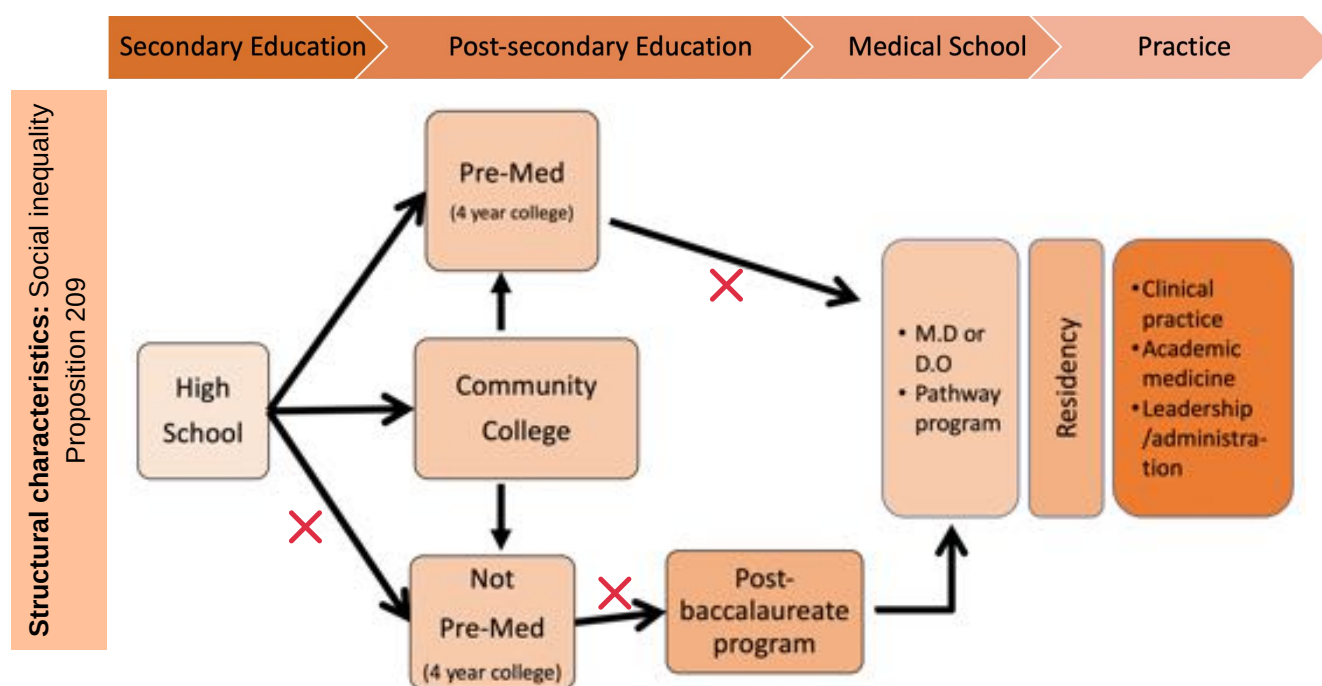
Our analyses identified the pivotal points when Latino physicians were deterred from the medical profession (i.e “pipeline leakages”). We also examined motivations, perceived barriers, and sources of support to pursuing a medical career before, during and after medical school. Responses were grouped into: contextual or structural characteristics and barriers with varying degrees of severity at each stage.

FINDINGS

1) Unequal Backgrounds and Opportunities

As shown by Figure 1, social inequality is a structural problem that impacts the trajectories and outcomes of Latino physicians and medical students. Growing up in low-income communities and/or living in households that experience access to care barriers are common motivations to become a physician. References to the long-lasting effects of attending under-resourced schools were widespread among study participants. Additional institutional barriers cited by study participants were perceived racism, discrimination and micro aggressions, or the “challenges of being a minority” as summarized by one participant.

Figure 1. Pathways, barriers and leaks in the pipeline of Latino physicians



✗ = "leaks" or critical junctures where barriers such as finances and lack of guidance might hinder students' progress, or discourage them from pursuing a medical career.

Barrier	Secondary Education	Post Secondary Education	Medical School	Practice
Financial conditions	✗	✗	⚠	✓
Academic disadvantage	✗	✗	⚠	—
Underrepresentation	⚠	✗	✓	✗
Navigation	✓	✗	✓	⚠
Citizenship	✗	✗	✗	✗

✗ = barrier or potential deterrent ✓ = barrier with available resources ⚠ = concern

Source: focus groups and interviews with pre-medical students, medical school applicants, medical students, residents and practicing physicians in California, 2018.

2) Diverse Career Trajectories

Figure 1 illustrates the different trajectories and barriers described by study participants. The arrows show the progression through different pathways. Steps with a red "X" show "leaks" or critical junctures when financial and academic disadvantages, underrepresentation or lack of guidance may discourage Latino students from pursuing a medical career. The transition from high school to college, and from college into medical school are critical moments when potential Latino physicians choose alternative career paths due to the perceived barriers in the medical profession.

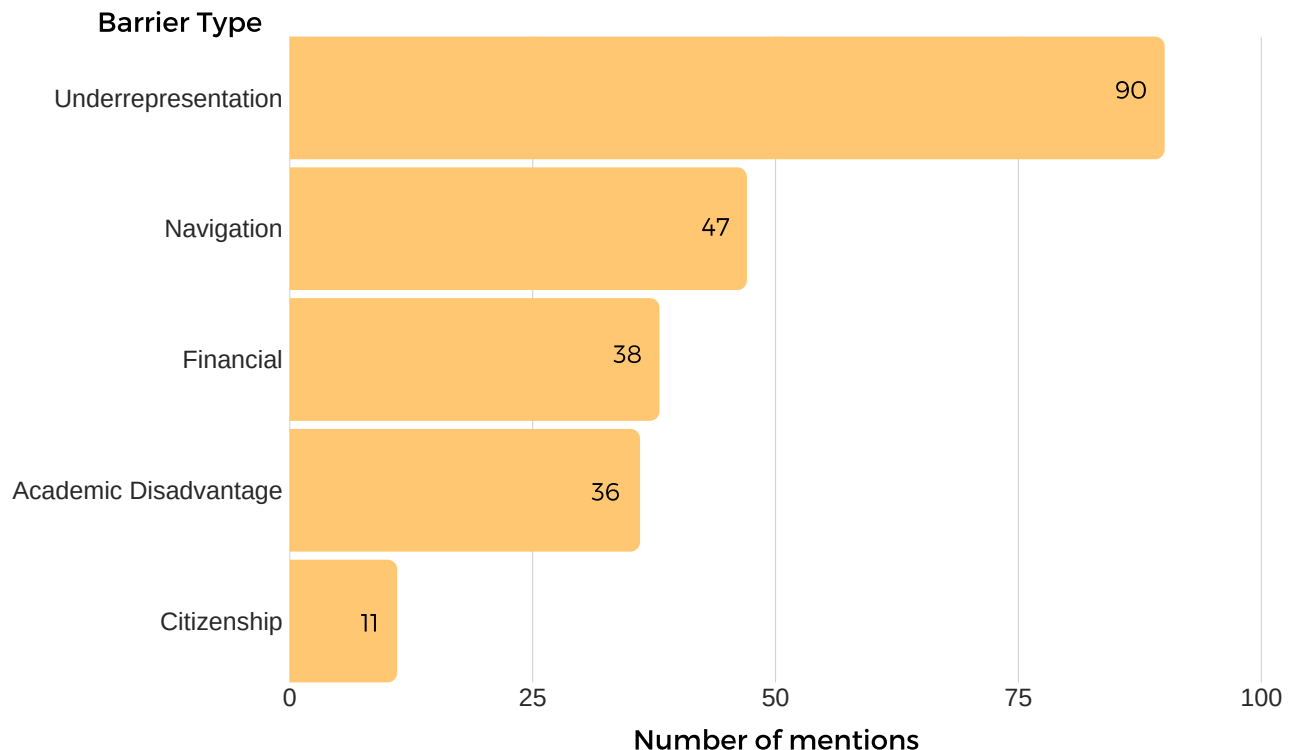
**THE MEDICAL
PROFESSION IS DE
FACTO NOT OPEN
TO EVERYONE.**

- Practicing Physician

3) Barriers in the Medical Profession

Figure 1 shows the main barriers to the medical profession displaying how important these barriers are for Latino pre-med students, Latino medical students, and early Latino physicians. Figure 2 shows the main barriers identified by study participants displayed by the number of mentions.

Figure 2. Barriers in the Latino physician pipeline by the number of mentions



3.1 Financial & Opportunity Cost

The high financial and opportunity cost of pursuing a medical degree is one of the main barriers faced by prospective Latino physicians. Some of the costs identified by study participants were paying for the MCAT, test preparation, admission applications, campus visits, and sometimes the fees of a Post-baccalaureate Programs (PBP). The decision to become a physician is a long-term investment. The forgone income during the training and residency years was cited as an important financial deterrent. References were made to peers who were initially interested in becoming physicians but the need to get an income after college or other personal considerations forced them to take alternative career paths.

I CAN'T PAY FOR COLLEGE AND BECOMING A COMPETITIVE APPLICANT REQUIRES RESOURCES. THIS INCLUDES RECEIVING TUTORING FOR THE MCAT, ATTENDING RESEARCH CONFERENCES; WEALTHY STUDENTS HAVE ACCESS TO THESE RESOURCES, I'VE HAD TO WORK.

- Practicing Physician

Available aid mechanisms such as the Association of American Medical Colleges (AAMC) Fee Assistance Program and some scholarships have strict eligibility criteria. Study participants mentioned having to work or get loans when they were ineligible for these programs due to citizenship or income eligibility. The high cost of residency applications was commonly referenced as an important financial barrier since it could not be deferred. Student debt burdens were cited as the main financial barrier to work in underserved areas. Study participants mentioned the need of getting a high paying job after graduation that would allow them to repay their student loans as the main reason to delay their goal of working in underserved areas. Study participants reported debts up to four-hundred thousand dollars by the time they finished their medical residency. Among other aspects, this financial burden influenced their career choices and their ability to choose a job serving their community, which was the most common reported motivation to become a physician.

3.2 Academic Disadvantage

Study participants mentioned that academic disadvantages early in their education represent an important barrier that lingers through college and medical school. Access to resources such as advanced placement classes, mental health services, adequate career counseling, pipeline programs and volunteering opportunities during high school are important enablers of progression in the medical profession. Study participants mentioned that disparities in access to these resources could explain differences in academic achievement during college and medical school compared to peers who grew up in wealthier communities.

Universities have put in place different programs that provide support to academically disadvantaged students. Many participants acknowledge that these programs were helpful in addressing previous academic disadvantages. However, they mentioned that strict admission standards from medical schools many times penalize students who experienced academic disadvantages. For example, lower grades from students who struggled during their first years in college puts them in disadvantaged when they apply to medical school since they would compete with students with higher GPAs who benefited from the resources available in more academically advantaged schools and communities. Study participants also mentioned that medical school admission committees seem to be inclined to offer admission to applicants from colleges and universities perceived as more prestigious, limiting the spaces available for applicants from minority serving institutions such as the California State University (CSU) system or Community Colleges.



WHAT I REALIZED IS YOU HAVE DIFFERENT COMMUNITIES. YOU HAVE ONE COMMUNITY THAT'S BEEN WORKING AT, YOU KNOW, A HIGHER LEVEL [OF SOCIOECONOMIC STATUS] FOR THE PAST 15 YEARS. IT'S REALLY DIFFICULT TO CATCH UP WITH THAT IN A MATTER OF A YEAR OR TWO.

- Pre-Med Student

3.3 Navigation

Navigating through college and medical school was identified as a major challenge along the medical profession spectrum. Respondents mentioned that several Latino students who were interested in medical school were unaware of available resources (e.g. scholarships, mentorship networks, or pipeline programs) or had incomplete information about requirements to become successful applicants into medical school. A lack of exposure to the medical profession, being discouraged by counselors, and the constant academic and financial burden often made students question their aspiration of becoming a physician. Frequently, they considered alternatives such as nursing, physical therapy or physician assistant. Participants mentioned that they had to build their own support networks to help them navigate and provided guidance. Pipeline programs, outreach initiatives from universities or health care providers played an important role in navigating the system and in building these support networks. Some of these programs provided exposure to the medical profession and facilitated the transition into college, such as Kaiser Permanente’s Educational Outreach Program (EOP) and volunteering programs in high school, transfer programs such as Center for Community College Partnerships (CCCCP), Médicos, Enfermeros, y Dentistas para El Pueblo (MEDPEP), and Future Physician Leaders (FPL). The Building Infrastructure Leading to Diversity (BUILD) Initiatives in CSU campuses were mentioned as an effective way of engaging and retaining students from diverse backgrounds in the biomedical field. The Latino Medical Student Association (LMSA) and pathway programs were identified as key resources during medical school, while MiMentor played an important role across the entire spectrum.

I KNOW AT LEAST A HANDFUL OF PEOPLE THAT ENDED UP NOT DOING [MEDICAL SCHOOL] BECAUSE THERE WASN’T SOMEONE WHO COULD HELP THEM GET THROUGH.

- Pre-Med Student

3.4 Underrepresentation of Latinos in the Medical Field

The underrepresentation of Latino physicians makes it challenging to identify role models and mentors. Underrepresentation also contributes to episodes of racism and micro aggressions during college, medical school, and as practitioners. While efforts to increase diversity in medical school were acknowledged, respondents criticized the actual segregation of underrepresented students who were more likely to be admitted into pathway programs, such as PRIME, which have a focus on primary care. Individuals interested in specialty care identified more widespread underrepresentation of Latinos. Since the promotion system post-medical school emphasizes clinical research, and not service, study respondents mentioned that it was more difficult for them to assume leadership positions.

3.5 Citizenship

Study participants also mentioned that the number of available scholarships, volunteering and pipeline programs were even more limited for non-citizen Latinos. Undocumented study participants acknowledged that the Deferred Action for Childhood Arrivals Program (DACA) and the Temporary Protected Status (TPS) increased the college funding options available to them. However, they cited other type of barriers linked to their legal status such as access to some resources from pipeline and volunteering programs. Pre-med study participants who were undocumented identified their legal status as the main obstacle to pursuing a medical career.

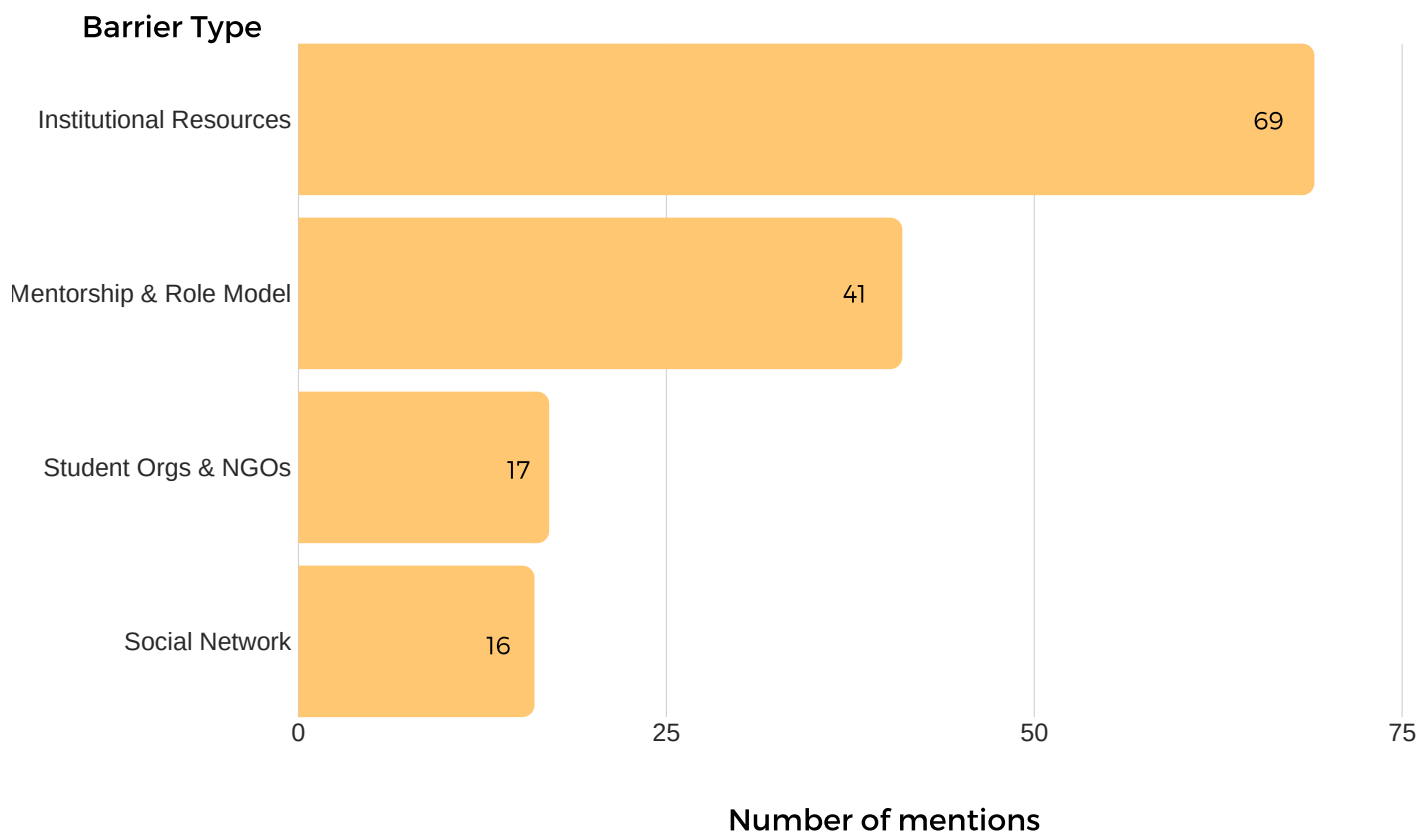
4) Sources of Support

Sources of support reported by study participants were the following: 1) School-based support programs: High school, community college, university or medical school wide resources, or from a specific pathway program, 2) Social networks: family and non-family members such as friends and classmates, 3) Student organizations such as LMSA or related organizations, such as MiMentor, which provide guidance and a forum for shared experiences. Prospective Latino physicians used these resources to identify mentors, find role models and connect with individuals who overcame similar barriers in the medical profession. Figure 3 shows the main reported sources of support displayed by the number of mentions.

IT WAS BY TALKING TO CLASSMATES AT UCSD THAT I REALIZED THAT MEDICINE WAS ALSO A WAY TO ACHIEVE MY SOCIAL WORK AND SERVICE GOALS, SO I SHIFTED TO PRE-MED THE FIRST YEAR.

- Resident

Figure 3. Support sources in the Latino physician pipeline by the number of mentions





A FACILITATOR HAS DEFINITELY BEEN THE PROXIMITY TO MY FAMILY. MY PARENTS VISIT EVERY MONTH OR I GO HOME EVERY TWO MONTHS AND I THINK WITHOUT THAT NETWORK, I DON'T KNOW HOW LONG I WOULD HAVE LASTED.

- Medical Student

CONCLUSION

This study found that financial/opportunity costs, academic disadvantages, navigation challenges, the lack of representation of Latinos in the medical profession and citizenship status represent the main barriers faced by prospective and recently graduated Latino physicians in California. Pipeline/pathway programs and mentorship platforms partly address these barriers by providing tutoring, mentorship, exposure to the medical profession, counseling, financial support, volunteering opportunities, among other resources that support underrepresented students who are interested in the medical profession. The scope of these programs, however, is limited. Given the relatively small size of their operations, these programs by themselves are unable to substantially change the low representation of Latinos in the medical profession. Additional funding, policies and programs are needed to address the current deficit of Latino physicians in the state. The need to address this deficit is increasingly pressing as the share of the Latino population increases in California, and as the demand for health care increases with an aging population.

POLICY RECOMMENDATIONS

The shortage of Latinos in the medical profession could be addressed by considering the following evidence-based recommendations:

1 INCREASE FINANCIAL RESOURCES

Increase financial resources available to students who do not qualify for existing programs, such as those that require citizenship or a very low-income threshold like the AAMC Fee Assistance Program. In addition, consider expanding loan repayment programs to ease the financial burden of a medical education, particularly, for low-income students interested in primary care. Advocate for an increased number of residencies in California for language capable/primary care physicians. Allocate resources to PBP programs administered by Community Colleges, the California State University (CSU), and the University of California (UC) systems, and provide scholarships to Latino students enrolled in a PBP programs and for MCAT preparation.

2 ADDRESS ACADEMIC DISADVANTAGES

Address academic disadvantages by coordinating and expanding pipeline and pathway programs that support students from middle school through medical school. They can include tutoring, summer schools and volunteering opportunities that expose students to the health system and enable them to find mentors and role models while strengthening their academic skills. Create incentives for medical schools to increase the number of spaces available to students from minority serving institutions, such as the Cal State System and Community College.

3 IMPROVE NAVIGATION RESOURCES

Improve navigation for high school and college students. Supporting programs that provide guidance and promote skills needed to succeed in the medical profession (Talamantes et al, 2014). Institutionalizing and standardizing pre-med programs in California's university systems could improve navigation. In addition, supporting programs that review applications and guide students through pre-med or when pursuing a PBP, such as Future Physician Leaders (FPL) and MEDPEP could improve the dissemination of information. Strengthening mentorship programs and organizations, such as MiMentor, the BUILD Initiative, and Latino Medical Student Association (LMSA) could improve the navigation resources available to Latinos in the medical profession. These organizations help students identify support networks and role models, and provide formal and informal information needed to be successful medical school applicants, and later on how to succeed in the medical profession (Ulloa et al, 2018).

4 MONITOR, EVALUATE, AND DISSEMINATE BEST PRACTICES

Monitor, evaluate and disseminate best practices from existing pipeline and pathway programs and new models of medical education. These programs aim to train physicians for underserved areas such as the Charles R. Drew/UCLA Medical Education Program, PRIME programs in the UC system and partnerships with health care providers such as the Accelerated Competition in Primary Care (ACE-PC) partnership between the UC Davis School of Medicine and Kaiser Permanente Northern California. In addition, studying new teaching models of medical education that promote team based care and skills such as language and cultural competence should be further explored. Evaluating the operation of these programs and disseminating best practices could encourage efforts by other universities and colleges in the state to improve medical education and increase the representation of Latinos in the medical profession.

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