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Long-Term Outcomes of a Dental Postbaccalaureate Program: Increasing Dental Student Diversity and Oral Health Care Access

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Abstract

The University of California, San Francisco School of Dentistry established the Dental Postbaccalaureate Program in 1998 to provide reapplication assistance to students from economically and/or educationally disadvantaged backgrounds who were previously denied admission to dental school. The goals were to increase diversity in the dental school student population and improve access to dental services for underserved populations. This article assesses the program's short-, mid-, and long-term outcomes and is the first to examine long-term practice patterns after a dental postbaccalaureate program. Data collected on all participant (n=94) demographics, pre/post-program DAT scores, and post-program dental school admission results were used to assess short- and mid-term outcomes. Long-term outcomes and practice patterns were assessed using results of a census survey administered between 2009 and 2011 to the participants who had completed dental school and been in practice for at least two years (n=57). The survey had a response rate of 93 percent (n=53). Descriptive statistical techniques were used to examine the responses and to compare them to U.S. Census Bureau data and nationally available practice data for new dental graduates. Program participants' DAT scores improved by an average of two points, and 98 percent were accepted to dental school. All survey respondents were practicing dentistry, and 81 percent reported serving underserved populations. These participants treat more Medicaid recipients than do most dentists, and their patient population is more diverse than the general population. The outcomes demonstrate that the program's graduates are increasing diversity in the dental student population and that their practices are providing access to care for underserved populations.

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Keywords

access to care; dental education; diversity; underrepresented minorities; postbaccalaurate program; dental students

U.S. dental schools continue to seek innovative ways to increase the enrollment of students from economically disadvantaged and underrepresented populations.[1] Postbaccalaureate programs are a way to recruit and prepare these students for admission to health professions schools.[2,3] The purpose of this study was to assess the short-, mid-, and long-term outcomes of a dental postbaccalaureate program at the University of California, San Francisco (UCSF) and the impact of the program on improving dental school student diversity and, ultimately, access to care for underserved populations.

Background

Medical and dental educators have long recognized the importance of a diverse student body in increasing the cultural competence of health care practitioners and in increasing access to care for the underserved.[2,4–6] However, African Americans, Hispanics, and Native Americans are underrepresented in the medical and dental professions compared to their distribution in the general U.S. population.[3,4] The rate of enrollment for these underrepresented minorities (URM) in medical school has hovered between 13 and 16 percent since 2000.[4,7] URM dental school enrollees, counted together, have averaged approximately 12 percent annually of all enrollees since 1999–2000.[8] It is only in the last decade that gender parity has almost been reached in dental education,[3,9] as women comprised fewer than 40 percent of dental school enrollees until the entering class of 2001–02.[8]

In 2000, the Pipeline, Profession, and Practice: Community-Based Dental Education program was established to increase enrollment of URM students in dental schools and to expand the involvement of all students in community-based dental education.[10,11] The Pipeline program funded initiatives at fifteen U.S. dental schools designed to 1) increase the number of URM students enrolled in Pipeline dental schools; 2) provide students with didactic course and clinical experiences to prepare them for treating disadvantaged patients in community sites; and 3) have senior students spend an average of sixty days in patient-centered community clinics and practices treating underserved patients.[12]

Summer enrichment and postbaccalaureate programs have been heralded as “the bedrock of the Pipeline program,” and 60 percent of the Pipeline schools included a postbaccalaureate program in their URM recruitment efforts.[3] However, postbaccalaureate programs predate the Pipeline initiative, as they have been widely implemented over the past forty years to increase the diversity of medical and dental school enrollments. These programs are generally short-term programs intended to provide dental or medical school reapplication assistance to students from socioeconomically disadvantaged or racially or ethnically diverse backgrounds by improving students’ study skills, raising their Dental Admission Test (DAT) or Medical College Admission Test (MCAT) performance, and providing students with additional exposure to the dental or medical professions via externships or similar experiences.[6] The theory underlying postbaccalaureate and similar types of programs is similar to that underlying the Pipeline program itself. First, diversity in the student body is thought to increase the cultural competence of all students, regardless of race or ethnicity.[4] Second, health care providers from diverse backgrounds are thought to be more likely to establish practices serving their own communities, thereby increasing access to care.[5]

The outcomes of the Pipeline program were evaluated with respect to applications, enrollment, and graduation of URM students in the Pipeline schools.[13,14] The evaluators found that, between 2003 and 2007, URM students' applications to Pipeline schools increased by 77 percent, and enrollments increased by 27 percent; however, there was an unexplained reduction in URM enrollment from 2006 to 2007.[12] An evaluation of dental school graduates' practice plans found no differences between Pipeline and non-Pipeline schools, but did not track graduates into practice location or type.[15]

While postbaccalaureate programs have existed in medical and dental schools since the early 1970s, few studies have examined whether the practice patterns of graduates from these programs have increased access to care. The first postbaccalaureate medical program was established at Wayne State University in 1969, and the MedPrep program established in 1972 at Southern Illinois University was the first to include predental students.[16] Since the early-1970s, postbaccalaureate programs have proliferated in medical schools; however, dental schools more frequently have relied on summer enrichment, prematriculation, or mentoring programs to assist URM students in their transition to the rigors of dental school from the undergraduate experience.[7] This shifted in the late-1990s when dental schools increasingly began to implement postbaccalaureate programs modeled on those used by medical schools.[6]

Studies of postbaccalaureate programs have assessed outcomes primarily in terms of student admission to advanced degree programs.[1,16–18] Although some medical postbaccalaureate programs have tracked their participants' practice patterns,[4,16,17,19,20] our study is the first to evaluate long-term practice outcomes from a dental postbaccalaureate program.

UCSF Postbaccalaureate Program

The Dental Postbaccalaureate Program was established in 1998 at UCSF.[1] While UCSF was a funded Pipeline school, UCSF's postbaccalaureate program predates the Pipeline initiative. The program helps qualified students to improve their DAT scores and provides additional academic training and exposure to the field of dentistry to increase their competitiveness in the dental school applicant pool. The program's goals are to improve access to dental services for underserved populations in California through the admission of students with an expressed and demonstrated interest in caring for the underserved, and to increase diversity in the dental school student population by assisting a group of students whose backgrounds demonstrate significant disadvantages in educational opportunities and/or economic status with gaining admission to dental school.

Participants in the full-time, year-long program must have completed and received their undergraduate degree from an accredited college or university and meet all of the following criteria: have an overall GPA of at least 2.6 and a science GPA of at least 2.4 on a 4.0 scale; have documented evidence of being academically or economically disadvantaged; and possess a demonstrated interest in and desire to work with underserved communities or in communities with limited access to dental health care. A disadvantaged individual is defined as one who, from an early age, resided in a low-income community or experienced enduring family, societal, or other hardship that significantly compromised his or her educational opportunities. Race and ethnicity, while correlates of disadvantage, are not considered in the selection of applicants in accordance with California State Proposition 209 and the policies of the University of California. [21] Applicants are assessed through their work experience and an application essay detailing their work in underserved communities. An underserved community is a geographic location or an identified population that is determined medically or dentally underserved according to U.S. Health Resources and Services Administration (HRSA) guidelines.[22]

The postbaccalaureate program is offered in six components. DAT preparation is the primary focus of the program for the first two months. At the end of the summer and continuing through the fall, students receive dental school reapplication support and complete a clinical clerkship under the supervision of a faculty mentor. They also attend an oral health disparities seminar series and learning/study skills workshops. In the fall and continuing to the following summer, the participants complete upper division academic science course work based on the individual student's transcripts, needs, and interests.

A total of ninety-four students participated in the UCSF Dental Postbaccalaureate Program from 1998 to 2006. All program participants were socioeconomically or educationally disadvantaged (an entrance requirement), and 37 percent were URM students.

Methods

Data for this study come from several sources. Participants' pre/post DAT scores were collected from the program along with post-program dental school admission results (1998–2006, n=94). Participants who would have been in practice for at least two years following dental school graduation were asked to complete a survey online or by phone (n=60). The survey was conducted between 2009 and 2011 and collected information about the students' demographics, experiences in dental school, and current practice characteristics. U.S. Census Bureau data on demographics were matched to zip code of respondents' dental practices to examine communities of practice.[23,24] To compare practice patterns of the participants with the general dentist population, we utilized published data from the American Dental Education Association (ADEA) and the American Dental Association (ADA) Survey Center.[8,25–31] Data collection was approved by the UCSF Institutional Review Board (the Committee on Human Research).

Short-, mid-, and long-term outcome measures were developed to assess program outcomes (Table 1). The short-term measures included improvement in students' DAT scores, acceptance to dental school, and the impact they had on the diversity of the dental school class. The mid-term measures were subsequent graduation from U.S. dental schools, National Board Dental Examination (NBDE) pass rates, and entry into practice. The long-term measures consisted of the characteristics of the graduates' current dental practices, patients served, and volunteer or outreach work since completing dental school.

Short-term outcomes were analyzed using a pre/post design. Participants' DAT scores before the program were compared to those after the program. Analyses used paired t-tests and Wilcoxon signed-rank tests to assess changes in numeric DAT scores. Regression models assessed whether change scores differed significantly by URM status, learning disability (LD) accommodation status, and English as a second language (ESL) status. Since students with LD or ESL were likely to have had extra challenges in their undergraduate and DAT performance, components of the program such as teaching study skills targeted areas where improvement was needed. Mean change score and 95 percent confidence intervals were estimated. Acceptance into dental school and impact on diversity were analyzed using descriptive statistics to compare to nationally available data. Mid- and long-term outcomes were assessed primarily using the survey data. Descriptive statistics summarized the data, and the results were compared to published data on the practice patterns of all new dental graduates.

Results

Short-Term Outcomes

The postbaccalaureate program's short-term goal was to increase the diversity of the dental student population by assisting educationally or economically disadvantaged students to gain dental school admission. Of the ninety-four participants in the program between 1998 and 2006, eighty-seven (93 percent) reported pre- and post-program DAT scores. Seven participants had a DAT score of 16 or higher upon entry and so did not need to retake the exam. Participants' mean academic average on the DAT increased 1.9 points (95 percent confidence interval: 1.6–2.2). The mean pre- and post-program DAT scores, along with mean DAT score for first-year dental students, are shown in Figure 1.[30,31]

All DAT mean section scores of the postbaccalaureate program participants significantly improved (all eight $p<0.001$). Not only did DAT scores significantly improve for all students, but they significantly improved for URM (n=35; all $p\leq0.012$), LD (n=11; all $p\leq0.031$), and ESL (n=49; $p\leq0.007$) students. Program participants who had LD accommodations improved even more on the reading comprehension component than students who did not have such accommodations.

Of the postbaccalauareate program participants between 1998 and 2006, 98 percent (n=92) were accepted to dental school within one year of program completion. The remaining two participants were accepted the following year. On average, program participants applied to six dental schools, with West Coast dental schools receiving the most applications. Almost half (n=25) of the program participants attended UCSF, followed by 20 percent (n=10) who attended the University of the Pacific Arthur A. Dugoni School of Dentistry (UOP). The remaining participants attended eleven institutions, both Pipeline and non-Pipeline schools, in nine states.

Table 2 shows the distribution of postbaccalaureate program participants' race/ethnicity by admission to dental school in comparison to the racial/ethnic composition of all 2007 dental enrollees. The ADA reported that URM enrollees accounted for 13.6 percent of 2007 dental school enrollees compared to 38 percent of postbaccalaureate program participants.[8] The program participants' gender distribution is the inverse of that of all 2007 dental school enrollees, with 58 percent (n=55) female among the postbaccalaureate program participants compared to 57 percent male of the overall entering class of 2007.[8]

Mid-Term Outcomes

The mid-term goals of the program are for a greater number of URM and disadvantaged students to graduate from dental school and move into practice. These goals were assessed through a survey of postbaccalaureate program participants who finished the program by 2003 (n=60) and therefore would have completed dental school and been in practice for at least two years. Of the sixty eligible to be contacted, only fifty-nine could be located. Of the fifty-nine contacted, fifty-seven confirmed they had graduated from dental school, for a dental school graduation rate of 97 percent. Based on program completion data for the class of 2007, 95.4 percent of all U.S. dental school enrollees completed their program. [8] The postbaccalaureate program participants' dental school graduation rate is thus slightly higher than that of all graduates.

The survey response rate was 93 percent (n=53). According to the survey results, upon completion of dental school, 100 percent of the respondents had passed their national board exams, with 86.5 percent (n=45) passing on their first attempt. The ADA does not report national board pass rates stratified by attempt number, but does report the overall pass rate for each class year. The postbaccalaureate program participants' overall pass rate of 100

percent is virtually indistinguishable from the 99.4 percent of all U.S. dental school graduates reported to have passed their boards in the class of 2007.[8]

The survey captured indicators of disadvantage among postbaccalaureate program participants including primary language and parental educational achievement. As shown in Table 3, of the fifty-three respondents, 70 percent (n=37) reported speaking a primary language other than English. There are no comparable national data on language abilities of dental school students, new dentists, or all dentists. However, comparable data on parental educational achievement, which is used as a proxy indicator for socioeconomic status, are available. As shown in Table 4, respondents to our survey reported that their parents were less likely to have attained higher education than the average for the 2008 dental school graduating class.[32] Some 60 percent of the mothers and 45 percent of the fathers of the postbaccalaureate program respondents had completed a high school diploma or less, compared to 21 percent of all dental school graduates' mothers and 16 percent of all dental school graduates' fathers.

Long-Term Outcomes

Practice characteristics—The postbaccalaureate program's long-term goal is to increase access to care for underserved populations. All fifty-three survey respondents reported working as dentists, and one-quarter (26 percent, n=8) reported holding more than one dental position. The respondents reported a career interest in general practice (81 percent) that mirrors the U.S. dentist specialty distribution (79 percent).[25] Among specialty interests, public health (13 percent) and pediatrics (11 percent) were rated highest among the respondents, although we were unable to discern if formal training or specialty certification in these areas had been attained. Table 5 shows the respondents' career interests.

Overall, 83 percent of the respondents reported that they were working with an underserved population. Graduates who reported working in a moderately sized city or a suburb of a city were less likely to report working with an underserved population (67 percent) than those in or near a large city (88 percent) or in small towns or rural areas (100 percent).

The respondents provided their primary practice's zip code, which we matched to U.S. census data. In the U.S. as a whole, 13.8 percent of the population was below the Federal Poverty Level (FPL) in 2010.[24] The postbaccalaureate program participants were found to be practicing dentistry in communities with a mean of 11.5 percent of the population below the FPL and a range of 1.4–47.1 percent.[24] On average, these graduates were practicing in communities that are 25.2 percent Hispanic or Latino(a), with a range of 2.0 to 91.3 percent, compared to 16.3 percent of the U.S. population being Hispanic or Latino(a). These respondents were practicing in areas where 34.2 percent of the population does not speak English at home, with a range of 3.9 to 90.6 percent. In the United States, 20.1 percent of the population does not speak English at home.

Patient characteristics—These respondents reported that, on average, 45 percent of their patients are covered by private insurance and 32 percent are covered by Medicaid. The majority (60 percent) of the respondents said they accept Medicaid patients, and two respondents reported treating Medicaid patients exclusively. By comparison, all new independent dentists reported that 8.6 percent of their patients are covered by public insurance, 63.2 percent are covered by private insurance, and 28.2 percent had no insurance coverage.[28] In 1999, in thirty-nine reporting states, fewer than 25 percent of dentists reported treating at least 100 Medicaid dental patients in a year; and, in twenty-three states, fewer than half of all dentists saw even one Medicaid patient.[33] Table 6 shows the postbaccalaureate program respondents' payer-type composition compared to new independent dentists' payer-type composition.

Approximately half (n=27) of the survey respondents said they speak a language other than English with their patients. Twenty-four participants identified the language(s) most frequently used with patients, and, of those, Spanish was spoken by 88 percent (n=21). Hispanic patients were said to comprise an average of 38 percent of these dentists' total practice. As shown in Table 8, their patients are more diverse than the general U.S. population. No comparable patient data are available for the general dentist population. Our examination of the racial/ethnic composition of our survey respondents' practices by the practitioner's race/ethnicity found general concordance by race. This finding is consistent with prior work examining racial concordance between dentists and the communities in which they practice.[34]

Community service and student debt—Since the completion of dental school, 83 percent of our survey respondents reported performing outreach activities to minority or disadvantaged students, and the same number reported being involved in mentoring students who are interested in the health professions. Respondents who reported being "involved" or "very involved" with their activities also reported being "satisfied" or "very satisfied" with those activities. No comparable national data are available on volunteerism or community service by dentists.

Dentists' practice choice may be influenced by a number of factors besides personal background or stated inclination for practice. Two potentially significant factors are debt burden at graduation and the content of the educational experience. Sixty-nine percent of our survey respondents reported current debt levels from $75,000 to $500,000 (Table 9). While not directly comparable, this is roughly consistent with the average debt of $241,849 reported by all dental graduates.[27] All of the survey respondents reported volunteering or performing community service during dental school, and most (87 percent, n=45) reported being very satisfied with their volunteer experience. Most respondents (94 percent, n=50) completed a preceptorship, clinical rotation, or elective with an underserved population during dental school. Of these, 58 percent (n=29) spoke another language with that population.

Discussion

The purpose of this study was to assess the short-, mid-, and long-term outcomes of a dental postbaccalaureate program and the impact of the program on improving dental student diversity and, ultimately, access to care for underserved populations. The short-term program goals of improving DAT scores and helping participants to gain admission to dental school have been met successfully. By focusing on disadvantaged students, the program has facilitated higher dental school acceptance rates of URM individuals than is seen in national enrollment data.

The mid-term program goal of increasing the diversity of the dentist workforce has also been met successfully. Ninety-seven percent of the postbaccalaureate program participants accepted to dental school subsequently graduated, and 100 percent of our survey respondents passed their boards and are practicing dentistry. In addition to being 37 percent URM and 58 percent women, more than two-thirds of these participants entering practice speak a primary language other than English and have parents with lower educational achievement than their average dental school peers, indicating that they are increasing the diversity of practicing dentists along socioeconomic lines.

The long-term program goals of increasing access to care are more difficult to assess; however, our survey data found a workforce in which most (83 percent) dentists work with underserved populations and are located in high-minority and relatively low-income

communities. The majority of our survey respondents (51 percent) speak a language other than English in their practices, report high percentages of URM patients (53 percent), and are practicing in racially concordant patient relationships. Finally, the respondents are more likely than the general dentist population to accept Medicaid patients and report treating a higher percent of Medicaid patients (31 percent) than most new independent dentists (9 percent).

While the postbaccalaureate program successes are clear, it is one small program among many initiatives seeking to impact dental diversity and access to care. The postbaccalaureate students entering dental school are contributing to the racial/ethnic and gender diversity of their dental school cohorts. Yet, in any one year, this program sends fewer than twenty students to dental school in a national pool of almost 5,000 new dental school entrants, which can only marginally increase the overall diversity of the dental student population. In addition, the results regarding survey respondents' practices indicate a high likelihood that these providers are providing access to dental care for low-income and minority populations. The small number of these providers limits the overall impact, however, and we have no way of knowing if the patients they see would have otherwise had access to dental care. In addition, most of the participants attended dental schools that were involved in the Pipeline program, which emphasized community-based rotations and community service—both of which are thought to impact choice of practice. These factors complicate this descriptive study's ability to tease out the relative influences of life experience, postbaccalaureate program experience, and dental school experience, much less economic climate or other practice incentives such as loan repayment programs, in terms of what may have contributed to the differential practice patterns. Nevertheless, this study is the first to track long-term practice patterns, and the differences between our participants' practice patterns and those of the general dentist population are so striking that these important findings can serve as a starting point for future work.

The main limitations of this study are the small size of the participant group and the lack of a case control comparison group to the program participants. These factors mean that statistical tests of significance cannot be conducted. As a way of addressing these limitations, we have provided descriptive comparators using published data on dental student applications, enrollment and graduate demographics, dental graduate profiles, and practice patterns of new dentists and all U.S. dentists.

Conclusion

Despite a number of high-level and well-funded initiatives designed to increase the cultural competence and diversity of the dental profession, the percentage of underrepresented minority (URM) students enrolled in U.S. dental schools still falls well below their percentages in the general population, and large disparities exist in access to dental care for underserved communities.[2,35] Traditional methods of student recruitment have not been successful in enrolling adequate numbers of students from dentally underserved communities. Postbaccalaureate programs are designed to identify and assist highly motivated predental students from diverse backgrounds in gaining admission to dental school in order to help the dental profession meet the needs of underserved communities.

This is the first study to examine short-, mid-, and long-term outcomes of a postbaccalaureate dental program. Our preliminary findings support the hypothesis that postbaccalaureate programs can improve both the diversity of the dental profession and access to care. However, further research is necessary to better understand the relative impact of dental school recruitment strategies, dental educational strategies, and practice incentive strategies on practice choices for all dental school graduates.

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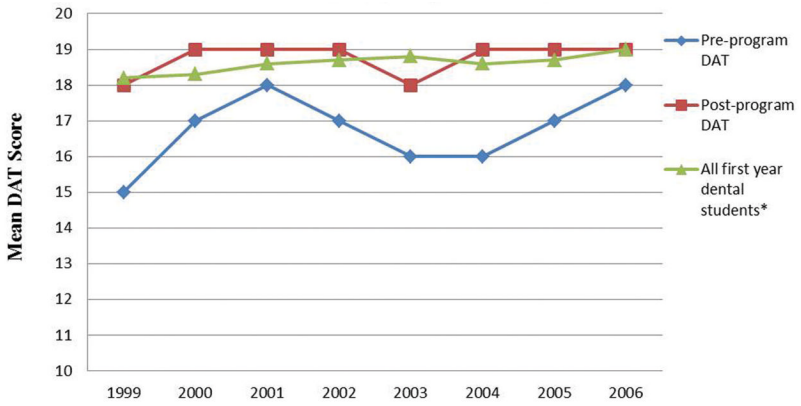

Figure 1. Postbaccalaureate program participants' mean pre- and post-program DAT scores compared to mean DAT scores of national first-year dental students, 1999–2006

Source for national first-year dental students: American Dental Association, Survey and Economic Research Center. 2003–04 and 2008–09 surveys of dental education: vol. 2, tuition, admission, and attrition. Chicago: American Dental Association, 2005 and 2009.

Table 1

Sample of postbaccalaureate program participants in each stage of outcomes study

Short-Term Outcomes	Mid- and Long-Term Outcomes
Total program participants,	Total program participants eligible for practice survey,
1998–2006	1998–2003
n=94	n=60
↓	↓
DAT pre/post-program scores n=87 (93%) (7 participants had pre-program score ≥16 so did not retake)	Graduated from dental school n=57 (97%) (2 did not graduate; 1 could not be located)
↓	↓
Accepted to dental school n=92 (98% acceptance rate)	Completed practice survey n=53 (93% response rate)

Table 2

Race/ethnicity of postbaccalaureate program participants admitted to dental school (1999–2007) compared to 2007 national dental school enrollees

	Postbaccalaureate Program Participants			2007 National Dental School Enrollees
Race/Ethnicity	**Number by Racial/ Ethnic Group (n=94)**	**Percentage of Racial/ Ethnic Group Admitted (n=92)**	**Percentage by Racial/ Ethnic Group of Total Admitted (n=92)**	**Percentage by Racial/ Ethnic Group (n=4,770)**
African American	8	100%	9%	6%
Hispanic/Latino(a)	23	100%	25%	7%
Native American	4	100%	4%	0.6%
Total URM (African American, Hispanic, and Native American)	35	100%	38%	13.6%
Asian/Pacific Islander	31	97%	33%	20%
Caucasian	28	96%	29%	62%
Other	n/a	n/a	n/a	4%

Source for 2007 national enrollees: American Dental Association, Survey and Economic Research Center. 2008–09 survey of dental education: vol. 1, academic programs, enrollment, and graduates. Chicago: American Dental Association, 2010.

Table 3

English and other language abilities of postbaccalaureate program participants

	Number	Percentage
Speak only English	16	30%
Speak another primary language and English equally well	22	42%
Speak a non-English primary language	15	28%
Total	53	100%

Table 4

Parents' highest level of educational achievement for postbaccalaureate program participants and national 2008 graduating dental school class

Postbaccalaureate Program Participants (n=53)			**National 2008 Graduating Dental School Class (n not given)**		
Educational Achievement	**Mother**	**Father**	**Educational Achievement**	**Mother**	**Father**
Did not graduate high school	30%	26%	Less than high school	5%	5%
High school graduate	30%	19%	High school or some high school	16%	11%
Some college	15%	24%	Technical school	5%	5%
Four-year degree	13%	22%	College graduate or some college	49%	34%
Graduate school	11%	8%	Graduate degree or some graduate school	24%	44%
			Not reported or missing	1%	2%
Total	100%	100%	Total	100%	100%

Source for national 2008 class: Okwuje I, Anderson E, Valachovic RW. Annual ADEA survey of dental school seniors: 2008 graduating class. J Dent Educ 2009;73(8):1009–32.

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Table 5

Postbaccalaureate program participants' dental career interest compared to specialty distribution of U.S. dentists

	Program Respondents (n=53)	U.S. Dentist Specialty Distribution
General Practice	81%	79%
Public Health	13%	<1%
Pediatrics	11%	3%
Orthodontics	9%	6%
Periodontics	8%	3%
Endodontics	2%	2%
Prosthodontics	2%	2%
Other	2%	5%

Note: The survey instrument allowed more than one selection of "career interest" (not designated as specialty status) for each respondent, so percentages do not total 100%.

Source for U.S. dentists' data: American Dental Association, Survey and Economic Research Center. Distribution of dentists in the United States by region and state. Chicago: American Dental Association, 2009.

Table 6

Payer composition of postbaccalaureate program participants' practice (n=45) compared with that of new independent dentists surveyed nationally

Payer Type	Program Participants (mean percentage)	New Independent Dentists' (mean percentage)
Private insurance	45%	63%
Medicaid	31%	9%
Self-pay	15%	28%
Reduced fee	9%	n/a

Source for national new independent dentists: American Dental Association, Survey Center. 2008 survey of dental practice: characteristics of dentists in private practice and their patients. Chicago: American Dental Association, 2009.

Table 7

Patients' race/ethnicity of postbaccalaureate program participants now in practice (n=53) compared with race/ethnicitiy of U.S. population reported in 2008

Race/Ethnicity	Program Participants' Patients (mean percentage)	U.S. Population (percentage)
Hispanic/Latino(a)	38%	16%
African American	10%	13%
Native American	5%	1%
Total URM (African American, Hispanic, and Native American)	53%	30%
White	33%	64%
Asian	14%	5%
Total	100%	100%

Note: U.S. census population categories do not match exactly with this study's measurement of patients of postbaccalaurate program participants' racial/ethnic categories.

Source for U.S. population percentages: U.S. Census Bureau. 2008 American community survey one-year estimates. Washington, DC: U.S. Census Bureau, 2008.

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Table 8

Race/ethnicity of postbaccalaureate program participants now in practice (n=52) compared to mean percentage of their patients' race/ethnicity

	Patients' Race/Ethnicity							
Dentist's Race/Ethnicity	**African American**	**Caucasian**	**Middle Eastern**	**Hispanic/Latino(a)**	**Native American**	**Chinese**	**Filipino**	**Southeast Asian**
African American	**25%**	16%	1%	43%	5%	2%	1%	4%
Caucasian	6%	**48%**	1%	37%	0	2%	1%	3%
Middle Eastern	15%	31%	**7%**	34%	1%	4%	3%	1%
Hispanic/Latino(a)	6%	33%	1%	**51%**	1%	2%	1%	1%
Native American	2%	27%	0	3%	**67%**	0	0	0
Chinese	9%	25%	1%	47%	0	**8%**	1%	0
Filipino	5%	8%	0	41%	3%	5%	**38%**	4%
Southeast Asian	13%	8%	3%	48%	0	3%	5%	**15%**

Note: Percentage of patients does not total 100% because dentists treat patients of additional races and ethnicities not shown in this table.

Table 9

Reported current debt of postbaccalaureate program participants (n=44), by category of debt

Current Debt	Percentage of Respondents
None	7%
$1–$30,000	5%
$30,001–$74,999	5%
$75,000–$150,000	39%
$150,001–$500,000	30%
$500,001–$1,000,000	14%
$1,000,001 and more	2%
Total	100%