

# The Pathway to Dentistry for Minority Students: From Their Perspective

**Keith Veal, B.A.; Michael Perry, M.A.; Judith Stavisky, M.P.H., M.Ed.;  
Kim D'Abreu Herbert, M.P.H.**

*Abstract:* The small number of minorities in the field of dentistry is a serious concern. While the United States as a whole has become more diverse with minorities making up 25 percent of the total U.S. population, only a handful (14 percent) are currently practicing dentistry, and only 11 percent entering dental schools are underrepresented minorities. Pipeline, Profession, & Practice: Community-Based Dental Education is a national foundation-sponsored program designed to address this issue in dental education. To understand the reasons why dentistry attracts so few underrepresented minority (URM) students, we conducted focus groups and in-depth interviews to determine the challenges facing minority students when they apply to and attend dental school. Ten focus groups were conducted with a total of ninety-two minority students (fourteen undergraduate students and seventy-eight students currently enrolled in dental schools) at six universities in four geographic regions. In addition, four in-depth interviews were held with faculty advisors who teach, mentor, and recruit minority students. The major findings of the study are as follows: 1) early and frequent exposure to dentistry and dentists in practice is essential for minority students to consider this profession; 2) while many dental schools have earnestly tried to recruit minority applicants, most URM students find out about dental programs by a family member or friend and not as a result of an intentional recruiting effort; and 3) hearing directly from minority students could be a solid first step in understanding the dental school experience from a different vantage point. This study has important implications for the methods dental schools use to both recruit minority students and foster a learning environment that is sensitive to students from diverse backgrounds.

Mr. Veal is an Associate Analyst at Lake Snell Perry & Associates, Inc.; Mr. Perry is a Partner at Lake Snell Perry & Associates, Inc.; Judith Stavisky is a Senior Program Officer at The Robert Wood Johnson Foundation; and Ms. D'Abreu-Herbert is Deputy Director of Pipeline, Profession, & Practice: Community-Based Dental Education at Columbia University Medical Center. Direct correspondence and requests for reprints to Ms. Kim D'Abreu Herbert, Columbia University Center for Community Health Partnerships, 630 W. 168<sup>th</sup> Street, P& S Box 100, New York, NY 10032; 212-304-6629 phone; 212-544-1938 fax; kdh2002@columbia.edu.

This study was funded by The Robert Wood Johnson Foundation. This report was presented on October 3, 2003 at the Second Annual Meeting of the Pipeline, Profession, & Practice: Community-Based Dental Education Schools in Minneapolis, Minnesota. A copy of the full report is available at [www.dentalpipeline.org](http://www.dentalpipeline.org).

*Key words:* student, minority, dental school, diversity, recruitment

*Submitted for publication 6/30/04; accepted 7/9/04*

While the United States as a whole has become more diverse, with minorities making up 25 percent of the total U.S. population,<sup>1</sup> only 14 percent of practicing dentists are currently underrepresented minorities,<sup>2</sup> and only 11 percent entering dental schools are underrepresented minorities.<sup>3</sup> Over the past three years, national reports have enumerated the barriers to pursuing a dental career and offered recommendations to increase the diversity of the profession.<sup>4-6</sup> The Institute of Medicine report *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care* suggests that the lack of minority providers exacerbates problems of access and service delivery for minority populations. The Robert Wood Johnson Foundation and The California Endowment have made a concerted effort to address the serious shortage of dental

providers from underrepresented minorities in an initiative called Pipeline, Profession, & Practice: Community-Based Dental Education Program. These two philanthropies have directed funds to fifteen dental schools to implement a variety of strategies to increase the enrollment of underrepresented minority and low-income students in dental schools. (The fifteen schools are Boston University Goldman School of Dental Medicine, Howard University College of Dentistry, Loma Linda University School of Dentistry, Meharry Medical College School of Dentistry, The Ohio State University School of Dentistry, Temple University School of Dentistry, UCLA School of Dentistry, UCSF School of Dentistry, University of Connecticut Health Center School of Dental Medicine, University of Illinois at Chicago School of Dentistry, UNC-Chapel Hill School of Dentistry,

University of the Pacific School of Dentistry, University of Southern California School of Dentistry, University of Washington School of Dentistry, and West Virginia University School of Dentistry.) In the pipeline program, the recruitment and retention of these students are linked with two other programmatic elements: the extension of time all students spend in community-based sites providing care to vulnerable populations, and the revision of academic coursework to include more behavioral sciences and public health training.

In an effort to gain a better understanding of the challenges faced by underrepresented minority students preparing for a career in dentistry, ten focus groups consisting of ninety-two minority students, including both undergraduates considering dental careers and currently enrolled dental students, were held around the country in the spring of 2003. The Robert Wood Johnson Foundation's National Program Office for the Dental Pipeline Program at Columbia University commissioned this study. We are hopeful that these findings will provide dental schools with a perspective to be considered as they establish approaches to recruit and retain underrepresented minority students.

---

## Study Purpose and Methodology

The goal of this study was to hear directly from minority students, undergraduates, dental students, and their faculty advisors about the challenges of pursuing a career in dentistry. Specifically, through focus groups and in-depth interviews, this research explored the following questions:

- What are the variables that influence minority students to enter the dental field?
- How does dentistry compare as a career option with other opportunities?
- What are students' general perceptions of dentists and dentistry?
- How do minority students describe the current environment in the dental schools they attend?
- How do minority students access the resources at colleges and dental schools designed to support and retain minority students?
- What do minority students wish they could change to help them succeed in the profession?

The focus groups were targeted specifically to the experiences of African American, American Indian, and Hispanic students in their pursuit of a dental education.

From April through June 2003, Lake Snell Perry & Associates (LSPA) conducted ten focus group discussions with a total of ninety-two minority students (fourteen undergraduate students and seventy-eight students currently enrolled in dental schools) at six universities in four geographic regions. This study also included students from historically black colleges and universities (HBCUs). In addition, LSPA conducted four thirty-minute, in-depth, one-on-one telephone interviews with the faculty who teach, mentor, and recruit students at some of these universities and dental schools. Since it was a priority of this study to have students and advisors speak candidly about sensitive issues such as race as well as the atmosphere at their own universities and dental schools, they were promised their names and the names of their schools would be kept confidential to enhance their comfort with the discussion.

The minority undergraduate students in the focus groups were sophomores and juniors, often majoring in the health sciences and considering a career in dentistry. However, it is important to note that most of these students were considering other careers as well. The minority dental students participating in the focus groups were either first- or second-year students. Finally, the four dental school faculty members we interviewed worked directly with minority students on a daily basis and served as advisors, teachers, and recruiters of dental students at their various schools. See Table 1 for details about the focus groups.

Each student discussion group lasted 120-180 minutes, included an average of nine participants, and was conducted off-campus in a professional focus group facility near campus. Holding the group discussion off campus was intentional so that students would feel more comfortable talking about their

---

**Table 1. Description of student focus groups**

Group Type	Number of Groups	Number of Students
African American	6	60
American Indian	1	10
Hispanic	3	22

---

experiences (both good and bad) than in a campus classroom or other on-campus location. Where a professional focus group facility was not available, accommodations were made. Each discussion was audiotaped and transcribed. Students were paid \$100 in cash at the end of the group discussion.

To hear as many perspectives as possible, all minority dental or pre-dental students in each school were informed of the study and encouraged to participate by faculty members, advisors, and other students through student campus clubs and organizations. Students were told that this research was being conducted independently of their school for a national foundation and that their responses would be presented only as a group, preserving confidentiality. Faculty members from each school were not allowed to view or attend any of the group discussions, nor did they have access to their school's specific findings or transcripts.

The minority students in this study came from a wide range of socioeconomic groups. Some were children of middle-class and professional families, often with a dentist in their immediate or extended family. Others were the first members of their family to attend either college or professional school, and many were carrying a substantial amount of debt. Several mentioned that they had very limited funds to even complete the admissions process and apply to dental schools, with some only able to afford to apply to one school. Because the cost of dental school is a substantial undertaking, there may be a self-selection process among those minority students who attend dental school and participated in our study. In the aggregate, many minority students who participated in the focus groups seemed to come from backgrounds where the debt of dental school was not described as an insurmountable obstacle to attending. However, there were notable exceptions. Given this group of research participants, concerns about the high cost of dental school education and fears of incurring debt were not as pronounced as they may actually be for students who simply do not apply because of the daunting costs. Since the pool of minority dental students is very small nationwide, those who were part of the focus groups may not represent those students who could not consider attending dental school because of the expense involved in applying and attending a four-year program.

---

## General Insights Gained from the Study

**Early and frequent exposure to dentistry and dentists is essential for minority students to choose this profession.** While most minority students in this study followed different paths to dentistry, one common element they shared was exposure to the field. Many said they had family members or friends who were dentists, while others said their childhood dentists inspired them. Dental students in particular seem to have a lot of contact with the field: some have worked in dental offices, some report having shadowed a dentist, and others say they used family members and friends in the field as a sounding board. Of note, most of this exposure to dentistry occurs randomly or at the initiative of the student—not through colleges, dental school outreach programs, or programs designed to recruit and retain minority dental students.

**Dentistry has a positive image among minority students.** It is considered a family-friendly profession that pays well. Many cited the regular hours, high incomes, and ability to be their own boss as the main reasons for choosing dentistry. They perceived no stigma associated with the profession, although a number of students mentioned a high suicide rate among dentists. A few students, mainly African American, said that friends and family wondered why they would choose a profession that involves putting their hands in people's mouths.

**Undergraduates have gaps in their knowledge of dentistry, including how to prepare for a career and what avenues to take to be a dentist.** Many minority undergraduates in the focus groups stated that their schools are focused more on their premedical rather than their pre-dental programs, and the resources and information committed mirror this emphasis. As a result, they said their undergrad advisors did not tell them much about dental school, the admissions process, the academic requirements, or grants and funding opportunities. Many stated that they knew little about the profession itself and would have liked to know more.

**Going into debt to pay for dental school is a significant barrier for some, but not others.** Most current dental students commented that the cost of a dental education was initially a shock, but that feeling was assuaged once they made their decision to

attend dental school. Many also perceived that the high income they could earn once they finished dental school will enable them to pay back their debt. However, for some undergraduates, particularly those who had already taken out loans for their undergraduate studies, the idea of incurring a large debt for dental school was a serious concern. Some of the dental students commented on the high cost of applying to dental school and the expenses required for traveling to several interviews. In contrast, there were other minority dental students who came from middle class and professional backgrounds. This was particularly true among students attending HBCUs. These students often came from backgrounds with parents in health professions and dental fields, where paying for tuition is not a barrier. Many of these students said they were not carrying any debt from their undergraduate school.

**Most minority students reported they are unaware of available grants or other funding opportunities to defray dental school costs.** Most believed they had to take out a loan and pay it back. Few knew about grants and scholarships or other funding assistance for minority students. Even those already in dental school stated that no one informed them that they could apply for grants; many still do not know if they could qualify for assistance.

**Most responded that they were not recruited or approached by dental schools as undergraduates.** According to most students in this study, there seems to be little or no outreach from dental schools to minority undergraduates in the sciences. Current dental students reported they learned about dental schools on their own, with little help and guidance from their undergraduate schools.

**The dental school experience for all students in this study was difficult and isolating. Many minority dental students, primarily African American students, asserted they face additional challenges due to their racial and ethnic background.** Many of the challenges they mentioned seem universal and not related to race or ethnic background: too much pressure, heavy course loads, no social life, difficult teachers, faculty that are not supportive, debt worries, watching their peers outside of school succeed while they remain students, etc. However, many minority students, primarily African American dental students, described additional challenges. African American students at non-HBCUs said they often felt alone in a “white” envi-

ronment without the support of faculty and with limited resources to access. Some described subtle racism in the examples that faculty used when, for instance, they described dental conditions in poor patients. Others felt it was more difficult to get the attention of faculty when they needed assistance. Most did not give positive feedback about the programs and services available on campus to aid minority students, although they viewed such services as necessary. Many were unfamiliar with the services that are available.

**Most minority dental students do not view faculty as a source of support and guidance.** Some felt marginalized by faculty, a few felt they are graded harder because they are from a minority group, and most said they did not feel comfortable going to a faculty member for advice or help. Few minority students in this study felt that faculty were on their side. Hispanic dental students may be an exception as the majority in these groups felt they had a good relationship with faculty members.

**Many minority students commented that they were disappointed by the lack of diversity among dental school faculty.** This was even true for students at the historically black colleges and universities included in this study. Most said they expected to see more minorities teaching core classes and were surprised this was not the case. Most felt they would better connect to faculty if they were from the same racial and ethnic background.

**Many minority students gave mixed reviews to the programs and services at their dental schools designed to recruit and retain minority students.** Many praised summer school programs designed to prepare incoming dental students for the upcoming year, and some offered positive feedback on peer-to-peer mentoring programs at their schools. However, most said other programs are ineffectual or that their schools had not committed enough resources into these programs (e.g., small and understaffed offices). Many were also critical of their undergraduate programs for not providing enough information about dentistry, dental schools, and the application process (which many found to be difficult). Of note, many students (particularly Hispanic dental students) were unfamiliar with the programs offered by their dental schools to recruit and retain minority students.

**When thinking beyond dental school, few minority dental students envisioned themselves**

**practicing in underserved or minority communities for the immediate future.** While they believed this is an important need, most are focused on repaying their debt and earning a high income. Most talk of opening a private practice, usually in a large urban area. A few, however, expressed a desire to give back and serve their community.

---

## Specific Insights Gained from the Study

**African American dental students reported the greatest challenges.** Most of the problems cited in this report emerge from the focus groups with African American students. These students were more likely to say that faculty are not supportive and that the atmosphere at dental school is uncomfortable. They also reported more incidents of subtle discrimination and miscommunication when interacting with faculty. Hispanic students appeared to be at the other end of the spectrum: they seemed to have an easier time blending into the larger student body and have little or no experience using the services at their schools designed to support minority students. Some revealed that they avoid the label of minority in order to fit in and succeed in dental school. The American Indian students appeared to fall somewhere in the middle: they also sought to assimilate with the “white” culture of their dental schools but feel it is important to hold on to their unique cultural identities as well. In fact, many commented that they have been frustrated when they have been mistaken for white students and must, at times, prove their minority status.

**African American dental students at HBCUs reported significantly different experiences than those at “white” dental schools.** Those attending HBCUs said they felt comfortable and supported by their peers. African American students at “white” dental schools felt more isolated, less supported, and more likely to report incidents of subtle discrimination. Both groups of students, however, stated they did not have close relationships with faculty.

**African American dental students seem most disappointed by the lack of diversity among faculty.** Many stated this is a problem and that they would have better relationships with their teachers if there were more minorities among the faculty. Students at HBCUs seem particularly frustrated by the lack of minority teachers in core courses.

**African American dental students rely on peers, family, and God.** They mentioned these three sources of support in all focus groups rather than formal or school-sponsored sources of support.

**African American dental students were most critical of programs and services offered by their schools to attract and retain minority students.** These students had the most experience using these services but felt they had not been helpful. They stated that these programs are ineffective and cannot really bring about change at the school. Some also felt these programs lacked the resources to really be helpful.

**Despite their criticisms, African American dental students seemed open to receiving information and assistance.** Most said they would welcome additional support and information from their school.

**Hispanic students reported fewer problems.** Most Hispanic students said they felt part of their dental schools, did not feel isolated because of their racial or ethnic background, and made efforts to assimilate with the larger student population. This does not mean that Hispanic students did not find dental school to be a difficult experience; they did. Many said they felt overwhelmed with the workload, they complained of having no social life, some did not feel the faculty was supportive, and they noticed the lack of minority faculty. However, unlike the African American students, most Hispanic dental students in this study did not feel they faced additional challenges because of their racial and ethnic background.

**What was striking about Hispanic dental students is the degree to which they seek to fit into the general student population.** Some students in the focus groups seemed to place a premium on fitting in and assimilating with the “white” culture at their dental schools. Most did not feel they are treated differently because of their racial and ethnic background but believed their experience was similar to that of any other student. Based on their comments, some Hispanic students avoided the label of minority and, as a result, tended not to use resources at their schools available to minority students.

**Most Hispanic dental students reported they do not use services or programs designed for minority students.** Unlike African American students, Hispanic students in the focus groups had less experience with retention programs at their schools. They felt that they had adequate support from their peers (including non-Hispanic students), and they even re-

ported better relationships with faculty and other minority students in this study.

**American Indian dental students were unique.** The context of the focus group with American Indian dental students is that there are only a small number of these students nationwide. Those who participated in this study, therefore, are unlikely to represent the breadth of the different racial and ethnic groups that comprise the wider American Indian population. Rather, many American Indian dental students in the focus group came from professional households from large urban areas, with only one or two coming from a reservation. A number of the participants also had European features (blond hair and blue eyes), and their racial and ethnic background was not easily discernible.

**American Indian students were not as comfortable as Hispanic students in their dental school environment, but were much more comfortable than African Americans.** Like Hispanic students, American Indian students said that they generally fit into the larger student body and reported some of their peers were surprised to learn they were American Indian. However, the American Indian students also seemed to want to emphasize their culture in their interactions with peers and faculty and continually stressed, in the focus group, the importance of their heritage. Their unique status as American Indians in dental school made them feel separate at times from other students, and some said they were frustrated because a few of their peers and a small handful of administrative staff did not fully understand their culture.

Like all other students in this study, they tended to look to peers, rather than faculty, for support, but American Indian students also had some experience accessing services and supports for minority students. Some of these students did not have close relationships with faculty, but they did not perceive their racial and ethnic background as the reason for this situation. Instead, they sought other students—American Indian students as well as students from other racial and ethnic backgrounds—for support. Yet these students seemed open to using services and programs sponsored by their school for minority students.

Because some American Indian students do not physically look distinct from white students, some American Indian students stated they must at times prove their minority status. Some of them were asked by administrative staff, “What are you doing here?” when entering a “minority” or financial aid office.

---

## Insights from Faculty Advisors

**Advisors reported that most minority students do as well academically as non-minority students.** They stated they rarely lose a minority student due to an academic problem. At the same time, some advisors noted that some minority students experience an academic shock when they come to dental school because a number of these students come from smaller, less rigorous undergraduate schools.

**Advisors agreed that dental school is difficult for all students regardless of racial and ethnic background.** They stressed that the dental school experience by its very nature is isolating, pressure-filled, and demanding for all students. However, most of the advisors interviewed agreed that minority students have unique concerns and may need different kinds of resources than other students.

**While they believe their schools are “good places” for minority students, all stated that more could be done to support these students.** They mentioned providing tutors, workshops on test-taking skills, more interaction with alumni, and closer ties to the local community as additional ways to support minority students.

**Even though they believed their schools could do more, most advisors perceived their school’s existing programs and outreach to minority students as being effective.** In sharp contrast to the input from minority students, advisors believed that the existing supports and programs for minority students are doing a good job. However, the feedback from minority students about the services and supports provided by their dental schools was generally negative, or they regarded these programs as ineffectual.

**Advisors believed the biggest barriers to dentistry for minorities are the expense of dental school, limited knowledge about funding opportunities, matriculating from less competitive undergraduate schools, generally lower DAT scores, and a lack of exposure to dentistry.** Of these barriers, advisors believed that concerns about debt and coming from less competitive schools with lower DAT scores are the biggest challenges facing minority students. These did not necessarily reflect the barriers that the students identified. While debt was a concern for some, other minority students felt that

the incomes they will earn once they become practicing dentists will enable them to pay back their loans. Also, very few minority dental students felt they were unprepared academically for dental school or that their undergraduate school was not rigorous enough. However, many minority students mentioned a lack of information about funding opportunities as a problem. Also, many minority dental students pointed to the key role that early exposure to dentistry could have played in their decision to apply to dental school.

**Advisors acknowledged that interaction between minority students and faculty needs to improve.** Advisors, like the minority dental students in the focus groups, are concerned about poor relationships between faculty and minority students. They cite too few minority faculty members and a lack of sensitivity among some white faculty. Their solution: they believe that more minority faculty need to be hired and that existing faculty should be sensitized to the concerns and needs of minority students. Advisors believe incidents of miscommunication and subtle discrimination that some minority students experience could be rectified through these efforts.

---

## Idea for More Effective Efforts

Throughout the focus groups and interviews with minority students and faculty advisors, a number of ideas arose regarding ways to bring more minorities into the field of dentistry. Their ideas include the following:

**Provide more creative opportunities to expose minority students to the field of dentistry.** Early and frequent exposure to the field is the one common experience shared among all minority dental students in this study.

**More outreach and recruitment to minority undergraduates.** Very few of the students in this study say they were “recruited” by their dental school. Rather, most had to learn about the field and about dental schools on their own. Many students described an information gap at the undergraduate schools that needs to be filled to attract more minority students to the field.

**Provide more information about scholarships and funding opportunities.** Most dental students in this study said they were unaware of fund-

ing sources for minority students. Since debt is a concern for some of the students in this study, learning more about ways to defray the cost of dental school could attract more minorities to apply.

**Continue to offer programs that minority students say are effective.** They praise summer programs for undergraduate students to introduce them to the field and prepare them for dental school. The peer-to-peer mentoring program at some dental schools was also considered to be effective, as was mentoring with upperclassmen and practicing minority dentists who served as mentors.

**Hire more minority faculty.** All minority students in this study notice the lack of diversity among dental school faculty, and most find it disappointing. Not only would minority faculty serve as role models, but they could break down some of the barriers that exist between minority dental students and their faculty members.

**Include minority dental students in the solution.** Their enthusiastic input during the focus groups shows that minority students have an interest in this topic and would like to be included in decision-making on these issues at their dental schools. They are vocal in articulating how current support services at their dental schools are not as effective as they could be, and their feedback could be helpful in designing better programs.

**Sensitize dental school faculty to the problems of miscommunication with minority students.** Particularly in their interactions with African American students, faculty may be making the dental school experience unnecessarily more difficult for these students.

**Generally encourage dental school faculty to reach out to minority students.** There seems to be a gap between students in this study and their faculty that needs to be addressed. Faculty are not seen as supportive or accessible to minority students.

---

## A Growing Consensus on the Issues

Many of the concerns expressed by the underrepresented minority students who participated in this focus group study were confirmed by Lopez et al.<sup>7</sup> using a different study methodology. Those researchers mailed a fifty-eight item questionnaire

to the minority/admission officers at dental schools in twenty-two U.S. states who then redistributed the questionnaire to underrepresented minority students at their schools.

The two studies report many similar findings. In both studies there was a strong influence by family dentists to pursue a dental career. Dental students reported a positive influence from the presence of other minority students for peer relations and mentoring programs. Financial aid barriers were an issue for some students and not for others. The ability and desire to “blend in” and assimilate into the majority culture varied across racial and ethnic groups, with African American students in both groups reporting the greatest challenge in fitting in.

Regarding URM student perceptions of targeted URM days or programs, the two studies asked different questions. The Lopez study asked about “special days” for admissions interviews and tours designated for minority students only and found that the URM students preferred integrated days instead. This focus group study asked about summer enrichment programs designated for URM students and found that URM students praised them as beneficial. On the one hand, the two types of programs cannot be compared (for example, special designated admissions days vs. special designated summer programs); on the other hand, the notion that URM students would feel uncomfortable with being singled out in one circumstance and not another provides even more reason for program developers to learn as much as possible about their audience before designing initiatives.

Dental schools that adopt a goal to increase their enrollment of underrepresented minority students need to pay attention to making their schools hospitable to a diverse student population and to providing better information to URM college students. A recent Institute of Medicine Report<sup>8</sup> entitled *In the Nation's Compelling Interest: Ensuring Diversity in the Health Care Workforce* provides recommendations for improving the institutional climate for diversity. It also offers much insight into recruitment, admissions, and retention factors that can guide dentistry's efforts to enhance its racial and ethnic diversity. The following implications in our study are supported by the IOM study:

- 1) Most students in the focus group study say they are “unaware” of available grants or other funding opportunities to defray dental school costs. The IOM report found that “the large variety and scope of public and private efforts for funding

URMs in health professions make it difficult to assess if and how well these programs work together and complement one another in their efforts.”

- 2) Many minority students are disappointed by the lack of diversity among dental school faculty. The IOM study finds that “enhancing racial and ethnic diversity of health professions education faculty can provide support for URM students in the form of role models and mentors.”
- 3) The dental school experience for all students in the focus group study was difficult and isolating. Many minority students, primarily African American dental students, described additional challenges that may be unique. A number of the students felt isolated in the school environment with little access to faculty support and experienced subtle forms of discrimination. The IOM study recommends that health professions education institutions should develop and regularly evaluate comprehensive strategies to improve the institutional climate for diversity.

This focus group study is the first report to be published from the Dental Pipeline program. Over the next four years, this program will be issuing further reports on its overall program goals. Additionally, reports on the outcomes of the national program will be forthcoming as a national evaluation team at UCLA collects and analyzes data on the participating schools.

---

## Acknowledgments

We wish to thank Dr. Allan J. Formicola and Dr. Howard Bailit, codirectors of Pipeline, Profession, & Practice: Community-Based Dental Education for their revisions and suggestions to the manuscript. Special thanks to Minna Jung, J.D., a communications officer at The Robert Wood Johnson Foundation, who helped make this research possible. Appreciation is expressed to The Robert Wood Johnson Foundation, The California Endowment, and the W.K. Kellogg Foundation for funding of the program.

---

## REFERENCES

1. U.S. Census Bureau. Census 2000 redistricting data (Public Law 94-171).
2. Valachovic RW, Weaver RG, Sinkford JC, Haden NK. Trends in dentistry and dental education. *J Dent Educ* 2001;65:539-61.
3. Weaver RG, Valachovic RW, Haden NK. Applicant analysis: 2000 entering class. *J Dent Educ* 2002;66:430-48.

4. Oral health in America: a report of the surgeon general—executive summary. Rockville, MD: U.S. Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health, 2000.
5. Institute of Medicine. Unequal treatment: confronting racial and ethnic disparities in health care. Washington, DC: National Academy Press, 2002.
6. Future of dentistry. Chicago: American Dental Association, Health Policy Resource Center, 2001.
7. Lopez N, Wadenya R, Berthold P. Effective recruitment and retention strategies for underrepresented minority students: perspectives from dental students. *J Dent Educ* 2003;67:1107-12.
8. Institute of Medicine. In the nation's compelling interest: ensuring diversity in the health care workforce. Washington, DC: National Academy Press, 2004.