Selected Readings

The following resources are a selection of Journal of Dental Education articles relevant to holistic review. The list is not intended to be comprehensive, but rather an introduction to aid dental institutions with policies, procedures and practices related to admissions, review of applicants’ credentials, and recruiting diverse applicants. Contact ADEA at roedaj@adea.org if you have any resource suggestions or questions.

Admissions/Reviewing Applicants


Cognitive tests are used to select students into dental school, yet cognitive predictors explain only part of the variance in academic performance. Therefore, interviews and personality tests are often used to measure noncognitive (e.g., interpersonal) characteristics. Recently, situational judgment tests (SJTs) have drawn attention since there is evidence that SJTs can be valid predictors in medical admission contexts. This study examines the validity of an SJT measuring interpersonal skills for predicting academic performance of dental students. Incremental validity over cognitive tests is also examined. In this study, 796 dental students who passed the admission exam for medical and dental students in Flanders, Belgium, and enrolled in one of the two Flemish dental schools were evaluated. Grade point average (GPA) in the five years of dental studies served as the criterion. Corrected correlation between the cognitive tests of the admission exam and GPA equaled .38. Their validity dropped from .45 (year 1) to .18 (year 5). However, the validity of the SJT increased from .05 (year 1) to .20 (year 5). The SJT had incremental validity in year 5. Dental admissions committees that envision assessing a broad set of capabilities might consider using an SJT as a valuable supplement to cognitive tests. Future research needs to confirm these findings with job performance as another criterion.


Our purpose was to compare admissions criteria as predictors of dental school performance in underachieving and normally tracking dental students. Underachieving dental students were identified by selecting ten students with the lowest class grade point average following the first year of dental school from five classes, resulting in a pool of fifty students. Normally tracking students served as a control and were randomly selected from students who had completed their first year of dental school not in the underachieving group. Admission measures of college grade point average (GPA),
science grade point average (SGPA), academic average (AA), Perceptual Ability Test (PAT), college rigor, and academic load in college were evaluated with descriptive statistics, correlation, and regression analysis with first-year and graduating GPA as the dependent variables. Admissions criteria were generally weak predictors of first-year and graduating GPA. However, first-year dental school GPA was a strong predictor (R²=0.77) of graduating GPA for normally tracking students and a moderate predictor (R²=0.58) for underachieving students. Students who completed the first year of dental school having a low GPA tended to graduate with a low GPA. Therefore, remediation and monitoring would be important during the dental school experience for these students.


From the early 1980s until recently, the University of British Columbia Faculty of Dentistry had employed the Canadian Dental Association (CDA) Structured Interview in its Phase 2 admissions process (with those applicants invited for interviews). While this structured interview had demonstrated reliability and validity, the Faculty of Dentistry came to believe that a multiple interview process using scenarios would help it better identify applicants who would match its mission. After a literature review that investigated such interview protocols as unstructured, semi-structured, computerized, and telephone formats, a multiple interview format was chosen. This format was seen as an emerging trend, with evidence that it has been deemed fairer by applicants, more reliable by interviewers, more difficult for applicants to provide set answers for the scenarios, and not to require as many interviewers as other formats. This article describes the process undertaken to implement a customized multiple interview format for admissions and reports these outcomes of the process: a smoothly running multiple interview; effective training protocols for staff, interviewers, and applicants; and reports from successful applicants and interviewers that they felt the multiple interview was a more reliable and fairer recruiting tool than other models.


This retrospective study aimed to determine the ability of a self-designed evaluation instrument to identify applicants who should be invited for an interview and to assess applications including non-academic factors in a consistent and systematic manner. The instrument was constructed using information culled from the American Dental Education Association Associated American Dental Schools Application Service (ADEA AADSAS) applications including academic (DAT, GPA) and non-academic qualifications (work experience, volunteer and extracurricular activities, rural and ethnic background, essays). Weights were assigned to each item assessed. Using applications received during the 2006 and 2007 admissions cycles, the instrument identified who should have been invited for interview. Descriptive statistics and specificity and sensitivity tests were conducted. The instrument allowed for a systematic quantitative
assessment of non-academic factors that was part of the overall evaluation of applicants. Results show differences in non-academic scores of minority compared to non-minority applicants, males compared to females, and those who were offered interviews compared to those not interviewed. It is possible that some applicants who were not offered interviews could have gained a chance to be looked at more closely on a second round of review if non-academic factors were considered.


Oral Health in America, the landmark U.S. surgeon general’s report, inextricably connects oral health disparities with poor access to oral care by vulnerable populations. Furthermore, the report associates an insufficiently diverse dental workforce with oral health disparities among some minority groups. Successful strategies to curtail oral health disparities and remedy workforce issues require collaboration among all involved in dental education. As gatekeepers to dental programs, admissions committees are significant stakeholders in diversifying the dental workforce. The purpose of this article is to demonstrate that a workshop on diversity in admissions can modify the perceptions of individuals involved in the student recruitment and admissions processes and lead to increased matriculation of underrepresented minority students. Emerging from the workshop were key concepts and action steps for promoting a holistic review of dental applicants. Results since implementing the workshop recommendations have been positive, with underrepresented minority dental student acceptances increasing six fold. The workshop was cosponsored by the Robert Wood Johnson Foundation and facilitated by two nationally recognized dental educators.


In this chapter we describe the institutional and policy-level strategies that dental schools in the Pipeline, Profession, and Practice: Community-Based Dental Education program used to modify their admissions practices to increase the diversity of their student bodies. Schools developed and used clear statements recognizing the value of diversity. They incorporated recent U.S. Supreme Court rulings regarding educational diversity into their revised admissions practices; these rulings cited diversity as both a "compelling interest" and its use in only "narrowly tailored" circumstances. We make a case for admissions decisions based on a comprehensive evaluation that balances the quantitative and qualitative qualities of a candidate. It refutes the practice of overreliance on standardized tests by detailing the whole-file review process to measure merit and professional promise. Also described is a range of noncognitive variables (e.g., leadership, ability to sustain academic achievement with competing priorities, volunteerism, communication, social background, and disadvantaged status) that schools can take into consideration in admissions decisions. Admissions committees can tie this comprehensive review of candidates into the case for promoting cross-cultural understanding and enhanced competence to provide care to patients from diverse backgrounds. In addition, the chapter
reviews the challenges schools face in developing admissions policies and procedures that reflect the university's mission for diversity. It addresses the importance of a diverse composition of the admissions committee. It also describes how tailored workshops and technical assistance for admissions committees can help schools improve their student diversity and how admissions committees can engage in a process of periodic review of their diversity objectives in relationship to the school's mission.


Drawing on the interconnection of workforce diversity and oral health access, the American Dental Education Association (ADEA) is leading a novel approach to improve student body diversity in U.S. dental schools through an admissions committee development program. With funding provided by the Pipeline, Profession, and Practice: Community-Based Dental Education program and the Robert Wood Johnson Foundation, ten dental directors/deans of admissions from a cross-section of U.S. dental schools were selected through a competitive application process to participate in a Train-the-Trainers Admissions Committee Workshop. After completing intensive training that was built on legally sound admissions practices, these new trainers copresented ADEA Admissions Committee Workshops in two-member teams at six U.S. dental schools. This report summarizes the evaluation of both the train-the-trainers workshop and six workshops held in summer 2009. Also summarized are post-workshop outcomes relative to structural diversity at the participating schools.


The American Dental Education Association's Admissions Committee Workshop (ADEA ACW) was designed to challenge dental school administrators and admissions committee members to review their current admissions practices and to explore ways to attract a more diverse student body. Presented at the invitation of dental schools, this half-day interactive workshop provides opportunities for a dental school’s administrators, staff, and admissions committee members to learn about the value of diversity in the educational environment and how to implement holistic admissions practices that take into consideration the experiences, attributes, and metrics of candidates for admission. This report explores the rationale for the development of the ADEA ACW, discusses lessons learned from presentation of the workshop at more than twenty-seven U.S. dental schools, and tracks enrollment trends of underrepresented minority students in dental schools where the workshop has been presented.

Dental school admissions committees continue to grapple with challenges associated with recruiting, admitting, and enrolling students who best meet the mission of the particular institution. For many students, particularly underrepresented minority students and those from non-traditional backgrounds, standardized tests such as the Dental Admission Test (DAT) are poor predictors of their potential for success. Noncognitive assessment methods can be used in conjunction with traditional cognitive measures in making admissions decisions. These methods have been employed by hundreds of higher education institutions, foundations, and scholarship programs, but are relatively new in dental education. This article describes a prevalent assessment model and discusses one dental school’s implementation of the model, with the outcome of enrolling students from diverse backgrounds whose career goals parallel the mission of the school.

**Recruiting Applicants**


Dental schools in the Pipeline, Profession, and Practice: Community-Based Dental Education program that increased the number of underrepresented minority (URM) and low-income (LI) students in their predoctoral programs used focused approaches in their outreach, recruitment, and retention initiatives. Various combinations of approaches were used by the fifteen schools that received funding during Phase I of the program, which spanned 2003 to 2007. URM enrollment in the Pipeline schools increased from 184 students in 2003 to 246 in 2007. These enrollment numbers represent 16 and 20 percent of the first-year class in the Pipeline schools in 2003 and 2007, respectively. If the historically minority-serving institutions—Howard University College of Dentistry and Meharry Medical College School of Dentistry—are removed from these totals, the numbers changed from 100 in 2003 to 144 in 2007, representing 10 and 13 percent of the first-year classes. This chapter describes the approaches used by the fifteen Pipeline schools to increase the number of URM and LI students recruited to and enrolled in their predoctoral programs. It describes the internal infrastructural and organizational approaches these dental schools used to increase awareness about oral health careers among URM and LI students and to recruit applicants from these populations to their educational programs. The effective partnerships and collaborations these dental schools established with each other and external stakeholders to bolster their career outreach and recruitment efforts and some of the informal efforts that supported increased diversity are also examined.


By now, all dental schools should understand the need to increase the enrollment of underrepresented minority (URM) students. While there has been a major increase in the number of Hispanic/Latino, African American/Black, and Native American applicants to
dental schools over the past decade, there has not been a major percent increase in the enrollment of URM students except in the schools participating in the Pipeline, Profession, and Practice: Community-Based Dental Education program, which have far exceeded the percent increase in enrollment of URM students in other U.S. dental schools during Phase I of the program (2002-07). Assuming that all dental schools wish to improve the diversity of their student bodies, chapters 9-12 of this report for which this chapter serves as an introduction provide strategies learned from the Pipeline schools to increase the applications and enrollment of URM students. Some of the changes that the Pipeline schools put into place were the result of two focus group studies of college and dental students of color. These studies provided guidance on some of the barriers and challenges students of color face when considering dentistry as a career. New accreditation standards make it clear that the field of dentistry expects dental schools to re-energize their commitment to diversity.


It is well known that there is a large disparity between the proportions of African Americans, Hispanics, and American Indians in the general U.S. population and in the nation's dental profession. While these underrepresented minorities (URMs) together make up almost 30 percent of the population, they comprise only about 6 percent of U.S. dentists. For years, the American Dental Education Association has been diligently working with U.S. dental schools to reduce this disparity by increasing the diversity of their student bodies. However, with approximately 13 percent of first-year dental students coming from URM groups, the proportion of URM students entering dental school continues to remain significantly below that of the general population. Diversifying the dental profession is important for improving access to care for underrepresented groups, and student diversity provides better educational experiences for all students. Texas A&M Health Science Center Baylor College of Dentistry's strategy for increasing the number of URM dentists was to create a series of initiatives that together form a successful comprehensive program addressing students' awareness of and attraction to a dental career, academic enrichment, admissions, and graduation. The cumulative impact of this program is that the college enrolled greater numbers and proportions of URM students than any other non-minority U.S. dental school from 2006 to 2009. This article describes the program that led to these successes.


This article reports the outcomes of an evaluation conducted to determine if an academic skills training program for undergraduate predental students from underrepresented minority backgrounds increased the students’ standardized academic skills test scores for vocabulary, reading comprehension, reading rates, spelling, and math as well as subject-specific test results in biology, chemistry, and physics. Data from standardized academic skill tests and subject-specific tests were collected at the beginning and end of the 1998 to 2006 Pipeline Programs, six-week summer enrichment programs for undergraduate
predental students from disadvantaged backgrounds. In total, 179 students (75.4 percent African American, 7.3 percent Hispanic, 5.6 percent Asian American, and 5 percent white) attended the programs during these nine summers. Scores on the Nelson-Denny Reading Test showed that the students improved their vocabulary scores (percentile ranks before/after: 46.80 percent/59.56 percent; p<.001), reading comprehension scores (47.21 percent/62.67 percent; p<.001), and reading rates (34.01 percent/78.31 percent; p<.001) from the beginning to the end of the summer programs. Results on the Wide Range Achievement Test III showed increases in spelling (73.58 percent/86.22 percent; p<.001) and math scores (56.98 percent/81.28 percent; p<.001). The students also improved their subject-specific scores in biology (39.07 percent/63.42 percent; p<.001), chemistry (20.54 percent/51.01 percent; p<.001), and physics (35.12 percent/61.14 percent; p<.001). To increase the number of underrepresented minority students in the dental school admissions pool, efforts are needed to prepare students from disadvantaged backgrounds for this process. These data demonstrate that a six-week enrichment program significantly improved the academic skills and basic science knowledge scores of undergraduate predental students. These improvements have the potential to enhance the performance of these students in college courses and thus increase their level of competitiveness in the dental school admissions process.

McCants, JB. Methods to increase underrepresented minority student enrollment and retention at the University of Louisville School of Dentistry [Abstract]. J Dent Educ 2011; 75(12):1542-1547.

The 2000 U.S. census reported that the population is 12.3 percent African American and 12.5 percent Hispanic; however, less than 4 percent of dentists are African American and 2 percent are Hispanic. To address this disparity, increasing the diversity of dental students is mandatory. The purpose of this article is to describe how the University of Louisville School of Dentistry (ULSD) has approached enrolling and retaining underrepresented minority students. ULSD has increased its pool of underrepresented minority applicants through three major methods: partnerships and collaborations, mentoring, and restructuring administration. Data from ULSD’s admissions, institutional research, and planning along with annual enrollment surveys from the American Dental Education Association were used to determine the percentage of African American and Hispanic students entering (1993–2006) and graduating (1997–2010). From 1993 to 2010, African American enrollment increased from 3 to 9.6 percent of the entering class, and the graduation rate of African American students increased from 1.7 to 8.5 percent. Hispanic student enrollment also increased (1.6 percent in 1993 to 2.4 percent in 2006), but Hispanic student graduation rates decreased (3.5 percent in 1996 to 0 percent in 2010).


Adequately providing for the health care of the growing minority population in the United States requires increased racial and ethnic diversity of the health care workforce. Long-term diversity in the dental profession depends on a more diverse student
population in dental schools. The University of Nevada, Las Vegas School of Dental Medicine's (UNLV SDM) Dental Prospects Club is a predental education program that has increased the number of underrepresented minority and disadvantaged students in the school by concentrating on outreach, recruitment, and retention initiatives. The approaches used by the club members and faculty advisors to increase the number of underrepresented minority students recruited to and enrolled in the UNLV SDM are discussed in this report. Also described are the strategies, methods, internal infrastructure, and organizational support used to increase the number of underrepresented minority students at the school.


Dental educators have been trying to increase enrollment of underrepresented minority (URM) students for many years with limited success. The Pipeline, Profession, and Practice: Community-Based Dental Education program has developed or been affiliated with several innovative strategies for increasing the enrollment of URM students in U.S. dental schools. In March 2005, three promising approaches were discussed at an American Dental Education Association symposium and are described in this article: 1) collaborative recruitment programs based on groups of regional schools; 2) workshops that focus on the effective operation of admissions committees; and 3) a new summer enrichment program for college students interested in dentistry and medicine.


As the U.S. population continues to become more diverse, there has been a movement toward the recruitment of more diverse students into the dental profession. The purpose of this study was to assess the current and historical trends in diversity among dental school applicants and enrollees at a new dental institution, the University of Nevada, Las Vegas, School of Dental Medicine (UNLV-SDM). Applicant and enrollment data for the first four cohorts, sorted by gender and ethnicity, were retrieved and summarized by the Office of Admissions and Student Affairs at UNLV-SDM. The principal findings of this analysis revealed enrollment of females at UNLV-SDM was relatively consistent during this time interval, although significantly lower than the U.S. average of all dental schools. The enrollment of minorities at UNLV-SDM, however, was consistent and comparable to the U.S. average, although these percentages were disproportionately smaller than the percentage of minorities in the general population. Based upon these findings, a new model for outreach and recruitment of females and minorities was recently created, based in part upon evidence of successful strategies by dental educators at other institutions, in order to increase the enrollment of female and underrepresented minority students.

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.