Addressing Health Care Disparities and Increasing Workforce Diversity: The Next Step for the Dental, Medical, and Public Health Professions

The racial/ethnic composition of our nation is projected to change drastically in the coming decades. It is therefore important that the health professions improve their efforts to provide culturally competent care to all patients.

We reviewed literature concerning health care disparities and workforce diversity issues—particularly within the oral health field—and provide a synthesis of recommendations to address these issues.

This review is highly relevant to both the medical and public health professions, because they are facing similar disparity and workforce issues. In addition, the recent establishment of relationships between oral health and certain systemic health conditions will elevate oral health promotion and disease prevention as important points of intervention in the quest to improve our nation's public health. (*Am J Public Health.* 2006;96:2093–2097. doi:10.2105/AJPH.2005.082818)

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THE AMERICAN DENTAL Education Association (ADEA) recently released a position paper that addressed academic dental institutions' (ADIs') roles and responsibilities for improving the oral health of all Americans.[1] The projected changes in our nation's demographic composition[2] and the underrepresentation of several minority groups within the oral health care workforce indicate that oral health professionals will be ill prepared to provide quality culturally competent care to many of their patients.[1,3] Therefore, this is the opportune time for both dental and nondental oral health stakeholders (including physicians and public health professionals) to review and augment their efforts for actively implementing strategies that will achieve a culturally competent workforce devoted to providing quality oral health care to all patients. The association between oral health and systemic health[4] shows that collaborations among oral health professionals, medical professionals, and public health professionals will be necessary for adequately addressing both the oral health and the general health of our nation.

We reviewed relevant access to care and workforce diversity literature, and we will provide a synthesis of recommendations offered in the ADEA's position paper and those put forth in recent reports by the Sullivan Commission,[5] the Institute of Medicine,[6,7] the Office of the Surgeon General,[4] and the American Dental Association.[3] In keeping with the ADEA's position piece, we emphasize the role of academic institutions (particularly ADIs), which are the educators and the nurturers of our future health professionals.[1]

HEALTH DISPARITIES IN THE UNITED STATES

The Haves and Have Nots

With the release of their position paper, the ADEA has placed the issue of disparate access to quality oral health care at the feet of current and future oral health professionals of all races and ethnicities. It has been documented that impoverished and racial/ethnic minority populations receive substandard health care compared with their more affluent White counterparts.[4,7] In 2001, there were more than 31.4 million individuals who lived in 1480 health professional shortage areas, nearly double the 780 shortage areas identified in 1990. Racial/ethnic minorities are the majority of individuals who reside in health professional shortage areas; therefore, they bear much of the emotional, financial, and physical burden of poor oral health.[4,7]

Compounding this issue is minority overrepresentation in lower socioeconomic groups. As highlighted in the ADEA's position paper, health care services in the United States are inappropriately treated as marketplace commodities, i.e., those who are unable to pay have less access to quality resources.[1,3,5] Consequently, economically disadvantaged minority patients bear the brunt of poor oral health, receive lower-quality health care, and are less likely to receive routine care compared to more affluent White patients.[4,7]

Increasing Workforce Diversity

The absence of a sound patient–provider relationship is one factor that contributes to disparities in the quality of care received by minority populations, which returns us to the issue of health care workforce diversity. Several publications have shown the importance of a racially diverse workforce for improving underserved populations' access to care. According to the Sullivan Commission's report, Black patients are significantly more likely to receive their care from Black dentists (who treat almost 62% of Black patients) than from White dentists (who treat 10.5% of these patients).[5] Similarly, surveys of dentists' practice trends have shown that dentists who are themselves underrepresented minorities treat significantly higher proportions of urban, less

TABLE 1—Race/Ethnicity Distribution Within the US Population (Current and Projected) and Among the Health Professions

	US Population, %		Health Professions, %		
	Current (2000 Census)	Projected (Year 2050)	Medicine	Dentistry	Nursing
White, non-Hispanic	69.4	50.1	51.0	86.0	86.6
Asian/Native Hawaiian/Pacific Islander	3.7	8.2[a]	8.6	7.0	3.7
Black	12.3	14.6	2.4	3.4	4.9
Hispanic	12.5	24.4	3.3	3.3	2.0
Native American/Alaskan Native	0.9	1.8[a]	0.05	0.1	0.5
Non-URM totals	73.1	58.3	59.6	93.0	90.3
URM totals	25.7	40.8	5.8	6.8	7.4

Sources. US Census Bureau[2,12]; Sullivan Commission, 2004[5]; Weaver et al., 2005.[13]
Note. URMs = underrepresented minorities. Non-URM and URM values do not total 100% because "other" and "unknown" categories were excluded.
[a]The US Census Bureau includes Native American/Alaskan Native and Native Hawaiian/Pacific Islander individuals in a broad "all other races" category; therefore, these values are estimates. Some groups included in the Asian/Native Hawaiian/Pacific Islander category are also considered URMs. Unfortunately, the available data do not allow the separation of these groups.

formally educated, and lower-income patients compared with their non–underrepresented minority peers.[8,9] Workforce diversity also has been associated with both greater satisfaction with care received and improved patient–provider communication.[6,7,10] Conversely, the lack of a diverse workforce may foster lingual and cultural barriers, bias, and clinical uncertainty within the patient–provider relationship.[7,11]

Despite the clear benefit of increasing workforce diversity, the racial/ethnic composition of the health professions workforce, including the dental workforce, fails miserably to reflect the increasing diversity of the US population. According to the 2000 Census, African Americans, Hispanics, and Native Americans/Alaskan Natives composed 12.3%, 12.5%, and 0.9% of the US population, respectively (one quarter of the US population).[12] However, within the health professions, these underrepresented minorities composed only 5% of dentists, 6% of physicians, and 9% of nurses in 2004 (Table 1).[5]

A LOOK TO THE FUTURE

A Diverse Workforce for Our Rapidly Changing Nation

Unfortunately, indicators of future diversity at the highest level (doctoral-level professionals) within the health care workforce are far from reassuring. In 2004, underrepresented minorities composed only 11.1% (dental),[13] 13.52% (medical),[14] and 7.36% (public health)[15] of doctoral-level graduates in the health professions (Table 2). These numbers show the dearth of underrepresented minorities in positions of leadership within the health care workforce and the critical need for additional efforts to strengthen the pipeline of qualified underrepresented minority students.

Future trends in the provision of care to underserved populations also are disquieting. It has been shown that underrepresented minority health professionals are more likely than their non–underrepresented minority counterparts to serve in areas of need.[5] Similarly, the ADEA's survey of graduating seniors in the class of 2004[13] indicates that underrepresented minority oral health professionals are likely to continue as the primary care providers in underserved communities unless there is an active intervention. Among the 2004 graduates, Blacks were significantly more likely to expect a patient load that includes a large percentage (>50%) of underserved patients.[13] Compared with White students, Black students tended to place a higher premium on "the opportunity to serve vulnerable and low-income populations" and to view low-income individuals as potential patients less negatively.[13] If steps are not taken to increase both workforce diversity and awareness of healthcare disparity issues,[7] projected changes within the US population—underrepresented minorities are expected to compose 40% of the US population by 2050[2]—will make the existing underrepresentations even more

TABLE 2—Race/Ethnicity Distribution Within the US Population (Current and Projected) and Among 2004 Health Professions Graduates

	US Population, %		2004 Health Professions Graduates, %		
	Current (2000 Census)	Projected (Year 2050)	Medicine	Dentistry	Public Health (Doctoral)
White, non-Hispanic	69.4	50.1	64.0	63.1	75.3
Asian/Native Hawaiian/Pacific Islander	3.7	8.2[a]	20.0	24.7	8.3
Black	12.3	14.6	6.5	4.5	4.7
Hispanic	12.5	24.4	6.4	6.3	2.4
Native American/Alaskan Native	0.9	1.8[a]	0.6	0.3	0.3
Non-URM totals	73.1	58.3	84.0	87.8	83.6
URM totals	25.7	40.8	13.5	11.1	7.4

Sources. US Census Bureau[2,12]; Sullivan Commission, 2004[5]; Weaver et al., 2005.[13]
Note. URMs = underrepresented minorities. Non-URM and URM values do not total 100% because "other" and "unknown" categories were excluded.
[a]The US Census Bureau includes Native American/Alaskan Native and Native Hawaiian/Pacific Islander individuals in a broad "all other races" category; therefore, these values are estimates. Some groups included in the Asian/Native Hawaiian/Pacific Islander category are also considered URMs. Unfortunately, the available data do not allow the separation of these groups.

glaring. Additionally, if the current resistance to service in underserved areas persists, patients who receive the least adequate care will continue to have the most difficulty identifying willing and competent providers. Under these conditions, it is easy to imagine the unacceptable persistence—and even worsening—of oral health disparities.

Light and Shadow by Jessica Keller. *Source.* http://www.serenityartistry.com.

Courtesy of Jessica Keller

The Role of Academic Institutions

The recruitment of additional underrepresented minority oral health professionals is one obvious approach to addressing the issue of oral health disparities.[4,5,7] Nevertheless, a comprehensive solution cannot be attained without the active participation and commitment of all dental professionals and oral health stakeholders. ADIs are an intuitive base for these efforts, because they are charged with the selection and the education of oral health professionals.[1,4] Several national organizations or committees, including the ADEA, have provided a plethora of recommendations for addressing workforce diversity and health care disparity issues. It is recognized that ADIs cannot exert direct influence in all areas where change is needed. Therefore, our review begins with those changes that institutions currently have the power and responsibility to implement and concludes with those actions that require continued advocacy and perseverence to effect change in external organizations and forces.

Making Diversity a Priority

First and foremost, ADIs must develop a culture conducive to change and the implementation of diversity initiatives.[5,6] This requires consistent support from the leadership within academic institutions,[5,6] including the formal declaration of each institution's commitment to diversity, cultural competency, and the elimination of oral health care disparities. This declaration can and should be made through a mission statement that clearly delineates the institution's goals and commitments with respect to diversity, community involvement, and the provision of culturally competent care.[5,6] Such a statement solidifies these responsibilities and values as necessary for the institution's success.

Furthermore, needs assessments within the institution and the community—and ongoing evaluations—are necessary to ensure that the appropriate diversity initiatives are adopted and smoothly incorporated into the fabric of each institution.[6] Recommended activities for helping institutions attain this goal include the creation of a mediation process for the investigation of perceived threats to the institution's commitment to diversity[6]; the appointment of a dedicated individual to oversee the development, implementation, and evaluation of diversity measures[5,6]; and the use of formal systems currently in place (e.g., yearly evaluations) to monitor and encourage active engagement in diversity-building initatives.[5,6]

Additionally, institutional support is needed for the implementation of curriculum and professional development changes aimed at improving diversity and cultural competency training. ADIs are urged (1) to incorporate diversity and cultural competency training into the predoctoral curriculum,[1,3,5–7] (2) to expose students to underserved populations early in their careers (e.g., through placements in community clinics),[1,3] (3) to provide ongoing cultural competency training to faculty and staff members,[5–7] and (4) to encourage interdisciplinary instruction that will advance the successful elimination of healthcare disparities by promoting collaboration among the health professions.[1,4,7]

Recruitment of Underrepresented Minority Students

The recruitment, retention, and support of underrepresented minority students is crucial to achieving a climate open to diversity.[1,3,5] Beyond the fact that underrepresented minorities are more likely to embrace care for the underserved as one of their career goals and responsibilities,[7,8,9,13] diversifying the student body will benefit the education of all dental students and the care of their future patients, regardless of race/ethnicity.[1,5,6] Improved underrepresented minority recruitment requires increased exposure to the health professions. Such exposure is particularly critical for the dental profession, which some fear and associate with other negative emotions.

Exposure to dentistry at several points along the educational path of underrepresented minority students is necessary for combating these associations. Efforts to reach students who may not have considered pursuing a

career in the health professions include (1) improving the identification and academic enrichment of potential underrepresented minority students at the K–12 and undergraduate stages of their education,[1,3–6,10] (2) developing campaigns that increase the visibility of health professions in communities where underrepresented minorities reside and thereby pique interest in pursuing health professions careers,[1,3] (3) recruiting underrepresented minorities who are taking nontraditional paths to careers in the health professions (including students who are enrolled in programs that bridge the 2-year and 4-year college experiences and individuals who seek a career change),[5] and (4) providing underrepresented minority students with psychosocial and skill-building services that will improve their chances for success in dental school.[3,5,6]

Enrollment and Support of Underrepresented Minority Students

As these initiatives work to increase the pool of underrepresented minority applicants, steps must be taken to ensure the enrollment of qualified underrepresented minorities in dental schools across the nation. Research has shown that underrepresented minorities tend not to perform as well as non–underrepresented minority applicants on assessments (standardized test scores and science course grades) on which admissions committees rely heavily.[5,6] Although these quantitative measures can provide useful, albeit limited and imprecise,[5,6] information about students' eventual performance, many have suggested reducing the heavy reliance on these measures in favor of a more thorough review of each applicant. Such a review would take into account qualitative aspects, such as life experience, previous experience navigating cross-cultural issues, multilingualism, and leadership potential.[5,6]

Should ADIs be successful in their attempts to increase underrepresented minority enrollment, they must not rest on the laurels of this success. Once enrolled, underrepresented minority students often face unique challenges[5,6]; therefore, academic institutions must assess the need for and provide appropriate academic (e.g., tutoring), psychosocial (e.g., counseling, mentoring), and financial (e.g., identifying aid sources, providing guidance on finance management issues) support services.[3–6]

Current underrepresented minority students are an important resource and should be encouraged to support their incoming colleagues. Regional collaboratives, such as those funded by the Dental Pipeline program,[16] are another valuable resource for underrepresented minority students. These collaboratives allow students to build support systems that include faculty members and students at nearby institutions. Such initiatives will ensure that underrepresented minority students fulfill their potential as oral health professionals, with the support they need and without undue burden.

The Role of Underrepresented Minority Faculty Members

Underrepresented minority faculty members can take leadership roles in the successful implementation of revised admissions procedures and initiatives aimed at supporting underrepresented minorities as they pursue a career in dentistry.[5,6] Institutions should, therefore, actively encourage and ensure the participation of underrepresented minority faculty members in decisionmaking committees, including admissions committees.[5,6] Because these faculty members are often overcommitted with mentorship and committee duties, such involvement should carry career-promoting incentives.[6] Additionally, increasing the pool of underrepresented minority faculty, including those with expertise in nondental fields such as education, will ease the load on the few underrepresented minorities currently in academia.[3,5,6] Increasing the number of underrepresented minority dental graduates is critical to increasing the underrepresented minority faculty pool, which further shows the need for ADIs to invest in their underrepresented minority students.

Collaboration with External Agencies

Increasing workforce diversity and access to care for the underserved are goals that require internal changes such as those described in the previous section, but opening academic institutions to collaboration with and influence by community-based stakeholders (e.g., community-based organizations that create and implement health promotion and disease prevention programs in economically disadvantaged neighborhoods) also is important. Academic institutions should actively engage their surrounding communities to remain aware of evolving oral health needs and to facilitate the dissemination of information about the institutions' diversity and cultural competency initiatives.[3,6] Additionally, community-based organizations can aid academic institutions with meeting those diversity and health care access goals by providing training in cultural competency and by being involved with the implementation of diversity initiatives whenever possible.[5,6]

Although there is much that ADIs can do to increase diversity and address disparity issues, there are areas where change is needed but cannot be achieved solely through institutional changes. For example, academic institutions should be involved in activities aimed at enriching the pipeline of potential underrepresented minority health professionals, but an overhaul of the public education system is needed to address disparities in the quality of education received by underrepresented minority children.[5,6] Academic institutions cannot initiate or control this overhaul process but they can advocate for changes to the educational system and provide technical assistance as needed (e.g., with science curriculum development).

The cost of a dental education also presents challenges that require support beyond the institution. The financial structure of ADIs is unique and contributes to the high cost of a dental education. Unlike other health profession schools, which are usually affiliated with hospitals or other external agencies, dental schools finance the didactic and clinical/externship portions of their students' educations. The additional costs incurred by dental schools are partially offset by tuition fees. These ever-increasing fees are a prohibitive burden for many underrepresented minority students and, therefore, are a barrier to the goal of increasing workforce diversity.[3,5,6] Because underrepresented minority students are likely to continue as leaders in the crusade to provide quality

care to the underserved, easing these students' financial burden can serve the additional purpose of improving access to care. Although many institutions offer internal sources of financial aid, innovative strategies for identifying additional financial resources are needed.[3,5,6] Funding from external sources is necessary for providing scholarships, tuition assistance, tax incentives, and loan repayment or forgiveness for oral health professionals who practice in underserved areas.[1,3–6]

Finally, although institutional self-regulation is important, accountability to outside organizations and stakeholders (e.g. communities) is crucial for ensuring sustained dedication to increasing diversity and eliminating disparities.[5,6] Institutions should cooperate fully with accountability measures and embrace them as an opportunity for evaluating progress toward meeting diversity, cultural competency, and care provision goals. Such cooperation is crucial for the implementation of several recommendations recently put forth, including external evaluations of data related to diversity initiatives (e.g., trends in underrepresented minority recruitment, enrollment, retention, and graduation) and the infusion of diversity goals into accreditation procedures.[5,6]

THE ROAD AHEAD

The ADEA's compelling statement to the dental education community should spur all oral health professionals to action. With the recommendations we discussed in mind, oral health professionals must work in concert with all interested stakeholders (including physicians and public health professionals) to develop and support initiatives that increase minority representation in the oral health care workforce and that reduce disparities in the quality of oral health care received by racial/ethnic minority and economically disadvantaged patients. Organized dentistry, and ADIs in particular, is the natural leader for these diversity-building and disparity-reducing efforts. But these institutions alone cannot provide effective solutions.

Recent research has shown the association between intraoral infections and multiple systemic conditions, including diabetes,[17,18] cardiovascular disease,[19] and adverse pregnancy outcomes.[20,21] If the association between oral health and systemic health is corroborated by the results of randomized multicenter clinical trials, oral health interventions will be recognized as important health promotion and disease prevention measures. The collaboration of dental and nondental oral health stakeholders (including all professional, philanthropic, community-based, and governmental organizations that have an investment in the public's health) is crucial for the success of any oral health intervention.[3,4] Collaboration among these multifaceted stakeholders will require the development of innovative strategies, but the benefits of improving the public's oral health will make this task worthwhile. Good systemic health cannot be achieved without attention to oral health.[4] Thus, oral health promotion and disease prevention could soon be the next frontier in the struggle to improve the overall health of our nation. ■

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