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Keynote Address

The Need for Greater Racial and Ethnic Diversity in Orthopaedic Surgery

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Abstract

Background Advances in medicine in the past century have resulted in substantial reductions in morbidity and mortality in the United States. However, despite these improvements, ethnic and racial minorities continue to experience health status and healthcare disparities. There is inadequate national awareness of musculoskeletal health disparities, which results in greater chronic pain and disability for members of ethnic and racial minority groups. The Sullivan Commission concluded in 2004 the inability of the health professions to keep pace with the US population is a greater contributor to health disparities than lack of insurance.

Where are we now? While African Americans, Hispanic Americans, and Native Americans constitute more than one-third of the US population, they make up less than 10% of physicians, dentists, and nurses and less than 4% of orthopaedists in the United States.

Where do we need to go? Increasing the representation of women and ethnic and racial minorities in orthopaedics will help to increase trust between patients and their providers and will improve the quality of these interactions by enhancing culturally and linguistically appropriate orthopaedic care.

How do we get there? Pipeline enrichment programs along the educational spectrum are important in the academic preparation of underrepresented minorities. Collaborations between health professions schools and postsecondary educational institutions will increase awareness about careers in the health professions. Ongoing mentorships and career counseling by orthopaedists should enhance the interest of underrepresented minority students in careers as orthopaedists.

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The health of the citizens of the United States improved in many ways during the twentieth century with advances in public health practices, expansion of the scientific basis of medicine, and improvements in the training of America's health professionals. Average life expectancy at birth increased from 47.3 years in 1900 to 77 years in 2000 and infant mortality rates decreased from approximately 100 per 1000 live births in 1900 to 6.7 per 1000 live births by 2000. Despite these major advances, ethnic and racial minorities still experience health and healthcare disparities that persist even when controlling for type of insurance, socioeconomic status, and severity of disease [11]. Minorities suffer disproportionately from chronic conditions, such as heart disease, hypertension, cancer, asthma, obesity, and diabetes; are less likely to have regular care; and are more likely to report poorer quality of care. Notably, despite two decades of government programs targeting the reduction and elimination of health disparities at both the federal and local levels, health disparities persist and in some cases are widening [15].

Among ethnic and racial minorities, there are substantial diagnostic and treatment disparities in access to orthopaedic care [10, 16]. It has been reported the rates of total joint

arthroplasty (TJA) among African American and Hispanic patients are lower than those for non-Hispanic white patients. This disparity persists among Medicare-eligible populations and the Veteran Administration system. Mexican Americans and African Americans with diabetes are more likely to receive immediate proximal amputation than vascular workup and limb-preserving surgical procedures [16]. Disparities in pain treatment related to long-bone fractures have been noted. In one study, Hispanic patients presenting to the emergency department with long-bone fractures were half as likely as non-Hispanic whites to receive pain medication [23]. A more recent study also reported Hispanic patients with long-bone fractures waited almost twice as long as non-Hispanic whites to receive their first dose of pain medication [8].

Contributing to the persistence of health disparities is the failure of the US health workforce to match the growing racial and ethnic diversity of the nation. The percentage of African Americans, Hispanic Americans, American Indians, Alaska Natives, or Pacific Islanders (groups considered among those underrepresented in medicine [URM]) in the health professions has shown modest gains over the past 40 years [21]. These groups make up over 30% of the US population, but in 2007, they accounted for only 9% of physicians, 7% of dentists, 10% of pharmacists, and 6% of registered nurses. These URM populations are also underrepresented in orthopaedics, as documented in a 2008 report on practice patterns and demographics in orthopaedic practice in the United States [1]. Among survey respondents, 3.9% were URMs and 4.4% were women [1]. This level of URM representation is lower than the 7% of URM reported by Jimenez [12] one decade ago. Data from 2001 on minorities in US orthopaedic residency programs show slightly higher URM representation of 9.2% [22]. Finally, uneven distribution of orthopaedic specialists is evident from the 2008 report by the American Academy of Orthopaedic Surgeons (AAOS) [1]. Recognizing these deficiencies, the AAOS has placed increasing diversity and cultural competence among its core strategies to advance the highest-quality musculoskeletal health. In collaboration with the J. Robert Gladden Society, the AAOS's diversity initiatives are designed to increase access to orthopaedic care, promote the delivery of culturally competent care, and support efforts to diversify the orthopaedic workforce.

In 2004, The Sullivan Commission stated "[t]he fact that the nation's health professions have not kept pace with changing demographics may be an even greater cause of disparities in health access and outcomes than the persistent lack of health insurance for tens of millions of Americans" [20].

There is a substantial body of literature indicating diversity in the health professions increases access to care and the quality of care received by ethnic and racial minorities and the quality of educational environment for all students. When given a choice, ethnic and racial minority patients are more likely to utilize physicians from their own racial and ethnic group. Racial and ethnic concordance enhances effective communication between patients and providers. Overall, white, African American, Asian, and Hispanic patients in racially concordant settings are more likely to use needed services and less likely to postpone seeking care [14]. Moreover, patients in a concordant health encounter posed more questions, had increased trust in their providers, had a higher level of agreement about recommended lifestyle changes, and a higher intention to followup with treatment regimens [4, 9, 19]. Cooper et al. [6] showed race concordance was associated with longer visits characterized by a higher level of decision-sharing between provider and patient.

A growing body of literature demonstrates clinical decisions regarding patient management, in particular those related to invasive procedures, are influenced by patient race and ethnicity [7]. An Institute of Medicine study found evidence that "stereotypes, biases and uncertainty on the part of healthcare providers can all contribute to unequal treatment" [11]. Dovidio et al. [7], in their review of health disparities, concluded treatment disparities seem to be highest when physicians engage in "high discretion" procedures, such as cardiac catheterizations, implantable cardioverter-defibrillators, coronary artery bypass grafts, testing for osteoporosis, and active treatment for prostate cancer.

Cultural competency in orthopaedic care is important given the complexity of surgical interventions. For example, it has been noted referrals for invasive orthopaedic procedures such as TJA were at a higher rate for African American patients than white patients. However, African Americans were less willing to consider the procedure. The authors attributed this discrepancy to the complex process of decision-making on the part of patient and physicians [16]. Jimenez [12] highlights the fact that perceptions of disease processes and healing are rooted in cultural beliefs and practices and states orthopaedists who treat URM groups must be aware of their fears and attitudes regarding issues such as injury, disability, medical diagnosis, and treatment but, most of all, surgery.

Diversity enhances access to health care as ethnic and racial minority physicians are more likely to choose primary health specialties and serve rural and underserved communities [13]. These providers are also more likely to care for patients without insurance. URM medical school graduates consistently show a disproportionate tendency to pursue public service, indicating a desire to serve in underserved areas [2].

Diversity enhances the learning environment and competency of all physicians. Saha et al. [18] correlated students' attitudes with the proportion of URMs in the student body. White students in the groups with the highest classroom diversity were more likely to rate themselves as better prepared to care for minority populations than white students in the lowest-diversity cohorts. In addition, students in the highest-URM cohort were also more likely to have strong attitudes about endorsing equitable access to care. The Carnegie Foundation for the Advancement of Education, in its recent call to reform medical schools and residency programs, states "…diversity was not a feature of medical education in Flexner's day… [however] diversity in medical education is now enhancing the quality of education for all learners and translating into more effective and culturally competent physicians who are better prepared to serve an increasingly heterogeneous patient population" [5].

Finally, diversity in the health professions is important for the effectiveness of the nation's healthcare system. The Patient Protection and Affordable Care Act (PPACA) signed by President Obama on March 23, 2010, is a far-reaching law intended to improve access to health care and the quality of health care for Americans. It is estimated the PPACA could afford access to health care for 32 million currently uninsured healthcare consumers, many of which are ethnic and racial minorities or members of other vulnerable groups. This legislation comes on the heels of warnings that the US health workforce is woefully unprepared for greater health services demands. As the "baby boomer" generation ages, the number of Americans 65 years and older is expected to soar, accelerating the increase in demand for, and utilization of, health services. Among this aging population are healthcare professionals who will retire or reduce their work hours, contributing to a critical health workforce shortage. The PricewaterhouseCoopers Health Research Institute predicts a shortage of 24,000 physicians by 2020 [17]. The Association of American Medical Colleges in 2010 reiterated its projection that by 2025 the United States will face a shortage of 124,000 to 159,000 physicians [3].

When the 2010 Census counts are tallied, we will see the degree of demographic shifts that the nation has undergone in the past decade. Since the 2000 Census, data gleaned from the American Community Surveys project major population shifts. Ethnic and racial minorities are expected to comprise more than half of the US population by 2042. The current demographic trends are even more pronounced in the school-aged population. Today, minorities account for 43% of Americans younger than 20 years, and it is projected, over the next two decades, minority students will account for almost 40% of the total college population in the United States.

In summary, population growth combined with demographic shifts, developments of biomedical technology, and the enactment of healthcare reform are putting greater demands on our nation's health workforce. This requires an increase in the number and the ethnic and racial diversity of our health professionals in our efforts to provide care for all Americans.

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