The Value of Ethnic and Racial Diversity in Academic Medicine

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Abstract

The population of the United States is changing rapidly, and physicians are required to provide people of various racial and ethnic backgrounds culturally sensitive and appropriate services. However, minority communities continue to suffer from disparities of healthcare. Only through recognition that disparities exist, implementation of changes in physician practices, and continuing development and retention of minority physicians and academicians can better care be provided for these populations.

Introduction

The changing population of the US

The changing population of the United States reflects the importance of having a diverse group of healthcare providers. The United States 1990 census consisted of five racial/ethnic categories and classified the population as 80% White, 12% African American, 3% Asian, 0.8% American Indian, and 3.9% other[1]. Hispanics were not included in their own category and were spread across all groups. Latin Americans have since been a part of widespread intermarriage among peoples of other backgrounds, resulting in a wide variation of racial self-identification across nominally Hispanic groups in census and healthcare data. The five categories in 1990 were expanded to14 categories in the 2000 census. For the first time, people were also allowed to choose more than one option. Seven million Americans identified themselves as more than one race (2.4%). The US census estimated that 75% of the population was White, 12.5% Hispanic, 12.3% Black, 3.6% Asian, and 0.9% Native American. There has been a noted increase of 160% in the Asian population, 83% in Hispanic, 57% in Native American, 24% in African American, and a 12% increase of population in white Americans[2]. By 2050, the United States population is projected to be 50% white and 50% comprised of Asian, Hispanic, Native American and African American.

Although America has always experienced a changing ethnic landscape, the medical arena did not historically incorporate equal opportunities for healthcare across all racial groups. The hesitancy to medical care today that minority communities have is in large part due to numerous examples of racial discrimination. In 1800, hundreds of slaves, including 200 owned by Thomas Jefferson, were inoculated with smallpox to test an experimental vaccine. Marion Sims, the father of modern-day gynecology, perfected his techniques on slaves, addicting them to narcotics post-operatively and then using the same slaves for repetitive surgery. Post slavery, African Americans continued to be the subject of experimentation. During the 1950-70s, the now infamous "Tuskegee experiments" involved neither treating nor informing hundreds of black men that they had syphilis, so that the course of the disease could be observed.

Institutional and individual racism are just several overt mechanisms that perpetuate disparities in care. The distribution of wealth and insurance has more recently been considered a causal agent for the differing levels of care minorities receive. However, though access to care and socioeconomic factors are perceived to be some precipitants of differing standards of healthcare, there is a growing body of evidence that supports race and ethnicity as independent factors that determine quality of medical care. The Institute of Medicine (2002)[3] concluded that racial and ethnic minorities "tend to receive a lower quality of health care than non-minorities, even when access-related factors, such as patients' insurance status and income, are controlled." Similarly, a recent analysis of hundreds of clinical studies by Physicians for Human Rights (2003)[4] found that many minority groups receive lower quality evaluation and treatment than white Americans for a wide range of medical conditions, even when each has health insurance. These disparities of care can only be corrected by a meaningful presence of practicing academics able to effectively train and mentor those physicians who are most likely to treat these various populations and perform meaningful research to improve the quality of care to all patients.

Discussion

Evidence of Health Care Disparities

The evidence for current disparities in healthcare is abundant. Minority populations - Hispanics (35%), Native Americans (27%), African Americans (20%), and Asian/Pacific Islanders (19%) - all have substantially higher uninsured rates than white Americans (12%). While racial and ethnic minorities represent only about one-third of the non-elderly U.S. population, they represent more than half of uninsured Americans. Hispanics (30%), Asian/Pacific Islanders (21%), African Americans (19%), and Native Americans (19%) are more likely to have no usual source of healthcare than white Americans (15%).[5] These data are particularly important to the practicing emergency medicine physician, as the financial constraints of the minority population can increase their likelihood of presenting to emergency departments.

The evidence persists within various stages of the clinical encounter. Information from national data sets has been analyzed and demonstrates national and regional disparities in care. This body of studies is large and heavily represented in the 2002 IOM report.

One of the largest bodies of data acquired concerning these disparities includes cardiovascular care. This literature did not provide a definitive source of the disparities, but did suggest that differences in care could not be explained by socioeconomic factors alone. Similarly, racial differences in clinical presentation or disease severity could not explain why treatment and outcomes differ among groups[6,7]. Racial and ethnic disparities in cardiovascular services are found among patients even among those insured by Medicare[89] and in VA settings[10], although not explained consistently in one study. Specific examples exist in concert with emergency cardiovascular care. Allison et al (1996)[11] assessed the rate of receipt of thrombolysis, beta-adrenergic blockade, and aspirin? in a retrospective medical record review of 4,052 patients hospitalized in acute care hospitals in Alabama with a principal discharge diagnosis of AMI. After controlling for patient age, gender, clinical factors, severity of illness, and hospital characteristics, white patients were found to be 50% more likely to receive thrombolytics than black

patients. No differences were found in receipt of beta-blockers or aspirin by patient race. In terms of revascularization, Carlisle et al (1995)[12] found that African Americans, Hispanics, and Asian Americans were significantly less likely than whites to receive coronary angiography, CABG, and/ or angioplasty, after controlling for primary diagnosis, age, gender, income, insurance type, and co-morbid factors.

This information is particularly disturbing in light of the cardiac disease association with minorities. According to the American Heart Association[13], African Americans develop high blood pressure more often than whites, and it tends to occur earlier and be more severe. Early onset and greater severity of hypertension in African Americans leads to an 80% higher stroke mortality rate, a 50% higher heart disease mortality rate, and a 320% greater risk of hypertension-related end-stage renal disease than seen in the general population. One of the few studies to systematically examine the prevalence of hypertension and related diseases in Hispanics is the San Antonio Heart Study, which compared Mexican Americans with whites. Although Mexican Americans had a slightly lower prevalence of hypertension, they had a dramatically higher incidence of type 2 diabetes and a 60% higher mortality from cardiovascular disease than whites.[14]

Disparities persist in other health-related issues. There has been a documented 50-100% higher burden of illness and mortality from diabetes in the African American, Hispanic, and Native American communities when compared to white Americans. Minorities were found less likely to undergo a measurement of glycosylated hemoglobin, lipid testing, and ophthalmologic visits. African American patients with diabetes were also more likely to use hospital emergency departments and had fewer primary physician visits[15]. Hispanic Americans especially have increased morbidity such as a higher incidence of diabetes morbidity that includes eye and kidney disease than non-Hispanic whites. Complicating diabetes management in some Hispanic communities is a common cultural perception that increased weight is a sign of good health, thereby increasing the prevalence of obesity and type 2 diabetes.

Renal disease is another area in which medical disparities are found. A study of patients with end-stage renal disease from four regional networks in geographically diverse areas found that African American patients were less likely to be rated as appropriate candidates for transplantation, referred for evaluation, placed on a waiting list for a transplant, and less likely to ultimately undergo the procedure compared to white patients[16]. Similar studies have found that white patients were more likely to be placed on waiting lists before initiating maintenance dialysis than minority patients, and that African American patients were also found to be less likely to receive dialysis as an initial treatment for ESRD.[1718]

According to the CDC[19], African Americans make up 41% of all AIDS cases and Hispanics make up 19%. African Americans with HIV infection are less likely to receive antiretroviral therapy, less likely to receive prophylaxis for pneumocystic pneumonia, and less likely to receive protease inhibitors than non-minorities with HIV. These disparities remain even after adjusting for age, gender, education, and insurance coverage[20]. Hispanics have twice the risk of dying as whites while being hospitalized as a result of HIV-related illness after controlling for sociodemographic data and with the use of anti-retrovirals prior to hospitalization not affecting outcome[21].

Asthma has also been shown to disproportionately affect minority populations. African Americans, particularly those in urban areas, are at a greater risk of morbidity and mortality due to asthma. Among the various conditions contributing to the prevalence of asthma are socioeconomic factors, environmental conditions including air pollutants, and genetic predisposition. One study, after controlling for income, age, and marital status, found that African Americans were more likely than whites to access care in emergency rooms, were hospitalized more often, and were less likely to be seen by an asthma specialist[22].

Asian American and Pacific Islander (AAPI) populations are particularly at risk for malignancies. The incidence of liver cancer among AAPI males is dramatically higher than for whites. This is most likely explained by the high prevalence of hepatitis B

carrier status, liver fluke infestation, and aflatoxin exposure among Asian immigrants[2324]. In addition, stomach cancer, although decreasing in incidence in the US, is still the most common malignant Neoplasm among Asians in China, Japan, and Korea[25] and is especially important when considering immigration patterns to the United States.

Analgesia use in the emergency department has been noted as disparate in administration. One study found that Hispanics were twice as likely as whites to receive no pain medications[26]. A follow-up study revealed that African American patients with long-bone fractures were less likely to receive pain medications[27].

The cultural attitudes of minority patients can add to disparities in medicine, especially when the physician lacks the cultural awareness to address patients' concerns. The inability of the physician to understand their patient is fundamental to the communication process. This communication is more than transcending language barriers. Cultural competency requires that health providers understand and be responsive to the various beliefs, attitudes, and values of the patients that they encounter. There is great variation in the beliefs held by individual populations - Asian, African, and Hispanic cultures can view concepts such as the will of God, physician and patient relationships, and the availability of medical choices differently. Physicians should be aware that these beliefs exist and are receptive to those ideas.

Minorities and Medical Training

As shown above, the disparities of healthcare are widespread. One of the most fundamental ingredients to solving this crisis is the development of medical professionals who will confront the disparities**.** In the academic community, minorities will have to contribute to the research that eliminates these disparities and propel that knowledge into a workable framework at our teaching institutions to provide better quality training for all residents and quality of care for our patients.

Traditionally, the Association of American Medical Colleges has classified underrepresented minority groups as Black American, American Indian, Mexican

American, and Mainland Puerto Rican. This definition has now been coined as "underrepresented in medicine" due to legal pressures and the need for consistency in data collection. The AAMC definition of "underrepresented in medicine" are those racial and ethnic populations that are underrepresented in the medical profession relative to their numbers in the general population[28].

After the Civil War during Reconstruction, the need to treat the health of the former slaves was addressed. Howard University was established as the first black medical school. Overall, there were 14 schools created. However, by the late 1800's only seven remained. Following the 1910 Flexnor Report, strict standards for medical schools were established and the total number of medical schools was halved. Only two black medical schools survived, Howard and Meharry. The Civil Rights struggles of the 1950s and 1960s culminated in the Civil Rights Act of 1964. From 1964 to 1974, underrepresented minority student enrollment increased but never surpassed 3%. Subsequent to the 1970 AAMC Equal Representation Commitment in the early 1970s and the Robert Wood Johnson scholarships for minorities and females, the percent of underrepresented minorities in medical schools dramatically increased to over 8%. The tactics used to increase minority enrollment were challenged in 1974. Allan Bakke successfully challenged the UC Davis admissions policy at the California and U.S. Supreme Court level by arguing that having separate application programs for minorities was unconstitutional under Title Six of the Civil Rights Act and thus ended quotas in the California educational system. However, the Supreme Court did allow that race be a factor in considering applicants to reverse past discrimination. The progress of previous years towards underrepresented minority matriculation continued to be affected by legislation in the 1990s. Proposition 209 of California (1996), Initiative 200 (1998) of Washington State, and the Texas vs. Hopwood case (1996) representing Texas, Louisiana, and Mississippi either decreased or eliminated race and ethnicity as factors towards student admission policies.

The two most important recent court decisions were rendered in the two cases *Grutter vs. Bollinger* and *Gratz vs. Bollinger*. In June 2003, the U.S. Supreme Court in a 5 to 4 vote

upheld the decision to allow the University of Michigan to use race as a component in their admission policies. Sandra Day O'Connor stated that the Constitution "does not prohibit the law school's narrowly-tailored use of race in admissions decisions to further a compelling interest in obtaining the educational benefits that flow from a diverse student body." However, the point system used by the University of Michigan's undergraduate program was deemed unconstitutional in a 6-to-3 vote as it was based on 150 points, 20 of which were accounted by race. Chief Justice Rehnquist stated that the university had violated the Equal Protection Clause of the Constitution because of its mechanized formula determining the worth of race for admissions to a college. These two decisions have made clear that race can be used as a factor but not the only factor towards student admissions.

During the 1990s, there was an increase in the underrepresented minority matriculation into medical schools in part due to Project 3000 by 2000, which by 1994 increased the number of URMs to over 3000 of the first year class[29]. However, due to the rise of reverse discrimination and the legal battles of the later 20th century, these numbers have declined. The total medical student enrollment in year 2000-2001 was 64.8 % white, 20.1% Asian, 7.4% black, 5.5% Hispanic, and 0.8% Native American[30]. During that same year, the United States House staff numbers were 64% white, 20% Asian 7.4% black, 5% Hispanic, and 0.9% Native American[31].

Several articles have suggested that, even after minorities attain their medical education, they continue to experience racial and ethnic barriers throughout their academic career. Data derived from the AAMC Faculty Roster System[32] show that only 3.9% of all faculty identify themselves as African American, Native American, Mexican American, or Puerto Rican. Of all black faculty, 15.5% teach at Howard University, Morehouse College of Medicine, or Meharry Medical College. Promotion of the small numbers of minority physicians has been recently evaluated. Palepu et al surveyed 3,013 medical faculty members to evaluate the numbers of different ethnic groups attaining senior rank[33]. After adjusting for the medical school, department, years as a medical school faculty member, sex, tenure status, number of peer-reviewed publications, and receipt of

grant funding, black and Hispanic groups were noted as less likely to receive senior rank defined as full professor or associate professor. In 2000, another JAMA article evaluated the promotion rates of various ethnic groups through a cohort study of medical school faculty during the 1980s and found that the promotion rate from assistant to associate professor was significantly lower for minorities when compared to whites[34]. Similar data were noted when evaluating the promotion of associate professors to full professors. Even after adjusting for variables such as sex, tenure status, medical school type, department, and receipt of NIH funds, the data indicated that minority faculty members were promoted at lower rates compared with majority faculty. Minorities in academics were less likely to be tenured or on a tenure track, less likely to be an NIH recipient, and more likely to have positions at private medical schools. These data presented above may be indicative as to why many minority faculty practice at historically black institutions such as Meharry and Howard University or mainland Puerto Rican hospitals**.**

In emergency medicine, underrepresented minorities comprise 8% of residents, 5% of practicing physicians, and 3.5% of emergency medicine physicians[35]. In 1997, the SAEM Task Force on Women and Minorities conducted a survey of 1,197 academic faculty in which minority respondents identified themselves as 4% African American, 4% Asian, 2% Puerto Rican, 2% Native American, and 1% Mexican. All races are treated in the emergency department, but there is a disproportionate share of minorities obtaining their healthcare in the ED[36]. In 2001, 6% of visits among whites occurred in emergency rooms compared with 10% of African American visits and 8% of Latino visits according to a report by the Center for Studying Health System Change based in Washington DC[37].

The number of minority physicians does affect the quality of care of minority populations. Racial and ethnic minorities are four times more likely to receive care from non-white physicians than white physicians[38]. Minority physicians have a greater percentage of their patients come from minority communities. A national study in 2000 estimated that although black and Hispanic physicians account for only 4% and 5% of the physician population, they care for 25% of black patients and 23% of Hispanic patients[39]. Regionally, the effect is even more apparent. One California study found that Hispanic

physicians see 55% Hispanic patients compared with a 20% average for non-Hispanic physicians. African American physicians saw 53% African American patients as opposed to 9% among non-African American physicians. Because minorities disproportionately receive medical care in hospital and emergency settings, minority physicians are posed to effectively serve the communities that need them the most.

Minorities are underrepresented in all levels of training. In 1996, the applicant pool to U.S. medical schools reached a record number. However, in 1998, after the Hopwood decision and the passage of Prop 209, there was a decline of 8.4% for URM. It is particularly interesting to note that in 2001, more than 50% of all URM applicants to medical school came from just seven states—California, New York, Texas, Florida, Georgia, Illinois, and Maryland[40]. Clearly, the recruitment of minorities from these and other locations is important, for they represent the future intellectual resources of all medical specialties. Private medical schools that are immune from the Hopwood decision have subsequently increased their minority enrollment. Between 1997 and 2003, public university enrollment of African American students decreased by 8%, but private school enrollment increased by 28% and the number entering historically black hospitals increased by 8%. Unfortunately, the total number of black medical students is still 1% less than in 1996[41].

Too often, junior faculty members are not adequately prepared for the process of becoming principal investigators. Retention programs such as professional development sessions, mentorship, and community-building events are essential to all new faculty but are especially important for URMs. Minorities should also be encouraged by their institutions to pursue faculty development programs like those promoted by the Health Resources Services Administration[42] and the Agency for Healthcare Research[43] that encourage minorities to not only enter academic medicine, but also to stay there.

Promotion rates that are lower for minorities in all areas of medicine must be adjusted. Minorities need to be appointed to academic departments and then promoted to meaningful roles that provide adequate leadership for resident development, community

outreach, and addressing disparities of care within their prospective departments. The position paper of the American College of Physicians was recently published in the Annals of Internal Medicine[44], and it acknowledged the need for improving the diversity of medical school faculty and the rate at which they are promoted. It echoed the need for minority faculty members who can act as mentors for minority students and improve the quality of curricula at medical schools by emphasizing the healthcare needs of minority populations.

African American, Latino, and Asian patients often believe that their care would be better if they were a different race[45]. This same group also reports more difficulty communicating with their physicians than white patients. This gap in communication must be lessened, or the poor outcomes and patient dissatisfaction noted above will continue. Indeed, the diversity among health professionals may improve the scientific understanding of the causes and consequences of racial and ethnic disparities.[46]

The Joint Commission on Accreditation of Healthcare Organizations considers this an important issue[47]. Its policy regards cultural competency as both a healthcare safety issue and a quality issue. JCAHO has also begun a project entitled "Hospitals, Language, and Culture" that will end in June 2006. It will seek to examine how hospitals are addressing patients' cultural and linguistic needs. Academic administrators should review these findings and attempt to incorporate promising practices and suggestions into their educational and administrative infrastructure. Being the "safety net" of medicine, emergency physicians are more able to help patients across socioeconomic and ethnic backgrounds forego their mistrust of the medical system and properly maneuver within in it. Indeed, the mistrust that minorities have of the system will alter their care.

Recommendations

To improve minority educational opportunities, academic administrators from both public and private schools at the medical school and residency level must review all recent affirmative action legislation and judicial decisions so that they can make individual applicant decisions without fear of legal retribution.

Emergency medicine has the potential to encourage the recruitment of these individuals. Academic resources such as ACEP and SAEM can increase outreach efforts targeted to historically black colleges and universities and correlate activities with minority organizations within universities with large Hispanic and Native American communities. These activities include incorporating early mentorship and shadowing programs for minorities to encourage their presence in medicine.

Slightly more URM medical school graduates than non-URM graduates indicated that they planned to have a full-time academic career (29% vs. 25%). Emergency medicine must encourage this desire to pursue academic careers that originate in medical school and continues throughout residency. Emergency medicine residency programs must create mentorship opportunities with the Student National Medical Association (SNMA), a body that encompasses many minority medical students, the National Boricua Latino Health Organization (BLHO), and the Society for Advancement of Chicanos and Native Americans (SACNAS). Residency programs should send representatives to regional and national meetings to actively recruit minorities into emergency medicine. Residency programs should form relationships within their institution to draw upon a base for retaining students into their programs. Emergency medicine residents, particularly underrepresented minorities, should be actively encouraged to participate in research.

Academic diversity should be promoted by aggressive recruitment. At least one faculty member should be dedicated year-round to cultivating relationships with faculty candidates. Departments should encourage the use of search committees for new faculty that actively recruit minorities. Gender and ethnic/racial diversity should be considered when choosing members of the search committee that will advocate diversity.[48]

Language in jobs advertisements should underscore the desire for diversity. Job advertisements in emergency medicine journals frequently state that "women and minorities are encouraged to apply." The statement at the bottom of an advertisement that "this university is an equal opportunity employer" is typically inadequate. A simple

statement to emphasize that your department values diversity within its student body and faculty ranks goes a long way to underscoring a department's commitment to diversity.

Not only should medical Spanish courses also be available to all medical students, but also cultural competency training for both medical students and residents. Physicians must be aware that communication problems occur even when the provider and patient speak the same language. This is important in not only diminishing disparities in care, but also in improving relationships that patients have with their physicians. Spanish courses should also be available to all medical students, especially those who are thinking about practicing in disadvantaged communities.

Emergency physicians must be able to understand different ethnic expectations of care and avoid unnecessary visits, tests, and hospitalizations that burden the department and the hospital with unnecessary fiscal costs.

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