

Major Deficit in the Number of Underrepresented Minority Academic Surgeons Persists

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Introduction: Eliminating health care disparities in the United States will require a multifaceted approach that will include increasing diversity in the health care workforce. Historically, the field of medicine, and particularly surgery, has had an incumbent that grossly misrepresents the patient population. Delineating the exact demographics of the U.S. surgical residents and faculty could provide outstanding information, yielding insight into a possible deficit that, if rectified by the medical education system, could change the face of surgery and the entire health care system.

Methods: Demographic information regarding medical students, surgical residents, and surgical faculty was retrieved and analyzed from the Association of American Medical Colleges data files dating back to 1966.

Results: Whites comprise 64.4% of U.S. surgical residents, whereas Asian Americans, African Americans, and Latino Americans comprise 17.2%, 4.7%, and 5.1%, respectively. Whites comprise 74.1% of academic surgeons, whereas Asian Americans, African Americans, and Latino Americans comprise 10.8%, 2.9%, and 3.6%, respectively. African Americans and Latino Americans comprise 5.4% and 4.8% of all U.S. surgeons, but only 2.9% and 3.6% of the academic surgeons, respectively. Whites comprise 85.7% of tenured surgical professors, whereas Asian Americans, African Americans, and Latino Americans comprise 4.9%, 1.8%, and 2.7%, respectively.

Conclusion: Academic surgery is exceedingly deficient of minority residents, junior faculty, and professors. Correcting this misrepresentation would facilitate establishing a more culturally and ethnically sensitive health care environment for patients who otherwise would not seek care. Additionally, with more minority academic surgeons, there will likely be a commensurate increase in investigative studies highlighting minority specific health care needs and provide additional role models and mentors for future minority surgeons.

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Attempting to diminish or eliminate health care disparities in the United States will require a multifaceted approach. Promoting additional scientific and sociologic research in health care disparities, educating health care providers about culturally significant issues, and increasing diversity in the health care workforce will all be necessary. This latter piece, the diversification of the health care workforce, continues to be a problem despite numerous publications addressing the need.^{1–8} Minority patients are more likely to seek out and feel increasingly comfortable with minority physicians.^{3,9–11} Minorities are more likely to participate in clinical trials if a minority clinician/academician is on the investigative team.^{12–14} Minority health care professionals are more likely than their white peers to treat patients of color and practice in minority and medically underserved communities.^{3,4,15,16} Additionally, minority physicians are more likely to take care of indigent patients with Medicaid or no health insurance than their white counterparts.^{3,4,17,18} Obviously these are all significant reasons for establishing an increasingly diverse health care workforce, but despite this evidence, little progress has been made.

The U.S. health care workforce is primarily a product of the medical education system and despite subtle increases in underrepresented minority matriculants in U.S. medical schools, there is little discussion regarding the number of underrepresented minorities in academic medicine.¹⁹ The bottom-up concept of recruiting more medical students, which in theory should yield additional minority physicians, publicized through the Association of American Medical Colleges (AAMC) Project 3000 by 2000, absolutely has merit.⁵ However, when this goal of 3000 minority medical school matriculants by the year 2000 fell short by over 1000,³ there was more discussion about the heuristic value of the initiative rather than evaluating the reasons that it failed to reach its goal.

There is increasing evidence that role models and mentors have a significant impact on the career decisions of medical students and the recruitment of young people into scientific fields.^{20–24} For young people aspiring to become physicians, these role models and mentors would logically come in the form of academic physicians that work at the medical institutions in which they attend or hope to attend. Thus, it is possible that a more top-down approach of ensuring a diverse academic medical faculty, would potentially lead to a greater number of underrepresented minorities pursuing careers in medicine.

Historically, the field of academic surgery, in particular, has had a homogenous incumbent that grossly misrepresents the patient population they treat. Unfortunately, the field

of surgery has been laden with racial and ethnic disparity issues and would truly benefit from a more diverse community of physicians. From patient care, to outcome studies, to basic science research, surgery is deficient in providing adequate attention to the capacious community it is entrusted to serve, and a more diverse work force would undoubtedly be beneficial for all. It should be of significant concern for the field of surgery whether the faculty responsible for recruiting, teaching, and mentoring is deficient in the appropriate representation that would make a diverse surgical workforce possible.

We believe that delineating the demographics of the U.S. surgical residents and faculty could provide substantial information, yielding insight into a possible deficit that, if rectified, could change the face of surgery and the entire health care system. As the authors, we predicted that the number of underrepresented (namely Latino American and African American) surgical residents and faculty is significantly lower than their white counterparts, inadequately reflecting the demographics of the U.S. population. Additionally, we hypothesized that African Americans and Latino Americans comprise a disproportionate percentage of surgeons in the United States, but are even more underrepresented in academia. We anticipated that the number of underrepresented minority academic surgeons is exceedingly low compared with whites, and this discrepancy is even larger when comparing the percentage of tenured surgical professors. Last, we speculated that the number of African American and Latino American junior faculty and tenured surgical professors are the lowest among all medical disciplines.

METHODS

Demographic information was collected for medical student graduates, resident physicians, and medical school faculty for 1966–2006 from the data files of the AAMC. The AAMC's various data warehouses contain a tremendous amount of information regarding the medical school matriculants, resident physicians, and faculty members of all 126 U.S. allopathic medical schools. These databases are available to all medical universities and were developed to allow medical school administrators a means to perform intrainstitutional and interinstitutional comparisons. With this information, institutions could develop time-series data, create comparative data analyses, track national trends, and institute strategic planning, with the end result of supporting and adhering to accreditation activities.

Variables were race/ethnicity defined by the AAMC as white, Asian, Black, Mexican American, Cuban, Other Hispanic, Native and Hawaiian American, and Other. For simplicity we combined the Mexican American, Cuban American, and Other Hispanic American groups into 1 Latino group. Additionally, the extremely small Native and Hawaiian Americans' groups were combined with the Other group. The AAMC Data Books: from 1992 to 2007 were used to gather the demographic information on medical school matriculants and graduates.²⁵ Additional information regarding African American medical student matriculants dating back

to 1966 was collected from the *Journal of Blacks in Higher Education*.²⁶

Demographic information for resident physicians in the year 2004, which was the most current available, was retrieved from the AAMC Diversity in the Workforce: Facts and Figures 2006.²⁷ Demographic information for medical faculty, and particularly surgical faculty, was retrieved from the AAMC 2006 Faculty Roster.²⁸ Via request, the AAMC provided additional demographic information on the surgical faculty dating from 1966 to 2006. Surgical residents and faculty included general, orthopedic, plastic and reconstructive, otorhinolaryngology, urology, cardiothoracic, vascular, transplant, and neurosurgery.

To determine whether the medical students, surgical residents, and surgical faculty were reflective of the U.S. population, demographic information was collected from the 2006 U.S. population projections gathered by the U.S. Census Bureau.²⁹ Additionally, demographic information on the overall surgical workforce was also collected from AAMC Diversity in the Workforce: Facts and Figures 2006, as a means to compare it with the academic surgical community.²⁷

Data were analyzed for medical students, surgical residents, all surgical faculty, and surgical tenured professors in comparison with the overall U.S. population using the Student *t* test. There was said to be a statistically significant difference if the *P* value was <0.001.

RESULTS

Demographics of Surgical Residents and Faculty

Information from AAMC Diversity in the Workforce: Facts and Figures 2006 revealed that there is a significant difference in the demographics of U.S. surgical residents when compared with the U.S. population as a whole (Table 1).^{28,29} Whites were comparably represented (66.4% of population vs. 64.4% of residents), Asian Americans were overrepresented (4.3% of population vs. 17.2% of residents), and both African American and Latino Americans were underrepresented (12.3% of population vs. 4.7% of residents) and (14.8% of population vs. 5.1% of residents), respectively ($P < 0.001$). The majority of the Other group (8.6% of all residents) consisted of international medical graduates.

Data analyzed from the AAMC 2006 Faculty Roster even more dramatically revealed that the U.S. surgical faculty significantly misrepresents the overall U.S. population (Table 1).²⁸ Whites comprise 74.1% of all surgical faculty, whereas Asian Americans, African Americans, and Latino Americans comprise 10.8%, 2.9%, and 3.6%, respectively. Thus, both whites and Asian Americans are overrepresented, whereas the African Americans and Latino Americans were significantly underrepresented ($P < 0.001$).

Demographics of U.S. Surgical Tenured Professors

Data from the AAMC 2006 Faculty Roster revealed that the demographics of U.S. surgical tenured professors significantly misrepresents the overall U.S. population (Table 1).²⁸ Whites are exceedingly overrepresented as they com-

TABLE 1. Demographics of U.S. Medical Student Graduates, Surgical Residents, and Surgical Faculty Compared With Overall U.S. Population (2006)

	U.S. Population ²⁹ (%)	U.S. Medical School Graduates ²⁵ (%) [*]	U.S. Surgical Residents ²⁷ (%) ^{**†}	U.S. Surgical Faculty ²⁸ (%) ^{**}	U.S. Surgical Tenured Professors ²⁸ (%) ^{**}
White	199,744,494/299,398,484 (66.4)	10,030/15,810 (63.4)	10,096/15,668 (64.4)	10,294/13,901 (74.1)	3139/3,661 (85.7)
Asian American	12,881,639/299,398,484 (4.3)	3232/15,810 (20.4)	2689/15,668 (17.2)	1515/13,901 (10.8)	181/3661 (4.9)
African American	36,689,680/299,398,484 (12.3)	1122/15,810 (7.1)	736/15,668 (4.7)	415/13,901 (2.9)	67/3661 (1.8)
Latino American	44,321,038/299,398,484 (14.8)	1063/15,810 (6.7)	793/15,668 (5.1)	508/13,901 (3.6)	99/3661 (2.7)
Other	5,987,969/299,398,484 (2.2)	363/15,810 (2.3)	1354/15,668 (8.6)	1196/13,901 (8.6)	179/3661 (4.9)

*Statistically significant compared with overall U.S. population ($P < 0.001$).

†Most current data available was from 2004.

**Includes general, orthopedic, otorhinolaryngology, urology, plastic and reconstructive, cardiothoracic, vascular, transplant, and neurosurgery.

prise 85.7% of tenured surgical professors. Asian Americans are comparably represented at 4.9%, whereas African Americans and Latino Americans are severely underrepresented at 1.8% and 2.7%, respectively ($P < 0.001$).

All U.S. Surgeons Versus U.S. Academic Surgeons

The most current data on the entire U.S. surgical workforce was from 2004. Data from the AAMC Diversity in the Workforce: Facts and Figures 2006 revealed that the demographics of the overall U.S. surgical workforce (private practice and academic surgeons) is significantly disproportionate to the U.S. population as a whole.²⁷ In 2004, whites and Asian Americans were overrepresented at 71.1% and 11.2%, respectively; however, African Americans and Latino Americans were underrepresented at 5.4% and 4.8%, respectively (Table 2). This underrepresentation of African Americans and Latino Americans was heightened when evaluating the number of academic surgeons in 2004.³⁰ As previously mentioned, African Americans and Latino

Americans comprised 5.4% and 4.8% of all U.S. surgeons, respectively, but only 2.9% and 3.3% of academic surgeons, respectively, in 2004.

Evaluation of African American and Latino American Faculty Within All Medical Disciplines

Analysis of the data from the AAMC 2006 Faculty Roster revealed that among all medical disciplines, surgery has the lowest percentage of African Americans and Latino Americans represented within their faculty (Table 3).²⁸ Surgery departments had the second lowest percentage of Latino American tenured professors (2.7%) when compared with all other disciplines. Although internal medicine, pediatrics, and psychiatry reported less African American tenured professors (1.2% for all 3), surgery was close behind with only 1.8%.

DISCUSSION

In an ever-changing U.S. population that includes a record number of nonwhite citizens (33.6%),²⁹ the need for a system that ensures effective and nondiscriminatory health care has never been more important. The U.S. medical workforce, epitomized by the field of surgery, dramatically misrepresents the patient population in which they are responsible for caring. Despite the rise in the underrepresented minority population over the last 50 years, African Americans and Latino Americans have gained minimal ground in the field of surgery both in the private sector and academia.³¹ As an example (Fig. 1), the African American population has risen from 10.5% in 1966 to almost 13% of the overall U.S.

TABLE 2. Comparison of all U.S. Surgeons Versus U.S. Academic Surgeons (2004)

	All U.S. Surgeons ²⁷ (%)	Academic U.S. Surgeons ³⁰ (%)
White	44,229/62,294 (71.1)	9880/13,084 (75.5)
Asian American	6955/62,294 (11.2)	1383/13,084 (10.6)
African American	3358/62,294 (5.4)	389/13,084 (2.9)
Latino American	2981/62,294 (4.8)	429/13,084 (3.3)
Other	4485/62,294 (7.2)	1020/13,084 (7.8)

TABLE 3. Percentage of African American and Latino American Surgical Faculty Versus African American and Latino American Faculty From Other Medical Disciplines (2006)²⁸

Ethnicity/Academic Position	Surgery [*]	Internal Medicine	Family Practice	Pediatrics	Anesthesiology	Psychiatry	Obstetrics/Gynecology
African American faculty (%)	415/13,901 (2.9)	889/28,696 (3.1)	254/4172 (6.1)	474/13,757 (3.4)	202/5626 (3.6)	285/9216 (3.1)	329/4340 (7.6)
African American tenured professors (%)	67/3661 (1.8)	76/6457 (1.2)	14/553 (2.5)	34/2878 (1.2)	16/830 (1.9)	22/1807 (1.2)	26/876 (3.0)
Latino American faculty (%)	508/13,901 (3.6)	1244/28,696 (4.3)	232/4172 (5.6)	677/13,757 (4.9)	239/5626 (4.2)	388/9216 (4.2)	202/4340 (4.7)
Latino American tenured professors (%)	99/3661 (2.7)	183/6457 (2.8)	18/553 (3.3)	99/2878 (3.4)	12/830 (1.4)	50/1807 (2.8)	38/876 (4.3)

*Includes general, orthopedic, otorhinolaryngology, urology, plastic and reconstructive, cardiothoracic, vascular, transplant, and neurosurgery.

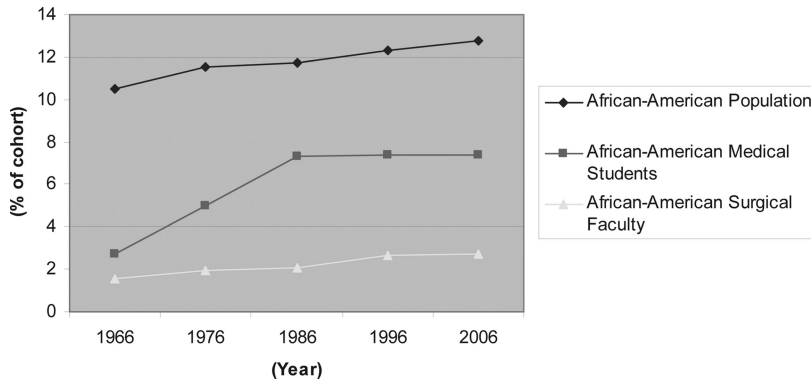


FIGURE 1. Historical trends of African American individuals in the U.S. population, U.S. medical student matriculants, and U.S. surgical faculty (general surgery only).^{25,26,29,30}

population in 2006 (38 million people). However, despite a strong, short-lived surge in the number of African American U.S. medical student matriculants during the late 1970s and 1980s, the percentage of African American U.S. general surgery faculty has risen from 1.53% in 1966 to just 3.1% in 2006 (326 physicians).^{25,26,28–30}

The United States has made significant strides in race relations over the last 40 years (1966–2006). Because of this general consensus, one might assume that with the change in times the low percentage of African American academic surgeons is merely a reflection of underrepresentation at the tenured professorship level, which tends to encompass an older cohort of surgeons. Thus, one would hope that if the tenured professor population was removed and only the associate professor, assistant professor, and instructor populations were evaluated (which typically encompass a younger cohort of surgeons, thus reflecting a change in times) that the historical demographic disparity would reveal substantial improvement. Unfortunately, this still is not the case, as the percentage of African American general surgery faculty that are nontenured professors has risen from 1.87% in 1966 to just 3.5% in 2006.^{28,30} Not surprising, the African American tenured general surgery professors has risen from 1.3% to only 2.1%, over that same 40-year time span.^{28,30} Thus, the aforementioned increase of 1.7% in African American nontenured professors of surgery is not significantly greater than the 1.6% increase in African American surgical faculty as a whole. This illustrates that when it comes to diversifying surgical faculty, sadly, medical institutions have not come exceedingly far over the last 40 years.

Why Is Diversification of the Surgical Workforce Important?

Access to Care

Historically, racial and ethnic disparities in access to appropriate surgical management have been a significant problem in the United States, and that remains true today.^{32–38} There is not a specialty within the field of surgery that is devoid of documented evidence of racial disparities. For example, in thoracic and cardiovascular surgery, it has been found that African Americans are less likely to undergo angioplasty and coronary artery bypass surgery than whites.^{39–42} Non-white patients are less likely to receive carotid endarterectomies or peripheral vascular surgery than

white patients.^{43,44} African Americans diagnosed with lung cancer were 12.7% less likely to undergo surgical resection and had a lower 5-year survival rate than white patients.⁴⁵

Regarding various oncologic surgical issues, it was found that among the early stage colon cancer patients, African Americans were less likely than whites to receive major therapeutic procedures.⁴⁶ Another study revealed that African American patients were less likely than whites to undergo surgical resection for colon cancer (68% vs. 78%), even after controlling for age, comorbidity, and location and extent of tumor.⁴⁷ Additionally, it was also determined that minority women with breast cancer were less likely to receive necessary adjuvant treatments despite rates of oncologic consultation similar to those of white women.⁴⁸

Other subspecialties' difficulties with racial disparities include the findings that African Americans are less likely to receive total joint arthroplasty than whites.^{37,49} African American children with appendicitis have a greater delay to surgical management and lower laparoscopic rates than white children.⁵⁰ Despite higher rates of chronic renal failure and end-stage renal disease, African Americans are less likely than whites to undergo renal transplantation.^{32,51–56} Among women with a diagnosis of stress urinary incontinence, white women were disproportionately more likely to undergo a sling procedure than were African American women.⁵⁷ African American patients with Parkinson disease are significantly less likely than white patients to receive neurosurgical Parkinson disease treatment of any kind, including neurostimulator placement.⁵⁸ Finally, in the field of plastic and reconstructive surgery a recent study revealed that African American women who had oncologic mastectomies underwent immediate breast reconstruction at significantly lower rates compared with white women.⁵⁹

Unfortunately, over the last 2 decades there has been minimal improvement in African Americans' and Latino Americans' access to treatment despite all of this evidence of disparate care. It is likely that advances have not been made because the exact reasons for these disparities have not been fully elucidated. It is possible that prejudicial views and actions by health care providers could play a role, but there is an increasing amount of evidence revealing that patient's preferences may more accurately explain racial differences in care.^{32,60}

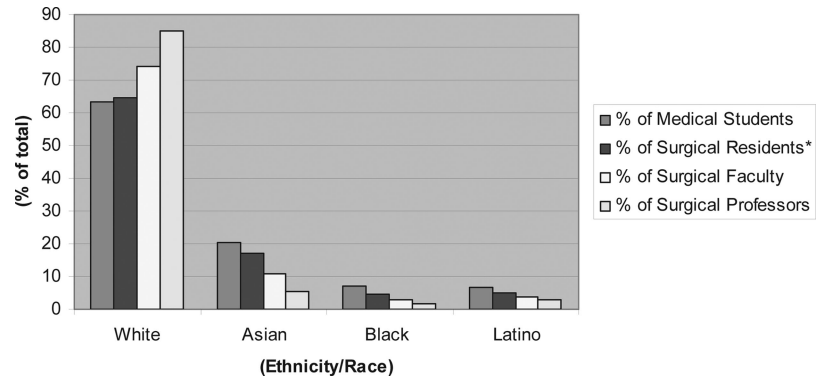


FIGURE 2. Bar graph depicting demographics of U.S. medical student graduates, surgical residents*†, and surgical faculty† (2006).^{25,27,28}
*Most current data available were from 2004.
†Includes general, orthopedic, otorhinolaryngology, urology, plastic and reconstructive, cardiothoracic, vascular, transplant, and neurosurgery.

Patients' Preference and Minority Surgeons Service

Several studies have revealed that African American and Latino American patients rate their health care generally higher when cared for in a racially concordant setting compared with a discordant setting.^{3,10,11,61} In light of this, it is not surprising that when given the opportunity, minority patients are more likely to select health care professionals of their own race.^{9,11,62,63} There is no substantial evidence that correlates physician-provider racial and ethnic concordance with improved medical care outcomes; however, cultural barriers in patient-physician communication have been well defined.^{1,61,64–67} Despite advanced knowledge of disease processes and unprecedented technological innovations within the field of surgery, the understanding of how behavioral and environmental influences impact an individual's health cannot be discounted. Thus, if a minority patient is reluctant to visit a racially discordant physician because of the concern of another poor interaction, the end result would be theoretically the same as a bad surgical outcome. Obviously, no study could inexorably prove this, but with too few minority surgeons and not enough culturally enlightened nonminority surgeons, it is possible that African American and Latino American patients are choosing no care over culturally insensitive care.

This discrepancy is clearly an example of where increasing the number of underrepresented surgeons and physicians could be extremely beneficial for U.S. health care. As mentioned previously, minority physicians are more likely to treat patients of color, Medicaid patients, indigent patients with no health insurance, and practice in underserved communities than white physicians.^{4,15–18} Thus, one can deduce that the insufficient number of minority surgeons and physicians quite possibly is at the crux of the health care disparity issue. Minority physicians want to serve this patient population and this patient population currently prefers to be served by minority physicians, which means that there is evidently a need for more.

Minority Academic Surgeons Impact on Future Surgeons and Research Advancements

As revealed in our results, contrary to the white population, the percentage of underrepresented minority medical student matriculants and graduates starts out small and with

each successive step along the surgical career pathway, the percentages get smaller and smaller (Fig. 2). Significant aims have been made at increasing underrepresented minority medical student enrollment with limited success. Before 1960 less than 3% of U.S. medical students were African American; however, with the onset of the civil rights movement and subsequent initiatives like the AAMC 3000 in 2000, African American and Latino American medical school enrollment reached 7.1% and 6.7%, respectively.²⁵ However, despite these exhaustive efforts, the representation of these groups falls substantially short of the goal of a future medical workforce that is emulative of the U.S. population.

Because considerable recruitment at the medical student level has not been completely successful in correcting the misrepresentation, it is possible that a slight shift in focus to the leadership level may be propitious. Increasing representation at the faculty and academic leadership levels, via dedication to active recruitment by medical institutions, would likely result in a trickle down effect that might propel academic medicine to become more reflective of the U.S. population. Several studies have revealed that exposure to role models in various clinical fields is strongly associated with medical students' choice of clinical field for residency training.^{68–70} According to the surgery resident data obtained from AAMC, the percentage of African Americans and Latino Americans within their respective races pursuing a surgical residency is comparable with both Asians and whites (Table 4). Thus, it is not a question of minorities not having an interest in surgery, it is likely more of an issue of not

TABLE 4. Choice of Surgical Residency Within Each Race/Ethnicity (2004)²⁷

	White	Asian American	African American	Latino American
No. all U.S. resident physicians	55,515	17,016	4811	4817
No. U.S. surgical residents*	10,096	2689	736	793
Percent within race that chose surgical residencies	18.2	15.8	15.3	16.5

*Includes general, orthopedic, otorhinolaryngology, urology, plastic and reconstructive, cardiothoracic, vascular, transplant, and neurosurgery.

having enough exposure or positive reinforcement to continue on with surgical careers. Particularly in the academic arena, mentors can be essential to informing residents, medical students, and even undergraduate students about the necessary strides needed to obtain a faculty position.

The education literature indicates that there are 5 reasons that minorities do not go into the sciences, math, or computer technology. They include cognitive differences (teacher's inability to recognize that minorities process information and approach problem solving in different ways than educators believe is the norm), racial and cultural bias (teachers feel that certain groups are superior in their math and science abilities than others), poor preparation (teachers feel that the student has been improperly prepared for math/science), outside family or peers, and lack of role models.⁷¹⁻⁷⁵ Of these 5 reasons, the factor that most researchers concluded to be the primary influence was the lack of professional role models and mentors.⁷¹⁻⁷⁵

By no means are we suggesting that nonminority physicians cannot be mentors and role models for minority students and residents because some absolutely are and can be quite capable of doing so. However, like minority patients, many minority students feel that a minority role model will better understand their perspective and point of view because it is likely that they too faced many of the same cultural boundaries as they progressed through their career. A cited significant impediment to minority student learning is the lack of positive images or reassuring social illustrations.⁷⁶ Thus, it implied that underrepresented minority students, and all students for that matter, need to see a real life example to believe that they too can achieve it.

Thus, to serve as role models and mentors for the next generation of surgeons is another significant reason that the number of African American and Latino American academic surgeons need to be increased. An article from 2003 that took a historical look at the integration of the faculty at predominantly white educational institutions claimed that the universities had 2 goals in mind when focusing on increasing the size of African American faculty. The first goal was to implement African American studies programs and the second was to secure academic role models for its minority students.⁷⁷ Increasing the presence of underrepresented minority academic surgeons would in theory be beneficial to the minority residents and students, but also it would enrich the entire department, as nonwhite faculty would likely gain insight into culturally sensitive issues. The educational and social implications for nonminority students would also be enhanced as they would benefit from learning from a less homogenous faculty, possibly exposing them to perspectives that would allow them to be more ethnically and racially cognizant physicians in the future.

With an increase in the number of African American and Latino American academic surgeons, it is reasonable to believe that there would likely be a corresponding increase in investigative studies highlighting minority specific health care needs. They clearly would have a vested interest in some of these culturally pertinent issues. One of the major downfalls of clinical research is the lack of minority patient

representation because of poor participation. Apprehension to medical research has persisted within the African American community since the Tuskegee project in the 1930s.⁷⁸ However, similar to patient care preferences, African Americans and Latino Americans were more likely to participate in clinical research if a minority physician/academician is on the investigative team.¹²⁻¹⁴ If this is indeed true, the clinical implications could be astounding. Thus, by increasing the prevalence of underrepresented minority surgeons in the academic arena, the determination of valuable information regarding various disease processes and treatment modalities could result. This would obviously be beneficial to minority patients, but it would be just as instrumental in providing the entire medical community with insight that otherwise would have likely gone undiscovered.

The Possible Impact of Intervention by Surgical Leadership

In addition to a renewed dedication to active recruitment of underrepresented minority academicians by university hospitals, the leadership of surgery can begin addressing some of these concerns by establishing and/or enhancing the participation in preceptorship or mentorship programs. Such can be done on a local, regional, and national level. For example, the Society of Black Academic Surgeons has formed an alliance with the American College of Surgeons to provide a preceptorship program for minority fellows and young surgeons that are interested in academic surgery. The preceptors have been nonminorities, like Drs. R. Scott Jones, Thomas Russell, and Ted Copeland. Other associations can cultivate similar alliances with other groups (Student National Medical Association, National Medical Association, along with several local and regional organizations). The value of this type of intervention is remarkable.

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