Addressing Racial Inequity in Surgery: Reflections On a Career in Medicine by a Surgeon

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Abstract: Racial inequity has influenced both personal and public health in the United States and has impacted enrollment in medical schools and training programs. The effects of racial inequity on training and how it is perceived can differ depending on who is being affected. Recommendations are offered for positive changes through mentoring of individuals, institutional leadership, and structural changes in organizations.

Racial inequity has played a major role in health care in the United States for a very long time. It is the result of the social advantages and disparities that affect different races within the United States.[1] Its history reflects inequality of social origins and consequent prejudice against minority groups, which can be manifested in ways that are intensely personal and at the same time have a global impact on the public's health. A *seminal* report from the Institute of Medicine on unequal medical treatment states, "Bias, stereotyping, prejudice, and clinical uncertainty on the part of healthcare providers may contribute to racial and ethnic disparities in healthcare."[2]

Diversity in Medicine is failing to keep pace with population trends. Racial Inequity can affect providers and patients in different ways depending on those providing the care. Its effects can be seen in medicine, surgery, pediatrics, obstetrics and gynecology, infectious disease, and nearly every other discipline of medicine. This personal narrative will focus on certain aspects of racial inequality in surgery and will provide recommendations for mitigating its negative effects.

Identifying Racial Inequity

The nation was horrified at the images on national television of George Floyd being murdered while other police officers observed but did not intervene

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in the eight minutes that it took for him to die. Similar feelings of moral outrage erupted at seeing Jacob Blake being shot in the back seven times at point blank range. These and other events raise the question of what people would expect if their loved one were the victim.

Racial Inequity has several different meanings. The Seattle Race and Social Justice Initiative identifies three types of racial inequity: Structural, Institutional, and Individual. "Structural Racial Inequity addresses the interplay of politics, practices and programs of different institutions which lead to adverse outcomes for communities of color." These policies and practices usually have been instituted over long periods of time and may be so deep-seated and culturally embedded that they are difficult to overcome. Correcting them requires societal understanding and agreement that there is a problem. Changes in laws or in institutional bylaws are necessary and require institutional commitment to effect meaningful changes.[3] For instance, repealing laws that restrict minorities to certain areas of a city (red-lining) can facilitate minority home ownership. Similarly, modifications in institutional bylaws can facilitate participation of minorities in institutional governance and other committees.

Institutional Racial Inequality speaks to "policies, practices and procedures which positively affect the majority group, usually to the detriment of people of color." These policies may be unintentional or inadvertent.

Individual Racial Inequity "address pre-judgment bias, stereotypes or generalizations about an individual or group, based on race. This type of racial inequity can be subtle or overt." It may or may not be intentional. The person on the receiving end of the racial bias will definitely know that it has occurred. The effects of racial bias can be devastating and long-lasting.

Deville and colleagues reported in 2012 there were 16,835 medical school graduates: 48.3% were female and 15.3% were underrepresented minorities (URM) (7.4% Hispanic and 6.8% Black).[4] They further reported that there were 688,468 practicing MD's: 30% female, 9.2% URM (5.2% Hispanic, 3.8% Black). Data from medical school graduates continue to show racial disparities when compared to the general population. These metrics were not consistent with the percentages of URMs, Blacks, and Hispanics in the general population.

Other scholars have reported that the proportion of underrepresented minority faculty in United States academic medical centers has remained flat over the last two decades: 7% versus 8%. They reported that the number of African-American men in medical schools in 2015 was lower than it was in 1978.[5]

The American Association of Medical Colleges (AAMC) in 2015 published a white paper in which Marc Nivel, the Chief Diversity Officer of the AAMC, reported that in 1978 Black male applicants to medical school numbered 1,410, and in 2014, 1,337.[6] In 1978 Black male matriculants numbered 542, and in 2014, 515. Nivel issued a clarion call for leaders in education to increase the number of Black males in medicine.[7]

In my years as the senior administrator and educator in a large Northeast urban teaching hospital, we established a system that changed institutional culture: attending surgeons and senior residents are instructed to gently and firmly explain to patients that a particular Black resident is fully credentialed and will be carrying out their daily examinations.

The AAMC reported that the enrollment of Black African Americans in US medical schools in 2015 was 5,356 of 86,595 total enrollees (6.2%). It increased in 2019 to 6,783 of 92,758 total enrollees (7.3%). In 2019 of 19,938 graduates of US medical schools, 52% were men, 48% women, 61% white, 8.9% Hispanic and 7% Black African American.[8]

Jarman et al. surveyed URM representation in general surgery programs in the U.S. in 2018, and found that the applicants were 66% White, 19% Asian, 8% Hispanic/Latino, 7% African-American, and 1% American Indian. URM's comprised 10% of 272 core faculty and 21% of 318 current residents. They concluded that recruitment of racially and ethnically diverse trainees will require more effective recruitment strategies.[9]

Medical education is the pipeline for medical practice. A report on health disparities in the Black community in the District of Columbia showed that Black residents have diabetes at rates seven times greater than Whites, deaths from colorectal cancer was three times higher, deaths from heart disease was 2.5 times higher, infant mortality was four times higher, and the unintentional injury death rate was three times higher.[10]

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From a surgical and trauma perspective, once an event has occurred, one considers what the appropriate response should be and when it should be initiated. In the event of a cardiac arrest public education has promoted the appropriate response: opening the airway, beginning CPR, and calling 911. This response has been taught in schools, universities, places of worship, first responder schools, law enforcement, and the military. It has become an expectation that all hospitals, clinics, and any place that cares for patients would have health care professionals who are competent in resuscitation. Not only would these professionals need the skills necessary to conduct a successful resuscitation but they would be expected to carry out the resuscitation to the best of their ability.

In the Floyd and Blake cases, the medical response was not initiated immediately. The airway was not opened and medical resuscitation was delayed even though the law enforcement officers presumably had first responder training and some understanding of resuscitation. We should all be thinking about what the medical, ethical, and moral expectation should be for anyone who is faced with an unexpected cardiac arrest. What would we do? What would we be expected to do? What should we do? We should think about the answers to those questions and plan in advance what we would do. It should never matter, of course, whether the victim in question were Black or White.

Would we think differently about such situations if the providers in question were Black and the patients were White? Would the expectations for the type of intervention and the immediacy of the implementation of resuscitation vary with the race, ethnicity, and socio-economic status of the providers and the victims? Thinking about these issues can sometimes be too difficult, too uncomfortable, and too invasive for generally good-minded people to wrestle with. It is easier to change the subject and move on to other things.

Can Education Mitigate Racial Biases?

An important question is whether education and training can be powerful enough to overcome inherent biases of individuals. One might expect the innate moral inclinations of physicians to be powerful enough to drive consistent, competent behaviors regardless of the race of the patient. It is inconceivable to me that any surgeon would perform different operations or the same operations differently based solely on the patient's race or ethnicity. A ruptured appendix is a ruptured appendix no matter whose body is affected. The treatment is the same and should be applied similarly for everyone.

The power of education to modify and change the behavior and practice of clinicians to achieve positive outcomes in the clinical arena is well understood. Continuing Medical Education which is the mainstay of improving medical outcomes is part of the continuous improvement of medical professionals. The challenge is to encourage the society to understand the negative impact of racism and to use education to implement policies and behaviors that will mitigate its negative effects. After spending a career as a trauma surgeon, I learned to quickly and efficiently identify the nature of a traumatic injury and intervene to stop the bleeding. The results of my intervention were immediately apparent and the problem was usually solved very quickly. Racism is not like a traumatic injury. Its causes are multifactorial, often hidden, and usually subtle, requiring a complex set of societal corrective actions that require a team of people from many different walks of life to come together to explore and understand the problem and then work diligently over long periods of time to develop and implement solutions. Even with diligent work the results will take months or years to become apparent, and even then are likely to be mixed.

Personal Experiences

I can testify that it is difficult to be a minority in a majority world. What is totally familiar to most people can make it difficult to understand the position of the minority individual. Similarly, the minority individual can make mistakes that arise from legitimate cultural differences that can be misinterpreted and amplified in a negative way. These types of problems in an institutional environment can be effectively addressed by understanding and flexible leadership and a thoughtful and carefully developed on-boarding educational program.

Surgical training programs are complex and incredibly busy, fully occupying all of a resident's time. Days and nights are filled with the needs of clinical care, technically complex operating room experiences, and intense management of a surgical team composed of diverse cultural and ethnic individuals who nevertheless function under the same professional expectations and are allowed no special forgiveness of error or other lapses.

In social terms the professional experience can be imagined as similar to a person being invited to an ongoing party and being welcomed by the guests at the party, who explain the prevailing norms and rules of engagement that will result in successful integration into the group — a successful outcome. No success could occur if the person were not invited to the party at all, and even more difficult if he were invited

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to the party but were isolated, not engaged, or worse, were ignored by others at the party.

This scenario is not easily understood by people who have never been in a minority role. Perhaps more easily understood is a different scenario; if one were invited to a foreign country as a visiting dignitary, one would be a minority in the majority world, yet being made to feel comfortable would produce good feelings about one's situation. If no welcome were forthcoming, however, and isolation occurred for whatever reason, one would feel uncomfortable and would likely have a negative impression of the environment and the people. All of this could well be totally inadvertent, but the effect would nevertheless be profound and lasting.

My own experiences as a surgical resident years ago were not negative. The leadership of the training program and my resident colleagues made conscious efforts to be welcoming and to share learning and teaching experiences. Everyone was treated similarly. The work of a surgical resident was rigorous and spanned long hours, but the work was distributed evenly and respectfully with the expectation that every resident would perform maximally at all times. In fact, I could not have been successful without the help and support of many good-minded surgeons and others who helped me over the years. They encouraged me to contribute in any way that I could to take excellent care of patients and to advance important issues in surgery.

Perceptions Can Be Reality

Perceptions can be very powerful and difficult to manage. Busy surgical residents are expected to make rounds starting at 5:00-5:30 AM and see all the surgical patients. As many as 20 patients may need to be evaluated, including examining the patients, reviewing the laboratory results and radiographic images, and writing orders for the day. If patients are not aware of this process and residents do not adequately identify themselves, serious misunderstandings and errors can occur. A White patient can misidentify a Black resident as a worker for environmental services. The patient may well be conditioned by their past experiences to think that a Black person cannot be the doctor. This is not a problem that White male surgical residents would encounter. This problem can be exacerbated if the patient and the doctor are of different genders. In a hospital environment where multiple practitioners may be wearing similar "scrubs", it is easy for a patient not to know who is authorized to perform which function or task.

Patients can be defensive and prevent Black residents from carrying out their examinations, but the residents have to defuse the situation, fully evaluate the patient, write the appropriate orders, and move on to the next patient. Such delays risk tardiness for formal rounds and may also delay the start of the day's operating room activities. This would be disruptive to the flow of patient care at best, and at worst cause significant interpersonal problems between doctor and patient. Negative interactions of this kind can significantly degrade the resident's evaluations and hamper their ability to continue their progress in the surgical training program. Problems such as these can be mitigated by having the doctor, the nurse, and other practitioners wear a large identifying label on their badge stating their role and function (e.g., DOCTOR or NURSE). This will not solve all problems, of course, but certainly would diminish confusion and could mitigate troubling negative interactions.

In my years as the senior administrator and educator in a large Northeast urban teaching hospital, we established a system that changed institutional culture: attending surgeons and senior residents are instructed to gently and firmly explain to patients that a particular Black resident is fully credentialed and will be carrying out their daily examinations.

Setting the tone for positive interactions is possible even in the presence of obvious and distinct personal biases by the simple strategy of treating all patients as if they were your mother, father, sister, or brother. Generally speaking, this kind of professionalism creates an atmosphere of mutual respect and cordiality.

The Role of Mentoring

Mentoring can be critically important in helping a minority person function effectively and even flourish in any society or organization. An effective mentor can help in navigating difficult personal problems particularly as it relates to race. In a mentee's new environment, a senior mentor's most important function is to help guide the mentee through the maze of unfamiliar rules and organizational procedures, particularly those that are new and different from those the mentee has previously experienced.

In surgical training programs young surgical resident trainees are introduced to and prepared for many rules of procedure and other aspects of institutional culture. The rules and expectations of different hospitals are complex and often inflexible, and can be daunting to a young trainee. This can be particularly intimidating if the trainee is a minority who is alone and isolated in a new environment.

A mentor can have a profoundly positive effect on the performance and well-being of the mentee. Taking a few minutes on a busy day to explain why something has to be done in a particular manner and why a previous method of operation will not work in the present

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environment is extraordinarily helpful in supporting the mentee's performance. A positive byproduct of this mentor/mentee relationship can be lifelong friendships that transcend race and gender

Mentoring programs can be effectively modified to include specific items of race inequity and race relationships, addressing questions of how race relations can affect the practice of surgery. Ullrich and colleagues recognized that mentorship was a vital component for general surgical residents and that it fostered success that extended beyond residency into future practices.[11] They developed a mentor match using the results of faculty surveys that utilize the six core competencies outlined by the Accreditation Council for Graduate Medical Education (ACGME): patient care, medical knowledge, communication skills, practice-based learning, system-based practice, and professionalism.[12] They correlated areas of resident weakness with areas of attending surgeon strength to match faculty mentors with resident mentees. Residents' satisfaction with this program was high: 92%. Improvement in areas of weakness was identified in 83%. Kibbe et al. recognized the importance of mentorship programs in departments of surgery. They stated that mentorship is important to career satisfaction and retention in academic positions.[13] They surveyed 155 department of surgery chairmen and found that 54% of the responding chairmen had an established mentoring program. They called for the development of formal mentoring programs in all academic departments of surgery. Such programs will be critically important for success of URM surgical trainees and faculty members.

A Health Care System Addresses Racial Inequity.

Hartford HealthCare (HHC) is a large health care system in Connecticut, with seven hospitals, including teaching hospitals, trauma centers, specialty institutes, ambulatory clinics, and 30,000 employees. In 2020 HHC established a new Diversity, Equity and Inclusion Council, as well as new mandatory training in diversity. Inclusivity was encouraged by creating affinity groups staffed by an executive leadership team.

HHC initiated newly required implicit bias training for all staff. The Health Equity Department focused on health equity and disparities and used data to study the impact on the health and changes in disparities in the local community. Relationships were established with professional organizations that promote advancement of Black health care leaders. An existing program for early and mid-career development for minorities was expanded. These initiatives signal a commitment from HHC leadership to meaningfully address the problems of racial inequity.

One way to achieve a just and inclusive environment is to add anti-racism to the list of values of the College, creating a culture of open and candid conversations about racism in the ACS and ultimately in all departments of surgery in hospitals around the country. This culture would include reflections on unconscious bias especially as it relates to race and gender inequities. The ACS has begun this process with unconscious bias training for its staff and leadership. It is also including conversations about inequities in the monthly ACS Bulletin publication which is sent to the entire fellowship of the college. The goal is to create a safe space for conducting challenging conversations that would result in honest, open discussions about racism.

The Role of the American College of Surgeons in addressing Racial Inequity.

Medical professional associations are addressing racial inequity. For example, the American College of Surgeons (ACS) has had a 100-year history of identifying problems relative to clinical quality and patient safety and implementing far-reaching solutions. It created the Hospital Standardization Program, starting in 1913, that evaluated the quality of medical and surgical services in hospitals throughout the country. This program required understanding quality issues, developing a standardized education process for practitioners, and creating an environment for safe surgical procedures.

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Decades later in 1951, the ACS invited other organizations to join in the hospital evaluation program, thus creating the Joint Commission on Accreditation of Hospitals, now known as the Joint Commission.[14] This leadership standardized and changed the way hospital care in general and surgical care in particular is delivered throughout the nation.

Moving forward to today, we have seen the results of the well-documented racial inequity in health care delivery during the COVID-19 pandemic. Minority patients have had a disproportionate share of morbidity and mortality.

In response the ACS has created a Regental Committee on Racial Inequity (the Committee) which was charged with addressing the issue of racial inequity within the College and its Fellowship. The Committee determined that it would be critical to obtain metrics of where we were five years ago, where we are now, and where we hope to be in 5-10 years.

These metrics will quantify minority presence in the ACS staff and Fellowship, and will further quantify racial involvement in leadership, presentations at scholarly meetings, and contributions to committees of the College. The Committee will regularly review metrics to monitor the progress toward the ACS goal of overcoming racial inequity.

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The ACS will develop education and training programs to improve awareness of issues of race, both personally and in the clinical care of all patients, with particular reference to racial minorities. The training will be aimed at surgeons at all levels, including surgical residents, attending surgeons, and all members of departments of surgery.

The ACS will implement policies intended to increase diversity and promote inclusiveness in leadership committees and in presentations at ACS-sponsored meetings. The effect of the policies will be monitored and reported regularly to the Board of Regents. The goals will be to identify policies that have been effective and to modify policies that have not led to the desired results.

The ACS will facilitate meetings of other like-minded organizations to develop best practices and encourage a uniform far-reaching agenda to address racial inequity. The College will document and memorialize the history of African-American experiences in the ACS.

All Fellows of the ACS are committed to providing the best care for their patients. The ACS seal displays its motto: *Omnibus per artem fedemque prodesse* (To serve ALL with skill and fidelity [emphasis mine]). It seems obvious and reasonable that the same philosophy should be extended to providing a just and inclusive environment for African-American and other minorities so that they feel welcome and are included in the pipeline for medical school, surgical residencies, and Fellowship in the American College of Surgeons.

Conclusion

The data on racial inequity in health care is compelling. Racial disparities in students applying to and matriculating in medical school persists. African-American applicants and matriculants in medical school in 2014 were fewer than in 1978. African-Americans now compose 7% of students in U.S. medical schools, 7% of applicants to general surgery residency programs, and 3.8% of practicing physicians. These data vary greatly from the population demographics of African-Americans and other URMs in the overall population.

Creating mentorship programs that feature the six ACGME competencies and adding a seventh — racial inequity — can engage faculty and align them with the values and policies of anti-racism. Such programs will help integrate minority persons with the majority group, and their rules and expectations will be prospectively understood by everyone.

Institutional policies and structural organizational changes that are monitored and the results reported to the leadership of organizations can make a significant difference to the individuals within the organizations, to the organizations themselves, and in the broader society.

The challenges of addressing all of the societal issues around racial inequity — socioeconomic differences, access to care, and cultural, nutritional, and disease-specific issues — are all important and need to be addressed. However, each individual, minority or majority, can be guided by the simple tenets of courteous, caring, professional dialogue and supportive behaviors. Treating everyone with respect as if they were your mother, father, brother or sister is a useful and effective strategy that will make a great difference at a personal level.

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Note

The author has no conflicts to disclose.

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