

Emergency Medicine and the Public's Health
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Racial/Ethnic Disparities

**Racial and Ethnic Disparities in the Emergency Department:
A Public Health Perspective**

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Abstract

This chapter will discuss these disparities from a public health perspective; specifically why racial and ethnic disparities threaten to impede the efforts to improve the nation's health.¹³ We will 1) provide background information, including a review of the Institute Of Medicine (IOM) report on healthcare disparities; 2) describe the racial and ethnic compositions of individuals in the ED setting from the perspective of both the patient and healthcare provider; 3) discuss the most prevalent disease presentations to the ED that are likely to have racial and ethnic disparities; and 4) give conclusions and general recommendations on how to address disparities in emergency healthcare.

Background

Unequal Treatment

The state of healthcare delivery seems to be filled with nothing but bad news, including continued concerns about rising healthcare costs, medical errors, patient safety and the growing numbers of uninsured and underinsured Americans. To further complicate matters, the issue of racial and ethnic disparities in healthcare not only continues to exist in our delivery models, but also has seemingly worsened. In fact, according to the Centers for Disease Control and Prevention (CDC), despite years of attention to these disparities, the racial gap in American's health continues to widen¹.

Numerous studies, in both general medical literature as well as literature specific to emergency medicine, have previously documented racial and ethnic disparities showing differential utilization of cardiac angioplasty^{2,3}, coronary artery bypass surgery⁴, mammography^{5,6}, influenza vaccine⁷, pain management and "gatekeeping" activities.⁸ African-Americans die from nearly every major disease or cause at rates higher than

whites, especially homicide (5.7 times higher) and HIV (8.7 times higher). The top three causes of death in the United States are the same for blacks and whites, but the rates of death for black people are strikingly higher: heart disease (30% higher), cancer (30% higher) and stroke (40% higher). African-Americans also have higher rates of high blood pressure and many infectious diseases, especially those that are sexually transmitted¹¹. To compound these concerns, minorities and non-English speakers have greater difficulties accessing healthcare services. Minorities are disproportionately more likely than the general population to be uninsured, and are overrepresented among those in publicly-funded health systems (i.e., Medicaid, See Figure 1)¹². Even when individuals have the same health insurance and similar access to providers as non-minorities, research shows that racial and ethnic minorities tend to receive a lower quality of healthcare than white patients.

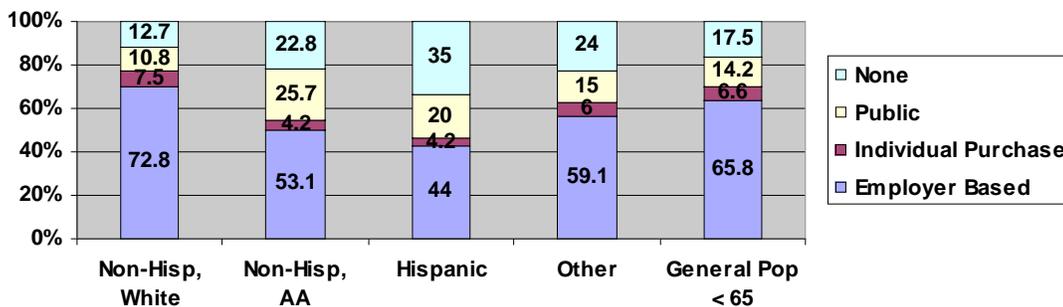


Figure 1: Sources of health insurance for population under 65, by race and ethnicity, 1999. Note: Numbers may not add to 100% secondary to additional sources of coverage and rounding. Source: Fronstin, 2000

This chapter will discuss these disparities from a public health perspective; specifically why these racial and ethnic disparities threaten to impede the efforts to improve the nation’s health.¹³ We will 1) provide background information, including a review of the Institute Of Medicine (IOM) report on healthcare disparities; 2) describe the racial and ethnic compositions of individuals in the ED setting from the perspective of both the patient and healthcare provider; 3) discuss the most prevalent disease presentations to the ED that are likely to have racial and ethnic disparities; and 4) give conclusions and general recommendations on how to address disparities in emergency healthcare.

What Is The Evidence: The IOM Report

In 1999, the IOM, a private, independent institute of the National Academy of Science, was charged by Congress with investigating whether racial/ethnic disparities in quality of care existed for those patients who enter the U.S. healthcare system. The specific charges of the committee were the following:¹³

1. Assess the extent of racial and ethnic differences in healthcare that are not otherwise attributable to known factors such as access to care (ability to pay or insurance coverage, clinical needs, preferences and appropriateness of the intervention);
2. Evaluate potential sources of racial and ethnic disparities in healthcare including the role of bias, discrimination and stereotyping at the individual (provider and patient), institutional and health system levels;
3. Provide recommendations regarding interventions to eliminate healthcare disparities.

It is also important to understand that the committee's charge was to focus on disparities in healthcare, not health outcomes. Many factors contribute to disparities in health outcomes including access issues, insurance status, continuity of care, education, housing, employment and other socioeconomic issues. To meet their charge, the IOM convened expert groups, reviewed over 600 papers on health disparities, and conducted public workshops and focus groups among several other activities. In addition to holding constant the variations in insurance status, patient income and other access issues, many of the studies also controlled for other confounding factors such as racial differences in the severity or stage of disease progression, the presence of co-morbid illness, where the care was received (public or private hospitals), and other demographic data. Some studies that employed more rigorous research designs followed patients prospectively, using data from clinical information abstracted from patient's charts, rather than administrative data used for insurance claims.

The vast majority of the published literature indicates that minorities are less likely than whites to receive needed services, including clinically necessary procedures, even after correcting for access. In general, this research showed the following:

- African-Americans and Hispanics tend to receive a lower quality of care across a range of disease areas, including cancer, cardiovascular disease, HIV/AIDS, diabetes, mental health and other chronic and infectious diseases¹³.
 - Ex.: Schneider et al reported that African-Americans, even in Managed Medicare programs, received a lower quality of care⁷.

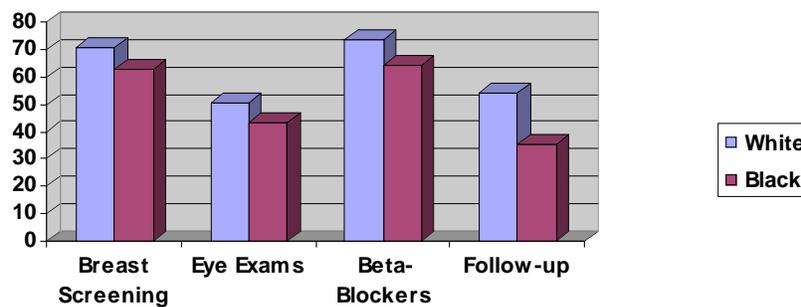


Figure 2:

- African-Americans are more likely than whites to receive less desirable services such as amputation of all or part of a limb¹³.
- Disparities are found even when clinical factors such as stage of disease presentation, co-morbidities and disease severity are taken into account¹³.
- Disparities are found across a range of clinical settings including public and private hospitals, teaching and non-teaching hospitals¹³.
- Disparities in care are associated with higher mortality among minorities who do not receive the same services as whites (e.g., surgical treatment for small-cell lung cancer)¹⁴.
- Specific coverage of EM, as reported by Cone et al, is minimal.¹⁵ There is brief discussion of the Emergency Medical Treatment and Active Labor Act (EMTALA) in a chapter on patient and system-level factors that contribute to racial and ethnic disparities and discussion on the study by Lowe et al that found that, after controlling for age, gender, time of day, type of managed care organization and triage score, African-Americans were approximately 1.5 times more likely than whites to be denied authorization for their ED visit¹⁶.

Potential Sources Of Racial And Ethnic Disparities

The IOM report notes that many sources - including those related to characteristics of patients, health systems and the clinical encounter - may contribute to racial and ethnic disparities in care.¹⁷

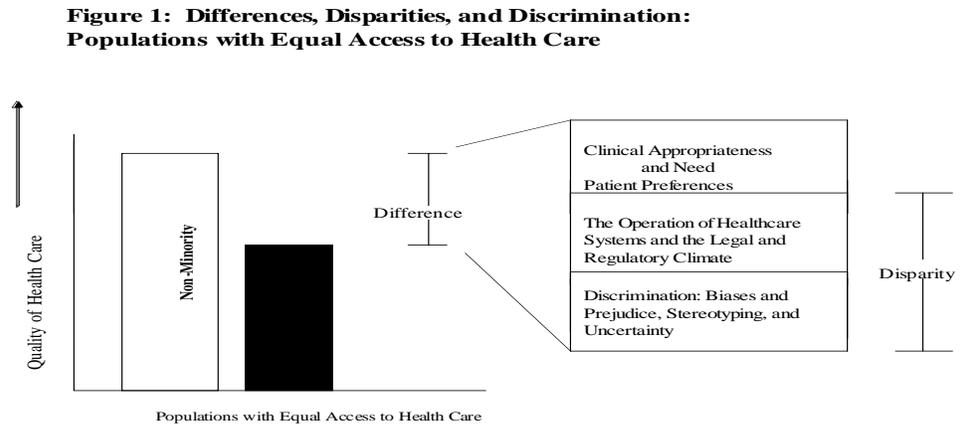


Figure 3:

Some researchers speculate that there may be subtle differences in the way that members in different racial and ethnic groups respond to treatment, particularly with regard to some pharmaceutical interventions¹⁸. Others have speculated that minority patients may receive a lower quality of care because of differences in health-seeking behaviors. As such, they are more likely to refuse recommended services and delay seeking healthcare. These behaviors can develop as a result of a poor cultural match that in turn may lead to mistrust, misunderstanding of provider instructions, poor interactions with the healthcare system and inadequate access. A small group of studies have found that African-Americans are slightly more likely (approximately 3-6%) to reject medical recommendations, but these small refusal rates do not explain the differences.¹³ More research is needed to understand the reasons behind these refusals and, if explained, the different strategies for helping patients to make informed decisions.

As Figure 3 depicts, the IOM study considered other causation factors that may be associated with disparities in healthcare. One of those additional factors is the operation

of the healthcare system and the legal and regulatory climate in which it must operate.

These include:

- Cultural and/or linguistic barriers (e.g., the lack of interpretation services)
- Fragmentation of the healthcare system
- Factors related to minorities being disproportionately enrolled in lower-cost health plans where the demands on service utilization are controlled
- Where minorities receive care (less likely to seek access in a private physician's office even when insured at the same level as whites)

The other additional factor is related to the clinical encounter itself. According to the IOM, three mechanisms might be operative in healthcare disparities from the provider's side of the exchange:

- Bias or prejudice against minorities
- Greater clinical uncertainty when interacting with minority patients
- Beliefs or stereotypes held by the provider about the behavior or health of minorities.

Research on how patient race or ethnicity may influence physician decision-making and the quality of care for minorities is scant and still developing. As of yet, there is no direct evidence how prejudice, stereotypes and bias influence care. It can be said that this creates a paradox: how could well-meaning and highly-educated healthcare professions, working in their usual circumstances with diverse populations of patients, create a pattern of care that appears to be discriminatory? There is a large body of social psychology research that demonstrates that stereotyping is an almost universal human cognitive function. As such, stereotypes, conscious or not, endorse or guide the perception, interpretation and retrieval of information.¹⁹

Clearly, racial and ethnic disparities in healthcare exist and, because they are associated with worse outcomes, these disparities are unacceptable. In addition, disparities occur in the context of a broader historical, contemporary social and economic inequity with evidence of persistent racial and ethnic discrimination in many sectors of American life.

In 1985, 15 years before the publication of the IOM report, the Department of Health and Human Service (DHHS) issued a report of the Secretary's Task Force on Black and Minority Health. The report was considered a landmark document at the time because it represented the first time DHHS had made a concerted effort to examine gaps in healthcare among ethnic groups. The task force observed that gross indicators of access and utilization of services, such as the number of annual visits to a physician, had narrowed as a result of the major insurance programs of Medicare and Medicaid²⁰. The report also indicated that racial and ethnic groups continued to have poorer access to quality healthcare services and different patterns of utilization relative to white Americans, including a lower use of preventive services, a greater likelihood of not having a usual source of care and a greater likelihood of being uninsured²⁰.

With these factors in mind, the role of the Emergency Medicine healthcare professional is significant as racial and ethnic communities seek healthcare in the ED. There is literature to suggest that an increase in the size of vulnerable populations served by EDs, such as ethnic minorities, the poor and the working poor is an important contributor to increases in ED visits.⁵⁰⁻⁵⁴ Rather than be inclusive of the exhaustive literature on disparities in the healthcare arena, specific seminal and highlighted studies relevant to Emergency Medicine will be the further focus of this chapter. Several articles in the Emergency Medicine literature have addressed racial disparities from an Emergency Medicine perspective^{15, 21-28}. Indeed, the Academic Emergency Medicine Consensus Conference in 2003 focused on disparities in Emergency Healthcare and was developed to examine current medical issues that impact the delivery of care to the emergency patient, specifically on healthcare disparities with attention to the ED setting²⁹.

We will also examine the literature on the Racial and Ethnic Composition of individuals in the ED setting; review those systemic factors contributing to disparities in healthcare and highlight medical conditions most likely to have disparate health presentations and outcomes in the ED. Lastly, we will offer conclusions and future directions on how we as Emergency Medicine professionals can address these healthcare disparities.

The landmark report by the IOM highlights several strategies to address disparities in the United States healthcare delivery system¹³. This is a noteworthy discussion since the second overarching goal of the Healthy People 2010 initiative is to eliminate health disparities among segments of the population including but not limited to gender, race or ethnicity and education³⁰.

The IOM report clearly notes patient, provider and system level factors, beyond access-related issues, which may contribute to racial and ethnic healthcare disparities. This section of the report highlights ways in which health disparities can occur among various demographic groups in the United States, particularly as they relate to the aforementioned individual patient risk factors, such as lower socioeconomic status, environmental risks in minority communities and health-related cultural beliefs of the patient and the healthcare provider²². In the following section of this chapter, we will also examine the recommended strategy of workforce diversity, particularly as it relates to physician characteristics and related factors within the patient-physician dyad. The public health model of defining the problem, identifying the risk and protective factors, creating interventions and evaluating the effect of these interventions will be examined in the context of what the literature notes on healthcare disparities stated above.

Individual Factors

Lower SocioEconomic Factors

The impact of homelessness and poverty in the Emergency Department will be discussed in greater detail in Chapter 10 of this book. Worthy of mention here, however, is the question of disparities as it relates to socioeconomic status (SES). Lillie-Blanton and colleagues noted that minority patients were less likely than white patients to receive medical care from private physicians and less likely to have a primary care provider³¹. In the Emergency Medicine Patients Access to Healthcare Study (EMPATH), investigators noted that minority patients were more likely to access the ED for their general healthcare than white people, and reported financial reasons for seeking care in EDs²⁷. This was also noted in a study of acute asthma among adults presenting to the ED, where ED management were similar for all racial groups but SES accounted for most of the observed acute asthma differences³². SES is also linked to insurance status. Racial and

ethnic minorities are less likely than white Americans to have health insurance, which is the most significant barrier to healthcare³³. African-Americans are less likely to have private or employment-based health insurance compared to white Americans and are more likely to have Medicaid or other publicly-funded insurance. Native Americans, Alaska natives, Asian Americans and Pacific Islanders also have a disproportionately high rate of uninsurance^{33, 34}. It is clear that lower SES and lack of insurance in ethnically diverse communities is a significant barrier to healthcare access. As a result, many of these disadvantaged groups turn to the ED for healthcare. Despite these findings and the need for African-Americans to seek care in the ED, Lowe et al noted that African-American patients enrolled in managed care organizations (MCOs) were more likely than whites to be denied authorization for emergency department (ED) care¹⁶.

Health-Related Beliefs of The Health Professional And The Patient

Healthcare professionals are held to the highest professional standards and ethics, which ideally should prevent disparities in how healthcare is rendered in the physician-patient encounter. Van Ryn's work supports the idea that physicians' perceptions of patients were influenced by patients' sociodemographic characteristics; specifically, physicians in her study tended to perceive African-Americans and members of low SES groups more negatively on a number of dimensions than they perceived whites or members of the middle and highest third of SES³⁵. Clinical uncertainty, provider beliefs and stereotypes, and patient mistrust of the healthcare system are cited in the literature as important factors contributing to disparate treatment. The theory of uncertainty implies that a physician's vagueness in understanding and interpreting information from patients may contribute to disparities in care and can lead to minorities getting either more or less care than whites^{13, 36}.

Workforce Diversity

The physician-patient dyad has been based on the common belief of trusting one's doctor, yet physician bias may play a role in differences in the delivery of medical care. In a study by Schulman et al, the race and sex of the patient influenced the recommendations of physicians independently of other factors. This may suggest bias on the part of physicians. For example, African-Americans were less likely to be referred

for cardiac catheterization than whites.³⁷ Of note, Burgess et al stated that stereotyping and bias is not simply a product of the individual provider but is caused by features of the healthcare setting that decrease cognitive capacity, such as fatigue, overload, and time pressure. Moreover, these conditions have been shown to be more prevalent in settings that predominantly treat minority patients³⁸. This is particularly noteworthy given the ED setting where fatigue, overload and time pressure are natural parts of the work.

Indeed, as it is noted in the literature, this may speak to the need for workforce diversity and the role the minority physician plays in the care of minority patients^{39,40}. For example, Cooper-Patrick et al noted that patients in race-concordant relationships with their physicians rated their visits as significantly more participatory than patients in race-discordant relationships⁴¹. Other studies also support concordance relationships^{42,43}. In cases of language differences, this is even more evident. Language barriers and lack of interpreter services impede healthcare delivery in the ED setting. Bernstein and colleagues noted that use of trained interpreters can increase clinic utilization, decrease 30-day total and ED return charges, and reduce disparities between English-speaking patients and non-English non-interpreted patients in a number of services at the index ED visit.⁴⁴

What is the Evidence: Literature Related to Care in the ED

The IOM report was a landmark publication in that it was the first large-scale government-sponsored examination of racial and ethnic disparity in healthcare. As mentioned earlier, however, coverage of emergency medicine in this report is scant. While this is due in part to the relative paucity of academic research in this area, a number of studies have been published which merit consideration. While a complete review of the breadth of literature on healthcare disparity is beyond the scope of this chapter, we will address some of the most significant research in areas relevant to emergency medicine.

General Medical Care

The impetus to examine disparity in the ED stems from the overwhelming evidence on inequality in healthcare in general. A number of studies have examined

racial disparities in the provision of general medical care without regard to specific diagnoses. A 1994 comparison of care provided to nearly 10,000 Medicare beneficiaries (including ordering of diagnostic studies such as serum chemistries and chest x-rays as well as the provision of therapies including diuretics and antibiotics) demonstrated significant deficiencies in the treatment of black patients⁴⁵. An even larger study published in 1997 compared the provision of major therapeutic and diagnostic procedures in 77 disease categories among 1.7 million hospital encounters. African-American patients were significantly less likely than whites to receive a major therapeutic procedure in nearly half of these categories⁴⁵. Other researchers have demonstrated similar disparities with Hispanic patients. These studies provide a glimpse into the widespread and deeply ingrained problem of healthcare disparity.

Chest Pain and Acute Coronary Syndrome

The approach to chest pain and care of acute coronary syndrome (ACS) is perhaps the most comprehensively studied area of racial disparity. While there is a paucity of ED-based literature on this topic, a number of studies have demonstrated significant race-related care discrepancies relevant to care provided in the ED. Almost universally, the data show that when diagnosed with acute myocardial infarction (AMI) or unstable angina (UA), African-American patients are significantly less likely than whites to receive standard reperfusion therapies⁴⁶⁻⁵⁰. Similar disparities have been observed between Hispanic and white patients, though the difference is smaller⁵¹. More recent studies show that for those who do receive thrombolytics or percutaneous coronary intervention, door-to-therapy times are significantly longer for African-American, Hispanic, and Asian patients⁵⁰. Importantly, these studies all involved admitted patients with confirmed diagnoses of ACS, and therefore represent a true disparity in provision of care, rather than a difference in access to care.

A number of investigators have attempted to identify the underlying causes of this inequality, with limited success. One study of cardiac care across a number of different hospitals found that the racial disparity could be partially attributed to care variation between participating hospitals, rather than within each of the individual sites. However, even with multivariate analysis to factor out this effect, the study still reported that

minority groups received substandard care⁵⁰. An important message to recognize from this study is that the inter-hospital variability itself is an example of race-related disparity, as hospitals with poorer performance tended to treat a preponderance of African-Americans, Hispanics, and Asians. Other studies have looked at whether the treatment gap can be explained by patient preference, socioeconomic factors, disease prevalence, differences in presentation, and regional variability; but no causative relationship has been found. In a review of the available literature, East and Peterson rhetorically ask, “Have we elucidated the causes of racial inequality in care? No, but we have clarified what does not explain it⁵².”

One additional paper deserves close analysis: in 2003, a review of ED care of patients with suspected acute coronary syndrome was published. This study was unique in that it looked at chest pain care solely as it related to the ED; care after admission or discharge was not considered⁴⁷. The results were striking: of patients diagnosed with AMI in the ED, 60% of white patients received cardiac catheterization, as opposed to only 39.6% of African-Americans and 35.7% of all other non-whites. Additionally, in patients diagnosed with non-ST elevation myocardial infarction (NSTEMI) or UA, white patients were more likely to undergo cardiac catheterization. Diagnostic work-up and medical therapy was similar for all groups with AMI or NSTEMI/UA, with the exception of whites receiving glycoprotein IIb/IIIa inhibitors more often. Perhaps even more remarkable, however:

“Among patients with an ED diagnosis of non-ACS chest pain, African-Americans were less likely to undergo ECG acquisition within 10 minutes of ED presentation, laboratory evaluation, standard anti-ischemic medical treatment ... and invasive and non-invasive testing for CAD in comparison with whites ($p < 0.05$). Other non-whites received less invasive testing and were admitted less often than whites with this diagnosis ($p < 0.01$).”⁴⁷

In other words, minority patients were significantly more likely to be diagnosed with “non-ACS chest pain” despite receiving fewer diagnostic tests, less medical therapy, and fewer hospitalizations than their white counterparts. This was the first study which

demonstrated that, not only is there unequal care in the immediate treatment of diagnosed ACS, but also in the work-up of patients with chest pain presenting to the ED.

Interestingly, there is evidence that this racial inequality can be overcome. An examination of nearly 1,500 AMI patients within the equal-access, government-subsidized Department of Defense healthcare system demonstrated no race-based variability in the rate of immediate revascularization procedures⁵³. The design of this healthcare system could help guide modifications to bridge the racial gap in cardiac care.

Trauma

As with cardiac care, there is a minimal amount of literature addressing disparities in ED care of the trauma patient. In the broader trauma literature, however, a number of examples are evident. From pre-hospital mortality rates to ED evaluation to post-injury recovery, trauma care is fraught with examples of the healthcare race gap.

Motor vehicle collisions (MVCs) are one of the leading causes of death in individuals younger than 34 years of age. While in the past three decades there has been a steady decline in MVC-related fatalities, Hispanics represent a disproportionate number of these deaths. A one-year retrospective examination of MVCs in rural North Carolina demonstrated a 0.037% mortality rate for Caucasians as opposed to 4.4% for Hispanics. This equates to a death rate of 12.3 per 100,000 for whites as opposed to 166 per 100,000 for Hispanics⁵⁴. In addition, Hispanic fatalities were more likely to have involved alcohol and be associated with lack of seat belt use. A larger study examining the fatality rates for African-Americans as well as Hispanics and whites found similar disproportionate numbers, though by factoring in socioeconomic status they were able to account for some of the disparity⁵⁵. These studies both provide examples of the disproportionate toll trauma takes on minority populations and propose educational strategies to bridge this gap.

Within the ED, there is evidence of disparate care as well. While the literature is sparse, a few studies merit consideration. In an analysis of data from the National Trauma Data Bank, charts from nearly 7,800 adolescent trauma victims were reviewed

for frequency of alcohol and drug testing. The report found an increased rate of testing in both Hispanic and African-American patients when compared to whites, but only the rates for Hispanic males and African-American females reached statistical significance⁵⁶. There was no relationship found between rates of testing and frequency of positive results among ethnic groups, indicating that the more frequent testing could not be clinically justified. Another study examined the treatment of mild traumatic brain injury (TBI) in the ED and found significant disparities. African-American patients were more likely to be treated by a resident and less likely to be referred to a primary care physician for follow-up. Hispanic patients were more likely to leave without being seen, to receive blood work including blood alcohol level testing, and to receive a nasogastric tube.⁵⁷ The authors of this study were unable to provide an explanation for some of these disparities, but felt they may be related to language barriers in the ED. Regardless, they recommended further study to elucidate the cause of these findings. Finally, another study reviewed the ED disposition for 1.5 million patients presenting with any traumatic injury and found that uninsured patients and African-American females were less likely to be admitted than other demographic groups⁵⁸. The provision of care for victims of trauma is unique to the ED environment, and the effect of race and ethnicity in this area remains poorly studied. It is likely that other areas of discrepancy may be found with further examination.

Cerebrovascular Accident

The effect of stroke on the African-American population is well documented. African-Americans and Hispanics have a higher stroke frequency, higher mortality rate, and larger incidence of risk factors including diabetes and hypertension^{59, 60}. Literature examining this disparity, however, is scant.

One study examined the records of nearly 1,200 ischemic stroke patients presenting to academic medical centers in 1999. The rates of administration of tissue-type plasminogen activator (tPA) were reviewed, and significant racial and ethnic differences were found in the utilization of this therapy. While the most significant predictor of tPA use was stroke severity:

“Black tPA candidates were about one-third as likely to receive tPA as those who were white (8.3% versus 24.6%; $P=0.04$). The magnitude of the difference was similar after adjustment for age, gender, insurance status, and stroke severity.”⁶¹

The study authors did note a trend towards more frequent contraindications to tPA among African-Americans, including delayed presentation, but this did not account for the observed difference in treatment. Additionally, a significant gap was seen when considering only those patients who met inclusion criteria for administration of tPA. While there continues to be some controversy regarding the role of tPA in acute stroke, this study makes clear that its use is not equal across all ethnic groups.

Asthma

It is well-established that not only do African-Americans and Hispanics have a greater incidence of asthma, but they also have more severe symptoms, are more frequently hospitalized, and often receive substandard outpatient care⁶²⁻⁶⁴. Recent investigations have sought to establish whether these disparities exist within the ED.

A review of more than 1,800 adult patients enrolled in the Multicenter Airway Research Collaboration (MARC) study examined whether racial or ethnic differences existed in the presentation and management of patients in the ED. The results were mixed. The investigators found that, while African-American and Hispanic patients presented with more severe respiratory symptoms and a history of more severe disease than did whites, the ED treatment they received was similar, and discharge rates were not statistically different. The disparity in asthma severity was largely eliminated through multivariate analysis for socioeconomic status. Interestingly, the study demonstrated more intense therapy for minorities in certain areas of care, such as amount of beta-agonist administered and prescription of inhaled corticosteroids⁶³.

The same investigators conducted a similar study examining the presentation and treatment of children with asthma, and found similar results. With pediatric patients, minorities again had a history of more severe disease with more frequent hospitalizations, but intensity of ED therapy and rate of discharge was found to be equivalent.

Interestingly, the investigators found that, unlike in adults, all pediatric patients were equally likely to receive inhaled corticosteroids⁶⁵. The authors expressed concern that, given the more severe disease patterns as well as higher historical admission rates among African-American and Hispanic children, that they likely should have greater rates of corticosteroid prescription than whites.

Pain Control

Some of the very first literature on healthcare disparity in the ED focused on management of acute pain and found some disturbing trends. In 1993, a retrospective cohort study compared analgesic use in Hispanic and non-Hispanic whites with isolated long-bone fractures. After analyzing for multiple variables including injury severity, the investigators found that Hispanics were twice as likely as non-Hispanic whites to receive no analgesic in the ED¹⁰. The same investigators conducted a follow-up study to try to discover the reason for this striking discrepancy. Using a similar demographic population, Hispanic and non-Hispanic white patients with isolated extremity trauma, they asked both physicians and patients to estimate the severity of pain on a visual analog scale. They found no significant difference in either patient or physician estimates of pain severity between groups, and the degree of disparity between patient and physician estimates were similar for whites and Hispanics⁶⁶. The authors concluded that physician capacity for assessing pain severity was similar for each ethnic group, and therefore could not account for their early finding of disparate analgesic use.

A more recent study examined rate of analgesic use for African-American and white patients with extremity fractures, and found that African-Americans were much less likely to receive analgesia in the ED⁹. Again, none of the study's covariates could account for this discrepancy.

Two other studies merit consideration, as they analyzed analgesic prescription for a variety of conditions, including long-bone fractures, acute non-traumatic back pain, and migraine headache. The first presented volunteer physicians with a variety of scripted clinical vignettes using African-American, Hispanic, or white patients presenting with migraine headache, back pain, or ankle fracture. The authors report no race or ethnicity-

related difference in frequency of opioid prescription, but did find that patients with “socially desirable” characteristics (i.e. a “high prestige occupation and a strong relationship with a primary care provider”) did increase rates of narcotic use⁶⁷. The authors admit, however, that as their study was conducted on volunteer physicians in a non-medical setting, their results may not translate into clinical practice. A study published that same year examined analgesic prescription rates among Hispanic, African-American, and white patients with migraine headache, back pain, and isolated long-bone fractures. While rates of analgesia were similar for all three groups with extremity fractures, whites were more likely than both African-Americans and Hispanics to receive pain control for headache and back pain⁶⁸. Perhaps the similar results in pain control for long-bone fractures indicate heightened awareness of the need for analgesia in the ED, but there clearly remain areas of racial disparity.

Other Studies and Future Directions

A few other studies have been published indicating disparity in other areas of ED care. An observational analysis of a full-year sample of pediatric appendicitis cases in California and New York demonstrated significantly increased rupture rates in Hispanic, Asian, and African-American children, with some geographic variability⁶⁹. A chart review of 1.2 million adolescent ED visits for sexually transmitted diseases demonstrated that, not only are males more likely to be treated than females, but that Hispanic patients were particularly at risk for under-treatment⁷⁰.

These studies clearly demonstrate that racial and ethnic healthcare disparity exists within the ED. Many of these areas remain inadequately studied and there are other areas the literature has yet to address. Further examination of these and other disease presentations are needed to further explore areas of ethnic and racial inequality in ED care.

General Recommendations

There is a need to increase awareness of racial and ethnic disparities in healthcare among the general public and key stakeholders, and to increase healthcare providers’ awareness of disparities. Despite EM’s philosophical, historical and even legislative

mandate to care for all who present to the ED regardless of racial or ethnic background, we are not immune to these problems.

Legal, Regulatory, And Policy Recommendations

There are a number of important public policy steps that should be taken to eliminate racial and ethnic disparities. Among these steps, we need to 1) avoid fragmentation of health plans along socioeconomic lines, and take measures to strengthen the stability of patient-provider relationships in publicly-funded health plans; 2) increase the proportion of underrepresented U.S. racial and ethnic minorities among health professionals; 3) apply the same managed care protections to publicly-funded HMO enrollees that apply to private HMO enrollees; and 4) provide greater resources to the U.S. Department of Health and Human Services Office of Civil Rights to enforce civil rights laws¹³.

Health System Interventions

From a health systems perspective, there are a number of important potential interventions. These include: 1) promoting the consistency and equity of care through the use of evidence-based guidelines; 2) structuring payment systems to ensure an adequate supply of services to minority patients, and limit provider incentives that may promote disparities; 3) enhancing patient-provider communication and trust by providing financial incentives for practices that reduce barriers and encourage evidence-based practice; and 4) promoting the use of interpretation services where community need exists. The use of community health workers and multidisciplinary treatment and preventive care teams should also be supported.¹³

Education

Educational interventions are as important as health system and public policy interventions. We need to implement patient education programs to increase patients' knowledge of how to best access care and participate in treatment decisions. Emergency medicine literature also supports integrating cross-cultural education into the training of all current and future health professionals⁷¹ as well as diversifying the medical and emergency medicine workforce^{23, 72}.

As Jordan Cohen, President of the Association of American Medical Colleges, stated in the emergency medicine literature, “There must be a diverse medical student and faculty group in order for students to live and work and experience the diversity that is critical for developing the sensibilities that we call cultural competence. That is an important element in reducing disparities in healthcare over time.”⁷³

In Emergency Medicine, minorities are under-represented in academic emergency medicine compared to other specialties and their status lags behind that of white academic EM physicians. Therefore, academic departments of emergency medicine must identify strategies to facilitate the recruitment, retention, and promotion of minority faculty⁷⁴. As stated in the literature, efforts to recruit minorities and to eliminate disparities in healthcare require strong leadership⁷³.

Summary

Disparities in medical care in the emergency medical arena require our continued attention and concerted efforts if we are to reduce disparate healthcare outcomes of the patients we serve. Emergency Medicine literature examining the issue is the first step toward finding solutions. The next step would be in improved data collection, such as targeting methodological issues (i.e. study design that incorporates within-group comparisons of subgroups within the Hispanic or Asian population) and controlling for confounders. This methodology is a fundamental requirement for producing high-quality research on disparities⁷⁵. Richards and Lowe aptly note that Emergency Medicine has a different lens from other medical specialties in that ED professionals care for all comers and are more apt to respond uniformly given that reality. They also note that ED professionals must determine the extent of the problem within the specialty using rigorous databases and scientific research. Based on this scientific research, to the extent that disparities exist, the causal factors need to be identified and studied. This will lead to further action through the development of appropriate interventions and the tracking of outcome measures, and ultimately to progress toward eradicating racial disparities in healthcare²⁵.

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