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Essential Principles to Create an Equitable, Inclusive, and Diverse EMS Workforce and Work Environment: A Position Statement

Emergency Medical Services (EMS), similar to all aspects of health care systems, can play a vital role in examining and reducing health disparities through educational, operational, and quality improvement interventions. Public health statistics and existing research highlight patients of certain socioeconomic status, gender identity, sexual orientation, and race/ ethnicity are disproportionately affected with respect to morbidity and mortality for acute medical conditions and multiple disease processes, leading to health disparities and inequities. With regard to care delivery by EMS, research further demonstrates that the current attributes of EMS systems may further contribute to these inequities, such as documented health disparities existing in EMS patient care management and access along with EMS workforce composition not being representative of the communities served influencing implicit bias. EMS clinicians need to understand the definitions, historical context, and circumstances surrounding health disparities, healthcare inequities, and social determinants of health in order to reduce health care disparities and promote care equity. This position statement focuses on systemic racism and health disparities in EMS patient care and systems by providing multifaceted next steps and priorities to address these disparities and workforce development. The NAEMSP believes that EMS systems should:

- Adopt a multifactorial approach to workforce diversity implemented at all levels within EMS agencies.
- Hire more diverse workforce by intentionally recruiting from marginalized communities
- Increase EMS career pathway and mentorship programs within underrepresented minorities (URM) communities and URM-predominant schools starting at a young age to promote EMS as an achievable profession.
- Examine policies that promote systemic racism and revise policies, procedures, and rules to promote a diverse, inclusive, and equitable environment.
- Involve EMS clinicians in community engagement and outreach activities to promote health literacy, trustworthiness, and education.
- Require EMS advisory boards whose composition reflects the communities they serve and regularly audit membership to ensure inclusion.
- Increase knowledge and self-awareness of implicit/unconscious bias and acts of microaggression through established educational and training programs (i.e. anti-racism, upstander, and allyship) such that individuals recognize and mitigate their own biases and can act as allies.
- Redesign structure, content, and classroom materials within EMS clinician training programs to enhance cultural sensitivity, humility, and competency and to meet career development, career planning, and mentoring needs, particularly of URM EMS clinicians and trainees.
- Discuss cultural views that affect health care and medical treatment and the impact of social determinants of health on care access and outcomes during all aspects of training.
- Design research and quality improvement initiatives related to health disparities in EMS that is focused on racial/ethnic and gender inequities and includes URM community leaders as essential stakeholders involved in all stages of research development and implementation.

Essential Principles to Create an Equitable, Inclusive, and Diverse EMS Workforce and Work Environment: A Resource Document

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Abstract

Emergency Medical Services (EMS), similar to all aspects of health care systems, can play a vital role in examining and reducing health disparities through educational, operational, and quality improvement interventions. Public health statistics and existing research highlight that patients of certain socioeconomic status, gender identity, sexual orientation, and race/ ethnicity are disproportionately affected with respect to morbidity and mortality for acute medical conditions and multiple disease processes, leading to health disparities and inequities. Research further demonstrates that the current attributes of EMS systems may further contribute to these inequities, such as documented health disparities existing in EMS patient care management and access, along with EMS workforce composition not being representative of the communities served influence implicit bias. EMS clinicians need to understand the definitions, historical context, and circumstances surrounding health disparities, healthcare inequities, and social determinants of health to reduce healthcare disparities and promote care equity. This position statement focuses on systemic racism and health disparities in EMS patient care and systems by providing multifaceted next steps and priorities to address these disparities and workforce development. NAEMSP believes that EMS systems should:

- Adopt a multifactorial approach to workforce diversity implemented at all levels within EMS agencies.
- Hire a more diverse workforce by intentionally recruiting from marginalized communities
- Increase EMS career pathways and mentorship programs within underrepresented minorities (URM) communities and URM-predominant schools starting at a young age to promote EMS as an achievable profession.
- Examine policies that promote systemic racism and revise policies, procedures, and rules to promote a diverse, inclusive, and equitable environment.
- Involve EMS clinicians in community engagement and outreach activities to promote health literacy, trustworthiness, and education.
- Require EMS advisory boards whose composition reflects the communities they serve and regularly audit membership to ensure inclusion.
- Increase knowledge and self-awareness of implicit/unconscious bias and acts of microaggression through established educational and training programs (i.e., antiracism, upstander, and allyship) such that individuals recognize and mitigate their own biases and can act as allies.
- Redesign structure, content, and classroom materials within EMS clinician training programs to enhance cultural sensitivity, humility, and competency and to meet career development, career planning, and mentoring needs, particularly of URM EMS clinicians and trainees.

- Discuss cultural views that affect health care and medical treatment and the impact of social determinants of health on care access and outcomes during all aspects of training.
- Design research and quality improvement initiatives related to health disparities in EMS that are focused on racial/ethnic and gender inequities and include URM community leaders as essential stakeholders involved in all stages of research development and implementation.

Objective

Introduction: Defining the Problem and Terms

All sectors of the emergency care delivery system, including EMS, can play a role in examining and reducing health disparities through educational, operational, and quality improvement interventions. When providing care to patients, EMS personnel need to understand the definitions of implicit bias and circumstances surrounding health disparities, healthcare inequities, and social determinants of health (SDOH).

Implicit or unconscious bias is defined as attitudes, behaviors, and actions that occur automatically and unintentionally, which nevertheless impacts judgments and decisions to be prejudiced in favor of or against one person or group compared to another.[4]

Social determinants of health (SDOH) are conditions based on where people live, learn, work, and play that affect a wide range of health risks and outcomes. Social determinants of health, such as poverty, unequal access to health care, lack of education, stigma, and racism, are contributing factors to health disparities and inequities.[1] Race and ethnicity are social determinants of health based on conditions (e.g., structural racism, implicit bias) and not based on biological makeup.[2,4] Structural racism is defined as "the normalization and legitimization of an array of dynamics–historical, cultural, institutional and interpersonal–that routinely advantage White people while producing cumulative and chronic adverse outcomes for people of color."[4(p.1), 5 (p.1)] This system leads to "differential access to the goods, services, and opportunities of society by race, determines societal values and power hierarchies, and underlies persistent health disparities in the United States."[4 (p.1)] SDOH, race/ ethnicity, and gender/ sex are closely intertwined to be significant factors influencing comorbidities, severity of conditions, access to primary or preventative care, which influences EMS utilization, and prehospital care disparities.

According to the Centers for Disease Control and Prevention (CDC), health disparities are preventable differences in the burden of disease, injury, violence, or opportunities to achieve optimal health experienced by socially disadvantaged racial, ethnic, and other population groups and communities.[6] The World Health Organization defines health inequities as "differences in health status or in the distribution of health resources between different population groups, arising from the social conditions in which people are born, grow, live, work, and age".[7] Health disparities stem from preventable and unjust systematic differences, policies, and practices that interfere with attaining full health potential for specific socially disadvantaged communities and groups—leading to an increase in incidence, prevalence, mortality, and burden of disease and other adverse health conditions.[8] From

the *Disparities in Emergency Medical Services Care Delivery in the United States: A Scoping Review*, we learned that there are important differences in prehospital care for women and racial and ethnic minorities observed for time-sensitive conditions including acute coronary syndrome (ACS), out-of-hospital cardiac arrest, and stroke, while differences in care by sexual orientation were rarely investigated.[9] Disparities may exist in all phases of patient care stemming from prehospital management, the emergency room, and inpatient and outpatient settings. Research has shown that disparities are more prominent for underrepresented groups based on race/ ethnicity and gender identity.[3,47, 48]

Recent public health statistics show that patients of certain socioeconomic status (SES), gender, and race/ ethnicity are disproportionately affected with respect to morbidity and mortality for multiple disease processes, leading to health disparities and inequities.[4] Healthcare legislation and delivery in the United States have incorporated social justice and equity elements through the 1986 Emergency Medical Treatment and Active Labor Act (EMTALA). Additionally, social justice and equity are addressed in the entitlements granted through Medicare and Medicaid for the elderly and those with low socioeconomic status.[10] Social justice is defined as “the objective of creating a fair and equal society in which each individual matters, their rights are recognized and protected, and decisions are made in ways that are fair and honest”[11] The Centers for Disease Control defines health equity as “the state in which everyone has a fair and just opportunity to attain their highest level of health. Achieving this requires ongoing societal efforts to:

- Address historical and contemporary injustices
- Overcome economic, social, and other obstacles to health and health care; and
- Eliminate preventable health disparities.”[12]

The Medicare and Medicaid developments have made progress toward social justice by ensuring equal access to care and quality of life for patients; however, health disparities and inequities continue to impact patient health outcomes, especially in underserved communities significantly. The persistence of such inequities reinforces that there is still work to be done.

Supporting Evidence

Diversity, Equity and Inclusion within the EMS Workforce

EMS systems can enhance career pathways and mentorship programs to promote EMS as an achievable position and career to increase diversity within our workforce and to reflect the communities we serve. A study led by Crowe et al. demonstrated that women and underrepresented minorities (URM) make up a substantially low percentage of our EMS workforce.[13] In particular, the study showed that 8% of EMS personnel are Black (African- American), 3% are paramedics, and 5% are EMTs. These statistics for Black EMS personnel have not changed in 10 years.[14] The EMS workforce continues to be predominantly represented by white males, who make up the large majority. Hispanic/ Latino EMS personnel numbers are increasing.[13] Much work remains to increase the numbers of women and URM in the field of EMS.[13-15] Since the Crowe et al study, not much has changed. A recent scoping review noted that while there are more women and Hispanics at the EMT level, the number of Black EMTs remained stagnant. Women and non-white EMS clinicians “continue

to be underrepresented in EMS training, education, and workforce, irrespective of level", revealing continuing challenges in diversifying the EMS workforce. This shows that not much has changed in over a decade.[16] Continued qualitative research demonstrating the real-world experiences of URM EMTs, paramedics, and EMS physicians concerning peer and patient interactions would provide a better picture of career success and strategies for overcoming the daily challenges of bias, microaggressions, prejudice, and discrimination. This study also elucidated that there is work to be done in improving the EMS environment to allow for diverse workspaces, recruitment, and retention.

Promoting Antiracism Policies within EMS

Mechanisms to foster a more equitable and inclusive work environment with more diverse leadership may include evaluating and, where necessary, rewriting policies that may be affected by systemic racism, especially hiring and promotion practices. When evaluating the composition of the EMS workforce, it has been demonstrated that systemic racism is present not only in patient care but also in professional experiences and advancement.[13-15, 17-21] One study examined the association between the race of EMS clinicians and career outcomes. The Longitudinal Emergency Medical Technician Attributes and Demographics Study (LEADS) project in 2008 compared career success among race and gender in EMS clinicians as white versus minority to determine the degree to which these groups succeed in the EMS profession.[15] Success was measured objectively by salary, promotions, and personal judgments related to job satisfaction. A representative sampling from the NREMT database in 2000 and 2004 predicted objective career success by education, experience, and hours worked. Subjective career success was predicted by satisfaction with other paramedics (work relations) and supervisor relationships. The results of the LEADS project showed that gender had a negative influence on objective career success but was unrelated to subjective career success. This finding suggests that women receive lower salaries than men but appear satisfied in their careers. In the same study, minority status was not associated with differences in either objective or subjective career success, suggesting that minority paramedics experience the same degree of objective and subjective career success as their white peers. However, this study had several methodological limitations, including a lower response rate among non-white participants compared to white participants and grouping all 'minority' providers (Asian, Black, Hispanic, and Native American/Alaskan Native) into one heterogeneous group without examining outcomes for more differentiated subgroups, such as underrepresented minorities.[15] The limited data and methods of such preliminary studies emphasize the need for more systematic approaches to examining workforce experience within EMS through the lens of race to promote a more inclusive and equitable environment.

Impact of Systemic Racism within EMS

In EMS, more awareness and acknowledgment of the effect and impact of systemic racism on health disparities, healthcare inequities, and SDOH for Black, Indigenous, and people of color (BIPOC) and underserved populations are needed. Clinicians may recognize and mitigate their biases to serve as better allies and improve health outcomes. Evidence suggests that EMS clinicians may still misconstrue the concept of race as a biological construct instead of a social construct.[22-23] Boyd et al. noted that the use of the term 'race' without reference to 'systemic racism' when examining health

disparities could result in "obfuscating the role of [structural] racism in driving health inequities."[15] It is recommended investigators and educators examining racial/ ethnic disparities explicitly state such issues with the goal of increasing knowledge and discussing root cause contributions..[2,4-5,7,24]

Addressing Health Disparities in EMS

According to the Disparities in Emergency Medical Services Care Delivery in the United States: A Scoping Review, there are important differences observed in prehospital care for women and racial and ethnic minorities for time-sensitive conditions including acute coronary syndrome (ACS), out-of-hospital cardiac arrest, and stroke, while differences in care by sexual orientation were rarely investigated.[9] The results showed that Black, Asian, and Hispanic patients waited longer before seeking care for ACS. This may be attributable to racial/ ethnic minorities not recognizing signs of ACS or stroke compared to their White counterparts. Black patients were more likely to access EMS than Asian patients. However, Hispanic patients showed mixed findings regarding contacting EMS. One study stated higher usage than White patients and another study showed those with limited English proficiency were also less likely to call 9-1-1.[3] This is due to concerns relating to an inability to communicate with 9-1-1 telecommunicators along with additional barriers of distrust of law enforcement, cost and language issues, and concerns about immigration status. These studies also demonstrated a lower rate of correct diagnosis of stroke and other health conditions when the patient was Black or Hispanic and was female. Female patients also received less epinephrine than male patients for anaphylaxis. Multiple studies highlight inequities in Black, Hispanic, Asian, and American Indian/Alaska Native patients receiving less prehospital administration of analgesia with or without pain scale documentation, suggesting implicit clinician bias may be a strong factor. While female patients were more likely to recognize signs and symptoms of life-threatening conditions, they waited longer to access the EMS system after symptom onset compared to men.[2,3] This may suggest there are disincentives for seeking care based upon influences from experiences of marginalization and trivialization of their medical complaints by clinicians. These findings are important given that racial and ethnic minority patient populations have disproportionate deaths due to heart disease and other major medical conditions.[2, 17]

Although a growing area of inquiry, there remains a paucity of data, research studies, and quality improvement initiatives related to healthcare disparities in EMS which has been highlighted as critical to address. Racial and ethnic inequities in healthcare pose significant moral and ethical dilemmas within the United States healthcare system. Inaccessibility to healthcare, increased rates of death and morbidity, and poor and inadequate medical care are just a few examples of healthcare inequities we face in the U.S. today related to systemic racism.[25-35] Healthcare has controversially been viewed as an entitled right for each person.[10, 36-37] However, systemic racism interferes with the rights of BIPOC to be afforded equitable quality of care and services. EMS clinicians care for patients with many medical conditions reflecting healthcare disparities and SDOH, disproportionately affecting BIPOC communities. These conditions include but are not limited to COVID19[25-29], out-of-hospital cardiac arrest[30-31], cardiovascular disease[32], diabetes[33], hypertension, stroke[47], asthma/COPD[34], and alcoholism.[35]

Continued Research and Quality Improvement Around Health Disparities in EMS

Research addressing EMS-related healthcare disparities has remained relatively unexamined until recently. In a 2003 study by Young et al. they examined the administration of pain medication associated with the patient's pain scale.[13] They studied the use of morphine in adult blunt trauma patients in Contra Costa County, CA. Black patients were half as likely to receive morphine compared to white patients when a pain score was documented. Black patients were only 15% as likely as white patients to receive morphine when a pain score was not documented.[20] Another study investigated a patient's race as a risk factor in the medication-based treatment of pain in select traumatic injuries (e.g., fracture, burns, and penetrating trauma) in adults and children.[18] Using a large national dataset of standardized EMS medical records from the National Emergency Medical Services Information System (NEMSIS), Hewes et al. found that adult Black patients received pain medications significantly less often than White patients after controlling for pain as a documented symptom. Children (defined as < 15 years of age) who were identified as racial minorities were also found to receive pain medications significantly less often, with 10.9% of African American children receiving pain medications compared to 25% of white children.[18] An additional study examining racial disparities in pain management showed that Black/ African American and Asian patients in Oregon receiving prehospital emergency medical assistance for painful injuries or conditions were less likely to receive the same treatment as white patients. These studies document racial health inequities in pain management practices found in hospital-based emergency medicine.[17-21] Such study outcomes call into question the long-held assumption that high-quality and equitable EMS care is easily attained through 'color-blind' protocols.[1] While these studies represent necessary initial steps to understand racial health disparities in EMS, they did not control for socioeconomic or environmental factors that also drive health outcomes. These few studies support the need for EMS training to focus on understanding SDOH, cultural and structural competency, and strategies for mitigating implicit bias.

Conclusion

Social determinants of health, including race/ ethnicity, SES, gender, age, disability, and language, contribute to health disparities and healthcare inequities. These issues are present at all levels of EMS care delivery systems. The EMS workforce is not representative of the diverse communities we serve and the diversity within the US population. Evidence suggests that creating a workforce reflective of the diverse patient population served can decrease communication barriers, improve patient outcomes with more equitable prehospital care, and increase recruitment and retention. Mitigating implicit bias, diversifying the EMS workforce, and acknowledging the impacts of social determinants of health can improve patient care outcomes and enhance clinician longevity and retention in the specialty.[39-40]

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