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A Thousand Cuts: Racial and Ethnic Disparities in Emergency Medicine

William E Soares III, MD MS[1], **Kenneth J Knowles II, MD**[2], **Peter D. Friedmann, MD MPH**[3]

[1]Fellow, Institute of Healthcare Delivery and Population Science, University of Massachusetts Medical School – Baystate Campus, Assistant Professor of Emergency Medicine, Baystate Medical Center, 759 Chestnut St., Springfield, MA 01199

[2]Associate Regional EMS Medical Director, Baystate Medical Center, 759 Chestnut St., Springfield, MA 01199

[3]Chief Research Officer, Baystate Health, Associate Dean for Research and Professor of Medicine, University of Massachusetts Medical School (UMMS) – Baystate, Professor of Quantitative Health Sciences, UMMS, Office of Research; 3601 Main Street, Springfield, MA 01199

Despite the many advances in emergency and prehospital medicine, racial and ethnic inequities in care persist.(1) In the emergency department, ethnic and racial minorities experience many different types of inequality, including increased wait times,(2,3) less frequent pain medication administration, (4–6), and decreased rates of CT and MRI imaging. (7) Although these disparities are well established in the hospital, their extent in the prehospital setting is less certain. Emergency medical services (EMS) treats over 16 million patients annually, yet relatively little is known with regards to treatment differences based on race and ethnicity. The article by Kennel, et al, explores differences in EMS pain management practices for racial and ethnic minority patients with blunt trauma injuries (cite article in Medical Care).

Using electronically captured self-reported medical records from the Oregon Emergency Medical Services Information Systems, which represents approximately 70% of EMS agencies in Oregon, Kennel et al conducted a retrospective evaluation of the frequency of EMS management of pain. Authors found that Hispanic and Asian patients were less likely than White patients to have a pain assessment recorded. Additionally, despite a similar frequency of completed pain assessment scores among Black (45.1%) and White (44.5%) patients, Black patients received pain medications less frequently (13.9% compared to White patients, 20.1%). When controlling for gender, age, location, insurance, and presence of a pain assessment score, compared to White patients, Black, Hispanic and Asian patients were less likely to receive pain medication from EMS for blunt traumatic injuries (32%,21% and 24% respectively).

William E Soares III MD MS, William.soaresMD@baystatehealth.org, Phone: 413-794-6244.

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The study contains limitations that must be considered when interpreting results. Of the over 25,000 patients included in the study, less than 15% were identified as a racial or ethnic minority by EMS providers. The low frequency of diversity in the sample population limits generalizability to other EMS agencies that treat different populations. Further, though the authors control for preidentified confounders, there are several other possible measured and unmeasured variables that may account for differences in pain assessment and treatment. For example, there is no adjustment for the population area of the EMS provider; it is likely that EMS providers who serve urban, rural and frontier areas and may have different patient practice patterns. Additionally, there is no discussion of distance from encounter to hospital; it may be that urban minority patient encounters are physically closer to hospitals, thus leaving less time for pain assessment and treatment.

Despite the above limitations, the findings support and add to previous literature which has demonstrated that, even in the prehospital setting, racial and ethnic minority patients receive a lower standard of care, including in pain management, (8,9) utilization of EMS during emergencies, (10) and likelihood of being transported to a safety net hospital.(11) Placed in the context of the overall literature, racial and ethnic minority patents experience disparities in all aspects of healthcare, from the initial EMS activation, throughout treatment in the hospital, and persisting post hospitalization, as the likelihood of being referred to rehabilitation after trauma also appears to be influenced by race and ethnicity.(12)

Racial and ethnic disparities in medicine may result, in part, from implicit bias at the level of the healthcare provider. Unlike explicit, conscious acts of discrimination, implicit bias is subconscious, silently informing healthcare decisions through the influence of underlying biased attitudes and beliefs. Implicit bias is prevalent throughout society, and well-documented in medicine, especially in healthcare settings with relatively limited contact with racial and ethnic minorities.(13) That said, the measurable effects of implicit bias on healthcare decisions are not always recognizable, and evidence suggests that implicit bias rarely overwhelms standard of care clinical decision-making and treatment algorithms.(14) For example, little evidence supports that discrimination or bias influence initial critical decisions involving acute trauma and surgical patients.(15,16)

Rather, implicit bias is more insidious and additive, subtly influencing a series of smaller, more subjective decisions. In some ways, implicit bias can be compared to *Lingchi*, the Chinese term that describes the concept of the death by 1000 cuts. Rather than striking a single mortal blow, *Lingchi* was a cruel method of torture meant to bring a slow death through a series of small, individually inconsequential injuries that together, created a fatal wound. In medical terms, implicit bias may not be the proximal deciding factor to perform a critical action, such as an emergency surgery or procedure. However, small additive acts of disparity, such as the delay in arrival of the ambulance in low income areas, the lack of a full assessment, the decision to transport to a safety net hospital, the increased wait time, the discrepancy in performing imaging, all contribute to an overall disparity in care. And, while each of these factors alone might not have a measurable impact, continued and persistent acts that promote racial and ethnic disparities in the pre-hospital and hospital setting are additive and likely result in the inequities we continue to find in clinically important outcomes.

How then, do we move forward to address the racial and ethnic bias experienced by our patients? Because implicit bias may influence insidiously, we must be cautious interpreting negative studies as evidence that disparity does not exist. Rather, we recommend focusing future research efforts on identifying factors that modify implicit bias and measured disparities in outcomes to help refine understanding and promote solutions. For example, a recent study found no significant racial or ethnic difference in the treatment of patients with migraine and fractures, both of which have objective pain management algorithms. In contrast, Black patients were less likely to receive opioid medications for the treatment of low back pain, a complaint that relies heavily on the subjective interpretation of pain by the healthcare providers.(5) Further, development of a standardized emergency department chest pain algorithm led to reductions in measured differences in management of racial and ethnically diverse patients. (17) The implementation of algorithms and protocols that recognize race as a risk factor for disparate care may help decrease inequities, such as the subjective perception of pain in the EMS patient population.

From a policy standpoint, promoting racial and ethnic diversity in the prehospital workforce may also help. Patients who receive care from healthcare providers who share their racial and ethnic backgrounds are more participatory during the exam and more likely to engage in self-advocacy.(18) However, this solution is challenging in the current EMS environment, where less than 10% of the workforce identifies as a racial or ethnic minority.(19,20) Policies that remove barriers and promote diversity in emergency medicine professionals may raise the quality of care we provide to all patients.

In summary, prehospital and emergency medicine providers share the goal of providing exceptional care for all patients. However, as Kennel et al found, racial and ethnic differences continue to influence quality of care. Moving forward as a healthcare community, we must focus on effectively acknowledging and counteracting the impact of race and ethnicity on the assessment and treatment of emergency patients. Provider education and recognition of inequalities, addressing the lack of diversity in the prehospital and emergency workforce, and incorporation of treatment algorithms and protocols that acknowledge race and ethnicity as a risk factor may help to lessen the impact of race and ethnicity on treatment decisions. Ultimately preventing a death by 1000 cuts is not about avoiding a single blow, just as improving racial and ethnic disparities is not about implementing a single measure. Rather, it will take a coordinated, purposeful, and comprehensive series of steps to reduce the injustice inflicted on our racial and ethnic minority patients.

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