The Dangers of Underestimating Injury Severity

"Initial trauma center designation does not ensure equivalent downstream care," concluded a study.

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A study published in Urology assessed racial and socioeconomic disparities in kidney trauma care to identify whether triage decisions cause structural inequities in patient death and injury treatment. Despite similar or lower rates of under-triage, or underestimating the severity of an injury, in kidney trauma cases, minority patients were still more likely to die of their injuries.

Triage, according to the National Center for Biotechnology Information, is the process through which health care professionals determine who gets immediate care based on severity of injuries. Under-triage is the failure to give a seriously injured patient the level of care they need.

"Under-triage is a trauma system quality metric and represents a modifiable systems-level failure that may disproportionately affect racial and ethnic minority patients through differences in prehospital decision-making, geographic access to trauma centers and structural inequities embedded within trauma systems," wrote the study's authors. "Understanding whether under-triage contributes to racial disparities in renal trauma outcomes is critical for identifying actionable targets for improving equity in trauma care."

The study used the National Trauma Databank to analyze 44,915 renal trauma patients across more than 700 trauma centers in the United States from 2007 to 2016. The International Classification of Diseases defines renal trauma cases as those involving kidney damage from an external force, including falls, car accidents, poisonings, stabbings or gunshots.

Patient outcomes were divided into two categories: inpatient mortality or under-triage. Inpatient mortality meant the patient died after being admitted to the hospital and under-triage meant they received emergency care at a hospital ill equipped to treat their injury. The researchers also looked at insurance coverage (private, Medicare, Medicaid or uninsured) as a proxy for socioeconomic status.

Black patients were less likely than white patients to be under-triaged; Latino and other minority groups were at similar risk of being under-triaged. All non-white patients were at increased risk for inpatient mortality. What's more, Black patients were more likely to die within 24 hours of arrival.

Neither self-pay nor public insurance were associated with under-triage. However, uninsured or self-paying patients had an increased risk for death within and beyond the first 24 hours.

Other factors were associated with patient under-triage. Patients with blunt trauma (car accident, fall or sports injury) were more likely to be under-triaged than those with penetrating kidney trauma (gunshot wound or stabbing).

"These findings highlight that disparities in renal trauma outcomes are not fully explained by injury severity or access to high-level trauma centers alone and instead point to the influence of early clinical management, hospital-level factors and broader structural inequities," wrote the study's authors. "Addressing these disparities is essential to ensuring equitable, high-quality trauma care and improving survival outcomes for all patients with renal trauma."
