Title

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Permalink

https://escholarship.org/uc/item/1mg7b7gd

Journal

Trauma Surgery & Acute Care Open, 9(1)

ISSN

2397-5776

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Publication Date

2024-06-01

DOI

10.1136/tsaco-2024-001507

Copyright Information

Peer reviewed

Value of trauma registries in improving global trauma outcomes

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Though injury remains one of the greatest public health problems worldwide, the disease burden of injury will likely worsen as low-income and middle-income countries (LMICs) undergo increasing urbanization and motorization.[1 2] Tracking injury data through trauma registries establishes a critical evidence base for quality improvement initiatives and targeted interventions, which have improved outcomes in diverse settings.[3] Starr *et al*[4] demonstrate that registry implementation in Ethiopia comprises challenges such as inconsistent data entry resulting in data missingness. Data missingness is prevalent in trauma registries collected in well-resourced contexts and should not preclude implementation nor utilization of these data to inform interventions.[5] A concise trauma registry may reveal simple solutions to complex problems.

The data missingness described by Starr *et al*[4] demonstrates the need for trauma registries to perform continuous training, data quality review, and verification. Data collection and verification should be task-shifted to a non-clinical data team since the excessive workload of LMIC healthcare providers limits daily research involvement. The transfer of this responsibility requires the sustained financial commitment from governmental and academic stakeholders. This commitment is evident and commendable in Ethiopia as the country plans to implement a comprehensive trauma registry in seven trauma hospitals.[4] Moreover, trauma quality improvement and staff training initiatives augment local provider capacities; however, the sustainability of such interventions relies on the acceptance of each hospital staff to conduct continuous review of outcomes in addition to busy clinical workloads.

Although it remains tempting to develop interventions before collecting the necessary data to understand baseline problems, researchers must avoid the trap of neglecting reliable data collection in the rush to create interventions. For instance, though an ordinance mandating vehicular airbags appears to be a prudent recommendation, some LMIC cities may not significantly benefit, as traffic congestion restricts vehicle transit speed. Trauma registries may identify that more road traffic injury hospital admissions are pedestrians or motorcyclists rather than car passengers. Correspondingly, initiatives targeting these road users instead would best improve patient outcomes and avoid wasting

resources. These data can provide a nuanced understanding of local circumstances to better inform local public health policy. Researchers in LMICs must continuously advocate for increased investment in precise and accurate trauma registry data collection to develop the highest-yield interventions. The impact of future trauma care interventions ultimately depends on the quality of data collected at the granular level.

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