Trauma registries in low- and middle-income countries: Working with what we already have

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Background: Trauma registries (TRs) are a fundamental tool of mature trauma systems. They are used in developed countries to measure the effectiveness of trauma quality improvement (TQI). Low- and middle-income countries (LMIC) have not developed TRs on a large scale. Financial barriers and a lack of digital and human infrastructure are obstacles to creating TRs in LMICs. Some LMIC hospitals have created financial databases to record pay-for-service information. Innovative methods to adapt financial databases into TRs could advance TQIs in LMICs. We report how we adapted a financial database to measure the effectiveness of a TQI.

Structure/Method/Design: A TQI standardizing generally accepted interventions in initial resuscitation of patients at a trauma center in Neiva, Colombia was implemented in September 2011. To measure the effectiveness, we wished to investigate the incidence of standardized interventions in the emergency department (ED) before and after TQI implementation. We used restructuring techniques to create a database that permitted analysis from an administrative hospital database that was used for billing purposes. The database spanned September 2010 to September 2012. To confirm accuracy, a chart review was conducted for a subset of patients by two independent researchers.

Results (Scientific Abstract)/Collaborative Partners (Programmatic Abstract): The restructured database allowed for analysis of mortality, many ED interventions and length of hospital stay 1 year before intervention and 1 year after. Chart review confirmed database fidelity. The analysis demonstrated the general success of the TQI by increased interventions, decreased length of stay, and a dramatic decrease in mortality for severely injured patients. It also demonstrated some interventions that did not increase, showing where future TQI efforts should be directed at the institution. A second TQI is currently underway, based on the results of this work.

Summary/Conclusion: Adapting financial databases into trauma registries is a potentially cheap and effective way to measure trauma quality improvement effectiveness in LMIC hospitals. This method, in turn, could be used as a catalyst to new quality improvement initiatives in LMIC hospitals.

Factors influencing the external validity of the evidence of HIV counseling and testing data in global health settings

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Background: Reliable assessments of external validity (EV) are needed in global health decision-making, to ensure that interventions are implemented in settings where favorable benefits observed in evaluation studies can be replicated. To date, there are no standards for how EV is defined or assessed. Ours is the first systematic approach to develop a quantitative tool for assessing EV in global health settings, applied initially to HIV testing and counseling (HTC).

Structure/Method/Design: We conducted a literature search and structured discussions within our team to develop a list of EV indicators (i.e., study characteristics that might determine EV). We grouped indicators into thematic categories. We refined and amended the list through a two-round Delphi process with 28 HTC experts identified as authors of HTC studies. We sent a structured survey to these experts to elicit the weights for each indicator and to propose additional indicators. We sent the first round results back to the experts for re-weighting. We extracted data for EV indicators from 46 HTC studies identified via standard systematic review methods.