**BACKGROUND**

Efforts to improve clinical outcomes for the acutely ill and injured are currently hindered by a lack of data. World Health Assembly resolution 72.16 calls on countries to implement mechanisms for standardized data collection to **characterize the local acute disease burden and identify high-yield mechanisms for improving the coordination, safety and quality of emergency care worldwide.**

This work requires an understanding of how emergency care services are utilized at national and sub-national levels as well as the refined ability to identify current gaps in care across specific prehospital and facility settings. The lack of standardized case-based data on initial patient presentation and management in emergency units leaves limited opportunity for comparison, aggregation and performance monitoring at facilities and across levels of the health system.

**UTILITY OF REGISTRIES TO IMPROVE QUALITY OF CARE**

Registries are data repositories with built-in analytic function that use case-level data to identify potentially preventable deaths. They can collect integrated data – from the prehospital setting to emergency unit visits to inpatient stays. First, data are collected on patient presentation, care and outcome. Second, this data is analyzed in real-time to determine if poor outcomes were. These reports can be fed back to clinical teams for review and targeted education. Quality improvement cycles are iterative, directly informing corrective actions over time.

**IRTEC – WHAT IS IT?**

To respond to the need of countries and support systematic quality improvement of emergency care, the International Registry for Trauma and Emergency Care (IRTEC) was developed. IRTEC is a platform for systematically collecting, aggregating and analyzing case-based emergency care encounters. Currently, the platform captures only facility-based data but will be expanded to collect prehospital data in the future. The platform is free to users and built on the open-source DHIS2 software.

*Please visit [www.who.int/emergencycare](http://www.who.int/emergencycare) or contact emergencycare@who.int for more information*
WHAT ARE THE KEY FEATURES OF IRTEC?

Multi-lingual and multi-platform
IRTEC interface is multi-lingual, with translation across 28 languages by adjusting user account settings. IRTEC offers different types of operation (online, offline) and modalities (web-app, Android mobile app). The mobile app offers offline data entry for low connectivity settings that can be synced when you reach WiFi.

Based on validated minimum dataset
IRTEC utilizes the WHO Minimum Dataset for Injury (MDI) - a consensus-based set of data elements recommended after extensive consultations as the minimum data needed for effective monitoring and quality improvement of injury care. A variation of MDI exists to encompass all emergency care presentations beyond injury, in which the registry is flexible to adapt to.

The MDI components are integrated into existing WHO Standardized Clinical Forms that can facilitate a systematic approach to each patient in the emergency unit while also capturing relevant IRTEC data points.

Built-in analytics and reporting
A range of dashboards and standard reports are available in IRTEC to view injury epidemiology trends and monitor key indicators over time at a single facility or across facilities. A range of audit filters can be executed for a given time and facility to flag cases for in-depth review – such as *patients with hypoxia who did not receive oxygen*. Analytics that a user is able to see are fully configurable based on their user roles and permissions. If given access, users can also configure their own additional reports and visualizations as necessary.

IMPLEMENTATION REQUIREMENTS

Each facility will need to appoint data entry staff who will be solely responsible for entering data into the platform – translating paper-based clinical forms into online platform. This could be existing medical records staff or quality officer. Required staff time depends on trauma volume at your facility.

Required infrastructure includes at least one desktop, laptop or tablet at the facility with connection to internet. Where internet connectivity is limited, you can utilize a tablet and Android application to record offline data entry, with intermittent syncing of case records periodically when you can successfully connect to a network.

We recommend a 3-4 day training before launch. This includes a full day of training clinical providers on the Standardized Clinical Form (if required), a full day of data entry training with data entry staff, and 1-2 days for implementation logistics and site visits. Sample budgets and agendas for training are available upon request.

To create login credentials, you must to identify a list of users at your facility who will be entering data or viewing data. Details on where the facility(ies) are located within country administrative zones is required. These user details should be communicated with the WHO HQ Focal Point.

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