Expeditionary Medical Encounter Database (EMED)

Problem
To improve medical mission readiness, researchers and medical planners require accurate injury and clinical treatment data for casualties as they proceed from point of injury through the medical system to definitive care and rehabilitation. These data are necessary to inform the decisions that shape the medical capabilities of the Department of Defense (DoD).

Solution
To meet this challenge, the Naval Health Research Center (NHRC) collects medical data for sick and injured personnel during deployment and through definitive and rehabilitative care. These records are compiled into the Expeditionary Medical Encounter Database (EMED).

Results
The EMED is a comprehensive data repository that provides a high-quality source of clinical data, across the spectrum of care, which can be used in the determination of theater medical requirements and for research. EMED data are obtained from clinical records generated when sick or injured personnel move through the medical network of care and rehabilitation.

Medical treatment data become increasingly sparse the closer one gets to the point of injury. To address this issue, NHRC works closely with theater medical providers to incorporate procedures for collecting casualty data as close to the point of injury as possible. NHRC integrates these data with other DoD datasets, including tactical data sets, the Military Health System (MHS), and deployment and personnel-related datasets. Because of this integration, the EMED allows researchers at NHRC to perform studies and analyses across the entire spectrum of tri-service, deployment-related injury and illness.

The EMED has enabled studies of amputation, traumatic brain injury, psychological health, posttraumatic stress disorder, personal protective equipment, and rehabilitation and quality of life outcomes.

The EMED is one element of an integrated, clinically based, end-to-end medical materiel requirements planning process that incorporates clinical practice guidelines (CPG), patient encounter and clinical workload forecasts, and medical materiel data linked to clinical workload forecasts and CPGs. This modeling and simulation process enables collaboration by integrating clinical and logistics data that permits identification of capabilities, operational requirements, patient stream estimates, material item estimates, and review and adjustment of current material item estimates.

Benefits
- The EMED is a high-quality data source for studies on injury, injury prevention, personal protective equipment evaluation, clinical practice guidelines, and the development of policy and doctrine.
- The EMED is a robust source for clinical data that identifies areas within the medical chain of evacuation most likely to benefit from technology development and expenditure of training resources.
- The EMED is the first comprehensive database of deployed service members that became sick and/or injured to assess the quality of care administered in forward areas and to relate this care to rehabilitative outcomes and ultimate quality of life.

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