



NHRC

Naval Health Research Center

Supporting the biomedical and psychological health and performance of the Navy and Marine Corps

Enterprise Estimating Supplies Program (EESP)

Medical Mission Support

Problem

Estimating supply requirements for treating illnesses and injuries likely to be incurred during military operations is a critical component of the medical resource planning process. Reliable tools are needed to assist in this work.

Solution

The Naval Health Research Center (NHRC) developed a systematic process to review Navy, Marine Corps, and Air Force medical supply requirements. NHRC incorporated that data into the Expeditionary Medical Knowledge Warehouse (EMedKW), which is a service-oriented architecture system designed to protect and organize medical and supply data. EMedKW provides the underlying data for the Enterprise Estimating Supplies Program (EESP). (United States Patent 7707042)

(EESP) was designed and developed to provide medical planners with the capability to estimate the requirements for the medical consumables, durables, and equipment items necessary for the treatment of a specified patient distribution. EESP allows analysts to track inventory and to determine mission readiness.

Results

EESP is a web-based application that securely connects to EMedKW. The user creates a medical mission scenario by entering casualty flow data or by importing a patient stream from a casualty projection system (such as the Casualty Rate Estimation Tool). EMedKW contains a representative collection of *International Classification of Diseases, 9th Revision* (ICD-9) codes that are descriptive of trauma and illness typically seen in military operations. EESP provides the capability to assess supply usage across levels of care for ground, air, and shipboard medical facilities, and across all medical functional areas and medical treatment facilities. It generates the inventory of supplies and equipment necessary to treat a scenario-specific patient distribution.

Planners and logisticians are able to produce a variety of reports, to analyze supply usage by injury or by the tasks required for treatment, and to compare scenario supplies with those in any service's medical sets, kits, outfits, Authorized Medical Allowance Lists (AMALs), or Unit Type Codes.

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

Benefits

- EESP provides user-customizable patient distributions, which facilitate analysis of consumables, equipment, personnel, and transportation requirements.
- EESP allows comparison of an existing medical supply inventory or AMAL with the actual supplies required to accomplish a particular mission scenario.
- With EESP, planners can develop optimal supply sets and evaluate the clinical readiness of an inventory, and/or identify clinical capability shortfalls or excesses.
- EESP flexibility allows supply, equipment, and personnel configurations to be quickly customized and revised as policy and doctrine changes occur.

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