Background

- The Joint Medical Planning Tool (JMPT) is a computer-based simulation tool that models patient flow from point of injury through more definitive care.
- Before the development of the JMPT, medical planners and logisticians lacked the means to assess the adequacy of medical support for military operations.
- JMPT is verified, validated, accredited, and mandated for DoD use.

Value

- JMPT helps determine whether a medical planner’s selection of particular military treatment facilities (MTFs) meets the needs of an anticipated patient stream, whether the relocation of an MTF affects patient outcomes, and how personnel and transportation assets are best used.
- JMPT facilitates patient outcome comparisons of proposed care facility networks.

Goals

- To provide medical planners and logisticians with a course-of-action assessment tool specifically designed to assist military medical planners and logisticians to plan and evaluate the medical support mission.
- To support research, medical systems analysis, operational risk assessment, and field medical services planning.

Methods

- JMPT is based on empirical data, including over 300 patient conditions and their associated medical treatment tasks, times, required medical providers, and equipment necessary to provide patient care.
- Includes algorithms that calculate died-of-wounds due to treatment delay and complications.
- JMPT uses discrete-event stochastic processes to model patient arrivals, treatments, and outcomes as patients move from the point of injury through the network of MTFs and eventual return to duty or evacuation from theater.

Key Facts

- JMPT spans the spectrum of theater-based levels of care and emulates all service medical treatment facilities (MTFs) and their respective functional areas, including the number and type of personnel, and the type, speed, and capacity of transportation assets.
- JMPT is fully integrated with the Medical Planners’ Toolkit (MPTk) and consists of four functional components: patient stream generation, medical treatment, transportation, and report generation.
- Users create the medical network by specifying scenario type and duration, MTF laydown, transportation assets, and casualty load.
- JMPT generates a wide variety of system-defined reports that provide detailed information on casualty generation, care provision, transportation metrics, and detailed patient outcomes in both tabular and graphic formats.
- This modeling and simulation process enables collaboration by integrating clinical and logistics data, permitting identification of capabilities, operational requirements, patient stream, and material item estimates.