PACER Surge

A free, web-based simulation tool for hospital emergency planners to estimate bed surge capacity for acute mass casualty events.

http://www.pacerapps.org

Overview

PACER Surge (often simply referred to as 'Surge') is a free, publicly available, web-based simulation tool developed by the National Center for the Study of Preparedness and Catastrophic Event Response (PACER) at Johns Hopkins University. The tool is designed for hospital emergency planners, intensive care units, and other clinical units to proactively assess and estimate hospital bed surge capacity in the event of an acute mass casualty incident, such as an explosion.

Key Capabilities:

Monte Carlo Simulation: Uses a Monte Carlo simulation algorithm to forecast available hospital bed capacity over a 7-day period.
Capacity Assessment: Iteratively assesses a hospital's ability to accommodate disaster patients based on user-defined inputs for the hospital, unit, or service.
Strategy Evaluation: Allows interactive evaluation of various response strategies to expand capacity, including opening unlicensed beds, canceling elective admissions (medical and surgical), and implementing reverse triage for the ICU.
Resource Focus: The simulation focuses on bed capacity, facility space, medical supplies, and equipment. It does not specifically simulate staff and supply inventory.
Ease of Use: Developed to promote ease of use by limiting the detailed data required for input while capturing the important aspects of hospital capacity and patient flow.
PACER Surge is part of the PACER Disaster App Suite, which also includes EMCAPS (for casualty estimation) and FluCast (for flu patient forecasting), and is a key resource for improved decision-making in disaster response and emergency preparedness. Users must register and set up an account profile before gaining access.

Key Features

- Monte Carlo simulation for capacity forecasting
- 7-day bed capacity forecast

- Evaluation of surge response strategies (e.g., reverse triage)
- Scalable from unit to entire hospital
- User-defined hospital input sections

Pricing

Model: free

Free, publicly available tool developed by the Johns Hopkins National Center for the Study of Preparedness and Catastrophic Event Response (PACER), a U.S. Department of Homeland Security (DHS) Center of Excellence.

Target Company Size: small, medium, enterprise