

ASPR TRACIE Training and Technical Assistance

Requestor:

Requestor Phone:

Requestor Email:

Request Receipt Date (by ASPR TRACIE): 11 April 2016

Response Date: 12 April 2016

Type of TTA Request: Standard

Request:

██████████ asked, on behalf of the ██████████ Department of Health, if ASPR TRACIE knew of any casualty estimate tools available from the U.S. Department of Health and Human Services (HHS) or other U.S. Government sources.

Response:

The ASPR TRACIE Team conducted a search on disaster preparedness casualty estimate tools. We also reached out to an ASPR TRACIE Subject Matter Expert (SME) Cadre member for additional tools supported by or sponsored by US Government agencies. Tools and other related resources that were gathered are provided below.

The resource we feel is the closest to the user's request is the Electronic Mass Casualty Assessment and Planning Scenarios (EMCAPS) tool available through the Hopkins PACER Suite of applications.

John Hopkins. (n.d.). [PACER SUITE](#). (Accessed 4/12/2016. Free registration is required.)

This resource provides three tools. The first is the Electronic Mass Casualty Assessment and Planning Scenarios (EMCAPS) tool, which models plausible disaster scenarios (based on the Department of Homeland Security National Planning Scenarios) to help planners better understand and assess preparedness and response capabilities needs. By scenario, the tool asks questions, then provides the estimated casualty numbers. The second is the Surge tool, which assesses current hospital surge capacity and allows the user to simulate bed expansion, inflow alteration, and outflow alteration to increase capacity or make room for disaster patients. The third tool is the FLUCAST, which forecasts the current week's flu cases for the user's hospital based on historical data. References used to develop the tool are available on the site for further research.

NOTE: For questions related to EMCAPS, contact Jim Scheulen at 410-735-6450. The ASPR TRACIE team tested this tool and reached out the POC.

I. Other Casualty Estimate Tools

Centers for Disease Control and Prevention. (n.d.). [Pandemic Flu Preparedness Tools](#). (Accessed 4/12/2016.)

This webpage provides several resources to help hospital administrators, and state and local health officials prepare for the next influenza pandemic by estimating the spread within a community, and surge on healthcare centers and services.

The Lauren Ancel Meyers Lab. (n.d.). [Various Tools](#). The University of Texas at Austin, Department of Integrative Biology, Institute for Cellular and Molecular Biology. (Accessed 4/12/2016.)

This webpage provides multiple tools including the following: 1) DiCon (Disease Control System) – provides a general optimization framework, with a special focus on distributed, parallel epidemic disease simulation with policy optimization; 2) Texas Pandemic Flu Toolkit – includes tools for antiviral release scheduling and distribution, vaccine allocation and ventilator stockpiling, and simulating pandemic flu and public health responses; 3) Public Health Laboratories (PHL) Sample Size Calculators – provides a systematic approach to estimate the number of specimens to be tested within a specific level of data confidence for situational awareness and rare/novel influenza event detection and investigation; and 4) EpiFire – simulates the spread of epidemics on contact networks.

II. Casualty Estimate Tool Related Resources

Department of Defense, Office of the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs/ Nuclear Matters. (n.d.). [Specialized Radiological Monitoring and Hazard Assessment Capabilities](#). (Accessed 4/12/2016.)

This resource describes the Defense Threat Reduction Agency (DTRA) Hazard Prediction and Assessment Capability (HPAC), which is a forward deployable and/or reachback modeling capability available for Government, Government-related, or academic use. This software tool assists in emergency response to hazardous agent releases. It allows users to model and predict hazard areas and human collateral effects in minutes. It also provides the capability to accurately predict the effects of HAZMAT releases into the atmosphere and their impact on civilian and military populations.

Sandia National Laboratories. (2011). [New Tool Allows First Responders to Visualize Post-Event Disaster Environments](#).

This article describes the Standard Unified Modeling, Mapping and Integration Toolkit (SUMMIT), which is a science-based software tool that allows emergency preparedness officials and first responders to view and modify accurate models of building damage and other post-event disaster effects.

YouTube. (2011). [Brooke Buddemeier, Nuclear Detonation in a Major City](#).

This 35-minute YouTube video is a presentation given by Brooke Buddemeier, Global Security Directorate of the Lawrence Livermore National Laboratory, at a 2011 conference held in Washington, D.C. called Advancing U.S. Resilience to a Nuclear Catastrophe. Mr. Buddemeier discusses "Bounding the Problem: Updated Models of the Effects of a Nuclear Detonation in a Major City."

III. Other Tools

U.S. Department of Health and Human Services Office of the Assistant Secretary for Preparedness and Response, Public Health Emergency. (n.d.). [Hospital Surge Evaluation Tool](#). (Accessed 4/12/2016.)

The Hospital Surge Evaluation Tool was developed by RAND and is in beta testing. It is a software-based tool designed to help hospitals evaluate their level of preparedness by identifying gaps and assessing their ability to respond to mass casualty incidents. The tool takes the form of a no-notice drill, and incorporates the real-life considerations of healthcare delivery in acute care settings. This tool can help hospital emergency managers make recurring tabletop exercises a reality by providing a fully developed tabletop exercise that can be used at their facilities.