

In a Moment's Notice: Surge Capacity for Terrorist Bombings  
Challenges and Proposed Solutions  
**Executive Summary<sup>1</sup>**

Explosive devices and high-velocity firearms are the terrorists' weapons of choice. The devastation wrought in two European capitals, Madrid and London, demonstrate the impact that can be achieved by detonating explosives among densely packed civilians. In an instant, an explosion can wreak havoc—producing numerous casualties with complex, technically challenging injuries not commonly seen after natural disasters such as floods, tornadoes, or hurricanes. Because many patients self-evacuate after a terrorist attack, and prehospital care may be difficult to coordinate, hospitals near the scene can expect to receive a large influx—or surge—of victims after a terrorist strike. This rapid surge of victims typically occurs within minutes, exemplified by the Madrid bombings where the closest hospital received 272 patients in 2.5 hours. Such a surge differs dramatically from the gradual influx of patients after an outbreak of infectious disease or an environmental emergency such as a heat wave, which can last several days to weeks afterwards. In addition, injuries to workers involved in recovery procedures can lead to a secondary wave in surge. The key question is this: Can hospitals meet the challenge?

Health care and public health specialists anticipate profound problems in adequately caring for the resulting surge of victims. Our current health care system, especially the emergency care system, is already severely strained by its routine volume of daily care.

Further, the health care system, emergency departments, and intensive care units (ICUs) of acute care hospitals are chronically overcrowded and resource-constrained. Without immediate federal assistance, many, if not most, communities would have difficulty caring for a surge of victims because each hospital and emergency medical service differs dramatically in capacity, training, and level of coordination. Indeed, a terrorist bombing in the United States would be a “predictable surprise.”

To address the challenges posed by such an event, CDC's National Center for Injury Prevention and Control (CDC's Injury Center) convened an expert panel in October 2005 and January 2006. The panel included experts in the areas of emergency medical services, emergency medicine, trauma surgery, burn surgery, pediatrics, otolaryngology, intensive care medicine, hospital medicine, radiology, pharmacology, nursing, hospital administration, laboratory medicine (blood bank), and public health. The panel was charged with identifying creative strategies that could be adopted in a timely manner to address surge issues from terrorism. The panel focused on recommending strategies for rapid management of large numbers of bombing casualties. They examined the related challenges that would confront not only the general emergency medical response and health care system, but would also affect select medical disciplines. Though developed in the context of a surge of injuries from a terrorist bombing, the recommendations in this report may improve the response to and management of a surge of patients from any cause, including biological, chemical, or nuclear.

This document, which is the result of the expert panel meetings, reflects the opinions and recommendations of the experts. It includes a description of system-wide and discipline-specific challenges as well as recommended solutions to address these challenges. The proposed solutions for the discipline-specific challenges have been incorporated into easy to use templates that can assist various disciplines in managing surge needs for injuries.

The needs and resources of each community must be considered to effectively plan for a surge of patients into an already overburdened health care system. Admittedly, community resources are not specific to handling casualties of explosives, but the likelihood of this threat and the sudden demand it would place on the health care system make it imperative to manage deficiencies in surge capacity now—not when crisis strikes—and to do so in an aggressive, but thoughtful manner.

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<sup>1</sup> U.S. Department of Health and Human Services; Centers for Disease Control and Prevention; Coordinating Center for Environmental Health and Injury Prevention; National Center for Injury Prevention and Control.