



Managing Surge Needs for Injuries: Surgical and Intensive Care Unit Response

PURPOSE

To mobilize and assign operating rooms and related assets to provide life- and limb-saving surgical care to the most critically injured of 300 patients injured from explosions (care extends to patients from the community with acute surgical illness for up to 72 hours after a bombing).

BACKGROUND

The Madrid terrorist bombings were used as a model to help develop solutions for managing rapid surge problems during a mass casualty event.

On March 11, 2004, 10 terrorist explosions occurred almost simultaneously on commuter trains in Madrid killing 177 people instantly and injuring more than 2,000. That day, 966 patients were taken to 15 public community hospitals. More than 270 patients arrived between 0800 and 1030 hours.

Federal resources should not be expected to arrive sooner than 72 hours from the time of the explosion. Resources can be delayed by the time taken to deploy them and by responding to multiple communities.

GOAL

Within two hours of a blast event, establish incident command for the operating rooms and surgical support areas for up to 72 hours.

RESOURCES REQUIRED

Resources needed for communicating within the organization and with the community (e.g., satellite phone, walkie-talkie).

This document is a response guide. Local needs, preferences, and capabilities of affected communities may vary.

ASSUMPTIONS

1. Operating room (OR) assets are a critical component of surge capacity after an explosion and must be mobilized quickly.
2. The OR capacity of any institution or community (i.e., number of operating rooms) is fixed because of structural requirements.
3. One or more surgeons, anesthesiologists, and critical care specialists will be in the hospital or be available immediately after an event.
4. Other surgeons, anesthesiologists, and critical care specialists can be available within two hours of an event to provide direct patient care in the ORs and related areas.
5. The ORs, post-anesthesia care units (PACU), and intensive care units will already be in use.
6. Casualties of the blast and patients already in the hospital system or in other treatment centers in the community will occupy one or more of these three areas within the next 72 hours.
7. If these areas are not made available in a timely manner, patients will suffer greater harm.
8. Some patients could be moved to different care sites.
9. Federal resources cannot be expected to arrive sooner than 72 hours from the time of an explosion.

Emergency Medical
Service Response

Emergency Department
Response

**Surgical and Intensive
Care Unit Response**

Radiology Response

Blood Bank Response

Hospitalists' Response

Administration Response

Drugs and Pharmaceutical
Supplies

Nursing Care

ACTION STEPS

The near-term (six months) solutions listed below include estimated hours for each task.

1. Identify medical leadership within surgery and anesthesiology for disaster planning.
 - Leadership should collaborate in the design, implementation, and refinement of an incident command system for an operating room. Initially, leadership in surgery and anesthesiology should meet with representatives of critical care, emergency medicine, administration, and others involved with the institution's disaster planning. These discussions will be facilitated by appointing a hospital disaster committee.
2. Select individuals for incident command roles.
 - Specify the authority, processes, and responsibilities of the OR incident command and a call schedule identifying individuals available to fill their roles 24 hours a day, beginning within two hours of the event, and extending for 72 hours.
 - Although individuals from several disciplines and departments in the operating room and related areas may assist the incident command, final decision-making authority should rest with one person—an "Operating Room Czar." The OR Czar would have authority to cancel scheduled OR cases, rearrange OR schedules, identify patients that could be transferred, call in and deploy OR teams, and prioritize patients for beds in the OR, PACU, and ICUs. The OR Czar would report to hospital incident command.
 - Candidates for this role should be able to assess the medical needs of a variety of patients requiring OR services. They must be physicians, and would most likely be surgeons. An individual serving in this role should not have primary patient care responsibility at the same time (i.e., be part of a surgical team).
 - Communication systems linking surgery, nursing, anesthesiology, critical care, emergency department, and hospital administration should be specified.
 - The OR incident command system must account for personnel availability at different times of the day and week and provide for transfer of incident command responsibility as the incident evolves over 72 hours.
 - The circumstances under which the OR incident command begins and ends should be specified.
 - Methods for data collection, testing, monitoring, and improving the system should be specified.
3. Assure that individuals who might assume an incident command role are knowledgeable about incident command, operations of other hospital components, and community disaster response.

This step assures that eligible candidates for OR incident command receive appropriate training. Requirements and standards for such training should be specified.

4. Identify lines of communication and interactions with other components of the community-wide disaster plan and regional trauma system.

EVALUATION

1. Participate in community-wide drills and evaluate performance of OR incident command.

Determine when individuals should be present onsite. Review triage decisions, quality, quantity, and appropriateness of information obtained from and given to others, including hospital incident command, emergency medicine, and other community assets.

2. Refine and conduct further planning based on drill experience.