



Emergency Medical Services System Response

Emergency Department Response

Surgical Department Response

Intensive Care Unit Response

Radiology Response

Blood Bank Response

Hospitalist Response

Administration Response

Drugs and Pharmaceutical Supplies

Nursing Care

■ *Managing Surge Needs for Injuries:* **Surgical Department Response**

PURPOSE

To mobilize and assign operating rooms and related assets to provide life- and limb-saving surgical care to those who could most benefit 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, Spain, 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 explosions occurred almost simultaneously on commuter trains in Madrid, killing 177 people instantly and injuring more than 2,000. On that day, 966 patients were taken to 15 public community hospitals. More than 270 patients arrived at the closest facility between 8:00 a.m. and 10:30 a.m.

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 emergency personnel responding to multiple communities.

GOAL

Within 2 hours of a blast event, establish a person with decision-making capability who is responsible for operating rooms and surgical support areas for up to 72 hours from the time of the event. This person will be trained, have an appropriate knowledge base for triaging patients to the proper place, and occupy a position in the hospital's incident management system.

REQUIRED RESOURCES

- ◆ Operating room equipment: sufficient stocks of operating room supplies to conduct emergent surgical procedures for up to 72 hours.
- ◆ Staff: Arrangements should include a contingency schedule to staff operating rooms concurrently or in succession for up to 72 hours. Staff should include surgeons, nurses, operating room technicians, anesthesiologists, administrative and clerical staff, and support personnel.
- ◆ Medications: sufficient quantities of required anesthetic agents and other medication for surgical procedures.

ASSUMPTIONS

- ◆ The event in the surgical department will extend beyond the emergency department (ED) event and may last for days.
- ◆ Operating room (OR) assets are a critical component of surge capacity after an explosion and must be mobilized quickly.
- ◆ The OR capacity of any institution or community (i.e., number of operating rooms) is fixed because of structural requirements.
- ◆ One or more surgeons, anesthesiologists, and critical care specialists will be in the hospital or be available immediately after an event occurs.
- ◆ Other surgeons, anesthesiologists, and critical care specialists can be available within 2 hours of an event to provide direct patient care in the operating rooms and related areas.
- ◆ The ORs, post-anesthesia care units (PACUs), and intensive care units (ICUs) will already be in use.
- ◆ Casualties of the blast and patients already in the hospital system, or in other treatment centers in the community, will require one or more of these three areas—OR, PACU, or ICU—within 72 hours.
- ◆ If these areas are not made available in a timely manner, patients will be detrimentally affected.
- ◆ Federal resources cannot be expected to arrive sooner than 72 hours from the time of an explosion.
- ◆ Surgical staff will be familiar with the hospital disaster plan, their individual roles and responsibilities, and the roles and responsibilities of all essential departments.

ACTION STEPS

1. Identify medical leadership.

Identify medical leadership within surgery and anesthesiology departments who will actively participate in disaster planning. These individuals should collaborate in designing, implementing, and refining an incident command system for OR capacity. In addition, OR disaster planning should be conducted in conjunction with representatives of critical care, emergency medicine, administration, and others involved with the institution's proposed incident command system. These discussions should be facilitated by the hospital disaster committee.

2. Establish a flexible or adaptable response.

Establish a flexible or adaptable response so that unused operating space could be readily converted for critical care use.

3. Select individuals for incident command role and define processes and responsibilities. Create job action sheets for each position.

- ◆ Specify the authority, process, and responsibilities of the OR incident command and a call schedule identifying individuals available to fill their roles 24 hours a day, beginning within 2 hours of the event, and extending for 72 hours.



- ◆ Although individuals from several disciplines and departments may assist the incident command, final decision-making authority should rest with one person. This person has the 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 ICU. This person should directly communicate with incident command through a counterpart who is knowledgeable about OR and ICU utilization.
- ◆ Candidates for this decision-making role should be able to assess medical needs of various patients requiring OR services. 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, ED, and hospital administration should be specified if not already specified by the hospital incident command system.
- ◆ Methods for data collecting, testing, and monitoring and improving the system should be specified.

Ensure that individuals who assume leadership roles within the incident management system are trained and knowledgeable about working within the chosen system, operations of other hospital components, and community disaster response.

4. Train incident management leaders.

Ensure that individuals who assume leadership roles within the incident management system are trained and knowledgeable about working within the chosen system, operations of other hospital components, and community disaster response. Training requirements should be specified in writing.

5. Establish lines of communication.

Identify lines of communication and interactions, including training and exercises with other components of the community-wide disaster plan and regional trauma system.

6. Develop plans to move patients to different care sites if needed.

EVALUATION

- ◆ Participate in community-wide drills and evaluate performance of OR incident command.
- ◆ Determine when individuals should be on-site. Review triage decisions and quality, quantity, and appropriateness of information obtained from and given to others, including hospital incident command, emergency medicine, and other community assets.
- ◆ Refine and conduct further planning based on drill experience.

For more information, visit <http://emergency.cdc.gov/masscasualties>.