

American College of Surgeons Committee on Trauma Disaster Management and Emergency Preparedness Course[®]

Target Audience

This course will be directed primarily to surgeons, but should fulfill the needs of all frontline medical acute care providers who are likely to be confronted with the initial care of victims of a mass casualty disaster, to include emergency physicians, anesthesiologists, nurses, and prehospital personnel.

Structure

This educational course will be one day—8 hours—in length

It will consist of 12-15 didactic lectures on the essential basic principles and concepts of the overall management of mass casualty disasters, to include introductory overview, classifications and definitions, epidemiology and patterns of injury, severity and mortality for the most common mechanisms of mass casualty disaster (biologic, chemical, radiologic/nuclear, explosive, natural), planning, triage, incident command, decontamination, barriers to effective response and care, and psychoemotional issues.

An all-hazards approach will be emphasized, demonstrating that many principles apply to disasters of all kinds regardless of specific mechanism, while including the unique factors that may be encountered in each of the most common disaster mechanisms. Surgical problems that may occur in all types of disasters, and the role that surgeons may fulfill in disasters even with nonsurgical forms of injury, will be emphasized.

After the didactic sessions, approximately 60-90 minutes will be devoted to an interactive session of disaster scenario presentations designed to confront the students with the unique challenges and decision-making that confront medical care providers in the setting of a mass casualty event, with the purpose of demonstrating how the principles learned in the didactic session actually apply in real disaster settings. This may be done as one session with the whole class, or by rotating among different scenario stations.

A course syllabus and bibliography of relevant literature will be given to the students to provide the opportunity for more extensive study in specific areas of interest.

A mechanism will be developed for training and certifying instructors to assure standardization of this educational process.

A standard system of testing will be developed to assure an effective learning experience, and to allow the course to evolve according to student needs.

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Core Competencies

The following areas of knowledge and skill are essential to the delivery of an effective medical response to mass casualty disasters:

Disaster Planning

- Essential elements of, and participants in, a disaster plan
- Factors at the hospital, community and regional levels
- Rehearsal –hospital drills, community exercises
- Revision and evolution according to results of rehearsal critique/debriefing

Disaster Epidemiology

- Classification schemes
- Phases of response
- Impediments to an effective response
- Documented results of actual disasters

Disaster Response Organization

- Incident Command
- Role of surgeons
- Crisis/consequence management
- Situational awareness
- Scene control
- Communications and security
- Search and rescue/recovery
- Casualty distribution
- Interaction of local with regional and national assets
- Barriers to effective response

Pathophysiology/Clinical Manifestations of Disaster Mechanisms

- Natural events—weather-related, geophysical
- Biological agents
- Chemical Agents
- Radiological/nuclear agents
- Explosive agents
 - Biodynamics of blast
 - Blast injury
- Patterns of injury, severity and mortality
- Surgical considerations

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Medical Management of Disaster Casualties

- Casualty flow
- Surge capacity
- Resource allocation
- Triage
 - Categories
 - Accuracy
 - Decision-making principles
- Barriers to effective care
- Decontamination
- Treatment—initial, definitive, surgeon role
- Record keeping—continuity of care
- Evacuation/secondary distribution of casualties
- Psychoemotional support of casualties, families, and providers

Post-Disaster Recovery

- Psychoemotional considerations
- Debriefing/critique of responders
- Disaster plan revision
- Analysis and documentation of results of disaster response
- Dissemination/publication of results

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Educational Objectives

1. Provide surgeons and other acute medical care providers with an understanding and appreciation of the principles of planning, preparedness and medical management of casualties following disasters, within the context of the unique constraints of large casualty numbers in short periods of time with limited resources.
2. Understand the surgical problems, issues and injuries that result from most disasters, and the roles that surgeons may play in managing all forms of disasters.
3. Justify the importance of involvement by surgeons and other acute care providers in disaster planning and management at the hospital, community and regional levels.
4. Know the pathophysiology and patterns of injury and mortality to be expected from disasters of all mechanisms, including natural, biologic, chemical, nuclear/radiologic and explosive events.
5. Be familiar with the definition and goals of terrorism, the history of terrorist attacks, and the most common types of mass casualty disasters that result from terrorist actions.
6. Know the principles, categories, challenges, and the proper implementation and practice of mass casualty triage.
7. Be familiar with the terms and concepts that are unique to the medical management of mass casualties, including triage, surge capacity, crisis management, consequence management, situational awareness, decontamination, and critical mortality.
8. Understand the function and structure of Incident Command.
9. Be familiar with the definition, classifications, response phases and impediments to care of mass casualty disasters.
10. Understand the justification and methods for psychoemotional support and care of disaster casualties, their families, and responders.
11. Provide surgeons and other acute care providers with the resources for further education in specific areas of disaster management.
12. Be familiar with the importance and methods of record keeping for casualty tracking and post-event analysis.
13. Know the civilian and military assets available for support of local disaster responses at the regional, state and national levels.