Disaster Response Challenges: Lessons Learned for the Boston Metro-Region

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Increasingly, medical providers are being asked to respond to complex disasters, the spectrum of threats ranging from natural to man-made disasters, including terrorism.
Key Principles in Disaster Response:

- **Demand** for resources always exceeds the **supply** of resources in a MCI

- **EFFECTIVE** “Medical Surge” Capacity is essential in disaster response, both locally, nationally and internationally
National Disaster Medical System

- Federal “medical surge” capacity
- IMSuRTs - International Medical Surgical Response Teams (East, West, South)
- DMATs (Disaster Medical Assistance Teams)
International Medical/Surgical Response Teams

- Deployable, rapid assembly field hospital
- "Federalized" multi-disciplinary medical/surgical response teams
- Capacity for triage, initial stabilization, operative interventions, critical care and evacuation
Haiti Earthquake: January 12, 2010

- Greater than 200,000 dead
- Greater than 300,000 injured
- Greater than one million homeless
Mobile surgical and medical teams, able to provide a graded, flexible response to the need for medical care in a disaster, are important assets.
US Field Hospital

- 3000 patients
- 300 operations (conscious sedation + general anesthesia):
  - 50% orthopedics
  - 50% general surgery
EARTHQUAKE INJURIES
TRAUMA
IT'S A SMALL WORLD HOTEL

du HAITI
OBSTETRICS
Non-Earthquake Related Medical/Surgical Emergencies
INFECTIOUS DISEASES
Lessons from previous disasters are important in distinguishing “myths” (misconceptions) from “facts” (evidence-based data).
Disaster Myth #1:

- Disaster responders can utilize traditional organizational and command structures when participating in disaster response.
LESSONS LEARNED:

- The **Incident Command System (ICS)** is the accepted standard for all disaster response.

- **Functional** capacities, not titles, determine the organizational structure of the Incident Command System.
Disaster Myth #2:

- All disasters are different, especially terrorism.
Lessons Learned:

- Similar to the ABC’s of trauma care, disaster response includes basic elements that are similar in all disasters.
  - Medical concerns
  - Public Health concerns
ABCs of the Public Health Response to Disasters

- Water
- Food
- Security/safety
- Shelter
- Sanitation
- Transportation
- Communication
- Endemic and epidemic diseases
ABCs of the Medical Response to Disasters

- Search and rescue
- Triage and initial stabilization
- Definitive care
- Evacuation
Medical Surge

- Disaster management teams, including medical, must be based on “functional” capacities not professional titles.
Disaster Myth #3:

- Effective “surge capacity” is based on well-intentioned and readily available volunteers.
LESSONS LEARNED:

- Effective “surge” capacity requires preplanning and training.
- Responders must be able to care for routine emergencies/diseases as well as disaster-related injuries.
Training must include basics of disaster response (disaster triage, ICS, weapons of mass destruction, decontamination, etc.).
Disaster Myth #4:

- Disaster medical care is the same as conventional medical care.
Lesson Learned:

- Disaster medical care requires a **fundamental change** in the approach to the care of injured victims.

- “Altered Standards of Care”/ “Crisis Management”
Objective of *Conventional* Medical Care:

- Greatest good for the INDIVIDUAL PATIENT
Objective of Disaster Medical Care:

- Greatest good for the GREATEST NUMBER OF VICTIMS
Disaster Myth #5:

- Table top exercises suffice for disaster drills
Lessons Learned:

- Mass casualty drills must include actual "live" simulations
- Mass casualty drills must include 3 phases
Mass Casualty Drills:

- Preparation phase
- Exercise phase
- Patient treatment phase
Preparation Phase

- Clear definition of functional areas of responsibility that can be evaluated during the disaster drill.
Exercise Phase

- Objective evaluation of all key functional roles in the ICS
Patient Treatment Phase

- Triage
- Initial resuscitation
- Definitive medical care
- Evacuation
- Care of dead victims
Disaster Myth #6:

- Politics do not dictate disaster response
Lesson Learned:

- Politics, more than lack of personnel, supplies and equipment, limits the effectiveness of disaster preparedness and response to today’s complex disasters.
Medical Surge Capacity:

- Functional capacities, not titles.
- Flexible and modular response
- Preplanning and training essential
Good intentions and clinical expertise do not ensure effective use of “medical surge” during a disaster.

Pitfalls of disaster response must be avoided.