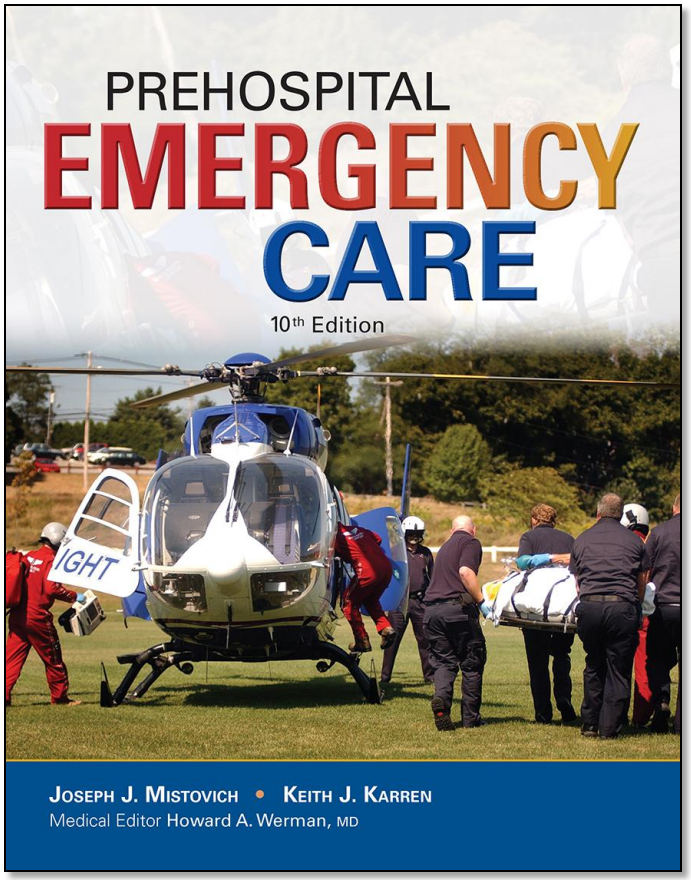
PREHOSPITAL EMERGENCY CARE

TENTH EDITION



CHAPTER 45

Multiple-Casualty Incidents and Incident Management

Learning Readiness

- EMS Education Standards, text p. 1215

Learning Readiness Objectives

- Please refer to page 1215 of your text to view the objectives for this chapter.

Learning Readiness Key Terms

- Please refer to page 1215 of your text to view the key terms for this chapter.

Setting the Stage

- Overview of Lesson Topics
  - Multiple-Casualty Incidents
  - National Incident Management System
  - Triage
  - Disaster Management

Case Study Introduction

EMTs Tom Hurley and Joe Meyer are the first EMS unit to arrive on the scene of a tour bus collision, in which the bus hit a bridge abutment. A half dozen patients with various injuries have made their way out of the bus. "Help us," says one man. "There are people dying in the bus."

Case Study

- What steps do Joe and Tom need to carry out to establish an organized response?
- How should the EMTs decide which patients should be treated first?

Introduction

- The number of patients needed to declare a multiple-casualty incident varies according to the resources available.
- Incident management, triage, and disaster response plans are needed to effectively respond to multiple-casualty incidents.

Multiple-Casualty Incidents

- An MCI is any event that places excessive demands on personnel and equipment, and typically involves three or more patients.
- A variety of events can lead to multiple casualties.

National Incident Management System

- NIMS provides for a consistent approach to managing disasters.
- The incident command system (ICS) is part of NIMS.
- NIMS provides for flexibility and standardization.

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National Incident Management System

- NIMS involves specialized training and preparedness.
- Relationships built during preparedness are key to effective response.

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Relationships developed during the preparedness phase of NIMS worked to the advantage of responders and agencies in the aftermath of Hurricane Katrina in 2005 as shown in this disaster triage and treatment sector. (© AP Photo/Dennis Paquin)

National Incident Management System

- An incident command system provides a standardized approach to on-scene management.

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The incident commander directs the response and coordinates resources at a multiple-casualty incident.

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National Incident Management System

- The purpose of NIMS is to ensure:
  - Safety of emergency responders and others
  - Achievement of tactical objectives
  - Efficient use of resources

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National Incident Management System

- Features of ICS
  - Use of common terminology and plain English
  - Common designations for all organizational resources
  - Manageable spans of control
  - Identification of incident facilities by common terminology

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National Incident Management System

- Features of ICS
  - Distinct titles are used
  - Incident action plans identify the objectives to be accomplished
  - Integrated communications approach
  - Accountability at all levels

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National Incident Management System

- Designated ICS sections
  - Command
  - Finance/administration
  - Logistics
  - Operations
  - Planning

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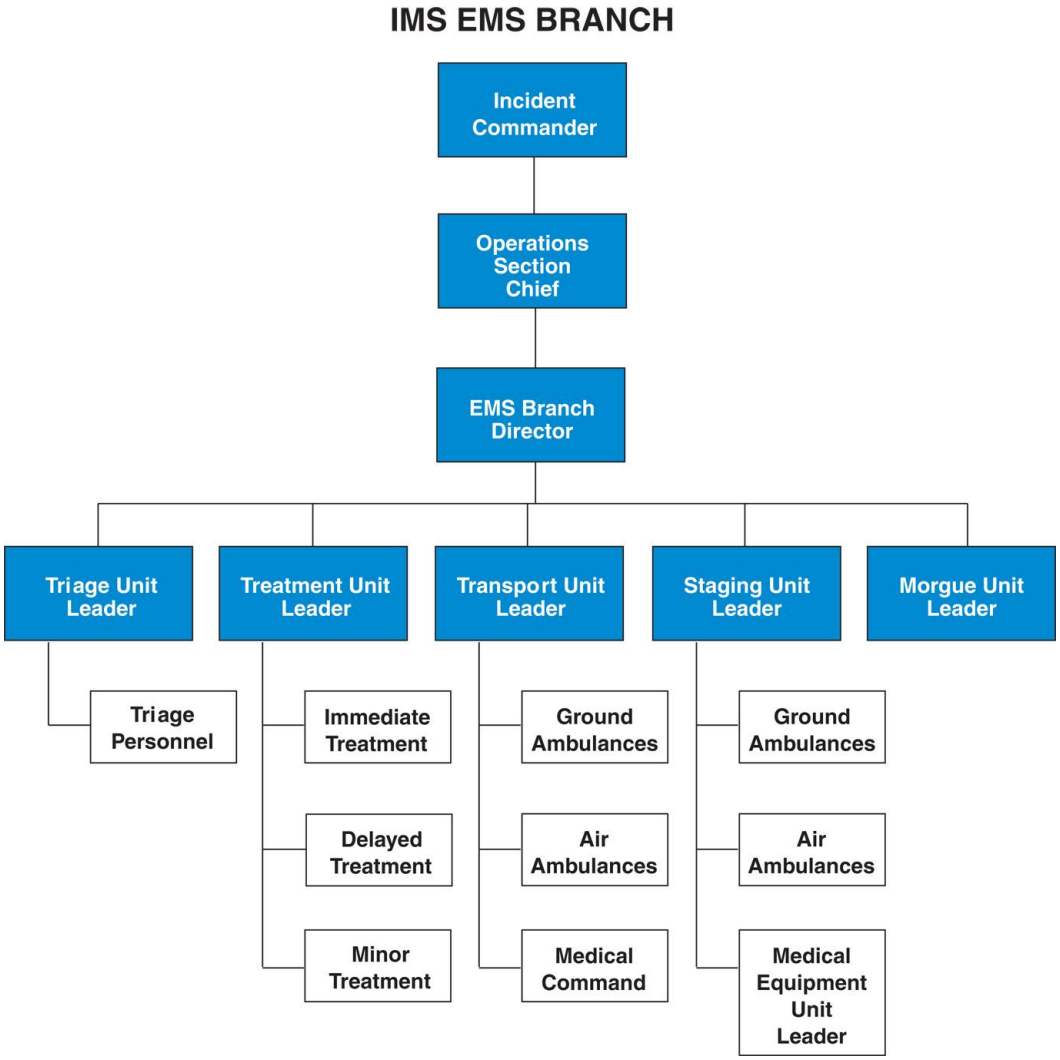
EMS branch organization for a major incident.



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National Incident Management System

- Incident command is initially assumed by the most experienced and senior person of the first arriving service.
- Incident command can then be transferred to the most qualified person in an orderly manner.

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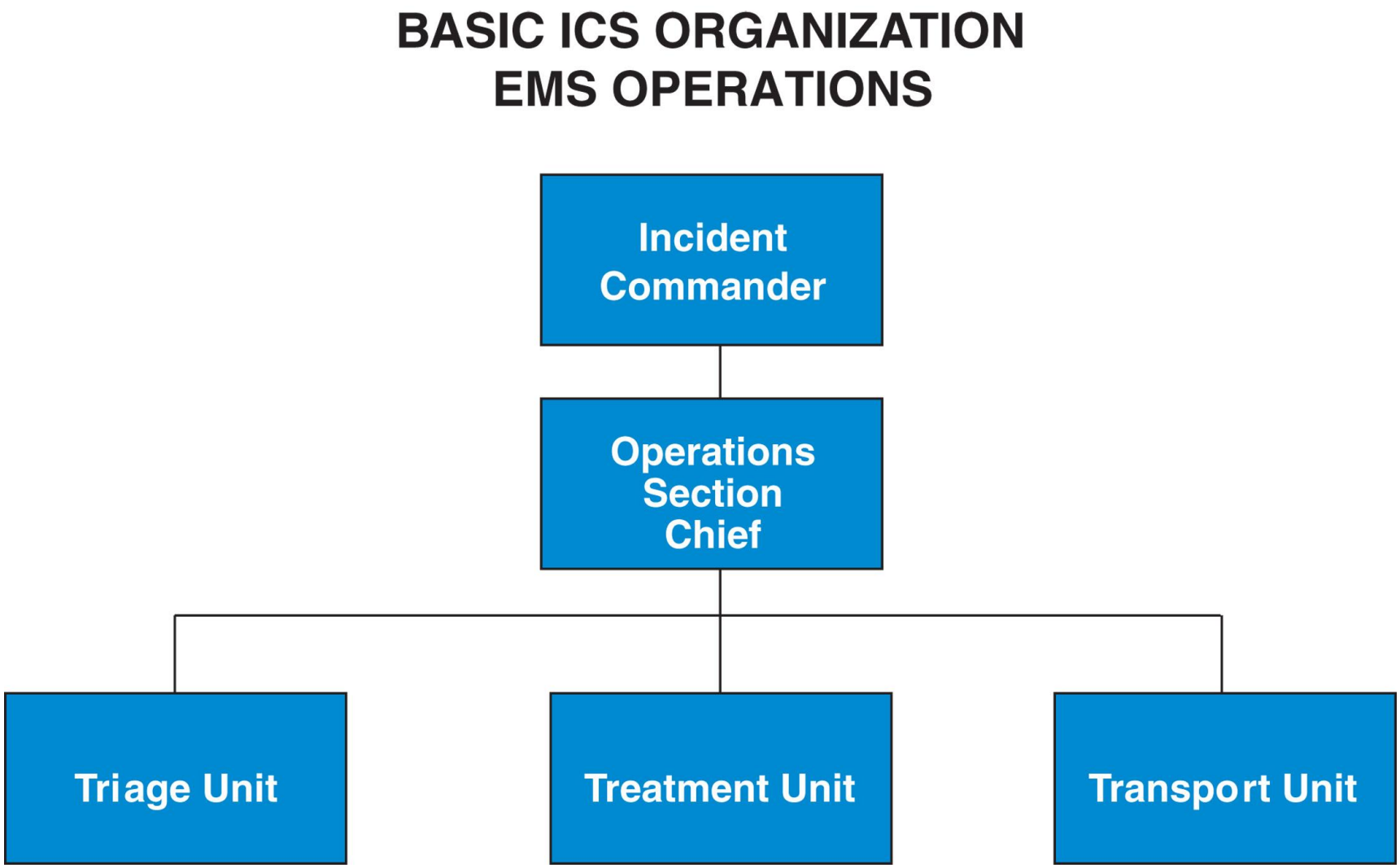
National Incident Management System

- Responsibilities of EMS units may include:
  - Triage unit
  - Treatment unit
  - Transport unit
  - Staging unit
  - Morgue unit

Basic ICS organization for a small- to medium-sized incident.



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Triage

- Triage is a system used to sort patients to determine the order in which they receive medical care or transportation.

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Triage sector at the Houston Astrodome where up to 16,000 evacuees from Hurricane Katrina stayed. (© Carlos Barria/Reuters/Corbis)

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Triage

- Primary triage occurs immediately upon arrival of the first EMS crew.
- Patients are tagged with a color-coded system to allow organization of their removal from the incident site.
- Patients are moved to the triage unit, where secondary triage is performed.

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Triage

- START is a triage system that uses universal colors to identify priority.
- It is used for patients older than 8 years of age and greater than 100 lbs.
- Each patient is triaged in less than 30 seconds.
- Patients are assessed for respiratory, perfusion, and mental status.

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Triage

- JumpSTART pediatric triage system
  - Accounts for pediatric differences in physiology
  - Used on any patient who appears to be a child

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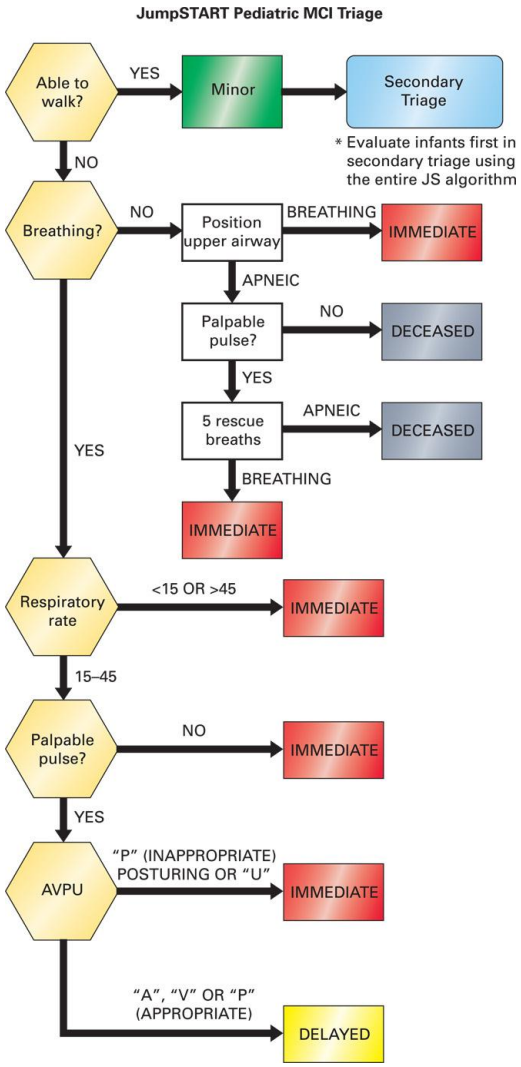
The JumpSTART system. (© Lou Romig, MD, FAAP, FACEP, 2002)



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Triage

- Patients are moved from the triage area to the treatment area.
- Only salvageable patients are treated.
- Provide only necessary care.

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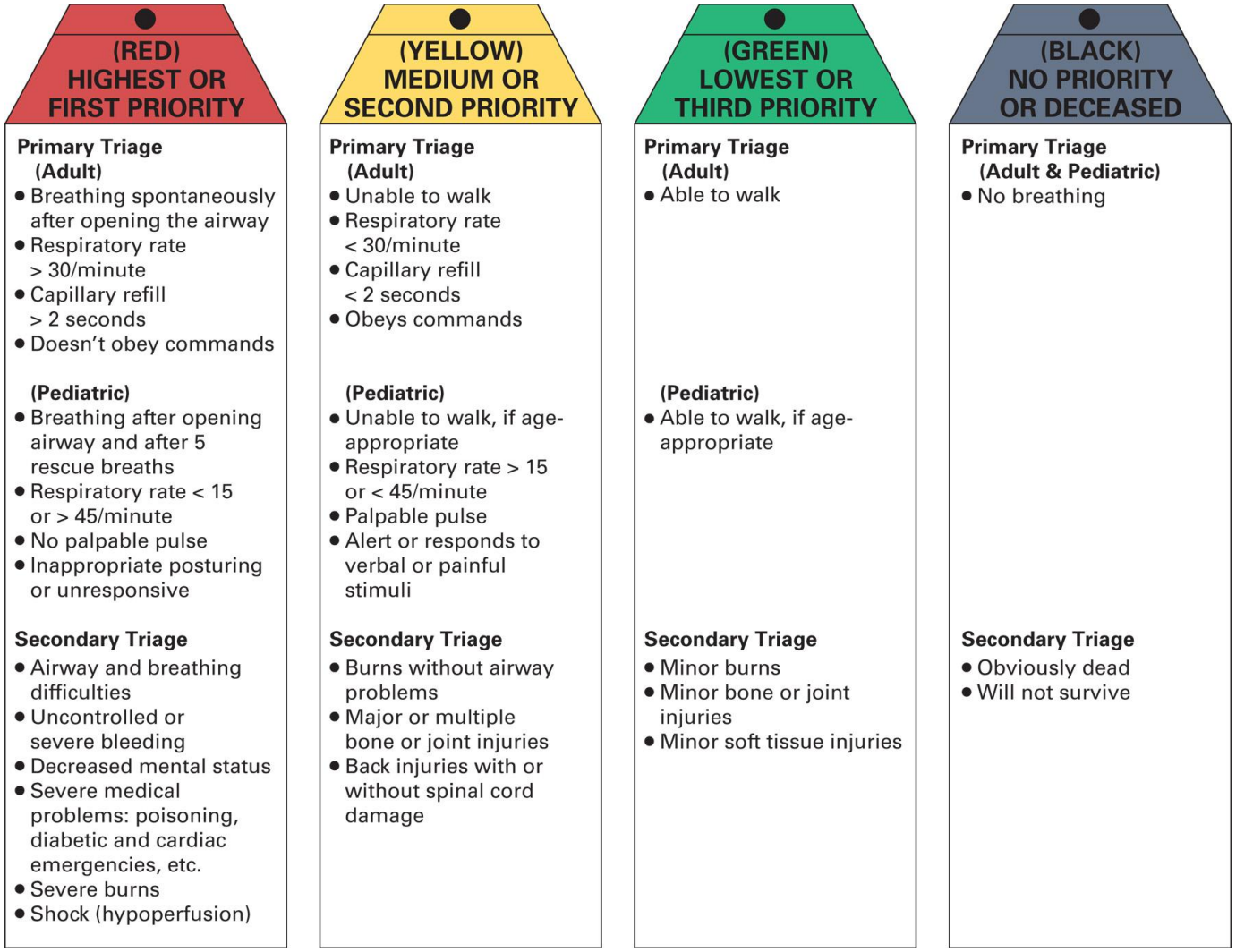
Triage summary.



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Triage

- The treatment, staging and transport unit leaders make decisions about priority of transport.
- The transport unit ensures that transportation is coordinated.

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Figure 45-10a EMS personnel must have a universally understood triage identification tag system as shown in photos (a), (b), and (c).

Figure 45-10b EMS personnel must have a universally understood triage identification tag system as shown in photos (a), (b), and (c).

Figure 45-10c EMS personnel must have a universally understood triage identification tag system as shown in photos (a), (b), and (c).

Triage

- The transport unit leader must consider:
  - Distribution of patients to each medical facility
  - Surge capacity of each hospital or facility

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Triage

- The transport unit leader must consider:
  - Need for transport to a specialty medical facility
  - Need for constant coordination and communication

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Triage

- Follow-through
  - When all patients have been transported, EMS personnel may be needed to assist at hospitals.

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Triage

- Reducing posttraumatic and cumulative stress
  - Try not to become overwhelmed by the incident, care for patients one by one.
  - Rest periods should be provided.

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Triage

- Reducing posttraumatic and cumulative stress
  - Each worker must be fully aware of his assignment.
  - Someone should circulate among personnel, looking for signs of exhaustion or stress.

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Firefighters and rescue workers take a break in a rehab unit near “Ground Zero,” New York City, September 12, 2001. (© Tim Fadek/Gamma)

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Triage

- Reducing posttraumatic and cumulative stress
  - Rescuers should be assigned tasks appropriate to their skill levels.
  - Food and drink should be provided.

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Triage

- Reducing posttraumatic and cumulative stress
  - Rescuers should be encouraged to talk amongst themselves.
  - Rescuers should have the opportunity to talk with trained counselors following the incident.

Click on the triage category most suitable for a 30-year-old patient with a leg amputated below the knee, who is awake, able to follow commands, has respirations of 24 per minute, and a weak, rapid radial pulse.

A. Green

B. Yellow

C. Red

D. Black

Case Study

Joe establishes initial incident command, and advises dispatch that there are 30 to 40 patients. Tom begins triage by asking anyone who is able to leave the bus on his own to do so. Left with nine patients on the bus, the first patient Tom comes to is a man in his 50s who is confused and having difficulty breathing.

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Case Study

- What additional information does Tom need in order to categorize this first patient?
- Once additional help arrives, what incident command sections will be established?
- How will EMS be organized within the ICS?

Disaster Management

- A disaster is a sudden catastrophic event that overwhelms natural order and causes great loss of property or life.
- There is a great disparity between casualties and resources.
- Disasters may be natural or man-made.

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Disaster Management

- Requirements of effective disaster assistance
  - Preparation of the entire community
  - Careful preplanning
  - Ability to quickly implement a plan
  - Effective communication among responders

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Disaster Management

- Requirements of effective disaster assistance
  - Application of triage skills
  - Ability to organize quickly and utilize all emergency personnel
  - Ability to adapt the plan to meet special conditions

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Disaster Management

- Requirements of effective disaster assistance
  - A contingency plan for shelter and transportation for the community
  - Doing the greatest good for the greatest number
  - A plan that avoids relocating the disaster from the scene to the hospital

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Disaster Management

- An evacuation and warning message should communicate the following:
  - The nature of the disaster, its estimated time of impact, and estimated severity
  - Safe routes out of the area
  - Destinations for those who evacuate

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Disaster Management

- Disaster communications systems
  - An effective system includes a backup system.
  - Establish details of the system ahead of time.
  - Appoint only one person who communicates with those outside the disaster area.

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Disaster Management

- Disaster communications systems
  - The designated communication person should stay in contact with hospitals and rescue units.
  - Area-wide communications are vital.
  - Provide an area where people can register concerning whereabouts and health status.

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Disaster Management

- Disaster communications systems
  - Make sure information about road conditions and alternative routes is constantly monitored and updated.
  - Monitor hospital status.
  - Do not allow vehicles en route to hospitals to communicate with hospitals except if an emergency occurs en route.

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Disaster Management

- Disaster communications systems
  - Individual rescuers should have individual portable radios to communicate with their command.
  - Include a mechanism of recording communications for later review.

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Disaster Management

- Psychological impact of disasters
  - Survivors suffer many negative emotions and physical effects.
  - Reactions depend on age, physical health, and emotional health.

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Disaster Management

- Guidelines for managing the psychological impact of disasters
  - Families of patients need and deserve accurate information.
  - Reunite families as soon as possible.
  - Group people with their families and neighbors.
  - Encourage people to do necessary chores.

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Disaster Management

- Guidelines for managing the psychological impact of disasters
  - Provide emotional structure and expectations for the emotionally injured.
  - Help patients confront the reality of the disaster.
  - Don't give false assurances.

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Disaster Management

- Guidelines for managing the psychological impact of disasters
  - If patients refuse help, assure them that accepting help is in no way a sign of weakness.
  - Identify high-risk patients, including those with no support, and target them for immediate crisis intervention.

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Disaster Management

- Guidelines for managing the psychological impact of disasters
  - Identify people who are in a unique position to help and recruit them for psychological emergency care.
  - Arrange for all those involved in the disaster to get follow-up care and support.

Case Study Conclusion

The first arriving fire personnel assume incident command, as Joe joins Tom in completing primary triage. An EMS supervisor is designated the EMS branch supervisor, as two arriving paramedics assume triage and treatment unit positions. Joe is then reassigned to the transport unit.

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Case Study Conclusion

There are seven immediate, 18 delayed, and ten minor patients. The patients are transported to three local hospitals.

Lesson Summary

- Response to MCIs requires standardized preplanning and training.
- NIMS was established to provide standardization of MCI response.
- The ICS identifies the authority and responsibilities of responders at an MCI.

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Lesson Summary

- Triage is a mechanism for sorting and prioritizing patients according to their injuries.
- Triage systems rely on color-coded tags.
- MCIs and disasters have profound psychological effects on survivors and responders.