

Emergency

Care and Transportation of the Sick and Injured



Section 7: Operations

37: Special Operations

Special Operations

37

Cognitive Objectives (1 of 4)

- 7-3.1 Explain the EMT-B's role during a call involving hazardous materials.
- 7-3.2 Describe what the EMT-B should do if there is reason to believe that there is a hazard at the scene.
- 7-3.3 Describe the actions that an EMT-B should take to ensure bystander safety.

Cognitive Objectives (2 of 4)

- 7-3.4 State the role the EMT-B should perform until appropriately trained personnel arrive at the scene of a hazardous materials situation.
- 7-3.5 Break down the steps to approaching a hazardous situation.
- 7-3.6 Discuss the various environmental hazards that affect EMS.

Cognitive Objectives (3 of 4)

- 7-3.7 Describe the criteria for a multiple-casualty situation.
- 7-3.8 Evaluate the role of the EMT-B in the multiple-casualty situation.
- 7-3.9 Summarize the components of basic triage.
- 7-3.10 Define the role of the EMT-B in a disaster operation.

Cognitive Objectives (4 of 4)

- 7-3.11 Describe basic concepts of incident management.
- 7-3.12 Explain the methods for preventing contamination to self, equipment, and facilities.
- 7-3.13 Review the local mass-casualty incident plan.

Psychomotor Objectives

- 7-3.16 Given a scenario of a mass-casualty incident, perform triage.

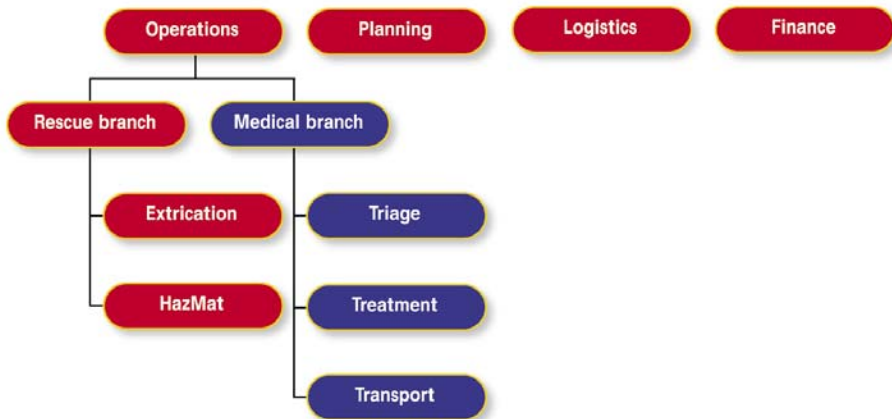
Additional Affective Objective*

1. Discuss the psychological impact of wanting to act but recognizing that a scene is not safe to enter.
*This is a noncurriculum objective.

Incident Command System

- ICS is used to help control, direct, and coordinate resources.
- It ensures clear lines of responsibility and authority.
- Incident commander has overall responsibility for the scene.
- Safety officer is designated to circulate among responders.

Structure of an Incident Command System



Information Officer

- All information to the public and news media originates at the command post.

Safety Officer

- Circulates through incident scene to ensure safety of responders and victims.
- Orders by the safety officer have full authority of the incident commander.

Sector Commanders

- Coordinate activities of specialty groups
 - EMS
 - Rescue
 - Fire

Sectors of Typical IC Structure

- Operations
- Planning
- Logistics
- Finance

Incident Command

- Command structure must be established early and expanded as needed.
- Incident command may vary in different communities.
- An EMT-B must not deviate from the directions and orders given by command.

Key Components of the ICS at a Mass-Casualty Incident (1 of 2)

- Command center
- Staging area
- Extrication area
- Decontamination area

Key Components of the ICS at a Mass-Casualty Incident (2 of 2)

- Triage area
- Treatment area
- Supply area
- Transportation area
- Rehabilitation area

National Incident Management System (1 of 2)

- Nationwide template to enable federal, state, and local governments and private-sector and non-governmental organizations to work together in an emergency

National Incident Management System (2 of 2)

- Applicable to all jurisdictions
- Utilized by a variety of disciplines
- Improves coordination and cooperation
- Built on existing incident management systems

Mass-Casualty Incidents

- Incidents involving three or more patients
- Places high demand on available resources
- May require mutual aid response



Triage (1 of 2)

- Triage is the sorting of two or more patients based on the severity of their conditions.
- Patients are ranked in the order of the severity of their conditions.
- Treatment priority is determined by rank.

Triage (2 of 2)

Triage is an essential component of operations at a mass-casualty incident.



Triage Categories



Triage Priorities

- Patients should be color coded early.
- Patients tagged red should be assessed in the treatment area.
- Patients in dangerous areas should be removed to a non-hazardous environment prior to triage.

Triage Procedures

- Rotate hospital destinations.
- Trauma center should receive the most critical patients.
- Utilize a transport officer to evenly distribute patients.



Disaster Management

- The role of the EMT-B is to respond when requested and report to incident command.
- A casualty collection area may be set up and staffed by nursing and medical staff with equipment.
- You may have to bring patients to this area.

Introduction to Hazardous Materials

- Any substance that is toxic, poisonous, radioactive, flammable, or explosive and can cause injury or death with exposure
- Responders must have special training before becoming involved with hazardous materials.

Hazardous Materials Situations

- A train or truck with a leaking substance
- A leak, fire, or other emergency at an industrial plant, refinery, or other storage facility
- A gas pipe leak or rupture
- Deterioration of underground fuel tanks
- Buildup of methane in sewers
- Car crash involving a ruptured gas tank

Recognition of Hazardous Materials (1 of 2)

- Warning signs
- Placards
- Labels

Hazardous Materials Warning Placards

CLASS 1 EXPLOSIVES Class 1.1, 1.2, or 1.3 Placard 694 kg (1,500 lbs) or more	CLASS 1 EXPLOSIVES 1.4 Class 1.4 Placard 694 kg (1,500 lbs) or more	CLASS 1 BLASTING AGENTS Class 1.5 Placard 694 kg (1,500 lbs) or more	CLASS 1 EXPLOSIVES 1.6 Class 1.6 Placard 694 kg (1,500 lbs) or more	CLASS 2 OXYGEN Class 2 Placard 694 kg (1,500 lbs) or more, gross weight of the compressed gas or refrigerant liquid
CLASS 2 FLAMMABLE GAS Class 2 Placard 694 kg (1,500 lbs) or more	CLASS 2 NON-FLAMMABLE GAS Class 2 Placard 694 kg (1,500 lbs) or more, gross weight	CLASS 2 POISON GAS Class 2.3 Placard 694 kg (1,500 lbs) or more	CLASS 3 FLAMMABLE Class 3 Placard 694 kg (1,500 lbs) or more	CLASS 3 GASOLINE Class 3 Placard 694 kg (1,500 lbs) or more, gross weight of the compressed gas or refrigerant liquid
CLASS 3 COMBUSTIBLE Class 3 Placard 694 kg (1,500 lbs) or more	CLASS 3 FUEL OIL Class 3 Placard 694 kg (1,500 lbs) or more	CLASS 4 HAZARDOUS LIQUID Class 4 Placard 694 kg (1,500 lbs) or more	CLASS 4 FLAMMABLE LIQUID Class 4 Placard 694 kg (1,500 lbs) or more	CLASS 4 DAMAGING WHEN WET Class 4.3 Placard 694 kg (1,500 lbs) or more
CLASS 5 OXIDIZER Class 5.1 Placard 694 kg (1,500 lbs) or more	CLASS 5 ORGANIC PEROXIDE Class 5.2 Placard 694 kg (1,500 lbs) or more	CLASS 6 HARMFUL Class 6 Placard 694 kg (1,500 lbs) or more	CLASS 6 POISON Class 6 Placard 694 kg (1,500 lbs) or more	CLASS 7 RADIOACTIVE Class 7 Placard 694 kg (1,500 lbs) or more
CLASS 8 CORROSIVE Class 8 Placard 694 kg (1,500 lbs) or more	CLASS 9 MISCELLANEOUS Class 9 Placard 694 kg (1,500 lbs) or more	CLASS 9 DANGEROUS Class 9 Placard 694 kg (1,500 lbs) or more		CLASS 9 SECONDARY RISK PLACARD Class 9 Placard 694 kg (1,500 lbs) or more
CLASS 9 MISCELLANEOUS Class 9 Placard 694 kg (1,500 lbs) or more	CLASS 9 MISCELLANEOUS Class 9 Placard 694 kg (1,500 lbs) or more	UN or NA Identification Numbers PLACARDS OR ORANGE PANELS 1090, 1093, 1017, 1993		UN or NA Identification Numbers PLACARDS OR ORANGE PANELS 1090, 1093, 1017, 1993

Response begins with identification!

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Response begins with identification!

Recognition of Hazardous Materials (2 of 2)

- Visible cloud or odd-looking smoke coming from an escaping substance
- A leak or spill from a tank, container, truck, or railroad car
- An unusually strong, noxious, acrid odor

HazMat Placards



The four-digit number that appears on the warning placard identifies the specific hazardous material.

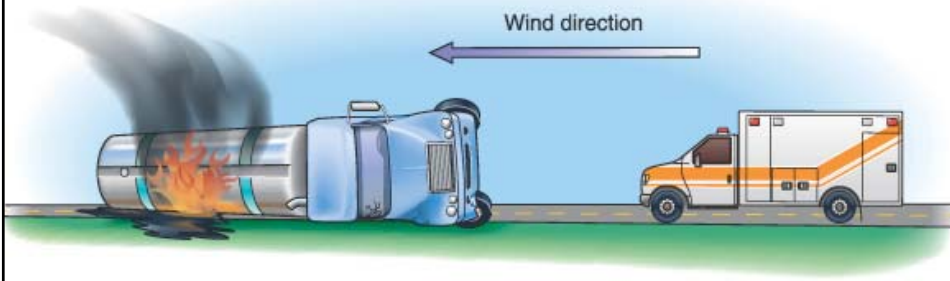
First Arrival

- Stop at safe distance.
- Call for a HazMat team.
- Stay out of danger zone.
- Gather information.
- Do not reenter the scene.
- Do not leave until cleared by HazMat.

Identifying Hazardous Materials

- Safety perimeters
- Uphill and upwind
- Efforts to ensure safety and survival of the masses.

HazMat Scene Safety



Approach a hazardous incident cautiously from upwind.

HazMat Scene Operations

- HazMat will determine the specific hazardous material involved.
- Only those trained in HazMat and wearing protective gear should enter the zone.
- As an EMT-B, your job is to remain in the designated treatment area.
- HazMat will bring patients to you.

Decontamination Area

- Designated area where contaminants are removed
- Anyone who leaves the hazard zone must pass through this area.
- Wait for the patients to be brought to you.

Classification of Hazardous Materials—Toxicity Levels

<i>Level</i>	<i>Health Hazard</i>	<i>Protection Needed</i>
0	Little or no hazard	None
1	Slightly hazardous	SCBA (level C suit) only
2	Slightly hazardous	SCBA (level C suit) only
3	Extremely hazardous	Full protection; with no exposed skin (level A or B suit)
4	Minimal exposure causes death	Special HazMat gear (level A suit)

Caring for Patients at a HazMat Incident

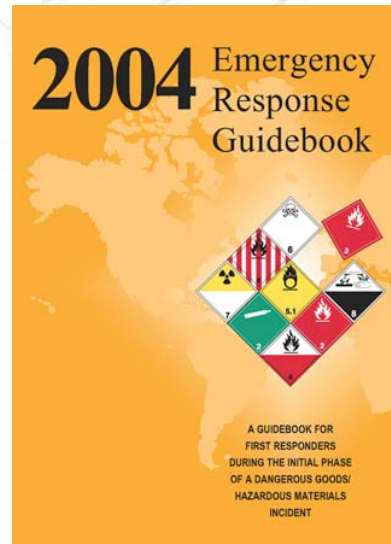
- Only essential treatment will take place in the hazard zone and decontamination area.
- Injuries should be treated as any other patient.
- Treatment for exposure will be mainly supportive.
- Initiate transport.

Special Care

- Some patients may need to be treated without full decontamination.
- Protect yourself with proper gear.
- Ensure the receiving hospital is aware patient has not been fully decontaminated.
- Ambulance will need to be decontaminated after transport.

Resources

- *Emergency Response Guidebook*
- Chemical Transportation Emergency Center (CHEMTREC)
– 1-800-424-9300



Personal Protective Equipment Levels

- Level A—Fully encapsulated, chemical-resistant protective clothing
- Level B—Nonencapsulated protective clothing with respiratory protection
- Level C —Nonpermeable clothing, eye protection, filtering face mask
- Level D —Work uniform; minimal protection

Four Levels of Protection



Level A



Level B



Level C



Level D