

3.3.5.3 EMS Operations at HazMat Incidents



YOUR ORGANIZATION
STANDARD OPERATING PROCEDURES/GUIDELINES

TITLE: EMS Operations at HazMat Incidents

SECTION/TOPIC: Special EMS Operations

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PREPARED BY:

APPROVED BY:

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Preparer

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Approver

These SOPs/SOGs are based on FEMA guidelines FA-197

1.0 POLICY REFERENCE

CFR

NFPA

NIMS

2.0 PURPOSE

This standard operating procedure/guideline addresses emergency decontamination of victims and team members, patient care and treatment, transport considerations, personal protective equipment.

3.0 SCOPE

This SOP/SOG pertains to all personnel in this organization.

4.0 DEFINITIONS

These definitions are pertinent to this SOP/SOG.

5.0 PROCEDURES/GUIDELINES & INFORMATION

5.1 Emergency Decontamination of Victims and Team Members:

Hazard Sector shall appoint an HMRT member as Decontamination Officer.

1. The Decontamination Officer shall determine the need for decontamination, and if

SOP Center

- required, the optimal procedure to utilize for the hazardous materials involved.
2. The Decontamination Officer shall be responsible for setting up and making operational a decontamination station.
 3. The Decontamination Officer may appoint additional HMRT personnel to assist him/her. Fire department personnel may also be utilized during initial set up of the station.
 4. The Decontamination Officer may request additional resources through Hazard Sector.
 5. The Decontamination Officer will review the following:
 - Number of personnel that will require decontamination.
 - Type and extent of contamination anticipated.
 - Personal protective equipment required for personnel conducting decontamination activities.
 - Potential signs and symptoms of personnel overexposure to the hazardous materials involved.
 - Disposition of decontamination water, decontaminated equipment and clothing.
 - Termination of decontamination activities.
 6. The Decontamination Officer shall confer with the Medical Officer regarding medical monitoring of decontaminated personnel.
 7. The Decontamination Officer shall ensure that HMRT members know and understand the decontamination station set-up and procedures that will be utilized.
 8. The Decontamination Officer shall report to Hazard Sector when the decontamination station is operational.

5.2 Patient Care and Treatment:

MEDICAL MANAGEMENT

1. Whether the agent is chemical, biological or radiological, victims of a Weapons of Mass Destruction/terrorist incident may present injuries caused by explosions, fire, falls, or other mechanisms not directly related to the hazard agent itself. These can include cardiac symptoms. As appropriate, treatment of such injuries should be initiated in the field.
2. For victims in a chemical incident, treatment protocols will follow established agent specific guidelines. For nerve agents (sarin, soman, VX) Mark I Kits are used for adults; atropine injections for pediatric. Oxygen is administered for choking agents. Amyl Nitrate (or sodium nitrite or sodium thiosulfate) is given for Blood agents. Blister agents are given supportive therapy for blisters plus pain medication.
3. For biological agent victims, it is possible that no symptoms may be present. If an agent is positively identified, patients will be decontaminated and moved to hospitals or other shelters for quarantine or observation.

4. Victims of a radiological agent are unlikely to exhibit specific symptoms at the scene. Exposure to ionizing radiation produces tissue and cell changes that are slow onset. Radioactive particles are easily removed from skin and clothing. **RADIATION EXPOSURE ALONE IS NOT A MEDICAL EMERGENCY.**
5. Treatment and triage are responsibilities of the IMS Medical Sector/Branch with information from Hazmat. Extrication from the Hot Zone and decontamination is part of the Hazmat Sector/Branch. In a small incident, Transportation may be a sector under the Medical Branch; with a large number of victims.
6. Command will assess scene stability and determine whether medical sector/branch is located at the scene or away from the scene.

5.3 Transport Considerations:

Transportation

1. The Transportation Sector/Branch moves patients from the scene to receiving hospitals or to shelters as assigned by Command.
 - Only patients who have been decontaminated will be transported.
 - Zones will be designated in or near treatment areas to serve as collection points for patients to be transported.
2. Ambulatory victims, once given initial assessment, decontamination and treatment, can be transported en mass on designated vehicles (busses and other multiple patient transports). Patients whose condition merits will be transported to medical facilities via ambulance. If appropriate and such transport will not further disperse the agent, air transportation may be used.
3. Decontaminated, uninjured patients may be released or transferred to mass shelter locations as determined to be appropriate by Command. Names and contact information will be recorded for all released individuals for any necessary post-incident follow-up as well as behavioral health interviews.
4. Some civilians present at the scene may not have experienced injury or exposure to a chemical agent, and may not require decon. Witnesses may fall into this category. After medical review, Command may direct such people to be documented and interviewed by Police Sector. Behavioral Health personnel may also interview such victims to offer assistance.
5. Movement and loading of vehicles at the scene will be managed by Transportation Sector/Branch, with security/support from the Police Department as

appropriate. Acquisition of additional vehicles and equipment will be handled through the Resource Sector/Branch.

6. If the local hospital system is overwhelmed early in an incident, or treatment requires it, patients may be moved to the NDMS Patient Reception Center (PRC). Patients will not be transported from the scene until the Transportation Officer has confirmed that the PRC is operational. The chain of treatment will be continued at the PRC until patients are placed on aircraft. Patients transferred to NDMS will be tracked through their triage tags.

5.4 Personal Protective Equipment:

The primary exposure routes are (1) inhalation (2) ingestion (3) absorption and (4) injection. Proper selection of personal protective equipment (PPE) must include consideration of the exposure routes of the materials involved. There are 4 levels of personal protective equipment (PPE).

- (1) Level A – Highest level of respiratory and skin protection
 - i. (Operations Level personnel are not permitted to work in Level A PPE)
- (2) Level B – High level of respiratory protection; less skin
- (3) Level C – Air Purifying Respirator (APR); modest skin protection
- (4) Level D – Ordinary work uniform (Firefighter turnout gear is considered Level D PPE)

Determining the appropriate level of PPE for a hazmat incident involves the evaluation of several factors.

- (1) Physical and chemical properties of the materials involved.
- (2) Exposure routes of the materials involved.
- (3) Type of operations being conducted.
- (4) Nature of the incident.