Hazardous Materials and Terrorist Incident Response Curriculum Guidelines

Emergency Medical Service/ Hazardous Materials/WMD Basic Life Support (BLS) Responder

Introduction

Emergency medical service (EMS) personnel at the EMS/HM Basic Life Support (BLS) responder level, in addition to their BLS or ALS certification, shall be trained to meet the requirements of the emergency responder at the Awareness level, as defined in OSHA 1910.120(q)(6)(i) and/or as defined in NFPA 472, *Chapter 4: Competencies for Awareness Level Personnel*, and all the competencies recommended in this section. In addition, EMS/HM BLS responders shall meet the training requirements of local occupational health and safety regulatory agencies or EPA, as appropriate for their jurisdiction.

In addition to being trained to the first responder awareness level, emergency medical service personnel who respond to hazardous materials incidents should be trained and receive regular continuing education to maintain competency in three areas: emergency medical technology, hazardous materials, and specialized topics such as hazardous materials toxicology, as approved by the authority having jurisdiction. The training program should be a comprehensive, competency-based presentation of the required subject material with applicable hands-on sessions that demonstrate the newly acquired skills.

Definition

EMS/HM BLS responders are persons who, in the course of their normal duties, may be called on to perform patient care activities in the cold zone at a hazardous materials incident. EMS/HM BLS responders shall provide pre-hospital care only to those individuals who no longer pose a significant risk of secondary contamination, such as decontaminated patients in the cold zone.

Training Audience

EMS/HM BLS training is appropriate for all emergency medical technicians, paramedics, and other health professionals who, in the course of their normal duties, may respond to hazardous materials emergencies either as a first responder or as on-site cold zone support to the incident command structure at an incident scene.

Related Health, Safety, and Performance Standards

- OSHA 29 CFR 1910.120
- EPA 40 CFR 311
- NFPA 472
- NFPA 473
- NFPA 1561 Standards on Fire Department Incident Management System, 1995 Edition
- U.S. Fire Administration Emergency Incident Rehabilitation Guide, FA-114

Recognized U.S. Department of Transportation, State, regional, or local training curricula should constitute the entry-level EMS preparation for continuing hazardous materials training. When a hazardous materials incident occurs, all EMS/HM BLS personnel responding should have been trained to the emergency medical technician A level or equivalent.

Methodology Recommendations

EMS/HM BLS Responder training should include a combination of traditional classroom lecture with small-group activities, field exercises involving working with the incident command structure in simulated emergencies, and hands-on psychomotor skill training. Content instruction should focus on contamination hazards, treatment procedures, and incident scene roles and responsibilities. Trainee activities should focus on assessment and analysis of hazards and determination of appropriate procedures. Skill training should focus on implementing procedures. Written and practical examinations are highly recommended to measure achievement in initial training and refresher programs and to support the employer's responsibility that all EMS personnel are trained to competency before being called on to perform at emergencies. Table-top and field exercises should focus on acting out incident scene roles and on implementing procedures in a field environment. Refresher training should be conducted on a yearly basis and focus on technical updates to changes in response protocols, SOP's, and renewal of individual response skills.

The following resources are recommended to supplement the training process:

- Local Emergency Response Plan
- Standard Operating Procedures
- Hawley's Condensed Chemical Dictionary, 11th Edition
- OSHA 29 CFR 1910.120
- Hazardous Chemical Data (U.S. Government)
- National Institute for Occupational Safety and Health (NIOSH) Pocket Guide to Chemical Hazards (U.S. Government)
- Emergency Action Guides (Association of American Railroads)
- NFPA 471, 472, and 473
- Handbook of Toxic and Hazardous Chemicals and Carcinogens
- Toxic Gases: First Aid and Medical Treatment
- Haz/Mat Injuries (Bradford/Stutz)

Summary: Emergency Medical Service/ Hazardous Materials/ WMD Basic Life Support (BLS) Responder

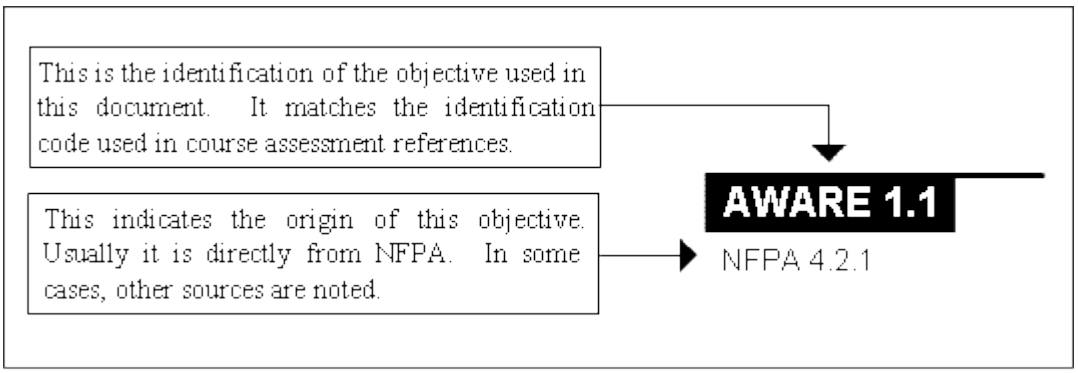
Audience:	Large training audience. All paramedics and emergency medical technicians who respond to emergencies, including all transportation accidents, that may involve hazmat.
Pre-Req:	Awareness training. BLS or ALS certification.
Training:	Classroom, physical skills lab, and simulator/field instruction, with emphasis on decision making and treatment. Competencies: • Assessing incident scene hazards and risks of patient secondary contamination. • Incident scene response planning, including determining personal protective equipment needs and defining roles and responsibilities of EMS BLS responder. • Ability to perform EMS/HM BLS patient preparation, care, preparation for transport, and patient transport as appropriate. • Ability to perform medical support of HM incident response personnel. • Ability to perform post-incident EMS reporting, documentation, and follow-up
Refresher:	Technical updates. Changes in response protocols and incident command system SOP's. Renewal and retesting of incident scene decision making and warm zone decontamination and treatment skills.

Recommended Training Objectives

The following training objectives are recommended for emergency medical service/hazardous materials Level 1 responder. The primary source for this material is NFPA 473: *Standard for Competencies for EMS Personnel Responding to Hazardous Materials Incidents/Weapons of Mass Destruction Incidents*, Chapter 4 *Competencies for Hazardous Materials/WMD Basic Life Support (BLS) Responders*.

In general, these recommended objectives are comparable in scope and concept to the general requirements of OSHA that all responding personnel be properly trained to perform their assigned roles in a hazardous materials emergency.

Objective Identification Legend



BLS Responder

BLS 1. - Analyzing the Hazardous Materials Incident

BLS - 1.1.

NFPA 4.2.1

Surveying Hazardous Materials/WMD Incidents

Given scenarios of hazardous materials/WMD incidents, the BLS level responder shall assess the nature and severity of the incident as it relates to anticipated or actual EMS responsibilities at the scene.

BLS - 1.1.1.

NFPA 4.2.1.1

Given examples of the following types of containers, the BLS level responder shall identify the potential mechanisms of injury/harm and possible treatment modalities:

1. Pressure
2. Nonpressure
3. Cryogenic
4. Radioactive

BLS - 1.1.2.

NFPA 4.2.1.2

Given examples of the nine U.S. Department of Transportation (DOT) hazard classes, the BLS level responder shall identify possible treatment modalities associated with each hazard class.

BLS - 1.1.3.

NFPA 4.2.1.3

Given examples of various hazardous materials/WMD incidents at fixed facilities, the BLS level responder shall identify the following available health-related resource personnel:

1. Environmental health and safety representatives
2. Radiation safety officers
3. Occupational physicians and nurses
4. Site emergency response teams
5. Product or container specialists

BLS - 1.1.4.

NFPA 4.2.1.4

Given various scenarios of hazardous materials/WMD incidents, the BLS level responder, working within an incident command system, shall evaluate the off-site consequences of the release based on the physical and chemical nature of the released substance and the prevailing environmental factors, to determine the need to evacuate or to shelter in place affected persons.

BLS - 1.1.5.

NFPA 4.2.1.5

Given the following biological agents, the BLS level responder shall define the signs and symptoms of exposure and the likely means of dissemination:

1. Variola virus (smallpox)
2. Botulinum toxin
3. E. coli O157:H7
4. Ricin toxin
5. B. anthracis (anthrax)
6. Venezuelan equine encephalitis virus
7. Rickettsia
8. Yersinia pestis (plague)
9. Tularemia
10. Viral hemorrhagic fever
11. Other CDC Category A, B, or C-listed organism

BLS - 1.1.6.

NFPA 4.2.1.6

Given examples of various types of hazardous materials/WMD incidents involving toxic industrial chemicals (TICs) and toxic industrial materials (TIMs) e.g., corrosives, reproductive hazards, carcinogens, nerve agents, flammable and/or explosive hazards, blister agents, blood agents, choking agents, and irritants), the BLS level responder shall determine the general health risks to patients exposed to those substances in the case of any release with the following:

1. A visible cloud
2. Liquid pooling
3. Solid dispersion

BLS - 1.2.

NFPA 4.2.1.7

Determining If a Hazardous Materials/WMD Incident Is an Illicit Laboratory Operation

Given examples of hazardous materials/WMD incidents involving illicit laboratory operations, BLS level responders assigned to respond to illicit laboratory incidents shall identify the potential drugs/WMD being manufactured.

BLS - 1.2.1.

NFPA 4.2.1.7(1)

Given examples of illicit drug manufacturing methods, describe the operational considerations, hazards, and products involved in the illicit process.

BLS - 1.2.2.

NFPA 4.2.1.7(2)

Given examples of illicit chemical WMD methods, describe the operational considerations, hazards and products involved in the illicit process.

BLS - 1.2.3.

NFPA 4.2.1.7(3)

Given examples of illicit biological WMD methods, describe the operational considerations, hazards, and products involved in the illicit process.

BLS - 1.2.4.

NFPA 4.2.1.7(4)

Given examples of illicit laboratory operations, describe the potential booby traps that have been encountered by response personnel

BLS - 1.2.5.

NFPA 4.2.1.7(5)

Given examples of illicit laboratory operations, describe the agencies that have investigative authority and operational responsibility to support the response.

BLS - 1.3.

NFPA 4.2.1.8

Determining Potential Patient Outcomes of Exposure to Radiation

Given examples of a hazardous materials/WMD incident involving radioactive materials, including radiological dispersion devices, the BLS level responder shall determine the probable health risks potential patient outcomes.

BLS - 1.3.1.

NFPA 4.2.1.8(1)

Determine the most likely exposure pathways for a given radiation exposure, including inhalation, ingestion, and direct skin exposure.

BLS - 1.3.2.

NFPA 4.2.1.8(2)

Identify the difference between radiation exposure and radioactive contamination and the health concerns associated with each.

BLS - 1.3.3.

NFPA 4.2.1.9

Given three examples of pesticide labels and labeling, the BLS level responder shall use the following information to determine the associated health risks:

1. Hazard statement
2. Precautionary statement
3. Signal word
4. Pesticide name

BLS - 1.4.

NFPA 4.2.2

Collecting and Interpreting Hazard and Response Information.

The BLS level responder shall obtain information from the following sources to determine the nature of the medical problem and potential health effects:

1. Hazardous materials databases
2. Clinical monitoring
3. Reference materials
4. Technical information centers (e.g., CHEMTREC, CANUTEC, and SETIQ) and local state and federal authorities.
5. Technical information specialists
6. Regional poison control centers

BLS - 1.5.

NFPA 4.2.3

Establishing and Enforcing Scene Control Procedures

Given two scenarios involving hazardous materials/WMD incidents, the BLS level responder shall identify how to establish and enforce scene control, including control zones and emergency decontamination, and communications between responders and to the public.

BLS - 1.5.1.

NFPA 4.2.3(1)

Identify the procedures for establishing scene control through control zones.

BLS - 1.5.2. NFPA 4.2.3(2)	Identify the criteria for determining the locations of the control zones at hazardous materials/WMD incidents.
BLS - 1.5.3. NFPA 4.2.3(3)	Identify the basic techniques for the following protective actions at hazardous materials/WMD incidents: • Evacuation • Sheltering-in-place protection
BLS - 1.5.4. NFPA 4.2.3(4)	Demonstrate the ability to perform emergency decontamination
BLS - 1.5.5. NFPA 4.2.3(5)	Identify the items to be considered in a safety briefing prior to allowing personnel to work at the following: • Hazardous materials incidents • Hazardous materials/WMD incidents involving criminal activities.
BLS - 1.5.6. NFPA 4.2.3(2)	Identify the procedures for ensuring coordinated communication between responders and to the public.

BLS 2. - Planning the Response

BLS - 2.1. *NFPA 4.3.1.1(1) – (3)*	Identifying High Risk Areas for Potential Exposures The BLS level responder, given an events calendar and pre-incident plans, which can include the local emergency planning committee plan, as well as the agency's emergency response plan and standard operating procedures (SOPs), shall identify the venues for mass gatherings, industrial facilities, potential targets for terrorism, and any other location where an accidental or intentional release of a harmful substance can pose an unreasonable health risk to any person in the local geographical area as determined by the AHJ and shall identify the following: 1. Locations where hazardous materials/WMD are used, stored, or transported 2. Areas and locations that present a potential for a high loss of life or rate of injury in the event of an accidental or intentional release of hazardous materials/WMD 3. External factors that may complicate a hazardous materials/WMD incident

BLS - 2.2.

NFPA 4.3.2.1(1)-(10)

Determining the Capabilities of the Local Hospital Network

The BLS level responder shall identify the following methods and vehicles available to transport hazardous materials patients and shall determine the location and potential routes of travel to the medically appropriate local and regional hospitals, based on the patients' needs:

1. Adult trauma centers
2. Pediatric trauma centers
3. Adult burn centers
4. Pediatric burn centers
5. Hyperbaric chambers
6. Established field hospitals
7. Dialysis centers
8. Supportive care facilities
9. Forward deployable assets
10. Other specialty hospitals or medical centers

BLS - 2.2.1.

NFPA 4.3.2.2

Given a list of receiving hospitals in the region, the BLS level responder shall describe the location, availability, and capability of hospital-based decontamination facilities.

BLS - 2.2.2.

NFPA 4.3.2.3

The BLS level responder shall describe the BLS protocols and SOPs at hazardous materials WMD incidents as developed by the AHJ and the prescribed role of medical control and poison control centers, as follows:

1. During mass casualty incidents
2. Where exposures have occurred
3. In the event of disrupted radio communications

BLS - 2.2.3.

NFPA 4.3.2.4

The BLS level responder shall identify the formal and informal mutual aid resource (hospital- and non-hospital-based) for the field management of multi-casualty incidents, as follows:

1. Mass-casualty trailers with medical supplies
2. Mass-decedent capabilities
3. Regional decontamination units
4. Replenishment of medical supplies during long-term incidents
5. Rehabilitation units for the EMS responders
6. Replacement transport units for vehicles lost to mechanical trouble, collision, theft, and contamination

BLS - 2.2.4.

NFPA 4.3.2.5

The BLS level responder shall identify the special hazards associated with inbound and outbound air transportation of patients exposed to hazardous materials/WMD.

BLS - 2.3.

NFPA 4.3.3.1(1)-(2)

Identifying Incident Communications

Given an incident communications plan, the BLS level responder shall identify the following:

1. Medical components of the communications plan
2. Ability to communicate with other responders, transport units, and receiving facilities

BLS - 2.3.1.

NFPA 4.3.3.2

Given examples of various patient exposure scenarios, the BLS level responder shall describe the following information to be transmitted to the medical or poison control center or the receiving hospital prior to arrival:

1. The name of the substance(s) involved
2. Physical and chemical properties of the substance(s) involved
3. Number of victims being transported
4. Age and sex of transported patient
5. Patient condition and chief complaint
6. Medial history
7. Circumstances and history of the exposure, such as duration of exposure and primary route of exposure
8. Vital signs, initial and current
9. Symptoms described by the patient, initial and current
10. Presence of associated injuries, such as burns and trauma
11. Decontamination status
12. Treatment rendered or in progress
13. Patient response to treatment(s)
14. Estimated time of arrival

BLS - 2.4.

NFPA 4.3.4.1

Identifying the Role of the BLS Level Responder

Given scenarios involving hazardous materials/WMD, the BLS level responder shall identify his or her role during hazardous materials/WMD incidents as specified in the emergency response plan and SOPs developed by the AHJ.

BLS - 2.4.1.

NFPA 4.3.4.1(1)

Describe the purpose, benefits, and elements of the incident command system as it relates to the BLS level responder.

BLS - 2.4.2.

NFPA 4.3.4.1(2)

Describe the typical incident command structure, for the emergency medical component of a hazardous materials/WMD incident as specified in the emergency response plan and SOPs, as developed by the AHJ.

BLS - 2.4.3.

NFPA 4.3.4.1(3)

Demonstrate the ability of the BLS level responder to function within the incident command system.

BLS - 2.4.4.
NFPA 4.3.4.1(4)

Demonstrate the ability to implement an incident command system for a hazardous materials/WMD incident where an ICS does not currently exist.

BLS - 2.4.5.
NFPA 4.3.4.1(5)

Identify the procedures for requesting additional resources at a hazardous materials/WMD incident.

BLS - 2.4.6.
NFPA 4.3.4.2

The hazardous materials/WMD BLS responder shall describe his or her role within the hazardous materials response plan developed by the AHJ or identified in the local emergency response plan, as follows:

1. Determine the toxic effect of hazardous materials/WMD
2. Estimate the number of patients.
3. Recognize and assess the presence and severity of symptoms.
4. Take and record vital signs.
5. Determine resource maximization and assessment.
6. Assess the impact on the health care system.
7. Perform appropriate patient monitoring.
8. Communicate pertinent information.

BLS 3. - Implementing the Planned Response

BLS - 3.1.
NFPA 4.4.1

Determining the Nature of the Incident/Providing Medical Care

The BLS level responder shall demonstrate the ability to identify the mechanisms of injury or harm and the clinical implications and provide emergency medical care to those patients exposed to hazardous materials/WMD agent by completing the following tasks:

BLS - 3.1.1.
NFPA 4.4.1(1)

Determine the physical state of the released substance, in addition to the environmental influences surrounding the release, as follows:

1. Solid
2. Liquid
3. Gas
4. Vapor
5. Dust
6. Mist
7. Aerosol

BLS - 3.1.2.
NFPA 4.4.1(2)

Identify potential routes of exposure and correlate those routes of exposure to the physical state of the released substance, to determine the origin of the illness or injury, as follows:

1. Inhalation
2. Absorption
3. Ingestion
4. Injection

BLS - 3.1.3.

NFPA 4.4.1(3)

Describe the potential routes of entry into the body, the common signs and symptoms of exposure, and the BLS treatment options approved by the HAJ for exposure (s) to the following classification of substances:

1. Corrosives
2. Pesticides
3. Chemical asphyxiants
4. Simple asphyxiants
5. Organic solvents
6. Nerve agents
7. Vesicants and blister agents
8. Blood agents
9. Choking agents
10. Irritants
11. Biological agents and toxins
12. Incapacitating agents
13. Radiological materials
14. Nitrogen compounds
15. Opiate compounds
16. Flourine compounds
17. Phenolic compounds

BLS - 3.1.4.

NFPA 4.4.1(4)

Describe the basic toxicological principles relative to assessment and treatment of persons exposed to hazardous materials, including the following:

1. Acute and delayed effects
2. Local and systemic effects
3. Dose-response relationship

BLS - 3.1.5.

NFPA 4.4.1(5)

Given examples of various hazardous materials/WMD, define the basic toxicological terms as applied to patient care:

1. Threshold limit value-time-weighted average (TLV-TWA)
2. Permissible exposure limit (PEL)
3. Threshold limit value – short-term exposure limit (TLV-STEL)
4. Immediately dangerous to life and health (IDLH)
5. Threshold limit value – ceiling (TLV-C)
6. Parts per million/ parts per billion/ parts per trillion (ppm/ ppb/ ppt)

BLS - 3.2.

NFPA 4.4.1(6)

Evaluating Progress and Effectiveness of Medical Care Providers

Given examples of hazardous materials/WMD incidents with exposed patients, evaluate the progress and effectiveness of the medical care provided at a hazardous materials/WMD incident to ensure that the overall incident response objectives, along with patient care goals.

BLS - 3.2.1.

NFPA 4.4.1(6)(a)

Locate and track all exposed patients at a hazardous materials/WMD incident, from triage and treatment to transport to a medically appropriate facility.

BLS - 3.2.2. NFPA 4.4.1(6)(b)	Review the incident objectives at periodic intervals to ensure that patient care is being carried out within the overall incident action plan.
BLS - 3.2.3. NFPA 4.4.1(6)(c)	Ensure that the required incident command system forms are completed, along with the patient care forms, during the course of the incident.
BLS - 3.2.4. NFPA 4.4.1(6)(d)	Evaluate the need for trained and qualified EMS personnel, medical equipment, transport units, and other supplies based on the scope and duration of the incident.

BLS - 3.3.

NFPA 4.4.2(1)

Determine if Decontamination Was Performed

Given the emergency response plan and SOPs developed by the AHJ, the BLS level responder shall determine if patient decontamination activities were performed prior to accepting responsibility and transferring care of exposed patients.

BLS - 3.4.

NFPA 4.4.2(2)

Determine the Need and Location for Patient Decontamination

Given the emergency response plan and SOPs developed by the AHJ, the BLS level responder shall determine the need and location for patient decontamination, including mass casualty decontamination, in the event none has been performed prior to arrival of EMS personnel.

BLS - 3.4.1. NFPA 4.4.2(2)(a)	Given the emergency response plan and SOPs developed by the AHJ, identify sources of information for determining the appropriate decontamination procedure and identify how to access those resources in a hazardous materials/WMD incident.
BLS - 3.4.2. NFPA 4.4.2(2)(b)	Given the emergency response plan and SOPs developed by the AHJ, identify (within the plan) the supplies and equipment required to set up and implement emergency decontamination operations and mass decontamination operations for ambulatory and non-ambulatory patients.
BLS - 3.4.3. NFPA 4.4.2(2)(c)	Identify procedures, equipment, and safety precautions for the treatment and handling of emergency service animals brought to the decontamination corridor at hazardous materials/WMD incidents.
BLS - 3.4.4. NFPA 4.4.2(2)(d)	Identify procedures, equipment, and safety precautions for communicating with critical, urgent, and potentially exposed patients and identify population prioritization as it relates to decontamination purposes.

BLS - 3.4.5. Identify procedures, equipment, and safety precautions for preventing cross contamination.

NFPA 4.4.2(2)(e)

BLS - 3.5.

NFPA 4.4.3.1

Determining the Ongoing Need for Medical Supplies

Given examples of single-patient and multi-casualty hazardous materials/WMD incidents, the BLS level responder shall determine the following:

1. If the available medical equipment will meet or exceed patient care needs throughout the duration of the incident.
2. If the available transport units will meet or exceed patient care needs throughout the duration of the incident.

BLS - 3.6.

NFPA 4.4.4

Preserving Evidence

Given examples of hazardous materials/WMD incidents where criminal acts are suspected, the BLS level responder shall make every attempt to preserve evidence during the course of delivering patient care.

BLS - 3.6.1. Determine if the incident is potentially criminal in nature and cooperate with the law enforcement agency having investigative jurisdiction.

NFPA 4.4.4(1)

BLS - 3.6.2. Identify the unique aspects of criminal hazardous materials/WMD incidents, including crime scene preservation and evidence preservation, to avoid the destruction of potential evidence on medical patients during the decontamination process.

NFPA 4.4.4(2)

BLS - 3.6.3. Identify within the emergency response plan and SOPs developed by the AHJ procedures, equipment, and safety precautions for securing evidence during decontamination operations at hazardous materials/WMD incidents.

NFPA 4.4.4(3)

BLS - 3.6.4. Ensure that any information regarding suspects, sequence of events during a potentially criminal act, and observations made based on patient presentation or during patient assessment are documented and communicated to the law enforcement agency having investigative jurisdiction.

NFPA 4.4.4(4)

BLS - 3.7.

NFPA 4.4.5

Medical Support at Hazardous Materials/WMD Incidents

Given examples of hazardous materials/WMD incident, the BLS level responder shall describe the procedures of the AHJ for performing medical monitoring and support of hazardous materials incident response personnel.

BLS - 3.7.1. NFPA 4.4.5(1)(a)	Given examples of various hazardous materials/WMD incidents requiring the use chemical protective ensembles, the BLS level responder shall demonstrate the ability to set up and operate a medical monitoring station.
BLS - 3.7.2. NFPA 4.4.5(1)(b)	Given examples of various hazardous materials/WMD incidents requiring the use chemical protective ensembles, the BLS level responder shall demonstrate the ability to recognize the signs and symptoms of heat stress, cold stress, heat exhaustion, and heat stroke.
BLS - 3.7.3. NFPA 4.4.5(1)(c)	Given examples of various hazardous materials/WMD incidents requiring the use chemical protective ensembles, the BLS level responder shall determine the BLS needs for responders exhibiting the effects of heat stress, cold stress, and heat exhaustion.
BLS - 3.7.4. NFPA 4.4.5(1)(d)	Given examples of various hazardous materials/WMD incidents requiring the use chemical protective ensembles, the BLS level responder shall describe the medical significance of heat stroke and the importance of rapid transport to an appropriate medical receiving facility.
BLS - 3.7.5. NFPA 4.4.5(1)(e)	Given a simulated hazardous materials incident, demonstrate the appropriate documentation of medical monitoring activities.
BLS - 3.7.6. NFPA 4.4.5(2)	The BLS level responder responsible for pre-entry medical monitoring shall obtain hazard and toxicity information on the hazardous materials/WMD from the designated hazardous materials technical reference resource or other sources of information at the scene.
BLS - 3.7.7. NFPA 4.4.5(3)	The following information shall be conveyed to the entry team, incident safety officer, hazardous materials officer, other EMS personnel at the scene, and any other responders responsible for the health and well-being of those personnel operating at the scene: 1. Chemical name 2. Hazard class 3. Multiple hazards and toxicity information 4. Applicable decontamination methods and procedures 5. Potential for cross contamination 6. Procedure for transfer of patients from the constraints of the incident to the EMS 7. Prehospital management of medical emergencies and exposures.

BLS - 3.7.8.

NFPA 4.4.5(4)

The BLS level responder shall evaluate the pre-entry health status of responders to hazardous materials/WMD incidents prior to their donning personal protective equipment (PPE) by performing the following tasks (consideration shall be given to excluding responders if they do not meet criteria specified by the AHJ prior to working in chemical protective clothing):

8. A full set of vital signs
9. Body weight measurements to address hydration considerations
10. General health observations
11. Core body temperature: hypothermia/hyperthermia
12. Blood pressure: hypotension/hypertension
13. Pulse rate: bradycardia/tachycardia as defined
14. Respiratory rate: bradypnea/tachypnea

BLS - 3.7.9.

NFPA 4.4.5(5)

The BLS level responder shall determine how the following factors influence heat stress on hazardous materials/WMD response personnel:

15. Baseline level of hydration
16. Underlying physical fitness
17. Environmental factors
18. Activity levels during the entry
19. Level of PPE worn
20. Duration of entry
21. Cold stress

BLS - 3.7.10.

NFPA 4.4.5(6)

The BLS level responder shall medically evaluate all team members after decontamination and PPE removal, using the following criteria:

22. Pulse rate determined within the first minute
23. Pulse rate determined 3 minutes after initial evaluation
24. Temperature
25. Body weight
26. Blood pressure
27. Respiratory rate

BLS - 3.7.11.

NFPA 4.4.5(7)

The BLS level responder shall recommend that any hazardous materials team member be prohibited from redonning chemical protective clothing if any of the following criteria is exhibited:

28. Signs or symptoms of heat stress or heat exhaustion
29. Pulse rate: tachycardia/bradycardia
30. Core body temperature: hyperthermia/hypothermia
31. Recovery heart rate with a trend toward normal rate and rhythm
32. Blood pressure: hypertension/hypotension
33. Weight loss of >5 percent

Any team member exhibiting the signs or symptoms of extreme heat exhaustion or heat stroke shall be transported to the medical facility.

BLS - 3.7.12.

NFPA 4.4.5(8)

The BLS level responder responsible for medical monitoring and support shall immediately notify the persons designated by the incident action plan that a team member required significant medical treatment or transport. Transportation shall be arranged through the designee identified in the emergency response plan.

BLS - 3.8.

NFPA 4.5

Reporting and Documenting the Incident

Given a scenario involving a hazardous materials/WMD incident, the responder assigned to use PPE shall complete the reporting and documentation requirements consistent with the emergency response plan or SOPs and identify the reports and supporting documentation required by the emergency response plan or SOPs.

BLS - 3.9.

NFPA 4.6

Compiling Incident Reports

The BLS responder shall describe his or her role in compiling incident reports that meet federal, state, local, and organizational requirements.

BLS - 3.9.1.

NFPA 4.4.

List the information to be gathered regarding the exposure of all patient(s) and describe the reporting procedures, including the following:

1. Detailed information on the substances released
2. Pertinent information on each patient treated and transported
3. Routes, extent, and duration of exposures
4. Actions taken to limit exposure
5. Decontamination activities

BLS - 3.9.2.

NFPA 4.4.

At the conclusion of the hazardous materials/WMD incident, identify the methods used by the AHJ to evaluate transport units that might have been contaminated and the process and locations available to decontaminate those units.