

Medical Education Systems, Inc.

Course 908

Emergency Preparedness



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Emergency Preparedness

Learning Objectives

Upon successful completion of this course, you will be able to:

- List and discuss the key relevant legal requirements for hospitals and emergency preparedness
- Identify and explain the key elements of a hospital's emergency response plan
- Identify and discuss the important aspects relating to the training of employees for emergencies

Introduction

Protecting health care workers who respond to emergencies involving hazardous substances is critical. Health care workers dealing with emergencies may be exposed to chemical, biological, physical or radioactive hazards. Hospitals providing emergency response services must be prepared to carry out their missions without jeopardizing the safety and health of their own workers. Of special concern are the situations where contaminated patients arrive at the hospital for triage or definitive treatment following a major incident.

In many localities, the hospital has not been firmly integrated into the community disaster response system and may not be prepared to safely treat multiple casualties resulting from an incident involving hazardous substances. Increasing awareness of the need to protect health care workers and understanding the principal considerations in emergency response planning will help reduce the risk of health care worker exposure to hazardous substances.

Relevant Legal Requirements

Both OSHA and EPA have regulations to help protect workers dealing with hazardous waste and emergency operations. For example, Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) requires each state to establish a State Emergency Response Commission (SERC) that designates and coordinates the activities of Local Emergency Planning Committees (LEPC). The LEPCs must develop a community emergency response plan (contingency plan) that contains emergency response methods and procedures to be followed by facility owners, police, hospitals, local emergency responders, and emergency medical personnel. The Environmental Protection Agency (EPA) generates these requirements and ensures that states implement emergency response planning programs.

In planning for emergencies, LEPCs must designate a local hospital that has agreed to accept and treat victims of emergency incidents. The designated local hospital, which should have a

representative participate in the LEPC or SERC, becomes part of the community emergency response organization.

SARA also directed the Occupational Safety and Health Administration (OSHA) to establish a comprehensive rule to protect employee health and safety during hazardous waste operations, including emergency responses to the release of hazardous substances. Accordingly, OSHA published the *Hazardous Waste Operations and Emergency Response (HAZWOPER) Standard, Title 29, Code of Federal Regulations (CFR) 1910.120*, which became effective in 1990.

HAZWOPER requires employers, including hospitals, to plan for emergencies if they expect to use their employees to handle an emergency involving hazardous substances. A hospital designated by an LEPC to handle hazardous substances emergency victims must have an Emergency Response Plan (ERP), decontamination equipment, personnel protective equipment (PPE), and trained personnel. The emergency response section of HAZWOPER (29 CFR 1910.120(q)) outlines required ERP elements which allow emergency responders to use the local community emergency response plan or the state emergency response plan or both as part of the hospital's emergency response plan. This plan must meet Joint Commission on Accreditation of Healthcare Organizations (JCAHO) guidelines.

To learn more about HAZWOPER or other OSHA standards, contact your Area or Regional OSHA office listed elsewhere in this course.

Preplanning

Ideally, employers within the community will have coordinated emergency response planning with the hospital prior to any emergency event. However, the hospital may need to treat contaminated victims of emergency incidents without the benefit of pre-emergency planning. Both scenarios need to be addressed in the hospital's Emergency Response Plan, along with plans for responding to a hazardous substance incident that occurs in the hospital itself.

The hospital should prepare an Emergency Response Plan even if community coordination has not been initiated or completed. The hospital's Emergency Response Plan must be prepared in writing and established prior to an actual emergency. All employees and affiliated personnel expected to be involved in an emergency response including physicians and nurses, as well as maintenance workers and other ancillary staff should be familiar with the details of the plan.

Elements of a Hospital Emergency Response Plan

This Emergency Response Plan is intended for hospitals involved in a community response to a hazardous substance incident. The plan should address the following elements:

- pre-emergency drills implementing the hospital's emergency response plan;
- practice sessions using the Incident Command System^{**} (ICS) with other local emergency response organizations;

- lines of authority and communication between the incident site and hospital personnel regarding hazards and potential contamination;
- designation of a decontamination team, including emergency department physicians, nurses, aides and support personnel;
- description of the hospital's system for immediately accessing information on toxic materials;
- designation of alternative facilities that could provide treatment in case of contamination of the hospital's Emergency Department;
- plan for managing emergency treatment of non-contaminated patients;
- decontamination procedures and designation of decontamination areas (either indoors or outdoors);
- hospital staff use of PPE based on routes of exposure, degree of contact, and each individual's specific tasks;
- prevention of cross-contamination of airborne substances via the hospital's ventilation system;
- air monitoring to ensure that the facility is safe for occupancy following treatment of contaminated patients; and
- post-emergency critique of the hospital's emergency response.

When a hospital has been designated by the LEPC, it must prepare to fulfill its role in community emergency response. This is accomplished by engaging in emergency response planning activities that involve all segments of the community (i.e., employers, other emergency response organizations, local government, and the emergency medical community). With this in mind, the hospital should consider the following:

- The hospital must define its role in community emergency response by pre-planning and coordinating with other local emergency response organizations, such as the fire department. In particular, the hospital must be familiar with the ICS used by other local organizations during emergencies and should participate in training and practice sessions using the ICS.
- All hospital personnel who are expected to respond in emergencies where hazardous substances are released must be trained in handling contaminated patients and objects including body fluids.
- Training must be based on the duties and responsibilities of each employee.
- Hospitals should have a contingency plan for managing other patients in the emergency response system when contaminated patients are being treated.
- There should be communication between other members of the ICS, the incident site, and the hospital personnel regarding the hazards associated with potential contaminants.
- Hospitals should have access to a database that is compiled by the LEPC to provide immediate information to hospital staff on the hazards associated with exposure to toxic materials that may be used by local employers.

Training Employees

HAZWOPER requires varying levels of training for personnel involved in hazardous material releases or clean-up. HAZWOPER is a performance-based regulation allowing individual employers flexibility in meeting the requirements of the regulation in the most cost-effective manner. It is not OSHA's intent that every member of a community's emergency response services receive high levels of specialized hazardous materials training. The community may determine that it is appropriate for the fire department to develop a small group of highly trained hazardous materials technicians and specialists, called a "HAZMAT team," or may find that the community does not require a HAZMAT team and that less intensive training is adequate. Likewise, all emergency medical technicians (EMTs) (e.g., ambulance corps members) do not need to be trained to treat contaminated victims.

To determine the appropriate level and type of training under HAZWOPER, community response agencies will need to consider the hazards in their community, and determine what capabilities will be required to respond effectively to those hazards. This determination is to be based on worst-case scenarios. All individuals must be adequately trained to perform their anticipated job duties without endangering themselves or others.

Medical personnel who will decontaminate victims must be trained to the *First Responder Operations Level*⁽¹⁾ with emphasis on the use of PPE and decontamination procedures. (Refer to 29 CFR 1910.120(q)(6)). The employer must certify that personnel are trained to safely perform their job duties and responsibilities. This includes a minimum of 8 hours of training or demonstrated competencies and an annual refresher. Hospitals may develop an in-house training course on decontamination and PPE use and measures to prevent the spread of contamination to other portions of the hospital, or provide additional training in decontamination and PPE use after sending personnel to a standard First Responder Operations Level course.

EMS personnel are often the first on the scene and should be given *First Responder Awareness Level*⁽²⁾ training as a minimum. There is no specific hourly minimum required but the training must be sufficient or the employees must have proven experience in specific competencies with an annual refresher. EMS personnel who have received only Awareness Level training should not be involved in the transport or treatment of contaminated patients. EMS personnel who might be exposed to hazardous substances because they are expected to transport or treat contaminated patients at the release area should be trained to the First Responder Operations Level.

Individuals who develop the decontamination procedures and select PPE for the workers who help decontaminate patients, must be trained to the First Responder Operations Level with additional training in decontamination procedures, but such individuals would not need the lengthy specialized training required for a hazardous materials technician.

Every member of the emergency room clinical staff, plus any employee who might be exposed to hazardous substances during an emergency response incident, should (1) be familiar with how the hospital intends to respond to hazardous substance incidents, (2) be trained in the appropriate use of PPE, and (3) be required to participate in scheduled drills. Such a pre-designated

decontamination team might consist of emergency physicians, emergency department nurses and aides, and other support personnel such as respiratory therapists, security, and maintenance personnel.

Under life-threatening emergency situations, other hospital personnel may need to enter the decontamination area to monitor and treat the victim. These employees may be considered *Skilled Support Personnel*.⁽³⁾

All hospital employees, including ancillary personnel such as housekeeping and laundry staff, must be adequately trained to perform their assigned job duties in a safe and healthful manner. If ancillary personnel will be expected to clean up the decontamination area they must be trained in accordance with 29 CFR 1910.120(q)(11), and have access to Material Data Safety Sheets (MSDSs), for those chemicals that may be used to decontaminate equipment and area. Coordination with community resources for clean-up assistance is included in the contingency plan.

Performing Emergency Drills

Emergency response drills are considered part of "Pre-emergency planning" and can be used to evaluate HAZWOPER compliance. Drills are required under SARA Title III as part of the local contingency plan, and under 29 CFR 1910.120 for hazardous waste sites. Emergency medical responders should be involved in drills through the LEPC.

JCAHO requires accredited hospitals to implement their response plan, twice a year, either to reply to an actual emergency or in a planned drill [1]. These drills may be combined to fulfill dual requirements.

Documenting Training

Employees need not necessarily receive a certificate, but the employer must certify training with some form of documentation. It is considered good practice to provide employees with a training certificate as well as to document the training in the employer's records. The hospital also must document its training plan for personnel who respond to hazardous substance incidents and contaminated victims in its ERP.

Defining Personnel Roles

Personnel roles and responsibilities, including who will be in charge of directing the response, training, and communications must be included in the hospital's overall ERP. The ERP should also have an evacuation plan and identify alternative facilities that could provide treatment in the event that patients would need to be rerouted due to contamination of the Emergency Department. The plan should identify PPE including type, quantity, location, and use, and

specific decontamination procedures, materials, and equipment. It should also cover plans for critique and follow-up of drills and actual emergencies.

Responding to Emergencies

Once an emergency actually occurs, the benefits of pre-planning will be immediately apparent, especially in identifying the hazardous substances involved. Pre-planning with the LEPC identifies known chemical hazards in the community; this includes information gathered from MSDSs. First Responder Awareness Level and Hazard Communication training enables responders to determine the presence or release of a hazardous substance. Data from those at the scene of the incident may identify or help identify hazards. Resources including printed reference materials, computer databases, and telephone hotlines are available to help identify hazards not immediately recognized. (DOT requires a 24-hour a day telephone number to be available from the chemical producer or shipper to assist the emergency response community in getting accurate information on chemical hazards.)

Selecting PPE

Personnel who will be involved in decontamination must be equipped with PPE that is appropriate for the hazardous substances expected to be encountered.

- Reference guidebooks, database networks, MSDS's, and telephone hotlines may also be useful in determining suitable PPE.
- Communication with those at the scene of the incident will be helpful in identifying the type of PPE that will be required to prevent secondary contamination of the hospital personnel.

Factors to be considered in the selection of PPE include toxicity routes of exposure, degree of contact, and the specific task assigned to the user [2]. The primary routes of exposure are inhalation, ingestion, and direct contact.

Types of PPE range from gloves to chemical protective clothing to a self-contained breathing apparatus (SCBA) when the highest level of respiratory protection is required [2]. The proper use of PPE requires considerable training by a competent person, such as an industrial hygienist, and is required under OSHA's standard on personal protective equipment, 29 CFR 1910.132. Wearing PPE without proper training can be extremely dangerous and potentially fatal. Persons should not be assigned to tasks requiring the use of respirators unless it has been determined that they are physically able to perform the work and use the equipment. The local physician shall determine what health and physical conditions are pertinent.

Selecting Respirators

To determine which respirator is needed, hospitals can consult OSHA's respiratory protection standard, 29 CFR 1910.134.

The standard includes requirements covering training in the use of respiratory protective equipment and development of a written respiratory protection program that addresses fit testing of respirators and inspection and maintenance procedures.

Decontaminating Patients

Ideally, when medically appropriate, patients should be decontaminated before reaching the hospital, preferably at the incident site. However, complete on-site decontamination of victims may not be possible due to the medical conditions of the employees, training and skills of emergency responders, weather conditions, and equipment availability. Therefore, the hospital should have designated decontamination areas.

Although areas dedicated solely to decontamination need not be set aside, hospitals need to take appropriate precautions to prevent the spread of contamination to other areas within the hospital. Decontamination should be performed in areas of the facility that will minimize any exposures to uncontaminated employees, other patients, or equipment. Morgues are often used as decontamination rooms because of the preexisting drainage and ventilation system. Morgues often have ventilation isolation to prevent mixing of airflow with other area systems.

An alternative to an indoor decontamination area would be an outside or portable decontamination facility. This might include wading pools or outdoors showers, along with bags for disposal of contaminated clothes.

Preparing to Receive Victims

Once word reaches the hospital of a hazardous substance incident, all hospital personnel engaged in the response should be notified of the nature of the emergency and the type of chemical contamination expected. Then the hospital should outfit all necessary personnel with appropriate PPE.

All persons along the route from the emergency entrance to the decontamination area need to be relocated. This area may need to be protected by plastic or paper sheeting [3], and the area outside the emergency department entrance set up to direct the flow of contaminated patients to the decontamination area.

Avoiding Cross-Contamination

Airborne contaminants may be transported via the hospital's ventilation system. Therefore, ventilation in the decontamination area should be separate from the rest of the hospital. Morgues, with an isolated ventilation system, are often used as decontamination rooms.

If a contaminated victim is emitting airborne contaminants, the ventilation system in the decontamination area should be turned off. However, not all chemicals will be volatile enough to cause off-gassing. Because Emergency Department personnel could be at risk if the ventilation system is shut off during decontamination in an enclosed area, ambient air should be monitored using appropriate direct-reading instruments, and the plan should provide means of supplementary or auxiliary ventilation. Prior to restarting the ventilation system, air monitoring with appropriate direct-reading instruments is advised to assure the atmosphere is safe for circulation. The use of direct reading instruments to evaluate air quality must be made by an individual who has been properly trained in the use of the instruments.

Related Standards

For further information on applicable standards refer to:

29 CFR 1910.120 - *Hazardous Waste Operations and Emergency Response*

29 CFR 1910.1030 - *Bloodborne Pathogens*

29 CFR 1910.1200 - *Hazard Communication* (Appendix A- Health Hazard definition; Appendix B-Hazard Determination; Appendix C-Information Sources)

29 CFR 1910.38 - *Employee Emergency Plans and Fire Prevention Plans*

29 CFR 1910.132 - *Personal Protective Equipment*

29 CFR 1910.134 - *Respiratory Protection*

Additional Resources

Emergency Preparedness

The EPA develops, implements and coordinates preparations for chemical and other emergencies. The Agency carries out this work in partnership with regions, domestic and international organizations in the public and private sectors, and the general public. The goal of the preparations is to be able to respond quickly and effectively to environmental crises and to keep the public informed about hazards in their community. The EPA approaches these preparations with an emphasis on flexibility and cooperation with its emergency partners at all

levels.

Recommended EPA Web pages

- [Preparedness: Emergency Planning and Community Right - To - Know](#)
Provides information about EPCRA.

[List more recommended EPA Emergency Preparedness web pages](#)

Emergency Planning and Community Right to Know (EPCRA) Hotline:
Phone 1-800-535-0202 Fax (703) 412-3333

Joint Commission on Accreditation of Healthcare Organizations, JCAHO Standards Division
Phone (708) 916-5600 (Available on the World Wide Web at <http://www.jcaho.org>)

References

1. Joint Commission on Accreditation of Healthcare Organizations. "Emergency Services Chapter" and "Plant, Technology, and Safety Management Chapter." *The 1993 Joint Commission Accreditation Manual for Hospitals, Vol. 1 Standards*. Oakbrook Terrace, Illinois, 1993.
2. U.S. Department of Health and Human Services. Public Health Service, Agency for Toxic Substances and Disease Registry. *Emergency Medical Services: A Planning Guide for the Management of Contaminated Patients*. Atlanta, Georgia: 1990,78 pp.
3. U.S. Department of Health and Human Services. Public Health Service, Agency for Toxic Substances and Disease Registry. *Managing Hazardous Materials Incidents, Volume II. Hospital Emergency Departments: A Planning Guide for the Management of Contaminated Patients*. Atlanta, Georgia: 1990,76 pp.
4. Public Law No. 99-499, "The Superfund Amendments and Reauthorization Act of 1986," Title III.
5. State of California Emergency Medical Services Authority. *Hazardous Materials Medical Management Protocols*. Sacramento, California, 1991.
6. "CDC Recommendations for Civilian Communities Near Chemical Weapons Depots: Guidelines for Medical Preparedness," *Federal Register* 60 (123): 3308-June 27, 1995.

Documents #1 and #5 are available from:

Emergency Response and Consultation Branch (E57)
Division of Health Assessment and Consultation
Agency for Toxic Substances and Disease Registry
1600 Clifton Road, N.E.
Atlanta, Georgia 30333

(404) 639-6360

(Document #1 is available on the World Wide Web at <http://atsdr1.cdc.gov.8080/atsdrhome.html>)

Document #2 is available from:

Commission on Accreditation of Healthcare Organizations JCAHO Standards Division
One Renaissance Blvd.
Oakbrook Terrace, IL 60181
(708) 916-5600

Document #4 is available from:

California Emergency Services Authority
1030 15th Street, Suite 302
Sacramento, CA 95814
(916) 322-2300

Document #6 is available on the World Wide Web at http://www.access.gpo.gov/su_docs

States with Approved Plans

Commissioner

Alaska Department of Labor
1111 West 8th Street
Room 306
Juneau, AK 99801
(907) 465-2700

Director

Industrial Commission of Arizona
800 W. Washington
Phoenix, AZ 85007
(602) 542-5795

Director

California Department of Industrial Relations
45 Fremont Street
San Francisco, CA 94105
(415) 972-8835

Commissioner

Connecticut Department of Labor
200 Folly Brook Boulevard
Wethersfield, CT 06109
(203) 566-5123

Director

Hawaii Department of Labor and Industrial Relations
830 Punchbowl Street
Honolulu, HI 96813
(808) 586-8844

Commissioner

Indiana Department of Labor
State Office Building
402 West Washington Street
Room W195
Indianapolis, IN 46204
(317) 232-2378

Commissioner

Iowa Division of Labor Services
1000 E. Grand Avenue
Des Moines, IA 50319
(515) 281-3447

Secretary

Kentucky Labor Cabinet
1047 U.S. Highway, 127 South,
Suite 2
Frankfort, KY 40601
(502) 564-3070

Commissioner

Maryland Division of Labor and Industry
Department of Labor Licensing and Regulation
501 St. Paul Place, 2nd Floor
Baltimore, MD 21202-2272
(410) 333-4179

Director

Michigan Department of Consumer and Industry Services
4th Floor, Law Building
P.O. Box 30004
Lansing, MI 48909
(517) 373-7230

Commissioner

Minnesota Department of Labor and Industry
443 Lafayette Road
St. Paul, MN 55155
(612) 296-2342

Director

Nevada Division of Industrial Relations
400 West King Street
Carson City, NV 89710
(702) 687-3032

Secretary

New Mexico Environment Department
1190 St. Francis Drive
P.O. Box 26110
Santa Fe, NM 87502
(505) 827-2850

Commissioner

New York Department of Labor
W. Averell Harriman State Office Building - 12
Room 500
Albany, NY 12240
(518) 457-2741

Commissioner

North Carolina Department of Labor
319 Chapanoke Road
Raleigh, NC 27603
(919) 662-4585

Administrator

Department of Consumer and Business Services
Occupational Safety and Health Division (OR-OSHA)
Labor and Industries Building
Room 430
Salem, OR 97310
(503) 378-3272

Secretary

Puerto Rico Department of Labor and Human Resources
Prudencio Rivera Martinez
Building
505 Munoz Rivera Avenue
Hato Rey, PR 00918
(809) 754-2119

Commissioner

South Carolina Department of Labor, Licensing and Regulation
3600 Forest Drive
P.O. Box 11329

Columbia, SC 29211-1329
(803) 734-9594

Commissioner

Tennessee Department of Labor
Attention: Robert Taylor
710 James Robertson Parkway
Nashville, TN 37243-0659
(615) 741-2582

Commissioner

Industrial Commission of Utah
160 East 300 South, 3rd Floor
P.O. Box 146600
Salt Lake City, UT 84114-6600
(801) 530-6898

Commissioner

Vermont Department of Labor and Industry
National Life Building - Drawer 20
120 State Street
Montpelier, VT 05620
(802) 828-2288

Commissioner

Virgin Islands Department of Labor
2131 Hospital Street
P.O. Box 890
Christiansted, St. Croix, VI 00820-4666
(809) 773-1994

Commissioner

Virginia Department of Labor and Industry
Powers-Taylor Building
13 South 13th Street
Richmond, VA 23219
(804) 786-2377

Director

Washington Department of Labor and Industries
General Administration Building
P.O. Box 44001
Olympia, WA 98504-4001
(360) 902-4200

Administrator

Workers' Safety and Compensation Division (WSC)
Wyoming Department of Employment
Herschler Building
2nd Floor East
122 West 25th Street
Cheyenne, WY 82002
(307) 777-7786

OSHA Consulation Project Directory

State	Telephone
Alabama	(205) 348-7136
Alaska	(907) 269-4957
Arizona	(602) 542-5795
Arkansas	(501) 682-4522
California	(415) 972-8515
Colorado	(970) 491-6151
Connecticut	(860) 566-4550
Delaware	(302) 761-8219
District of Columbia	(202) 576-6339
Florida	(904) 488-3044
Georgia	(404) 894-2646
Guam	(671) 475-0136
Hawaii	(808) 586-9100
Idaho	(208) 385-3283
Illinois	(312) 814-2337
Indiana	(317) 232-2688
Iowa	(515) 281-5352
Kansas	(913) 296-7476
Kentucky	(502) 564-6895
Louisiana	(504) 342-9601
Maine	(207) 624-6460
Maryland	(410) 333-4210
Massachusetts	(617) 727-3982
Michigan	(517) 332-8250 (H) (517) 322-1809 (S)
Minnesota	(612) 297-2393
Mississippi	(601) 987-3981

Missouri	(573) 751-3403
Montana	(406) 444-6418
Nebraska	(402) 471-4717
Nevada	(702) 486-5016
New Hampshire	(603) 271-2024
New Jersey	(609) 292-2424
New Mexico	(505) 827-4230
New York	(518) 457-2481
North Carolina	(919) 662-4644
North Dakota	(701) 328-5188
Ohio	(614) 644-2246
Oklahoma	(405) 528-1500
Oregon	(503) 378-3272
Pennsylvania	(412) 357-2561
Puerto Rico	(809) 754-2188
Rhode Island	(401) 277-2438
South Carolina	(803) 734-9614
South Dakota	(605) 688-4101
Tennessee	(615) 741-7036
Texas	(512) 440-3834
Utah	(801) 530-6868
Vermont	(802) 828-2765
Virginia	(804) 786-6359
Virgin Islands	(809) 772-1315
Washington	(360) 902-5638
West Virginia	(304) 558-7890
Wisconsin	(608) 266-8579 (H) (414) 521-5063 (S)
Wyoming	(307) 777-7700

(H) Health
(S) Safety

Examination

Select the *best* answer to each of the following items. Mark your responses on the Answer Form.

1. Health care workers dealing with emergencies may be exposed to _____.

- a. chemical
- b. biological
- c. radioactive hazards
- d. All of the above

2. _____ has regulations to help protect workers dealing with hazardous waste and emergency operations.

- a. OSHA
- b. EPA
- c. LEPC
- d. All of the above

3. The emergency response section of HAZWOPER outlines required ERP elements which allow emergency responders to use the local community emergency response plan or the state emergency response plan or both as part of the hospital's emergency response plan. This plan must meet _____ guidelines.

- a. American Hospital Association (AHA)
- b. NIOSH
- c. Joint Commission on Accreditation of Healthcare Organizations (JCAHO)
- d. HCFA

4. The hospital's Emergency Response Plan must be _____ and established prior to an actual emergency.

- a. available
- b. sent
- c. prepared in writing
- d. All of the above

5. This Emergency Response Plan is intended for hospitals involved in a community response to a hazardous substance incident. The plan should address the following elements:

- a. pre-emergency drills implementing the hospital's emergency response plan
- b. post-emergency critique of the hospital's emergency response
- c. hospital staff use of PPE based on routes of exposure, degree of contact, and each individual's specific tasks
- d. All of the above

6. HAZWOPER is a performance-based regulation allowing individual employers flexibility in meeting the requirements of the regulation in the most _____.

- a. organized
- b. sophisticated
- c. cost-effective manner
- d. All of the above

7. Medical personnel who will decontaminate victims must be trained to the *First Responder Operations Level* with emphasis on the use of _____ and decontamination procedures.

- a. PPE
- b. chemicals
- c. time efficiency
- d. All of the above

8. This includes a minimum of ____ hours of training or demonstrated competencies and an annual refresher.

- a. 2
- b. 5
- c. 8
- d. 14

9. Every member of the emergency room clinical staff, plus any employee who might be exposed to hazardous substances during an emergency response incident, should _____.

- a. be familiar with how the hospital intends to respond to hazardous substance incidents
- b. be trained in the appropriate use of PPE
- c. be required to participate in scheduled drills
- d. All of the above

10. _____ requires accredited hospitals to implement their response plan, twice a year, either to reply to an actual emergency or in a planned drill [1]. These drills may be combined to fulfill dual requirements.

- a. OSHA
- b. AHA
- c. JCAHO
- d. All of the above

11. The hospital should prepare an Emergency Response Plan even if community coordination has not been initiated or completed.

- a. True
- b. False

12. All hospital personnel who are expected to respond in emergencies where hazardous substances are released must be trained in handling contaminated patients and objects including body fluids.

- a. True
- b. False

13. EMS personnel who have received only Awareness Level training should not be involved in the transport or treatment of contaminated patients.

- a. True
- b. False

14. All hospital employees, including ancillary personnel such as housekeeping and laundry staff, must be adequately trained to perform their assigned job duties in a safe and healthful manner.

- a. True
- b. False

15. It is considered good practice to provide employees with a training certificate as well as to document the training in the employer's records.

- a. True
- b. False

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How to Complete Your Test and Print Your Certificate Online

If you chose to receive your order by postal mail, you have been mailed the printed course material(s) and the printed test(s). To take a test, simply complete the mailed test and send it back. Upon successful completion of a test, a certificate will be mailed or faxed to you. If you don't wish to mail the test back, customers who chose to have the course material(s) mailed may also follow the steps below to complete a test and print a certificate online.

INSTRUCTIONS

1. Go to www.mededsys.com
2. Login and go to "My Account".
3. On the page that opens, select an option from the "My Courses" menu.
4. Select the test you wish to complete.
5. After completion of test, print your certificate online by clicking on the "Continue" button. Alternatively, you may return to the "My Courses" section and select the option to print a certificate.