



# **Hospital-Based Decontamination Facilitator Guide**

Copyright © 2023  
Midwest Consortium for Hazardous Waste Worker Training

## **Acknowledgments**

---

The Midwest Consortium developed this course under cooperative agreement number U45 ES 06184 from the National Institute of Environmental Health Sciences (NIEHS).

We encourage you to comment on these materials. Please give your suggestions to your Program Director.

## **Warning**

---

The Midwest Consortium has copyrighted this material. A recipient of the material, other than the Federal Government, may not reproduce it without permission of the copyright owner. The material was prepared for use by instructors experienced in the training of persons who will be involved in hospital decontamination should an emergency occur. Authors of this material have prepared it for the training as of the date specified. Users are cautioned that the subject is constantly evolving. Therefore, the material may require additions, deletions, or modifications to incorporate the effects of that evolution occurring after the date of this material preparation.

## **Disclaimer**

---

The Occupational Safety and Health Administration (OSHA) rules to help ensure worker health and safety. For further information about the training requirements for emergency response personnel, consult the training instructor and/or your company emergency response plan, emergency action plan or your health and safety representative.

Content was updated July 31, 2023 and all weblinks were active at that time; if an error is found please inform your Program Director so it can be updated.

**Table of Contents**

---

Facilitator Preparation	1
Introduction	6
Disaster Preparedness	7
Duties and Limitations	8
Hazard Recognition	12
PPE	18
Decontamination	34
Termination	38
Closing	40

**Overview**

---

This course was developed to meet the requirements of the OSHA Hazardous Waste Operations and Emergency Response standard, 29CFR1910.120 for those hospital employees who may be involved in receiving victims of a mass-casualty event. The program is designed to provide background, drill and resources for “first receivers” at a health care facility. The program covers vulnerability assessments, Emergency Management Plans and provides opportunity for a drill using equipment that is available at the facility where you will provide training. The facilities for decon will vary, from a single room in a facility, to the availability of a heated and plumbed external tent.

This course is designed to allow the facilitator to complete a 3-hour orientation for managers and an 8-hour decon program for the first receivers. Combination of both elements will result in a 10-hour program (note that the total is not 11 due to common elements). Although the amount of time spent on each section is flexible, material covered in the earlier sections may be needed for successful completion of the class exercises and the drill. The exercises were designed to ensure that participants acquire the knowledge and skills necessary to perform their duties within the Incident Command structure. The drill at the end of the program allows practice in a full-scale simulation of decon for a mass-casualty incident. The actual drill will be designed by the facilitators, utilizing the facility where the victims may be received.

At least two facilitators are needed to deliver this program. Additional support personnel will be needed to assist in the assembly of complex decon stations, and for the monitoring decon lines. To maximize learning, the class size should be limited to 24 participants.

## **Facilitator Preparation**

---

The Hospital Decon course incorporates a variety of teaching methods to meet varied learning styles. Material presentation, discussion, and small group exercises are used. This Facilitator's Guide will give you a guideline for presenting the material, and includes the following types of information: objectives of the modules and directions for running them, exercise directions and answers, and issues that might be raised by the class.

As a facilitator, you should carefully review this Facilitator's Guide and the content of the Participant Guide. You should be familiar with the resources shown below.

## **Sample Agenda for 8-hour program**

---

Introduction	45 minutes
Disaster Preparedness	30 minutes
Duties and Limitations	60 minutes
Hazard Recognition	60 minutes
PPE	90 minutes
Decontamination	120 minutes
Termination	60 minutes
Closing	15 minutes

## **Instructional Resources**

---

Protecting Emergency Responders volumes 1, 2, 3 (see [www.niosh.gov](http://www.niosh.gov)).

**Vol. 1:** Lessons Learned from Terrorist Attacks, external link

[www.rand.org/publications/CF/CF176](http://www.rand.org/publications/CF/CF176)

**Vol 2:** Community Views of Safety and Health Risks and Personal Protection Needs, external link [www.rand.org/publications/MR/MR1646/](http://www.rand.org/publications/MR/MR1646/)

**Vol 3:** Safety Management in Disaster and Terrorism Training, [www.cdc.gov/niosh/npptl/guidancedocs/rand.html](http://www.cdc.gov/niosh/npptl/guidancedocs/rand.html)

Hazardous Waste Operations and Emergency Response, 29CFR1910.120, March 6, 1989, Occupational Safety and Health Administration.

## **Hospital Decon Pre-Training Checklist**

---

**Facilitators:** Take this checklist with you to the hospital(s) whose staff you will be training. It will help you better understand the participant's workplace and provide detailed training geared towards their needs.

Have they completed a Hazard Vulnerability Analysis?

What sort of equipment do they have?

- PPE
- Decon
- Monitoring
- Waste

Tour the decontamination area and examine equipment

What do they have in the way of SOPs/EMPs?

How many personnel do they have and what capabilities do they have? What level of training have they reached?

What sort of schedule would work best for the hospital and their staff?

- 1 or 2 hour blocks?
- How many would attend each class?

Tour the classroom and drill area.

Read over their Respiratory Protection Program.

Obtain a list of contacts.

Look at the facility from a logistical standpoint.

- Water source
- Power source
- HVAC system

Have they completed a decon exercise/drill before? How did it go?

Do they have a decon or mass casualty incident plan?

What is their security like?

Do the ER doors lock?

How will the decontamination/patients flow?

What weather do they typically encounter?

Wind patterns can influence decon flow.

Do they have a relationship with dispatch?

Dispatch should know to notify the hospital of a mass casualty incident so they can prepare for the patients.

How will they track patients?

Do they have mutual aid agreements with neighboring hospitals/organizations? What do they use for communications?

- Internal
- External

## **Graphics and Audiovisuals**

---

Graphics appear in the Participant Guide. Refer to these illustrations and photos when you cover the material. You may also need to use a map to illustrate the decon area.

Photos, charts, slides, posters, and short videos are also useful training tools and may be introduced in the lesson where appropriate. Slides should be limited to those that support lesson presentation. Avoid using one-word slides, slides with term definitions, and slides as lecture outlines. These formats are not effective for keeping participant attention. Effective slides contain color graphics and short review lists.

If you are delivering this program to a specific facility, you should consider creating graphics that depict that location. This may include photos, or slides that depict equipment storage areas, emergency entrances and exits, designated assembly areas, or the decon area.

## **Exercises**

---

Small-group exercises are incorporated throughout the course. The purpose of the exercises is to involve participants in clarifying information, identifying options, and applying the skills they will need if they are providing decon as a first receiver. Be sure to allow sufficient time for participants to complete the exercises and discuss them afterwards. These facilitator pages will inform you how to run the exercises and will give you the exercise answers.

Because class activities and exercises enhance the learning process, it is important to make discussions comfortable so that everyone can participate. Assume that every class will have participants with a wide range of communication skills. Some participants will have no problem in participating in group discussion, while others may have a hard time in front of the group. Suggestions for handling group exercises and discussions include the following:

- Allow participants to express their values, attitudes, and opinions freely.
- Do not judge participants' responses.
- Facilitate discussion by paraphrasing and clarifying. It is seldom appropriate for the facilitator to give opinions.
- Avoid putting people on the spot. Instead of asking individuals for answers, have a voluntary group spokesperson present answers to the class.
- Keep the groups focused on the task at hand. Because small-group exercises can draw heavily on the participants personal experience, sometimes one person can dominate the group and runaway with the discussion. If you see this happening, steer the discussion back on track by asking another group for reactions.
- Keep the participants alert and interested by encouraging participation. If the groups are

not participating or are giving only cursory answers, ask them probing questions about their answers to make them be more specific.

### Decon Drill

---

The program includes a drill to set up, conduct decon and perform termination activities. If the facility has already conducted a drill, the facilitator should pay particular attention to information resulting from termination phases of these previous exercises, and utilize the “lessons learned” in developing the session. The facilitator should carefully review all of the equipment available at the facility prior to the session, and assure that it is in good condition and adequate supplies are available for an exercise.

### Successful completion

---

Successful completion for this course is defined as:

Attendance, 100% on all Performance Checklists

### Evaluation

---

Evaluation provides input from participants regarding value to them, achievement of learning objectives and insights into how to improve the program. NIEHS supports ‘model programs’ that employ interactive training methods to build skills; see [https://tools.niehs.nih.gov/wetp/public/hasl\\_get\\_blob.cfm?ID=11266&file\\_name=WTP\\_Minimum\\_Criteria\\_062818\\_Final\\_508.pdf](https://tools.niehs.nih.gov/wetp/public/hasl_get_blob.cfm?ID=11266&file_name=WTP_Minimum_Criteria_062818_Final_508.pdf). Collection and use of evaluation data are key to program improvement. Adherence to these criteria is a term-and-condition of NIEHS funding.

Evaluation forms are shown at <https://mwc.umn.edu>.

# Introduction

---

Time Requirement: 45 Minutes  
Number of Facilitators 1

## Materials

---

- Whiteboard or equivalent; markers
- Sign-in sheets
- Registration Materials
- Participant Guide
- Handouts (if applicable)

## Objectives

---

- Introduce the course agenda and objectives
- Learn about the participants' work backgrounds and their reasons for taking the course
- Answer initial questions that participants may have
- Introduce the topic

## Presentation of the Session

---

Introduce facilitator(s) and provide any needed orientation. Review MWC, NIEHS 'model programs' and uses of evaluation.

Present the agenda that has been prepared, noting that training time does not include breaks. Note that attendance is required for the duration of the program.

Ask participants to introduce themselves, describing experience and what each wants to gain from the session. Note any goals identified by participants that are not in the listing above - address any that may fit with the session materials and describe why remaining goals are outside the scope of this training.

Collect any forms and provide to program staff for retention.

Use the Lessons Learned section in the Participant Guide to introduce the topic.

Discuss that CBRNE (Chemical, Biological, Radiological, Nuclear, Explosive) and other hazardous materials may arrive on contaminated patients attempting to gain access to the emergency department.

Discuss the term "first receiver".



# Disaster Preparedness

---

Time Requirement: 1 hour

Number of Facilitators: 1 or more, consistent with ratio in the Minimum Criteria

## Materials

---

- Participant Guide
- Whiteboard or equivalent; markers

## Objectives

---

When they have completed this chapter, participants will be better able to:

- Identify appropriate preparations for a disaster
- Explain Hazard Vulnerability Analysis
- Define Emergency Management/Operations Plans (EMP/EOP)

## Suggested Facilitator Preparation

---

- Review Participant Guide

## Minimum Content Requirements

---

- Preparation
- Hazard Vulnerability Analysis
- Emergency Management/Operations Plans (EMP/EOP)

## Presentation of the Session

---

Discuss specialization, getting connected, internal preparation as found in the Participant Guide.

Review hazard vulnerability analyses (HVA). It is best if you can review their completed HVA as part of the preparation for the program.

Discuss Emergency Management/Operations Plans (EMP/EOP)

## **Duties and Limitations**

---

Time Requirement: 1 hour

Number of Facilitators: 1 or more, consistent with ratio in the Minimum Criteria

### **Materials**

---

- Participant Guide
- Whiteboard or equivalent; markers

### **Objectives**

---

When they have completed this chapter, participants will be better able to:

- Define a mass casualty incident
- Identify the types of hazardous contaminants that may result in an exposure to healthcare workers
- Identify the elements of an Emergency Management Plan
- Explain the need for Standard Operating Guides at your health care facilities
- Identify training required for first receivers
- Identify your role within the Incident Command System for a scenario

### **Suggested Facilitator Preparation**

---

- Review Participant Guide

### **Minimum Content Requirements**

---

- Definition of Hazardous Substance
- Emergency Management Plan
- Standard Operating Procedures and Guides
- Levels of Training

### **Presentation of the Session**

---

Discuss the Mass Casualty Incident and Attack with Sarin in Tokyo

#### **Definition of Hazardous Substance**

---

Discuss the definition of a hazardous substance.

Ask participants to list 5 possible events in the community that could result in mass casualties. What are the hazardous substances?

### **Emergency Management Plan**

---

Discuss the elements of an EMP that are required by OSHA in HAZWOPER.

Discuss the use of an EMP during an emergency.

Discuss how the EMP defines how the facility will respond to each type of emergency, not just hazardous materials.

### **Standard Operating Guides or Standard Operating Procedures**

---

Discuss that OSHA requires facilities to develop Standard Operating Guides for mass casualty incidents.

Discuss what SOG's would be needed for their facility.

Discuss that first receivers require Standardized SOGs for dress-out and decontamination.

Refer to the SOG for Loose-fitting PAPR pre-operational Checkout in the Participant Guide.

### **Levels of Training**

---

Discuss that OSHA training requirements are based on the duties of the responder.

- Awareness
- Operations
- Technician
- Specialist
- Incident Commander

Discuss the activities a first receiver can perform at the Awareness Level.  
Discuss the basic functions of the first receiver at the Awareness Level.

- Gather information from remote location

- Notify appropriate personnel

Discuss that OSHA training requirements are based on the duties of the first receiver.

- Awareness
- Operations
- Technician
- Specialist
- Incident Commander

Discuss the activities a first receiver can perform at the Awareness Level.

Discuss the basic functions of the first receiver at the Awareness Level.

- Gather information from remote location
- Notify appropriate personnel

Discuss what receivers can do at the Operations Level.

Discuss that receivers at the Operations Level can perform defensive tactics only.

Discuss that the current program is an Operations Level class for a specific hazard. Most operations programs are 24 hours; however OSHA officials believe 8 hours is sufficient for narrowly defined duties and where the number of hazards is limited. Why do hospital personnel fit this description?

- Decon only
- HVA Completed
- Can train to the hazard

Discuss the basic functions of a receiver at this level.

- Receive Consultations
- Decon
- Transfer to treatment

Discuss the tasks that can be performed at the Operations Level.

- Decontamination
- Monitoring
- Support Functions
  - Material supply/removal
  - Security

Skilled Support Staff - Discuss roles

Discuss why the Technician Level is not generally relevant to the decontamination of victims - Stop the release.

Discuss the basic function of a Hazmat Technician.

- Contain the release
- Act in an offensive mode

Discuss the tasks that can be performed at the Technician Level.

- Patching and Plugging
- Over Packing
- Vacuuming
- Cleaning Up

NOTE: According to OSHA, a HAZMAT Technician must receive 24-hours of Operations Level training as a prerequisite.

Refresher Training Required by OSHA

# Hazard Recognition

---

Time Requirement: 1 hour

Number of Facilitators: 1 or more, consistent with ratio in the Minimum Criteria

## Materials

---

- Participant Guide
- Whiteboard or equivalent; markers

## Objectives

---

When they have completed this chapter, participants will be better able to:

- Recognize the presence of a hazardous substance and conduct a hazard assessment using a Hazard Assessment Worksheet.
- Assess chemical and physical hazards according to properties of toxic materials.
- Assess health effects according to the resources provided.
- Determine situations where medical surveillance is appropriate.

## Suggested Facilitator Preparation

---

- Review Participant Guide

## Minimum Content Requirements

---

- Chemical and Physical Properties
- Hazard Assessment Worksheet
- Health Effects
- Measures of Concentration

## Presentation of the Session

---

Emphasize that a safe response is required.

Hazard Assessment Worksheet can be used to gather information about a substance.

## **Chemical and Physical Properties**

---

Discuss states of matter – Solid, Liquid, Gas

Ask how state of matter will affect the behavior of a contaminant. Example: if contaminant is a gas, most of it will have evaporated off victim by the time he/she arrives at the hospital. Solids and liquids will stay on the victim longer.

Discuss freezing, melting and boiling points can help determine the state of matter.

Discuss appearance, odor, pH

Discuss corrosives. Corrosives stronger than water can eat through clothes, skin and steel.

Discuss flash point. Ask participants what substances give off enough vapor to ignite at room temperature (72° F.) Answer: Anything with a flash point at or below 72° F.

Discuss flammable, combustible, ignitable.

Discuss autoignition temperature

Discuss oxidizer

Discuss Solubility in water, Specific gravity, Relative gas density

Discuss vapor pressure - Water = 18 mmHg @ 68 degrees F

Discuss viscosity

Discuss volatility. A material that is more volatile will evaporate more quickly from a victim, leaving less contaminant on him or her.

## **Activity - Hazard Assessment Worksheet**

---

Discuss the Hazardous Assessment Worksheet

Goal is to organize information and understand hazards, not just fill in the blanks.

Use GB MSDS (Appendix) to complete the worksheet.

Each time a blank is filled, relate the value to secondary decontamination of victims exposed to GB

Example: If the material is a solid, you'd probably begin making sure clothes are removed and any visible contaminant is removed from the skin. If the material is not water soluble, instruct victims to use plenty of soap in the shower, as water alone will not cleanse the person sufficiently.

Complete only the sections on chemical properties. Then continue to the next section (Health Effects).

## **Health Effects**

---

Discuss importance of understanding health effects.

Discuss common exposure routes.

Discuss that understanding acute and chronic effects is important in responding to emergencies.

Discuss acute exposure and effect.

- Single exposure
- High concentration

Show examples of acute exposures - sulfuric acid on chest.

Discuss possible health effects of acute exposure.

Ask if anyone has experienced an acute health effect.

Tell participants they are more likely to deal with these kinds of exposures, due to the temporary nature of the emergency and decontamination.

Discuss chronic exposure and effects.

- Repeated exposure
- Usually low concentrations

Discuss an example of a chronic exposure.

Hospital decon workers are less likely to experience these effects, since the decontamination emergency will rarely last long enough. However, repeated emergencies of a similar nature over a period of time could lead to chronic health effects.

Discuss factors that influence the body's response to exposure.

- Health status
- Age
- Race



- Sex
- Allergies
- Previous exposure

Discuss dose-response relationship - Higher dose = bigger response

Discuss what makes a chemical toxic or nontoxic

Discuss chemical interaction within the body

Asbestos exposure + cigarette smoking = Higher risk of lung cancer

Discuss diagram of “How Does Your Body React?” that covers symptoms different body parts might show.

Discuss diagram showing “What Affects Your Body?” that covers different materials which affect each body part.

Discuss effects of chemicals on the body.

### Respiratory System

- Purpose of respiratory system
- Symptoms displayed
- Diseases
- Exposures that cause the diseases
- Protection

### Skin

- Purpose of skin
- Symptoms
- Diseases
- Exposures that cause the diseases
- Protection

### Eyes

- Symptoms
- Eye disorders
- Exposures that lead to eye disorders
- Protection

### Stomach, Liver, and Intestinal System

- Discuss function of liver
- Symptoms
- Diseases
- Exposures that cause the diseases
- Protection

**Brain and Nerves**

- Discuss particular danger of this exposure
- Symptoms
- Disorders
- Exposures that cause disorders
- Protection

**Reproductive System**

- Purpose of system
- Women's symptoms
- Men's symptoms
- Disorders
- Exposures that can lead to disorders
- Protection

**Blood, Bone Marrow and Heart**

- Purpose of heart, blood and bone marrow
- Symptoms
- Diseases
- Exposures that can lead to diseases
- Protection

**Kidney and Bladder**

- Purpose of these organs
- Symptoms
- Diseases
- Exposures that can lead to these diseases
- Protection

Emphasize to participants the need to see a doctor immediately if they notice symptoms like these.

Discuss dose-response relationship diagram for alcohol consumption.

Discuss Medical Surveillance - protect the health of workers.

Discuss when medical surveillance should be done.

Discuss legal requirements for medical surveillance.

- HAZWOPER - required groups
- Licensed physician
- Employer must provide doctor with certain information
- Typical content of exam
- Employers must pay for exam and not cause employee to lose pay time

- Requirements after medical surveillance exam
- Cover the “Things Employees Should Do”

Discuss medical emergencies during an emergency response.

### **Measures of Concentration**

---

Discuss measures of concentration.

Discuss definition of PEL – Limit set by 8-hour Time-Weighted Average 40-hour week

Discuss definition of TLV – ACGIH, recommendations

Discuss definition of REL - Set by NIOSH, not legally enforceable

Discuss definition of STEL.

- Comes from OSHA, ACGIH, or NIOSH
- Provides a maximum concentration
- Employee can be exposed at this level for 15 minutes

Discuss definition of Ceiling Limit

Comes from OSHA, ACGIH, or NIOSH This is a limit that must not be exceeded

Discuss definition of PEL

Limit set by 8-hour Time-Weighted Average 40-hour week

Discuss Skin, Sensitizer, and Carcinogen Notations - ACGIH uses these

- “Skin” = can be absorbed through skin
- “SEN” = exposure can result in sensitization
- “A” followed by 1-5 = the cancer-causing potential
- “A1” = confirmed human carcinogen
- “A5” = not suspected as human carcinogen

Discuss definition of TWA

Discuss Explosive Limits - Lower, Upper, and Explosive Range

### **Activity: Hazard Assessment Worksheet**

---

Return to the worksheet and complete the Health Effects and Exposure Limits Section.

# PPE

---

Time Requirement: 90 minutes

Number of Facilitators: 1 or more, consistent with ratio in the Minimum Criteria

## Materials

---

- Participant Guide
- Whiteboard or equivalent; markers

## Objectives

---

When they have completed this chapter, participants will be better able to:

- Review regulations requiring PPE
- Identify different types of respirators
- Identify the levels of protection established by the EPA
- Identify the ways that hazardous materials degrade chemical protective clothing
- Identify the need for using two layers of gloves and the requirements for footwear

## Suggested Facilitator Preparation

---

- Review Participant Guide

## Minimum Content Requirements

---

- PPE Regulations
- Respirator Fit
- Taking care of respirators
- Chemical Protective Clothing
- Activity – Levels of Protection

## **Presentation of the Session**

---

### **Regulations Requiring PPE**

---

Protects first receivers from: Chemicals Temperature Respiratory Hazards

Must be properly selected, maintained and worn

HAZWOPER requires Emergency Management Plans to include section on PPE.

HAZCOM requires workers receive training and information on hazards and how to protect themselves at work.

Other OSHA standards

Discuss usage of PPE during emergencies bs. ventilation/special work practices during routine activities.

Overview respiratory protection - remove contaminants from air, or supply fresh air.

Types of Respirators:

- SCBA / SAR
- APR

SCBA

- Full facepiece
- Oxygen tank, with alarm when supply is low
- Gauge
- Safety valve
- Closed vs. open-circuit mode
- Mainline (yellow) and bypass (red) valves
- Go over steps to don SCBA
- Emphasize safety checks

SAR

- Air provided from remote source
- Must have escape bottle

## APR

- Filter air
- Must know contaminant(s) and concentration before use at emergency
- Quarter-mask, half-mask, and full face
- Filters: particulate filter vs. chemical cartridge
- Select based on expected exposure

Never wear APR in oxygen-deficient environment!

## PAPR

- Powered filtering unit
- Loose-fitting PAPRs don't require fit tests
- Still must go through inspection

## Filters and Cartridges

- Particulate filters protect from dusts, mists, and fumes
- Chemical cartridges protect from vapors and gases
- Changing the filters
- OSHA regulation 29 CFR 1910.134 covers which filter to use when
- How to tell when to change filter

## Respirator fit

- Fit-testing
- What changes the fit?
  - Dental work, facial hair, etc.

## Periodic Fit Testing

- Qualitative testing uses irritant or smelly substances
  - Purpose, method, requirements
  - Cautions
- Quantitative testing results in numerical estimate of fit
  - Purpose, method, requirements
  - Advantage: objective
  - Disadvantage: must have trained personnel to administer test and special equipment.

## **Respirator Fit**

---

Discuss Routine Fit Checks

- Positive-pressure - purpose, method, requirements
- Negative-pressure - Purpose, method, requirements
- Advantages and disadvantages

Discuss medical fitness to wear a respirator

- Must have exam by licensed physician
- Conditions which might keep someone from wearing respirator
- Must be done every 2 years

## **Taking Care of Respirators**

---

Discuss care of respirators - Inspection, cleaning, disinfection, maintenance, storage

Facial Hair and Respiratory Protection - OSHA standards

Discuss with participants: Can employers force worker to shave facial hair?

Discuss minimum requirements for a Respirator Program

- OSHA requires employers who provide respirators to employees have a written respirator program
- Go over requirements for program
- Respirator program should be in EMP
- Special considerations

Review Special Problems

- Vision Communications
- IDLH Atmosphere
- Low-temperature environments
- High-temperature environments

## **Chemical Protective Clothing**

---

Introduce Chemical Protective Clothing (CPC)

Discuss types of CPC suits

- Totally encapsulating suit
- Hooded (partially encapsulating) suit

Discuss levels of protection

Precautions when wearing CPC

Discuss Penetration, Degradation, Permeation

Go over some of the chemical-resistant materials.

Ask participants:

You need gloves that protect against dilute acids. What material will you select?

What are coveralls usually made of?

Review things to remember when using CPC

Discuss inspection, maintenance, and storage of CPC

- When to inspect
- Remember shelf-life
- Inspection checklist
- Maintenance prolongs life of CPC
- Storage, done properly, helps prevent suit failures

## **Activity - Levels of Protection**

---

Discuss the purpose and directions

Show images and discuss.



1. Ask participants what level of protection this is:



Answer:

- a) Level B
- b) Level A

2. Ask participants what level of protection this is:



Answer: Level A

3. Ask participants what level of protection this man appears to be donning.



Answer: Level A

4. Ask participants what level of protection this is:



Answer: None, since it is being worn improperly. If worn properly, level C.

5. Ask participants what level of protection this is.



Answer: Level D.

6. Ask participants what level of protection this is.



Answer: Level D

7. Ask participants what level of protection this is.



Answer: Level D

8. Ask participants what level of protection this is.



Answer: Level D.



9. Ask participants what level of protection this is.



Answer: Level B.

10. Ask participants what level of protection is:
- a) pictured at left.
  - b) pictured at right.



Answer:

- a.) Level B b.) Level A

## **Gloves and Footwear**

---

Discuss glove requirements.

Discuss boot requirements.

# Decontamination

---

Time Requirement: 2 hours

Number of Facilitators: 1 or more, consistent with ratio in the Minimum Criteria

## Materials

---

- Participant Guide
- Whiteboard or equivalent; markers

## Objectives

---

When they have completed this chapter, participants will be better able to:

- Identify work zones as applied to the decontamination area.
- Identify work practices to prevent the spread of contamination.
- Demonstrate deployment of a decontamination shelter and associated equipment.
- Identify need to monitor the environment.
- Identify elements of a decontamination briefing.
- Demonstrate methods of decontaminating ambulatory patients.
- Demonstrate methods of decontaminating non-ambulatory patients.

## Suggested Facilitator Preparation

---

- Review Participant Guide

## Minimum Content Requirements

---

- Decontamination Work Practices
- Shelter Deployment
- Donning/Doffing PPE
- Shelter Deployment
- Monitoring
- Patient Decontamination

## **Presentation of the Session**

---

### **Work Zones**

---

Discuss Contaminated/Decontaminated Zones and Waste/Supply Side

### **Work Practices**

---

Discuss work practices

- Move patients from “dirty” to “cleaner” areas
- Decon workers do not move from “dirty” to “cleaner” areas
- Only decon workers and patients allowed in decon area
- All material, equipment and waste stays
- One person in charge per ICS plan
- Minimize contact with contaminated surfaces

### **Shelter Deployment**

---

Discuss the general layout of the secondary decon area.

Review photos found in the Participant Guide

### **Activity: Decon Deployment Skills**

---

Discuss directions.

Complete the skills checklist after the deployment exercise.

### **Donning PPE**

---

Discuss donning PPE. Refer to photo in Participant Guide.

### **Monitoring**

---

Discuss that monitors can detect hazards that are not immediately noticeable by first receivers. Monitors increase safety.

Discuss need to conduct monitoring

- Detect hazards
- Identify hazardous materials
- Measure concentrations
- Verify effectiveness of decon

Discuss uses of monitoring

- Identify hazards
- Determine tactics
- Determine isolation area
- Identify exposure levels
- Provide clearance monitoring

### **Hazardous atmospheres**

---

- Combustible gases - oxygen
- Toxic gases
- Radiation

### **Patient Decontamination**

---

Discuss primary vs. secondary decon

Discuss decon of ambulatory patients and non-ambulatory patients

Note that:

- Very minimal or no treatment is administered in the decon area.
- No one is to enter the ED without decon.

Discuss how to remove clothing from a non-ambulatory patient.

Discuss decon methods:

- Warm water rinse
- Cold water rinse
- Specialized solutions

Review photos found in Participant Guide

**Activities - Ambulatory and Non-Ambulatory Patient Decon**

---

Discuss purpose and directions

Complete checklists when done

**Activity - Decon Briefing**

---

Discuss decon briefing

Purpose - so first receivers know what to do

Content - Communications, hazards, slopes, drains, emergency evacuation routes and signs/symptoms of exposure

Overview of self-decon and PPE doffing.

Discuss that the participants will be directed how to don, self-decon and doff during the dress-out exercise.

Divide Participants into two groups.

**GROUP 1**

Go to tent exercise area.

Deploy and strike equipment with SOG in groups of 4 participants.

Everyone gets a chance to participate set-ups).

**GROUP 2**

Go to dress-out exercise area.

Don, self-decon and doff in groups of 4 participants using SOGs.

Everyone gets a chance to participate (2 dress-outs).

Switch groups and repeat.

**Activity - Donning and Doffing Skills**

---

Discuss Purpose and Directions

Complete checklist

# Termination

---

Time Requirement: 1 hour

Number of Facilitators: 1 or more, consistent with ratio in the Minimum Criteria

## Materials

---

- Participant Guide
- Whiteboard or equivalent; markers

## Objectives

---

When they have completed this chapter, participants will be better able to:

- Identify the elements of the Termination Phase.
- List site transfer options.
- Demonstrate an aspect of the Termination. Phase Aspects included in a complete Termination procedure include Personnel, Equipment and Property, and Site Transfer. Each is reviewed below.

## Suggested Facilitator Preparation

---

- Review Participant Guide

## Minimum Content Requirements

---

- Personnel
- Equipment and Property
- Site Transfer
- Activity – Termination Skills



## **Presentation of the Session**

---

### **Personnel**

---

Discuss personnel aspects of terminations.

- PAR
- Rehab
- PIA
- CISD
- Documentation

### **Equipment and Property**

---

Discuss equipment and property aspects of termination

- Resupply
- Inventory of equipment

### **Site Transfer**

---

Discuss site transfer

- Clearance monitoring
- Waste site
- Clean up

### **Activity: Termination Skills Checklist**

---

Discuss purpose, directions, checklist.

### **Appendices Included in Participant Guide**

---

Appendix A: Hazard Assessment Worksheet

Appendix B: Standard Operating Guide for Loose-Fitting PAPRs

Appendix C: Standard Operating Guide for Decontamination Tents

Appendix D: Emergency Management Plan Sample

Appendix E: Material Safety Data Sheet (GB)

# Closing

---

Time Requirement: 15 Minutes  
Number of Facilitators: 1

## Materials

---

- Whiteboard or equivalent; markers
- Evaluation Forms
- Certificates, if appropriate

## Objectives

---

- Review program objectives
- Answer questions
- Collect feedback (evaluation forms)

## Presentation of the Session

---

Thank participants for attending the program.

Review the program objectives.

This is an opportunity for final questions and to assure that the list of questions has been addressed during the program.

Evaluation is important to continued program improvement. This should not be rushed. Provide time to complete the program evaluation forms and collect them.

Forward suggestions to improve this exercise to your Program Director. Forward any impact stories or 'takeaways' to your Program Director.