

County of Los Angeles Department of Health Services
Emergency Medical Services Agency
Disaster Medical Services

Disaster Training Unit Course Description

Topic: Mass Casualty Decontamination –Hospital Course

Course Hours: 8

Course Description: This course provides an entry level awareness and operational training in mass decontamination.

Target Audience: All interested hospital staff

Objectives: At the conclusion of this course the student will be able to:

- Describe reasons why a terrorist might use CBRN weapons
 - List ways that CBRN incidents are different from an industrial Haz-mat incident
 - Describe the most likely method of dissemination to be used by a terrorist
 - Describe the different mechanisms that toxic substances can enter the body and cause harm
 - Identify unique characteristics of a CBRN event
 - Define chemical weapon
 - Describe the impact of toxic chemicals as it relates to mortality and morbidity
 - State the sources of harmful chemicals
 - List the major categories of chemical agents as described in this class
 - Define volatility and persistence and describe the effects that these concepts can have on the activities of first receivers
 - Describe how a first responder/receiver might best utilize the knowledge of what toxic agents smell like
 - Review normal physiological effects of the release of acetylcholine and the effects nerve agent on that process
 - Describe the signs, symptoms and treatment of selected chemicals agents that might be weaponized;
 - Nerve Agents (GA, GB, GD, GF)
 - Blister Agents (H, HD, HN1, HN2, HN3, L)
 - Blood Agents (Hydrogen Cyanide (AC), Cyanogen Chloride (CK))
 - Choking Agents (Chlorine, Phosgene, Ammonia)
 - Biological Toxins (Botulism Toxin, Ricin)
 - Define biological weapon
 - Compare and contrast between a communicable and a non-communicable disease
 - Describe some diseases/pathogens that meet these criteria, their symptoms and treatments:
 - *Anthrax*
 - *Plague*
 - *Smallpox*
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- List attributes of a pathogen that would cause it to be weaponized by a terrorist
 - Discuss why decontamination is usually not necessary following a biological incident
 - Identify indicators that a biological agent has been released in your response area
 - Describe the cluster of symptoms that most biological weapon agents initially create in the earliest stages of illness
 - Discuss why decontamination is generally not necessary following a covert biological incident
 - Identify actions to be taken by first receivers to protect yourself in a biological incident
 - Describe the health care worker role as an epidemiologist
 - Describe how terrorists might use ionizing radiation to cause harm to people (weaponization) and the likelihood of each method
 - Discuss various ionizing particles and waves and their potential for harm
 - Describe what makes atoms “radioactive”
 - Differentiate between non-ionizing and ionizing radiation
 - Discuss various ionizing particles and waves and their potential for harm
 - Name a device that detects radiation
 - Describe the most important asset in responding to or providing aid at a radiological event
 - Explain the relationship of different radiation measurements and conversions)
 - Describe the concept of background radiation
 - Define the term ALARA
 - Describe how the ALARA principle can be applied to the decon process
 - Describe and apply the four principles of radiation protection
 - Differentiate between exposure, contamination and incorporation
 - Describe the immediate actions of potential radiological terrorism incidents likely to result in mass casualties
 - Explain OSHA exposure limits and how they apply to responders/receivers
 - Identify the major pharmacological agents used to treat patients with radiological injury following a mass casualty radiological terrorism incident
 - Identify the key principles involving triage of patients with potential radiation injury (Acute Radiation Syndrome)
 - Describe the key components of treating patients with combined injury (trauma and radiation injury)
 - Identify who needs decontamination when provided a list describing “victims” arriving at a hospital
 - Explain what is meant by “Operations Level Requirements”
 - Define the term “Hazardous Vulnerability Analysis (HVA)”
 - Identify some of the limitations with detection equipment (slide 86)
 - Define Decontamination
 - State the three primary reasons to decontaminate
 - Differentiate the following types of decontamination: Emergency, Primary, Secondary and Site
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- Discuss the Hospital Decontamination Zone and its components
 - Understand the principles of existing First Receiver decontamination systems
 - Identify general safe decontamination considerations
 - List some difficulties with decontamination operations
 - Describe the best way to determine the effectiveness of hospital decontamination operations
 - Explain the role of the Hospital Incident Command System (HICS) as it relates to decontamination operations
 - Explain necessary actions once decon operations are over
 - Identify types, selection and usage of PPE
 - Understand the risks associated and medical considerations with the decontamination operation and wearing PPE
 - Don and doff the chemical protective clothing and 3M BE-10 Powered Air Purifying Respirator (PAPR)
 - Utilize PPE Level C while conducting simulated operations within the decontamination corridor
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