Recognition and Safe Handling of Chemical Terrorist Agents

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This course provides an in-depth guide to the initial public health response to a chemical terrorist attack, including (1) the strategies used in the field to recognize that a chemical terrorist attack is in progress and the techniques and requirements for safe handling of the chemicals; (2) the devices used to detect the type of chemical(s) present and the levels at which they are present; and (3) the models and other tools used to conduct an exposure assessment for the surrounding exposed population. The topics covered in this course include:

Learning Objectives
Module 1: General recognition strategies for chemical terrorist attacks
- List general signs and symptoms of a chemical attack
- Identify the type and relative danger of a chemical agent based on its DOT placard and hazard identification code
- Identify the type of agent carried in a vehicle based on the structural characteristics of the vehicle itself
Module 2: Detection devices and technologies
- Define the term “detection limit”
- Compare and contrast the sensitivity and selectivity of a chemical detection device
- Describe the various means by which chemical agents may be detected, including paper devices, kits, monitors, alarms, and lab-based instruments
Module 3: Safe handling practices
- Identify the personal protective equipment (PPE) that is prescribed for various exposure scenarios
- Familiarize oneself with the Emergency Response Guidebook (Dept. of Transportation) and become facile in its use
Module 4: Exposure assessment models and tools
- Compare and contrast the various models and tools used to predict the geographic extent to which a released chemical will affect a surrounding community, including ALOHA, ARCHIE, and various first responder isolation distance tables
- Familiarize oneself with the Emergency Response Guidebook (Dept. of Transportation) and become facile in its use

Competencies
- Identify and locate the emergency response plan (or the pertinent portion of the plan)
- Identify limits to own knowledge/skill/authority and identify key system resources for referring matters that exceed these limits
- Recognize unusual events that might indicate an emergency and describe appropriate action
- Apply creative problem solving and flexible thinking to unusual challenges within his/her functional responsibilities and evaluate effectiveness of all actions taken

* Bioterrorism and Emergency Readiness

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