

TRAINING
TODAY FOR
A SAFER
TOMORROW



NIEHS Worker Education
and Training Program
Awardee Meeting and
**NATIONAL
TRAINERS'
EXCHANGE**
March 27-29, 2012
Ft. Lauderdale, FL



Engaging Healthcare Hazardous Materials Trainees

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Paul Penn- MS, HEM, CSHP, CHEP

- Currently EnMagine President
 - Founded EnMagine - one of the leading healthcare emergency management planning, training and exercising firms
- Formerly
 - Environmental Health and Safety Manager - Kaiser Permanente Sacramento Medical Center
 - Safety Officer/ Oil Spill Response Program Manager - CA Conservation Corps
 - SARA Title III Program Manager- CA Governor's Office of Emergency Services
 - Assistant Director Emergency Services, Emergency Medical Services Hazardous Materials/Waste - San Benito County CA
 - VP - Donner Summit Public Utility District, Planning Commissioner - Nevada County CA, Professional Ski Patroller, Founder and Board Member - New Paltz (NY) Rescue Squad
 - Other items of interest- Author CA Hazardous Materials Incident Contingency Plan, member FIRESCOPE ICS Hazardous Materials Working Group, HICS National Summit/Secondary Review Committee



Learning Objectives

- By the end of the session participants will be able to:
 - Identify how hazardous materials emergencies may impact a healthcare worker both personally and professionally
 - Recognize the threats and how hazardous materials emergencies may impact the healthcare organization
 - Recognize the threats and how hazardous materials emergencies may impact the community



The Problem

- Some attendees are willing, interested, engaged, and knowledgeable
- Others are *unwilling, uninterested, unengaged, and/or unknowing* sent to attend hazardous materials emergency training



The Question

- How can a training program engage healthcare workers so that:
 - They recognize the importance of the content
 - Their learning is maximized
 - They work more safely and effectively



The Answer

- Make it:
 - Real
 - Personal/Professional
 - Fun



What The Program Is

- A healthcare-centric hazardous materials emergency response training program
 - The Awareness module is an introductory course that contains an overview of hazardous materials in a healthcare environment
 - Addresses internal spills and contaminated victims/patients, including
 - SIN- Safety Isolate Notify
 - Directed Self-Decon
 - Defensive only
 - The basis of all future training



What the Program Is Not

- Neither a defensive response (Operations level) or offensive (Technician, Specialist)
- Does not require the use of personal protective equipment other than Standard Precautions
- A program that requires competency in manipulative skills



Standards and Best Practices

- Includes material required by OSHA pursuant to the:
 - Hazardous Waste Operations and Emergency Response standard (HAZWOPER- [1910.120\(q\)\(6\)\(i\)](#) or state plan state equivalent) for the First Responder (Receiver) Awareness level
- And the Guidance document:
 - Best Practices for Hospital-Based First Receivers of Victims from Mass Casualty Incidents Involving the Release of Hazardous Substances



Who?

- **Individuals [healthcare workers]:**
 - **Who are likely to witness or discover a hazardous substance release and**
 - **Who have been trained to initiate an emergency response sequence by notifying the proper authorities of the release.**
 - **They would take no further action beyond notifying the authorities of the release.**
 - **First responders at the awareness level shall have sufficient training or have had sufficient experience to objectively demonstrate competency in the following areas**

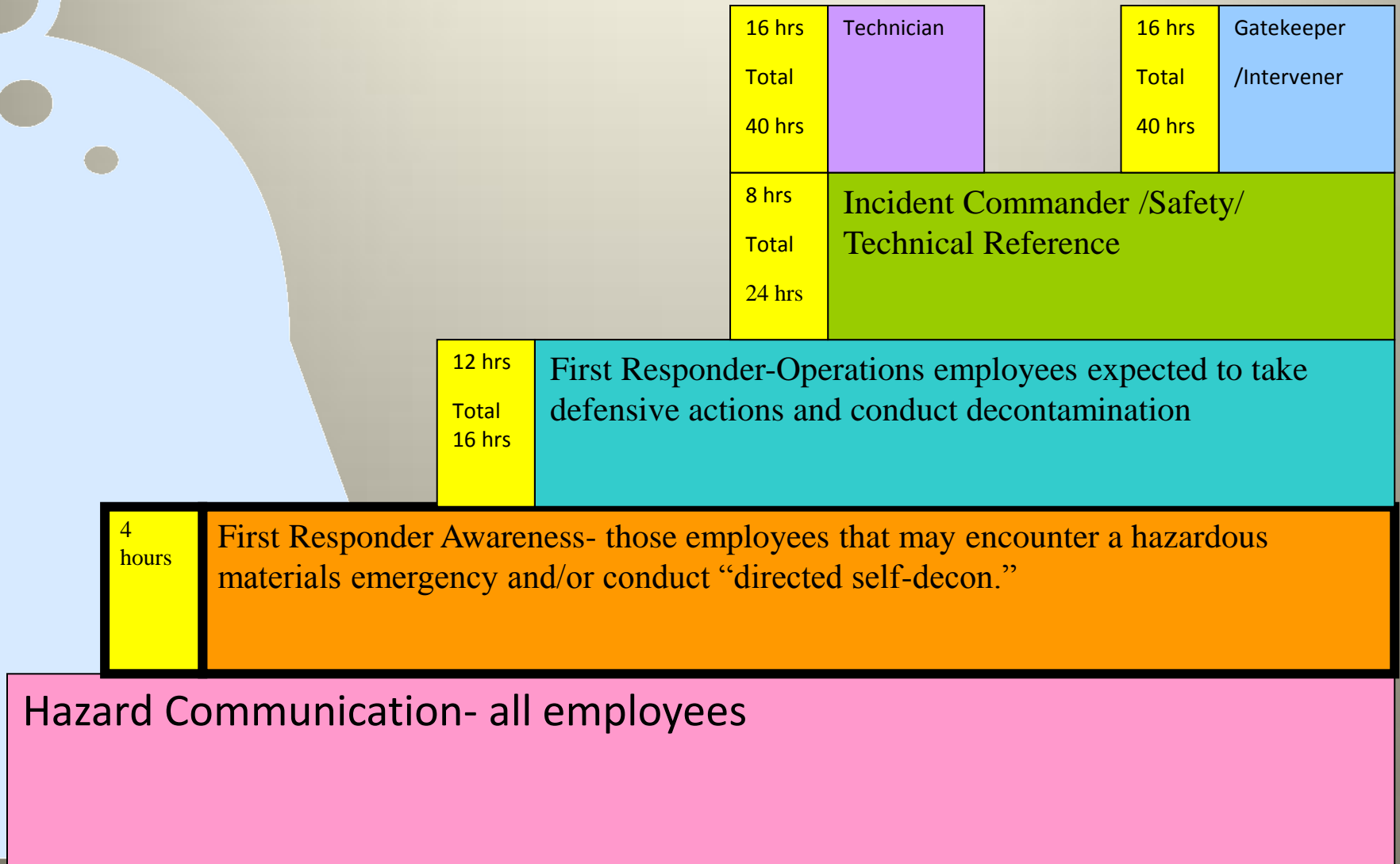


What?

- An understanding of what hazardous substances are, and the risks associated with them in an incident.
- An understanding of the potential outcomes associated with an emergency created when hazardous substances are present.
- The ability to recognize the presence of hazardous substances in an emergency. 1910.120(q)(6)(i)(D)The ability to identify the hazardous substances, if possible.
- An understanding of the role of the first responder awareness individual in the employer's emergency response plan including site security and control and the U.S. Department of Transportation's Emergency Response Guidebook.
- The ability to realize the need for additional resources, and to make appropriate notifications to the communication center.



A Tiered Approach





AND SO...



HazMat for Healthcare

**An Awareness
Level Course**

Brought to you by



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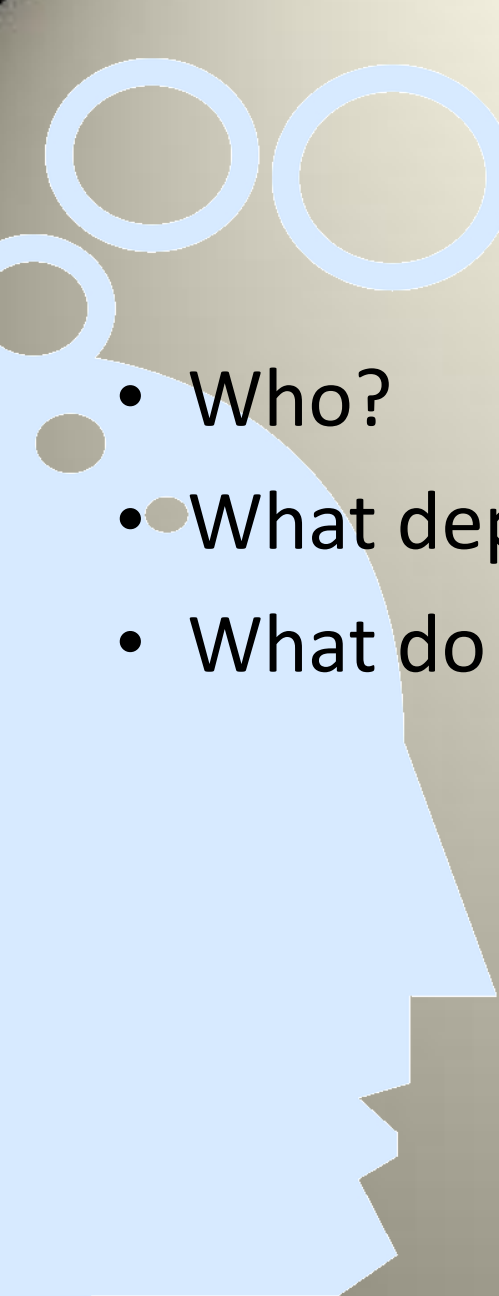
Haz Mat for Healthcare

**An Awareness
Level Course**



***An Awareness Program for
Managing Hazardous Materials
Emergencies Within Healthcare***

Brought to you by Paul@EnMagine.com (530) 622-5964



But First (Activity)

- Who?
- What department and job?
- What do they want to get out of the class?



Who needs to take the **Awareness Level Course?**



Hospital personnel “who are likely to **witness or discover** a hazardous substance release and who have been trained to initiate an emergency response sequence by **notifying** the proper authorities of the release.”

But Second (Activity)

- Who (by job title) in the hospital would likely encounter someone who is contaminated and accessing the facility?
- What departments handle/use hazardous materials and are likely to witness or discover a hazardous materials spill?



Who needs to take the **Operations** Level Course?

Hospital personnel
“who **respond** to a
Haz Mat release as
part of the initial
response in a
defensive action and
contain the release
from a safe distance.”



Regulations

The Occupational Safety and Health Administration (or its state equivalent) has a mandate to ensure that employers provide a **safe and healthful workplace**.

The primary standard applicable to this program is called Hazardous Waste Operations and Emergency Response (**HAZWOPER**).

HAZWOPER

HAZ-
WOPER

Regulations (cont.)



Training categories in the Emergency Response section of the HAZWOPER Standard are:

- First Responder-Awareness
- First Responder-Operations
- Hazardous Materials Technician/Specialist
- Hazardous Materials On-Scene Commander
- Hazardous Materials Skilled Support Personnel



Regulations (cont.)



Training categories in the Emergency Response section of the HAZWOPER Standard are:

- First Responder-Awareness
- First Responder-Operations

DEFENSIVE

Hazardous Materials Technician/Specialist

- Hazardous Materials On-Scene Commander
- Hazardous Materials Skilled Support Personnel



Awareness Objectives



Identify the risks and problems that can occur in Hazardous Materials Incidents.



Awareness Objectives

Recognize a Hazardous
Materials Incident



Identify Characteristics
of a Chemical



Awareness Objectives



Describe Safe and Effective Response

Understand How to Make Proper Notifications



Awareness Objectives

Describe How to Isolate the Scene and Deny Entry



Describe How to Conduct Directed Self-Decon



Awareness Objectives

Understand the role of **Awareness Level** personnel in the overall response



AWARENESS



Awareness Objectives

Understand the role of **Awareness Level** personnel in the overall response



AWARENESS



OPERATIONS



Awareness Objectives

Understand the role of **Awareness Level** personnel in the overall response



AWARENESS



OPERATIONS



COMMAND



Awareness Objectives

Understand the role of **Awareness Level** personnel in the overall response



AWARENESS



OPERATIONS



COMMAND



TECHNICIAN



Definition of a Hazardous Material

There is **NO** one definition.

OSHA definition:

Hazardous Chemical: Any substance to which exposure
“results or may result in adverse affects on the health or
safety of employees:” or “any chemical which is a physical
hazard or a health hazard.” 29 CFR 1910.1200 (c)





What does the Regulation State?

"Hazardous substance" means any substance designated or listed under (A) through (D) of this definition, exposure to which results or may result in **adverse effects on the health or safety of employees:**





What does the Regulation State?

"Hazardous substance" means any substance designated or listed under (A) through (D) of this definition, exposure to which results or may result in adverse effects on the health or safety of employees:

Any substance defined under section 101(14) of **CERCLA**;





What does the Regulation State?

"Hazardous substance" means any substance designated or listed under (A) through (D) of this de or may result in adverse effects employees:

Any substance defined under section 101(14) of CERCLA;

Any **biologic agent and other disease causing agent** which after release into the environment and upon exposure, ingestion, inhalation, or assimilation into any person, either directly from the environment or indirectly by ingestion through food chains, will or may reasonably be anticipated to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions (including malfunctions in reproduction) or physical deformations in such persons or their offspring.



What does the Regulation State?

"Hazardous substance" means any substance designated or

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Any substance defined under section 101(14) of **CERCLA**;

Any **biologic agent and other disease causing agent** which after release into the environment and upon exposure, ingestion, inhalation, or assimilation into any person, either directly from the environment or indirectly by ingestion through food chains, including, but not limited to, drinking water, or through disease, malfunction, or deformation;

Any substance listed by the **U.S. Department of Transportation** as hazardous materials under 49 CFR 172.101 and appendices; and



What does the Regulation State?



"Hazardous substance" means any substance designated or listed under (A) through (D) of this definition, which is a hazard to the health of humans, animals, or the environment, or which is a safety hazard.

Any substance defined under section 101(14) of **CERCLA**;

Any **biologic agent and other disease causing agent** which after release into the environment and upon exposure, ingestion, inhalation, or assimilation into any person, either directly or indirectly, may reasonably be expected to cause death, genetic mutation, or physical deformity;

Any substance listed by the **U.S. Department of Transportation** as hazardous materials under 49 CFR 172.101 and appendix B;

Hazardous waste as herein defined.



What does the Regulation State?

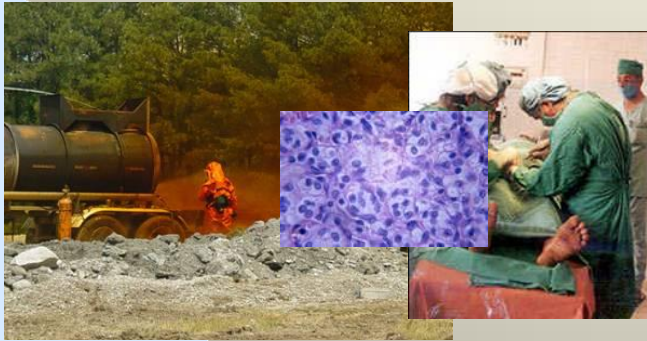
IN OTHER WORDS...

**Any Substance Posing
an Adverse Effect on Health
Any CERCLA-Defined Substance
Any Biological or Disease Causing Agent
Any DOT-Defined Haz Mat Substance
Any Other Substance Defined
in 29 CFR 1910.1200**



Examples of Hazardous Materials

(OSHA Hazardous Waste Operations and Emergency Response
Standard 29 CFR 1910.120 [Title 8 §5192 CCR])



Chemicals That Cause Cancer



Chemicals That Burn the Skin or Eyes on Contact



Biohazards or Infectious Materials



Radioactive Materials



Examples of Hazardous Materials

(OSHA Hazardous Waste Operations and Emergency Response
Standard 29 CFR 1910.120 [Title 8 §5192 CCR])



**Chemicals That Catch Fire
or Explode**



Poisons



**Chemicals That Can Cause
Violent Chemical Reactions**



Unknown Chemicals

Hazardous Materials in Hospitals



Internal incidents where the spill originates onsite and is limited to the facility.



External incidents that occur offsite and are brought to the hospital (either through a plume of hazardous material or by contaminated patients accessing the facility for treatment.)

But Third (Activity)

- Provide examples of internal event
- Provide examples of external incident



Activity

***What are the
Impacts of
Hazardous
Materials
Incidents On...***

- **You**
- **Your Community**
- **The Hospital**
- **The Emergency
Department**
- **Pre-Hospital Providers**



But Fourth (Activity)

- What are the impacts/concerns of a hazardous materials incident, both personally and professionally?





Basis For Success

The C's

- Communication
- Coordination/Consideration
- Control
- Common Sense





Learning Objectives

Did we?

- By the end of the session participants will be able to:
 - Identify how hazardous materials emergencies may impact a healthcare worker both personally and professionally
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 - Recognize the threats and how hazardous materials emergencies may impact the community



Why we plan!





The End!

Photo courtesy of Robert A, Eplett /oes.ca.

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