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The Role of an Environmental Health Professional in a Disaster

Protecting Environmental Health in Disasters: An Extension of the Hurricane Dialogues
Natchez, Mississippi
April 24-25, 2007

Twin Cities Metro
Advanced Practice Center
Minnesota
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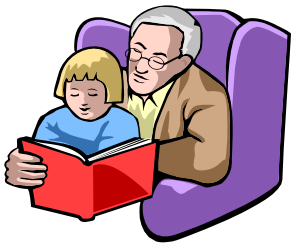
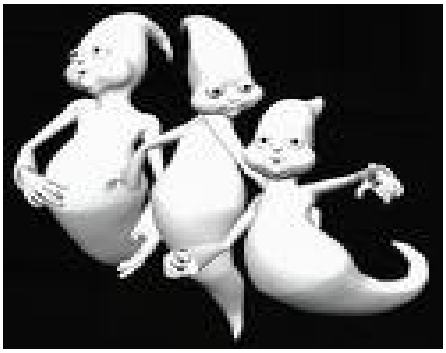
Emergency and Disaster Definitions

- **Disaster** overwhelms the affected community and requires outside assistance
- **Emergency** is not a disaster in itself, but an event requiring immediate response
- The role of an EHP in responding to a disaster or an emergency is essentially the same

Storytelling





Purpose: To create models for implementing information technology and training in support of bioterrorism preparedness and emergency response.

Technical Topics in Module I

1. Outbreak investigation
2. Water safety
3. Food safety
4. Sanitation (sewage)
5. Mass care
6. Solid waste mgt
7. Vector control
8. Hazardous Materials
9. Household Hazardous Waste
10. Hazardous Waste
11. Medical/Infectious Waste
12. Chemical Incidents
13. Radiological Incidents

Story Based

14 EH Core Competencies

- Information Gathering
- Evaluation
- Economic/Political Issues
- Project Management
- Reporting/Documentation
- Educate
- Conflict Resolution
- Data Analysis
- Problem Solving
- Organizational Knowledge & Behavior
- Computer/Information Technologies
- Collaboration
- Communicate
- Marketing

Key Core Competencies

- Organizational Knowledge/Behavior
- Collaboration
- Problem Solving
- Information Gathering
- Communication

Organizational Knowledge & Behavior
What does it Mean?

The capacity to function effectively within the culture of the organization and to be an effective team player.

Organizational Knowledge & Behavior
Why is it Important?

To strengthen the EH team's performance during a disaster

Organizational Knowledge & Behavior
What is the EHP Role?

- Understand ICS and how environmental health and your emergency response plan work within ICS
- Read/understand the procedures in your emergency response plan

Organizational Knowledge & Behavior

How do you build Organizational Knowledge?

- Ensure your staff is trained in ICS
- Meet with your jurisdiction's Dir. Of Emergency Mgt. to discuss & review roles for environmental health within ICS
- Know how your jurisdiction's emergency plan works, your roles within it, and how it ties into ICS

Organizational Knowledge & Behavior

Keep Your Team Safe!

- Take mental health breaks
- Always use a buddy system
- Limit the number of response hours worked

Collaboration
What does it Mean?

The capacity to form partnerships and alliances with other individuals and organizations in order to enhance performance on the job.

Collaboration
Why is it Important?

A multidisciplinary team of knowledgeable and experienced experts working together is essential for effective and timely response and recovery

Collaboration
What is the EHP Role

- Make relationship building part of your routine
- Work with others involved with emergency preparedness and response efforts
- Be firm in your convictions

Problem Solving
What does it Mean?

The capacity to develop insight into and appropriate solutions to environmental health problems.

Problem Solving
Why is it Important?

- Your expertise & experience make you uniquely qualified to ID and solve problems
- Your proactive involvement is critical to keeping the public safe and healthy

Problem Solving
What is the EHP Role?

- ID current & potential problems
- Propose solutions and actions
- Prioritize actions
- Prevent future problems

Information Gathering
What does it Mean?

The capacity to identify sources and compile relevant and appropriate information when needed, and the knowledge of where to go to obtain the information.

Information Gathering
Why is it Important?

- Assessing risk and damage is critical to the health & safety of victims and responders
- The assessment begins with information gathering

Information Gathering
What is the EHP Role?

- Continuous effort due to changing circumstances
- Think outside the box
- Be creative
- Work alone or with partners

Communication
What does it Mean?

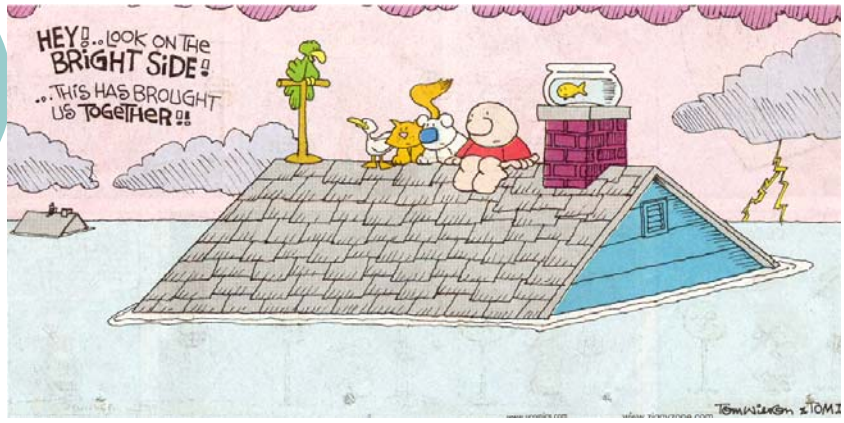
The capacity to effectively communicate risk and exchange information with colleagues, other practitioners, clients, policy-makers, interest groups, media, and the public through public speaking, print and electronic media, and interpersonal relations.

Communication
Why is it important?

- Frequent communication prevents **chaos** and is essential to successful disaster/emergency response and recovery

Communication
What is the EHP Role?

- Routinely communicate with team members
- Ensure accuracy of messages
- Be prepared to provide emotional support
- Develop good listening skills



Disaster Denial Paradigm

- It isn't going to happen.
- If it happens, it will not be as they said it would be.
- If it happens, and it is as bad as they said, it will not happen to me.
- If it happens and it is as bad as they said, and it happens to me, then someone has planned for it and is coming to help.

EH Professional Activities

- Performs inspections
- Provides tools and education to implement and maintain standards
- Conducts special studies
- Samples air, water, soil and food
- Reviews plans

EH Professional Activities (Cont.)

- Acts as an educator
- Plans programs
- Acts as a consultant to civic groups, business, industry and individuals
- Enforces environmental and public health laws

Types of Disasters

- Hurricanes
- Earthquakes
- Tornadoes
- Floods
- Drought
- Volcanoes
- Landslides
- Wind Storms
- Wild Fires
- Extreme Temperatures

Environmental *Health*

The science and art of:

- identifying agents of disease or injury,
- designing and implementing programs to prevent transmission of the agent in the environment, and
- protecting people from exposure to the agent.

Minnesota Department of Health

Environmental *Protection*

The science and art of:

- identifying threats to environmental quality,
- designing and implementing programs to prevent degradation of the environment, and
- preventing environmental contamination or degradation.

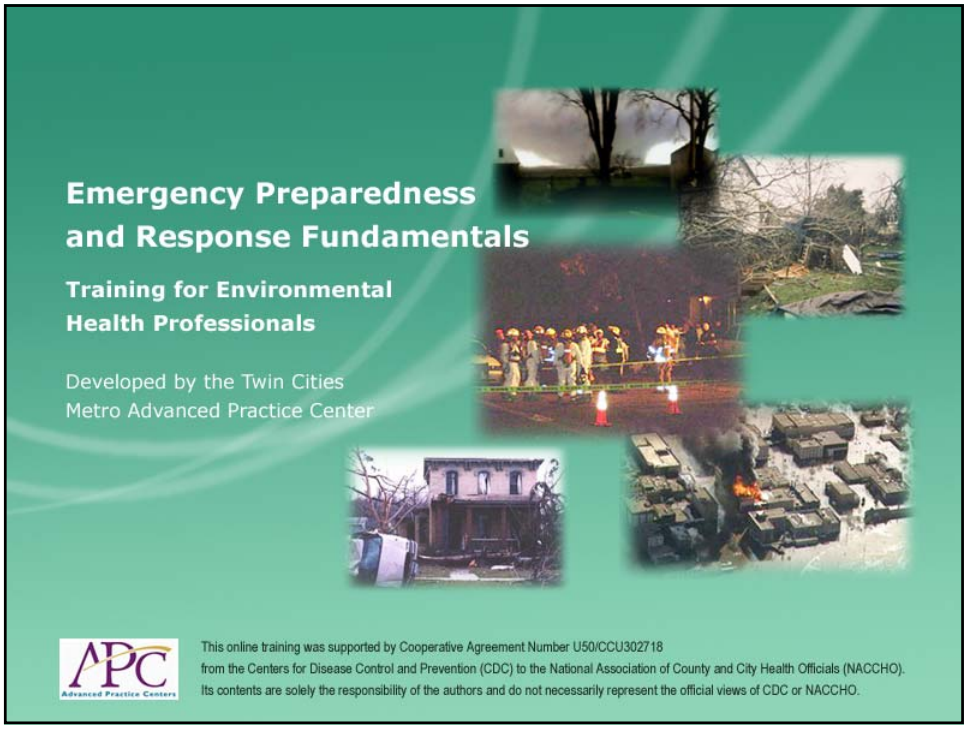
Minnesota Department of Health

A range of action to protect public health

- Food safety
- Lodging safety
- Recreational water quality
- Public pool safety
- Lead hazard control
- Water quality
- Wastewater management
- Outdoor air quality
- Indoor air quality
- Sustainable design
- Public health nuisance control
- Solid waste management
- Hazardous waste management
- Housing regulation
- More


THIS OUTBREAK MAY BE HARDER TO CONTAIN.
FEAR
THE SACRAMENTO BEE REX BABIN


MOTHER NATURE as TERRORIST


Emergency Preparedness
and Response Fundamentals
Training for Environmental
Health Professionals
Developed by the Twin Cities
Metro Advanced Practice Center
APC
Advanced Practice Centers
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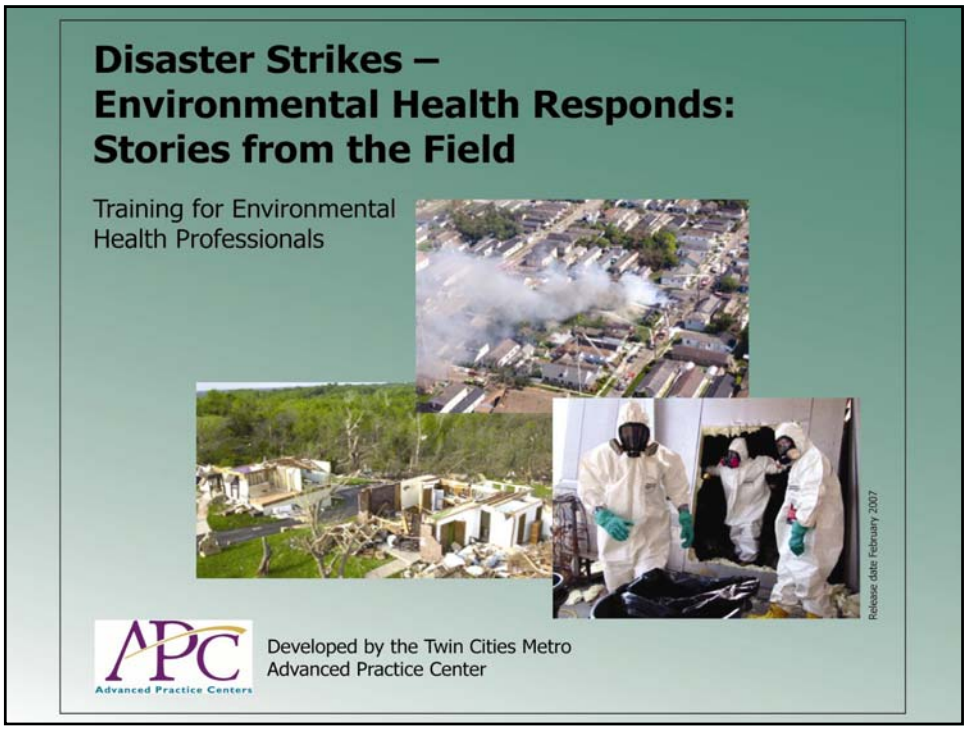
Disaster Strikes –
Environmental Health Responds:
Stories from the Field
Training for Environmental
Health Professionals
APC
Advanced Practice Centers
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Advanced Practice Center
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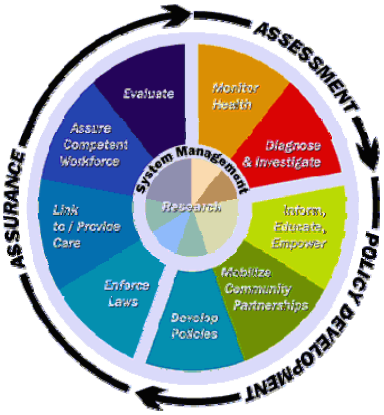
Protecting Public Health

- **Surveillance**: look for disease/condition
- **Identify** the source
- **Act** to disrupt transmission of disease/condition

This works for biological, chemical, and physical causes of illness and injury



Chain of Disease Transmission

"R.E.T.E.R."

Reservoir

Exit Route

Mode of Transmission

Entry Route

Receptive Host

Top 10 Natural Disasters - Number Killed:

Disaster type	Date	No Killed
Wind Storm	8-Sep-1900	6,000
Earthquake	18-Apr-1906	2,000
Wind Storm	Sep-1928	1,836
Wind Storm	29-Aug-2005	1,833
Extreme Temperature	Jul-1936	1,193
Wild Fires	15-Oct-1918	1,000
Wind Storm	17-Mar-1925	739
Flood	Mar-1913	732
Extreme Temperature	14-Jul-1995	670
Wind Storm	Sep-1938	600

Top 10 Natural Disasters - Number Affected:

Disaster type	Date	No Affected
Wind Storm	5-Sep-2004	5,000,000
Wind Storm	13-Sep-1999	3,000,011
Wind Storm	30-Aug-1985	1,000,000
Wind Storm	29-Aug-2005	500,000
Epidemic	Jan-1993	403,000
Wind Storm	11-Feb-1994	350,000
Wind Storm	23-Sep-2005	300,000
Wind Storm	24-Aug-1992	250,055
Wind Storm	18-Sep-2003	225,000
Flood	15-Jan-1996	200,000

By Doing a Great Job,
The reputation of EH will not end up Here