

# Assessing the Environmental Health Practitioner's Skills and Experience for Improved Response in Emergency and Terrorist Events

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# Topics

- **Examine the role of EH practitioners in emergency response.**
- **Describe the general Knowledge Skills and Abilities (KSA's) required by EH practitioners for emergency response.**
- **Demonstrate a system of identifying and cataloging EH skills for emergency response.**



# The Day the World Changed



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# Terrorism Attack Concept



**Social**

**Physical**

# **The Basis of Environmental Health Degree**

**Chemical**

**Biological**

**Behavioral**



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# Subjects taught at Accredited Schools of Environmental Health

- Air Quality
- Environmental Chemistry
- Environmental Epi
- Health Planning
- Microbiology
- Food Protection
- Global Health
- Housing
- Hazardous Materials
- Hydrogeology
- Industrial Hygiene
- Injury Prevention
- Institutional Health
- Noise Control
- Occupational Health
- Radiation Health
- Recreational EH
- Soils
- Solid Waste
- Vector Control
- Wastewater
- Water Quality
- Water Supply



# Role of Environmental Health in Emergency Response



Waste



Health & Safety



Air quality



Food safety



Water Quality



# World Trade Center



- **Sampling Plans**
- **Environmental Sampling**
- **Worker Safety**
- **Community Education**



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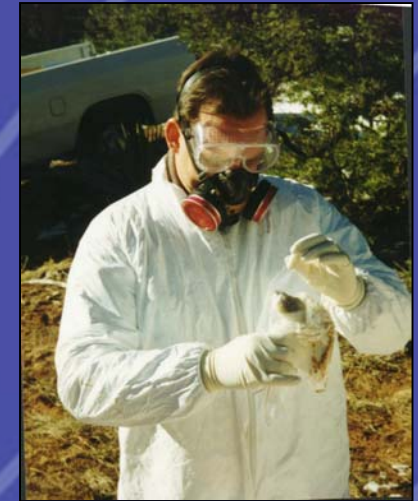
# Anthrax Response



- **Sampling Plans**
- **Environmental Sampling**
- **Decontamination**
- **On-site Training**



# Hantavirus



- **Specimen Collection**
- **Specimen Processing**
- **Environmental Assessments**
- **Public Education**



# Natural Disasters



- ◆ Insuring Safe Water Supplies
- ◆ Restoring Water
- ◆ Safe Food
- ◆ Solid Waste
- ◆ Liquid Waste/ Sewage
- ◆ Vector Control
- ◆ Safety/Injury Prevention
- ◆ Hazardous Materials Disposal
- ◆ Health Assessment



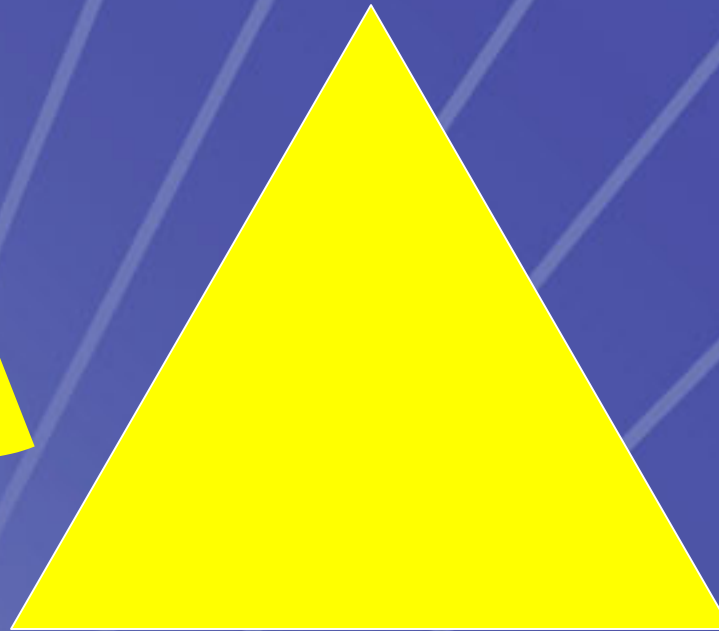
# Public Health Response

Public Health System

Environmental Health



Laboratory



Epidemiology



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# What EH Practitioners bring to an Emergency Response?

- **Broad science base**
- **Understanding of env. systems**
- **Field familiarity**



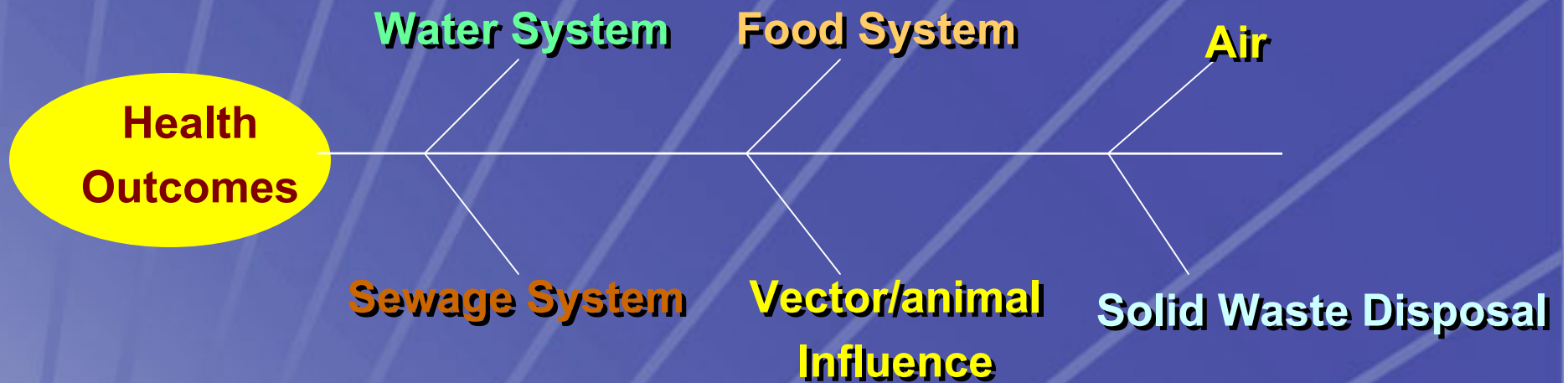
# Building Depth and Experience

- Mentoring
- Encouragement
- Challenged
- Supportive Administration



# KSA's of Emergency Response

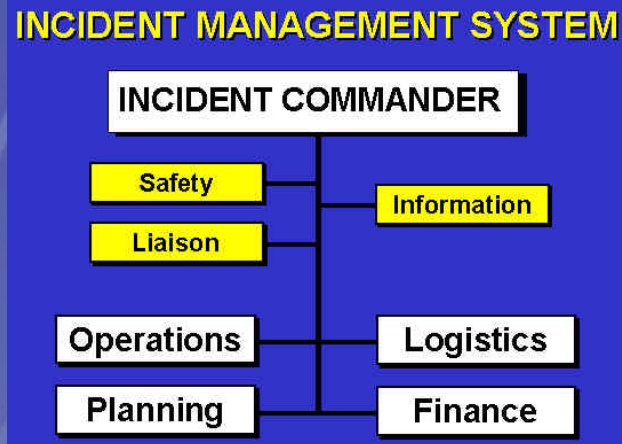
Gaining a broad-based knowledge



# KSA's

## Understand Incident Command System

- How it works, where you fit
- Developing a working familiarity



# KSA's

## Knowledge of Environmental Sampling

- Sampling Methods
- Instruments
- Developing Sampling Plans
- Interpreting Results



# **KSA's**

## **Rules and Guidance on Personal Protective Equipment**

- **Recognizing**
- **Certification**
- **Site Safety**
- **Practice**



# KSA's

## Ability to Observe and Evaluate

- Operational Surveys of Environmental Systems
- Recognize Problems and Vulnerabilities
- Influence the Operation of the System



# KSA's

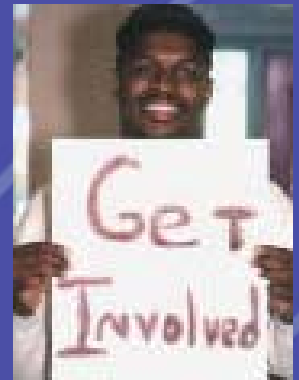
## Awareness of Emergency Response Issues

- General Emergency Response Issue
- Specialty Areas
- Web Site Listings



# KSA's

- Involved in response planning activities
- Knowledge of federal plans/authorities
- Aware of department assets
- Understands state and federal assets
- Knows when to ask for help



# KSA's

## Access information quickly

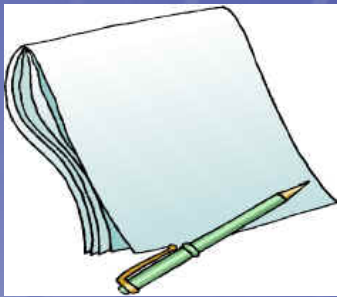
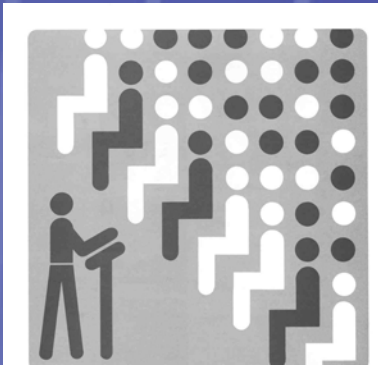
- Web sites
- Prepared materials
- Resource materials



# KSA's

## Communicates Effectively

- Concise and clear
- Oral and written
- Limited time
- Diplomacy skills



# **KSA's**

## **Practices Risk Communication**

- **Sandman's**

**Risk = Hazard + Outrage**

- **Covello's**

**7 Cardinal Rules of Risk Communication**



# KSA's

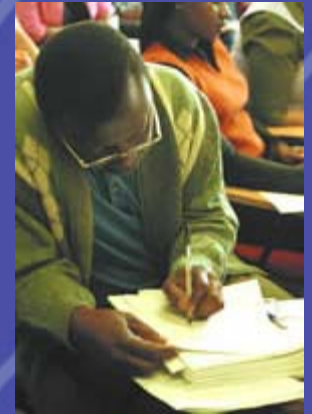
## Maintains partnerships

- **Poison Control**
- **Veterinarians / Animal Control**
- **Emergency personnel**
- **Public health partners**
- **Water Utilities/Public Works**
- **Laboratory personnel**
- **Law enforcement**



# KSA's

- **Maintains Specialty Certification**
- **Physically fit**
- **Ability to work in teams**
- **Responding to community need**



# **Strong Emergency Response Requires Strong Public Health System**

- **Capacity**
- **Continued funding**
- **Operational flexibility**
- **Individual flexibility**



# System for Cataloging Skills and Experience



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# Personnel w/Availability Info.

EOC West Nile Database - [Travel Personnel]

File Edit Insert Records Window Help

### Personnel

Type a question for help

First Name: Richard  
Last Name: Collins  
Middle Initial: F  
Title: Environmental Health Scientist  
CIC: ATSDR/OAA  
User Id: RYC4  
Home Phone: 770-509-0220  
Work Phone: 404-498-0785  
Roster Color: [ ]

Cell Phone: [ ]  
Degree 1: MS  
Degree 2: [ ]  
Security Level: [ ]  
Security Clearance Status: [ ]  
Security Exp. Date: [ ]  
Supv. Id: [ ]  
Medical Clearance: [ ]  
Medical Clearance Date: [ ]

PassPort Blue: [ ]  
PassPort Red: Red  
Confidential Agreement: [ ]  
Confidential Agreement Date: [ ]  
Personnel Type: Public Health Service  
Current Military Service: Y  
Prior Military Service: N  
Military Category/ Branch: Officer USPHS  
Chemical / Environmental Only: [ ]

Availability  
Equipment  
Teams  
Travel  
Contacts  
Skill Sets  
Training  
Vaccination

Start Date	End Date	WorkSite	SupvApproval	FieldApproved	ShiftID	WeekEndOnly
			<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>

Record: 1 of 1

Next Employee Previous Employee Find Employee Add Employee Close Form

Record: 13 of 124



# Personnel w/Skillset Info.

EOC West Nile Database - [Travel Personnel]

File Edit Insert Records Window Help

Type a question for help

## Personnel

First Name:  Cell Phone:   
 Last Name:  Degree 1:  PassPort Blue:    
 Middle Initial:  Degree 2:  PassPort Red:    
 Title:  Security Level:  Confidential Agreement:   
 CID:  Security Clearance Status:  Confidential Agreement Date:   
 User Id:  Security Exp. Date:  Personnel Type:   
 Home Phone:  Supv. Id:  Current Military Service:    
 Work Phone:  Medical Clearance:  Prior Military Service:    
 Roster Color:  Medical Clearance Date:  Military Category/ Branch:    
 Chemical / Environmental Only:

Profession / Job Id	Current State License	ExpirationDate	Skill Set
▶ Environmental Health Scientist	<input type="checkbox"/>		Basic Envr Hlth -Emergency Liquid Waste Disposal
	<input type="checkbox"/>		Basic Envr Hlth -Emergency Shelter Sanitation
	<input type="checkbox"/>		Basic Envr Hlth -Mass Gathering Sanitation
	<input type="checkbox"/>		Basic Envr Hlth -Solid Waste Disposal
	<input type="checkbox"/>		Emergency Response Coordinator
	<input type="checkbox"/>		Environmental Health

Record: 1 of 19

Record: 13 of 124

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# List of Environmental Health Professional Skill Sets

- Basic EH -Emergency Disinfection of Water Supplies
- Basic EH -Emergency Liquid Waste Disposal
- Basic EH -Emergency Shelter Sanitation
- Basic EH -Mass Gathering Sanitation
- Basic EH -Solid Waste Disposal
- Emergency Response Coordinator
- Environmental Health
- Fire Prevention/Protection
- Food -Food borne Outbreaks
- Food -Food Inspections and Sanitation
- Food -Food Storage and Transportation
- Food -HACCP
- Former EPA OSC
- HAZMAT
- Health Facilities
- Miscellaneous -Institutional EH
- Miscellaneous -Vessel/Ship Sanitation
- Miscellaneous-Health Care Accreditation Expertise
- Needs Surveillance
- Occupational Safety and Health
- OCE/Environmental Medicine
- Radiological Health -Health Physics
- Radiological Health -Medical Decontamination Trng
- Radiological Health -Nuclear Disaster Response
- Radiological Health -Radiation Emergency Assistance Center (REAC/TS)
- Trained Professionals
- Radiological Health -Radiological Mishaps Response
- Radiological Health -Radiological Monitoring
- Sampling -Air sampling/Monitoring
- Sampling -Asbestos Sampling/Monitoring
- Sampling -Comprehensive EH Sampling
- Sampling Design
- Sampling -Indoor Air Quality Assessments/Investigations
- Sampling -Lead Sampling/Monitoring
- Sampling -PCB Sampling/Monitoring
- Sampling -Radon Sampling/Mitigation
- Sampling -Sampling for biologic agents
- Sampling -Sampling in an Industrial Environment
- Site Safety Officer
- Training Expertise
- Vectors/Disease Epi-Anthrax Sampling/Monitoring
- Vectors/Disease Epi-Plaque Surveillance/Monitoring
- Vectors/Disease Epi-Small Pox Sampling/Monitoring
- Vectors/Disease Epi-Tularemia Sampling/Monitoring
- Veterinary Medicine and Surgery



# Personnel w/Contacts Info.

EOC West Nile Database - [Travel Personnel]

File Edit Insert Records Window Help

Type a question for help

## Personnel

First Name  Cell Phone   
 Last Name  Degree 1   
 Middle Initial  Degree 2   
 Title  Security Level   
 CID  Security Clearance Status   
 User Id  Security Exp. Date   
 Home Phone  Supv. Id   
 Work Phone  Medical Clearance   
 Roster Color  Medical Clearance Date

PassPort Blue    
 PassPort Red    
 Confidential Agreement   
 Confidential Agreement Date   
 Personnel Type   
 Current Military Service    
 Prior Military Service    
 Military Category/ Branch    
 Chemical / Environmental Only

	Full Name	Street Address	Street Address Two	City	State	Zip	Home Phone
▶	Ginger Gist	2141 Dayron Circle		Marietta	GA	30062	
*							

Record:  of 1

Record:  of 124



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# Personnel w/Teams Info.

EDC West Nile Database - [Travel Personnel]

File Edit Insert Records Window Help

Type a question for help

## Personnel

First Name  Cell Phone   
 Last Name  Degree 1  PassPort Blue    
 Middle Initial  Degree 2  PassPort Red    
 Title  Security Level  Confidential Agreement   
 CIO  Security Clearance Status  Confidential Agreement Date   
 User Id  Security Exp. Date  Personnel Type   
 Home Phone  Supv. Id  Current Military Service    
 Work Phone  Medical Clearance  Prior Military Service    
 Roster Color  Medical Clearance Date  Military Category/ Branch    
 Chemical / Environmental Only

	TeamID	StartDate	EndDate	Hours
▶	Chemical			
▶	Environmental			
*				

Record:        of 2

Record:        of 124





# Personnel w/Vaccinations Info.

EOC West Nile Database - [Travel Personnel]

File Edit Insert Records Window Help

Type a question for help

### Personnel

First Name: Richard  
Last Name: Collins  
Middle Initial: F  
Title: Environmental Health Scientist  
CID: ATSDR/OAA  
User Id: RYC4  
Home Phone: 770-509-0220  
Work Phone: 404-498-0785  
Roster Color: [dropdown]

Cell Phone: [text]  
Degree 1: MS  
Degree 2: [text]  
Security Level: [dropdown]  
Security Clearance Status: [dropdown]  
Security Exp. Date: [text]  
Supv. Id: [text]  
Medical Clearance: [text]  
Medical Clearance Date: [text]

PassPort Blue: [checkbox]  
PassPort Red: Red  
Confidential Agreement: [checkbox]  
Confidential Agreement Date: [text]  
Personnel Type: Public Health Service  
Current Military Service: [checkbox] Y  
Prior Military Service: [checkbox] N  
Military Category/ Branch: Officer | USPHS  
Chemical / Environmental Only: [checkbox]

Availability  
Equipment  
Teams  
Travel

Contacts  
Skill Sets  
Training  
Vaccination

Vaccine	Vaccine Date	PrevVacDate	DocRecall	PrevTake	VacArmCkDate	Take	UnExpAE:	Comments	ClinicCont
[Empty table body]									

Next Employee Previous Employee Find Employee Add Employee Close Form

Record: 13 of 124

Start | [Taskbar icons] | 2:39 PM



# Personnel w/Travel Info.

EOC West Nile Database - [Travel Personnel]

File Edit Insert Records Window Help

Type a question for help

### Personnel

First Name: Richard  
Last Name: Collins  
Middle Initial: F  
Title: Environmental Health Scientist  
C/O: ATSDR/OAA  
User Id: RYC4  
Home Phone: 770-509-0220  
Work Phone: 404-498-0785  
Roster Color: [Dropdown]

Cell Phone: [Text]  
Degree 1: MS  
Degree 2: [Text]  
Security Level: [Dropdown]  
Security Clearance Status: [Dropdown]  
Security Exp. Date: [Text]  
Supv. Id: [Text]  
Medical Clearance: [Text]  
Medical Clearance Date: [Text]

PassPort Blue: [Text]  
PassPort Red: Red  
Confidential Agreement: [Text]  
Confidential Agreement Date: [Text]  
Personnel Type: Public Health Service  
Current Military Service: Y  
Prior Military Service: N  
Military Category/ Branch: Officer, USPHS  
Chemical / Environmental Only: [Text]

Availability  
Equipment  
Teams  
Travel  
Contacts  
Skill Sets  
Training  
Vaccination

	TDY Location	MultipleTDY Loc	Date Deployed	Date Returned	Purpose	Travel Order	CAN Number	Voucher Completed	Hotel Name
▶								<input type="checkbox"/>	

Next Employee Previous Employee Find Employee Add Employee Close Form

Record: 13 of 124

Start | [Icons] | [Taskbar] | 2:40 PM



