

# Community Practitioner's Role in Outbreak (Bioterrorism) Response



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# Lecture Learning Objectives

- List events when the student should contact public health department for a suspected outbreak
- Describe the community healthcare practitioners role in the epidemiological investigation of an outbreak
- Differentiate the sharing patient data under HIPAA between public health and law enforcement officials
- Diagram the flow of patients through a Point of Distribution (POD)
- List three opportunities for a community practitioner to assist with outbreak response
- List two sources of information that can be consulted for medical information during an outbreak.
- Identify a source of training in bioterrorism response



# This lecture is NOT...

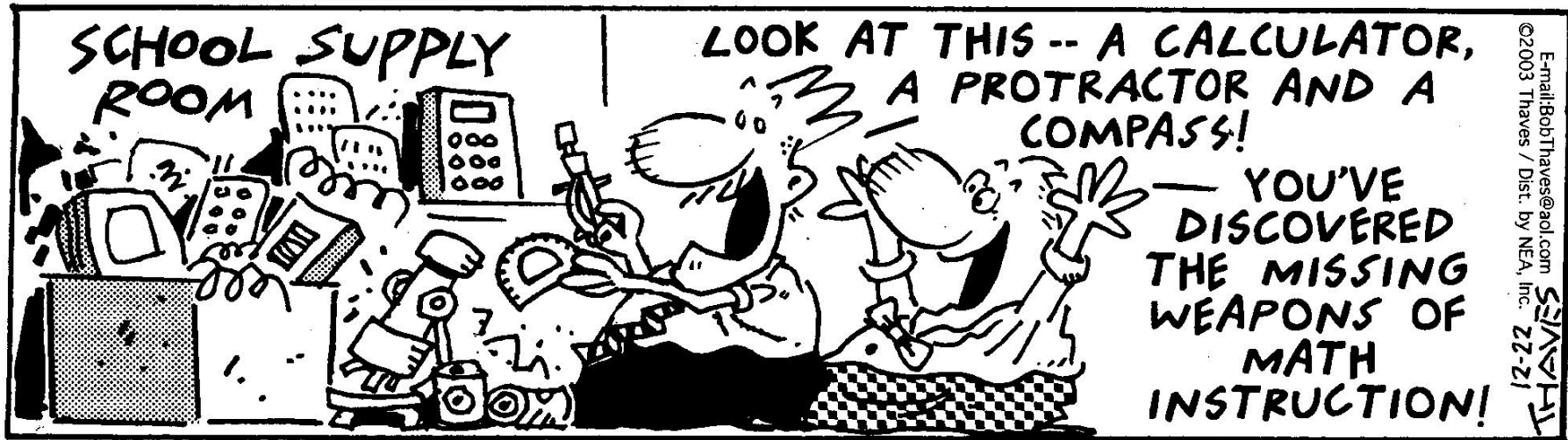
- A Recognition class
  - Describing each disease and listing treatment
- Training for leadership in outbreak response
- By itself going to make you an expert in outbreaks or response
- Preparing you to respond alone



# WMI ?

FRANK & ERNEST

BY BOB THAVES



# Local Practitioners Role

- Recognize and Report unusual events
- Assist the Investigation (as 1° care)
- Provide appropriate treatment for those affected
- Monitor your patients for the disease and respond to their questions
- Participate in treatment and prophylaxis of the public



# Outline of this Talk

- General function of public health
- Recognition of an “outbreak”
- The public health investigation
- Organizing the response
- The community response
- The community practitioners role
- Additional training opportunities

# General Functions of Public Health



# General role of Public Health

- Detection of diseases affecting the public at large and controlling them
  - Surveillance for disease outbreaks
  - When an outbreak is suspected, investigating
    - To confirm that an outbreak is occurring
    - Looking for a cause
  - Implementing measures to control the outbreak
  - Designing and implementing measures to prevent future outbreaks





# Public Health Issues in a Disease Outbreak

- Recognition that an event has occurred
- Confirmation of the outbreak
- Identification of the agent(s)
- Getting appropriate treatment for those affected (supporting local healthcare)
- Instituting measures to keep more people from becoming ill



# Recognition of An “Outbreak”



# Recognition by the Practitioner

- Practitioner Suspects a Diagnosis
  - Single case of important disease
    - A-list agents
      - Smallpox, Tularemia, Plague, Anthrax, etc
    - Locally important
      - Meningococcal Meningitis, Measles, etc
  - Increased number of any diagnosis
  - Diagnosis at wrong time (i.e. flu in summer)



# Recognition by Public Health

- Calls from clinicians or laboratories
  - “An astute clinician . . . .”
  - Certain positive lab tests
- Proxy data sets:
  - Number of prescriptions filled (i.e. antibiotics)
  - Over-the-counter medication sales
  - Work/school absenteeism



# How to report

- Local Public Health
  - Many now have 24 hour phone number
  - County 911 center may have contact info
- State Public Health
  - When local agency is unresponsive
  - (If you call the local department, their next call will be to the state)
- DO NOT use postcards for important cases



# Types of Agents

- Biologically Derived
  - Virus
  - Bacteria
  - Preformed toxins
- Chemicals
  - Chemical Weapons
  - Industrial Chemicals
- Radiological
  - Nuclear detonation
  - Dirty Bomb



# The Public Health Investigation



# Epidemiology

- Definition: The study of the cause(s) and control of diseases
- Performed by **epidemiologists**
  - Some local health departments
  - Every state health department
  - Federal government (Many, especially in CDC)





# Epidemiological Investigation

- Laboratory identification and confirmation of the agent involved
  - Bacteria, virus, toxin, chemical, etc.
- Investigation to find commonality between those who are affected
  - Interviews, questionnaires
  - Medical Records
  - Visit to potential sources and sampling



# Identification of the Agent(s)

- Occasionally obvious, at least to class
  - Immediate casualties: Chemical Agents
  - Characteristics of the patient's symptoms
  - Laboratory findings from the initial patients
- Field capabilities limited for most agents
  - Local / Regional HazMat teams
  - National Guard CST (Civil Support Teams)



# What is your role?

- Brief the epidemiologists on the case(s)
- Provide access to the medical records\*
- Leave the detective work to the public health and law enforcement folks
- Help protect your facility from contamination
- Prepare for the onslaught of investigators
  - Public Health (Local, State, and CDC)
  - Law Enforcement (Local, State, FBI)
  - The Press (refer to LE or PH)

# What about HIPAA ?

- Public Health Agencies are required by HIPAA to protect patient information
- You are required to share patient information with Public Health Agencies
- Public Health workers are entitled to access to the patient's chart

# HIPAA and Law Enforcement

- Law Enforcement is entitled only to the “Limited Data Set”
- Can request info by name or descriptor
- DO NOT allow Law Enforcement access to patient chart without legal input (i.e. a Subpoena)

## Limited Data Set

- Name and Address
- Date and Place of birth
- Social Security Number
- Type of Injury
- Date and Time of Treatment
- Date and Time of Death
- Blood Type and rh factor
- Description of distinguishing characteristics, including height, weight, gender, race, hair and eye color, presence or absence of facial hair, scars, and tattoos.

Organizing the Response

To an Outbreak

In the Community

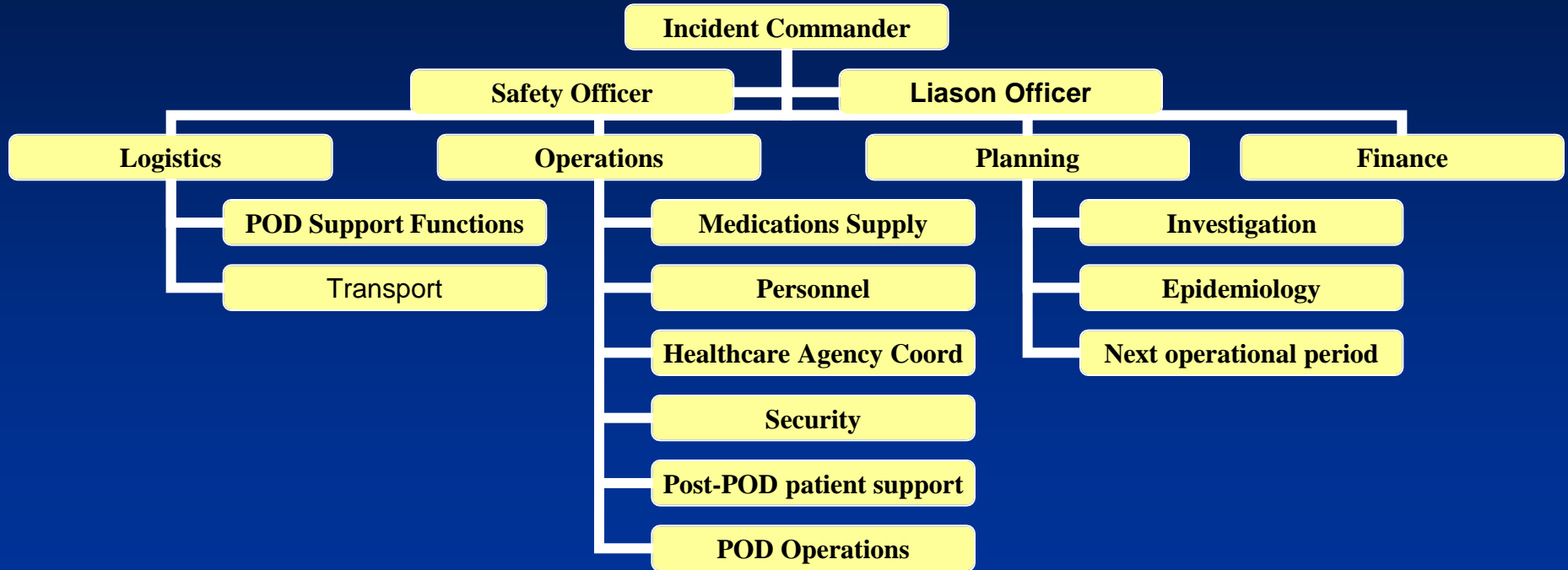


# Overall Organization

- State Coordinates response
  - Treatment recommendations
  - Supplies/medications
- Response is by local Health Department
  - Threat Preparedness Coordinator
  - Appoints Point of Distribution leadership
  - Volunteers assist with actual POD operations
    - Medically trained and community volunteers needed



# Incident Command System





# Incident Command for Public Health Emergencies

- Coordinated with rest of county/state emergency response plans
- In most jurisdictions, **ONLY** public health officials can order quarantine
- Public Health will usually be responsible for any clinics, PODs, etc
- Hospitals usually take care of themselves\*



# Response Resources of Public Health

- Strategic National Stockpile (nee NPS)
  - Antibiotics
  - Vaccines
  - Specialized equipment for mass treatment
- Public Health Service
  - DMAT (Disaster Medical Assistance Team)
    - Each team is both a state and federal asset
  - DMORT (Disaster Mortuary Teams)
  - NDMS (National Disaster Medical System)



# Strategic National Stockpile



# The Community Response



# Two Realms of Responsibility in response

- Care for the sick and injured
  - Local Healthcare Institutions
    - Special Teams (DMAT / DMORT / NDMS)
    - Strategic National Stockpile
- Preventing Diseases among those who are not yet sick
  - Public health departments and infrastructure
    - Strategic National Stockpile
    - Local volunteers as staff

# Care of Sick and Injured

- Local Hospitals
- Local Clinics
- Local Practitioners
- Regional Assistance
- May be supplemented by outside (state or federal) resources, but not likely until the third day



# Local Hospitals / Clinics

- Hospitals may be overwhelmed
  - Actual patients
  - Worried well
- Should be represented in the community Emergency Operations Center (EOC)
- If you are on a hospital staff, make sure you understand your institution's expectations before volunteering elsewhere



# Preventing Diseases among those who are not yet sick

The responsibility of public health





# Public Health Tactics to limit spread of illness

- Isolation
  - Exclusion
  - Quarantine
  - Reverse Quarantine
- Prophylaxis
  - Vaccines
  - Antibiotics



# Quarantine

## OBSERVATION QUARANTINE

PERSONS OTHER THAN THOSE OF THE HOUSEHOLD AND THOSE  
LEGALLY AUTHORIZED ARE FORBIDDEN TO ENTER

No persons other than those authorized by the Board of Health of Lower Merion Township shall remove this placard. Any person or persons defacing, covering up, or destroying this placard render themselves liable to the penalties of the law.

Act of the General Assembly approved June 28, 1923, provides that anyone violating the provisions of this Act, upon conviction thereof, may be sentenced to pay a fine of not more than \$100.00, to be paid to the use of the county, and costs of prosecution, or to be imprisoned in the county jail for a period of not less than ten days or more than thirty days, or both, at the discretion of the court.

By order of the Board of Health  
Lower Merion Township  
ROBERT J. THOMAS,  
Health Officer

Date . . . . . 19

## SCARLET FEVER

THESE PREMISES ARE UNDER TOWNSHIP QUARANTINE

No person shall be permitted to enter, leave or take any article from this house without written permission from a legally authorized agent of the Board of Health, excepting physicians, nurses in charge of the sick or the clergyman.

Animals must not be permitted to leave these premises.

No person, other than those authorized by the Board of Health, shall remove this placard. Any person or persons defacing, covering up or destroying this placard render themselves liable to the penalties of the law.

Penalty for removing, defacing or covering up this card is punishable by a fine of not less than \$10 or more than \$100 or to be imprisoned for a period of not less than 10 days or more than 30 days or both at the discretion of the Court.

By order of **BOARD OF HEALTH** OF LOWER MERION  
TOWNSHIP

Date . . . . . Signature . . . . .  
Health Officer

If this notice is removed, defaced or covered up, notify Health Officer, Ardmore, Pa.

# Quarantine

- Restricting mobility of those who were exposed to a disease, but are not (yet) ill
  - Works OK with small groups under quarantine
  - Worked well to limit spread of diseases when most people worked at home or on their farm
  - Problematic on a large scale
    - Food and Income
    - How to enforce
      - Who?
      - Penalty for violating ?



# Isolation

- Restricting mobility of those who are sick
  - Commonly used in hospitals for infectious diseases today
  - Usually happens without much effort when sick people go to hospitals and the healthy do not
  - Can “cohort” patients with same disease



# Cordon Sanitare

- Keeping people in an (contaminated) area so that they do not contaminate others
  - Very problematic
  - Not effective on a large scale
  - Primary motivation will be fear
    - You are leaving us here to die!!
  - Movie: Escape from NY



# “Reverse Quarantine”

- Restricting mobility of those who are well so that they are not exposed to a disease
  - Might be effective for a short period (days)
  - Primary motivation will be fear
  - Problematic on a large scale
  - Limitations same as quarantine
  - Some regions rely upon this as part of their response plan



# The Role of the Community Practitioner



# The Role of the Community Practitioner During an Outbreak

- Review info about the agent
- Review current recommendations
- Screen and treat your patients
- Provide advice to your patients
- Support epidemiological investigation
- Volunteer at a POD if possible



# Current Information: www.bt.cdc.gov

The screenshot shows the CDC Emergency Preparedness & Response website as viewed in Microsoft Internet Explorer. The browser's address bar displays <http://www.bt.cdc.gov/>. The website's navigation menu includes "Home", "What's New", "Search", and "Contact Us". The main content area is titled "Emergency Preparedness & Response" and is organized into several sections:

- Agents, Diseases, & Other Threats**
  - Bioterrorism Agents**: [Anthrax](#), [smallpox](#), [viral hemorrhagic fevers...](#)
  - Chemical Emergencies**: [Chlorine](#), [ricin](#), [bromine](#), [sarin...](#)
  - Radiation Emergencies**
  - Mass Trauma**: [Explosions/blasts](#), [burns](#), [injuries...](#)
  - Natural Disasters**: [Volcanoes](#) **NEW! Mar 9**, [tsunamis](#), [winter weather...](#)
  - Recent Outbreaks & Incidents**: [Flu](#), [Marburg virus](#), [mad cow disease...](#)
- Additional Topics & Resources**
  - [Lab Information](#)
  - [Training](#)
  - [Preparation & Planning](#)
  - [Surveillance](#)
  - [Related Links](#)
  - [Public Health Emergency Response Guide for State, Local, & Tribal Public Health Directors](#)
  - [Laboratory Response Network \(LRN\)](#)
  - [Clinician Outreach & Communication Activity \(COCA\)](#)
  - [Clinician Registry for Updates on Terrorism & Emergency Response](#)
  - [Emergency Preparedness for Business](#)
  - [Strategic National Stockpile](#)

The right sidebar contains a section for "español" with "CDC HOTLINES" (Public: 800-CDC-INFO, 888-232-6348; E-mail: [cdcinfo@cdc.gov](mailto:cdcinfo@cdc.gov)) and "Who to Contact in an Emergency". Below this is a "NEWS & HIGHLIGHTS" section featuring a webcast on "Recognition of Chemical Associated Gastrointestinal Foodborne Illness" (Mar 30, 12-1 PM ET), a "CDC Volcanoes Homepage" (NEW! Mar 9), and articles on radiation threats, tsunami recovery, and smallpox from movies.

The Windows taskbar at the bottom shows the Start button, several application icons, and the system tray with the time 11:32 PM.

# Treatment for the Ill

- Need to know agent (at least to class)
- Will likely overwhelm local hospitals
  - More patients
    - ill
    - Worried well
  - Less staff (some sick, some scared)
  - Still have “usual” patients to deal with
- May require draconian triage
- May require treatment at alternate sites (schools, fire houses, places of worship, etc)

# Patient Advice – General

- Viruses
  - Isolation so they do not infect others
  - Vaccination (for smallpox)
- Bacteria
  - Isolation (depends on agent)
  - Antibiotic treatment / prophylaxis
- Toxins/Chemicals – Avoidance / Antidotes
- Get / Provide agent-specific advice ASAP

# Prophylaxis

- Def: Giving a patient a medication or treatment to protect them from an agent
- Bacteria → Antibiotics or Immunization
- Viruses → Vaccination (or Anti-virals ?)
- Radiation → Uptake blockers (KI, etc)

# Post-Event Prophylaxis

- AFTER cases are discovered
- In the directly affected area, almost everyone will be offered prophylaxis
- Post-exposure vaccination is useful in smallpox (lessens disease severity)
- If antibiotics, will require medical intervention to select the correct antibiotic for some patients

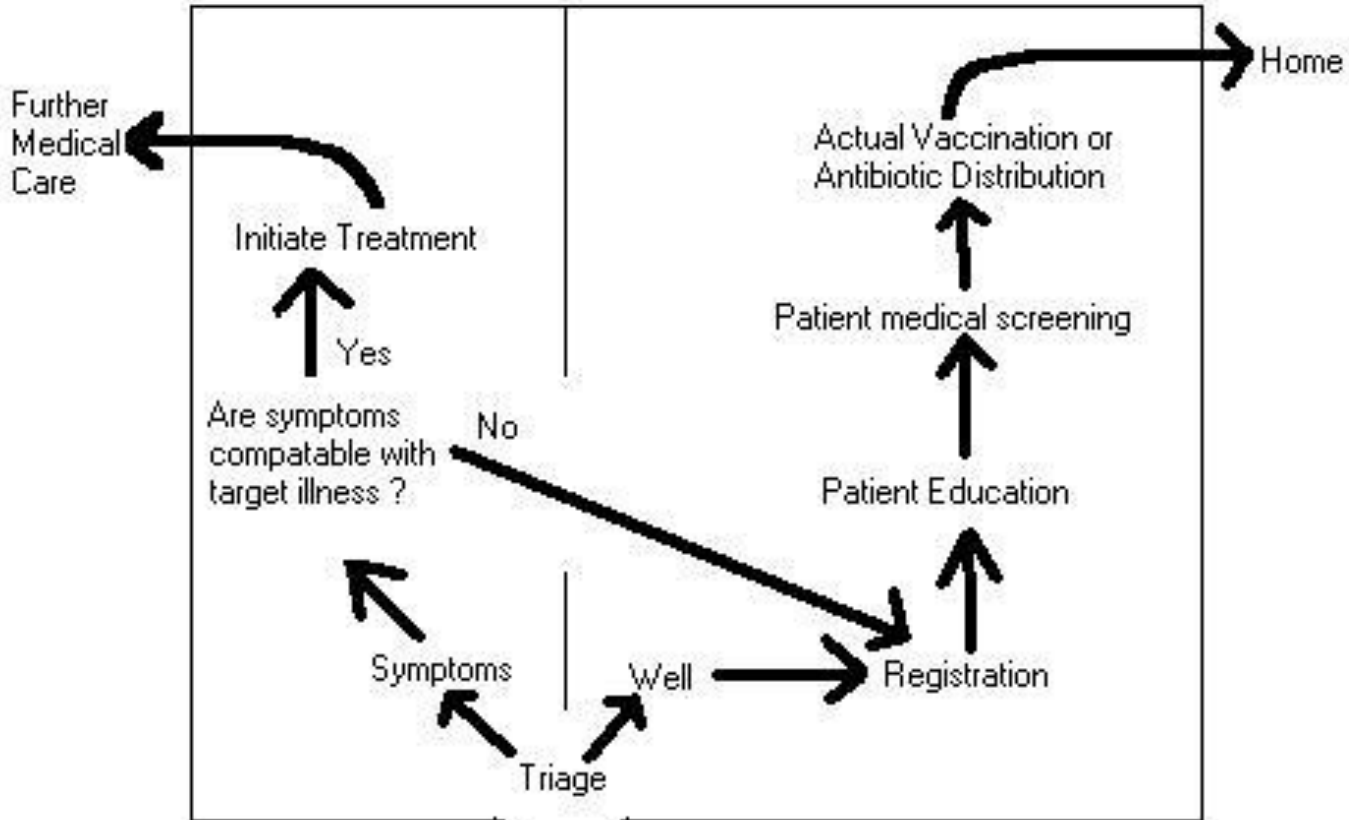


# Prophylaxis Clinic

- This will NOT be your father's (or grandfather's) immunization clinic!
  - Although for smallpox it will be your great-grandfathers' vaccine
- Formal patient education about risks
- Informed consent for each recipient
- Data collection and tracking
- Care for adverse events
- +/- Monitoring and confirmation of "take" \*



# Point of Distribution (POD)



The Public

# POD operations

- Regional Plans in WV for POD operations
- Most are based on a Job Action Guideline for each position
- Some positions require extensive training
- Most require minimal (1 hour) pre-event training
- Emergent (walk-on) volunteer role limited



# POD personnel

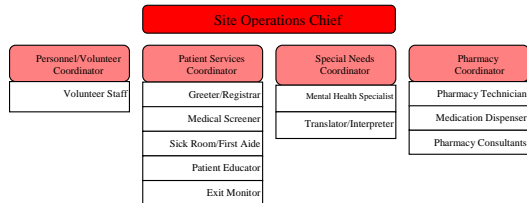
- This will be an “all-hands” exercise
- Operating under standing orders
- People may need to work outside their primary licensure
  - Paramedics or firefighters giving immunizations
  - Nurses or pharmacists selecting antibiotics based upon a protocol (with physician backup)
  - Healthcare students acting with supervision
  - Retired Health Professionals activated

# POD Administration (Operations)



# POD Job Action Guidelines

## Medical Screener/Triage



**Mission:** To screen clients for disease or contact with identified agent. Assess the client for contraindications to the medication and for risk of disease or infection. Review the benefits and risks of treatment/prophylaxis and identify those persons who have contraindications. Identify persons with complex problems and make referrals, as necessary.

**Qualifications:** Licensed Medical and/or Nursing Personnel

### Action Items

number	Date/time
1	Receive appointment and briefing from Patient Services Coordinator
2	Ensure that screening/triage site is physically set up and ready for operations
3	Review and familiarize self with dispensing site surroundings for work station locations, office areas, restrooms, first aid and break rooms
4	Review standing orders, protocols, forms
5	Review personal protection equipment guidelines as determined by Clinic Health and Safety Officer
6	Ensure appropriate PPE is available
7	Ensure that all necessary flowcharts and forms are available
8	Ensure that all clients receive appropriate prescription for antibiotics per treatment protocol
9	Ensure that all clients are referred to medical consultation or follow-up per protocol
10	Direct ill clients to other medical facilities for evaluation
11	Prevent ill persons from entering clinic
12	Provide early alert to Patient Services Coordinator of situations that may require Security
13	Review screening packet and sign
14	Ensure consent forms are read and understood by the client
15	Sign client consent form (this form requires client signature and screener signature)
16	Review list of normal or expected reactions to the medication with client
17	Answer medical questions such as exposure risks, assess medical contraindications to medication, and risk-benefit ratio

18	Maximize privacy of client	
19	Report any accidental exposures (blood borne or otherwise as per event characteristics) to the Patient Services Coordinator	
20	Assist with tear down and re-packing of the screening/triage site	
21	Ensure collection of all paperwork and turn in to Patient Services Coordinator	
22	Identify issues for the After Action Report	

# Volunteering Issues

- Will get you and family prophylaxed at special clinic (if eligible)
- Malpractice
  - Federal coverage for Smallpox
  - Other Agents – State coverage (pending)
- Licensure – Working on law for retired
- You will need to work in structured environment – Be prepared to follow direction and do your part!

# How to Volunteer

- Contact your local Health Department's "Threat Preparedness Coordinator"
- They will put you on their list
- Will notify you of training
  
- In an outbreak, you may be sent to another county/region to assist, but this assignment will come through your county's coordinator

# Additional Training Available

- WVU Virtual Medical Campus
- [www.vmc.wvu.edu/hrsa/](http://www.vmc.wvu.edu/hrsa/)
- Three on-line courses (2 CME hours each)
  - Recognition and Reporting
  - Multidisciplinary Response
  - Acute Care (focus on special populations)



# Additional Training Available

HRSA02: Multidisciplinary Response - Microsoft Internet Explorer

**HRSA** *Multidisciplinary Response*  
**Multidisciplinary Response Awareness**

Resources Help Exit

Topic Menu *Open* Intro to the Multidisciplinary Response \ 6: Agencies Involved in a Response

## Many Agencies May Be Involved in a Response

During an incident, most responders will have specific roles and responsibilities based on their areas of expertise. It is important, however, during a coordinated response, for all responders to be aware of what other agencies and organizations will be doing.

The interaction to the right shows just a few of the entities that may be called in during an emergency response.

### Roles in an Emergency Response

<b>The Federal Bureau of Investigation (FBI)</b>	<b>Special teams, equipped and trained to respond to specific incidents. These include:</b> <ul style="list-style-type: none"><li>- <b>Department of Energy (DOE) Nuclear Emergency Support Team (NEST)</b> Radiation incidents</li><li>- <b>National Guard Civil Support Teams (CST)</b> Agent identification</li><li>- <b>Urban Search and Rescue (US&amp;R)</b> Rescue of victims of structural collapse.</li><li>- <b>FBI Hazardous Materials Response Unit (HMRU)</b> Hazardous Materials</li><li>- <b>Disaster Medical Assistance Teams (DMAT)</b> Medical needs</li><li>- <b>Disaster Mortuary Operational Response Teams (DMORT)</b> Mortuary assistance</li><li>- <b>The U.S. Army Corps of Engineers (USACE) Rapid Response Program (RR)</b> Public works and engineering</li></ul>
<b>Local Law Enforcement</b>	
<b>American Red Cross</b>	
<b>Local Emergency Management</b>	
<b>Highway Department</b>	
<b>Environmental Protection Agencies (state and federal)</b>	
<b>Amateur (Ham) Radio Operators</b>	
<b>Special Response Teams</b>	
rollover and click on the buttons to get more information	

Click the **Next** button to continue

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# Additional Training Available

Multidisciplinary Response Awareness: Communications - Microsoft Internet Explorer

**HRSA** Multidisciplinary Response Awareness **WVC**

Resources Help Exit

Topic Menu *Open* ↓ Communications \ 3: Risk Communications

## Communication During Different Phases

The principles of emergency [risk communication](#) should be used during each phase of an incident. The interaction to the right shows the principles grouped according to their importance during the pre-incident, initial, maintenance, and resolution phases.

**INCIDENT PHASES:**

- 1** PRE-INCIDENT
- 2** INITIAL
- 3** MAINTENANCE
- 4** RESOLUTION

During the period of acute danger, the first priority will be safety and survival. Most people will respond appropriately and responsibly during a crisis, but be aware that some, unable to handle the stress of the crisis, may behave inappropriately or unreasonably.

**Do not attempt to dispel panic**  
Provide a consistent message, but remain vigilant to changing situations. Alert the public that the message, recommendations, and other information may change as the situation progresses and more information becomes available. Ensure that all response participants are immediately aware if the message does change.

**Do not over-reassure**  
The objective is not to pacify, but to elicit appropriate, calm concern.

Back Next

Follow the interaction instructions. Click the **Next** button to continue

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# Additional Training Available

Multidisciplinary Response Awareness: Treatment Issues in a Response - Microsoft Internet Explorer

**HRSA** **Multidisciplinary Response** **Multidisciplinary Response Awareness** WMC®

Resources Help Exit

Topic Menu *Open* ↓ Treatment Issues in a Response \ 1: Limiting Exposure or Spread

## Isolation and Quarantine

The coordinated efforts of several public service groups will be required to inform affected people, control water and food supplies, regulate the movement of people into and out of the area, and establish medical services.

**ISOLATION** **introduction** **QUARANTINE**

**The restriction of movement of people who are not yet ill, but who were exposed and therefore, potentially infectious. Implemented for diseases that readily spread from person to person, diseases that have a potential for epidemic spread in population, and diseases that are communicable with low doses of exposure.**

> **Especially useful for conditions where the person is contagious before they develop symptoms.**

> **Implementation of quarantine, where those quarantined are basically under house arrest for public health reasons, raises many issues which must be addressed for the quarantine to be successful:**

- Access to food and medical care
- Replacement of income when not permitted to work
- Separation of families where not all members are quarantined
- Penalties for those who violate quarantine

**[Click here to view a quarantine scenario >](#)**

◀ Back Next ▶

Click the **Next** button to continue

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Questions ?



# Additional Training Available

- [www.vmc.wvu.edu/hrsa/](http://www.vmc.wvu.edu/hrsa/)
- Courses Available:
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  - Multidisciplinary Response
  - Acute Care (focus on special populations)



