

Suspect Bioterrorism and/or Chemical Terrorism Sample Submission

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Lecture Goals

- Understand laboratory submission procedures in suspected Bioterrorism and/or Chemical Terrorism events
- Understand chain of custody as applied to laboratory specimens



Case #1

White powder incident



BT Sample Submission

Local Health Department contacts the
ODH Bureau of Infectious
Disease Control (BIDC)
about a potential BT threat/sample

See Algorithm



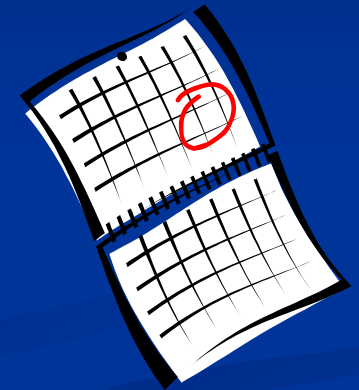
BT Sample Submission

- Samples are to be hand-delivered to the lab with the submitter paperwork completely filled out
- Sample x-rayed (if unopened: Environmental Sample)
- Submitter needs to have a Chain-of-Custody form filled out on arrival



Examples since 2001

- No positives
 - Calendars with corn starch
 - Blue Kool-aid
 - White powder in bag on airplane
 - Envelope with no powder



Problem Samples

- “Take it to the Lab! They can handle it!”





Sample Collection

- If it is bigger than a “Bread Box”, use swabs or wipes to collect the sample



www.bt.cdc.gov/agent/anthrax/environment/index.asp

For reference to sample collection.

Environmental Samples for BT Agents

- Public Health Lab capabilities:
 - Filters
 - wipes
 - swabs
 - powders
 - liquids





Case #2

The clinical laboratory is
unable to rule out
a select agent



A BT Sample Makes a Trip Through the Lab

- Sample Submitted
- Required Media
- Sample Processed
- Microscopy
- PCR
- Culture
- Results Reported



BT Services Offered by the State Public Health Laboratory

■ Select Agents

- Presumptive Testing (PCR): 4-6 hrs from time received [IN](#) ODH Laboratory
- Confirmatory Testing (bacterial culturing): 48-72 hrs to 7 – 14 days depending upon the organism



Locals First

- To be alerted first:
 - Local law enforcement (if appropriate)
 - Local health department
- Decision is then made for submission to state PHL

Chemical Terrorism (CT)





Chemical Terrorism

Important Concepts/Considerations

1. How severe is the attack or incident.
2. What type of material or agent is involved?
3. Hot-Zone, Warm-Zone, Cold-Zone
4. Who is authorized and trained to collect the sample?
5. What tools, gadgets, protective gear, procedures, etc are required to collect the sample?



Chemical Terrorism

Important Concepts/Considerations cont.

- Severe Incident: Obvious victims and symptoms. There is a contaminated area, “Hot-zone”, that can be identified.
- Moderate: Criminal puts strong-acid on someone's doorknob.
- Unknown: No victims but the “warning signs” are credible.
- Unknown: Is it Paranoia, Hoax, or Trap?



Case #3

- Chemical weapon used
- Large number of victims reporting to local hospital emergency departments



Chemical Terrorism



- Victims taken to or arriving at Emergency Department
- Considerations:
 - Victim/Patient Contaminated Clothing
 - Victim/Patient Decontamination
 - Victim/Patient Samples



CT Clinical Sample Collection

Proper personal protective
equipment



CT Clinical Sample Collection

- Proper collection materials
 - 25ml urine cup
 - 3 purple top 7mL blood tubes
or 4 purple top 3mL blood tubes.
 - 1 Green or Grey top blood tube.
 - Blanks for QC

Note: Kits can be prepared in advance with the proper containers and the necessary forms.



CT Clinical Sample Collection

- Necessary labeling with proper information
 - Patient's name
 - Identification number
 - Date collected
 - Paperwork
 - Evidence tape





Responding to a Chemical Event Initial Screening

Incident



Hospital Emergency Department



Local Health Department



State Requests CDC Assistance



Rapid Response Team Deploys



Responding to a Chemical Event Secondary Screening

**CDC Conducts Rapid Toxic Screen and
Sends Results To State**



CDC Contacts LRN Members



**LRN Members Perform Level-Specific Duties and
Report Results Back to CDC**



CDC Sends Results To State



State Sends Results to Local Health Dept



Establish a Terrorism Preparedness Response Plan

- Include in your Facility Terrorism Preparedness Response Plan:
 - Surveillance and Monitoring Program protocols
 - Communications policies
 - Chain of Custody policies
 - Security protocols
 - Specimen Collection
 - Packaging, Labeling and Shipping protocols
 - Sentinel Laboratory Procedures
 - Biosafety protocols
 - Select Agent Notification protocols



Terrorism Preparedness Response Plan Resources

■ Bioterrorism Response Preparedness

- ASM Website: <http://www.asm.org/Policy/>
 - Sentinel Laboratory Guidelines for Suspected Agents of Bioterrorism: Clinical Laboratory Bioterrorism Readiness Plan



Terrorism Preparedness Response Plan Resources

■ Chemical Terrorism Preparedness

- CDC Web Page <http://www.bt.cdc.gov/chemical/> it has links to the following...

- Chemical Terrorism Event Specimen Collection PDF (816 KB/1 page) Updated Dec 20, 2004:

<http://www.bt.cdc.gov/labissues/pdf/chemspecimencollection.pdf>

- Shipping Instructions for Samples Collected From People Potentially Exposed to Chemical Terrorism Agents PDF (111 KB/5 pages) Updated Dec 20, 2004:

<http://www.bt.cdc.gov/labissues/pdf/shipping-samples.pdf>



How to Reach BIDC

Any potential Terrorism Sample Submission must go through the Bureau of Infectious Disease Control (BIDC)

Monday thru Friday 8 am to 4:30 pm

614-466-0265

Local Health Departments need to call for the 24/7 phone number if they do not have it



How to Reach Us

Ohio Dept. of Health Laboratory
1-888-ODHLABS (1-888-634-5227)

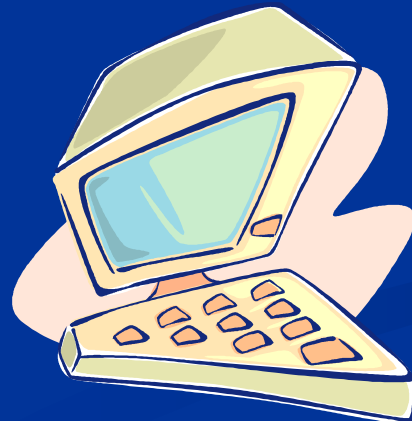




How to Reach Us

ODH Website: www.odh.state.oh.us

- Go to “Alerts & Advisories” (link located in top information bar)
- Go to “Bioterrorism”
- Go to “First Responders”





Questions

