Ways to Improve Sentinel Lab Preparedness Participation

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Abbreviations

Abbreviations Used In This Presentation:

APHL – Association of Public Health Laboratories
BSO – Biosafety Officer
CDC – Centers for Disease Control and Prevention
CAP-LPX – College of American Pathologists Laboratory Preparedness Exercise
LRN-B – Laboratory Response Network (Bioterrorism)
PT – Proficiency Test
STC – State Training Coordinator
NLTN – National Laboratory Training Network
WVOLS BT Lab – West Virginia Office of Lab Services, Bioterrorism Lab
2010 Survey Results

39 Advanced (sentinel) labs, 4 Basic labs.

44% - Didn’t know their lab’s biosafety level or provided an incorrect answer.

26% - Didn’t know if they were a sentinel lab or they chose the wrong designation.

Issues - Biosafety knowledge and understanding their role in LRN.
Next Steps

Open the Lines of Communication

Created one email for the advanced (sentinel) labs and one for the basic labs.

Identified their lab’s status (advanced or basic).

Identified expectations for each type of lab.

Introduced myself and gave contact information for the LRN-B lab.
Agents of Bioterrorism Wet Lab

Joined Special Interest Groups (SIGs), now called Collaborative Work Groups (CWGs).

Spoke with the trainers from Virginia.

Attended train-the-trainer course.

Worked with NLTN and Shoolah to set up training content.
May 2011 Agents of Bioterrorism Wet Lab

39 Sentinel labs.

4 Agents of Bioterrorism Wet Labs in two cities.

44 Attendees from 15 sentinel labs.

38.5% of sentinel labs participated in training.

10% of sentinel labs participate in the CAP-LPX proficiency testing.
Attitudes About Select Agents

Hospital Feedback
- “We need to be prepared. I want all of my people to be trained.”
- “Now that we’ve discussed it, it makes sense for us to be ready.”
- “If we choose not to be a sentinel lab, then we won’t be exposed to select agents.”
- “Our facility is so small, we would never get a select agent.”

Reality
- If you perform certain tasks, then you are a sentinel lab.
- You may come into contact with these agents.
- You need to be prepared.
Differences in opinions often varied by size and location.
Sentinel Year End Numbers

2012 Agents of Bioterrorism

39 Sentinel labs.

0 Agents of Bioterrorism Wet Labs. (Every other year)

7.7% of sentinel labs participate in the CAP-LPX proficiency testing.
Sentinel Laboratory Certification Program

Sentinel lab definition changed. Began with a new sentinel survey.

Each lab had to designate a primary and secondary contact.

Sentinel and basic lab letters were emailed to contacts and lab directors:

- Identified their status as a sentinel or basic lab.
- Outlined expectations for sentinel or basic lab.
- Sentinel letter outlined the new sentinel lab certification program expectations.
Sentinel Laboratory Certification Program

In order to become a certified sentinel laboratory, each lab must:

- Send two laboratorians to the 2013 sentinel wet lab training.
- Give a one hour in-service to all laboratorians that did not attend the wet lab training.
- Complete a proficiency test set provided by WVOLS.
- Participate in a call-in drill. (Part of PT expectations)
- Participate in a packaging and shipping drill. (Part of PT)
2013 Sentinel Laboratory Certification Program Results

37 Sentinel Labs.

4 Agents of Bioterrorism Wet Labs, 1 Dry Lab.

78 Attendees from 37 sentinel labs.

100% of sentinel labs participated in training.

100% of sentinel labs gave 1 hour in-service for all laboratorians.

100% of sentinel labs participate in the WVOLS proficiency testing.

100% of sentinel labs participated in call-in drill.

100% of sentinel labs participated in packaging and shipping drill.
How Did We Improve Participation?

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2013</th>
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</thead>
<tbody>
<tr>
<td>Sentinel Labs</td>
<td>39</td>
<td>37</td>
</tr>
<tr>
<td>Wet Lab Attendees</td>
<td>44</td>
<td>78</td>
</tr>
<tr>
<td>Trained Sentinel Labs</td>
<td>15 (38.5%)</td>
<td>37 (100%)</td>
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<tr>
<td>1-hour In-service</td>
<td>N/A</td>
<td>100%</td>
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<tr>
<td>Proficiency Testing</td>
<td>10%</td>
<td>100%</td>
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<tr>
<td>Call-in Drill</td>
<td>N/A</td>
<td>100%</td>
</tr>
<tr>
<td>Packaging &amp; Shipping Drill</td>
<td>N/A</td>
<td>100%</td>
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Make the training and the program important to them.
Communicate:

- Identify their status as a sentinel lab.
- Outline expectations for sentinel labs.
- Don’t be afraid to call them and ask for participation.
- Have your “elevator speech” ready.
Tactics for Improving Participation (cont.)

Change their concept of terrorism & bioterrorism.
Naturally Occurring Organisms

Select Agents/Angents of Bioterrorism

These organisms can cause severe illness or death in their naturally occurring form, and they can be manipulated and used for acts of bioterrorism.

- *Bacillus anthracis* – Anthrax
- *Brucella species* – Brucellosis
- *Burkholderia*  
  - *mallei* – Glanders
  - *pseudomallei* – Melioidosis
- *Francisella tularensis* – Tularemia
- *Yersinia pestis* – Plague (Bubonic, pneumonic, septicemic)
2014 Highly Infectious Organisms Identified in West Virginia

In May 2014, two hospitals in different parts of the state notified the West Virginia Office of Laboratory Services Bioterrorism Response Section of suspect organisms isolated from patient samples.

Francisella tularensis on SBA 7 days old
Local Examples Make an Impact (cont.)

Provide Details:

- How did patient A get infected?
- How did hospital A handle the samples? When did it suspect it might be a select agent?

Brucella canis - SBA at 72 hours
What’s in it for them?

- Free training opportunities (wet labs, packaging and shipping).
- Become a useful resource.
- Contact point between the CDC and the sentinel lab.
- Accomplishment of being recognized as a certified sentinel lab.
Why is Bioterrorism Preparedness Training so Important?

- Teaches how to recognize suspect select agents and what steps to take next.

The training covers more than how to handle select agents:

- Laboratory safety/biosafety.
- Other, more common organisms, can be dangerous if they aren’t handled properly.
- What tasks could cause infectious aerosols.
- How to perform a risk assessment.
- How to properly use biosafety cabinets.
- Biosecurity fundamentals.
- How to submit samples to their LRN-B reference lab.
How Select Agents Can Affect Hospitals

Possible Repercussions:

- Hospital workers are exposed to unnecessary risks when samples aren’t handled correctly.
  - Lab acquired infections – may result in illness or death
  - Treatment side effects
  - Anyone in the vicinity could be exposed
- Patient may not be treated properly if the organism isn’t identified quickly and accurately.
- Hospital could be exposed to liability and bad press if the patient doesn’t receive the proper treatment or if workers are exposed.
- Samples erroneously sent to a commercial reference lab could expose other facility and transport company employees.
Are you a Sentinel Lab?

What makes a hospital a Sentinel Lab?
Not all hospitals are considered Sentinel Labs. You’re a Sentinel Lab if:

- You perform high complexity microbiology testing.

Can I choose to stop being a Sentinel Lab?
No, Sentinel Lab status is based on the work you perform. A desire not to be a Sentinel Lab does not alleviate the risks that you face due to your normal job function.

You can protect your lab and your workers by being prepared!
The Payoff Continues

2017 Survey: Day 1, 7 hours since launch. 46% of labs responded.
Questions?

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