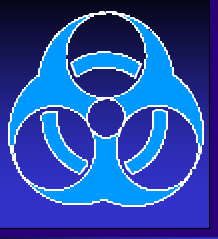




# The Laboratory Response Network for Bioterrorism (LRN)



# Objectives:

**Upon completion of this program, the learner will be able to:**

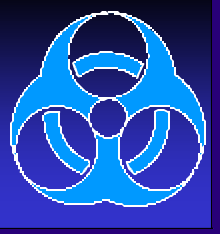
- 1. Participate in the LRN**
- 2. Describe critical aspects of lab preparedness, surveillance, and response for bioterrorism.**
- 3. Explain how clinical laboratories can access State and Local Public Health Labs.**
- 4. Access resources and training about control of bioterrorism**



# Introduction

**Participants should be able to:**

- **Name the Director of the State Public Health Laboratory in their states**
- **Access Emergency Contact Information:**
  - **during regular hours**
  - **outside of regular hours**



# Why is the Public Health Laboratory (PHL) Involved?

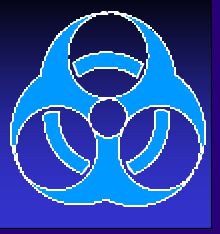
- Mandate by Congress
- Experience with Biological Agents of Concern and Outbreak Investigations
- Link between Local Laboratory Level and CDC/Federal agencies



# Roles of the PHL:

- Disease Identification, and Outbreak Investigation
- Reference Services
- Specialized Testing
- Direct Services
- Environmental Testing





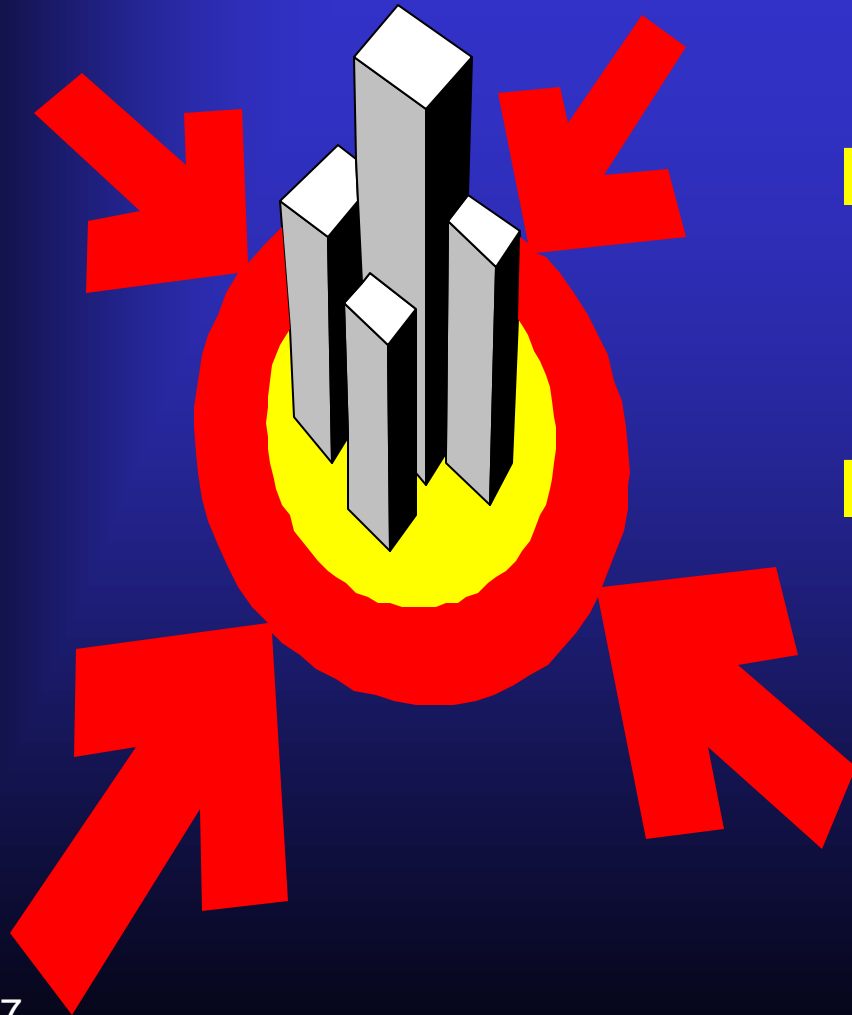
# Roles of the PHL:

- Rapid Testing
- Laboratory Improvement
- Applied Research
- Support of Surveillance and Epidemiology Investigations
- ◆ Emergency Preparedness and Response





# Types of Bioterrorist (BT) Events



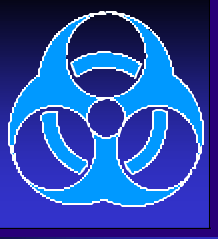
- **ANNOUNCED**  
(Overt)
- **UNANNOUNCED**  
(Covert)



# Characteristics of BT Events

- Increasing Frequency of Cases
- Rare or Non-endemic Disease
- Trouble Identifying Cause of Symptoms





# Scenarios

## ■ Overt Event

- Announced
- Patients Fall ill or Die (Increased Morbidity and Mortality)
- Microorganisms Unconfirmed
- Hoaxes Assumed to be Real



# Scenarios

## ■ Covert Event

- No Prior Warning - Unannounced
- Patients Fall ill or Die from Causes of Unknown or Unusual Origin
- Unusual Cluster(s) of Cases - May be Geographically Distributed
- Undetermined Causative Agent



# Local BT Events



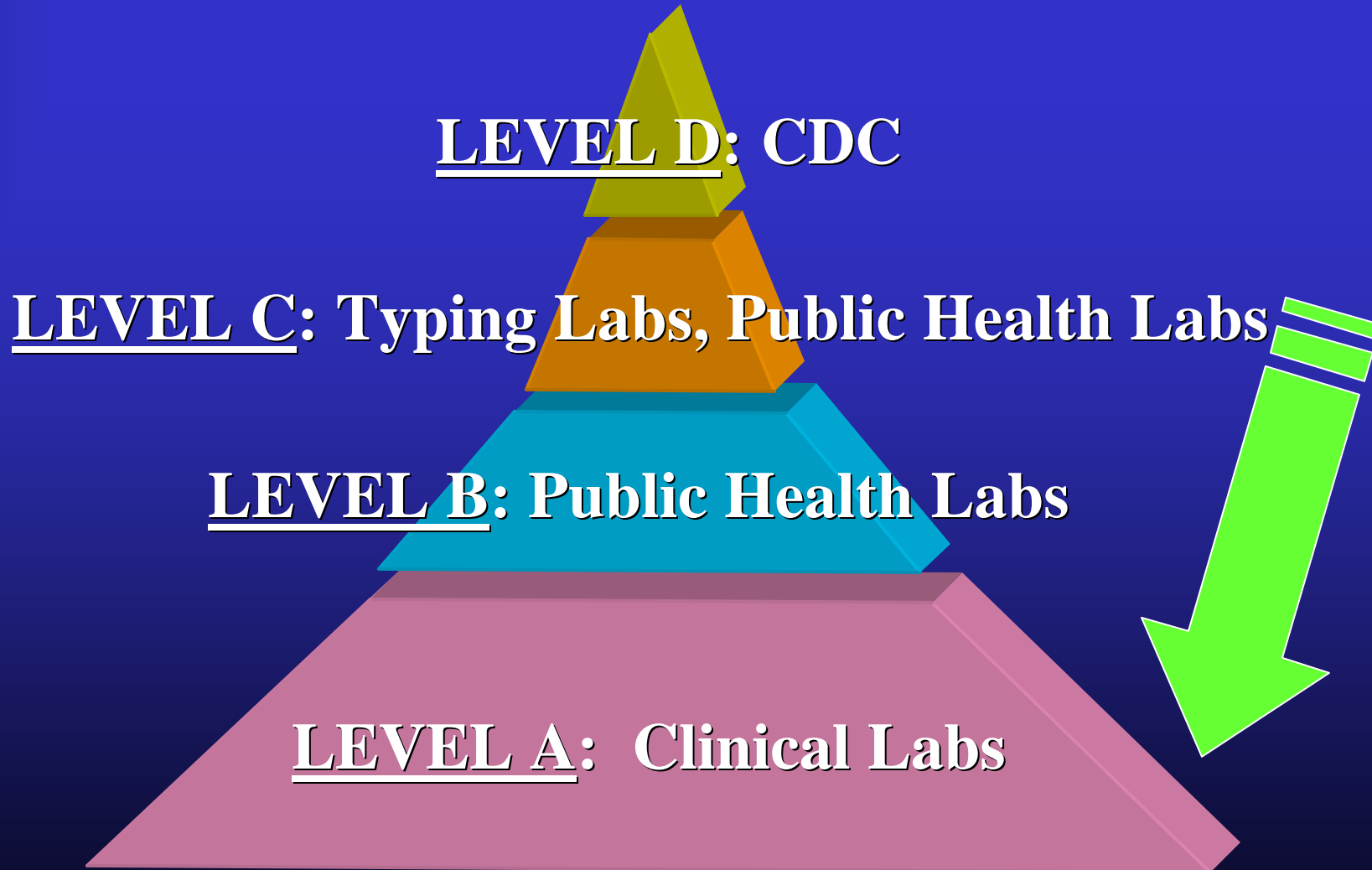


# The Laboratory Response Network for BT

- Public and Private Labs
- Test According to Consensus Protocols
- Timely and Accurate Testing and Reporting
- Linked with Local, State, and Federal Agencies



# LRN Laboratory Levels





# LRN Safety & Proficiency Adequate to...

Level D Labs -  
Work at BSL-4

Archive. Perform high level characterization  
Probe for universe of agents.

Level C Labs -  
Work at BSL-3

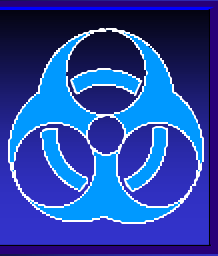
Rapid identification. Rule-in and Refer

Level B Labs -  
BSL-3 Recommended

Perform susceptibility testing.  
Isolate. Identify. Rule-in and Refer

Level A Labs - Assess Risks for  
Aerosols - Use BSL-2

Detect early (presumptive  
cases). Rule-out or Refer.



# Tasks by Capacity

- **BT Level A - Rule-out or Refer**
- **BT Level B - Rule-In and Refer**
- **BT Level C - Rule-in and Refer**
- **BT Level D - Confirm, Validate, Archive**



# Questions to Answer to Create Your Plan

- What is the BT level of my lab?
- Is my lab active in the LRN?
- Where is the nearest higher level lab?
- What guidelines should be followed to package and ship biological agents?
- Whom should I call?





# Have a Plan: Level A Labs

- If announced:
  - Notify the FBI, and the PHL.
  - Based on consultation, test &/or refer.
- If unannounced (but suspected):
  - rule-out.
  - If unable to rule-out, call the nearest Level B lab.

**RULE-OUT or REFER**



# Have a Plan: Level A Labs

- Be aware.
- Have a plan, test your plan, and keep it updated.
- Provide training/in-service to your staff.
- Know whom to call.
- Know chain of custody requirements.
- Know shipping requirements.

**at a minimum REFER**



# Action Items

- Review your current protocols and safety practices.
- Incorporate BT plan into your SOP.
- Keep updated.
  - Additional agent protocols.
  - Additional training opportunities (NLTN, professional societies, etc.)



# Conclusion

- The use of a biological agent for terrorism is a low probability event with very large, potentially devastating consequences.
- Be prepared.

