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| Related Documents |  |  |  |  |
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| Distribution |
| Microbiology Dept – Bioterrorism Preparedness Manual  |
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**PURPOSE:** In a society that is technologically advanced, economically driven and politically unstable the threat of bioterrorism (BT) is a grim reality. Biological agents can be aerosolized and distributed over large geographic areas and have undefined incubation periods, permitting escape of terrorists before realization of the event occurs. This ensures that victims of than incident at a particular location will disseminate before illness occurs, effectively multiplying the effects of the incident.

Biological agents may be preferred by terrorists because they are easy to obtain, inexpensive to produce, difficult to detect and have the capability to overwhelm the medical defense system. Clinicians must acquire comprehensive knowledge of the clinical characteristics of disease produced by the most probable biological agents. Early recognition of key clinical signs and symptoms, accurate diagnoses and treatment and prophylaxis of exposed persons is critical to containment of a BT event. Critical to patient management is the laboratory role in rapid identification of the causative agent.

**ROLE OF THE CLINICAL LABORATORY:** Emergency rooms, clinics and hospital laboratories may have the first opportunity to recognize and initiate a response to a BT-related outbreak. As first-responders in a BT event, these facilities must have access to the local emergency response system including a notification plan that includes internal infection control personnel and administration as well as external communication with local and state health departments, police, FBI and the CDC.

The Laboratory Response Network (LRN) is a consortium and partnership of laboratories that provide immediate and sustained laboratory testing and communication in support of public health emergencies, particularly in response to acts of bioterrorism. All laboratories are regarded as partners and in some cases, registered members of the LRN. Preliminary testing and screening are performed primarily in a distributed rather than a centralized fashion to ensure a prompt and rapid initial response; a system of triage and referral of specimens ensures transfer of appropriate materials to specialty laboratories where sophisticated equipment, technologies, and expertise are applied to specimen analysis. Clinical Laboratories play a critical role in the LRN. Their heightened awareness to the possibility of recovering the agents of bioterrorism from patient specimens and referral of suspect isolates to the appropriate public health reference laboratory is crucial.

In addition to specific contact information in the event of a bioterrorism incident and incorporation of the laboratory protocols within the hospital’s Emergency Preparedness Plan, <http://sharepoint.echristus.net/spohn/emergencyresponseproc/default.aspx> the CHRISTUS SPohn Health System Laboratory BT Preparedness Plan includes ASM Sentinel Level Clinical Microbiology Laboratory Guidelines which include description, etiology and mode of transmission of each agent, laboratory protocols and diagnosis, practical methods to aid microbiologists in ruling out critical agents and referring specimens to public health laboratories (LRN Reference Laboratories) for confirmation, safe specimen packaging and shipping procedures and the necessary isolation precautions to protect workers. It is these guidelines that are used within CHRISTUS Spohn Laboratories*.*

Safe-handling guidelines are found within the ASM guidelines but are worthy of inclusion within the CHRISTUS Spohn Health System Laboratory Bioterrorism Preparedness Plan.

 **HANDLING POSSIBLE BT AGENT GUIDELINES:**

1. The Lead Technologist should be notified immediately that a suspected BT specimen or agent is in the laboratory. Laboratory workers are to be informed promptly of the name and medical record number of the person(s) with suspected infection and, if appropriate, to treat other specimens from the patient(s) appropriately. This must be done in a manner that is in compliance with HIPPA.
2. All suspected BT specimens are to be processed in the biological safety cabinet while wearing appropriate personal protective equipment, such as lab coat, gloves and mask.
3. Each of the plates, tubes and blood culture bottles for which this applies must be labelled prominently as “**Possible highly infectious agent: [fill in name of agent]**”
4. All plates that have been streaked for culture or subculture will be sealed shut with tape or parafilm and labelled as in step 3 above.
5. Any growth from specimens is to be manipulated in the biological safety cabinet while wearing appropriate personal protective equipment, such as lab coat, gloves and a mask.
6. Automated instruments should not be used for identification when a bioterrorism agent is suspected.
7. As the culture is being worked up, the technologist(s) working on the culture(s) must be in close touch with the Microbiology Lead Tech, Medical Director and Infection Control.
8. An identification of the organisms is NOT the role of the Sentinel Microbiology Laboratory. An organism that is consistent with, for example, *Yersinia pestis*, will be forwarded to a LRN Reference or higher laboratory for definitive identification. **Do not perform any more manipulation of the cultures than is absolutely essential.**

**REFERENCES:**

1. Clinical Microbiology Procedures Handbook. Section 16. Bioterrorism. Updated March 2007.
2. <http://www.asm.org/index.php/guidelines/sentinel-guidelines>
3. <http://www.bt.cdc.gov/>