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Infection Prevention Response to the Intentional Use of a Biothreat Agent

I. Description

Describes the policies and procedures for management of biothreat acts.

II. Policy

A. Detection of Outbreaks Caused by Biothreat Agents

Rapid response to a biothreat-related outbreak requires prompt identification of its onset. Because of the rapid progression to illness and potential for dissemination of some of these agents, it may not be practical to await diagnostic laboratory confirmation. Instead, it may be necessary to initiate a response based upon the recognition of high-risk syndromes. Each of the agent-specific case definitions can be found at NC DETECT on the Emergency Department Syndrome & Custom Event Definitions web page, which includes a syndrome description (i.e., typical combination of clinical features of the illness at presentation) that should alert health care practitioners to the possibility of a biothreat-related outbreak.

Clinical staff should contact the Infection Preventionist on-call through the myUNC Health Directory and the House Supervisor (984-974-2415) immediately if they detect an outbreak or suspected outbreak related to a biothreat agent. After hours and weekends, the on-call Infection Preventionist may be reached through myUNC Health Directory.

Any patient with a suspected or known exposure to or infection from a biothreat agent must be reported immediately to the NC State Health Department, as well as the local health department of the patient's county of residence. Specific instructions for reporting can be found in the Infection Prevention policy: Reporting of Communicable Disease. For questions regarding reporting, contact Infection Prevention. Refer to Attachment 1 - Important Contact Information.

A biothreat event may be recognized in the following ways:

1. Covert event: Persons are unknowingly exposed, and an outbreak is suspected only upon recognition of unusual disease clusters or symptoms.
2. Announced event: Persons are warned that an exposure has occurred. The Emergency Department (ED) would likely be notified by Emergency Management or Hospital Police. In the event a biothreat event is suspected and thought to be caused by certain high-consequence infectious disease (i.e., smallpox, etc.), UNC Medical Center staff will follow the Infection Prevention policy: High Consequence Pathogen: Preparedness and Response Plan.

B. Potential Agents

1. Key diseases with recognized biothreat potential (e.g., anthrax, botulism, plague, and smallpox) and the agents responsible for them are described on the CDC and USDA's Select Agents and Toxins List web page. It contains brief descriptions of Category A, B, and C agents, modes of transmission, and risks of human-to-human transmission.
2. Features that should alert clinical staff to the possibility of a biothreat-related outbreak may include:
    a. A rapidly increasing disease incidence (e.g., within hours or days) in a normally healthy population.
    b. An epidemic curve that rises and falls during a short period of time.
    c. An unusual increase in the number of people seeking care, especially with fever, respiratory, or gastrointestinal complaints (see CDC and USDA's Select Agents and Toxins List web page). In addition, people seeking care with lesions consistent with plague, anthrax, or smallpox.
    d. An endemic disease rapidly emerging at an uncharacteristic time or in an unusual pattern.
    e. Lower attack rates among people who had been indoors, especially in areas with filtered air or closed ventilation systems, compared with people who had been outdoors.
    f. Clusters of patients arriving from a single locale.
    g. Large numbers of rapidly fatal cases.

h. Any patient presenting with a disease that is relatively uncommon and has biothreat potential (e.g., pulmonary anthrax, tularemia, viral hemorrhagic fever, smallpox, botulism, or plague).

3. For suspicion of a biothreat via a suspicious package, notify Hospital Police Communications (984-974-3686) immediately and refer to the Emergency Management policy: Active Threat and Workplace Violence Security Plan.

C. Infection Prevention Practices for Patient Management

1. Isolation Precautions

   - All patients in healthcare facilities, including symptomatic patients with suspected or confirmed biothreat-related illnesses, should be managed utilizing Standard Precautions. Standard Precautions are designed to reduce transmission from both recognized and unrecognized sources of infection in healthcare facilities, and are recommended for all patients receiving care, regardless of their diagnosis or presumed infection status. For certain diseases or syndromes (e.g., smallpox and pneumonic plague), transmission-based precautions may be needed to reduce the likelihood for transmission. See the Infection Prevention policy: Isolation Precautions for details regarding Standard Precautions and transmission-based isolation precautions to be followed for specific biothreat agents.

2. Patient Placement

   a. In small-scale events, routine facility patient placement and infection prevention practices should be followed. However, when the number of patients presenting to a healthcare facility is too large to allow routine triage and isolation strategies (if required), it will be necessary to apply practical alternatives. These may include cohorting patients who present with similar syndromes, i.e., grouping affected patients into a designated section of a clinic or emergency department, or a designated ward or floor of a facility, or even setting up a response center at a separate building. Designated cohorting sites should be selected by the Incident Management Team (or other appropriate decision-making body), in consultation with Infection Prevention and Plant Engineering staff, based on patterns of airflow and ventilation, availability of adequate plumbing and waste disposal, and capacity to safely hold potentially large numbers of patients. The triage or cohort site should have controlled entry to minimize the possibility for transmission to other patients at the facility and to staff members not directly involved in managing the outbreak. At the same time, reasonable access to vital diagnostic services (e.g., radiography departments) should be maintained.

b. Patient Transport

- Most infections associated with biothreat agents *cannot* be transmitted from patient to patient. Refer to the Infection Prevention policy: Isolation Precautions for details on transport of patients on transmission-based precautions.

c. Cleaning, Disinfection, and Sterilization of Equipment and Environment

i. Principles of Standard Precautions should be generally applied for the management of patient-care equipment and environmental control. Refer to the Infection Prevention policies: Environmental Services and Infection Prevention Guidelines for Safe Patient Care for procedures regarding routine care, cleaning, and disinfection of the patient care environment.

ii. Rooms and bedside equipment of patients with biothreat-related infections should be cleaned using the same procedures that are used for all patients as a component of Standard Precautions, unless the infecting microorganism and the amount of environmental contamination indicate special cleaning. In addition to adequate cleaning, thorough disinfection of bedside equipment and environmental surfaces may be indicated for certain organisms that can survive in the inanimate environment for extended periods of time. The methods and frequency of cleaning and the products used will be determined by Infection Prevention.

iii. Patient linens are handled in accordance with Standard Precautions, unless the infecting microorganism (e.g., smallpox virus) indicates special handling, transporting, and laundering. In most cases, although linen may be contaminated, the risk of disease transmission is negligible if it is handled, transported, and laundered in a manner that avoids transfer of microorganisms to other patients, personnel, and environments. If special handling, transporting, and laundering are indicated, specific procedures will be determined by Infection Prevention. In all other cases, facility policy and local/state regulations should determine the methods for handling, transporting, and laundering soiled linen.

iv. Contaminated waste is sorted and discarded in accordance with the Infection Prevention policy: Guidelines for Disposal of Regulated Medical Waste, which complies with federal, state, and local regulations.

v. Follow Infection Prevention policy: Exposure Control Plan for Bloodborne Pathogens to prevent occupational injury and exposure to bloodborne pathogens.

d. Discharge Management

- Ideally, patients with biothreat-related infections will not be discharged from the facility until they are deemed noninfectious. Discharge of any patient infected with a biothreat agent who remains potentially communicable should be coordinated with the local health department of the patient's county of residence or discharge location.

D. Post-Exposure Management

1. Decontamination of Patients and Environment
    - Refer to the Emergency Management policy: Emergency Decontamination Plan.
2. Prophylaxis and Post-Exposure Immunization
    - Current recommendations should be obtained in consultation with Orange County Health Department, North Carolina State Health Department, and CDC.
3. Triage and Management of large-scale exposures and suspected exposures.
    - Events will be coordinated by the Incident Management Team (IMT) in consultation with Infection Prevention and in accordance with the Emergency Operations Plan.
4. Exposure Reporting and Evaluation for Staff
    a. An occupational exposure to a biothreat agent is an exposure that occurs within the healthcare facility while the employee is on duty. Criteria for an exposure depend on the biothreat agent and will be defined by Infection Prevention using standardized CDC case definitions when available.
    b. All occupational exposures must be reported to the appropriate occupational health service provider immediately.
        i. Occupational Health Service: UNC Medical Center staff
        ii. University Employee Occupational Health Clinic: UNC University employees
        iii. Campus Health Service: UNC students
        iv. Contract medical workers and non-UNC students working in our facilities must notify their occupational health provider and go to the UNC Emergency Department if they need immediate care.
        v. The occupational health service providers will notify the local

health department of all employee exposures.

c. Management of asymptomatic staff with a ***low-risk exposure*** exposed to a contagious biothreat agent (e.g., pneumonic plague, smallpox, viral hemorrhagic fever).

    i. Persons who have been exposed to a communicable biothreat agent should notify their occupational health service provider immediately. They should also be vigilant for fever, rash, respiratory symptoms, or other signs and symptoms as directed by Infection Prevention following exposure for a period of time that varies depending on the pathogen (time period to be defined by Infection Prevention using standard CDC case definitions when available). Those who develop symptoms should limit interactions outside the home and should not go to work, school, out-of-home childcare, church, or other public areas per public health recommendations and notify their respective OHS immediately.

    ii. Exposed, unprotected staff who are asymptomatic may be furloughed at the discretion of the Medical Director of the applicable occupational health service during the incubation period of the disease (time period to be defined by Infection Prevention using standard CDC case definitions when available).

    iii. Exposed unprotected staff who are asymptomatic and who are allowed to work must be evaluated prior to work each day by the appropriate occupational health service.

    iv. Such examinations will be performed for a period of time that varies depending on the pathogen following the last unprotected exposure (time-period to be defined by Infection Prevention using standard CDC case definitions when available). If applicable, exposed asymptomatic staff should take their own temperature 2x per day and report any elevated temperatures (i.e., ≥38.0°C) to their occupational health provider.

d. Management of asymptomatic staff with a ***high-risk exposure*** (e.g., appropriate PPE was not worn) to a contagious biothreat agent (e.g., pneumonic plague, smallpox, viral hemorrhagic fever). To manage an unprotected high-risk exposure of staff (i.e., healthcare provider in the same room as a patient infected with a highly communicable biothreat agent during a high-risk aerosol-generating procedure and infection control precautions are either absent or breached) with no symptomatic disease, the staff:

    i. Should be excluded from duty for a time period that depends on the specific pathogen (time-period to be defined by Infection

Prevention using standard CDC case definitions when available) following the date of the last high-risk exposure.

ii. Should limit activities outside the healthcare setting per public health recommendations and should be vigilant for development of fever, rash, and/or respiratory symptoms or other signs and symptoms as directed by local and state public health officials.

iii. Will document active surveillance for the development of symptoms and report symptoms immediately to their respective OHS. The frequency of recording health status measures will be determined by occupational health service providers.

e. Management of symptomatic staff exposed to a contagious biothreat agent (e.g., pneumonic plague, smallpox, viral hemorrhagic fever).

i. Exposed staff who develop fever, rash, and/or respiratory tract symptoms or other signs and symptoms as directed by Infection Prevention should not report to work. Rather, they should immediately report by phone to their appropriate occupational health provider the development of fever, rash, respiratory tract, and/or other symptoms. An appropriate healthcare provider will evaluate symptomatic persons as medically necessary in locations as directed by the Incident Management Team. Staff with serious symptoms should be evaluated immediately in the Emergency Department (ED). The ED must be notified in advance of the disease exposure and patient arrival.

ii. If symptoms do not progress to meet the suspect biothreat agent case definition within the time period to be determined by specific infectious agent (time period to be defined by Infection Prevention using standard CDC case definitions when available), following permission from their appropriate occupational health provider the person may be allowed to return to work (depending on the pathogen), school, out-of-home child-care, church or other public areas per public health recommendations, and infection control precautions may be discontinued per Infection Prevention recommendations.

E. Laboratory Support and Confirmation

The current McLendon Clinical Laboratories plan for management of potential biothreat agents should be followed (see Lab - Micro Bacteriology policy: BACTI - Bioterrorism Preparedness Plan and Select Agent Policy.

1. Obtaining Diagnostic Samples

a. Use Standard Precautions when obtaining samples. In all cases of

suspected biothreat, collect an acute-phase serum sample to be analyzed, aliquoted, and saved for comparison to a later convalescent serum sample. McLendon Labs and the Department of Pathology must be informed of a potentially infectious outbreak prior to submitting any specimens for examination or disposal. Call the Clinical Microbiology Laboratory (984-974-1805) or the Director on-call via the myUNC Health Directory **BEFORE** submitting samples. McLendon Labs will coordinate with state and federal authorities as needed. **Hand deliver samples to McLendon Labs**. Refer to the McLendon Labs online resource, "Laboratory Specimens for Suspected Bioterrorism Agents Disease," for information regarding testing procedures and specific recommendations for diagnostic testing for each agent.

b. All autopsies and post-mortem exams of patient specimens should be performed following policies and guidelines from McLendon Clinical Labs and the Department of Pathology.

2. Transport Requirements

- Specimen packaging and transport will be coordinated by the Clinical Microbiology Laboratory. Advance planning should include identification of appropriate packaging materials and transport media in collaboration with the NC State Laboratory of Public Health.

F. Patient, Visitor, and Public Information

Clear, consistent, understandable information should be provided (e.g., via fact sheets) to patients, visitors, and the general public. Visitors may be strictly limited. All communication with the public will be provided by Public Affairs (and coordinated with Infection Prevention and senior hospital management).

III. Related Policies

Emergency Management Policy: Active Threat and Workplace Violence Security Plan

Emergency Management Policy: Emergency Decontamination Plan

Infection Prevention Policy: Environmental Services

Infection Prevention Policy: Exposure Control Plan for Bloodborne Pathogens

Infection Prevention Policy: Guidelines for Disposal of Regulated Medical Waste

Infection Prevention Policy: High Consequence Pathogens - Preparedness and Response Plan

Infection Prevention Policy: Infection Prevention Guidelines for Safe Patient Care

Infection Prevention Policy: Isolation Precautions

Infection Prevention Policy: Reporting of Communicable Diseases

IV. Responsible for Content

Infection Prevention

All Revision Dates

08/2025, 10/2022, 10/2019, 08/2016, 08/2013, 07/2010, 08/2007, 07/2005

Attachments

1: Important Contact Information

Approval Signatures

Step Description	Approver	Date
Policy Stat Administrator	Judith Strubin: Mgr Program-IP	08/2025
AVP Quality UNCMC	Erin Burgess: HCS Exec Dir Quality Improvement Complex AMC	08/2025
Dir Epidemiology	Emily Vavalle: HCS Exec Dir Infection Prevention	08/2025
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Applicability

UNC Medical Center

Standards

No standards are associated with this document