

Messiah College
Bioterrorism Readiness Plan
Policy and Procedure

This plan, if placed into action, could require a safety alert or a timely notice. Vice President for Operations must be notified immediately.

Policy: It is the policy of Messiah College to provide a readiness plan for educational purposes if a bioterrorist act should occur on campus, or in the community. This document is not intended to provide an exhaustive reference on the topic of bioterrorism, rather it is intended to serve as a tool to provide an overview of certain commonly used bioterror agents and necessary first response for Messiah College employees.

All employees are reminded that open and accurate communications are very important during events that might have an adverse impact on the students, or operation of the college. Under no circumstances should any employee provide any information, interviews or statements to the media. All questions, inquiries and concerns should be directed to the office of Public Relations extension 6027 or Vice President of Operations extension 6003.

Objectives: To provide an educational tool that can be used to identify a bioterrorist act and necessary first response by Messiah College Employees.

Outline: Disease Specific Information:
Anthrax – Definition – Post Exposure Management
Botulism – Definition – Post Exposure Management
Plague – Definition – Post Exposure Management
Smallpox – Definition – Post Exposure Management

Emergency Response to Bioterrorism or Suspected Bioterrorism
Internal and External Contacts

Suspicious Unopened Letter or Package Marked With Threatening Message

Envelope with Powder/Powder Spills out Onto Surface

Room Contamination By Aerosoliation (HVAC)

How To Identify Suspicious Package and Letters

Addendum "A" – Dept. of Safety Protocol

Disease Specific Information

Anthrax

Anthrax is an acute infectious disease caused by *Bacillus anthracis*, a spore forming, gram-positive bacillus. Associated disease occurs most frequently in sheep, goats, and cattle, which acquire spores through ingestion of contaminated soil. Humans can become infected through skin contact, ingestion, or inhalation, *anthracis* spores from infected animals or animal products (as in "wool sorter's disease" from exposure to goat hair). Person-to-person transmission of inhalational disease does not occur. Direct exposure to vesicle secretions of cutaneous anthrax lesions may result in secondary cutaneous infection.

Human anthrax infection can occur in three forms: pulmonary, cutaneous, or gastrointestinal, depending on the route of exposure. Of these forms, pulmonary anthrax is associated with bioterrorism exposure to aerosolized spores. Clinical features for each form of anthrax include:

Pulmonary

- Non-specific prodrome of flu-like symptoms follows inhalation of infectious spores.
- Possible brief interim improvement.
- Two to four days after initial symptoms, abrupt onset of respiratory failure and hemodynamic collapse, possibly accompanied by thoracic edema and a widened mediastinum on chest radiograph suggestive of mediastinal lymphadenopathy and hemorrhagic mediastinitis.
- Gram-positive bacilli on blood culture, usually after the first two or three days of illness.
- Treatable in early prodromal stage. Mortality remains extremely high despite antibiotic treatment if it is initiated after onset of respiratory symptoms.

Cutaneous

- Local skin involvement after direct contact with spores or bacilli.
- Commonly seen on the head, forearms or hands.
- Localized itching followed by a papular lesion that turns vesicular, and within 2-6 days develops into a depressed black eschar.
- Usually non-fatal if treated with antibiotics.

Gastro-intestinal

- Abdominal pain, nausea, vomiting, and fever following ingestion of contaminated food, usually meat.
- Bloody diarrhea, hematemesis.

- Gram-positive bacilli on blood culture, usually after the first two or three days of illness.
- Usually fatal after progression to toxemia and sepsis.

The plan for decontaminating students/ visitors/ employees suspected to be exposed to anthrax should include the following: (Bioterrorism Emergency Number at the CDC Emergency Response Office, (770) 488-7100) Local emergency response 911. Personal Protective Equipment and Containment supplies are available in Lenhart Room 116, ECC Room 149, and Kline Room 315.

- Standard Precautions and wearing appropriate barriers (e.g. gloves, gown and respiratory protection) when handling contaminated clothing or other contaminated items.
- Instructing students/visitors/employees to remove contaminated clothing and store in labeled, plastic bags.
- Handling clothing minimally to avoid agitation.
- Decontaminating environmental surfaces using an EPA-registered (1839-83-1677) Stepan Company Disinfectant Quat. Located in every Campus Events Utility Closets, or 0.5% hypochlorite solution (one part household bleach added to nine parts water).
- Contact Public Health Officials to report incident.
- Treatment – Ciprofloxacin 400 mg IV q 12 h or doxycycline 200 mg IV, then 100 gm IV q 8-12 h for 60 days w/o vaccine. Provided by public health officials
- Vaccine – 0.5 ml SC at 0, 2, 4 wk and 6, 12, 18 mo plus annual booster; (licensed but not readily available, should be requested by Public health Officials)
- Prophylaxis – Ciprofloxacin 500 mg po q 12 h or doxycycline 100 mg po q 12 h for 30 d and 3 doses of vaccine or for 60 d w/o vaccine. Provided by Public Health Officials

Botulism

Clostridium botulinum is an anaerobic gram-positive bacillus that produces a potent neurotoxin, botulinum toxin. In humans, botulinum toxin inhibits the release of acetylcholine, resulting in characteristic flaccid paralysis. Botulinum produces spores that are present in soil and marine sediment throughout the world. Foodborne botulism is the most common form of disease in adults. An inhalational form of botulism is also possible. Botulinum toxin exposure may occur in both forms as agents of bioterrorism.

Foodborne botulism is accompanied by gastrointestinal symptoms. Inhalational botulism and foodborne botulism are likely to share other symptoms including:

- Responsive students/employees with absence of fever.
- Symmetric cranial neuropathies (drooping eyelids, weakened jaw clench, difficulty swallowing or speaking).
- Blurred vision and diplopia due to extra-ocular muscle palsies.
- Symmetric descending weakness in a proximal to distal pattern (paralysis of arms

- first, followed by respiratory muscles, then legs).
- Respiratory dysfunction from respiratory muscle paralysis or upper airway obstruction due to weakened glottis.
 - No sensory deficits.

Botulinum toxin is generally transmitted by ingestion of toxin-contaminated food. Aerosolization of botulinum toxin has been described and may be a mechanism for bioterrorism exposure.

- a. Incubation period
 - Neuralgic symptoms of foodborne botulism begin 12-36 hours after ingestion.
 - Neurologic symptoms of inhalational botulism begin 24-72 hours after aerosol exposure.
- b. Period of communicability
 - Botulism is not transmitted from person to person.

Post Exposure Management – for questions or concerns regarding the possibility of botulism exposure contact CDC (Foodborne and Diarrheal Diseases Branch, (404) 639-2888).

- Suspicion of even single cases of botulism should immediately raise concerns of an outbreak potentially associated with shared contaminated food.
- In collaboration with CDC and local/state health departments, attempts should be made to locate the contaminated food source and identify other persons who may have been exposed.
- Any individuals suspected to have been exposed to botulinum toxin should be carefully monitored for evidence of respiratory compromise.
- Decontamination of Students/Employees Environment: Contamination with botulinum toxin does not place persons at risk for dermal exposure or risk associated with re-aerosolization. Therefore, decontamination of students/visitors/employees is not required.
- Treatment – Trivalent equine antitoxin (serotypes A, B, E)(licensed, CDC)
- Vaccine – Pentavalent toxoid (A-E), 0, 2, 12 wk SC, yearly booster (IND, USAMRID)
- Prophylaxis and post-exposure immunization: Trivalent botulinum antitoxin is available by contacting state health department or by contacting CDC at (404) 639-2888.

Plague

Plague is an acute bacterial disease caused by the gram-negative bacillus *Yersinia*
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pestis, which is usually transmitted by infected fleas, resulting in lymphatic and blood infections (bubonic and septicemia plague). A bioterrorism-related outbreak may be expected to be airborne, causing a pulmonary variant, pneumonic plague.

Clinical features of pneumonic plague include:

- Fever, cough, chest pain
- Hemoptysis
- Muco-purulent or watery sputum with gram-negative rods on gram stain.
- Radiographic evidence of bronchopneumonia.

Modes of transmission

- Plague is normally transmitted from an infected rodent to man by infected fleas.
- Bioterrorism-related outbreaks are likely to be transmitted through dispersion of an aerosol.
- Person-to-person transmission of pneumonic plague is possible via large aerosol droplets.

Incubation period

- The incubation period for plague is normally 2-8 days if due to fleaborne transmission. The incubation period may be shorter for pulmonary exposure (1-3 days).

Period of communicability

- Patients/Residents with pneumonic plague may have coughs productive of infectious particle droplets. Droplet precautions, including the use of a mask for patient care, should be implemented until the patient is transferred to the hospital.

Post Exposure Management

- Instructing students/visitors/employees to remove contaminated clothing and storing in labeled, plastic bags. (Available in Spill response Kits located in Kline Room 315, Lenhart Room 116 and ECC Room 149.
- Handling clothing minimally to avoid agitation.
- Instructing students/visitors/employees to shower thoroughly with soap and water (and providing assistance if necessary).
- Standard Precautions and wearing appropriate barriers (e.g. gloves, gown, face shield) when handling contaminated clothing or other contaminated items.
- Decontamination with EPA approved Stepan Company 1839-83-1677 located in every Campus Events Utility Room.
- Treatment – Streptomycin 30 mg/kg IM qD in 2 divided doses x 10 d (or gentamicin) or doxycycline 200 mg IV, then 100 mg IV q 8-12 h
- Vaccine – Greer inactivated vaccine available (licensed), 1.0 ml then 0.2 ml boost at 1-3 and 3-6 mo – but not protective against aerosol in animals

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- Prophylaxis – Tetracycline 500 mg po qid x 7 d or doxycycline 100 mg po bid x 7 d

Smallpox

Smallpox is an acute viral illness caused by the variola virus. Smallpox is a bioterrorism threat due to its potential to cause severe morbidity in a nonimmune population and because it can be transmitted via the airborne route. A single case is considered a public health emergency.

Acute clinical symptoms of smallpox resemble other acute viral illnesses, such as influenza. Skin lesions appear, quickly progressing from macules to papules to vesicles. Other clinical symptoms to aid in identification of smallpox include:

- 2-4 day, non-specific prodrome of fever, myalgias
- rash most prominent on face and extremities (including palms and soles) in contrast to the truncal distribution of varicella.
- Rash scabs over in 1-2 weeks.
- In contrast to the rash of varicella, which arises in “crops,” variola rash has a synchronous onset.

Smallpox is transmitted via both large and small respiratory droplets. Student-to-student transmission is likely from airborne and droplet exposure, and by contact with skin lesions or secretions. Students/employees are considered more infectious if coughing or if they have a hemorrhagic form of smallpox.

Incubation period

- The incubation period for smallpox is 7-17 days; the average is 12 days.

Period of communicability

- Unlike varicella, which is contagious before the rash is apparent, Patients/Residents with smallpox become infectious at the onset of the rash and remain infectious until their scabs separate (approximately 3 weeks).

Preventive Measures

- Vaccine availability: a live-virus intradermal vaccination is available for the prevention of smallpox.
- Immunization recommendations: since the last naturally acquired case of smallpox in the world occurred more than 23 years ago, routine public vaccination has not been recommended. Vaccination against smallpox does not reliably confer lifelong immunity. Even previously vaccinated persons should be considered susceptible to smallpox.
- Immediate transfer of suspected or confirmed smallpox students/employees to local hospital is necessary.

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Post Exposure Management

- Students/visitors/employees decontamination after exposure to smallpox is not indicated.
- Items potentially contaminated by infectious lesions should be handled using Contact Precautions.
- Recommendations for prophylaxis are subject to change. Up-to-date recommendations should be obtained in consultation with local and state health departments and CDC.
- Post-exposure immunization with smallpox vaccine (vaccinia virus) is available and effective. Vaccination alone is recommended if given within 3 days of exposure. Passive immunization is also available in the form of vaccinia immune-globulin (VIG). If greater than 3 days has elapsed since exposure, both vaccination and VIG are recommended. VIG is maintained at USAMRIID, (301) 619-2833.
- Vaccination is generally contraindicated in pregnant women, and persons with immunosuppression, HIV-infection, and eczema, who are at risk for disseminated vaccinia disease. However, the risk of smallpox vaccination should be weighed against the likelihood for developing smallpox following a known exposure. VIG should be given concomitantly with vaccination in these patients.
- Following prophylactic care, exposed individuals should be instructed to monitor themselves for development of flu-like symptoms or rash during the incubation period (i.e., for 7-17 days after exposure) and immediately report to designated care sites selected to minimize the risk of exposure of others.
- Treatment – Supportive care; cidofovir has activity in experimental animals, in vivo
- Vaccine – Calf lymph vaccinia vaccine; scarification (licensed, limited supply)

Emergency Response to Bioterrorism or Suspected Bioterrorism

Internal Contacts

- Dispatch: Emergency 6565; Non-Emergency 6005
- Engle Center 6035
- Vice President of Operations 6003

Internal contacts after hours

Dispatch will be responsible for contacting the individuals listed below:

- Kathie Shafer, Vice President of Operations
- Brad Markley, Director of Facility Services
- Cindy Burger, Director of Safety

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External Contacts

- Cumberland County Control
Call 911
- Federal Bureau of Investigation (FBI) Local Field Office:
228 Walnut Street
Harrisburg Pa, 17101
717-232-8686
- Bioterrorism Emergency Number, CDC Emergency Response Office 24 Hour Hotline
(770) 488-7100
- CDC Healthcare Infections Program (404) 639-6413
- CDC General Information 1-800-CDC-INFO
- Pennsylvania Department of Health
Secretary of Health
Phone No. 1-877-724-3258 (1-877-PA-HEALTH)
- Pennsylvania Emergency Management (717) 588-6900 (State), (717) 766-0756 (Local)
Upper Allen Township
Emergency Management
100 Gettysburg Pike
Mechanicsburg, PA 17055

HOW TO HANDLE ANTHRAX AND OTHER BIOLOGICAL AGENT THREATS

1. RELAX AND REMAIN CALM; DO NOT PANIC – Although any threatened use of biological agents must be treated as though it is real, experience has demonstrated that these are likely to be a HOAX. If the suspected biological agent is reported as Anthrax, be assured that it is NOT contagious, and that treatment is readily available if administered before the onset of symptoms.
2. Anthrax organisms can cause infection in the skin, gastrointestinal system, or the lungs. To do so, the organism must be rubbed into abraded skin, swallowed, or inhaled as a fine, aerosolized mist. Disease can be prevented after exposure to the anthrax spores by early treatment with the appropriate antibiotics. Anthrax is not spread from one person to another person.
3. For anthrax to be effective as a covert agent, it must be aerosolized into very small particles. This is difficult to do, and requires a great deal of technical skill

and special equipment. If these small particles are inhaled, life-threatening lung infection can occur, but prompt recognition and treatment are effective.

SUSPICIOUS UNOPENED LETTER OR PACKAGE MARKED WITH THREATENING MESSAGE SUCH AS "ANTHRAX":

1. Do not shake, empty, try to open, or move any suspicious envelope or package and do not pass on to others to look at.
2. Place the envelope or package in a plastic bag or some other type of container to prevent leakage of contents.
3. If you do not have any containers, then cover the envelope or package with anything (e.g., clothing, paper, trash can, etc.) and do not remove this cover.
4. Secure the room by closing the door, or section off the area to prevent others from entering. If you have touched the article in question, you could possibly be contaminated. DO NOT leave the area as you could potentially contaminate others. Remain in the area for further instructions by the Safety Officer.
5. **Call Messiah College Dispatch x6565 to report the incident.** Dispatch will contact a Safety Officer who will respond to the scene. The Officer will then determine if other outside agencies should be notified and will make the necessary contacts.
6. Avoid contact with others when possible. List all people who were in the room or area when this suspicious letter or package was recognized. Give this information to the Safety Officer who responds to the scene. Safety Officer should not enter space.

ENVELOPE WITH POWDER AND POWDER SPILLS OUT ONTO SURFACE:

1. Do not try to clean up the powder. Cover the spilled contents immediately with anything (e.g., clothing, paper trash can, etc.) and do not remove this cover.
2. Secure the room by closing the door, or section off the area to prevent others from entering. If you have touched the article in question, you could possibly be contaminated. DO NOT leave the area as you could potentially contaminate others. Remain in the area for further instructions by the Safety Officer.
3. **Call Messiah College Dispatch x6565 to report the incident.** Dispatch will contact a Safety Officer who will respond to the scene. The Officer will then determine if other outside agencies should be notified and will make the necessary contacts. Safety officer should not enter space.
4. Avoid contact with others when possible. List all people who were in the room or area when this suspicious letter or package was recognized. Give this information to the Safety Officer who responds to the scene.
5. Remove heavily contaminated clothing as soon as possible and place in a plastic bag, or some other container that can be sealed. This clothing bag should be given to the emergency responders for proper handling.
6. Shower with soap and water as soon as possible. *Do Not Use Bleach Or Other Disinfectant On Your Skin.*

ROOM CONTAMINATION BY AEROSOLIATION (HVAC):

For example: if the air handling system is contaminated or a biological agent is released in a public space.

1. Turn off local fans or ventilation units in the area, if possible.
2. Secure the room by closing the door, or section off the area to prevent others from entering. If you were in the area in question, you could possibly be contaminated. DO NOT leave the general vicinity as you could potentially contaminate others. Remain in the area for further instructions by the Safety Officer.
3. **Call Messiah College Dispatch x6565 to report the incident.** Dispatch will contact a Safety Officer who will respond to the scene. The Officer will then determine if other outside agencies should be notified and will make the necessary contacts. Dispatch should not enter the space.
4. Contact Facility Services to shut down air handling system in the building.
5. Avoid contact with others when possible. List all people who were in the room or area when the agent was released. Give this information to the Safety Officer who responds to the scene.

HOW TO IDENTIFY SUSPICIOUS PACKAGES AND LETTERS:

Some characteristics of suspicious packages and letters include the following.....

- Excessive postage
- Handwritten or poorly typed addresses
- Incorrect titles
- Title, but no name
- Misspellings of common words
- Oily stains, discolorations or odor
- No return address
- Excessive weight
- Lopsided or uneven envelope
- Protruding wires or aluminum foil
- Excessive security material such as masking tape, string, etc.
- Visual distractions
- Ticking sound
- Marked with restrictive endorsements, such as "Personal" or "Confidential"
- Shows a city or state in the postmark that does not match the return address

In the event of an incident or outbreak which would cause the college to close down or to Bioterrorism Readiness Plan

In the event of an incident or outbreak which would cause the college to close down or to isolate an area of campus, the following procedures will be followed to inform all students and employees:

- A mass email will be sent out explaining the incident and the procedures that will need to be followed.
- A message will be posted on the Messiah webpage.
- A message will be left on the Messiah emergency phone number (691-6084).
- A text message will be sent to all students and employees who are signed up to receive the alerts.

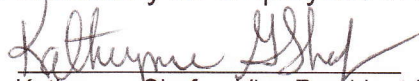
Department of Safety:

(See Addendum "A" – Protocol for Dealing with Bioterrorism Incidents)
Complete an incident report and involve input from all employees that participated in the activities.

Post Incident De-Briefing:


After any type of a Bioterrorism incident has occurred, a debriefing will be scheduled; this meeting will be conducted as soon as possible and will include all individuals involved in the incident as well as all those listed on the signature page of this document. This debriefing will cover any feedback from those involved, a detailed summary of the investigation, what improvements could be added to enhance the policy, and what education may be necessary for employees in the future.

Approved ___ Reviewed ___ Revised


Kathrynne Shafer, Vice President for Operations



Cindy Burger, Director of Safety and Dispatch Services

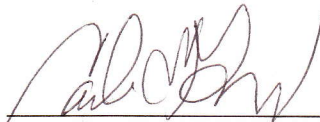

Brad Markley, Director of Facility Services


Hilary Kreider, Environmental Health and Safety
Manager


Amanda Coffey, Director of Human Resources


Bill Althoff, Postal Services Manager


Stoney Miller, Inventory Control and Receiving Coordinator



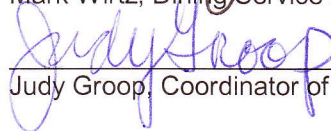
Carla Gross, Director of Marketing and Public Relations &
Special Assistant to the President for Communication



Carolyn Kreamer, Chair, Department of Nursing



Mark Wirtz, Dining Service Director



Judy Groop, Coordinator of Health Services

"Note - The signed copy of this procedure is filed in the Facility Service Department. By signing this policy you have agreed to enforce the contents and adhere to standards".

Department of Safety Protocol

Dealing with Bioterrorism Incidents

Dispatch Responsibilities:

1. When an incident is reported to Dispatch of a suspected Bioterrorism act (e.g. suspicious or hazardous mail, anthrax scare, etc.), the dispatcher shall contact the officer on duty for him/her to respond to the scene.
2. Once the Safety Officer has arrived on the scene and has verified an actual bioterrorism incident has occurred, the Safety Officer will notify the dispatcher. The dispatcher will immediately contact the following:

VP of Operations
Director of Safety
Director of Facility Services

Safety Officer Responsibilities:

OFFICER SAFETY IS CRITICAL; DO NOT BECOME A VICTIM YOURSELF.

1. With officer safety in mind, the Safety Officer will use personal protective equipment prior to entering the area so as not to become a victim themselves.
The Safety Officer will secure the area, not allowing access to anyone except proper authorities responsible for the incident investigation and/or decontamination.
2. The Safety Officer will have Dispatch contact Cumberland County Communications, 911, to have the local police authorities respond.
3. The Safety Officer will ensure that all exposed victims are in a separate, secure and private area. The officer will inform exposed victims that they are not to call or talk to anyone regarding the situation until accurate information is gathered; this includes friends and family. Keeping the possibly exposed victims together in a private area reduces the chance of further exposure to the campus community and will help keep all those involved calm and safe.
4. The Safety Officer will ensure that Dispatch has made the appropriate contacts to those listed above under Dispatch responsibilities.
5. The Safety Officer will await the arrival of local authorities and direct them to the scene.