



## Potential Agents of Bioterrorism Specimen Collection

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**IMPORTANT:** Follow the Infection Control Precautions described in Infection Control Guidelines for Potential Agents of Bioterrorism **BEFORE** collecting specimens.

| <b>ANTHRAX</b><br>( <i>Bacillus anthracis</i> )  | Possible <i>B. anthracis</i><br>exposure in an<br>asymptomatic patient | Anthrax-<br>inhalational | Anthrax-<br>cutaneous<br>vesicular stage | Anthrax-<br>cutaneous<br>eschar stage | Anthrax-GI  |
|--|--|--------------------------|--|---------------------------------------|-------------|
| Blood cultures<br>Two separate sets<br>from different sites.<br>One set is 2 bottles of<br>10 mL each. | No   | √                        | √  | √                                     | √           |
| Lavender-top tube<br>(EDTA)<br>Inpatients only for<br>direct Gram stain                                | No   | √                        | √  | √                                     | √           |
| Red-top tube<br>Save for other studies   | No   | √                        | √  | √                                     | √           |
| Sputum   | No   | √                        | No                                       | No                                    | No          |
| Pleural Fluid<br>(If present)  | No   | √                        | No                                       | No                                    | No          |
| CSF<br>(If meningeal signs<br>present)   | No   | √                        | No                                       | No                                    | No          |
| Cutaneous Lesions<br>2 swabs and<br>2 punch biopsies<br>See notes below.                               | No   | No                       | See notes<br>below.                      | See notes<br>below.                   | No          |
| Stool<br>(Not in transport<br>medium)  | No   | No                       | No                                       | No                                    | √           |
| Anterior Nares Swab  | No   | No                       | No                                       | No                                    | No          |
| <b>ORDER COMMENT</b>   | Not applicable   | R/O Anthrax              | R/O Anthrax                              | R/O Anthrax                           | R/O Anthrax |

Notes regarding Cutaneous Lesions:

1. Swabs:
  - a. Vesicular Lesions: Soak 2 swabs in previously unopened vesicle fluid and send in a Culturette.
  - b. Eschar Lesions: Rotate 2 swabs beneath edge of eschar without removing eschar and send in a Culturette.
2. Punch biopsy:
  - a. Send one in a sterile container for culture.
  - b. Send one in 10% neutral buffered formalin for histopathology and immunohistochemical stain.



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| <b>PLAGUE</b><br>( <i>Yersinia pestis</i> )   | Possible <i>Y. pestis</i> exposure in<br>an asymptomatic patient | Plague-pneumonic or bubonic |
|---|--|-----------------------------|
| Blood cultures<br>Two separate sets from different<br>sites. One set is 2 bottles of<br>10 mL each bottle | No   | √                           |
| Red-top tube<br>(for serology)  | No   | √                           |
| Sputum  | No   | √                           |
| CSF<br>(If meningial signs present)   | No   | √                           |
| Bubo aspirate   | No   | √                           |
| Skin scraping of lesions  | No   | √                           |
| <b>ORDER COMMENT</b>  | Not applicable   | R/O Plague                  |

| <b>BOTULISM</b><br>( <i>Clostridium botulinum</i> ) | Possible <i>C. botulinum</i> exposure<br>in an asymptomatic patient | Botulism-Symptomatic                                |
|---|---|---|
| Red-top tube<br>(for serology)                      | No  | 3 - 10 cc tubes from adults<br>√ (10 cc blood/tube) |
| Stool<br>(Not in transport medium)                  | No  | √ >25 g stool                                       |
| Gastric aspirate                                    | No  | √   |
| CSF<br>(If meningial signs present)                 | No  | Not recommended - CSF will be<br>normal             |
| <b>ORDER COMMENT</b>                                | Not Applicable  | R/O Botulism  |

| <b>TULAREMIA</b><br>( <i>Francisella tularensis</i> )  | Possible <i>F. tularensis</i> exposure<br>in an asymptomatic patient | Tularemia     |
|--|--|---------------|
| Blood cultures<br>Two separate sets from different<br>sites. One set is 2 bottles of<br>10 mL each bottle. | No   | √             |
| Red-top tube<br>(for serology)   | No   | √             |
| Sputum   | No   | √             |
| CSF<br>(If meningial signs present)  | No   | √             |
| Lymph node biopsy or aspirate<br>(Send in sterile container)   | No   | √             |
| <b>ORDER COMMENT</b>   | Not applicable   | R/O Tularemia |



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| <b>SMALLPOX</b><br>(Smallpox/Variola Virus)  | Possible Smallpox Virus exposure<br>in an asymptomatic patient | Smallpox   |
|--|--|--|
| Skin scrapings of lesions:<br>Use blunt edge of a scalpel to<br>open previously unopened<br>vesicular lesion <ul style="list-style-type: none"> <li>• Harvest fluid with a<br/>cotton swab</li> <li>• Scabs can be removed<br/>by forceps</li> </ul> | No   | Swabs and scabs should be<br>placed in a sterile tube, sealed<br>with tape. Double-bag in<br>Biohazard bag. Hand carry to the<br>Microbiology Lab (do not send via<br>pneumatic tube). |
| <b>ID CONSULT</b>  | No   | √  |
| <b>ORDER COMMENT</b>   | Not applicable   | R/O Smallpox   |

| <b>VIRAL<br/>HEMORRHAGIC<br/>SYNDROME</b>  | Possible Viral Hemorrhagic<br>Syndrome exposure in an<br>asymptomatic patient | Viral Hemorrhagic Fever     |
|--|---|-----------------------------|
| Blood cultures<br>Two separate sets from<br>different sites. One set is 2<br>bottles of 10 mL each bottle. | No  | √                           |
| Green-top (heparin) tube<br>(for culture)  | No  | √                           |
| Red-top tube<br>(for serology)   | No  | √                           |
| Stool<br>(Not in transport medium)   | No  | √                           |
| Nasopharyngeal or throat swab<br>in viral transport medium   | No  | √                           |
| Urine  | No  | √                           |
| <b>ID CONSULT</b>  | No  | √                           |
| <b>ORDER COMMENT</b>   | Not applicable  | R/O Viral Hemorrhagic Fever |



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| INFECTION CONTROL GUIDELINES<br>FOR POTENTIAL AGENTS OF<br>BIOTERRORISM              | Anthrax | Brucellosis | Cholera | Glanders | Bubonic Plague | Pneumonic Plague | Tularemia | Q Fever | Smallpox | Venez. Equine Encephalitis | Viral Encephalitis | Viral Hemorrhagic Fever | Botulism | Ricin | T-2 Mycotoxins | Staph Enterotoxin |
|--|---------|-------------|---------|----------|----------------|------------------|-----------|---------|----------|----------------------------|--------------------|-------------------------|----------|-------|----------------|-------------------|
|  |         |             |         |          |                |                  |           |         |          |                            |                    |                         |          |       |                |                   |
| Standard Precautions for all aspects of patient care                                 | x       | x           | x       | x        | x              | x                | x         | x       | x        | x                          | x                  | x                       | x        | x     | x              | x                 |
| Contact Precautions  |         | x           |         |          |                |                  |           |         | x        |                            |                    | x                       |          |       |                |                   |
| Airborne Precautions   |         |             |         | x        |                |                  |           |         | x        |                            |                    |                         |          |       |                |                   |
| Use of N95 mask by all individuals entering the room                                 |         |             |         |          |                |                  |           |         | x        |                            |                    |                         |          |       |                |                   |
| Droplet Precautions  |         |             |         |          |                | x                |           |         |          | x                          |                    |                         |          |       |                |                   |
| Wash hands with antimicrobial soap   |         | x           | x       |          |                |                  |           |         | x        |                            |                    | x                       |          |       |                |                   |
| <b>Patient Placement</b>   |         |             |         |          |                |                  |           |         |          |                            |                    |                         |          |       |                |                   |
| No restrictions  | x       |             |         |          |                |                  | x         |         |          |                            |                    |                         | x        | x     | x              | x                 |
| Cohort "like" patients when private room unavailable                                 |         |             | x       |          | x              | x                |           | x       |          |                            | x                  |                         |          |       |                |                   |
| Private room   |         | x           | x       | x        | x              | x                |           |         | x        | x                          |                    | x                       |          |       |                |                   |
| Negative pressure  |         |             |         |          |                |                  |           |         |          | x                          |                    |                         |          |       |                |                   |
| Door closed at all times   |         |             |         | x        |                |                  |           |         | x        |                            |                    |                         |          |       |                |                   |
| <b>Patient Transport</b>   |         |             |         |          |                |                  |           |         |          |                            |                    |                         |          |       |                |                   |
| No restrictions  | x       |             |         |          |                |                  | x         | x       |          |                            | x                  |                         | x        | x     | x              | x                 |
| Limit movement to essential medical purposes only                                    |         | x           | x       | x        | x              | x                |           |         | x        | x                          |                    | x                       |          |       |                |                   |
| Place mask on patient to minimize dispersal of droplets                              |         |             |         | x        |                | x                |           |         | x        | x                          |                    |                         |          |       |                |                   |
| <b>Cleaning, Disinfection of Equipment</b>   |         |             |         |          |                |                  |           |         |          |                            |                    |                         |          |       |                |                   |
| Routine terminal cleaning of room with hospital-approved disinfectant upon discharge |         |             | x       | x        |                |                  | x         | x       | x        | x                          | x                  |                         | x        | x     | x              | x                 |
| Disinfect surfaces with bleach/water sol. 1:9 (10% sol.)                             | x       | x           |         |          | x              | x                |           |         |          |                            |                    | x                       |          |       |                |                   |
| Dedicated equipment disinfected prior to leaving room                                |         | x           |         |          |                |                  |           |         | x        |                            |                    | x                       |          |       |                |                   |
| Linen management as with all other patients  | x       | x           | x       | x        | x              | x                | x         | x       | x        | x                          | x                  | x                       | x        | x     | x              | x                 |
| Routine medical waste handled per internal policy                                    | x       | x           | x       | x        | x              | x                | x         | x       | x        | x                          | x                  | x                       | x        | x     | x              | x                 |
| <b>Discharge Management</b>  |         |             |         |          |                |                  |           |         |          |                            |                    |                         |          |       |                |                   |
| No special discharge instruction necessary   | x       |             | x       | x        |                |                  | x         | x       |          | x                          | x                  |                         | x        | x     | x              | x                 |
| Home care providers should be taught principles of Standard Precautions              | x       | x           |         |          | x              | x                |           |         |          |                            |                    | x                       |          |       |                |                   |
| Patient not discharged from hospital until determined to be no longer infectious     |         |             |         |          |                | x                |           |         | x        |                            |                    | x                       |          |       |                |                   |
| Patient generally not discharged until 72 hours of antibiotics completed             |         |             |         |          |                | x                |           |         |          |                            |                    |                         |          |       |                |                   |
| <b>Post-mortem Care</b>  |         |             |         |          |                |                  |           |         |          |                            |                    |                         |          |       |                |                   |
| Follow principles of Standard Precautions  | x       | x           | x       | x        | x              | x                | x         | x       | x        | x                          | x                  | x                       | x        | x     | x              | x                 |
| Droplet Precautions  |         |             |         |          |                | x                |           |         |          |                            |                    |                         |          |       |                |                   |
| Airborne & Contact Precautions and Negative pressure                                 |         |             |         |          |                |                  |           |         | x        |                            |                    |                         |          |       |                |                   |
| Use of N95 mask by all individuals   |         |             |         |          |                |                  |           |         | x        |                            |                    |                         |          |       |                |                   |
| Negative pressure  |         |             |         |          |                |                  |           |         | x        |                            |                    |                         |          |       |                |                   |
| Contact Precautions  |         |             |         |          |                |                  |           |         | x        |                            |                    | x                       |          |       |                |                   |
| Routine terminal cleaning of room with hospital-approved disinfectant upon autopsy   |         | x           | x       | x        |                |                  | x         | x       | x        | x                          | x                  |                         | x        | x     | x              | x                 |
| Disinfect surfaces with bleach/water sol. 1:9 (10% sol.)                             | x       |             |         |          | x              | x                |           |         |          |                            |                    | x                       |          |       |                |                   |

Standard Precautions prevent direct contact with all body fluids (including blood), secretions, excretions, non-intact skin (including rashes) and mucous membranes. Standard precautions routinely practiced by healthcare providers include use of personal protective equipment.

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