

Public Health Advisory for Clinicians November 21, 2001

This advisory contains updated information regarding the current anthrax situation. Please distribute to medical, nursing, emergency room and administrative staff.

I. New Case of Inhalational Anthrax in Connecticut

A 94 year old woman from southwestern Connecticut has died from inhalational anthrax. The patient was hospitalized on November 16, 2001 with symptoms of an upper respiratory tract infection and died on November 21, 2001. Preliminary testing indicated possible anthrax. Subsequent testing by the Connecticut Department of Public Health and the Centers for Disease Control and Prevention (CDC) confirmed the diagnosis. The patient lived alone on a farm and had no known exposure to postal equipment or other potential risks for anthrax. An investigation by federal, state, and local public health agencies is ongoing. Further details may be found on the CDC website (www.bt.cdc.gov) and the CT Department Public Health website (www.dph.state.ct.us).

II. Summary of Anthrax Cases (as of 11/21/01)

Including the Connecticut case, there are now 23 cases nationwide; 11 are inhalational cases and 12 are cutaneous cases. Five of the cases are from the Washington, DC area, eight from New York City, seven from New Jersey, two from Florida and one from Connecticut.

III. Inhalational Anthrax Risk Exposure History

Seven of the inhalational cases were in persons working in central US Postal Service mail sorting facilities with mail sorting machines. A total of three facilities were involved. Two were in persons in a media corporate office, one worked in the mailroom, the other may have been an intended victim of a letter. Two cases (from NYC and CT) do not meet the profile- it is unclear how they were exposed.

IV. Heightened Surveillance for Unusual Illnesses or Disease

The New York State Department of Health (NYSDOH) continues to ask providers to immediately report any unusual illness or disease clusters, and **individual suspect cases of cutaneous or inhalation anthrax**, to your local health department. Recent events have highlighted the critical role that physicians have in recognizing a single case of an unusual illness or a cluster of illnesses that may represent an act of bioterrorism. If you are unable to make contact with your local health department, call the NYSDOH Bureau of Communicable Disease Control's provider hotline at 1-800-278-2965.

Providers in New York City should call the Provider Hotline at 866-692-3641. If you are unable to get through, call one of the following temporary numbers for the Communicable Disease Program: 212-295-5658, 212-295-5670, 212-295-5665, or 212-295-5671. After normal business hours, please call the Provider Hotline at 866-692-3641 from 8am until midnight. From midnight until 8 am, please call the Poison Control Center at 212-764-7667. If that number is not working, please call 1-800-222-1222.

V. Changes in the New York State Sanitary Code

Sections 2.1 and 2.5 of the New York State Sanitary Code (10 NYCRR 2) have been modified, under emergency authority, in response to the potential for disease caused by bioterrorist agents. Effective November 20, 2001, six new diseases have been added to the reportable disease list: glanders, melioidosis, Q fever, smallpox, staphylococcal enterotoxin B poisoning, and viral hemorrhagic fever. Suspected or confirmed cases of these or any other reportable disease should be reported to your local health department.

VI. Diagnosis of Patients with Influenza-like Illness (ILI)

Clinicians should take a detailed employment and exposure history on all patients presenting with influenza-like illness (ILI). Current information suggests that postal workers (especially those who work in mail distribution centers where automated sorting machines are used), persons who work at media corporations, for elected government officials, or for other high profile companies or institutions (especially if they handle mail), and persons who have had a potential risk exposure (such as aerosolization of powder when opening a letter containing powder *and* a credible threat) may be at higher risk for anthrax. In addition to influenza, the differential diagnosis of ILI includes other viruses (rhinoviruses, respiratory syncytial virus, adenoviruses, and parainfluenza viruses) and some bacteria (*Legionella spp.*, *Chlamydia pneumoniae*, *Mycoplasma pneumoniae*, and *Streptococcus pneumoniae*) The presence of upper respiratory symptoms such as rhinorrhea and sneezing make the diagnosis of anthrax much less likely.

The following table of symptoms may help distinguish between illnesses due to anthrax, laboratory-confirmed influenza and ILI from other causes:

Symptom	Anthrax	Flu	ILI
Chest discomfort/ Pleuritic pain	60%	35%	23%
Shortness of breath	80%	6%	6%
Sore throat	20%	64-84%	64-84%
Rhinorrhea	10%	79%	68%
Nausea/vomiting	80%	12%	12%

For further information on distinguishing ILI from inhalational anthrax, please see: <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5044a5.htm>

For patients in **high-risk** groups for anthrax (see above) who present with non-specific, febrile influenza-like illness, the following tests are suggested:

- a complete blood count with differential,
- blood cultures,
- a chest x-ray, and if the diagnosis is uncertain, consider a chest CT scan,
- lumbar puncture or thoracentesis, as clinically indicated, and
- influenza testing (including rapid detection tests and viral culture).

(Note: **nasal swabs** should not be done for diagnostic purposes. In experimental animals, nasal swabs may be positive in the initial 1-2 days after an exposure to aerosolized anthrax, but they quickly become negative. Disease results from inhaled spores that germinate directly in the lungs or in macrophages - often after a significant incubation period.)

High-risk individuals who have an abnormal chest x-ray, CT scan, or WBC, or who are moderately or severely ill, should be started on intravenous antibiotics for the empiric treatment of inhalational anthrax. High-risk individuals who have a normal evaluation should be started on a short course of oral antibiotics (doxycycline 100 mg twice a day or ciprofloxacin 500 mg twice a day in adults) while awaiting blood culture results. All such patients should be counseled to seek medical attention immediately if their clinical status worsens. A complete algorithm for the treatment of individuals exposed to or at risk for anthrax exposure is available at the following site: <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5043a1.htm>

Blood cultures for suspected *Bacillus anthracis* infection can be performed at most clinical microbiology laboratories. Any clinical isolates suspected to be *B. anthracis* should be forwarded to NYSDOH's Wadsworth Center for confirmation. Additional diagnostic methods are available at the CDC, including immunohistochemical staining of biopsy material or cells obtained from thoracentesis, serologic testing, and polymerase chain reaction testing on blood or pleural fluid. **Attachment 1** contains further information on arranging for anthrax testing at Wadsworth Center and the CDC. (NYC providers should consult the NYCDOH alerts and website for information about testing at the NYC Bureau of Laboratories.)

Information on the choice of antimicrobials for the treatment and prophylaxis for anthrax is available in the following MMWR publications:

MMWR (11/16/01) <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5045a5.htm>

MMWR (11/02/01) <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5043a5.htm>

MMWR (10/19/01) <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5041a1.htm>

MMWR (10/26/01) <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5042a1.htm>

V. Influenza Update

There have been two Type A influenza outbreaks in New York State this season, one in Suffolk County and one in Westchester County. The Suffolk County outbreak strain was H3N2 and similar to one of the influenza strains in this year's flu vaccine. The strain from the Westchester County outbreak is still being investigated.

Although influenza vaccine may be delayed again this year, it is not too late to vaccinate in December or even in January or later. Groups recommended for prioritization for influenza vaccination include:

- Adults ≥ 50 years of age,
- Persons with chronic cardiovascular or pulmonary disorders,
- Persons with chronic metabolic diseases, hemoglobinopathies, renal dysfunction, or immunosuppressive or immunodeficiency disorders,
- Healthy women in their second or third trimester of pregnancy during the flu season,
- Pregnant women with underlying medical conditions regardless of the stage of pregnancy,
- Residents and staff of chronic care facilities, and

- Healthcare workers.

VI. Additional Information

Recent articles on anthrax are available on the following websites:

- Bioterrorism-related inhalational anthrax: the first 10 cases reported in the United States.
John Jernigan, David Stephens, David Ashford, et al.
<http://www.cdc.gov/ncidod/EID/vol7no6/jernigan.htm>
- Death Due to Bioterrorism-Related Inhalational Anthrax
<http://jama.am.-assn.org/issues/v286n20/ffull/joc11802.html>
- Clinical Presentation of Inhalational Anthrax Following Bioterrorism Exposure
<http://jama.ama-assn.org/issues/v286n20/ffull/joc11782.html>
- Current Concepts: Recognition and Management of Anthrax -- An Update Morton N. Swartz
<http://content.nejm.org/cgi/content/abstract/NEJMra012892v1>
- Images in Clinical Medicine: Cutaneous Anthrax Infection
Kevin Joseph Roche, Mary Wu Chang, and Herbert Lazarus
<http://content.nejm.org/cgi/content/abstract/NEJMicm010777v1>