

A Publication of the Genesee County Health Department

Bioterrorism

Bioterrorism in the U.S became a reality after October 4th, 2001, when public health authorities reported a case of inhalational anthrax in Florida. The last case of inhalational anthrax in the U.S, before 2001, was in 1976 in California. A home craftsman, who worked with yarn died of the disease. *Bacillus anthracis* was isolated from some of the imported yarns used by the patient. The last case of cutaneous anthrax, before 2001, occurred in North Dakota, in 2000. Additional cases of anthrax that were caused by the intentional release of *Bacillus anthracis* have been reported since October 4th from New York, Florida, New Jersey, Washington DC and Connecticut. This issue of Epi News will report findings of these case investigations, current guidelines for post-exposure prophylaxis for prevention of inhalational anthrax, and other information to assist clinicians responding to intentional anthrax exposures.

As of December 5th, a total of 22 cases of anthrax met the CDC case definition. 11 were confirmed inhalational anthrax, and 11 (seven confirmed and four suspected) were cutaneous anthrax. Of the 11 confirmed inhalational anthrax cases, 5 died as a result of the infection, resulting in a mortality rate of 45%. This indicates that with early detection, prompt treatment and supportive care, survival of patients with inhalation anthrax (55%) is significantly higher than previously reported (<15%). The first inhalation anthrax case was reported in an employee of a tabloid magazine in Florida, two were among postal workers and two cases occurred in women not associated with the U.S Postal Service or media outlets that have received or processed anthrax-laden letters. Investigation of a case of inhalational anthrax in a 61 year old hospital stock room worker in New York City found no evidence of anthrax contamination at the work site or home;

the source of exposure is still unknown. The recent death of a 94 year old Connecticut woman due to inhalational anthrax continues to baffle public health officials investigating her death. Environmental samples taken from the victim's home and other locations frequented by the victim have tested negative for anthrax. According to the CDC, tests showed that the anthrax that killed her was indistinguishable from the anthrax in the other cases.

Of the 10 cases of inhalational anthrax (excluding the most recent case in Connecticut), 70% were male and all except one (the NY case) were known to have processed, handled or received letters containing *B. anthracis* spores. The median age of patients was 56 years (range 43-73 years). The median incubation period for the cases, when known (n=6), was 4 days (range 4 to 6 days). Symptoms included fever or chills (n=10), sweats (n=7), fatigue or malaise (n=10), unproductive cough (n=9), dyspnea (n=8), and nausea or vomiting (n=9). None of the cases reported having a runny nose. All 10 patients had abnormal chest X-rays; including infiltrates (n=7), pleural effusion (n=8) and mediastinal widening (n=7).

The Michigan Department of Community Health, consistent with the CDC, released the following guidelines for health care providers that answers questions related to illness associated with the intentional release of anthrax.

The purpose of this quarterly newsletter is to inform the community and health care providers in Genesee County about disease trends in the county. We welcome any comments or questions. Contact: Priya Nair, MPH, MSc, Epidemiologist, at (810) 768-7971, or email Pnair@co.genesee.mi.us. Visit our website at <http://health.co.genesee.mi.us>

- Persons reporting exposure to an unknown powder should be referred to local law enforcement for evaluation of risk. Law enforcement and the FBI will make a threat assessment. MDCH will only accept environmental samples evaluated by this mechanism for testing.
- Asymptomatic patients WITHOUT known verified exposure to anthrax should be reassured about the rarity of infection without exposure. They should be advised to seek medical care if they begin experiencing symptoms consistent with anthrax.
- Antibiotics should not be prescribed to treat anthrax in an asymptomatic patient.
- It is important to stress to patients that there is no screening test available for the detection of anthrax in an asymptomatic person. Nasal swabs and blood serum tests should not be used for diagnosis or screening patients without known exposure to anthrax. The above guidelines are also recommended to treat symptomatic (fever, respiratory tract infection) patients without known exposure to anthrax verified by public health officials.

Asymptomatic patients with known exposure to anthrax verified by public health officials should be started immediately on post-exposure prophylaxis (PEP). A nasal swab or serum sample may be requested by public health officials to assist in the epidemiological investigation. The

current recommendation for PEP for adults is Ciprofloxacin 500 mg po BID or Doxycycline 100 mg po BID for 60 days. If a release of *B. anthracis* is confirmed, children should be treated initially with ciprofloxacin or doxycycline. (Ciprofloxacin: 10-15 mg/kg po Q 12 hrs or Doxycycline: >8 yrs and >45 kg: 100 mg po BID, >8 yrs and ≤45 kg: 2.2 mg/kg po BID, ≤8 yrs: same as > 8 yrs and ≤45 kg). Therapy should be changed to oral amoxicillin 40 mg/kg of body mass per day divided every 8 hours (not to exceed 500 mg three times daily) as soon as susceptibility of the organism has been confirmed. The complete guidelines from MDCH can be accessed at:

<http://www.mdch.state.mi.us/anthrax/Hospital.htm>

The Genesee County Health Department should be immediately notified if a patient with symptoms consistent with anthrax is identified so that an epidemiological investigation, follow-up and control efforts can be initiated. An online presentation highlighting the clinical aspects of various bioterrorism agents can be viewed at

<http://www.mapp.org/epi/info>.

The Genesee County Health Department has recently conducted trainings for local law enforcement “first responders”, postal workers and school officials to help them respond to anthrax related questions and concerns. Please contact us if you require additional information on this subject.

Selected Reportable Communicable Diseases in Genesee County

Disease	Week ending 11/09/01	Reported cases to date FY* 2001-02	Same week reported cases to date FY 2000-01	Total reported cases FY 2000-01
Chicken Pox	7	40	37	311
Pertussis	0	0	4	7
Flu-like illness	840	6955	6318	38774
TB-Active	8	8	9	20
Chlamydia	132	272	265	1961
Gonorrhea	108	274	175	1581
Hepatitis B (Acute)	0	5	8	39
Campylobacter	0	7	4	27
Giardiasis	2	6	5	32
Hepatitis A	1	3	5	19
Salmonellosis	2	8	2	29
Shigellosis	0	0	7	29
Meningitis-Viral	1	44	12	178
Meningitis-Bacterial	2	2	3	17

*FY – Fiscal Year. October 1-September 30

Genesee County Health Department

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