

Animal Surveillance Case Definition *Bacillus anthracis* Infection (Anthrax)

Clinical description

A communicable disease of animals and people caused by Gram-positive *Bacillus anthracis*. *B. anthracis* is not naturally occurring in New Jersey. Many animal species can develop anthrax but susceptibility varies. Although goats, sheep, cattle and horses are most susceptible, anthrax has been seen in dogs and cats fed meat from infected animals. Clinical infections in ruminants and horses are usually fatal; mortality is relatively low for dogs and cats. Dogs and cats may have mild chronic infections characterized by localized swelling, fever and enlarged lymph nodes, with eventual recovery. Some animals develop dyspnea due to swelling of the throat, or gastrointestinal signs including anorexia, vomiting, diarrhea or constipation. Sudden death may also be seen. The usual interval between exposure and onset of illness in dogs and cats ranges from 3 to 14 days. Large numbers of bacteria are present in the carcass and in bloody discharges. Spores in the soil and environment remain viable for long periods of time.

Anthrax is a CDC bioterrorist Class A agent because of the potential for significant public health impact. Pathogens utilized as a bioterrorism agent may have atypical routes of transmission and clinical manifestations. Veterinary practitioners suspecting anthrax in domestic companion animals should immediately notify their local health department or the NJDHSS at 609-826-4872 during working hours, and 609-392-2020 on nights, weekends and holidays.

Case classification

Confirmed

+/- compatible clinical signs **and**

- isolation of *B. anthracis* from a clinical specimen by culture; **or**
- detection of *B. anthracis* nucleic acids via polymerase chain reaction (PCR).

Probable

A clinically compatible case **and**

- large Gram-positive rods occurring singly, in pairs, or in chains observed by examination of blood or other tissues, such as aseptically collected lymphatic tissue. Blood clots poorly in anthrax cases and sampling may be done post-mortem.

Suspect

- A clinically compatible case that is epidemiologically linked to a confirmed case or source of *B. anthracis*.