Foodborne Botulism Investigation Overview

The following guidelines provide a brief overview of the steps of Foodborne Botulism investigation. Botulism is a toxin made by *Clostridium botulinum* and sometimes *Clostridium butyricum* and *Clostridium baratii* bacteria. It is a rare but serious illness where the toxin attacks the body's nervous system. People usually have symptoms which start with weakness of the muscles that control the eyes, face, mouth, and throat. This weakness may spread to the neck, arms, torso, and legs. Botulism also can weaken the muscles involved in breathing, which can lead to difficulty breathing and even death. People who have symptoms should seek **immediate** medical attention.

***Clostridium botulinum* is a potential bioterrorism (BT) agent. If this is likely a BT event, health departments should notify local law enforcement immediately and then contact state public health officials.**

For additional support, consult the NC Communicable Disease Branch at (919) 733-3419.

Basic Steps of a Botulism Investigation

IMMEDIATE STEP	• Refer the healthcare provider directly to the Epidemiologist On Call at the state (919) 733-3419 to put the healthcare provider in contact with CDC to determine if release of antitoxin is warranted. • If the case reported consuming home canned products during the incubation period (usually 18-36 hours), ensure the products are identified and not consumed by anyone else. If consumed by others, ensure they are not symptomatic.
1. Ensure case definition is met	• Clinical criteria and laboratory evidence are required for the wound botulism case definition.
2. Collect clinical information	• During the course of the investigation, interview other exposed individuals for symptoms of illness • Refer symptomatic individuals immediately to health care provider for evaluation • Weakness of eye (double/blurred vision), face, mouth (slurred speech), and throat muscles (difficulty swallowing, breathing) • Weakness may spread to the neck, arms, torso, and legs • Respiratory muscles can also be involved, which can lead to difficulty breathing and death
3. Determine the incubation period	• Symptom onset: 6 hours to 10 days after exposure to contaminated food • Average onset: 18 to 36 hours after exposure to contaminated food

4. Manage the case	• Refer the healthcare provider directly to the Epidemiologist On Call at the state (919) 733-3419 to discuss clinical findings and request antitoxin and specimen testing • Follow up with Epidemiologist On Call to make sure that healthcare provider was able to speak with epidemiologist • As soon as possible, obtain medical record (admission note, progress note, lab report(s), and discharge summary) to look for evidence in the medical record that supports clinical findings described in the case definition • Review clinical information to determine if illness is the foodborne, wound or intestinal (infant) form of botulism • Complete the Part 2 Form/risk history and clinical packages in NCEDSS
5. Identify source of exposure	• **A single case of foodborne botulism could represent a public health emergency that may be the precursor to a larger outbreak.** • Interview patient to obtain additional information about home-canned, preserved, or fermented foods prior to symptom onset
6. Review Laboratory Information	• Laboratory results may not be available when a suspect case is reported • Botulism-related specimens can be submitted to the CDC for culture and toxin testing **ONLY** after approval by the state and CDC • Instructions for shipping specimens will be provided at that time • **Treatment, if indicated, should not be delayed pending test results** • Recommended specimens for botulism examination include fresh stool specimens (25g), serum (15 ml) and any implicated food items shipped refrigerated in an insulated container • **An epidemiologist at the state will discuss the case with the patient's physician and if botulism is a probable diagnosis, refer the physician directly to the CDC (770)488-7100 to arrange for testing and shipment of botulism antitoxin**
7. Implement Control Measures to Prevent Disease and Additional exposures	• Perform thorough food history • Assess whether others may be at risk for botulism, and urgently visit the patient's home to remove suspect food items. Removing suspect food items will protect others from exposure and facilitate testing of food items. • Look for evidence of food contamination. • Involve NC Department of Agriculture Food and Drug Protection Division if contaminated food product suspected (919) 733-7366 or (919) 280-1979
• *Resources – https://www.cdc.gov/botulism/index.html*	

Critical Elements for NCEDSS

- Document if high risk (food worker, childcare or healthcare)
- Document if patient resides or has been in a congregate living situation (LTCF, Assisted Living, Camp, etc.)