Toledo-Lucas County Health Department Standard Operating Procedure

Infectious Disease SOP— Botulism (foodborne)

Original Effective Date:	Review / Revision Date:	Environmental Health Procedure:
8/2008	7/20/17	2017.07.003

Maintenance Steward: Epidemiology Supervisor History: ☐ New ☒ Revised ☐ Archived

Organizational Scope:

☐ Full Agency ☒ Administration ☒ Community Services ☒ Environmental Health ☐ Health Services

Frequency of Review:

☐ Annually ☒ Biennially ☐ 5 Years ☒ As Needed ☐ Other:

Location:

S-Drive: S: → Users → Common → Policies & Procedures

Website: www.lucascountyhealth.com/employee-login/

Hardcopy: Environmental Health and Community Services Director's Office

Archived Version(s): S:\CSRP\SOGs\Archives

Requisite Signatures

☒	Medical Director	Date: 7-20-17
☒	Health Commissioner	Date: 07-20-17
☒	Director of Environmental Health & Community Services	Date: 7/20/2017

Infectious Disease SOP— Botulism (foodborne)

I. Policy

It is the policy of the Toledo-Lucas County Health Department (TLCHD) to adhere to all state, federal, and local statutes governing the management and case investigation of individual communicable disease cases and outbreaks within Lucas County.

II. Scope

This procedure/process establishes guidelines for foodborne botulism investigations. Per the Ohio Administrative Code (OAC) 3701-3, foodborne botulism is a Class A disease and must be reported immediately via telephone according to 3701-3-02, 3701-3-03, 3701-3-04, and 3701-3-05 of the Administrative Code.

III. Purpose

This procedure/process establishes guidelines for foodborne botulism investigations. Per the Ohio Administrative Code (OAC) 3701-3, foodborne botulism is a Class A disease and must be reported immediately via telephone according to 3701-3-02, 3701-3-03, 3701-3-04, and 3701-3-05 of the Administrative Code.

IV. Background

Clostridium botulinum is ubiquitous and has been found in soil, sea sediment and the intestinal tracts of animals, including fish. Foodborne botulism is an intoxication that results from the ingestion of preformed toxin in inadequately preserved, stored or prepared food. The most common food sources in the United States are low-acid home-canned fruits and vegetables. Meats and meat products are more commonly implicated in Europe, as are fish in Japan. The sources of spores for infants include dust and honey. Light and dark corn syrups may also contain botulinum spores, but at much lower frequencies.

Botulism occurs worldwide. Sporadic cases, family and general foodborne outbreaks occur where food products are prepared or preserved by methods, which do not destroy botulinum spores and permit toxin formation. The actual incidence and distribution of infant botulism is unknown.

V. Case Definition

A. Clinical Description

1. Ingestion of botulinum toxin results in an illness of variable severity. Common symptoms are diplopia, blurred vision and bulbar weakness. Symmetric descending paralysis may progress rapidly.

B. Diagnosis

1. Laboratory Criteria for Diagnosis
   a. Detection of botulinum toxin in serum, stool or patient's food or
   b. Isolation of Clostridium botulinum from stool.

VI. Case Classification

A. Suspect:

1. A clinically compatible case that is not yet laboratory confirmed with no or a plausible epidemiologic link that has not been confirmed.
2. This case classification can be used for initial reporting purposes to ODH as CDC has not developed a classification.

B. Probable:

1. A clinically compatible illness with an epidemiologic link (e.g. ingestion of a home-canned food within the previous 48 hours).

C. Confirmed:

1. A clinically compatible illness that is laboratory confirmed or that occurs among persons who ate the same food as persons who have laboratory-confirmed botulism.

D. Not a case:

1. This status is not generally used when reporting a case, but may be used to reclassify a report if investigation revealed it was not a case.

VII. Procedure

The procedure/process of the Infectious Disease Program is to ensure that all cases are investigated in the same format.

When a report is received, a member of the ID team will complete an interview of the contact.

A. Outbreak Response

1. Call ODH ORBIT at 614-995-5599 for guidance

B. Public Health Investigation Process

1. ODRS:
    a. Check to see if the patient is entered into ODRS. If not, enter the patient into ODRS
    b. Key fields for ODRS reporting include:
        i. Import status
        ii. Date of illness onset
        iii. All fields in the Epidemiology module
2. Investigation

Botulism is a public health emergency. Prompt diagnosis and early treatment of botulism are essential to minimize the otherwise great risk of death. Prompt epidemiologic investigation is critical to prevent further cases from occurring if a hazardous food is still available for consumption. Contact the local health department and ODH ORBIT immediately by telephone (24/7). ODH will notify CDC and facilitate consultation. If antitoxin is indicated, CDC will arrange for shipment directly to the attending physician. The local health department should investigate to determine the source of toxin and public health impact.

a. Case investigation should start as soon as possible following notification.
b. Contact the patient's provider and/or hospital to obtain demographic information, symptoms, date of onset of symptoms, pertinent test results, and travel history.
    i. Search for history of exposure to infected animals, contact or employment in industry working with hides, pelts, bone meal or other animal products, or heroin injection.
    ii. If there are multiple cases, consider terrorist activity.
        1) Call JTTF/FBI Immediately if terrorist activity is suspected
            a) Local FBI Contact: Louie Espinosa—419-779-6600 or lespinosa@fbi.gov
c. Once the provider and/or hospital ICP has been contacted call the patient/parent and complete the interview.
    i. Provide education from the fact sheet on the IDCM website at http://www.odh.ohio.gov/pdf/IDCM/botism.pdf. This information is also located in S:\CSRP\SOGs\Anthrax.
        1) If no one answers, leave a message requesting a call back.
        2) Mail an informational letter requesting a callback.
        3) Continue to attempt phone contact with the patient for three more times in the span of 48 hours after the informational letter was sent.
        4) Travel history for the week prior to symptom onset to an endemic area is important data to elicit. Toledo Lucas County HD progress notes will be utilized to record the necessary information and travel activity.
        5) After interview is completed, ask the patient/parent whether they would like more information. If they express an interest, ask what the best method to deliver the information would be (e.g. e-mail, mail, etc.)
d. Once information is obtained about case, inform the following agencies, as anthrax is a select agent reportable under 7CFR Part 331, 9 CFR Part 121, and 42 CFR Part 73:
    i. Local FBI Contact: Louie Espinosa—419-779-6600 or lespinosa@fbi.gov

3. Treatment
    a. Clinical diagnosis of botulism is confirmed by specialized laboratory testing that often requires days to complete. Routine laboratory test results are usually unremarkable. Therefore, clinical diagnosis is the foundation for early recognition of and response to a suspected cases of botulism. All treatment and management decisions should be made based on clinical diagnosis.
    b. Foodborne, Wound, Other (Intestinal Colonization of Adults):
        i. If diagnosed early, foodborne and wound botulism can be treated with an antitoxin which blocks the action of the botulinum toxin circulating in the blood. Intravenous botulinum antitoxin, available from the Centers for Disease Control and Prevention (CDC), is administered after testing for hypersensitivity to equine sera. Antitoxin can prevent the disease from worsening, but recovery still is gradual over many weeks.
        ii. Purgation and high enemas are recommended if the patient's gastrointestinal tract is not atonic.
4. Isolation/Follow Up Specimens

a. Botulism is not transmitted person-to-person. Medical personnel caring for patients with suspected botulism should use standard precautions (hand washing, eye protection, and gown). Patients with suspected botulism do not need to be isolated, but those with flaccid paralysis from suspected meningitis require droplet precautions.

5. Prophylaxis
    a. No prophylaxis is recommended.
6. Contacts (Exclusion)
    a. Induced vomiting, gastric lavage, rapid purgation and high enemas facilitate elimination of toxin in persons known to have eaten incriminated food. With infant botulism, searching for other causes to rule out foodborne botulism is important. Exposed persons should be kept under close medical observation.
7. Notification
    a. Notify TLCHD contacts immediately after investigation with patient (in sequential order)
        i. Supervisor of Epidemiology
        ii. Director of Community Services and Environmental Health
        iii. Medical Director
        iv. Health Commissioner
    b. Public health recommendations and interventions will be shared with the public by the PIO or to specific individuals within 6 hours of identification of the agent as determined by ODH and supervisory staff at the local health department. An OPHCS alert will be distributed within 12 hours of a positive test result as determined by supervisory local health department staff and ODH.

C. Documentation
1. Enter information into ODRS as it is obtained.
2. Include a note documenting investigation, education, and intervention.

    Sample: Spoke with mother by phone on [date]. EDUCATION: Reviewed disease facts, transmission, and symptoms. DISEASE COURSE: Client has history of [medical conditions] and started [symptoms] on [date]. Started [treatment] on [date]. HOUSEHOLD: HH contacts include [relationships]. All are [asymptomatic/symptomatic] [Include information about sensitive settings for HH contacts]. OCCUPATION: [job] TRAVEL HISTORY: [Include information about travel history within the past 2-3 weeks]. MAILING: Mailed fact sheet and cover letter to home address.
3. Include a note for each occupation, activity, or other notification and any actions taken.

D. Closing a case
1. Ensure that all available information is entered into ODRS before closing. Close case and print record. Staple with investigation sheet and any related documents and file in the appropriate file drawer for the current year located in the CSRP office.

VIII. Appendices

None

IX. Reference/Investigation Forms

A. Foodborne Botulism Factsheet is located in S:\CSRP\SOGs\Botulism-Foodborne.
B. For additional information please refer to the ODH IDCM at http://www.odh.ohio.gov/pdf/IDCM/botism.pdf.

X. Maintenance

A. Review

1. The Infectious Disease standard operating procedures are to be reviewed every other year or as needed to ensure compliance with both agency and accreditation standards.

2. If guidance/recommendations from the Centers for Disease Control, Ohio Department of Health or law changes regarding this infectious disease, TLCHD will follow the most up-to-date guidance and adjust the SOP(s) as needed.

B. Revision

1. All changes made to this SOP are to be noted on the **Record of Change.** Substantial changes will require renewed signatures from all applicable parties. This includes changes to the intent, scope, procedures, or policy statement.

2. Changes in style, format, grammar or minor error correction will not require renewed signatures but must be indicated on the Record of Change.

Record of Change

(Required for all procedures)

Date of Change	Changes Made By	Changes Made/Notes	Approved By