Enteric Illness

Botulism

Notification Timeline:

From Lab/Practitioner to Public Health: Immediate.
From Public Health to Ministry of Health: Immediate.

Public Health Follow-up Timeline: Immediate.

Information

Case Definition (Public Health Agency of Canada, 2008**)**
A confirmed case requires laboratory definitive evidence with clinical evidence **or, in the case of foodborne botulism,** clinical evidence and consumption of the same suspect food as an individual who has laboratory-confirmed botulism.

Foodborne Botulism[1] (Either 1 or 2)	1. Laboratory confirmation of intoxication with clinical evidence:[1] • detection of botulinum toxin in serum, stool, gastric aspirate or food **OR** • isolation of *Clostridium botulinum* from stool or gastric aspirate. 2. Clinical evidence[1] and indication that the client ate the same suspect food as an individual with laboratory-confirmed botulism.
Wound Botulism[2]	Laboratory confirmation of infection: • laboratory detection of botulinum toxin in serum **OR** • isolation of *C. botulinum* from a wound **AND** • presence of a freshly infected wound in the 2 weeks before symptoms and no evidence of consumption of food contaminated with *C. botulinum.*
Infant Botulism[3]	Laboratory confirmation with symptoms[3] compatible with botulism in a person less than one year of age: • detection of botulinum toxin in stool or serum **OR** • isolation of *C. botulinum* from the patient's stool or at autopsy.

Colonization Botulism	Laboratory confirmation with symptoms compatible with botulism in a patient aged 1 year or older with severely compromised gastrointestinal tract functioning (i.e., abnormal bowel) due to various diseases, such as colitis, or intestinal bypass procedures, or in association with other conditions that may create local or widespread disruption in the normal intestinal flora: • detection of botulinum toxin in stool or serum **OR** • isolation of *C. botulinum* from the patient's stool or at autopsy.
Probable Case Foodborne	A probable case requires clinical evidence[1] and consumption of a suspect food item in the incubation period (12-48 hours).

Clinical Evidence
[1]**Foodborne:** Clinical illness is characterized by blurred vision, dry mouth and difficulty swallowing and speaking. Descending and symmetric paralysis may progress rapidly, often requiring respiratory support.
[2]**Wound:** Clinical illness is characterized by diplopia, blurred vision and bulbar weakness. Symmetric paralysis may progress rapidly.
[3]**Infant:** Clinical illness in infants is characterized by constipation, loss of appetite, weakness, altered cry and loss of head control.

Causative Agent

The causative agent is *Clostridium botulinum* which is a spore-forming bacterium. It is a Gram-positive anaerobic bacillus. There are several strains of *C. botulinum* classified into types A-G based on the properties of the toxin formed. Most human cases of botulism are caused by types A, B, E and rarely F (Heymann, 2008).

Symptoms

Botulism is a neuroparalytic progressive disorder caused by the toxins produced by *Clostridium botulinum* (Heymann, 2008).

- The characteristic early symptoms and signs are marked fatigue, weakness and vertigo, usually followed by blurred vision, dry mouth, and difficulty in swallowing and speaking.
- Neurological symptoms always descend through the body: shoulders are first affected, then upper arms, lower arms, thighs, calves, etc. Paralysis is symmetric and may progress rapidly, often requiring respiratory support.

- Nausea, vomiting, constipation and abdominal swelling, and less commonly diarrhea, may occur.
- Symptoms of classic infant botulism (predominates in infants less than 6 months but can occur up to 12 months or age) include decreased movement, loss of facial movements and head control, poor feeding, weak cry, diminished gag reflex, ocular palsies, and progressive descending generalized weakness and decreased muscle tone (American Academy of Pediatrics, 2009).

Incubation Period

- Neurological symptoms usually appear within 12 to 36 hours, but sometimes occur several days after eating contaminated food.
- The shorter the incubation period, the more severe the disease and the higher the case-fatality rate.

Reservoir/Source

- *C. botulinum* spores are ubiquitous in soil including sediments in streams, lakes and coastal waters throughout the world and in the intestinal tract of animals, including fish (Heymann, 2008). Outbreaks of avian botulism have also occurred in wild fowl (Lindstrom, 2006).
- Spores are often found in agricultural products and honey (Heymann, 2008).
- The *C. botulinum* toxin is produced in anaerobic, low-acid environments like in improperly canned or processed foods held without refrigeration.
- Recently identified sources include: homemade salsa, uneviscerated fish, baked potatoes wrapped in aluminum foil, cheese sauce, improperly handled commercial potpies, sautéed onions, minced garlic in oil, home-prepared pickled eggs and home-prepared fermented tofu (Heymann, 2008).

Mode of Transmission (Heymann, 2008)

- Ingestion of foods in which the toxin is present.
- Wound botulism is acquired through the contamination of wound, most commonly associated with severe trauma or injection drug use.
- Intestinal botulism is through the ingestion of spores which germinate then release toxin.

Risk Groups/Risk Factors (Heymann, 2008)

- Individuals > 1 of age with severely compromised gastrointestinal function.
- Injection drug users are at increased risk for wound botulism.

Period of Communicability

There have been no reported cases of person-to-person transmission.

Specimen Collection and Transport

- Sera, gastric aspirate and/or stool samples should be collected from patients and if necessary, from others who were exposed but are not ill.
- Food samples should be packaged in a sterile, wide mouth, screw-capped container and forwarded immediately to the Saskatchewan Disease Control Laboratory (SDCL) under refrigerated or cooled conditions. Samples should arrive at the lab within 24 hours of collection and should not be frozen. Food samples should be collected but will not be tested by the lab until there is a positive result from a stool sample.
- Stool samples should be collected by holding a clean disposable plastic bag or container underneath or by covering the toilet bowl loosely with plastic wrap so that it sags in the middle or by filling the bottom of the bowl with plenty of clean toilet paper. A portion of the fecal matter about the size of a cherry should be transferred to a sterile specimen container without transport medium or preservative and the lid should be screwed on tightly. Hands should be washed after this procedure. The container should be labelled with name and health services number or birth date plus the date and time that the sample was collected. Sample should be kept cool and delivered to the lab as soon as possible.

Refer to the Saskatchewan Disease Control Laboratory Compendium of Tests for details available at http://sdcl-testviewer.ehealthsask.ca.

Methods of Control/Role of Investigator

Prevention and Education

Refer to the Enteric Illness Introduction and General Considerations section of the manual that highlights topics for client education that should be considered as well as provides information on high-risk groups and activities.

Education

- Honey should not be given to children under one year of age.
- Education of the public in safe handling of food. For example:
  - Do not use food from damaged or bulging containers.
  - Foods with unusual odours and tastes should not be eaten or "taste-tested."
  - Proper storage is one of the keys to food safety. Refrigeration slows down most bacterial growth. Set the refrigerator temperature at or below 4°C/40°F. (Type E toxin can be produced slowly at temperatures as low as 3°C/374°F.)
  - Storing food in non-airtight containers and at 4°C or lower will prevent or slow the growth of the bacterium.
- Educate those concerned with home canning regarding the proper time, pressure and temperature required to destroy spores.
- Take precautions with home-prepared foods stored in oil (e.g., vegetables, herbs and spices). If these products are prepared using fresh ingredients, they must be kept refrigerated (<4°C) and for no more than 10 days.
  - If the above products are purchased from fairs, farmers' markets, roadside stands or have been received as a gift and prepared more than a week ago, discard them.

Management

I. Case

History

- Suspect foodborne exposure for adult and intestinal botulism. Food histories should include:
  - consumption of home canned or preserved items;
  - consumption of processed foods in which containers may have been bulging or had strange odours or tastes;
  - consumption of smoked wild meat (e.g., bear, moose); smoked fish, whale and seal meat;
  - homemade salsa, uneviscerated fish, baked potatoes wrapped in aluminum foil, cheese sauce, improperly handled commercial potpies, sautéed onions, minced garlic in oil, home-prepared pickled eggs and home-prepared fermented tofu.
- Collect all suspected foods for appropriate testing and disposal.
- Inquire about recent trauma/wounds (within 2 weeks) or history of injection drug use.

- For infant botulism, inquire specifically about history of ingestion of honey.
- Medical history related to gastrointestinal system function.
- All probable cases should be investigated to determine the source.

Immunization

- Vaccination against botulism is not routinely recommended or provided in Canada at this time.

Treatment/Supportive Therapy

- Persons with botulism require immediate treatment. Treatment must not await laboratory confirmation.
- Antitoxin for foodborne and wound botulism – treatment with equine-derived botulism antitoxin heptavalent (BAT) is recommended as soon as possible as it blocks the action of the toxin circulating in the blood and arrests the progression of paralysis. Refer to Attachment – Botulism Case Management and Reporting and Appendix D – Publicly Funded Medications for Chemoprophylaxis/ Treatment on how to access botulism antitoxin. Access to antitoxin should be initiated as soon as botulism is suspected.
- Antitoxin for infant botulism – BabyBIG® is a human-derived botulism immune globulin indicated in the treatment of infant botulism for babies up to one year of age. It is deemed to be safer than equine-derived antitoxin because there are lower rates of hypersensitivity reactions and serum sickness associated with its administration. Refer to Attachment – Botulism Case Management and Reporting which outlines the process that must be followed for timely acquisition of the BabyBIG® product.
- Removal of contaminated food which may still be in the patient's system (e.g., induced vomiting or use of enemas can be considered).
- Supportive therapy including the use of ventilators may be necessary if the paralysis associated with the disease causes respiratory failure. Paralysis will slowly improve over several weeks.

Exclusion

Because there is no person-to-person transmission exclusion is not necessary.

Referrals
Not applicable.

II. Contacts/Contact Investigation

Contact Definition

- Botulism contacts only include persons with the same food history.
- All symptomatic contacts should be investigated to determine the source.

Testing
No specific tests for contacts.

Prophylaxis/Immunization

- Those people known to have eaten the suspected food should be referred to a physician for assessment, observation and consideration of gastric lavage if indicated.
- Preventative antitoxin given within one to two days of ingestion may prevent development of symptoms but there may be a larger risk of associated hypersensitivity to horse serum.

Exclusion
As with cases, contacts do not have to be excluded.

III. Environment

Child Care Centre Control Measures/Institutional Control Measures

- Care should be taken to reduce the possibility of ingesting improperly canned or preserved food.
- Proper refrigeration techniques should be followed. Set refrigerator at or below 4°C/40°F. Don't overload the fridge. After grocery shopping, immediately refrigerate or freeze foods as indicated on the label.
- Once a potential botulism case is identified all remaining food from the same source should be immediately collected, stored in sealed containers and submitted for testing.
  - the implicated food(s) should be detoxified by boiling before discarding or the containers broken and buried deeply in soil to prevent ingestion by animals.

- Contaminated utensils should be sterilized by boiling or by chlorine disinfection to inactivate any remaining toxin.

Epidemic Measures

- In the case of a botulism outbreak there should be an immediate recall of implicated food and an immediate search for people who shared the suspected food (Government of Manitoba, 2001). If it is a commercially produced food, the Canadian Food Inspection Agency (CFIA) should be informed and possibly the Ministry of Agriculture, depending on the implicated food.
- Stool and food samples should be collected according to the procedure outlined in the specimen collection section and send to SDCL for testing. All other suspected food should be disposed of immediately.

Bioterrorism Considerations

Bioterrorism might be considered in any outbreak of botulism. The following features would be particularly suggestive:

- outbreak of a large number of cases of acute flaccid paralysis with prominent bulbar palsies;
- outbreak with an unusual botulinum toxin type (i.e., type C, D, F, or G, or type E toxin not acquired from an aquatic food);
- outbreak with a common geographic factor among cases (e.g., airport, work location) but without a common dietary exposure (i.e., features suggestive of an aerosol attack);
- multiple simultaneous outbreaks with no common source.

Note: A careful travel and activity history, as well as dietary history, should be taken in any suspected botulism outbreak. Patients should also be asked if they know of other persons with similar symptoms. Where no common dietary exposure can be identified in cases that are temporally clustered, the possibility of inhalational botulism may be considered.

References

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PANORAMA

Botulism Routine Questionnaire - August 2018

Record type:
Record ID:
Record Name:

In this form the answers (Yes, Probably, No, and Don't know) are from the perspective of the person being interviewed. "Probably" can be used if the client thinks he/she may have eaten this food or usually eats this food, but is unsure if it was eaten during the period in question.

Diet and Allergies

Show/Hide

Are you a vegetarian?
- ◯ Yes
- ◯ No
- ◯ Don't know
- ◯ Not asked

Do you have any food Allergies / avoidances / special diet?
- ◯ Yes
- ◯ No
- ◯ Don't know
- ◯ Not asked

If yes, specify details

Food Exposures

Show/Hide

In the 8 days prior to onset, did you eat…

Any smoked salmon/fish?
- ◯ Yes
- ◯ Probably
- ◯ No
- ◯ Don't know
- ◯ None of the Above

If yes, specify details (E.g., where consumed, type, brand, location)

Any fermented fish eggs?
- ◯ Yes
- ◯ Probably
- ◯ No
- ◯ Don't know

PANORAMA

- ◯ None of the Above

If yes, specify details (E.g., where consumed, type, brand, location)

Any seafood (e.g. fish in oil, fermented fish)?

- ◯ Yes
- ◯ Probably
- ◯ No
- ◯ Don't know
- ◯ None of the Above

If yes, specify details (E.g., where consumed, type, brand, location)

Any smoked meat?

- ◯ Yes
- ◯ Probably
- ◯ No
- ◯ Don't know
- ◯ None of the Above

If yes, specify details (E.g., where consumed, type, brand, location)

Any fermented meat?

- ◯ Yes
- ◯ Probably
- ◯ No
- ◯ Don't know
- ◯ None of the Above

If yes, specify details (E.g., where consumed, type, brand, location)

Any salted fish/meat?

- ◯ Yes
- ◯ Probably
- ◯ No
- ◯ Don't know
- ◯ None of the Above

If yes, specify details (E.g., where consumed, type, brand, location)

Any home canned products?	◯ Yes ◯ Probably ◯ No ◯ Don't know ◯ None of the Above
If yes, specify details (E.g., where consumed, type, brand, location)	
Any flavoured oils (e.g. garlic oil)?	◯ Yes ◯ Probably ◯ No ◯ Don't know ◯ None of the Above
If yes, specify details (E.g., where consumed, type, brand, location)	
Any honey?	◯ Yes ◯ Probably ◯ No ◯ Don't know ◯ None of the Above
If yes, specify details (E.g., where consumed, type, brand, location)	
Any other weaning foods?	◯ Yes ◯ Probably ◯ No ◯ Don't know ◯ None of the Above
If yes, specify details (E.g., where consumed, type, brand, location)	

Any bottled vegetable/fruit juice?	◯ Yes ◯ Probably ◯ No ◯ Don't know ◯ None of the Above
If yes, specify details (E.g., where consumed, type, brand, location)	

Social Functions Show/Hide

In the 8 days prior to onset, did you attend any social functions (e.g. parties, weddings, showers, potlucks, community events)?	◯ Yes ◯ No ◯ Don't know ◯ Not asked

Click the Add button to add social event/function details

Add

Restaurants Show/Hide

In the 8 days prior to onset, did you attend any restaurants (including take-out, cafeteria, bakery, deli, kiosk)?	◯ Yes ◯ No ◯ Don't know ◯ Not asked

Click the Add button to add restaurant details

Add

Grocery Stores Show/Hide

In the past 8 days prior to onset, did you visit grocery stores for foods consumed during the incubation period?	◯ Yes ◯ No ◯ Don't know ◯ Not asked

Click the Add button to add grocery store details

Add

Loyalty card/store issued card (for outbreak investigation only)

Show/Hide

This section is only for use in some specific outbreak situations, with client consent. It is not a routine question for sporadic cases.

Has the client given consent (written or verbal)?

- ◯ Yes
- ◯ No
- ◯ Not applicable

Loyalty card details (names and numbers)

Interviewer Details and Notes

Show/Hide

Interviewer Name

Interview date: 9/26/2018

Any special notes regarding this interview

Orbeon Forms Orbeon Forms 4.9.0.201505052329 CE

Section 1 – Initial Notification:

Attending Physician Immediately notifies the Local Medical Health Officer (MHO)

- Botulism is a Reportable Disease in Saskatchewan under the Disease Control Regulations of *The Public Health Act, 1994*
- Botulism (suspected and confirmed cases) must be reported immediately to the local MHO. See Appendix E - Contact Information for Regional Health Authorities and First Nations Inuit Health and Northern Inter-Tribal Health Authority.
- The MHO must be also advised if a food item is the suspected source of the illness.

Local MHO must notify the Saskatchewan Ministry of Health within 24 hours

Botulism (suspected and confirmed cases) must be reported within 24 hours.

During Work Hours (Mon-Fri 8:00 - 5:00): 306-787-4722
After-Hours, Weekends and Holidays: 1-306-337-1676
Follow-up e-mail to: cdc@health.gov.sk.ca

The following information must be reported immediately to the Ministry of Health:

a. name of the patient
b. date of birth (or age if DOB is not known),
c. onset date
d. address and current location of the case
e. current health status of the case

Additional information is to be shared with the Ministry as details become available.

Attending Physician notifies Botulism Reference Service (BRS) for Canada to:

- discuss the clinical presentation of the suspect case in order to support the diagnosis;
- obtain advice on the appropriate submission of laboratory specimens (see Section 2 - Specimen Collection) prior to administering treatment.

During Work Hours: 613-957-0902
After-Hours, Weekends and Holidays: 613-296-1139

The local MHO should follow-up with the BRS and the physician to facilitate coordinated communication and follow-up.

Section 2 – Specimen Collection:

The BRS will provide recommendations of specimen collection (clinical and food).

Obtain the Appropriate Laboratory Specimens and Forward the Specimens to the BRS for Canada in Ottawa (refer to address below).

- A good case history should be obtained to support the diagnosis.
- Public Health coordinates:
  - Food specimens- may include leftovers or unopened containers of food. When commercial foods are involved, it is important to retrieve the label, the manufacturer's lot number, and codes embossed on the can or package.
- Attending physician coordinates:
  - Clinical specimens - Suitable clinical specimens for analyses include fecal samples (approximately 10 g) or enema fluid, gastric contents (adjusted to approximately a pH of 6.0 with 1N NaOH, if possible) and serum (from 20 ml of blood collected before administration of antitoxin).
  - When infant botulism is suspected, the essential material for analysis is the infant's feces. If necessary, soiled parts of diapers may be submitted.

Prior to sending clinical specimens, the attending physician must call the BRS to make arrangements for transporting clinical specimens for laboratory analysis.

During Work Hours: 613-957-0902
After-Hours, Weekends and Holidays: 613-296-1139

Samples must be sent by courier (not Canada Post) to:

Dr. John W. Austin or Mr. Greg Sanders
Botulism Reference Service
Health Canada
Room D457, Sir Frederick G. Banting Building
Building 22, Tunney's Pasture, PL2204E
251 Sir Frederick Banting Driveway
Ottawa ON K1A 0K9
Telephone: 613-957-0902
Fax: 613-941-0280

Specimens should be handled according to routine practices and additional precautions, and packaged for transport to the BRS. For safe shipment, the specimens must be in a watertight primary receptacle, in a watertight secondary container, with sufficient absorbent material between the two containers to absorb the entire contents of the primary receptacle. The preferred method of preserving the material during shipment is by cooling rather than freezing (i.e., by including commercial cooling packs in the parcel). In urgent cases, the parcels are picked up immediately upon arrival.

Samples need to be sent following the Transportation on Dangerous Goods instruction TC-125-1B[1] packing instruction.

NOTE – Specimens should be forwarded to the Saskatchewan Disease Control Laboratory (SDCL) who will forward the specimens to the BRS and will ensure specimens meet transporting standards prior to shipment. Please contact SDCL for additional information on shipping of specimens.

[1] http://www.tc.gc.ca/eng/tdg/moc-infectious-type1b-471.html

Section 3 – Accessing Botulism Antitoxin (BAT)

For Botulism cases IN THOSE 1 YEAR OF AGE AND OLDER, obtain botulism antitoxin (BAT) from the Ministry of Health as outlined in Appendix D – Publicly Funded Medications for Chemoprophylaxis/Treatment. Consultation must occur with the local MHO who will require authorization by the provincial Chief Medical Health Officer. This is accommodated via completion and submission of Special Access Request Form A to the Ministry of Health prior to the release of BAT.

The Ministry of Health requires the following information immediately:

a. the name of the physician to which the antitoxin should be sent
b. the address to which the antitoxin should be sent
c. the physician's contact telephone number
d. the name of the Health Unit in which the hospital is located

The Ministry must submit Form A to Special Access Programme (SAP).

NOTE: A blood sample (as suggested by the BRS) should be collected to identify the *C. botulinum* type before antitoxin is administered; **antitoxin should not be withheld pending test results however.**

- One vial of BAT should be administered as soon as possible.
- Ministry of Health staff will arrange for the shipment of the product.
- A product monograph and directions for administration will be included with the product.

After treatment with BAT, the attending physician must complete Special Access Request Form C – Patient Follow-up Form[2] and fax or e-mail to 306-787-9576 or cdc@health.gov.sk.ca.

The Ministry of Health must forward the information provided on Form C to the Health Canada Special Access Programme for the purpose of notifying Health Canada of the product administration.

[2] http://www.hc-sc.gc.ca/dhp-mps/acces/drugs-drogues/sapf3_pasf3-eng.php

Section 4 – Accesssing BabyBIG®

For Botulism cases IN INFANTS LESS THAN 1 YEAR OF AGE, obtain infant botulism immune globulin (BabyBIG®).
BabyBIG® is a human-derived botulism immune globulin indicated in the treatment of infant botulism for infants less than one year of age. It is deemed to be safer than equine-derived BAT because there are lower rates of hypersensitivity reactions and serum sickness associated with its administration.

The Ministry of Health will reimburse the Regional Health Authority (RHA) for the USA fees for the product, as well as the transportation cost from California.

- Access to BabyBIG® is authorized only by one of the Infant Botulism Treatment and Prevention Program (IBTPP) on-call physicians, who must be contacted by the patient's attending physician to discuss the clinical situation before BabyBIG® can be shipped. An IBTPP on-call physician can be reached 24 hours a day, 7 days a week at **510-231-7600**.
- The producers of BabyBIG® do not permit pre-orders of their product; therefore, the attending physician must place a request with Health Canada for the SAP to gain access.
- The attending physician must complete the Special Access Request Form A and **fax it to the SAP immediately at: 613-941-3194**. To avoid delays, all sections of the form must be completed accurately and it is recommended to follow-up with a phone call to the SAP office at 613-941-2108.
- If the case presents on a weeknight, weekend or holiday, the SAP on-call officer can be reached by telephone at 613-941-2108 (press 0). The attending physician should be prepared to provide the information required on the Special Access Request Form A to the on-call officer and then follow-up on the next business day with a copy of the completed form.

The SAP will then authorize the California Department of Health Services, IBTPP to ship the BabyBIG® to the hospital. For further information on the SAP, please consult their website at http://www.hc-sc.gc.ca/dhp-mps/acces/drugs-drogues/sapf1_pasf1-eng.php.

For additional information on BabyBIG® and the requirements prior to shipment of BabyBIG®, contact the IBTPP at 510-231-7600. Additional information can be obtained at Infant Botulism Treatment and Prevention Program[3]. The International Inquiries portion of the website outlines further details.

[3] http://infantbotulism.org/

After treatment with BabyBIG®, the attending physician must complete Special Access Request Form C – Patient Follow-up Form[4] and fax or e-mail to 306-787-9576 or cdc@health.gov.sk.ca.

For reimbursement for the payment of BabyBIG®, the RHA shall submit and invoice with the following attached to the address noted below:

- Invoice and Purchase Agreement for BabyBIG® - State of California – Health and Human Services Agency
- Completed SAP Form C

Director of Surveillance and Central Support
Population Health Branch
3475 Albert Street
Regina SK S4S 6X6
306-787-9576
cdc@health.gov.sk.ca

[4] http://www.hc-sc.gc.ca/dhp-mps/acces/drugs-drogues/sapf3_pasf3-eng.php

References

Please note that this information is subject to change. The following sources contain additional information:

Heymann, D. L. (Ed.). (2008). *Control of communicable diseases manual* (19th ed.). Washington, DC: American Public Health Association.

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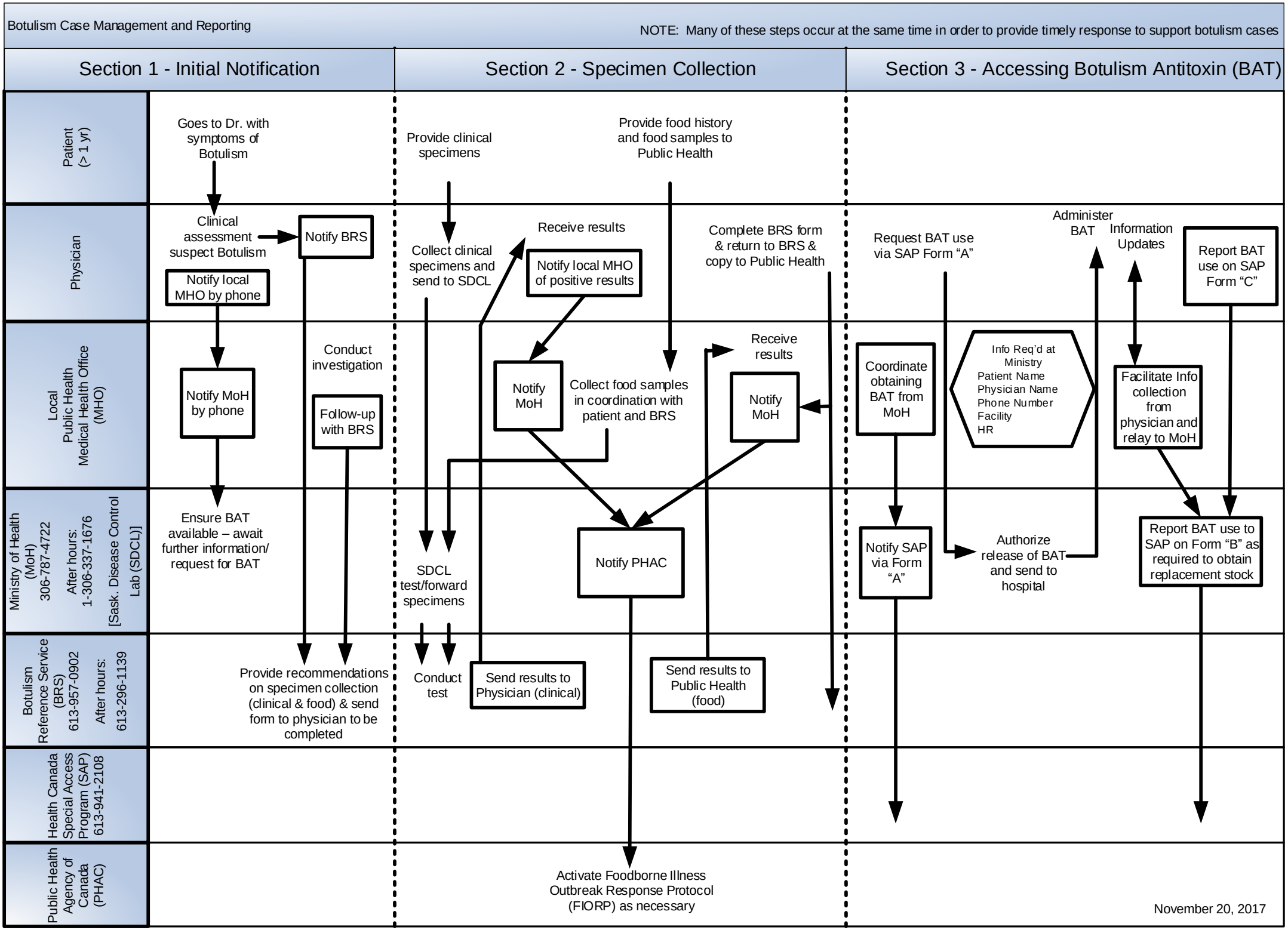
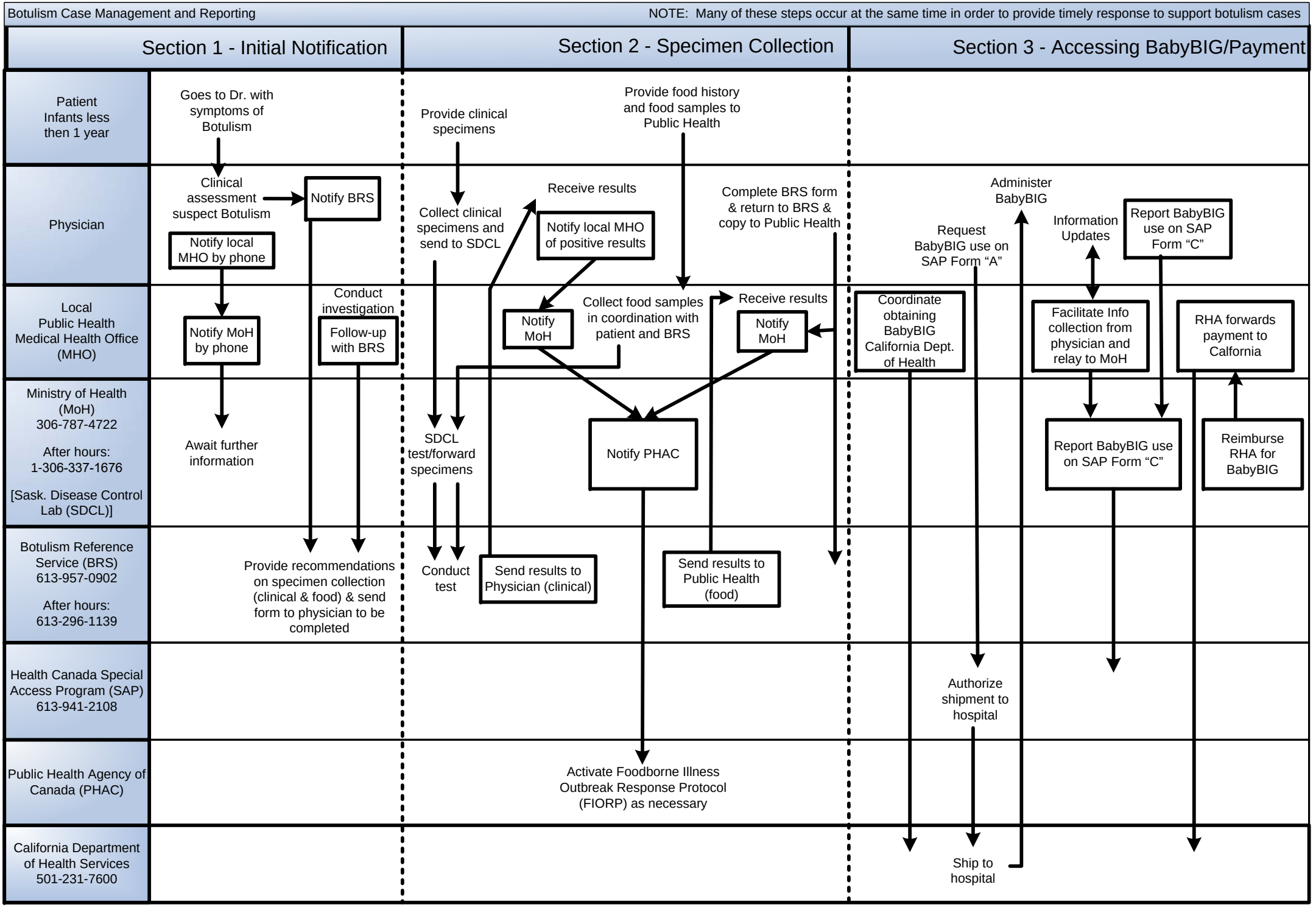

Botulism Case Management and Reporting
NOTE: Many of these steps occur at the same time in order to provide timely response to support botulism cases
Section 1 - Initial Notification
Section 2 - Specimen Collection
Section 3 - Accessing Botulism Antitoxin (BAT)
Patient (> 1 yr)
Physician
Local Public Health Medical Health Office (MHO)
Ministry of Health (MoH) 306-787-4722 After hours: 1-306-337-1676 [Sask. Disease Control Lab (SDCL)]
Botulism Reference Service (BRS) 613-957-0902 After hours: 613-296-1139
Health Canada Special Access Program (SAP) 613-941-2108
Public Health Agency of Canada (PHAC)
Goes to Dr. with symptoms of Botulism
Clinical assessment suspect Botulism
Notify BRS
Notify local MHO by phone
Notify MoH by phone
Ensure BAT available – await further information/ request for BAT
Conduct investigation
Follow-up with BRS
Provide recommendations on specimen collection (clinical & food) & send form to physician to be completed
Provide clinical specimens
Collect clinical specimens and send to SDCL
SDCL test/forward specimens
Conduct test
Receive results
Notify local MHO of positive results
Notify MoH
Collect food samples in coordination with patient and BRS
Send results to Physician (clinical)
Provide food history and food samples to Public Health
Notify PHAC
Activate Foodborne Illness Outbreak Response Protocol (FIORP) as necessary
Receive results
Notify MoH
Send results to Public Health (food)
Complete BRS form & return to BRS & copy to Public Health
Request BAT use via SAP Form “A”
Coordinate obtaining BAT from MoH
Notify SAP via Form “A”
Info Req’d at Ministry
Patient Name
Physician Name
Phone Number
Facility
HR
Authorize release of BAT and send to hospital
Administer BAT
Information Updates
Facilitate Info collection from physician and relay to MoH
Report BAT use on SAP Form “C”
Report BAT use to SAP on Form “B” as required to obtain replacement stock
November 20, 2017


Botulism Case Management and Reporting
NOTE: Many of these steps occur at the same time in order to provide timely response to support botulism cases
Section 1 - Initial Notification
Section 2 - Specimen Collection
Section 3 - Accessing BabyBIG/Payment
Patient Infants less then 1 year
Physician
Local Public Health Medical Health Office (MHO)
Ministry of Health (MoH) 306-787-4722
After hours: 1-306-337-1676
[Sask. Disease Control Lab (SDCL)]
Botulism Reference Service (BRS) 613-957-0902
After hours: 613-296-1139
Health Canada Special Access Program (SAP) 613-941-2108
Public Health Agency of Canada (PHAC)
California Department of Health Services 501-231-7600
Goes to Dr. with symptoms of Botulism
Clinical assessment suspect Botulism
Notify BRS
Notify local MHO by phone
Notify MoH by phone
Await further information
Conduct investigation
Follow-up with BRS
Provide recommendations on specimen collection (clinical & food) & send form to physician to be completed
Provide clinical specimens
Collect clinical specimens and send to SDCL
SDCL test/forward specimens
Conduct test
Receive results
Notify local MHO of positive results
Notify MoH
Send results to Physician (clinical)
Collect food samples in coordination with patient and BRS
Notify PHAC
Activate Foodborne Illness Outbreak Response Protocol (FIORP) as necessary
Provide food history and food samples to Public Health
Receive results
Notify MoH
Send results to Public Health (food)
Complete BRS form & return to BRS & copy to Public Health
Coordinate obtaining BabyBIG California Dept. of Health
Request BabyBIG use on SAP Form "A"
Authorize shipment to hospital
Ship to hospital
Administer BabyBIG
Information Updates
Facilitate Info collection from physician and relay to MoH
Report BabyBIG use on SAP Form "C"
Report BabyBIG use on SAP Form "C"
RHA forwards payment to Calfornia
Reimburse RHA for BabyBIG