



# The Pump Handle

September 2018

**"I had an interview with the Board of Guardians of St. James's parish, on the evening of Thursday, 7th September, and represented the above circumstances to them. In consequence of what I said, the handle of the pump was removed on the following day."**

John Snow, 1855

## Topics

- Infant Botulism – Laura Cronquist
- 2018-2019 Influenza Vaccine Recommendations – Molly Howell
- World Rabies Day is September 28th – Michelle Feist
- Get to Know Your Field Epidemiologist



## Infant Botulism

In late July, the North Dakota Department of Health (NDDoH) was notified of a suspected infant botulism case. Epidemiologists from the NDDoH consulted with the California Department of Public Health (CDPH) Infant Botulism Treatment and Prevention Program to arrange for the infant to be evaluated. The case was determined to be highly suspect for infant botulism. While laboratory tests were pending, the child received BabyBIG®, the anti-botulism-toxin antibody treatment for infant botulism types A and B. Laboratory testing performed by the Minnesota Department of Health confirmed infant botulism type B. The case responded well to treatment and recovered without any complications.

Infant botulism is defined as an illness occurring in persons less than one year of age caused by consumption of *Clostridium botulinum* spores, which are found in soils and dust worldwide. Honey has been identified as a possible source of *C. botulinum* spores and should not be given to children younger than one year of age. The spores colonize and produce toxins in the large intestine. The incubation period for infant botulism is estimated to be 3 to 30 days. Signs and symptoms may include constipation, loss of facial expression, poor feeding, diminished suckling and crying ability, neck and peripheral weakness (floppy baby syndrome), and respiratory failure. If untreated, the illness can progress to cause descending paralysis of respiratory muscles, arms, and legs.

Other types of botulism include foodborne botulism, wound botulism, adult intestinal toxemia, and iatrogenic botulism. Foodborne botulism is caused by consuming foods that have been

contaminated with botulinum toxin. Homemade foods that have been improperly canned, preserved, or fermented are the most common sources of foodborne botulism. Wound botulism is caused by *C. botulinum* spores that enter a wound and produce toxins. Injection drug use, especially black tar heroin, and contamination of wounds and open fractures with dirt or soil can cause wound botulism. Adult intestinal toxemia can happen if *C. botulinum* spores colonize an adult's intestines and produce toxin. Adult intestinal toxemia is very rare and not well understood but may be more likely to occur in people who have serious health conditions or altered intestinal flora due to antimicrobial use. Iatrogenic botulism is caused by the injection of too much botulinum toxin for cosmetic or medical reasons. All types of botulism can be fatal and should be considered medical emergencies.

Suspected cases of botulism are immediately reportable to the NDDoH. To report, please call the Division of Disease Control at 800.472.2180 or 701.328.2378. For additional information about botulism, please visit [www.cdc.gov/botulism/](http://www.cdc.gov/botulism/).



### **2018-2019 Influenza Vaccine Recommendations**

The 2018 – 2019 influenza vaccine recommendations remain similar to last season. Everyone six months of age and older is recommended to receive an influenza vaccine. The formulation of the influenza vaccine used during this season will be slightly different. The H3N2 and B influenza strains were changed. The official Advisory Committee on Immunization Practices (ACIP) recommendations were published in Morbidity and Mortality Weekly Report at <https://www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/flu.html>.

#### **Emphasis should be placed on vaccination of high-risk groups and their contacts/caregivers:**

- Children aged 6–59 months;
- Adults aged  $\geq 50$  years;
- Persons with chronic pulmonary (including asthma), cardiovascular (excluding isolated hypertension), renal, hepatic, neurologic, hematologic, or metabolic disorders (including diabetes mellitus);
- Persons who are immunocompromised due to any cause, (including medications or HIV infection);
- Women who are or will be pregnant during the influenza season;
- Children and adolescents (aged 6 months through 18 years) receiving aspirin- or salicylate-containing medications and who might be at risk for Reye syndrome;
- Residents of nursing homes and other long-term care facilities;
- American Indians/Alaska Natives;
- Persons who are extremely obese (BMI  $\geq 40$ ); and
- Caregivers and contacts of those at risk:

- Health care personnel in inpatient and outpatient care settings, medical emergency-response workers, employees of nursing home and long-term care facilities who have contact with patients or residents, and students in these professions who will have contact with patients;
- Household contacts and caregivers of children aged  $\leq 59$  months (i.e.,  $< 5$  years), particularly contacts of children aged  $< 6$  months, and adults aged  $\geq 50$  years; and
- Household contacts and caregivers of persons with medical conditions that put them at high risk of severe complications from influenza.

#### **Timing of vaccination:**

- Vaccination should be offered by end of October; however, vaccination should continue to be offered as long as influenza viruses are circulating and unexpired vaccine is available.
- Children aged 6 months through 8 years who require two doses should receive their first dose as soon as possible after vaccine becomes available, and the second dose  $\geq 4$  weeks later.
  - If a child received at least two doses prior to July 1, 2018 they only need one influenza vaccine during the 2018 – 2019 influenza season.

#### **Vaccine Formulations:**

- Children aged 6 through 35 months may receive:
  - 0.5mL Fluarix<sup>®</sup> Quadrivalent (IIV4) intramuscularly, or
  - 0.5mL FluLaval<sup>®</sup> Quadrivalent (IIV4) intramuscularly, or
  - 0.25mL Fluzone<sup>®</sup> Quadrivalent (IIV4) intramuscularly.
  - *Note that dose volume differs for these different brands. Care should be taken to administer the correct dose.*
- Children aged 3 through 17 years may receive 0.5mL of an age-appropriate intramuscular injectable influenza vaccine (IIV) formulation.
- Adults aged 18 years and older may receive 0.5mL intramuscularly of an age-appropriate IIV or recombinant influenza vaccine (RIV4).
- Healthy non-pregnant persons (see LAIV4 Contraindications and Precautions) aged 2 through 49 years may alternatively receive 0.2mL of live attenuated influenza vaccine (LAIV4) intranasally (0.1mL per nostril using supplied sprayer).

#### **LAIV4 Recommendations:**

- ACIP:
  - For the 2018–19 U.S. influenza season, providers may choose to administer any licensed, age-appropriate influenza vaccine (IIV, recombinant influenza vaccine [RIV], or LAIV4).
  - LAIV4 is an option for those for whom it is otherwise appropriate.

- No preference is expressed for any influenza vaccine product. ACIP will continue to review data concerning the effectiveness of LAIV4 as they become available.
- Providers should be aware that the effectiveness of the updated LAIV4 containing A/Slovenia/2903/2015 against currently circulating influenza A(H1N1)pdm09-like viruses is not yet known.
- American Academy of Pediatrics (AAP):
  - Prefers injectable influenza vaccine over Flumist®.
  - Quadrivalent live attenuated influenza vaccine (LAIV4) may be used for children who would not otherwise receive a vaccine (e.g., refusal of IIV) and for whom it is appropriate by age (2 years of age and older) and health status (healthy, without any underlying chronic medical condition).
  - The effectiveness of LAIV4 was inferior against A/H1N1 during past seasons and is unknown against A/H1N1 for this upcoming season.
  - Further details can be found at [www.aappublications.org/news/2018/06/07/influenza060718](http://www.aappublications.org/news/2018/06/07/influenza060718).

### **Egg Allergies and Influenza Vaccine:**

- Anyone with an egg allergy can receive any licensed injectable flu vaccine.
  - Vaccines should be administered in an inpatient or outpatient medical setting and should be supervised by a health care provider.
  - Patients no longer have to wait 30 minutes after receiving the vaccine.

For more information about influenza or influenza vaccine, please visit [www.ndflu.com](http://www.ndflu.com) or [www.cdc.gov/flu/index.htm](http://www.cdc.gov/flu/index.htm).



### **World Rabies Day - September 28th**

World Rabies Day is a global day of action to promote awareness and to prevent rabies. In the United States, humans dying of rabies is rare because of successful animal vaccination programs, education campaigns, and the availability and effectiveness of post-exposure prophylaxis. By contrast, rabies kills more than 59,000 people around the world every year. That is nearly one death every nine minutes.

In the United States, human fatalities associated with rabies occur in people who fail to seek medical assistance, typically because they were unaware of their exposure, usually to bats. The major reservoir for rabies in North Dakota is skunks. Unvaccinated cats, dogs, and farm animals can become infected with rabies when exposed to wildlife such as skunks, raccoons, and bats.

Help support the prevention of rabies by taking the following actions:

- Know what a rabies exposure is and seek care immediately.
- Vaccinate your pets against rabies.
- Report all contact with bats and animal bites to your health care provider.
- Learn how to prevent animal bites, especially in children.
- Support rabies vaccine programs in your area.

Visit the following websites for more information about rabies and World Rabies Day efforts worldwide:

North Dakota Department of Health - [www.ndhealth.gov/disease/Rabies/](http://www.ndhealth.gov/disease/Rabies/)

North Dakota Department of Agriculture - [www.nd.gov/ndda/disease/rabies](http://www.nd.gov/ndda/disease/rabies)

World Rabies Day - [www.cdc.gov/worldrabiesday/index.html](http://www.cdc.gov/worldrabiesday/index.html)



### **Get to Know Your Field Epidemiologist**

★ **Name:** Lacy Oyloe

**Title:** Regional Field Epidemiologist

**Area of ND Covered:** Williams, Divide, Burke, Renville, McKenzie, Mountrail, and Ward counties

**Education Background:** BS in Biology and BA in Spanish from Dickinson State University

**Past Experience:** While in college I worked as a physical therapy tech, a cardiac rehab tech, and a radiology tech. I enjoy all aspects of health care and get great joy from helping others. I started working as a field epidemiologist in July 2008. The best part of this job is no two days are the same. I am constantly learning and growing in this position while being able to share that knowledge with the public and be able to help educate them on how to prevent acquiring and spreading communicable diseases.

**Family/Hobbies:** Family is everything to me. I have two nieces, Sunday (6) and Story (2). They are my whole world and I spend as much time as possible visiting them. I have an English Mastiff named Riley. She likes to think she's a lapdog, which usually doesn't end well for me as she now outweighs me. I am a huge animal lover and am currently in the market for a horse, so I can start riding again. I love spending time outdoors, going target shooting or fishing. I have always loved classic cars and have wanted to learn how to restore them. So, at a recent car auction I decided to jump right in and bid on a vehicle. I am now the proud owner of a 1960 Chevy Apache pickup. It's going to be a lot of work but it's also going to be a lot of fun!



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