

# The Pump Handle The Pump Handle



"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

## November 2016 Topics

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### **Legionellosis with a Possible Association with Stays at a Hotel in North Dakota**

In November, the North Dakota Department of Health (NDDoH) conducted an investigation regarding a North Dakota hotel (hotel A) associated with five cases of Legionnaires' disease that occurred over the past thirteen months. All cases stayed at hotel A at some point during their incubation period. Four cases also had overnight stays at other hotels within their incubation periods, although hotel A was the only common hotel in the group. The ages of the cases ranged from 61 to 81 years. One case was a North Dakota resident, and four were travel-associated cases reported to the NDDoH by the Centers for Disease Control and Prevention (CDC). All cases tested positive for Legionnaires' disease via urine antigen lab test. No samples were available for molecular characterization, so the cases could not be laboratory-linked with each other.

An environmental assessment was conducted at hotel A, with samples collected from three guest room showers and sinks, the pool and pool filter, the hot tub and hot tub filter, the water heater, and two ice machines. Sixteen samples were collected in total, with no *Legionella* identified in any of the samples tested so far. Results for one sample, collected at a later date, are still pending.

*Legionella* are bacteria that are found naturally in the environment, usually in warm water. Some people will develop Legionnaires' disease from breathing in small droplets of water in the air

that is contaminated with *Legionella*. Legionellosis is a common cause of severe pneumonia requiring hospitalization. Legionellosis should be considered as a possible diagnosis for:

- patients who have failed outpatient antibiotic therapy for community-acquired pneumonia,
- patients with severe pneumonia or immunocompromised patient with pneumonia,
- patients with pneumonia in the setting of a legionellosis outbreak, or
- patients with travel within two weeks of system onset.

Outbreaks are commonly associated with buildings or structures that have complex water systems such as hotels, hospitals, and cruise ships. The key to preventing *Legionella* in building water systems is to have a water management program which is designed to reduce the growth and spread of *Legionella*. Visit the CDC's Legionella website for information on water system maintenance, surveillance and disease specifics at [www.cdc.gov/legionella/index.html](http://www.cdc.gov/legionella/index.html).



### **Acute Flaccid Myelitis Update for 2016**

The CDC has reported an increase in acute flaccid myelitis (AFM) cases in children this year, the first increase since several large clusters of children hospitalized with AFM were identified in 2014. A handful of other states reported possible clusters of AFM again early this fall, although no clusters (or cases) were identified in North Dakota. Cases for 2016 are elevated, but the count is not as high as during 2014.

AFM is a condition affecting the nervous system, with most patients experiencing an acute onset of limb weakness. It is a rare but serious illness, and the origins of which are not well understood. Viral infections are known to cause AFM, but no link has been found between an infectious agent and the recent clusters and increases in cases. In 2014 and 2016, an increase of AFM coincided with widespread circulation of Enteroviruses, particularly enterovirus D68 (EVD-68), but a definite link has not yet been demonstrated. The CDC continues to investigate a possible cause for these recent clusters.

As part of this effort, the NDDoH has requested providers report possible cases of AFM to the NDDoH Division of Disease Control. The NDDoH will coordinate the collection of specimens and submit them to the CDC for testing. Targeted specimen types include cerebrospinal fluid, blood, and stool. More information on specimen testing can be found at <https://www.cdc.gov/acute-flaccid-myelitis/hcp/specimens.html>. To report a possible case of AFM, please contact the NDDoH at 701.328.2378 (toll-free at 800.472.2180).



### **Increase in Reported Mumps Cases Across the Country**

Mumps is a highly contagious, vaccine-preventable disease that is uncommon in the United States due to the Measles, Mumps, and Rubella (MMR) vaccine. Mumps cases in the United States range from year to year, from hundreds to thousands. Before the vaccine's introduction, there were likely more than 186,000 cases each year in the United States. As of Dec. 3, 2016, 4,258 cases have been reported from 46 states and the District of Columbia. This is the largest number of mumps cases seen in the United States since 2006, when more than 6,500 cases were reported.

There are three states that have reported more than 300 cases during 2016. These states include Arkansas, Iowa, and Illinois. In Arkansas, a mumps outbreak that started in October is

continuing to grow. As of Dec. 13, 2016, the total number of suspect and confirmed cases has reached 2,104. In Iowa, from July of 2015 through April of 2016, there were 637 laboratory confirmed cases of mumps reported, with a large number occurring at the University of Iowa. Since this outbreak, cases of mumps have been rising again in Iowa, with 130 total cases reported from Aug. 1, 2016, through Dec. 11, 2016. Additionally, Oklahoma, Indiana, New York, and Massachusetts have all reported over 100 cases of mumps so far this year.

In North Dakota, an outbreak of mumps occurred this past spring, with 46 cases of mumps reported to the NDDoH. Of these cases, six were laboratory confirmed, four were probable, and 36 were suspect.

The mumps virus is found in fluids of the mouth and nose and may be spread by coughing, sneezing, or talking. It may also be spread by sharing objects such as eating utensils. Outbreaks are more likely to occur in settings where people are in close contact such as classrooms, sports teams, or students living in dorms. The most recognizable symptom of mumps is parotitis (swelling under the ears or jaw on one or both sides of the face). Other symptoms include fever, headache, earache, muscle or joint pain, painful swelling of the testicles in men and swelling of the ovaries in women, causing abdominal pain.

If health care providers are suspecting mumps, a buccal swab should be collected for RT-PCR testing as soon as possible, ideally within three days and not more than eight days after parotitis onset. Tests for IgM are not reliable and tend to provide both false positives and false negatives, so PCR is the preferred method of testing.

Because of the MMR vaccine, mumps cases are not common in the United States, but the mumps vaccine can range in effectiveness from 66-95% for two doses and 49-92% for one dose. Although not 100% effective, the vaccine can limit mumps outbreaks and may also offer some amount of protection, even in those who still get mumps, which is why we do not see a significant number of severe cases. Ensuring they are up to date with the MMR vaccine is the most important way for individuals to protect themselves against the disease. For more information on mumps cases in North Dakota, visit <http://www.ndhealth.gov/Immunize/Disease/Mumps.aspx>.



### **On the Move - New Infection Control Assessment Program Coordinator!**

★**Name:** Gaurav (Gary) Nagar

**Title:** Infection Control Assessment Coordinator

**Education Background:** I received my Doctoral degree in Family Medicine from NHL Municipal Medical College, Gujarat, India and my Masters in Public Health from the Wright State University, Dayton, Ohio.

**Experience:** I practiced Family Medicine in New Delhi, India for five years before immigrating to the US. My niche was communicable disease and TB management and prevention. I worked for the NDDoH as the HIV/STD/ Viral Hepatitis Surveillance Coordinator until starting my position as the Infection Control Assessment Program Coordinator on December 1<sup>st</sup>, 2016. This position is in the Epidemiology and Laboratory Capacity (ELC) Program. I am excited to work in this group and look forward to contributing in a constructive way.

**Family/Hobbies:** My hobbies have changed with time. These days I love spending time with my five-year-old daughter. I also like to watch movies and read. As a bachelor, I was into cricket and table tennis.



**New Disease Control Employee!**

★**Name:** Anna-Lena (Lena) Trondson

**Title:** Administrative Assistant – HIV/STD/TB/Viral Hepatitis Program

**Education Background:** I received my Bachelor of Arts Degree in Social Science from Dickinson State University in 2011 and my Associate of Arts Degree in International Studies from Broward College, FL, in 2001.

**Experience:** I moved to North Dakota in 2005 from Sweden but have lived in California and Florida previously. I worked as a Workforce Talent Assistant for ND Department of Commerce assisting out-of-state job seekers. I also worked as a Statistical Program Assistant for Abused Adult Resource Center, compiling data and reports for state and federal grants; as well as a Residential Advocate at shelters for abused women and children. I also worked as a Purchasing Assistant for Tharaldson Property Management in the past, to mention a few.

**Family/Hobbies:** I love to spend time with my nine-year-old daughter, watch a movie, rollerblade when possible, and travel when time and money allows it!



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