

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

December 2012 Topics

- Influenza Update
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- Pertussis Cases Reported in North Dakota



Influenza Update

As of January 19, 2013, a total of 2,815 laboratory-identified influenza cases have been reported to the North Dakota Department of Health (NDDoH) from 26 counties. Of those cases, 2,483 were identified as influenza A and 330 as influenza B. Two cases were reported to be an unknown subtype of influenza. Of the cases further subtyped at the Division of Laboratory Services, 14 have been subtyped as 2009 H1N1 and 149 as H3N2. Currently flu activity is widespread and has continued to maintain at that level for several weeks. Laboratory confirmation of flu appears to have peaked in week 52 of 2012, but outpatient visits for flu-like illness are still increasing.

In addition to an increase in cases of influenza, RSV activity is increasing in North Dakota. While the NDDoH does not quantify the number of RSV cases, there are sentinel laboratories in the state that are reporting increased positivity for RSV tests. This is indicative that the majority of influenza-like illness being seen in North Dakota is most likely due to influenza, RSV and other respiratory viruses.

The NDDoH influenza website is updated weekly on Fridays with the latest influenza data. For more information about influenza, the surveillance program or to order free educational materials, visit the NDDoH influenza website at www.ndflu.com.



Tuberculosis Update

The North Dakota Department of Health, along with Grand Forks Public Health and Altru Health System, continue to investigate a cluster of active tuberculosis (TB) in Grand Forks County. At present, there are 16 cases identified with this outbreak since October 2012. Four cases were identified in early 2012 and two cases in 2010 that genotypically match the cases from October to present.

Risk factors identified for this outbreak include incarceration in local jails, smoking, drug and/or alcohol abuse.

Twenty-two cases have been linked to this outbreak; two from 2010, four from the spring of 2012, and the remaining 16 have been identified since October 2012. The case breakdown is as follows: 12 (55 %) culture positive, ten (45%) clinical diagnosis, 11 (50%) are genotypically linked, and six (27%) are children younger than 15. There were more males (55%) than females (45%) and the ages in this outbreak range from three months to 60 years.

The majority of the outbreak cases are part of a richly connected social network. Most of the cases had exposure to more than one active tuberculosis case during their infectious period as well as having multiple risk factors. Contact investigations are ongoing and the numbers of latent and active cases are likely to increase.



New Disease Control Employee!

Name: Rahel Gemmeda

Title: Quality Assurance Coordinator/Immunization Program

Education Background: Rahel earned her Bachelor's and Master's degree in public health from Ethiopia. She also has another Master's degree in infectious disease management from North Dakota State University.

Family/Hobbies: Rahel has two beautiful boys, Oli and Rebira, who keep her busy all the time. She enjoys the time she spends with them.



Salmonella Typhi Case Reported in North Dakota

In December 2012, a case of *Salmonella* Typhi was reported to the North Dakota Department of Health. The case had recent travel history to a country endemic with *Salmonella* Typhi. The Department of Health is conducting follow-up testing as a precautionary measure to determine if the case is a carrier and conducting testing on travel companions to ensure they were not infected.

Salmonella Typhi causes Typhoid fever, which is common in most parts of the world except in industrialized regions such as the U.S., Canada, western Europe, Australia and Japan. Precautions should be considered when traveling to a developing country.

- Buy bottled water or bring it to a boil for one minute before you drink it.
- Ask for drinks without ice unless the ice is made from bottled or boiled water.

- Eat foods that have been thoroughly cooked and that are still hot and steaming.
- Avoid raw vegetables and fruits that cannot be peeled. When you eat raw vegetables or fruit that can be peeled, peel them yourself.
- Avoid foods and beverages from street vendors.

Vaccination against typhoid is available. Visit with your doctor to discuss your vaccination options before traveling to a country where typhoid is common. Additional information about typhoid fever can be found at http://www.cdc.gov/nczved/divisions/dfbmd/diseases/typhoid_fever/.



Pertussis Cases Reported in North Dakota

Preliminary data indicates that 214 cases of pertussis were reported to the North Dakota Department of Health (NDDoH) in 2012. Of these cases, 119 were laboratory confirmed and 86 were epidemiologically linked to confirmed cases. These cases occurred in 27 counties throughout the state. This marks the worst year for pertussis in North Dakota since 2004 when an outbreak occurred. The rest of the United States saw high numbers of pertussis as well.

Pertussis Symptoms:

Pertussis is a serious disease that can lead to pneumonia, encephalopathy or death in infants and unvaccinated children. Adults, teens and vaccinated children often have mild symptoms that mimic bronchitis or asthma. Adults and adolescents are usually the source of the disease in infants. The NDDoH would like to remind providers to consider pertussis as a differential diagnosis in patients presenting with the following symptoms:

- Prolonged cough
- Cough with paroxysms (uncontrollable bursts of coughing)
- Whoop
- Post-tussive gagging/vomiting

People presenting with the above symptoms should be considered as presumptive pertussis cases and should be treated and advised to stay home until after five days of antibiotics or until pertussis has been ruled out. All suspect and confirmed cases of pertussis should be reported to the NDDoH immediately.

Vaccine:

Diphtheria, tetanus and a cellular pertussis vaccine (DTaP) should be administered routinely to infants at 2, 4, 6 and 15 to 18 months of age and a booster dose of DTaP should be given at 4 to 6 years of age. DTaP is required to attend school and day care. Pertussis outbreaks highlight the need for pertussis vaccination in adults and adolescents. Tetanus, diphtheria and a cellular pertussis vaccine (Tdap) is routinely recommended for adolescents 11 to 12 years of age. Tdap is required to be administered to all adolescents entering middle school. Adolescent's ages 13 to 18 years and adults also are recommended to receive a dose of Tdap.

For more information, please contact the NDDoH Immunization Program at 701.328.2378 or toll-free at 1.800.472.2180.

Contributing authors of The Pump Handle include Lindsey VanderBusch, Dee Pritchet, Alicia Lepp, Amy Schwartz, Tracy Miller and Kirby Kruger. For questions, suggestions or inquiries, or to be removed from the mailing list, please contact Sarah Weninger of the Division of Disease Control, at 701.328.2366 or by e-mail at sweninger@nd.gov.

The pump handle picture in the title was obtained from the website www.ph.ucla.edu/epi/snow.html.



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