"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

February 2017 Topics

- Seoul Virus Outbreak in the United States – Laura Cronquist
- 2016-17 Seasonal Influenza Update – Jill Baber
- April is National STDs Awareness Month – Sarah Weninger
- Referral for CDC Recommended Screenings and Adult Immunization for North Dakota Ryan White Clients – Gordana Cokrlic
- New Disease Control Employee!

Seoul Virus Outbreak in the United States

An outbreak of Seoul virus, which is a member of the Hantavirus family of rodent-borne viruses, has been linked to pet rats in Canada and the United States. Seoul virus is found in both pet rats and wild rats throughout the world, but most human infections occur in Asia. This is the first known human outbreak of Seoul virus in North America. As of March 9, 2017, there have been 17 laboratory-confirmed human cases of Seoul virus identified in seven states. The rats associated with this outbreak are brown or Norway rats. The Centers for Disease Control and Prevention (CDC) is working with state health departments and Canadian health authorities to trace transport of rats to identify rats and humans that have been potentially exposed to infected rats. Infected rats do not show signs or symptoms of disease. Humans and rats can become infected after coming in contact with urine, feces and saliva of infected rats.

The incubation period for Seoul virus in humans is usually one to two weeks, but can be as long as eight weeks. Symptoms of Seoul virus are usually moderate and may include fever, chills, headache, back and abdominal pain, nausea, blurred vision, flushing of the face, inflammation or redness of the eyes, and rash. Rarely, Seoul virus can cause Hemorrhagic Fever with Renal Syndrome (HFRS), an acute renal disease that can include low blood pressure, acute shock and acute kidney failure. Laboratory testing can confirm a diagnosis of Seoul virus in a patient with
Clinically compatible illness. There is no specific treatment for Seoul virus, but supportive care may include rehydration, supplemental oxygen, and dialysis.

For more information about Seoul virus, please contact Laura Cronquist at 701.328.2694 or lcronquist@nd.gov.

2016-17 Seasonal Influenza Update
Influenza cases in North Dakota for the 2016-17 season peaked in late February, with 908 laboratory-confirmed cases reported the week ending February 18. This has been an earlier season than the 2015-16 season, which did not peak until the week ending March 12, 2016. This season, an influenza A H3N2 predominant season, has seen many more reported cases than last season. The total reported case count for the 2015-16 season was 1,942 cases. As of the week ending February 25, 4,318 cases of laboratory confirmed influenza have been reported for the 2016-17 season, with weeks of influenza activity to go.

Preliminary vaccine efficacy estimates for the 2016-17 influenza vaccine were released this month by the CDC. Overall, vaccine efficacy has been reported as 48 percent for this season. Broken down, vaccine efficacy against influenza A H3N2 was reported as 43 percent, while efficacy against influenza B viruses was estimated to be 73 percent. It is typical for influenza vaccine efficacy against influenza B viruses to be higher than against influenza A viruses. However, although efficacy for B is strong, the predominant influenza B strain in North Dakota this year has been the influenza B Yamagata lineage. Protection against B Yamagata viruses is found in quadrivalent vaccines only this year. Quadrivalent vaccine include protection again both influenza B lineages (Yamagata and Victoria), while trivalent vaccines contain protection against one lineage. According to the North Dakota Immunization Information System (NDIIS), about 75 percent of North Dakotans who received an influenza vaccine, received quadrivalent vaccine this year. There is no recommended preference for quadrivalent vaccine over trivalent vaccine at this time.
According to the NDIIS, influenza vaccination rates in North Dakota for the 2016 – 2017 season are similar to the 2015 – 2016 season.

April is National Sexually Transmitted Diseases (STDs) Awareness Month

April is National Sexually Transmitted Diseases (STDs) Awareness Month, an observance created to increase awareness about STDs, including their transmission, prevention and treatment. STDs continue to be a major health threat in the United States, especially among adolescents and young adults. One in two sexually active persons will contract an STD by age 25. Each year, one in four teens contracts an STD. If undetected and left untreated, STDs can lead to potentially severe health consequences, including ectopic pregnancy or infertility in females. These severe health consequences underscore the importance of annual chlamydia screening and vaccination for human papillomavirus (HPV) as part of a comprehensive approach to sexual health in young women.

In North Dakota, preliminary data indicates 3,453 cases of chlamydia, 1,005 cases of gonorrhea and 61 cases of syphilis were reported to the NDDoH in 2016. These numbers reflect an 8.5 percent increase in chlamydia, almost a 50 percent increase in gonorrhea, and a 42 percent increase in syphilis.
Throughout STD Awareness Month in April 2017, the NDDoH encourages healthcare providers to focus on appropriate screening and treatment of STDs. Important screening and treatment recommendations to highlight include:

- **Dual Therapy:** The recommended treatment for gonorrhea is dual therapy of ceftriaxone 250 mg IM plus 1 g azithromycin. These medications are recommended to be given at the same time. It is best practice to administer both medications in the clinic to ensure the patient takes both medications appropriately and in a timely manner.

- **Partner Services:** Providing treatment to partners of a confirmed case is an important part of the prevention and controls of STDs. Contact your local field epidemiologist on how to best provide partner services to your confirmed STD cases.

- **Syphilis is on the Rise:** Nationally, syphilis is currently at levels we haven’t seen in more than 20 years. North Dakota is also seeing an increase in syphilis. Remember to screen all men who have sex with men (MSM) annually for syphilis. All pregnant should be screened during their first trimester and high risk women should be also screened in their third trimester and at delivery. Syphilis has been called “The Great Pretender”, as its symptoms can look like many other diseases. For a description of the stages of syphilis and symptoms, please visit: [www.cdc.gov/std/syphilis/stdfact-syphilis-detailed.htm](http://www.cdc.gov/std/syphilis/stdfact-syphilis-detailed.htm).

- In 2016, North Dakota had a 64 percent increase in the number of new diagnoses of HIV/AIDS from 2015. Remember all patients diagnosed or being evaluated for STDs should also be tested for HIV.

Additional information about STDs are available at [www.cdc.gov/std/](http://www.cdc.gov/std/). The most current North Dakota HIV.STD.TB.Viral Hepatitis Epi Profile can be found at [www.ndhealth.gov/STD/](http://www.ndhealth.gov/STD/).

**Referral for CDC Recommended Screenings and Adult Immunization for North Dakota Ryan White Clients**

The North Dakota Ryan White Part B Program, in collaboration with the Immunization Program, has implemented screening and referral for recommended adult vaccinations for Ryan White Part B clients. The Ryan White Program has also implemented testing and referral for CDC recommended screenings for HIV-positive persons.

Ryan White Case Managers will assess what screenings and immunizations clients are missing, and will either link clients to receive those screenings and immunizations at the local public health or refer them to their primary provider. Each client will receive a recall letter from the NDDoH listing the vaccines they are missing every six months with the recertification form.

All HIV-positive persons are recommended to be screened for tuberculosis (TB), hepatitis B and hepatitis C, syphilis, chlamydia and gonorrhea. All HIV-positive women are recommended to have annual cervical cancer screening (Pap smear), and their positive pregnancy status must be reported to the NDDoH by calling 701.328.2378 or filling out the online report card at: [https://www.ndhealth.gov/disease/reportcard/](https://www.ndhealth.gov/disease/reportcard/).

HIV-positive persons should receive all childhood and recommended adult vaccines. Additionally, HIV-positive persons should receive both pneumococcal vaccines (PCV13 and PPSV23). Recently updated recommendations for people with HIV/AIDS include meningococcal conjugate vaccine (MenACWY or MCV4). The first two doses of MCV4 are given eight weeks apart, followed by booster doses every five years.
For a complete adult vaccine schedule please visit: https://www.cdc.gov/vaccines/schedules/downloads/adult/adult-scheduleeasy-read.pdf. For a list of vaccines recommended for HIV-positive persons, please visit www.immunize.org/catg.d/p4041.pdf.

New Disease Control Employee!

**Name:** Shari Renton

**Title:** HIV.STD.Viral Hepatitis Surveillance Coordinator

**Education Background:** I received my Master of Public Health degree from North Dakota State University in December 2016 with a focus on infectious disease management. My master’s paper was on HIV and Hepatitis C prevention among injection drug users.

**Past Experience:** Prior to graduating, I worked at Dakota Medical Foundation in Fargo within their healthy living initiative.

**Family/Hobbies:** I come from a large family of 10 siblings and I enjoy spending time with them. I also enjoy traveling, cooking, and watching movies.

Kirby Kruger, Director, Division of Disease Control; Chief of Medical Services Section
Molly Howell, MPH, Assistant Director, Division of Disease Control
Tracy K. Miller, PhD, MPH, State Epidemiologist
Kelsie Howes, Managing Editor