

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

July 2014 Topics

- Influenza Virus Identified in Pigs
- Salmonella Outbreak Associated with Attending Birthday Party
- Scabies
- West Nile Virus Update
- Ebola Update
- ND Outbreaks Update



Influenza Virus Identified in Pigs

This summer at the North Dakota State Fair, three ill pigs were removed from display after they appeared to be ill. The pigs, all with different owners and handlers, arrived at the fair on July 20 and began showing symptoms on July 25. When the illness was discovered, the pigs were subsequently removed from exhibit. Respiratory samples were collected from the pigs and tested at a United States Department of Agriculture (USDA) lab, where all three specimens were found to be positive for swine influenza A H3N2. When the swine H3N2 virus infects a human, it is known as H3N2 variant virus (H3N2v). During the summer months of 2011, 2012 and 2013, 340 people in 13 states tested positive for H3N2v after exposure to swine or swine barns at fairs. None of these cases occurred in North Dakota.

Because transmission of this disease from pigs to humans has been demonstrated, the North Dakota Department of Health (NDDoH) sent out a Health Alert on August 1 requesting that health care providers consider H3N2v in patients with influenza-like illness (fever, cough, sore throat, body aches, and headache). Providers were requested to ask these patients about swine contact and to send samples to the public health lab for

testing. At this time, no human cases of H3N2v have been identified in North Dakota, and no other swine influenza A H3N2 activity has been seen elsewhere in the state.

Because non-seasonal influenza can occur, and can also be a sign of a novel variant strain, it is important that providers consider influenza year-round. Surveillance specimens from confirmed or suspect summer flu cases can be sent to the public health lab for testing. Testing specimens increases our ability to identify variant influenza viruses, and enlightens us as to which strains may be circulating prior to the onset of the next influenza season.



Salmonella Outbreak Associated with Attending Birthday Party

On July 7, 2014, the NDDoH investigated three Salmonella cases that were reported to the Division of Disease Control as part of routine surveillance activities. Upon interviewing the cases, NDDoH identified a link in that all those with illness attended the same birthday party picnic in Sargent County, and there may have been additional unreported illnesses among other attendees.

The NDDoH interviewed 32 birthday party attendees by phone using a standardized questionnaire. Of the 32 interviewed, 20 (62%) became ill after eating at the birthday party. The most commonly reported symptoms were diarrhea (100%), stomach cramps (70%), fever (40%), headache (40%), chills (40%) and nausea (40%). The onsets of illness were from six hours to 90 hours (median 38 hours) after the birthday party meal and the duration of illness ranged from 24 to 288 hours (median 130 hours).

Four laboratory-confirmed Salmonella isolates from four individuals who attended the birthday party matched by pulse field gel electrophoresis (PFGE). Statistical analysis following the interviews of attendees suggested that the pork served at the birthday party may have been the vehicle. Samples of the leftover pork were sent to the NDDoH Division of Laboratory Services for testing. The pork tested positive for Salmonella I4,[5],12i-, a matching serotype of the human isolates. PFGE results on the pork are still pending to determine if it is a direct match to the outbreak.

Salmonella is suspected to cause about 1.2 million illnesses in the U.S. each year. Salmonella can be prevented by cooking poultry, ground beef and other meat and eggs thoroughly. If you are served undercooked meat, poultry or eggs, don't hesitate to send it back for further cooking. Wash your hands, kitchen work surfaces and utensils immediately after they have been in contact with raw meat or poultry.

If you would like to report a foodborne illness or have questions about foodborne illness, please call the NDDoH at 800.472.2180 or 701.328.2378.



Scabies

The week ending Aug 1, the NDDoH received a call regarding a student diagnosed with scabies. Scabies is an infestation of the skin by a mite called *Sarcoptes scabiei*. The infestation leads to a skin rash of the affected area and intense itching. Severe infestations are called Norwegian scabies and occur rarely.

Symptoms of scabies include an itchy rash. Itching may become more severe at night. Certain areas of the body favored by the mites include the finger webs, wrists, elbows, armpits, belt line and genitals. They are spread by direct person-to-person contact with someone who has scabies. Scabies in adults often is acquired sexually. Transmission via bedding and clothing worn close to the skin is also possible.

Those who are diagnosed with scabies should be treated immediately. Close contacts of people with scabies also should be treated. Close contacts include people who live in the same house, day-care contacts and others who have had direct skin-to-skin contact with someone who has scabies.

Bedding and clothing worn next to the skin during the three days before therapy is started should be laundered in a washer with hot water and dried on high heat. Mites do not survive in the environment for more than three days.

For more information call the NDDoH at 800.472.2180 or 701.328.2378.



West Nile Virus Update

As of August 21, 2014, four human West Nile virus (WNV) infections have been reported to the NDDoH from two counties. This time last year, the NDDoH reported 25 cases from a total of 11 counties.

Two of the cases have been hospitalized and two have experienced neuroinvasive disease, in which a person's nervous system is affected. This is the most severe form of the disease. There have been no deaths reported in North Dakota this year.

Additional WNV activity includes one positive bovine from Ward County, one positive moose from Stark County and six positive mosquito pools from Grand Forks County.

Nationwide, 210 cases have been reported to the CDC as of August 19, 2014. Of the 210, 113 (53%) were classified as neuroinvasive disease. Eleven WNV-related human deaths have been reported.



Ebola Update

The 2014 Ebola outbreak in West Africa is one of the largest Ebola outbreaks in history. As of August 22, there were 2,615 suspected and confirmed cases and 1,427 deaths. There are four countries affected by this outbreak where transmission is occurring: Guinea, Liberia, Sierra Leone and Nigeria (Lagos, Nigeria). Currently there is minimal risk to the general U.S. population. In response to this rapidly changing outbreak, the NDDoH has been communicating with local healthcare providers, businesses, universities and the general public on disease recognition and self-monitoring, infection control, patient care, and how to prevent the spread of infection.

The NDDoH's Ebola website contains links to a series of Ebola video conferences, fact sheets, an Ebola assessment tool, provider decision tree, and other guidance documents and disease updates. Visit the website at www.ndhealth.gov/disease/Ebola/Default.aspx for more information.



ND Outbreaks - Update

- Last month, the health department reported 13 cases of Shigellosis. This month, one new case has been reported, bringing the total to 14.
- As of April, 73 cases of syphilis had been identified since the beginning of the year. As of July 31, 2014, 101 cases of syphilis had been reported in the multi-state (North and South Dakota) outbreak. The majority (60 %) of cases are either primary or secondary syphilis; 28 percent are early latent; and eight percent are latent syphilis cases. Two cases of congenital syphilis have also been reported in this outbreak.
- On July 21, 2014 the Division of Disease Control announced the 47 case of Hepatitis C in the outbreak investigation. Due to this new case, additional testing will be initiated. For more information, see the health department news release at www.ndhealth.gov/disease/Hepatitis/HCVOutbreak2013.htm
- As of July 31, 2014, one new case of tuberculosis (TB) has been identified as part of the outbreak in Grand Forks. The total number of cases associated with the outbreak is 28.
- In July, the health department announced a cluster of tularemia confirmed in two of five possible cases. As of Aug. 4, a third case has been confirmed.



NORTH DAKOTA
DEPARTMENT *of* HEALTH

Terry Dwelle, MD, MPHTM, State Health Officer
Kirby Kruger, Director, Division of Disease Control; Chief Medical Services Section
Tracy K. Miller, PhD, MPH, State Epidemiologist