

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 2012 Topics

- Increase in Tularemia Cases in North Dakota
- West Nile Virus Update
- Foodborne Outbreak in a North Dakota Hospital



Increase in Tularemia Cases in North Dakota

Two tularemia infections have been reported to the North Dakota Department of Health in the past month increasing the number of human cases in 2012 to a total of three. As of August 15, 2012, tularemia cases have been detected in Traill, Ward and McKenzie counties. In the past five years, there have been nine human tularemia cases identified in North Dakota (**Figure 1**).

Figure 1. Reported human cases of Tularemia by County, North Dakota, 2008-2012.



Two of the three tularemia cases developed a cutaneous skin ulcer as a result of their infection. These types of tularemia infection are called ulceroglandular and are the most common form of tularemia. Ulceroglandular tularemia usually results following a tick or deer fly bite, or from handling an infected animal.

The signs and symptoms of tularemia include fever accompanied by varying symptoms depending on the route of entry into the body. These symptoms can include ulcers on the skin or mouth, swollen and painful lymph glands, swollen and painful eyes and a sore throat. Pneumonia also can develop, which is the most serious form of the disease. This form develops when people breathe in dust or aerosols that contain the bacteria that causes tularemia.

For more information about tularemia, visit the Department of Health's website at www.ndhealth.gov/disease/Tickborne.



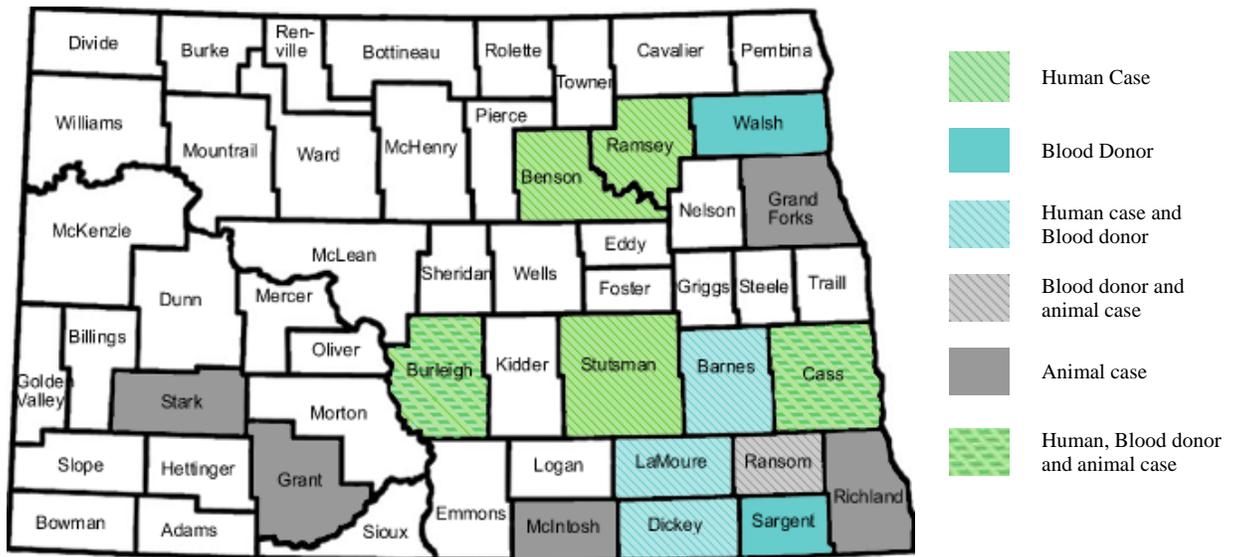
West Nile Virus Update

The first West Nile virus (WNV) infection was reported to the North Dakota Department of Health on August 3, 2012. The case was a male in his 50s. The man developed the more serious form of WNV and required hospitalization. As of August 15, 2012, there have been a total of 14 human WNV cases identified. In addition to these human cases, WNV has been detected in 14 other people through blood donor screening. All donated blood in the United States is screened for WNV. These donors are not considered to be WNV cases because they do not have any symptoms. Eight horses and one bird were also found to be positive. Detection of WNV in blood donors, horses and other animals indicates that WNV transmission is occurring in the state.

Currently, mosquito counts across the state are lower compared to recent years, but that should not provide a sense of security. With 14 human cases and the detection of WNV in blood donors and horses, it is evident that WNV transmission is occurring and that precaution still needs to be taken to reduce the risk of being bitten by mosquitoes. The following actions should be taken to prevent being bitten by mosquitoes:

- Use insect repellent that contains DEET, picaridin, IR 3535, oil of lemon eucalyptus or permethrin when outdoors. Always follow the directions on the manufacturer's label.
- Limit outdoor activities between dusk and dawn when mosquitoes are most likely to bite.
- When possible, wear long pants and long-sleeved shirts while outside.
- Eliminate stagnant water and leaf debris in containers around homes where mosquitoes can lay their eggs (e.g., buckets, flowerpots, old tires, wading pools and birdbaths).
- Keep mosquitoes from entering your home by repairing screens in windows and doors.
- Keep the grass around your home trimmed.

Figure 2. WNV Activity in North Dakota, Jan. 1, 2012 – Aug. 15, 2012.



Foodborne Outbreak in a North Dakota Hospital

On July 5, 2012, The North Dakota Department of Health (NDDoH) received notice that residents at a North Dakota hospital became ill over the July 4th holiday with symptoms of diarrhea and/or vomiting.

The NDDoH collected stool specimens at the hospital and designed a self-administered questionnaire for the residents to complete. Of the 152 residents that were served the same menu at the facility during the outbreak, questionnaires were collected for 146 (96%) residents. Cases were defined as experiencing vomiting and/or diarrhea on or after July 3, 2012. Sixty-six (45%) cases were identified among the residents. Of the 66 cases, 57 (86%) were male and nine (13%) were female. Frequently reported symptoms among cases included diarrhea (100%), stomach cramps (93%), nausea (61%) and headache (42%). The duration of illness ranged from 0.5 to 65.5 hours (median = 24 hours).

In analyzing the meal items served at the hospital, all of the cases ate the lasagna served at dinner on Tuesday, July 3, 2012. Forty-two percent of those that did not get ill did not eat the lasagna. Statistical analysis was undefined for this food item, so in order to run analysis, the zero people who were ill that did not eat the lasagna were assigned a number of 0.5. Statistical analysis using 0.5 in place of 0 shows that by consuming the lasagna on Tuesday, July 3, 2012, a person was 346.62 times more likely to become ill compared to those who did not consume the lasagna.

Stool samples were collected and tested at the Division of Laboratory Services. The samples were negative for *Salmonella*, *E. coli*, *Shigella* and *Campylobacter*. The samples were unable to be tested for norovirus. An environmental assessment of the hospital’s preparation practices did not reveal any deficiencies. The source of the reported illnesses in this investigation is unknown.

If you have questions related to foodborne outbreaks, or need to report a possible foodborne incident, please contact the NDDoH at 701.328.2378.

Contributing authors of The Pump Handle include Michelle Feist, Alicia Lepp, 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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