

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

August 2010 Topics

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World Rabies Day - September 28, 2010

In observance of World Rabies Day 2010, the North Dakota Department of Health (NDDoH) is encouraging people to vaccinate their pets. Rabies worldwide is a very serious illness that claims the lives of not only wild and domesticated animals, but humans as well.

In the United States, it is estimated that 30,000 to 40,000 people are potentially exposed to rabies, requiring them to receive post-exposure prophylaxis. Rabies prevention starts with the animal owner. The NDDoH recommends that people vaccinate dogs, cats, ferrets and any other animal that has regular contact with humans, such as horses.

This is the best prevention to keep not only your family and community, but also your pet safe from rabies exposure. For more information about rabies, please visit the NDDoH rabies website at www.ndhealth.gov/disease/rabies.



Update on North Dakota Tick Surveillance

The North Dakota Department of Health (NDDoH), in collaboration with North Dakota State University (NDSU) and University of North Dakota (UND), conducted tick surveillance this summer throughout the state to identify the species of ticks that are found in North Dakota.

The team from NDSU surveyed the eastern part of the state using a tick dragging technique (pulling a white piece of cloth across the ground in areas where ticks are thought to live). They sampled in parks, recreation areas, wildlife refuges, and preserves in Cass, Richland, Emmons, Sargent and Pembina counties. Thus far, their samples have all been identified as *Dermacentor variabilis*, or the dog tick that was previously known to be found throughout North Dakota.

Figure 1. Tick Dragging in North Dakota



The team from UND has performed a statewide tick survey. Counties sampled by UND include Billings, Eddy, Grand Forks, McHenry, McKenzie, Morton, Pembina, Ramsey, Rolette and Steele. In addition to tick dragging, the UND team also performed small mammal trapping and obtained tick samples from the mammals they caught. Though the UND team identified most of their tick specimens as *Dermacentor variabilis*, they also identified some specimens as *Ixodes scapularis*, also known as the deer tick or black-legged tick. The *Ixodes* specimens were found exclusively in the northeastern part of the state. UND plans to perform PCR testing on the tick specimens for several types of tick-borne diseases, including Rocky Mountain spotted fever and Lyme disease.

Based on these preliminary findings, people suspected of having Lyme disease should now be asked about travel to the northeastern part of North Dakota. The finding of the deer tick in North Dakota re-emphasizes the importance of prevention measures, such as wearing long pants and sleeves and applying insect repellent containing DEET when entering tick-infested areas to reduce the risk of having a tick attach to the skin.



Pertussis Cases Reported in North Dakota

Since July 26, 2010, 14 new cases of pertussis have been reported to the North Dakota Department of Health (NDDoH). Of these, 11 are laboratory confirmed and three are epidemiologically linked to confirmed cases. These cases have occurred in six counties throughout the state.

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. Adolescents 13 to 18 years of age and adults also are recommended to receive a dose of Tdap.

The NDDoH provides Tdap vaccine for administration to new parents/guardians, child-care providers and expecting fathers. This campaign is an effort to protect young infants from pertussis. Vaccinating adult contacts may reduce the risk of transmission to infants and other susceptible contacts.

For more information, please contact the NDDoH Immunization Program at 701.328.2378 or toll-free at 800.472.2180.



New Disease Control Employee!

Please help us in welcoming Mike Benz as a new employee to the Division of Disease Control!

Name: Mike Benz

Title: IT Coordinator

Education Background: I attended Dickinson State College where I received a bachelor's degree in computer science.

Past Experience: My experience within computer science includes working as a programmer analyst, project manager, and software and hardware support specialist. My work experience within the health field also includes my previous employment with the North Dakota Department of Health, where I gained a wide range of expertise with health informatics systems.

Family/Hobbies: I live in Bismarck with my wife Lelord, who is employed with BECEP. We have one daughter Kambree. I enjoy spending time with my family and friends and playing golf.



High-Dose Influenza Vaccine

The U.S. Food and Drug Administration (FDA) approved a high-dose influenza vaccine manufactured by Sanofi Pasteur for use in adults 65 and older. The new vaccine is available to health-care providers this fall in preparation for the 2010-2011 influenza season. Fluzone® High-Dose vaccine was designed specifically to generate a more robust immune response in people 65 and older. Typically, this age group does not respond as well to the standard dose of influenza virus vaccines as younger individuals because of their weakened immune systems.

Compared to younger adults, people 65 and older suffer disproportionately from seasonal influenza and its complications, including severe illness and death. Fluzone® High-Dose vaccine contains 60 mcg of hemagglutinin per strain of influenza virus, compared to 15 mcg of hemagglutinin per strain of influenza virus in the standard-dose influenza vaccine. The new Fluzone® High-Dose vaccine is produced in the same production facility as Fluzone® vaccine and is supplied as a single-dose, preservative-free, prefilled syringe. In the clinical trial, Fluzone® High-Dose was shown to have a clinically comparable safety profile to Fluzone® vaccine.

Influenza Vaccination To Begin ASAP

Health-care providers are recommended to start vaccinating people as soon as they have influenza vaccine in their clinic. There is no need to wait to begin vaccinating until later this fall. Studies have shown that individuals maintain an immune response to the influenza strains found in the seasonal influenza vaccine for long after the season is over. This year, influenza vaccination recommendations also have changed. The ACIP unanimously voted at their February 2010 meeting to recommend yearly influenza vaccination for everyone older than 6 months. This recommendation added healthy adults ages 19 through 64, who were previously not considered a priority group for vaccination.

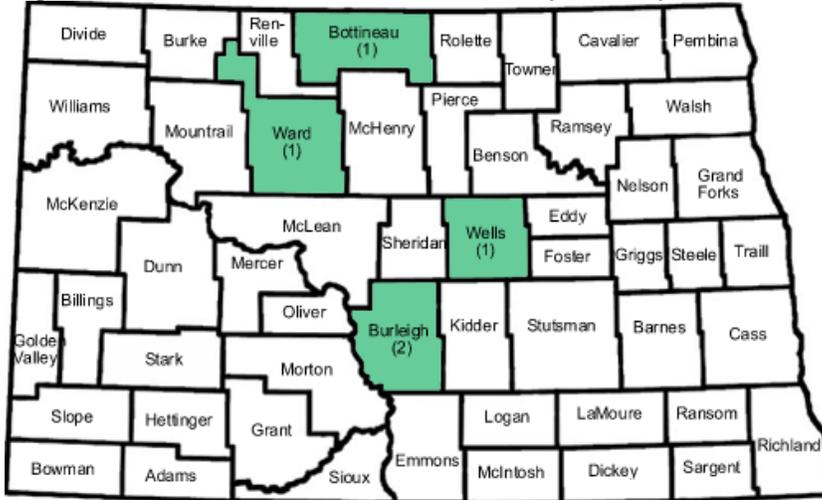


West Nile Virus (WNV) Update

As of Sept. 1, 2010, five human WNV infections have been reported to the NDDoH. Two were hospitalized. In addition, WNV infection has been identified in two horses and one dog.

The five human WNV cases have been identified from four counties located in central North Dakota (**Figure 2**).

Figure 2. WNV Positive Human Cases by County of Residence, North Dakota



West Nile virus activity is updated Wednesday mornings each week on the North Dakota Department of Health website at www.ndhealth.gov/wnv.



Two Cases of *Vibrio cholerae* in North Dakota

Two cases of *Vibrio cholerae* were reported to the NDDoH Division of Disease Control in August 2010. These cases of *Vibrio* were not serogroups O1 and O139, which are the serogroups responsible for the epidemic disease cholera. The two cases in North Dakota were *V.cholerae* serogroups non-O1/non-O139. Further serotyping is pending.

There are more than 200 serogroups of *V. cholera*. *V.cholerae* non-O1/non-O139 usually is associated with a diarrheal illness. These strains are found in aquatic environments worldwide, particularly in mildly brackish waters. They also can be found in fresh water. These strains often are linked to the consumption of raw or undercooked seafood, particularly shellfish. The cases in North Dakota reported no travel to tropical areas or travel out of country. Neither case reported consuming any type of raw or undercooked seafood in their incubation period. One case experienced diarrheal symptoms, while the other case had a urinary tract infection. These cases had exposure to non-chlorinated recreational water. The exact source of their infection is unknown.

For more information about *Vibrio* species, please visit www.cdc.gov/nczved/divisions/dfbmd/diseases/index.html or call the NDDoH at 800.472.2180 or 701.328.2378.

Contributing authors of The Pump Handle include, Lindsey VanderBusch, Dr. Jennifer Cope, Abbi Pierce, Michelle Feist, Sarah Weninger, Julie Wagendorf, Kirby Kruger and Tracy Miller. 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 email 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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