

# 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

## March 2012 Topics

- May Is Hepatitis Awareness Month
- Influenza Update
- New Manuals Now Available
- Neurosyphilis
- The Ticks Have Arrived in North Dakota



## May Is Hepatitis Awareness Month

May is hepatitis awareness month. One in 12 people worldwide are infected with either hepatitis B virus or hepatitis C virus. Because most of the 500 million infected with hepatitis B or hepatitis C are asymptomatic and are unaware of their infection, they may spread the virus to others without knowing. Viral hepatitis is the leading cause of liver cancer and the most common reason for liver transplantation in the United States.

The most common types of viral hepatitis in the United States are hepatitis A, B and C. These three viruses are very different, but all cause liver disease. Hepatitis A is an infection lasting no more than six months, while hepatitis B and C can develop into lifelong chronic illness.

**Hepatitis A** is a virus that is spread by the fecal-oral route. A person becomes infected with the virus by ingesting fecal matter from contaminated objects, food or drinks. People at greater risk of hepatitis A infections include those traveling to countries where hepatitis A is common, having sexual contact with someone who has hepatitis A, or living in the same household as a person infected with hepatitis A.

**Hepatitis B** is a virus that is spread from person to person through infected blood or sexual secretions. Those at increased risk for infection include anyone who has sex with an infected individual and those who share needles, syringes or other drug injection equipment. Hepatitis B also can be passed from an infected mother to her baby at birth.

**Hepatitis C** is spread from person to person through infected blood. Those at increased risk for hepatitis C infections include those who share needles or other equipment to inject drugs, who received a blood donation before 1992, or who have received tattoos or piercings in unsterile environments.

Thirteen public health units and clinics across North Dakota offer free-of-charge hepatitis C screening and hepatitis A and B vaccinations to those at risk. These sites include:

- Bismarck Burleigh Public Health
- Custer Health
- Custer Family Planning
- Central Valley Health District
- Fargo Cass Public Health
- First District Health Unit
- Grand Forks Public Health Department
- Lake Region District Health Unit
- Elbowoods Memorial Health Center
- Richland County Health Department
- Southwestern District Health Unit
- UND Center for Family Medicine – Bismarck
- Upper Missouri District Health Unit

Throughout hepatitis awareness month, the NDDoH is encouraging individuals to **Get Tested!** If you are at risk for hepatitis, knowing your status can help save your life. There are treatment options available for hepatitis, but keeping your liver healthy is very important. Avoiding alcohol and drug consumption, eating a healthy diet and exercising are all ways a person can promote a healthy liver.

For information on hepatitis, please contact the NDDoH hepatitis program at 800.472.2180 or 701.328.2378, or visit our website at [www.ndhealth.gov/disease/hepatitis](http://www.ndhealth.gov/disease/hepatitis).



### **Influenza Update**

As of April 25<sup>th</sup>, a total of 1,120 laboratory-identified influenza cases have been reported to the North Dakota Department of Health (NDDoH) from 45 counties. One thousand eighty-nine cases were recognized as Influenza A and 25 as Influenza B. Of the cases further subtyped by RT-PCR, 41 cases of 2009 H1N1 and 46 cases of H3N2 have been identified. Currently influenza activity is decreasing statewide.

The NDDoH influenza website is updated weekly 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](http://www.ndflu.com).



### **New Manuals Now Available**

The Division of Disease Control is excited to offer two new educational manuals.

1. The North Dakota Child Care/School Infection Control Manual is now printed. The manual will serve as a tool to encourage common understanding about infectious diseases in group care settings for children among caregivers/teachers; parent/guardians; and health-care professionals. The manual has sections on how diseases are spread, criteria for excluding ill individuals, and how to prevent and control the spread of communicable diseases.

The North Dakota Child Care/School Infection Control Manual will be delivered to licensed child care centers by the Department of Human Services during their biannual visit. The manual will also be made available to schools. The manual can be viewed online at [www.ndhealth.gov/disease/documents/publications/daycaremanual.pdf](http://www.ndhealth.gov/disease/documents/publications/daycaremanual.pdf).

2. The Foodborne Outbreak Investigation Manual is now available at [www.ndhealth.gov/disease/GI](http://www.ndhealth.gov/disease/GI). This manual will provide information on the roles and responsibilities of those involved in foodborne outbreak investigations, as well as provide essential activities, objectives and tools for the epidemiologic, environmental and laboratory investigations during an outbreak.

If you have any questions on these manuals, please contact the Division of Disease Control at 701.328.2378 or 800.472.2180.



### **Neurosyphilis**

Neurosyphilis is an uncommon condition in North Dakota. However, two cases of neurosyphilis were reported to the North Dakota Department of Health in 2011. In the last five years, two cases of neurosyphilis have been reported.

Neurosyphilis is a complication of syphilis that can occur anytime during a syphilis infection but usually occurs many years after the initial infection. Cerebral spinal fluid (CSF) abnormalities are common during early syphilis. However, in the absence of any symptoms of neurosyphilis, no deviation from the standard treatment for early syphilis is recommended. People with neurosyphilis may present with a variety of neurological deficits and symptoms including abnormal gait, vision or auditory problems, confusion, dementia, depression, headache, numbness in extremities, and others. Diagnosis can be made by performing a nontreponemal-specific test called the VDRL on the CSF. The VDRL performed on CSF is highly specific but lacks sensitivity. When reactive in the absence of contamination with blood, the CSF-VDRL is diagnostic for neurosyphilis. In cases where neurosyphilis is strongly suspected but the VDRL is non-reactive, consideration can be made to further evaluation of the CSF by a treponemal-specific test such as the FTA-ABS. The FTA-ABS is highly sensitive; therefore, neurosyphilis is unlikely when the FTA-ABS is non-reactive.

Treatment of neurosyphilis involves aqueous crystalline penicillin G intravenous every four hours or continuous infusion for 10 to 14 days or, if compliance can be assured, procaine penicillin G intramuscular plus oral probenecid for 10 to 14 days. Treatment

with these regimens may be followed by three weekly injections of benzathine penicillin G (Bicillin LA™), 2.4 million units each treatment, to allow for total penicillin therapy duration similar to what is recommended for late syphilis without neurological involvement. Follow-up evaluation of the CSF should be performed post-treatment at six months to help assess treatment response. More information can be found in CDC's 2010 STD treatment guidelines, which can be found at [www.cdc.gov/std/treatment/2010/default.htm](http://www.cdc.gov/std/treatment/2010/default.htm).

Prevention of neurosyphilis requires early detection of syphilis infection accompanied by the recommended treatment regimen appropriate for the stage of syphilis the person has been diagnosed with.

Providers are urged to promptly report all cases of syphilis, regardless of the stage, to the Division of Disease Control. Call 701.328.2378 or, toll free, 800.472.2180 to report a case of syphilis.

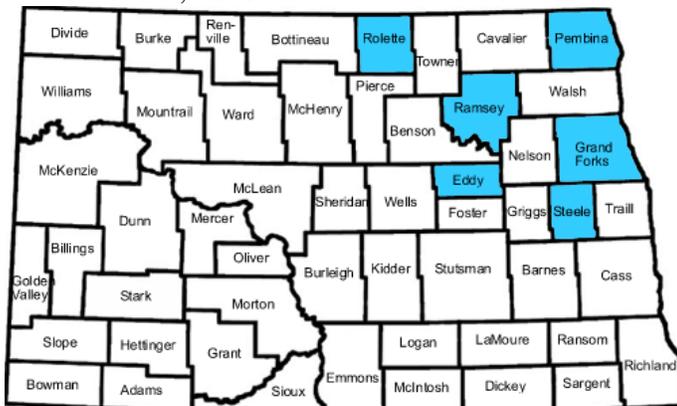


### **The Ticks Have Arrived in North Dakota**

With the beginning of spring, the tick-borne disease season has arrived in North Dakota. Areas that are heavily wooded, have tall grass or have brush are more likely to be tick infested, especially between April and September, with the highest risk of disease transmission during the warmer months.

Tick-borne diseases are reportable to the North Dakota Department of Health (NDDoH). Several of these include tularemia, Rocky Mountain spotted fever (RMSF), ehrlichiosis, anaplasmosis, babesiosis and Lyme disease. Tularemia and RMSF are transmitted by the dog tick (*Dermacentor variabilis*). The dog tick, the most common tick in the state, can be found throughout North Dakota. Other tick-borne diseases such as ehrlichiosis, anaplasmosis, babesiosis and Lyme disease are transmitted by the deer tick (*Ixodes scapularis*). A state-wide tick survey conducted in 2010 identified established populations of the deer tick in the northeastern region of the state. Counties identified with established deer tick populations are shown in **Figure 1**.

**Figure 1.** Counties with established populations of *Ixodes scapularis* ticks identified, North Dakota, 2010



Provisional data for 2011 include two cases of tularemia, two RMSF, three anaplasmosis, one babesiosis and 26 Lyme disease cases that were reported to the North Dakota

Department of Health. For more information about tick-borne diseases in North Dakota or to order free tick-borne illness educational materials, visit the tickborne disease website at [www.ndhealth.gov/disease/tickborne/](http://www.ndhealth.gov/disease/tickborne/).

*Contributing authors of The Pump Handle include Sarah Weninger, Lindsey VanderBusch, Alicia Lepp, Michelle Feist, Julie Wagendorf, 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](mailto:sweninger@nd.gov).*

*The pump handle picture in the title was obtained from the website [www.ph.ucla.edu/epi/snow.html](http://www.ph.ucla.edu/epi/snow.html).*



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