

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 2013 Topics

- Two Rabies Positive Skunks in Bismarck City Limits
- CRE/KPC Infections
- The Arrival of Tick Season in North Dakota
- Avian Influenza A (H7N9) Virus in China
- May is Hepatitis Awareness Month



Two Rabies Positive Skunks in Bismarck City Limits

Two skunks found within Bismarck, N.D., city limits have tested positive for rabies. These skunks were tested within nine days of each other. The first skunk was tested on March 18, 2013, after a man entering a work shed was bitten by the skunk that was in the building. The second skunk was tested on March 27, 2013, after the Bismarck Animal Control received numerous reports of a skunk wandering back and forth near the intersection of Expressway and Washington. A second-hand report of children attempting to catch the skunk and the possibility of one child being bitten prompted the North Dakota Department of Health to issue a news release and send letters home to parents of nearby elementary and middle schools.

Eight animals testing positive for rabies have been reported to the North Dakota Department of Health since January 1, 2013, (5 skunks, 2 cats and 1 cow). At this time last year, 33 animals had tested positive. The total number of animals testing positive for rabies in 2012 was 74.

As the weather starts to warm up, wild animals become more active and more people are outdoors where they are exposed to them. It is important for people to avoid wild animals, including not feeding them or handling them. The spread of rabies can also be prevented by:

- Vaccinating pets and keeping them from contact with wild animals.

- Not allowing wild animals to take up residence around your home, farmstead or livestock.
- Not keeping wild animals as pets. In North Dakota, it is illegal to keep a skunk or raccoon as a pet.

If you have been bitten by a wild animal, you should be evaluated by a health professional. For more information on rabies, contact the Division of Disease Control at 800.472.2180 or visit www.ndhealth.gov/disease/Rabies/.



CRE/KPC Infections

Carbapenem-resistant Enterobacteriaceae (CRE), are a family of gram-negative bacteria that are difficult to treat because they have high levels of resistance to antibiotics including last-resort antibiotics called carbapenems. Although there are a large number of mechanisms that can lead to carbapenem resistance among Enterobacteriaceae, the production of an enzyme that breaks down broad-spectrum carbapenem antibiotics (carbapenemases) has emerged as an important mechanism in the United States over the last decade. Most carbapenemase-producing CRE in the United States produce a carbapenemase called *Klebsiella pneumoniae* carbapenemase, or KPC, which was first reported in 2001.

Healthy people usually do not get CRE infections. In health-care settings, CRE infections most commonly occur among patients who are receiving treatment for other conditions. Patients whose care requires devices like ventilators (breathing machines), urinary (bladder) catheters, or intravenous (vein) catheters, and patients who are taking long courses of certain antibiotics are most at risk for CRE infections. Infections with these organisms are very difficult to treat and can be deadly – one report cites they can contribute to death in up to 50 percent of patients who become infected.

Health-care providers need to act aggressively to prevent the spread of CRE organisms in their facility. The Centers for Disease Control and Prevention has developed a CRE toolkit with guidance for preventing the spread of CRE in health-care settings (www.ndhealth.gov/disease/cre/). The following are key recommendations that facilities should follow:

- Ensure that the patient is on contact precautions.
- Reinforce and evaluate adherence to hand hygiene and Contact Precautions for health-care personnel who come into contact with the patient (e.g., enter the patient’s room).
- Since clinical cultures will identify only a minority of patients with CRE, screen epidemiologically-linked patient contacts for CRE colonization with stool, rectal or perirectal cultures.
- Should the patient be transferred to another health-care facility, ensure that the presence of CRE colonization or infection is communicated to the accepting facility.
- Dedicate rooms and staff to CRE patients when possible. It is preferred that staff caring for CRE patients do not also care for non-CRE patients.
- Remove temporary medical devices as soon as they are no longer needed.

For more information or to report cases of CRE, please call the NDDoH Division of Disease Control, at 701.328.2378 or 800.472.2180. Online reporting can be found at www.ndhealth.gov/disease/reportcard/.



The Arrival of Tick Season in North Dakota

The beginning of spring marks the arrival of tick-borne disease season 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.

You can prevent tick-borne diseases by taking the following precautions:

- **Avoid tick-infested areas.** Avoid wooded and bushy areas with high grass and leaf litter. If you are in tick infested areas, walk in the center of trails to avoid contact with overgrown grass, brush and leaf litter at trail edges.
- **Use insect repellent.** Use repellents that contain 20 percent or more of DEET on exposed skin. You can also treat clothes and gear, such as tents, with permethrin.
- **Wear protective clothing.** Wear long pants and long sleeves to help keep ticks off of your skin. Wear light-colored clothing to make ticks easier to spot.

Tick-borne diseases that are reportable to the North Dakota Department of Health include tularemia, Rocky Mountain spotted fever (RMSF), ehrlichiosis, anaplasmosis, babesiosis and Lyme disease. Tularemia and RMSF are transmitted by the dog tick (*Dermacentor variabilis*). Other tick-borne diseases such as ehrlichiosis, anaplasmosis, babesiosis and Lyme disease are transmitted by the deer tick (*Ixodes scapularis*).

Provisional data for 2012 include 14 cases of Lyme disease, one RMSF, three tularemia, and three anaplasmosis cases reported to the North Dakota Department of Health. For more information about tick-borne disease in North Dakota or to order free tick-borne illness educational materials, visit the tick-borne disease website at www.ndhealth.gov/disease/tickborne/.



Avian Influenza A (H7N9) Virus in China

On April 2, 2013, the World Health Organization (WHO) reported 3 human infections with a new influenza A (H7N9) virus in China. As of April 25, 2013, a total of 108 cases have been laboratory confirmed with influenza A (H7N9) virus in China, including 22 deaths. This virus has not been detected in people or birds in the United States. No person-to-person spread has been found at this time, and the reported cases are not linked to each other.

This H7N9 virus is an avian influenza virus. Human infections with avian influenza are rare, but have occurred in the past. However, this is the first time that this avian influenza subtype (H7N9) has been found in people.

Clinicians should consider the possibility of novel influenza A (H7N9) virus infection in people with respiratory illness and an appropriate travel or exposure history.

For additional information on Avian Influenza A (H7N9) Virus, please visit www.ndflu.com/H7N9/default.htm or <http://www.cdc.gov/flu/avianflu/h7n9-virus.htm>.



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. It is very important for all hepatitis B positive pregnant women be reported to the North Dakota Department of Health, in order to ensure that mother and child receive proper treatment in order to reduce transmission of hepatitis B to the child.

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. Baby boomers, those born during 1945 through 1965, represent 75 percent of adult cases of hepatitis C; thus, CDC recommends all baby boomers get tested for hepatitis C.

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.

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