

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

May 2003 Topics

- SARS
- Q Fever Case in North Dakota
- Recommendations for Controlling Influenza Outbreaks
- May Is National Hepatitis Awareness Month
- The Seventh Annual Tuberculosis Workshop



SARS

The NDDoH has added a SARS website to its home page at <http://www.health.state.nd.us> (click on SARS in the right-hand column). Information about the number of cases, affected areas, case definition, specimen collection, diagnostic methods, recommended infection control guidelines and travel advisories is updated daily. A webcast about SARS released by the NDDoH in April also is available on the department's website. To date, no suspected or probable cases of SARS have been reported in North Dakota. As of May 1, Minnesota was investigating seven suspect cases and one probable case.



Q Fever Case in North Dakota

A rancher in central North Dakota was diagnosed with Q fever earlier this year. Assessment of the patient's history revealed a previous positive serological test for Q fever about nine years ago; however the patient did not receive treatment. The patient raised sheep at that time and still works with cattle, two primary natural reservoirs of the disease. The person's chief complaints included muscle pain, stiffness, arthritis-like pain especially in the arms and night sweats. Treatment with doxycycline and symptom monitoring show signs of the patient's recovery.

The causative agent of Q fever is *Coxiella burnetii* and is shed in the milk, urine and feces of a variety of wild and domestic animals; in particular, cattle, sheep and goats. The

bacteria are shed in especially high numbers in amniotic fluids and placenta during birthing. Transmission of this disease commonly is airborne, disseminated in dust. This microbe has been marked as a potential bioterrorism agent because it is highly infectious, is transmissible in the air and is resistant to heat and drying, which enable it to live for long periods in the environment. There is no vaccine available in the United States for humans or animals, but use of a vaccine in Australia has proven successful. Since 1999 when Q fever became a reportable disease, four cases have been reported in North Dakota.



Recommendations for Controlling Influenza Outbreaks

Influenza cases continue to be reported to the NDDoH. A memorandum was distributed to all health care facilities in April 2003 in response to several phone calls the NDDoH received regarding influenza outbreaks. A summary of this memorandum is listed below:

The following control measures may be implemented during an outbreak of influenza:

1. Influenza testing to determine if illness is due to influenza.
2. Offering influenza vaccinations to **unvaccinated** persons.
3. Use of antiviral drugs for treatment and prophylaxis of influenza.
4. Frequent hand washing with soap and water.

These recommendations can be found in the Prevention and Control of Influenza MMWR at <http://www.cdc.gov/mmwr/PDF/RR/RR5103.pdf>.

Additional measures to control influenza outbreaks in an institution include:

1. Instituting droplet precautions.
2. Cohorting patients with confirmed or suspected influenza.
3. Restricting staff movement between wards or buildings.
4. Restricting contact between ill staff or visitors and patients.

Revaccination is not recommended by the Advisory Committee on Immunization

Practices. While revaccination will not cause harm, there is no data available that indicates revaccination provides an immunologic boost or benefit.

Additional information about detection and control of influenza outbreaks may be found at <http://www.cdc.gov/ncidod/hip/INFECT/FluBook2001.pdf>.

For current information about the number of flu cases and surveillance activities in North Dakota, go to <http://ndflu.com/Provider/InfluenzaSummary.htm>.



May Is National Hepatitis Awareness Month

Viral hepatitis was first described as a distinct clinical entity in the 17th and 18th centuries. Today, the NDDoH continues to focus on controlling the spread of viral hepatitis responsible for gastrointestinal illness, chronic hepatitis, hepatocellular carcinomas, cirrhosis and chronic liver disease. Hepatitis A, B and C are the most prominent forms of hepatitis in the United States.

In August of 1995, the NDDoH began providing hepatitis A vaccine for children 2 years old who live in areas endemic for hepatitis A. The vaccine is now available to the following children from ages 2 to 18:

- Children in counties where the average annual hepatitis A rate from 1987 through 1997 was at least 10/100,000 people or in counties that have periodic outbreaks of hepatitis A. These include the counties of McKenzie, Mountrail, McLean, Sioux, Rolette, Benson, Ramsey and Eddy.
- Native American children who live on or off reservations.
- **VFC-eligible children** traveling to countries that have high or intermediate endemicity of infection.
- Children who receive clotting factor concentrates, especially solvent detergent-treated preparations.
- Children who have chronic liver disease, including those awaiting or having undergone liver transplantation.
- Sexually active homosexual and bisexual male adolescents.

The number of cases of hepatitis A in North Dakota decreased from 140 cases in 1996 to four cases in 2002.

The NDDoH initiated the Perinatal Hepatitis B Vaccination Program in 1992. Hepatitis B vaccine is provided free of charge to all children born in North Dakota and all children through age 18 living in North Dakota. The NDDoH recommends that all neonates receive the first dose of hepatitis B vaccine before hospital discharge. Hepatitis B vaccine is required upon school entry in North Dakota.

Screening all pregnant women for the presence of the hepatitis B surface antigen (HBsAg) plays an important role in controlling the spread of this blood-borne pathogen. HBsAg testing is offered at no charge through the NDDoH to any pregnant woman residing in North Dakota. Infants born to HBsAg-positive mothers are provided both hepatitis B vaccine and the hepatitis B immunoglobulin (HBIG) at no charge. Follow-up testing of the infant for anti-HBs to confirm immunity also is conducted and is important for the evaluation of the program. Unfortunately, despite these efforts, many North Dakota children born to HBsAg-positive mothers are not tested for anti-HBs. This indicates a need for education at both the parent and provider level. Listed below is the number of children born to HBsAg positive mothers each year in North Dakota since the initiation of the program.

Number of Infants Born to HBsAg Mothers			
North Dakota, 1992-2002			
Year	Number of Infants Born	Year	Number of Infants Born
1992	1	1998	5
1993	4	1999	8
1994	11	2000	2
1995	5	2001	1
1996	6	2002	5
1997	5	Total	53

Follow-up of these infants indicate that:

- 25 completed the series and tested + for Anti-HBs.
- Seven moved out of the state prior to completion of the program.
- 13 have not been tested for Anti-HBs.
- Three were lost to follow-up prior to completing the hepatitis B vaccine series.
- Five are still being followed up (two need testing, two need to complete the series, one is being revaccinated because he or she tested negative for Anti-HBs after completion of HBIG/vaccine series).

Through this program, we were able to follow up three additional children who did not produce antibody response after receiving the first series of vaccine. They received three additional doses and are waiting follow-up testing.

The CDC's Division of Viral Hepatitis, in coalition with several organizations, has formed the National Viral Hepatitis Roundtable. The roundtable activities focus on adult vaccination programs, hepatitis C counseling, testing and medical referral, surveillance, prevention initiatives and research.



The Seventh Annual Tuberculosis Workshop

The NDDoH is sponsoring the Seventh Annual Tuberculosis Workshop May 29, 2003, at the Best Western Doublewood Inn in Bismarck. The workshop objectives include:

- The epidemiology of tuberculosis (TB) in North Dakota and the United States.
- The current guidelines for the treatment of TB.
- Strategies for targeted testing and treatment of latent TB infection.

To register, please contact Renae Jansen at 701.328.2376 or by email at rjansen@state.nd.us. Registration is limited and closes on May 19, so register early!

Contributing authors of The Pump Handle include Julie Goplin, Melissa Casteel, Tracy Miller, Kirby Kruger and Larry Shireley. For questions, suggestions or inquiries or to be removed from the mailing list, please contact Julie Goplin of the Division of Disease Control at 701.238.2375 or by email at jgoplin@state.nd.us.

The pump handle picture in the title was obtained from the website <http://www.ph.ucla.edu/epi/snow.html>.



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