

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

April 2007 Topics

- Influenza Season Coming to a Close
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- A Reason To Celebrate During National Hepatitis Awareness Month: Viral Hepatitis Program Established in North Dakota
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Influenza Season Coming to a Close

The number of influenza cases reported to the North Dakota Department of Health (NDDoH) has been decreasing. Influenza activity in North Dakota reached its peak for the 2006 – 2007 season during the week ending Feb. 24, 2007. As of April 25, 2007, a total of 2,346 influenza cases have been reported to the NDDoH this season. Influenza type A remains the predominant type reported, with 2,194 of the total cases (Table 1).

Table 1. North Dakota Influenza Cases by Type, 2006 – 2007.

Type	A			B	Unspecified A or B
	H1	H3	Unk.		
No. Cases	16	10	2,168	32	120

The NDDoH influenza website is updated weekly with the latest influenza data. For more information about influenza and the surveillance program, visit the NDDoH influenza website at www.ndflu.com.



Shiga-toxin *E. coli* O157 on the Rise

In 1995, *E. coli* O157:H7 became nationally notifiable following its recognition as a major foodborne pathogen responsible for several outbreaks. Since then, other strains of *E. coli* were also recognized to have the ability to produce Shiga toxin and cause clinical disease and outbreaks as well as the severe complication, hemolytic uremic syndrome (HUS). However, little is known about the incidence of non-O157 strains. Subsequently, in 2000, the Council of State and Territorial Epidemiologists expanded the reportable condition to include all Shiga toxin-producing *E. coli*. This condition is now referred to as STEC.

Preliminary data reported by the U.S. Centers for Disease Control and Prevention (CDC) indicate STEC O157 infections in humans in the U.S. increased in 2005 and again in 2006 (www.cdc.gov/mmwr/preview/mmwrhtml/mm5614a4.htm). Multi-state outbreaks associated with contaminated spinach and lettuce in 2006 serve as a reminder that measures to prevent contamination of produce intended for raw consumption must be improved. Draft guidance was issued by the U.S. Food and Drug Administration advising fresh fruit and vegetable processors on proper food-safety and hazard analysis to reduce the risk of illnesses attributed to consumption of produce. STEC O157 also remains commonly associated with contaminated ground beef and water and direct transmission from animals.

Early detection by laboratory testing and early reporting is important for prevention of STEC O157 and other non-O157 STEC. Typically, sorbitol-containing media is used in clinical laboratories to detect STEC O157 because of its inability to ferment sorbitol, resulting in colorless colonies. Non-O157 STEC strains ferment sorbitol and form pink colonies similar to other intestinal flora and therefore cannot be readily identified by this laboratory method. In these cases, Shiga toxin may be detected in stool culture broths using enzyme-linked immunosorbant assays (EIA).

Detection of Shiga toxin as the sole diagnoses method is not sufficient to characterize the incidence of STEC in North Dakota. Characterizing *E. coli* isolates by serotypes (O and H antigens) and pulsed-field gel electrophoresis (PFGE) patterns is critical to detect patterns of transmission and clusters of illness. Therefore, broth culture media or specimens in which Shiga toxin is detected should be cultured for *E. coli* and isolates submitted to NDDoH Division of Laboratory Services. As a reportable condition, STEC isolation is required to be confirmed and characterized in this manner at the Division of Laboratory Services. For questions about laboratory testing, call 701.328.6272.

Cases of HUS, regardless of isolation of STEC, are also reportable to the NDDoH. To report cases of STEC or HUS, call 800.472.2180 or report online at www.ndhealth.gov/Disease/Disease%20Reporting/Report.htm.



A Reason To Celebrate During National Hepatitis Awareness Month: Viral Hepatitis Program Established in North Dakota

May is National Hepatitis Awareness Month. And this year, the state of North Dakota has a reason to celebrate! On April 9, 2007, Governor John Hoeven signed House Bill 1434, which calls for the establishment of a viral hepatitis testing, vaccination and education program in North Dakota. The program, which will be implemented July 1, 2007, will allow the NDDoH to test high-risk individuals, specifically injection drug users, at local public health units already serving as HIV counseling, testing and referral sites throughout the state. The NDDoH also will be able to offer hepatitis A and B vaccinations to these high-risk individuals, as well

as to individuals who currently are infected with hepatitis C. In an effort to increase awareness of viral hepatitis among North Dakotans, the program will provide public education through printed materials and through a media campaign. Additionally, health-care provider training will be offered to local public health units participating in the program.

Hepatitis A, B and C are the most common types of viral hepatitis in the United States. Prevention of viral hepatitis is a major challenge for the nation's public health, scientific and medical communities. The greatest decline in hepatitis A and B infections has occurred among children and adolescents and is the result of effective interventions such as immunizations. No vaccine exists to prevent hepatitis C infection; therefore, prevention of new hepatitis C infections depends on directing primary prevention activities such as counseling and testing to people at increased risk of infection.

For more information about viral hepatitis prevention, see the NDDoH viral hepatitis website at www.ndhealth.gov/disease/Hepatitis/.



Pandemic Influenza Planning Exercises

Local public health units (LPHUs) throughout North Dakota are taking part in regional exercises to practice and evaluate written pandemic influenza plans. The regional exercises are scheduled throughout April and May. Participants include first responders, health-care facilities, Indian Health Services, the state public health laboratory and emergency preparedness and response state and community partners. The pandemic planning exercises simulate how a real pandemic influenza outbreak may develop and address strengths and weaknesses in emergency response to such a public health event in North Dakota.

Summaries of state plans, including the pandemic influenza response plan and the public health and medical all hazards plan, can be viewed at www.ndhealth.gov/EPR/.

Contributing authors of The Pump Handle include Kim Weis, Michelle Feist, Julie Goplin, Tracy Miller and Kirby Kruger. For questions, suggestions or inquiries, or to be removed from the mailing list, please contact Julie Goplin of the Division of Disease Control at 701.328.2375 or by email at jgoplin@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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