

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 2011 Topics

- Influenza Update
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Influenza Update

The North Dakota Department of Health (NDDoH) continues to monitor influenza infections in the state. As of April 6, 2011, 1,820 laboratory-identified influenza cases had been reported from 49 counties. Of the 1,820 cases, 63 hospitalizations due to influenza infection and three influenza-related deaths have been reported to the NDDoH.

2010-11 Influenza Confirmed Case Summary					
Total Cases		Age Information		Influenza Virus Strains	
		Range	Cases	Type	Cases
Gender		<10	656	A, 2009 H1N1	117
Female	909	10-19	328	A, H1	0
Male	911	20-29	309	A, H3	80
		30-39	155	A, Unspecified	1198
Hospitalized	63	40-49	121	B	421
		50-59	106	Unknown	4
Deaths	3	60 and over	145	Total	1820

Nationally, it appears that influenza has peaked and is steadily on the decline. The number of states reporting widespread geographic activity has decreased from 18 states to 10 last week. Also, for the first time since January, the percentage of doctors' visits from flu-like illness was below the national baseline of 2.5 percent.

While flu activity is declining, it is not gone in North Dakota. We continue to receive reports of cases, hospitalizations and even deaths as recent as this past week. It is important to remain vigilant to influenza in North Dakota and continue to consider the diagnosis with your patients.

For more up-to-date information on influenza in North Dakota, visit www.ndflu.com where the case counts and epidemiologic information is updated weekly.



National Infant Immunization Week Urges Parents to Vaccinate

The North Dakota Department of Health (NDDoH) highlights National Infant Immunization Week (NIIW) on April 23-30, 2011. NIIW is an annual observance that emphasizes the need to fully immunize children 24 months and younger against 14 vaccine-preventable diseases. Many parents believe their children are up-to-date, when in fact they may not be.

Each year more than 8,500 children are born in North Dakota and each is in need of protection from diseases that can be prevented through immunization. Infants and young children particularly are vulnerable to many serious illnesses and diseases. Immunizations are the best way for parents to protect the health of their children for a lifetime. Disease causing viruses and bacteria are still circulating and we still have cases of vaccine-preventable diseases in North Dakota.

For more information about NIIW or where to get immunizations for your children, contact Abbi Pierce, North Dakota Department of Health, at 1.800.472.2180, or visit our website at www.ndhealth.gov/immunize.



Measles Outbreak in Hennepin County, Minnesota

The North Dakota Department of Health (NDDoH) is providing the following information regarding measles cases in Minnesota. There have been 15 confirmed cases of measles reported in Minnesota. Twelve of the cases have been linked to a case that acquired infection in Kenya (13 total), one case acquired infection in Florida and one case acquired infection in India. Cases have ranged in age from 4 months to 51 years. Five of the cases were too young to receive vaccine, six were of age but were not vaccinated, one was vaccinated and three have unknown vaccine status. There have been eight hospitalizations and no deaths. There have been two known exposures to North Dakota residents, but no cases reported. North Dakota has not had a measles case since 1987.

Although measles is no longer an endemic disease in the United States, it remains endemic in most countries of the world, including some countries in Europe. International travel highlights the ongoing risk of measles importations, the risk of spread in susceptible populations, and the need for a prompt and appropriate public health response.

Measles is an acute disease characterized by fever, cough, coryza, conjunctivitis and a maculopapular rash lasting more than three days. Measles transmission is primarily person to person via large respiratory droplets, but airborne transmission can occur. Respiratory droplets can remain infectious for approximately two hours in the environment. The incubation period for measles is usually 10 to 12 days, although symptoms may occur as early as seven or late as 21 days after exposure.

Providers should consider a diagnosis of measles if a patient has a rash-like illness and recently has traveled internationally or to areas with ongoing measles outbreaks, such as Hennepin County.

To prevent transmission of measles in health-care settings, stringent airborne infection control precautions should be followed. Suspected measles patients (i.e., people with febrile rash illness) should be removed from emergency departments and clinic waiting areas as soon as they are identified; placed in a private room with the door closed, and asked to wear a surgical mask if tolerated. In hospital settings, patients with suspected measles should be placed immediately in an airborne infection (negative pressure) isolation room if one is available and, if possible, should not be sent to other parts of the hospital for examination or testing purposes.

Two doses of measles vaccine as a combination MMR separated by at least four weeks routinely are recommended for all children ages 12 months and older. Two doses of MMR are required for all children attending kindergarten through grade 12 in North Dakota. Two doses of MMR also are required for people attending colleges in North Dakota. All adults born in 1957 and after should have documentation of at least one dose of MMR or other evidence of measles immunity. Birth before 1957 generally is considered acceptable evidence of immunity to measles.

Please heighten your suspicion of measles and report any suspect cases of measles immediately to the NDDoH. As mandated by North Dakota law, any suspect cases of measles must be immediately reported to the NDDoH by phone at 701.328.2378, or confidential fax at 701.328.0355.

For general information about measles, visit the NDDoH website at www.ndhealth.gov/Disease/Documents/faqs/Measles2.pdf. Pictures of individuals with measles can be found at <http://www.cdc.gov/measles/about/photos.html>.

Please contact the NDDoH Division of Disease Control at 701.328.2378 or toll-free at 800.472.2180 with any questions or concerns regarding this issue.



Haemophilus Influenzae Type B

The North Dakota Department of Health (NDDoH) has confirmed a case of *Haemophilus influenzae*, type b (Hib) disease in a young child. North Dakota has not had a case of Hib disease in a pediatric patient since 1991. Hib used to be one of the most common causes of serious bacterial infection in young children, but is now very rare due to vaccination. Hib may cause a variety of diseases such as meningitis (inflammation around the spinal cord and brain), blood stream infections, pneumonia, cellulitis (infection of the skin),

epiglottitis (inflammation of the upper airway), arthritis, and infections of many other parts of the body. Hib is a very severe illness and can cause death in young children.

Symptoms depend upon the part of the body affected. Fever is present in all forms of Hib disease. Meningitis can cause stiff neck, headache and vomiting. Pneumonia may cause a cough that produces mucus and rapid breathing, and patients with epiglottitis usually have noisy breathing and a very sore throat. Swelling and purple-red discoloration of the skin is a symptom of cellulitis.

North Dakota providers should take steps to prevent Hib disease by vaccinating children according to the recommended immunization schedule. Hib vaccine routinely is recommended for children who are younger than 5. Some older children and adults who are at high risk for complications also are recommended to receive this vaccine. This case highlights the importance of vaccination in not only protecting the immunized individual, but also those who cannot be vaccinated because they are too young or those who cannot be vaccinated.

Any incidence of disease or presumptive diagnosis of Hib should be reported to the NDDoH immediately. For more information, please contact the NDDoH Immunization Program at 701.328.2378 or toll-free at 800.472.2180.



Rabies Surveillance – Variant Typing

Wild animals account for approximately 92 percent of the reported rabies cases in the United States, according to the Centers for Disease Control and Prevention (CDC). In North Dakota, 60 percent of the reported rabies cases from 2005 to 2010 have been in wild animals. The primary rabies reservoirs in the United States are wild carnivores and bats. The recognized reservoir for rabies in North Dakota is the skunk and the acknowledged rabies variant is the North American skunk variant. The North Dakota Department of Health (NDDoH) has limited rabies variant data because variant typing is not routinely performed on positive cases.

In order to determine the frequency of spillover from rabid bat species to wild terrestrial carnivores as well as the occurrence of other rabies variants (raccoon, canine, and south central skunk variants), the NDDoH is partnering with the North Dakota Game and Fish Department and U.S. Department of Agriculture Wildlife Services to collect additional animals for rabies testing. Animals will be identified through existing surveillance programs and submitted for rabies testing. All rabies-positive specimens will be forwarded to the CDC for rabies-variant typing. Plans are in place to conduct enhanced rabies surveillance through the fall of 2011. More information about rabies can be found on the NDDoH rabies website at <http://www.ndhealth.gov/disease/Rabies/>.

Contributing authors of The Pump Handle include Lindsey VanderBusch, Abbi Pierce, 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 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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