


# 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 2005 Topics

- Pertussis Outbreak in Cass County Schools
- New Meningococcal Vaccine Recommendations 
- Hantavirus
- Foodborne Disease
- 50<sup>th</sup> Anniversary of the Polio Vaccine



### **Pertussis Outbreak in Cass County Schools**

Since April 1, 2005, 10 laboratory-confirmed and eight epidemiologically linked cases have been reported in Cass County middle and elementary school children. The North Dakota Department of Health (NDDoH) is working closely with Fargo Cass Public Health to investigate cases and identify contacts. On April 19, 2005, Fargo Cass Public Health sent a memo to health-care providers in Cass County to inform them about the outbreak.

Providers in Cass County are recommended to suspect pertussis in individuals with an acute cough onset, with one of the following symptoms:

- Prolonged cough
- Paroxysms
- Whoop
- Post-tussive vomiting/gagging

Individuals with the above symptoms should be tested and treated for pertussis. Suspected pertussis cases should be treated at the time of testing. Pertussis is a mandatory reportable condition in North Dakota, and cases should be reported immediately to the NDDoH. All cases are investigated by the NDDoH or local public health unit to prevent further spread of the disease in the community. Symptomatic

contacts should be placed on antibiotics and furloughed until five days of antibiotics are complete. Asymptomatic contacts also should be placed on antibiotics but may still participate in community activities (i.e. school, work, day-care) as usual.

Pertussis is endemic in North Dakota. Therefore, it is important for health-care providers to consider pertussis as a differential diagnosis for cough illnesses to prevent the spread of the disease to infants. Currently, there is no pertussis vaccine available for adolescents and adults. Two adolescent and adult tetanus, diphtheria and pertussis vaccines are expected to be approved by the U.S. Food and Drug Administration this summer. For more information about pertussis, call the NDDoH Immunization Program at 701.328.2378 or toll free at 800.472.2180.



### **New Meningococcal Vaccine Recommendations**



In February 2005, the Advisory Committee on Immunization Practices (ACIP) passed new recommendations for meningococcal conjugate vaccine (Menactra™). The vaccine is licensed for people ages 11 to 55. The ACIP recommendations are as follows:

- Pre-adolescent visit (11 to 12 years old) and high school entry (14 to 15 years old)
- College freshman living in dormitories
- Other groups at high risk (microbiologists exposed to *Neisseria meningitidis*, people who travel or reside in countries where *N. meningitidis* is epidemic, military recruits and complement deficient and asplenic patients)

The NDDoH Immunization Program will supply meningococcal conjugate vaccine to Vaccines For Children (VFC) eligible children only. VFC eligibility should be assessed at each immunization visit. The NDDoH will notify health-care providers when Menactra™ is available to order from the state. Menactra™ is currently available from Sanofi Pasteur.

For more information about meningococcal disease and vaccines, visit [www.cdc.gov/nip/publications/VIS/vis-mening.pdf](http://www.cdc.gov/nip/publications/VIS/vis-mening.pdf).



### **Hantavirus**

Hantavirus pulmonary syndrome (HPS) is a viral infection that causes severe lung disease. The virus can be transmitted to people through a bite from a mouse or exposure to mouse urine and fecal droppings. HPS is not transmitted from person to person. People are at risk when cleaning out summer lake homes or storage bins that may become infested by rodents during the off season.

Symptoms of HPS usually occur two to three weeks after infection. Early symptoms commonly include fever, muscle and body aches, fatigue, headache, dizziness, chills, nausea and vomiting. The illness worsens within a short period of time to include cough and severe shortness of breath when lungs fill with fluid.

Seven cases of HPS have been reported to the North Dakota Department of Health since the disease was first recognized in May 1993. Four of these cases were fatal. Nationwide, 384 cases have been reported since 1993. The mean age of people infected with HPS is 38 years (range: 10 to 75 years). Thirty-six percent of all reported cases were fatal.

HPS is prevented by taking precautions against rodent infestation and ensuring proper disinfection:

- Fill any holes in your home or cabin that you can place your finger into.
- Clean droppings or urine with 1 ½ cups chlorine bleach to one gallon water.
- Wear rubber gloves and a paper mask while cleaning.
- Do not vacuum or sweep to avoid making virus-containing particles airborne.

For more information, call the North Dakota Department of Health at 800.472.2180.



### **Foodborne Disease**

Foodborne disease refers to various acute illnesses caused by ingestion of food contaminated with bacteria, viruses, parasites or chemicals. A foodborne outbreak is defined as two or more people ill with similar symptoms after consuming a common food. According to the U.S. Centers for Disease Control and Prevention (CDC), foodborne illness is estimated to affect 76 million people nationwide with 325,000 hospitalizations and 5,000 deaths. A recent cost estimate of annual costs for medical treatment, productivity loss and premature deaths resulting from these illnesses is \$6.5 billion.

The CDC, in collaboration with the U.S. Department of Agriculture (USDA) and the U.S. Food and Drug Administration (FDA), established the Foodborne Diseases Active Surveillance Network (FoodNet) in 1995. This surveillance database monitors occurrence of foodborne illness reported in specified regions nationwide. Incidence of foodborne illnesses tracked in FoodNet significantly declined in 2003 and 2004, indicating that progress is being made toward reducing illness from foodborne pathogens. These results are consistent with results of regulatory testing of meat, poultry and egg products by the USDA Food Safety and Inspection Service. The preliminary report for the 2004 FoodNet Data can be viewed at [www.cdc.gov/mmwr/preview/mmwrhtml/mm5414a2.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5414a2.htm).

Foodborne outbreaks are common during the summer months. Physicians and other health-care professionals who are likely to see the index case have a critical role in the prevention and control of foodborne disease. If any of the following signs and symptoms occur in patients, either alone or in combination, laboratory testing may provide important diagnostic clues (particular attention should be given to very young and elderly patients and to immunocompromised patients, all of whom are more vulnerable):

- Bloody diarrhea
- Weight loss
- Diarrhea leading to dehydration
- Fever
- Prolonged diarrhea (three or more unformed stools per day, persisting several days)
- Neurologic involvement, such as paresthesias, motor weakness, cranial nerve palsies
- Sudden onset of nausea, vomiting, diarrhea
- Severe abdominal pain

A foodborne disease outbreak should be reported if two or more patients are found to have ingested a common food or meal. Obtaining stool or vomit specimens and timely

reporting to appropriate authorities are the most important factors in identifying and preventing further spread of foodborne illness. To report foodborne illnesses, contact the North Dakota Department of Health at 701.328.2378 or toll free at 800.472.2180.

Foodborne disease may be avoided by excluding sick food handlers from work or handling of ready-to-eat food items and increased awareness of proper hand washing procedures, cooking, reheating and cooling instructions. For more information about foodborne disease, visit [www.cdc.gov/ncidod/diseases/food/index.htm](http://www.cdc.gov/ncidod/diseases/food/index.htm).



### **50<sup>th</sup> Anniversary of the Polio Vaccine**

April 12, 2005, marked the 50th anniversary of the first polio vaccine. The vaccine breakthrough, driven by Dr. Jonas Salk, brought together communities in a national collaboration that at that time was the largest human cooperative effort in history. Polio was eliminated in the United States in 1994. Before the introduction of the vaccine, 16,000 cases of paralytic polio occurred in the U.S. each year.

Since this effort 50 years ago, we can now protect children from more than 12 vaccine-preventable diseases, and disease rates have been reduced by 99 percent in the U.S. However, the polio virus still circulates in Asia and Africa, paralyzing the world's most vulnerable children. Efforts to maintain immunization programs and strengthen them worldwide will ensure that the diseases seen 50 years ago do not become a threat to our children today.

Information about polio disease, vaccine and eradication efforts is available at [www.cdc.gov/nip](http://www.cdc.gov/nip)

*Contributing authors of The Pump Handle include Molly Sander, 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 701.238.2375 or by email at [jgoplin@state.nd.us](mailto:jgoplin@state.nd.us).*

*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  
Craig Lambrecht, MD, MPH, Chief, Medical Services Section  
Kirby Kruger, Director, Division of Disease Control