

# 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 2010 Topics

- Pertussis Outbreak in Walsh County
- National Recreational Water Illness Prevention Week Is May 24 – 30, 2010
- Seal It! Trap It! Clean It!
- West Nile Virus Season
- New Heptavalent Botulinum Antitoxin
- Limited Voluntary Recall on Rabies Vaccine



### **Pertussis Outbreak in Walsh County**

On April 23, 2010, a suspected outbreak of pertussis (whooping cough) in Walsh County was reported to the North Dakota Department of Health (NDDoH). As of May 7, 2010, three lab confirmed cases and 12 epidemiologically linked cases have been identified and are under investigation. The age range of cases is 2 months to 12 years. The children related to this outbreak were age-appropriately vaccinated.

The source of the infection is unknown, and the earliest onset of symptoms was in mid-March. Some of the affected families have traveled outside of North Dakota, and another state is investigating a possible outbreak associated with symptomatic individuals traveling from North Dakota. At the time of investigation, all identified contacts and cases had been placed on appropriate antibiotics. Interviews were conducted with the affected families. Most children in the household had pertussis-like symptoms, and no adults reported illness.

Due to the outbreak, pertussis should be considered in the diagnosis of coughs lasting longer than one week for Walsh County residents. Walsh County Health District is offering vaccination free-of-charge to community members. People presenting with symptoms of pertussis should be treated and excluded from community activities, school, child care and work until pertussis is ruled out or five days of antibiotics have been taken.

The NDDoH recommends providers consider testing for pertussis when evaluating any patient with an unexplained, prolonged cough illness (longer than 14 days) characterized by one or more of the following symptoms: paroxysms, whoop, post-tussive gagging/vomiting or apnea. Appropriate antibiotics for the treatment of pertussis can be found at [www.ndhealth.gov/Immunize/Documents/Disease/Pertussis\\_Tx09.pdf](http://www.ndhealth.gov/Immunize/Documents/Disease/Pertussis_Tx09.pdf). Treatment is not necessary for individuals who have had a cough for longer than 21 days.

Diphtheria, tetanus and acellular pertussis vaccine (DTaP) should be administered routinely to infants at 2, 4, 6 and 15 to 18 months of age and at 4 to 6 years of age. The Advisory Committee on Immunization Practices (ACIP) recommends vaccination of adolescents (ages 11 through 18) and adults younger than 65 against pertussis with tetanus, diphtheria and pertussis vaccine (Tdap). A single dose of Tdap should replace a Td booster (recommended every 10 years) for adults not previously vaccinated with Tdap.

For more information about pertussis, please contact the NDDoH at 701.328.2378 or 800.472.2180 or visit [www.ndhealth.gov/immunize](http://www.ndhealth.gov/immunize).



### **National Recreational Water Illness Prevention Week Is May 24 – 30, 2010**

May 24 – 30, 2010, is the sixth annual National Recreational Water Illness Prevention Week. This observance provides an opportunity for public health agencies to increase awareness of recreational water illness and promote healthy water experiences.

Recreational water illness (RWI) is spread by swallowing, breathing or having contact with contaminated water from swimming pools, water parks, interactive fountains, spas, lakes, rivers or oceans. The most commonly reported RWI is diarrhea caused by pathogens such as *Cryptosporidium*, Norovirus, *Shigella*, *Escherichia coli* O157:H7 and *Giardia*. Children, pregnant women and people with compromised immune systems are at greatest risk for RWIs.

The following tips can help protect you from RWI:

- Refrain from swimming while experiencing diarrhea.
- Avoid swallowing pool water or even getting it in your mouth.
- Shower before swimming, and wash your hands after using the toilet or changing diapers.
- Take children on bathroom breaks or check diapers often.
- Change diapers in a bathroom and not at poolside, and thoroughly clean the diaper-changing area.

For more information regarding healthy swimming or to report a waterborne illness, call the NDDoH at 701.328.2378 or 800.472.2180 or visit [www.ndhealth.gov/disease/GI](http://www.ndhealth.gov/disease/GI).



### **Seal It! Trap It! Clean It!**

People who are cleaning cabins or other buildings that were closed for the winter should protect themselves against hantavirus, a disease transmitted by infected mice. Hantavirus pulmonary syndrome (HPS) is a viral infection that causes severe lung disease.

In North Dakota, HPS is caused by the SinNombre virus, and the rodent vector is the deer mouse *Peromyscus maniculatus*. The virus is shed in the stool, urine and saliva of infected rodents. Infection usually results from inhalation of the virus when droppings and urine are disturbed. People infected with the virus develop a rapidly progressing illness.

Eleven cases of HPS have been reported to the NDDoH since 1993; the most recent was reported in 2009. Six of the cases were fatal, with the most recent being in 2008.

Early symptoms are “flu-like,” with fever, headache, muscle ache and malaise. Vomiting and diarrhea also have been reported. Pulmonary signs and symptoms develop quickly, with shortness of breath and low blood-oxygen levels. Treatment is supportive with careful attention to fluids, electrolytes and blood pressure management. Additional information regarding the clinical management of HPS can be found at [www.cdc.gov/ncidod/diseases/hanta/hps/index.htm](http://www.cdc.gov/ncidod/diseases/hanta/hps/index.htm).

The Department of Health offers the following tips for preventing rodent infestation from occurring and for properly disinfecting areas contaminated by rodents:

- For severe or persistent infestations, contact a pest-control professional for rodent eradication or a building contractor for rodent exclusion (rodent proofing), or consult with the North Dakota Department of Health by calling 800.472.2180.
- Seal all entry holes through which a rodent can enter.
- Clear clutter and tall grass away from buildings to eliminate sources of nesting materials.
- **Do not** sweep or vacuum areas with evidence of rodent infestation, such as nests or fecal droppings. This action may stir up and aerosolize the viral particles.
- Wear rubber, latex, vinyl or nitrile gloves.
- Thoroughly wet contaminated area with a disinfectant or bleach solution before wiping up with a paper towel. Soiled cleaning materials may be double bagged and discarded in the trash or disinfected before reuse.

For more information about HPS, please call the NDDoH at 701.328.2378 or 800.472.2180 or visit [www.ndhealth.gov/disease](http://www.ndhealth.gov/disease).



### **West Nile Virus Season**

As warmer weather approaches, the NDDoH is reminding people to take precautions against West Nile virus (WNV). This includes wearing mosquito repellent when you are outdoors, removing standing water from around your home and wearing pants and long-sleeved shirts when possible.

Dead bird and mosquito surveillance begins June 1, 2010. Corvids and raptors are the only birds to be tested for WNV. These groups include the following birds: crows, magpies, blue jays, ravens, hawks, eagles, owls and falcons. While not all birds are acceptable for testing, the NDDoH is interested in dead bird reports. If you find a dead bird that is not eligible or is too decomposed for testing, please report the bird via the online dead bird reporting form found at [www.ndhealth.gov/wnv](http://www.ndhealth.gov/wnv) or by calling your local public health unit or the NDDoH at 800.472.2180.

As of June 1, 2010, the NDDoH Division of Laboratory Services will offer free human WNV testing through Sept. 30, 2010, on serum specimens from patients meeting any one of the following criteria and in the absence of a more likely clinical explanation:

Criteria I – Neuroinvasive Disease

- The presence of fever is required with at least one of the following:
  - Signs of brain dysfunction (e.g., altered mental status, confusion, coma, disorientation and stupor)
  - Signs of other neurologic dysfunction (e.g., stiff neck, sensory deficits, abnormal reflexes or movements, paralysis and pleocytosis in cerebrospinal fluid)

Criteria II – Non-neuroinvasive Disease

- The presence of documented fever is required and should include at least one additional symptom such as:
  - Headache, myalgia, arthralgia, malaise, skin rash, photo-phobia, lymphadenopathy, etc.

Questions regarding laboratory testing may be directed to the Division of Laboratory Services at 701.328.6272. For more information about WNV reporting and surveillance, visit the NDDoH West Nile virus website at [www.ndhealth.gov/wnv](http://www.ndhealth.gov/wnv). Website updates begin in June and will be updated weekly every Wednesday.



**New Heptavalent Botulinum Antitoxin**

As of March 13, 2010, heptavalent botulinum antitoxin (HBAT) became the only botulinum antitoxin available in the United States for naturally occurring noninfant botulism. HBAT contains equine-derived antibody to the seven known botulinum toxin types (A-G). HBAT replaces a licensed bivalent botulinum antitoxin AB and an investigational monovalent botulinum antitoxin E.

The transition to HBAT ensures uninterrupted availability of antitoxin. Botulinum antitoxin for treatment of naturally occurring noninfant botulism is available only from the Centers for Disease Control and Prevention (CDC). Baby botulism immune globin remains available for infant botulism through the California Infant Botulism Treatment and Prevention Program.

For more information on botulism, or to report a suspect case, please call the NDDoH at 701.328.2378 or 800.472.2180.



**Limited Voluntary Recall on Rabies Vaccine**

On April 13, 2010, Novartis Vaccines and Diagnostics released a voluntary market withdrawal of the following RabAvert Rabies Vaccine: RabAvert Kit Batch #458011A, diluent bial batch #927011. The stopper and the metal crimp dislodge from the diluent vial completely when removing the protective cap. A low percentage of diluent vials exhibit this issue.

This is a precautionary action taken by Novartis as they have no evidence that the quality of the diluent is compromised as long as the stopper is not removed from the diluent vial. For patients who have received vaccine from this batch, no additional actions, such as revaccination, are required.

The vial of lyophilized rabies vaccine contained in these kits is not affected, but all RabAvert should be returned as complete kits. The listed batch is subject to this voluntary market withdrawal; all other RabAvert batches are unaffected and safe for use. Customers are requested to contact Novartis Vaccines Customer Service to arrange for product return at 866.683.4732.

For further questions about rabies, please contact the NDDoH 701.328.2378 or 800.472.2180, or visit [www.ndhealth.gov/disease/rabies](http://www.ndhealth.gov/disease/rabies).

*Contributing authors of The Pump Handle include Abbi Pierce, Michelle Feist, Lindsey VanderBusch, Julie Wagendorf, Kirby Kruger, Tracy Miller and Sarah Weninger. 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](mailto:sweninger@nd.gov).*

*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).*



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