

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

July 2007 Topics

- West Nile Virus Death Reported in North Dakota
- Shiga Toxin *E.coli* Infections Associated With a Wedding Reception
- Increase of Diarrheal Illnesses Associated With Recreational Water Activities



West Nile Virus Death Reported in North Dakota

As of July 31, 2007, 37 human West Nile virus (WNV) infections have been reported to the state health department from a total of 16 counties. On July 25th, the North Dakota Department of Health (NDDoH) announced the state's first WNV-related human death in 2007. The case was a resident of the southeastern region of the state and was older than 60. The case died while hospitalized and did have underlying medical conditions. The news release about this case and others can be viewed at www.ndhealth.gov/wnv/News/.

Additional WNV activity includes eight dead birds, three horses and one sentinel chicken. There have been more than 140 dead birds from across the state reported online.

For more information about WNV, visit the NDDoH website at www.ndhealth.gov/wnv.



Shiga Toxin *E.coli* Infections Associated With a Wedding Reception

On Thursday, July 5, 2007, the NDDoH received a call from a physician in Minot, N.D., who reported seeing three children, all younger than 10 years old, with bloody diarrhea. All three children attended a wedding reception in North Dakota. An investigation was initiated by notifying the bride and groom hosting the wedding. Details regarding food preparation and menu items served at the wedding reception were discussed. Chicken was catered by a local restaurant. All other food items served at the wedding reception – including homemade meatballs, baked beans, potato salad, a variety of other macaroni and vegetable salads, and

cheesecake desserts – were prepared in the private home of the bride with the help of family and friends. The NDDoH received a list of wedding attendees from the bride and groom. The list consisted of people from North Dakota (counties: McLean, Mountrail, Ward), Arizona and Manitoba, Canada.

An investigation by the NDDoH identified that 23 (46%) wedding reception attendees met the case definition of diarrheal illness within 10 days following attendance of the wedding reception. The most frequently reported signs and symptoms included diarrhea (100%), bloody diarrhea (17%), abdominal cramping (74%), nausea (30%), fever (13%) and vomiting (9%). Fourteen (61%) of the cases were females. The ages ranged from 3 to 90 years (median = 26 years). The incubation period ranged from 11 to 94 hours (median 38 hours). The duration of illness ranged from 1 to 96 hours (median = 36 hours). No one was hospitalized and five case-patients sought medical attention.

Three stool specimens were sent to the NDDoH Division of Laboratory Services for shiga toxin testing. All three samples tested positive for shiga-toxin producing *E. coli* (STEC). DNA fingerprinting and serotype testing are pending. On July 19, a Manitoba health official reported a patient who traveled to North Dakota from Manitoba to attend the wedding also tested positive for STEC.

Leftover food samples collected from the bride's home were sent to the NDDoH Division of Laboratory Services. Samples included meatball gravy and two macaroni salads. Food tested negative for STEC. The food vehicle in this outbreak was unable to be determined.



Increase of Diarrheal Illnesses Associated With Recreational Water Activities

Cryptosporidium (crypto) is a parasitic protozoa commonly found in water. The parasite is excreted in feces of humans and many species of animals, including cattle, sheep, rodents, cats, dogs and birds. Humans and animals may be potential sources of contamination of untreated surface water, such as lakes and rivers. People may become infected by swallowing water contaminated with the parasite and, while infected, can pose a risk of spreading the disease to others by swimming in public beach areas; in treated, recreational water venues (e.g., public and residential swimming pools and water parks); handling food; and direct contact via fecal-oral route. Several cases of illnesses associated with swimming and other recreational water activities in lakes have been reported to the NDDoH. Early identification and notification of illnesses such as cryptosporidiosis is important for public health intervention.

As of July 31, 2007, 23 cases of cryptosporidiosis have been reported in North Dakota compared to 11 at the same time last year. The majority of this year's cases occurred in June and July; of those, nine people reported recently swimming in lakes in North Dakota. Children, pregnant women and people with weakened immune systems are at greatest risk of getting sick. Other organisms that can cause infections from being in water include giardia, shigella and *E. coli*.

The following tips can help prevent water-related illnesses:

- Do not swallow lake or river water and avoid getting water in your mouth.
- Practice good hygiene by taking a shower before and after swimming and wash your hands after using the toilet or changing diapers.
- Make sure children don't go to the bathroom in the water by taking them on bathroom breaks often. Make sure they wash their hands properly.
- Do not swim when you have diarrhea. This is especially important for children in diapers. **People diagnosed with cryptosporidium or giardia should avoid swimming for two weeks after diarrhea has ended.**

For more information about cryptosporidiosis, visit

www.ndhealth.gov/Disease/Documents/faqs/Crypto.pdf or www.cdc.gov/healthyswimming/.

To report a case of cryptosporidiosis to the NDDoH, call 800.472.2180.

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



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