

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

September 2014 Topics

- Enterovirus D68
- Increase in Cryptosporidiosis Cases
- Influenza Vaccine
- Carbapenem-Resistant *Enterobacteriaceae* Cluster Identified in Healthcare Facility
- Is There a Doctor in the House?



Enterovirus D68

Currently, eleven North Dakota cases of Enterovirus D68 have been identified by the Centers for Disease Control and Prevention (CDC). None of the North Dakota cases report paralytic disease, and no cases have died. Twenty-three North Dakota specimens have tested negative for EV-D68. Of these negative specimens, eight rhinoviruses and one additional enterovirus (not D68) have been identified. EVD-68 is not a reportable disease in North Dakota, and testing of severe, hospitalized patients is for epidemiologic purposes only. Hospitals are asked to report clusters of severe respiratory illness of unknown origin to the North Dakota Department of Health (NDDoH) within 24 hours.

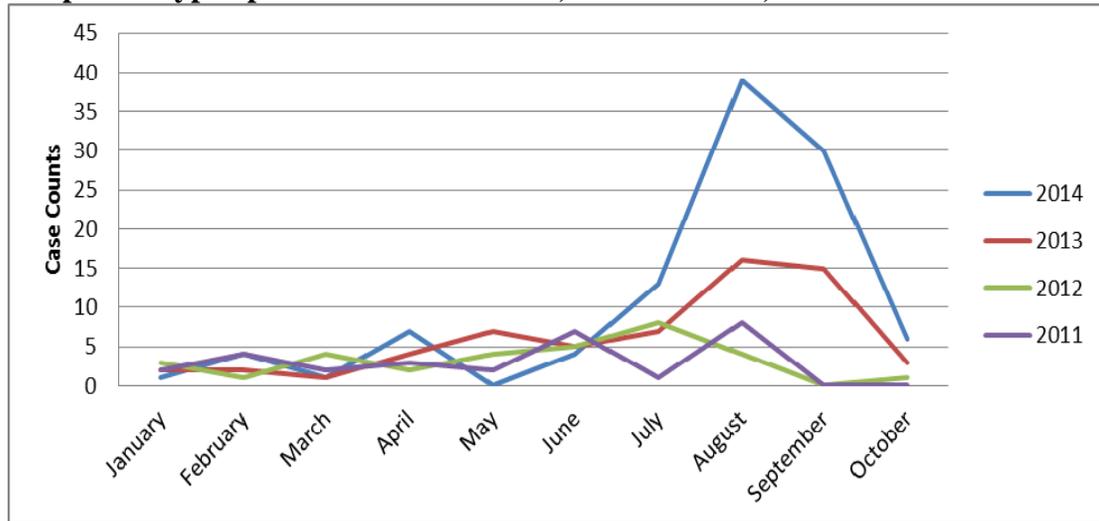


Increase in Cryptosporidiosis Cases

The NDDoH has seen a rise in Cryptosporidiosis in the past few months compared to previous years (**Graph 1**). Cryptosporidiosis is a diarrheal illness caused by a parasite. The most common form of transmission is water, either through drinking water or recreational water. Cryptosporidium is one of the most frequent causes of waterborne disease among humans in the United States.

The number of reported cases was 103 as of October 9, 2014 compared to 57 at the same time last year.

Graph 1. Cryptosporidiosis Case Counts, North Dakota, Jan – Oct 9 2011-2014



Thirteen of the reported cases have been associated with an outdoor pool in Dickinson, ND. The pool has since closed for the season. People who have diarrhea should not swim for at least two weeks after diarrhea stops. People should not swallow water while swimming or drink untreated water.



Influenza Season Update

The NDDoH is beginning to see a small number of early season influenza cases, including an outbreak of influenza A H3N2 in a long term care facility in the southwest portion of the state. Case counts are available at www.ndflu.com, which is updated every Thursday to reflect cases for the previous week. The single best way to prevent seasonal flu is to get vaccinated each year with the flu vaccine. Everyone 6 months and older is recommended to receive the flu vaccine each year; children between 6 months and 8 years may need two doses of vaccine. The CDC has also recommended that children 2 through 8 years of age preferentially receive the live nasal spray vaccine when it is immediately available and if the child has no contraindications or precautions to that vaccine. It is recommended that individuals begin receiving flu vaccine as soon as it becomes available. Supply of influenza vaccine may be slightly delayed this year but adequate supply is anticipated to be available by October and November.



Carbapenem-Resistant *Enterobacteriaceae* Cluster Identified in Healthcare Facility

Carbapenem-resistant *Enterobacteriaceae* (CRE) are a family of gram-negative bacteria that are resistant to carbapenems and a number of other available antibiotics, making these infections very difficult to treat. Some CRE produce an enzyme, *Klebsiella pneumoniae* carbapenemase (KPC), that breaks down carbapenems and make them ineffective.

The NDDoH was notified by an infection preventionist at a healthcare facility of two confirmed CRE cases with identical susceptibilities. The infection preventionist knew of one previous case who had since been discharged, and also suspected additional cases. A

point prevalence test was done identifying six additional CRE positive patients via Modified Hodge Test (MHT), bringing the total number of cases to nine. The facility began screening new admissions, resulting in an additional two cases identified, for a total of 11 cases.

The facility conducted monthly point prevalence testing on all patients who had previously tested negative. After the first month of ongoing surveillance testing, three new cases were identified. Additionally, CRE isolates are required to be sent to the NDDoH Division of Laboratory Services, and within the last year there were two prior cases from this facility. Additional testing was performed on these 16 isolates to look for the KPC-producing enzyme through Polymerase Chain Reaction (PCR) test; all 16 isolates tested positive. Pulse field gel electrophoresis (PFGE) was performed to determine how closely the isolates matched. Of the 16 patient isolates, 6 were related, 8 closely related, and 2 possibly related.

Not all cases show signs and symptoms of an active infection, but these patients are colonized with the organism. This means that although they do not have an active infection, the organism is present in their system. Because CRE screening was not initially performed on admission, the CRE status at time of admission is unknown for most of these cases.

The facility is currently reviewing policy and procedures, providing staff and patient/family infection control education, and reviewing contracted environmental services procedures. The facility is continuing to do CRE screenings on new admissions and monthly testing on all previously negative patients. As of September 29, an additional four patients have tested positive through their monthly surveillance testing.

If you have questions about CRE, please call the NDDoH at 800.472.2180 or 701.328.2378.



Is There a Doctor in the House?

In September 2014, Tracy Miller completed her PhD in Public Health - Epidemiology. Her dissertation topic was titled “Impact of Emergency Evacuations on Skilled Nursing Facilities Residents’ Health during 2009 Floods in Fargo, North Dakota”. Congratulations Dr. Miller!



NORTH DAKOTA
DEPARTMENT of HEALTH

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