

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

December 2014 Topics

- New Vaccines Approved!
- Vaccine Preventable HAN
- Influenza Update-December 2014
- NDDoH Investigates Two Gastrointestinal Illness Outbreaks
- NDDoH Investigates a New Tuberculosis Case



NEW Vaccines Approved!

On October 29, the Food and Drug Administration (FDA) announced the approval of Trumenba[®]. Trumenba[®] is the first vaccine licensed in the United States to prevent invasive meningococcal disease caused by *Neisseria meningitidis* serogroup B in individuals 10 to 25 years of age. The vaccine received accelerated approval; this path of approval allows the FDA to approve products more quickly for serious or life-threatening diseases based on evidence of effectiveness. Three randomized studies were conducted in the United States and Europe with approximately 2,800 adolescent participants. Among study participants who received three doses of Trumenba[®], 82 percent developed antibodies against four different *N. meningitidis* serogroup B strains. The vaccine was also shown to be safe; the most commonly reported side effects were pain and swelling at the injection site, headache, diarrhea, muscle pain, joint pain, fatigue and chills. As part of the accelerated approval process, Pfizer will conduct further studies to verify Trumenba's[®] effectiveness against additional strains of *N. meningitidis* serogroup B.

On December 10, the FDA approved the Gardasil[®] 9 vaccine which protects against nine types of Human Papillomavirus (types 16, 18, 31, 33, 45, 52, and 58). The vaccine has the ability to prevent approximately 90 percent of cervical, vulvar, vaginal and anal cancers and has been

approved for use in females' ages 9 to 26 and males ages 9 to 15. A randomized, controlled clinical study determined that the vaccine was 97 percent effective in preventing cervical, vulvar and vaginal cancers caused by HPV types 31,33,45,52, and 58 and as effective at HPV4 in preventing types 6,11,16, and 18. The safety of Gardasil[®] 9 was evaluated in approximately 13,000 males and females. The most commonly reported adverse reactions were injection site pain, swelling, redness and headaches.

The Advisory Committee for Immunization Practices (ACIP) has not yet voted on recommendations for Gardasil[®] 9 or Trumenba[®]. The ACIP will be discussing recommendations for both vaccines at its February 2015 meeting.



Vaccine Preventable HAN

On January 9, the North Dakota Department of Health (NDDoH) distributed a Health Advisory reminding health care providers that vaccine preventable diseases still circulate in the United States and should be considered when diagnosing patients. The NDDoH saw an increase in reported pertussis cases in the later part of 2014 with one-third of cases for the year reported in November and December. Additionally, bordering states have reported cases of measles and mumps. South Dakota reported an outbreak of measles on December 29; so far 14 cases have been reported. The United States experienced a record number of measles cases in 2014 with 610 confirmed cases (preliminary), the most since measles elimination was documented in the U.S. in 2000. There has also been an ongoing outbreak of mumps within the National Hockey League (NHL). The NDDoH also reminded providers to report any incidence of these diseases immediately.

For more information on vaccine preventable disease reporting, symptomology, and testing please visit www.ndhan.gov/data/health/2015-01-09-HAN%20VPD%202015-v.FINAL.pdf.



Influenza Update—December 2014

The NDDoH saw a significant increase in influenza activity this month, with nearly 2,000 cases reported for the 2014-15 influenza season by December 31. This is the third influenza season in a row with an earlier-than-average start to the season. Increases in activity began in the eastern portion of the state at the beginning of the month, and influenza was widespread across all regions by mid- to late-December.

A majority of the influenza that has been circulating has been identified as influenza A, and all typed influenza A cases were identified as influenza A H3N2. Years when A H3N2 predominates tend to be more severe. That severity is compounded this influenza season by a poor vaccine match for the A H3N2 strains circulating. Only one third of the influenza A H3N2 circulating nationally is well matched to the A H3N2 vaccine strain. However, vaccination is still advised, as the vaccine protects against other strains circulating in lower numbers and may still provide some level of cross-protection against the drifted strain.



NDDoH Investigates Two Gastrointestinal Illness Outbreaks

In November, the NDDoH investigated two incidences of acute gastrointestinal illness outbreaks that may have been associated with food that was catered forevents. The events were catered by different facilities and are not associated with each other.

The first outbreak occurred among guests of a birthday party that was held and catered by a bar and grill in Morton County. Twenty-six (43%) of the sixty guests that were interviewed reported vomiting and/or diarrhea following the party that was held on Nov. 15, 2014. The most commonly reported symptoms were diarrhea (88%), nausea (81%), stomach cramps (77%) and muscle/joint aches (65%). The onsets of illness were reported to be from four to 56 hours (median =23.5 hrs) after food was served at the party and the duration of illness ranged from 19 to 188 hours (median = 71 hrs). Stool specimens from ill individuals were not collected, so a pathogen was not identified. Environmental inspection of the facility that served the food was conducted and no critical violations were noted that could have contributed to this outbreak. The vehicle and source of contamination from this outbreak were not confirmed.

The second outbreak occurred among attendees of a conference that was catered by a restaurant in Grand Forks County. Twenty-nine (56%) of the 51 attendees that completed an online survey reported vomiting and/or diarrhea following attending the conference on November 19, 2014. The most commonly reported symptoms were nausea (90%), diarrhea (72%), stomach cramps (72%) and vomiting (62%). The onsets of illness were reported to be from 25 to 50 hours (median = 37 hrs) after food was served at the conference. The duration of illness ranged from 12 to 776 hours (median = 40.5 hrs). One stool specimen was returned to the NDDoH Division of Laboratory Services. The stool specimen was tested for viral and bacterial pathogens and tested negative; however, the stool was collected 20 days after the event so it is likely that the individual was no longer shedding the pathogen that caused the illness. Environmental inspection of the facility that catered the food was conducted and no critical violations were noted that could have contributed to this outbreak. The vehicle and source of contamination from this outbreak were not confirmed.

If you suspect a possible foodborne illness or have questions about foodborne illness, please contact the NDDoH at 800.472.2180 or 701.328.2378, or view the NDDoH's website at www.ndhealth.gov/disease/GI.



NDDoH Investigates a New Tuberculosis Case

In December, the NDDoH was notified of an individual living in Mountrail County as being diagnosed with active tuberculosis (TB). The contact investigation determined that during the infectious period of disease, this individual had contact with many of the students and staff of New Town Middle and High School, along with the children at the school's daycare.

The NDDoH is working closely with Upper Missouri District Health Unit, Elbowoods Memorial Health Center and New Town Public School to ensure contacts are screened and tested for TB disease.

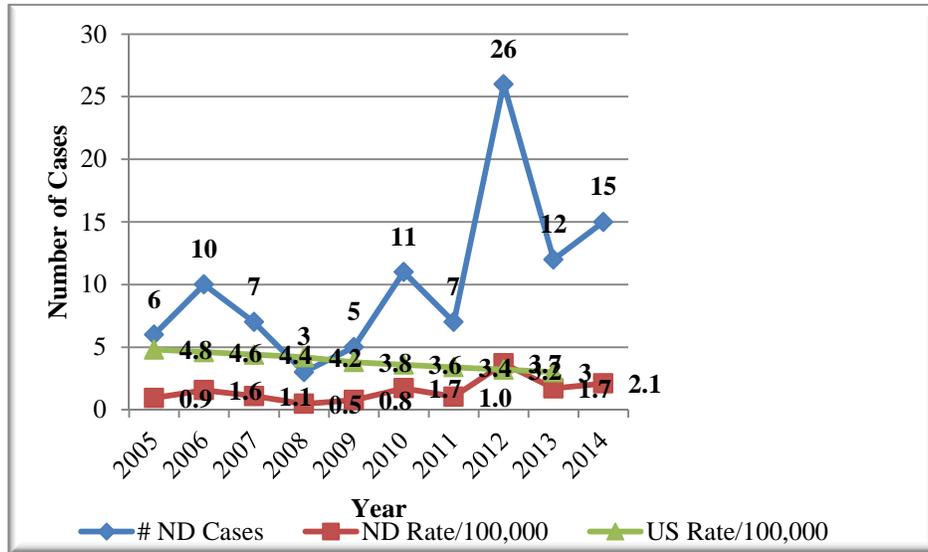
Fifteen cases of TB were reported in 2014 to the NDDoH. TB can be difficult to identify especially during cold and flu season.

Symptoms of TB include:

- a bad cough lasting more than three weeks
- unexplained weight loss
- night sweats
- fatigue

- pain in the chest
- coughing up blood
- chills
- fever
- no appetite

If you think you have been exposed to someone with TB disease, contact your health care provider or local health department to see if you should be tested for TB infection. Be sure to tell the doctor or nurse when you spent time with the person who has TB disease.



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