

The Pump Handle 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 2018 Topics

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Multistate Outbreak of *E. coli* O157:H7 Infections Linked to Romaine Lettuce

The North Dakota Department of Health (NDDoH) has been working with local, state and federal public health officials on a multistate outbreak of *E. coli* O157:H7 infections associated with romaine lettuce. Two confirmed cases in ND have been linked to the outbreak and laboratory results are pending on a suspected third case. Epidemiologic information gathered during interviews with ill persons indicates that romaine lettuce from the Yuma, Arizona, growing region could be contaminated with *E. coli* O157:H7 and could make people sick. On May 4, the NDDoH issued a news release with recommendations from the U.S. Food and Drug Administration (FDA) and the Centers for Disease Control and Prevention (CDC) advising restaurants and retailers not to sell or serve any romaine lettuce that originates from Yuma, Arizona, and for consumers not to eat or buy romaine lettuce unless they can confirm it is not from the Yuma growing region.

The most common symptoms of *E. coli* include diarrhea, bloody diarrhea, abdominal pain, nausea and vomiting. Symptoms typically begin three to four days after exposure to the bacteria, but can take as long as 10 days. Treatment with antibiotics is not recommended. Most cases resolve on their own, but severe cases and cases involving complications may require hospitalization. The CDC estimates that around 5-10 percent of people with *E. coli* infections develop a complication known as hemolytic uremic syndrome (HUS), which affects the red blood cells and can cause kidney failure. Indications that a person may be developing HUS include decreased frequency of urination, feeling very tired, and loss of pink color in cheeks and inside the lower eyelids.

As of May 16, 172 cases from 32 states have been reported to the CDC. Sixty-five percent of cases are female. Seventy-five cases have been hospitalized, including 20 people who developed HUS. One death has been reported. Cases range in age from 1 to 88 years, with a median age of 30.

To learn more about the outbreak of *E. coli* infections linked to romaine lettuce, please visit the CDC's website at www.cdc.gov/ecoli/2018/o157h7-04-18/index.html or contact Laura Cronquist, North Dakota Department of Health, at 701.328.2378.



Syphilis Infections Among Women of Childbearing Age are Increasing

The NDDoH continues to see an increase in syphilis infections. There was a 24 percent increase in the number of cases from 2016 (63 cases) to 2017 (78 cases). As of April 2018, a total of 37 cases have been reported. Of the cases reported, 11 (30 percent) are in women. The increase of cases among women is of concern due to the possibility of transmission to an unborn child (congenital syphilis), which can result in serious complications or death of the baby. Congenital syphilis is preventable through routine screening and timely treatment.

With the increase, the NDDoH is recommending all pregnant women be screened three times for syphilis – at the first prenatal visit, at 28-32 weeks gestation, and again at delivery. If the patient tests positive for syphilis, treatment should be rendered immediately. Penicillin G is the only known antimicrobial for preventing maternal transmission to the fetus. Refer to the most recent STD Treatment Guidelines (<https://www.cdc.gov/std/tg2015/default.htm>) for more staging and treatment information.

For questions, please contact the NDDoH STD program by calling 701.328.2378 or 800.472.2180.



Hepatitis A and Measles Outbreaks in the United States

Although cases of vaccine preventable diseases have decreased significantly over the years, outbreaks still occur around the world, and even across the United States. Multiple states are still experiencing hepatitis A outbreaks. Numbers of outbreak related cases in various states are available in the table below. Hepatitis A is transmitted through the fecal oral route either person-to-person or by consumption of contaminated food or water. In the ongoing outbreaks, transmission seems to be mostly person-to-person. The outbreaks have occurred primarily among

the homeless population and injection and non-injection drug users. Part of the challenge in these outbreaks is that people who are homeless often do not have access to clean toilets and handwashing facilities. It may also be more difficult to reach people who are homeless to offer vaccinations. Hospitalization rates have also been high during the outbreaks. This is likely due to comorbidities of those infected.

In addition to their homeless population, Michigan has also reported a number of cases in foodservice workers in various facilities. Those who are infected with hepatitis A are contagious two weeks before symptoms begin through one week after jaundice started, so it is possible for a foodservice worker who is not following proper hand hygiene to expose many individuals before even knowing he or she is infected. Symptoms of hepatitis A include yellow eyes or skin, abdominal pain, nausea and vomiting, pale stool, and dark urine.

Hepatitis A Outbreak Related Cases

State	Outbreak Related Cases	Hospitalizations	Deaths
California	704	461	21
Michigan	828	665	26
Indiana	91	44	0
Kentucky	448	315	4
Utah	235	125	2

Hepatitis A vaccine is routinely recommended for all children at 12 to 23 months of age. Two doses given at least six months apart are needed to be fully protected. The vaccine first became available in 1995, so most adults have not been vaccinated. Hepatitis A vaccine is also recommended for people ages 12 months and older who live in a community with a high rate of hepatitis A, men who have sex with men, people who use injection or non-injection drugs, people who travel to countries with high rates of hepatitis A, those with long term liver disease, those receiving blood products to help blood clot, those who work with HAV-infected animals, and those who work with HAV in research settings. No cases of hepatitis A have been reported in North Dakota in 2017 or so far in 2018.

Another disease the United States continues to see cases and outbreaks of is measles. Measles is common in many parts of the world, making it easy for unvaccinated travelers to bring the disease back. In addition, the disease is extremely infectious and spreads quickly when introduced into a population with low vaccination rates. According to the CDC, 63 cases of measles from 16 states have been reported as of April 21. Two measles outbreaks are currently taking place in Kansas and Missouri. A measles case was reported in Kansas in March 2018 after an unvaccinated child traveled internationally and was infected. In April, cases were reported in Missouri after an unvaccinated adult traveled internationally and was infected. As of May 2, 2018, Kansas has reported 22 cases associated with their outbreak, and Missouri has reported 13

cases. At this point, public health officials have stated the Kansas and Missouri outbreaks are not linked.

A number of other states, including Texas and California have also reported cases and outbreaks during 2018, mostly in unvaccinated individuals. The European Centre for Disease Prevention and Control (ECDC) has also reported an increase in measles cases across Europe, with 13 deaths reported so far in 2018. The last measles case reported in North Dakota was in 2011.

The best defense against measles is the MMR (measles, mumps, and rubella) vaccination. Children are recommended to receive the first dose at 12 to 15 months and the second dose at 4 to 6 years. Two doses of MMR are required for entry into kindergarten and universities in North Dakota.



Get to Know Your Field Epidemiologist

★**Name:** Brenton Neseemeier

Title: Regional Field Epidemiologist

Area of ND Covered: Cass County, Ransom County, Richland County, Sargent County

Education Background: BS Microbiology (2008), MS Microbiology (2010)

Past Experience: Upon graduating I worked one year as an Environmental Health Practitioner/Emergency Preparedness and Response Coordinator for Central Valley Health District in Jamestown, ND. From 2012-2017 I was working as a bioanalytical chemist/consultant for two clinical research organizations and one of the leading bioanalytical consulting firms in the United States. I started as the regional field epidemiologist in January 2017.

Family/Hobbies: My friends, family and pets mean the world to me. During the summer months you might find me at the lake, going for a jog outside, or tending to my vegetable garden. During the winter months you might find me traveling, playing board games with friends/family, or catching the latest movie. Aside from spending time with friends or family, you might also find me trying out the newest kitchen gadget, trying my hand at new recipes, or canning salsa/pickles from my garden.



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