

IN THIS ISSUE: Increased Norovirus Activity in Washoe County & Get Prepared for West Nile Virus

INCREASED NOROVIRUS ACTIVITY IN WASHOE COUNTY

Introduction

Norovirus is a virus that is the most common cause of acute gastroenteritis (diarrhea and vomiting). It is also known as the “stomach flu.” On average 19-21 million people become sick with norovirus each year in the United States. The most common signs and symptoms include vomiting, watery, non-bloody diarrhea, nausea, and abdominal cramps. Other signs and symptoms can include headache, body aches, and low grade fever. People usually become sick within 12-48 hours of their exposure to norovirus. Illness is typically self-limiting and lasts 1-3 days.

Norovirus is found in the stool and vomit of infected people and has to be swallowed to cause illness. It is highly contagious. It only takes as few as eighteen viral particles to make someone sick. A pea-sized piece of feces may contain billions of viral particles. Norovirus can be found in stool even before someone feels sick and remain in stool for as long as 2-3 weeks after people feel better. Noroviruses can remain infectious on environmental surfaces for many days and are relatively resistant to disinfection, heat, and cold.

Current Norovirus Activity in Washoe County, Nevada, and Nation

This month (May) a total of four (4) outbreaks of suspected norovirus have been reported to WCHD. Two outbreaks occurred in schools and two outbreaks occurred in daycares. These are the first norovirus outbreaks reported in 2017. More than 200 people have been sickened to date in these outbreaks. Incidence in the population cannot be measured because individual cases of norovirus are not reportable to the Washoe County Health District (WCHD). To update, norovirus GII is the laboratory-confirmed etiological agent.

On May 23, the California Department of Public Health (CDPH) announced that norovirus outbreaks are occurring in schools and other institutional settings. A peak in May is somewhat later than usual.¹ The Southern Nevada Health District has also seen increased norovirus outbreaks in schools.²

According to CDC, the peak season for norovirus is generally from December to March³. Figure 1 shows nearly real-time norovirus outbreaks reported from 9 participating

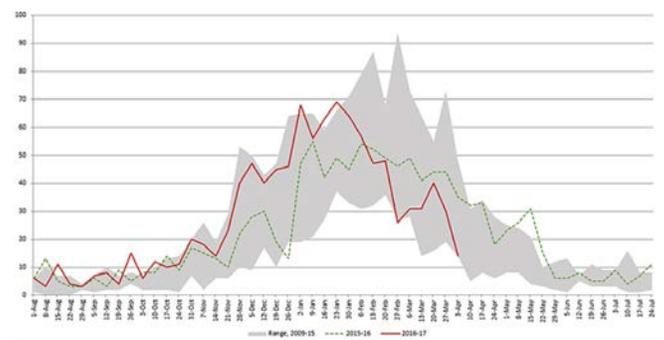
¹ CDPH. CDPH Works on Controlling Norovirus Outbreaks. News Release, May 23, 2017.

² <http://www.southernnevadahealthdistrict.org/news17/20170511-southern-nevada-health-district-investigates-outbreaks-of-gastrointestinal-illness.php>

³ <https://www.cdc.gov/norovirus/reporting/norostat/data.html>

NoroSTAT states to CDC. The solid red line is the latest data for the current season (2016-2017). The green dotted line is the data from the 2015-2016 season (September-August). The gray area represents data from the 2009-2015 seasons. To date in the current season, norovirus GII.P16-GII.4 Sydney has been the dominant strain⁴. GII.P16 is relatively a new strain. Therefore, immunity to this strain is a relatively low. According to CDPH, the same strain is being seen in current norovirus outbreaks in schools.

Figure 1. Suspected and Confirmed Outbreaks Reported by 9 State Health Departments to CDC, 2009-2017



2016 Outbreaks in Washoe County

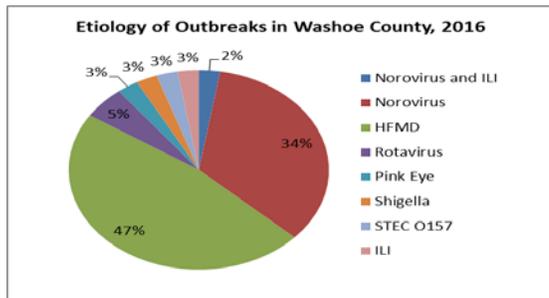
In 2016 a total of fourteen (14) norovirus outbreaks were reported to WCHD. Norovirus accounted for 36% of all outbreaks reported to WCHD in 2016. Three (3) of these outbreaks were confirmed by laboratory testing; Norovirus GII was the etiologic agent in all three confirmed outbreaks. A total of 701 people become ill with gastroenteritis during these outbreaks. Additional illnesses may have also occurred, especially among household contacts to cases. However, often the health status of household contacts is unknown or not reported to WCHD. The number of people sickened in norovirus outbreaks in 2016 ranged from 8 to 167 with a median of 38. The most common environment for norovirus outbreaks was schools (n=8, 57%) followed by daycares (n=5, 36%). A single outbreak occurred in a community shelter.

Reporting

Individual or sporadic cases of norovirus are not reportable in Nevada. However, if an outbreak of norovirus is suspected or confirmed, then those illnesses are reportable under Nevada law. **Report suspected or confirmed outbreaks IMMEDIATELY to the Washoe County Health District at 775-328-2447.**

⁴ <https://www.cdc.gov/norovirus/reporting/calicinet/data.html>

Figure 2. Etiology of outbreaks in Washoe County, 2016.



Educate

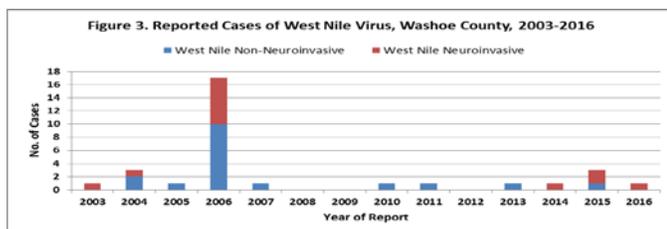
Education is critical for prevention. WCHD highly recommends that healthcare providers DO assist by providing the following messages to their patients. To protect themselves from norovirus patients should do the following:

- Wash hands for 20 seconds with soap and water, especially after using the toilet or changing diapers and before eating, preparing, or handling food. **Hand sanitizers are not as effective as soap and water against norovirus.**
- Wash fruits and vegetables before preparing and eating them.
- Cook oysters and other shellfish thoroughly before eating them.

- Do not prepare food or care for others while sick or during the two days after recovering from norovirus. In the presence of outbreaks, this length may extend to three days. It is important to note that during outbreaks, WCHD requests that child care facilities and schools exclude all ill students and employees with vomiting and/or diarrhea until 72 hours after symptoms stop. During that time period, a physician's note cannot be used as an exception to the exclusion requirement.
- Clean and disinfect contaminated surfaces after vomiting or having diarrhea. Noroviruses are relatively resistant to disinfection; therefore, if norovirus is suspected the contaminated surface should be cleaned with a freshly-made bleach solution using ½ cup of bleach plus one gallon of water (1000ppm). Another option is a disinfectant registered as effective against norovirus by the Environmental Protection Agency (EPA), https://www.epa.gov/sites/production/files/2016-06/documents/list_g_norovirus.pdf.
- Wash clothes or other linens that may be contaminated with diarrhea or vomit. Wash the items with detergent at the maximum available cycle length and machine dry. Wear gloves while handling contaminated linens.

GET PREPARED FOR WEST NILE VIRUS SEASON IN WASHOE COUNTY

On May 18, the Southern Nevada Health District (SNHD) reported its first human case of West Nile virus (WNV) in Southern Nevada in 2017⁵. From 2003 through 2016, the Washoe County Health District (WCHD) received reports of 0-17 cases per year with a median of one (1) case per year. However, 17 cases reported in 2006 accounted for 54% of total reports for the 14 year



periods. Seven (7) of the cases from 2006 had the neuroinvasive form of the illness. According to the epidemiological investigation, only two individuals likely acquired the infection while traveling out of state. In 2006, there was also a significant flood around the New Years in northern Nevada. This year, with increased water in the area due to the frequent winter and spring storms that brought record-breaking precipitation into the area, WCHD is anticipating the possibility of increased mosquito activity. It only takes a few days of warm temperatures for mosquitos and other insects to become active. The WCHD's Vector-Borne Disease Program

(VBDP) is conducting surveillance in the mosquito population and in sentinel chicken flocks. Mosquito abatement activities are underway in the region. Although there have been no WNV positive mosquitos identified to date, WCHD highly recommend that HCPs should consider testing for WNV during summer through early fall for any patient presenting with:

- Encephalitis;
- Aseptic Meningitis;
- Acute flaccid paralysis; atypical Guillain Barre Syndrome; transverse myelitis, or
- Febrile illness (T ≥ 100.4 for > 7 days), other symptoms may include headache, rash, swollen lymph nodes, eye pain, nausea or vomiting.

Enzyme Immunoassay (EIA) testing for IgM antibody is the frontline test for WNV diagnosis. EIA can be used with serum and cerebrospinal fluid (CSF). Such tests are available at local commercial labs as well as the Nevada State Public Health Laboratory (NSPHL). Acute serum should be collected within 3 to 10 days after onset of symptoms. Convalescent serum should be collected within 2-3 weeks after the acute sample. For patients in whom the serum collected within 10 days of illness lacks detectable IgM, testing should be repeated on a convalescent-phase sample. For more other tests, please refer to the CDC's website.

<https://www.cdc.gov/westnile/healthcareproviders/healthCareProviders-Diagnostic.html> . **Please report WNV to WCHD at 775-328-2447 (24/7) and 775-328-3764 (Fax).**

⁵ <http://www.southernnevadahealthdistrict.org/news17/20170518-health-district-reports-first-human-west-nile-case.php>