EPIDEMIOLOGY AND IMMUNIZATION SERVICES BRANCH

MONTHLY COMMUNICABLE DISEASE REPORT

JANUARY 2024

Volume 8, Issue 1: February 15, 2024

NOROVIRUS

Noroviruses are small non-enveloped RNA viruses in the family Caliciviridae that cause acute gastroenteritis. Named after an outbreak in a school in Norwalk, Connecticut in 1968, noroviruses are highly contagious and are thought to be the most common cause of acute gastroenteritis and gastroenteritis outbreaks worldwide. More than 25 genotypes in three genogroups (GI, GII, GIV) cause human illness.

Norovirus infection is characterized by acute onset of vomiting and/or watery, non-bloody diarrhea. These symptoms may be accompanied by abdominal cramps, low-grade fever, headaches, and myalgia. Onset usually occurs 12-48 hours after exposure. The infection usually resolves on its own after 24-72 hours, causing no long-term sequelae. Severe dehydration is the most common complication and can be particularly hazardous for young children, older adults, and those with compromised immune systems, potentially leading to hospitalization and even death.

Norovirus is shed in an infected person's stool and vomitus. One person can shed billions of norovirus particles. It only takes about 18 particles to infect another person. Because it is so contagious, spreading from person-to-person or via contaminated surfaces, outbreaks occur frequently in places where people live in close proximity, such as long-term care facilities, cruise ships, and institutions. Norovirus is also the most common cause of foodborne illness and outbreaks in the United States. Norovirus infections occur year-round but are more common during the winter months.

Continued on next page

Figure 1. Reported Norovirus Outbreaks, San Diego County, Fiscal Years 2014-15 – 2023-24*

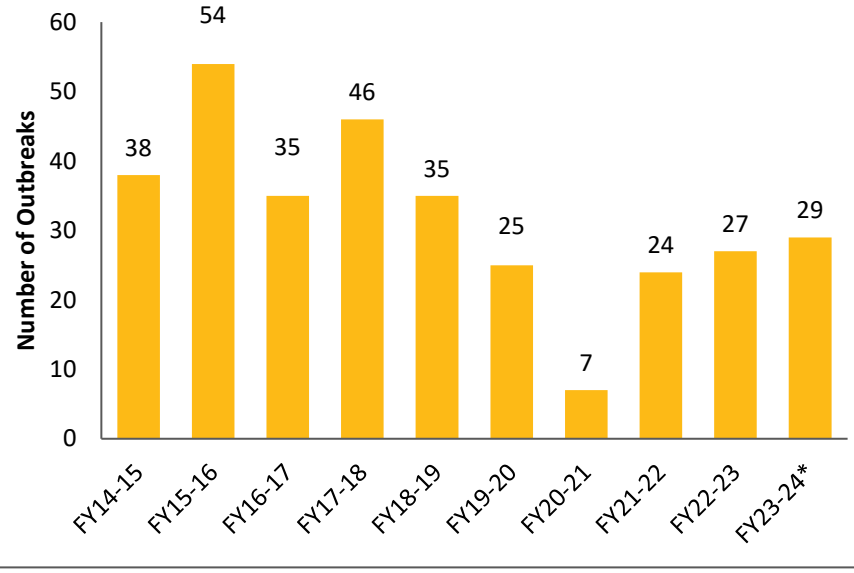
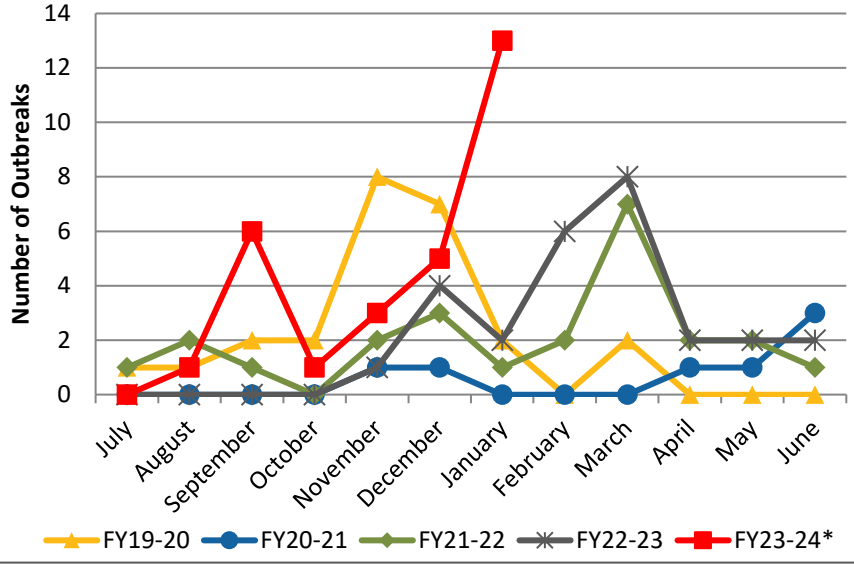


Figure 2. Norovirus Outbreaks by Month of Report, San Diego County, Fiscal Years 2019-20 – 2023-24*



*2023-24 data are year-to-date. Data are provisional and subject to change as additional information becomes available. Data are presented using fiscal years (the San Diego County fiscal year is July-June) due to the seasonal nature of norovirus outbreaks. Data current as of 2/4/2024.

The Monthly Communicable Disease Surveillance Report is a publication of the County of San Diego Public Health Services Epidemiology and Immunization Services Branch (EISB). EISB identifies, investigates, registers, and evaluates communicable, reportable, and emerging diseases and conditions to protect the health of the community. The purpose of this report is to present trends in communicable disease in San Diego County. To subscribe to this report, visit the Data and Reports page on the Epidemiology Program website (www.sdepi.org) and click on the subscribe link.

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NOROVIRUS, continued

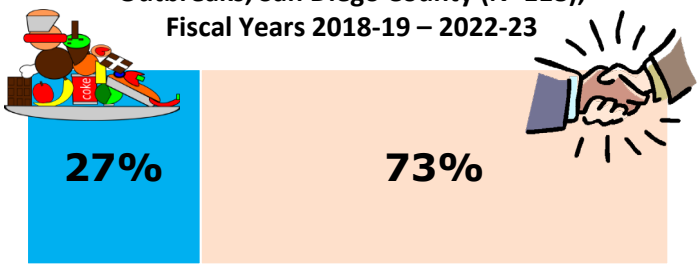
Individual cases of norovirus are not reportable locally or nationally, and laboratory testing is often only done in the context of an outbreak. Outbreaks of any disease, including norovirus, are reportable. From 2011-2021, CDC received reports of 22,418 outbreaks of norovirus. These outbreaks were responsible for 698,747 illnesses, 10,135 hospitalizations, and 827 deaths.

The County of San Diego Health and Human Services Agency (HHSA) reports norovirus outbreaks by fiscal year (July-June) due to the seasonal nature of the disease. Although norovirus circulates throughout the year, typically there are increased outbreaks during the winter months.

During the most recent five full fiscal years (2018-19 – 2022-23), HHSA investigated 118 norovirus outbreaks, with 2,645 outbreak-associated cases (median 17 cases per outbreak), 65 hospitalizations, and 2 deaths. There were 86 (73%) norovirus outbreaks due to suspected person-to-person or environmental transmission, and 32 (27%) due to foodborne transmission. About 72% of the person-to-person outbreaks were in congregate living facilities.

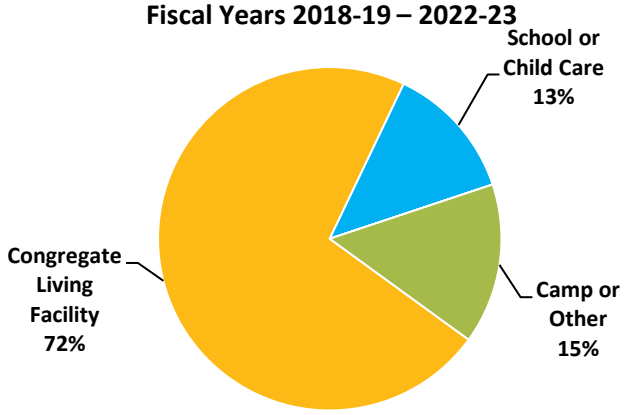
To date in 2023-24, HHSA has investigated 29 norovirus outbreaks, including 11 associated with a multi-jurisdictional investigation of potentially contaminated oysters harvested from multiple oyster beds in Mexico, affecting at least 19 local food facilities and at least 100 people. Oysters and other bi-valve mollusks, such as clams, mussels, and scallops, are filter feeders. While filter feeders are important for maintaining the health of marine ecosystems, they can bioaccumulate norovirus when grown in water contaminated with untreated human sewage. Norovirus that accumulates inside oysters can cause individuals who consume them raw or undercooked to become ill. To decrease the risk of contracting norovirus, people who eat raw oysters can stay up-to-date on news about oysters and avoid eating oysters from sites known to be contaminated. Vulnerable populations, including young children, older adults, and people who are immunocompromised, should be especially careful and may consider avoiding consumption of raw oysters altogether.

Figure 3. Mode of Transmission, Norovirus Outbreaks, San Diego County (N=118), Fiscal Years 2018-19 – 2022-23



Suspect person-to-person category also includes possible environmental contamination. Data are provisional and subject to change as additional information becomes available. Data current as of 2/4/2024.

Figure 4. Location of Suspect Person-to-Person Norovirus Outbreaks, San Diego County (N=86), Fiscal Years 2018-19 – 2022-23



Suspect person-to-person category also includes possible environmental contamination. Congregate Living Facilities include long-term care facilities, assisted living facilities, independent living facilities for seniors. Data are provisional and subject to change as additional information becomes available. Data current as of 2/4/2024.

County of San Diego Resources

- HHSA Norovirus website
- Department of Environmental Health Norovirus website

State and National Resources

- California Department of Public Health Norovirus website
- CDC: Norovirus website
- CDC: National Outbreak Reporting System (NORS)
- CDC: Reporting and Surveillance for Norovirus: CaliciNet
- CDC: Norovirus Guidelines for Healthcare Settings
- CDC: Healthcare-Associated Infections: General Information about Norovirus (includes Norovirus Prevention Toolkit)

Suggested citation: Hopkins JD, Thomas HR, Nelson JA. Norovirus. County of San Diego Monthly Communicable Disease Report 2024; 8(1):1-2.

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Table 1. Select Reportable Diseases

Disease and Case Inclusion Criteria (C,P,S)		2024 January	2024 December 2023	2024 YTD (January)	Prior Years 2023 YTD	Prior Years Avg YTD, 2021-2023	Prior Years 2023 Total
Botulism (Foodborne, Infant, Wound, Other)	C,P	0	2	0	0	0.0	2
Brucellosis	C,P	0	0	0	0	0.3	3
Campylobacteriosis	C,P	57	67	57	84	53.7	1,127
Candida auris	C	12	5	12	2	0.7	99
Chickenpox, Hospitalization or Death	C,P	1	0	1	1	0.3	7
Chikungunya	C,P	0	0	0	0	0.0	0
Coccidioidomycosis	C	3	29	3	36	40.7	429
Cryptosporidiosis	C,P	8	9	8	4	2.7	128
Dengue Virus Infection	C,P	1	5	1	1	0.3	23
Encephalitis, All	C	0	3	0	3	3.7	30
Giardiasis	C,P	16	25	16	11	11.0	226
Hepatitis A, Acute	C	4	2	4	3	1.0	45
Hepatitis B, Acute	C	0	0	0	3	1.7	12
Hepatitis B, Chronic	C,P	49	62	49	56	66.7	770
Hepatitis C, Acute	C,P	5	4	5	6	7.0	93
Hepatitis C, Chronic	C,P	194	135	194	205	265.0	2,254
Legionellosis	C	2	7	2	15	11.0	93
Listeriosis	C	0	0	0	0	0.0	11
Lyme Disease	C,P	0	2	0	0	0.7	14
Malaria	C	5	5	5	0	0.0	16
Measles (Rubeola)	C	0	0	0	0	0.0	0
Meningitis, Aseptic/Viral	C,P,S	3	5	3	2	3.0	61
Meningitis, Bacterial	C,P,S	5	7	5	3	3.0	39
Meningitis, Other/Unknown	C	0	2	0	2	2.7	24
Meningococcal Disease	C,P	1	0	1	0	0.0	4
Mumps	C,P	1	0	1	0	0.3	0
Pertussis	C,P	28	73	28	13	7.0	317
Rabies, Animal	C	0	0	0	0	0.3	8
Rocky Mountain Spotted Fever	C,P	1	0	1	0	0.0	3
Salmonellosis (Non-Typhoid/Non-Paratyphoid)	C,P	40	42	40	52	32.0	685
Shiga toxin-Producing *E. coli* (including O157)	C,P	16	17	16	11	9.3	250
Shigellosis	C,P	30	27	30	40	25.0	522
Typhoid Fever	C,P	0	2	0	0	1.0	6
Vibriosis	C,P	3	3	3	1	1.3	45
West Nile Virus Infection	C,P	0	0	0	0	0.0	0
Yersiniosis	C,P	7	9	7	4	2.7	79
Zika Virus	C,P	0	0	0	0	0.0	0

Case counts are provisional and subject to change as additional information becomes available. Cases are grouped into calendar months and calendar years on the basis of the earliest of the following dates: onset, lab specimen collection, diagnosis, death, and report received. Counts may differ from previously or subsequently reported counts due to differences in inclusion or grouping criteria, late reporting, or updated case information. Inclusion criteria (C,P,S = Confirmed, Probable, Suspect) based on Council of State and Territorial Epidemiologists/Centers for Disease Control and Prevention (CSTE/CDC) surveillance case criteria. Includes San Diego County resident cases only.

San Diego County Sexually Transmitted Infection Data | San Diego County Tuberculosis Data

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Figure 5. Select Enteric Infections by Month
February 2023 – January 2024

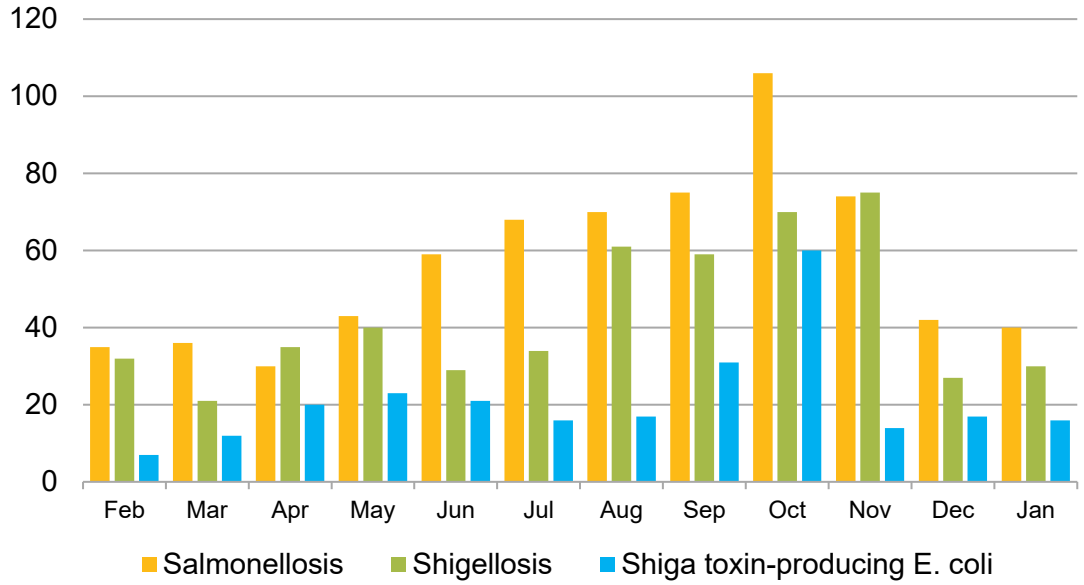

Figure 6. Select Vaccine-Preventable Infections by Month
February 2023 – January 2024

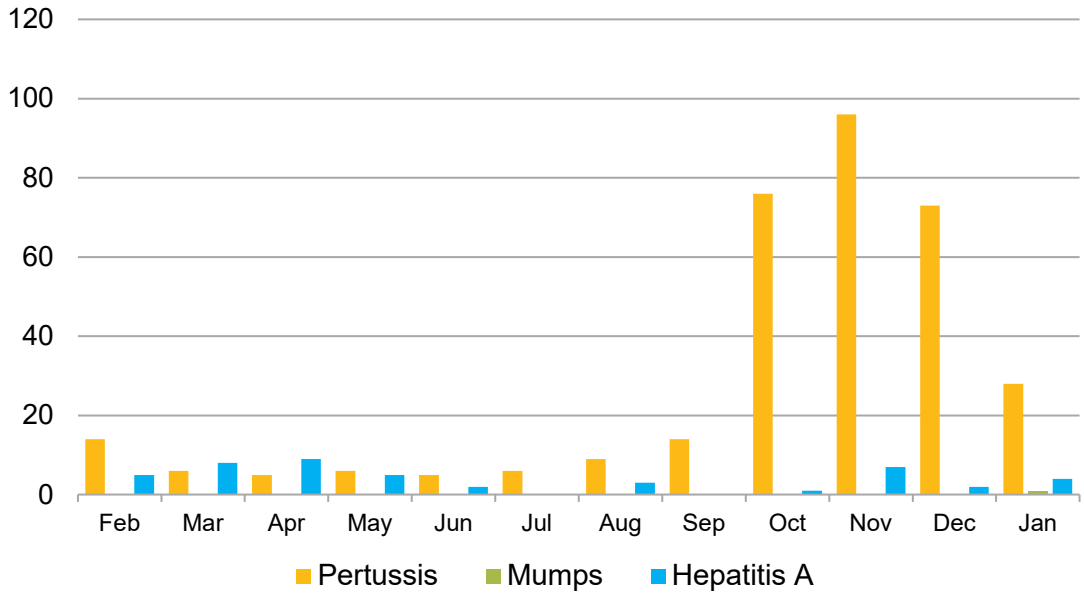

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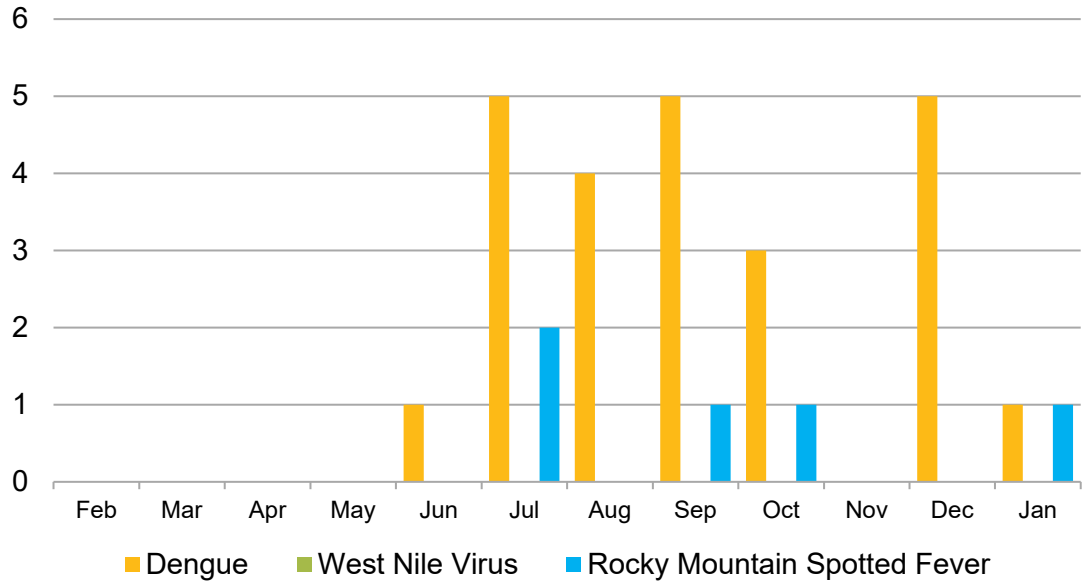
Figure 7. Select Vector-Borne Infections by Month
February 2023 – January 2024



All of the dengue cases are travel-associated. For more information on West Nile virus, see the County West Nile virus webpage.
Case counts are provisional and subject to change as additional information becomes available. Cases are grouped into calendar months and calendar years on the basis of the earliest of the following dates: onset, lab specimen collection, diagnosis, death, and report received. Counts may differ from previously or subsequently reported counts due to differences in inclusion or grouping criteria, late reporting, or updated case information. Inclusion criteria (C,P,S = Confirmed, Probable, Suspect) based on Council of State and Territorial Epidemiologists/Centers for Disease Control and Prevention (CSTE/CDC) surveillance case criteria.

Disease Reporting in San Diego County

San Diego County communicable disease surveillance is a collaborative effort among Public Health Services, hospitals, medical providers, laboratories, and the San Diego Health Connect Health Information Exchange (HIE). The data presented in this report are the result of this effort.

Reporting is crucial for disease surveillance and detection of disease outbreaks. Under the California Code of Regulations, Title 17 (Sections 2500, 2505, and 2508), public health professionals, medical providers, laboratories, schools, and others are mandated to report more than 80 diseases or conditions to San Diego County Health and Human Services Agency.

To report a communicable disease, contact the Epidemiology Program by phone at (619) 692-8499 or download and print a Confidential Morbidity Report form and fax it to (858) 715-6458. For urgent matters on evenings, weekends or holidays, dial (858) 565-5255 and ask for the Epidemiology Program duty officer. For more information, including a complete list of reportable diseases and conditions in California, visit the Epidemiology Program website, www.sdepi.org.

Tuberculosis, sexually transmitted infections, and HIV disease are covered by other programs within Public Health Services. For information about reporting and data related to these conditions, search for the relevant program on the Public Health Services website, http://www.sandiegocounty.gov/content/sdc/hhsa/programs/phs.html.