

## NOROVIRUS

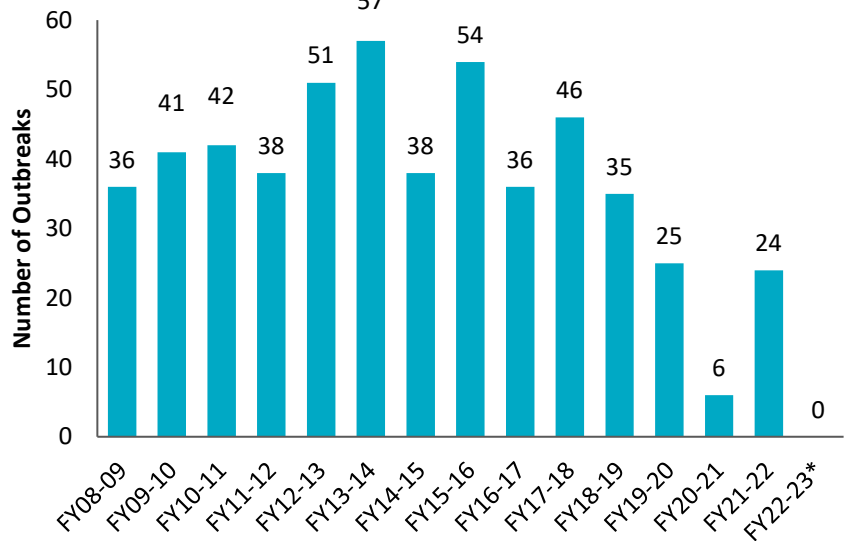
Noroviruses are small non-enveloped RNA viruses in the family Caliciviridae that cause acute gastroenteritis. Named after an outbreak in a school in Norwalk, Connecticut in 1968, noroviruses are highly contagious and are thought to be the most common cause of acute gastroenteritis and gastroenteritis 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.

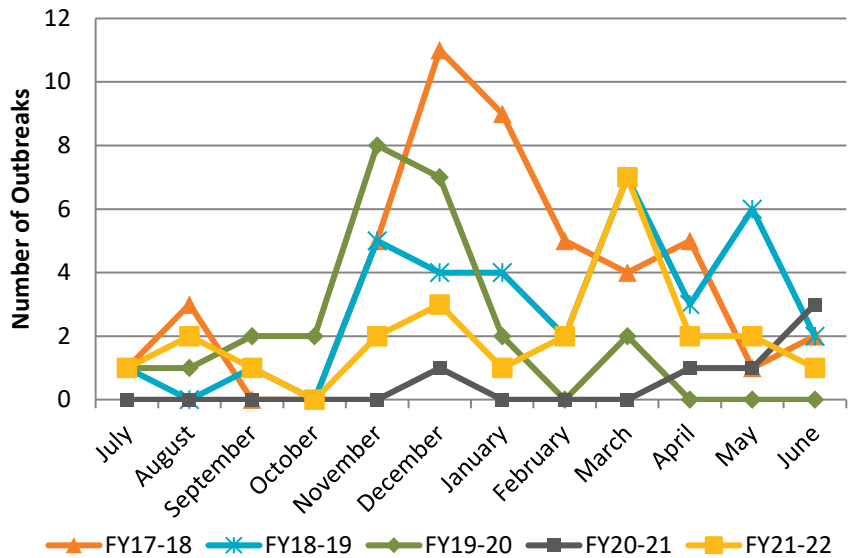
Norovirus is shed in an infected person's stool and vomitus. One person can shed billions of norovirus particles. It only takes about 18 particles to infect another person. Because it is so contagious, spreading from person to person or via contaminated surfaces, outbreaks occur frequently in places 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 2008-09 – 2022-23\***



**Figure 2. Norovirus Outbreaks by Month of Report, San Diego County, Fiscal Years 2017-18 – 2021-22**



\*2017-18 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 11/7/2022.

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](http://www.sdepi.org)) and click on the subscribe link.

### 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. In a [recent article](#), it was estimated that, in the United States, there are 2.3 million ambulatory clinic encounters relating to norovirus each year, leading to 109,000 hospitalizations and 900 deaths.

Outbreaks of any disease, including norovirus, are reportable. From 2010-2020, [CDC received reports](#) of 22,918 outbreaks of norovirus transmitted by food, person-to-person contact, environmental contamination, or unknown modes of transmission.

These outbreaks were responsible for 735,017 illnesses, 10,560 hospitalizations, and 908 deaths.

The County of San Diego Health and Human Services Agency (HHS) 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 (2017-18 – 2021-22), HHS investigated 136 norovirus outbreaks, with 3,169 outbreak-associated cases (median 17 cases per outbreak), 78 hospitalizations, and 6 deaths. There were 100 (74%) norovirus outbreaks that were due to suspected person-to-person or environmental transmission, and 36 (26%) due to foodborne transmission. Nearly three quarters of the person-to-person outbreaks were in congregate living facilities.

To date in 2022-23, HHS has investigated 0 norovirus outbreaks. Over the preceding ten fiscal years, local norovirus outbreak counts have ranged from 6-57. Decreased norovirus activity has been reported in the last several years, likely due to social distancing and other precautions implemented in response to the COVID-19 pandemic.

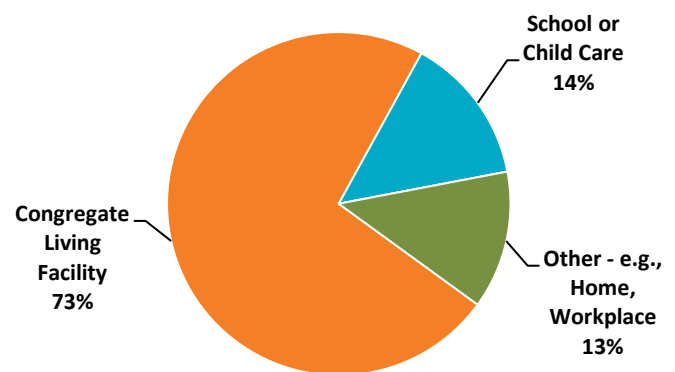
In years when a new strain of norovirus begins circulating, outbreaks frequently increase worldwide. Since September 2021, the most common norovirus [genotype](#) identified in outbreaks in the United States has been GII.4.Sydney. Recent San Diego County data show the same pattern.

**Figure 3. Mode of Transmission, Norovirus Outbreaks, San Diego County (N=136), Fiscal Years 2017-18 – 2021-22**



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 11/7/2022.

**Figure 4. Location of Suspect Person-to-Person Norovirus Outbreaks, San Diego County (N=100), Fiscal Years 2017-18 – 2021-22**



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 11/7/2022.

### County of San Diego Resources

- [HHS 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 \(includes Norovirus Prevention Toolkit\)](#)

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# MONTHLY COMMUNICABLE DISEASE REPORT

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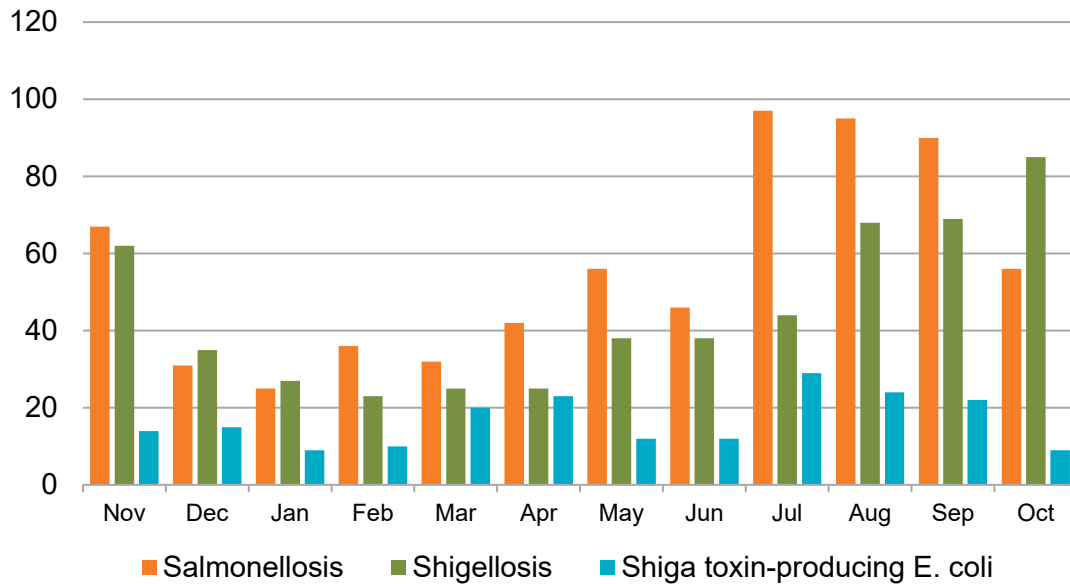
Table 1. Select Reportable Diseases		2022			Prior Years		
		Current Month	Prior Month	Year-to-Date (YTD)	2021 YTD	Avg YTD, 2019-2021	2021 Total
Disease and Case Inclusion Criteria (C,P,S)							
Botulism (Foodborne, Infant, Wound, Other)	C,P	1	2	3	3	1.3	3
Brucellosis	C,P	0	0	2	3	1.3	3
Campylobacteriosis	C,P	91	90	787	768	742.7	903
Chickenpox, Hospitalization or Death	C,P	0	0	0	3	1.7	3
Chikungunya	C,P	0	1	2	1	1.3	2
Coccidioidomycosis	C	8	26	344	414	403.3	512
Cryptosporidiosis	C,P	7	13	73	48	54.0	57
Dengue Virus Infection	C,P	2	3	13	2	11.0	3
Encephalitis, All	C	0	0	13	33	34.3	39
Giardiasis	C,P	6	9	152	148	156.7	176
Hepatitis A, Acute	C	4	2	26	10	12.0	10
Hepatitis B, Acute	C	1	0	12	16	9.3	16
Hepatitis B, Chronic	C,P	82	74	767	664	656.3	800
Hepatitis C, Acute	C,P	0	0	59	67	54.0	76
Hepatitis C, Chronic	C,P	220	215	2,605	3,080	3,286.7	3,539
Legionellosis	C	4	7	56	46	45.7	64
Listeriosis	C	1	1	16	6	11.0	8
Lyme Disease	C,P	0	0	5	13	7.3	13
Malaria	C	2	0	10	8	6.7	8
Measles (Rubeola)	C	0	0	0	0	0.7	0
Meningitis, Aseptic/Viral	C,P,S	4	7	48	42	89.7	46
Meningitis, Bacterial	C,P,S	1	1	25	20	23.0	24
Meningitis, Other/Unknown	C	0	0	11	24	26.7	34
Meningococcal Disease	C,P	1	0	2	1	3.7	1
Mumps	C,P	0	0	3	1	23.0	2
Pertussis	C,P,S	13	7	63	54	299.7	70
Rabies, Animal	C	0	0	3	4	6.0	4
Rocky Mountain Spotted Fever	C,P	0	0	3	1	2.0	1
Salmonellosis (Non-Typhoid/Non-Paratyphoid)	C,P	56	90	575	487	491.7	585
Shiga toxin-Producing <i>E. coli</i> (including O157)	C,P	9	22	170	134	150.7	163
Shigellosis	C,P	85	69	442	336	297.3	433
Typhoid Fever	C,P	0	0	12	9	6.3	10
Vibriosis	C,P	3	8	32	48	44.3	52
West Nile Virus Infection	C,P	0	1	3	3	2.3	3
Yersiniosis	C,P	8	2	40	19	29.3	21
Zika Virus	C,P	0	0	1	0	2.7	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.

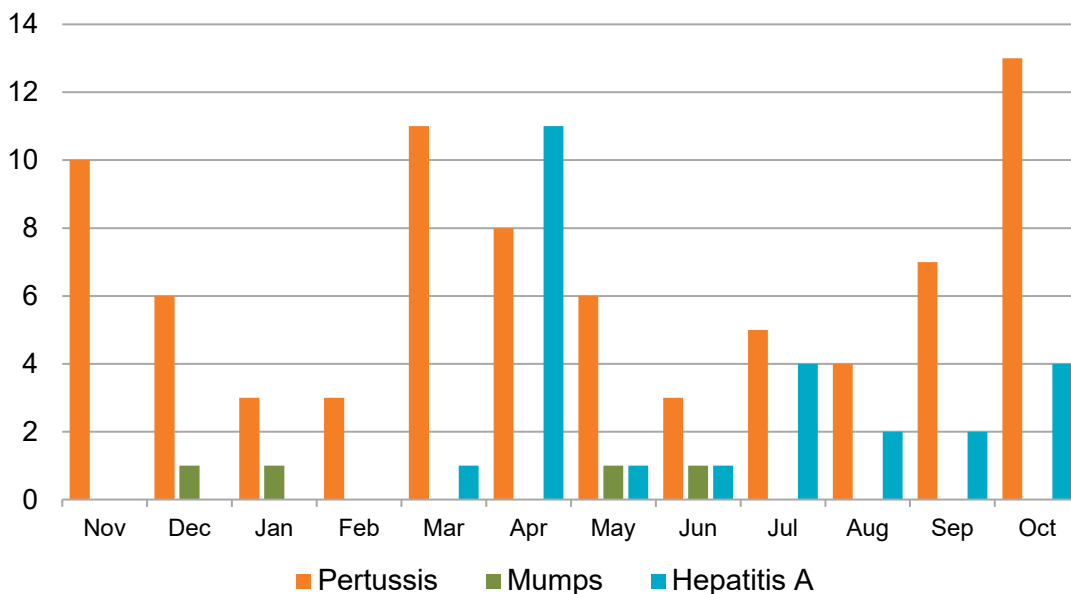
[San Diego County Sexually Transmitted Infection Data](#) | [San Diego County Tuberculosis Data](#)



**Figure 5. Select Enteric Infections by Month  
November 2021 – October 2022**

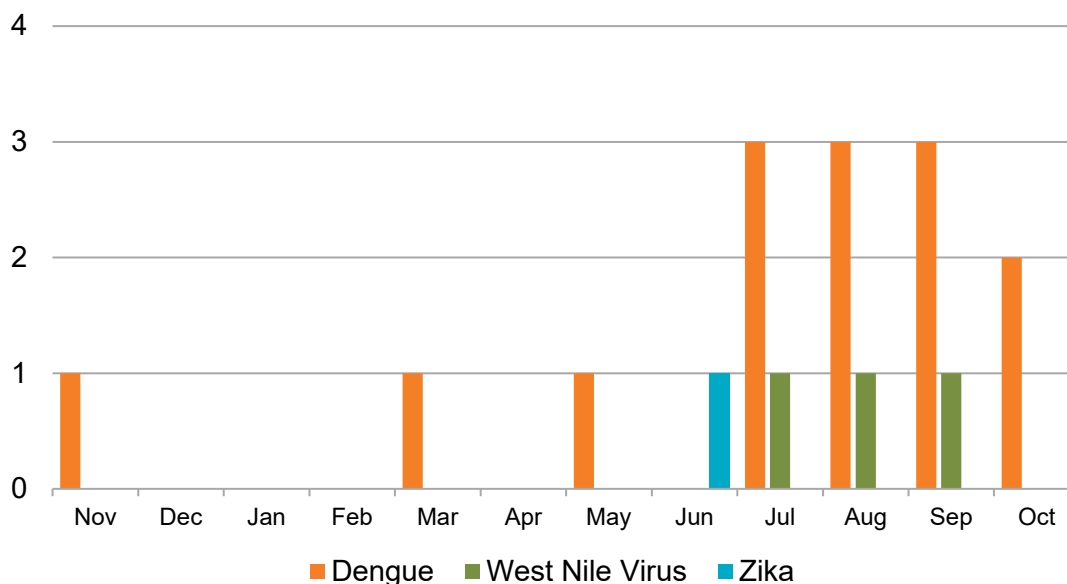


**Figure 6. Select Vaccine-Preventable Infections by Month  
November 2021 – October 2022**



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**Figure 7. Select Vector-Borne Infections by Month  
November 2021 – October 2022**



All of the dengue and Zika virus cases are travel-associated. For additional information on Zika cases, see the [HHSA Zika Virus webpage](#). 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](http://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>.