EPIDEMIOLOGY AND IMMUNIZATION SERVICES BRANCH

MONTHLY COMMUNICABLE DISEASE REPORT

APRIL 2024

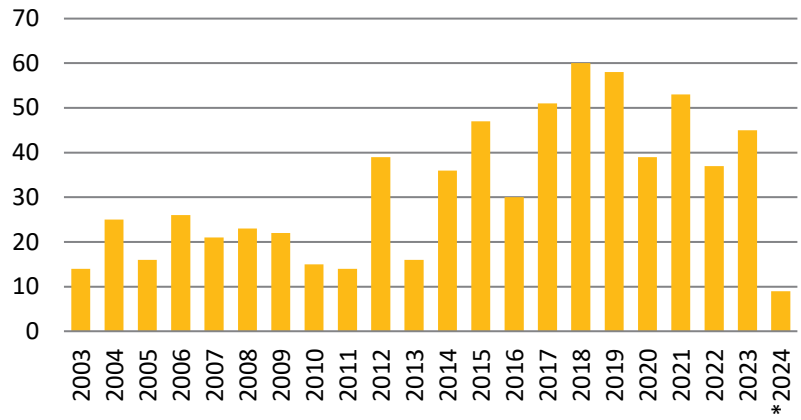
Volume 8, Issue 4: May 15, 2024

VIBRIOSIS

Vibriosis can be caused by approximately a dozen different species of *Vibrio* bacteria, which are naturally occurring in marine coastal environments. People usually become infected when they consume raw or undercooked seafood, primarily oysters, or when a new or preexisting wound comes into contact with brackish or salt water. Vibriosis is not transmitted person-to-person.

Vibriosis causes three main clinical syndromes: intestinal illness, characterized by diarrhea and abdominal cramps; skin, wound, or ear infection; and septicemia, characterized by fever, chills, hypotension, and blistering lesions. The first two syndromes can lead to the third, a bloodstream infection, which can be fatal. Septicemia is more common in persons who are immune compromised or have underlying conditions such as chronic liver disease or alcoholism.

Figure 1. Vibriosis Cases, San Diego County, 2003-2024*

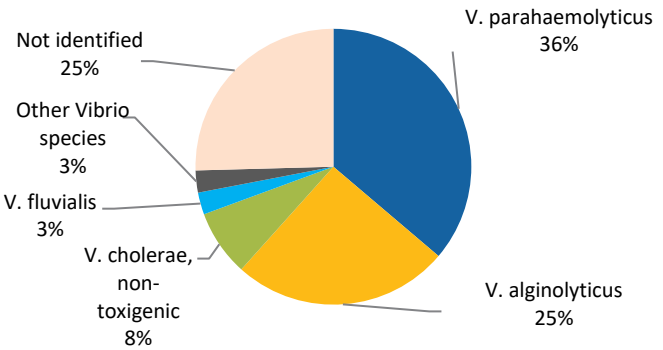


*Data current as of 5/15/2024. Data are provisional and subject to change as additional information becomes available. Confirmed and Probable cases are included. Grouped by CDC disease years.

Vibriosis is distinct from cholera, which is caused by toxigenic forms of *Vibrio cholerae* O1 and O139. Although now rare in the United States and other industrialized nations, cholera has historically caused many epidemics and remains endemic in parts of Africa and Asia. Illness caused by non-O1/non-O139 strains of *V. cholerae,* and strains of O1 and O139 that do not produce the cholera toxin, are classified as vibriosis rather than cholera.

The Centers for Disease Control and Prevention (CDC) estimates that there are approximately 80,000 *Vibrio* infections a year in the United States, though most are not diagnosed or reported. In 2021, 2,853 vibriosis cases were reported nationally, 310 cases were reported in California, and 53 cases were reported in San Diego County.

Figure 2. Vibriosis Cases by Species, San Diego County, 2019-2023 (N=232)



Data current as of 4/29/2024. Data are provisional and subject to change as additional information becomes available. Confirmed and Probable Cases. Grouped by CDC disease years.

The *Vibrio* species that most commonly cause illness in the United States are *V. parahaemolyticus*, *V. alginolyticus*, and *V. vulnificus*. While *V. parahaemolyticus* usually causes intestinal illness after ingestion of the bacteria, it can also cause wound infections via contact with marine water. In contrast, *V. alginolyticus* almost exclusively causes wound or ear infections. *V. vulnificus* is the species most likely to cause serious, life-threatening infections in those with underlying conditions.

Infections caused by *V. parahaemolyticus* and *V. alginolyticus* were most common in San Diego County from 2019-2023, accounting for 61% of the reported cases. An additional 8% of cases were caused by non-toxigenic

Continued on next page

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.

MONTHLY COMMUNICABLE DISEASE REPORT

APRIL 2024

Volume 8, Issue 4: May 15, 2024

VIBRIOSIS, continued

V. cholerae. Due to the adoption of culture-independent diagnostic testing in 2017, the proportion of cases with no species identified has increased in recent years.

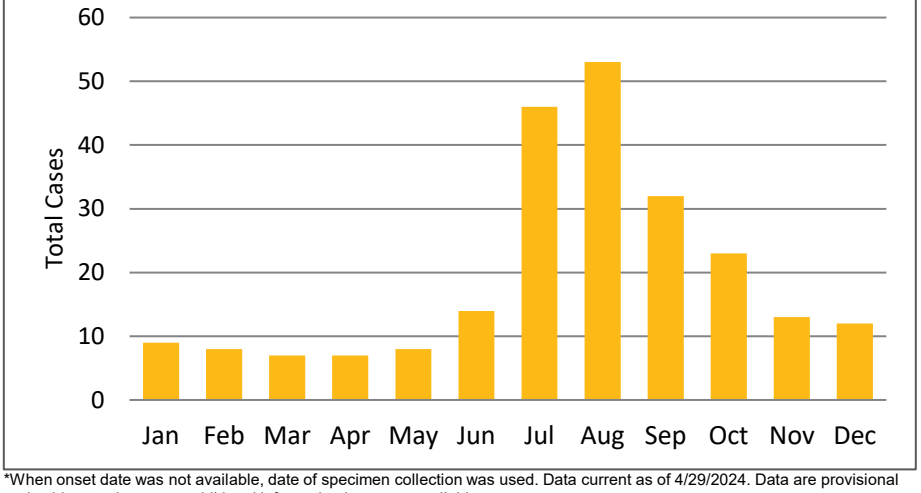
Vibrio bacteria proliferate in warmer water. In the United States, most infections occur during the warmer months of May through October. San Diego County infections follow the same pattern, with 76% of 2019-2023 infections occurring during those months, peaking in August.

Oysters, which live in the same coastal waters inhabited by *Vibrio*, present a particular risk for vibriosis when eaten raw. Oysters are filter-feeders, filtering water through their gills and in the process potentially concentrating bacteria in their tissues. The only way to kill the *Vibrio* bacteria and prevent infection is to cook oysters properly.

Although vibriosis cases occur year-round and infections have been traced to oysters originating from oyster beds throughout the world, levels of *Vibrio* bacteria can be particularly high in the Gulf of Mexico during the summer. In 2015, California prohibited the sale of oysters harvested from the Gulf of Mexico between April and October, unless they had been processed so *Vibrio* levels were less than 30 MPN per gram. In 2019, CDC reported a multistate outbreak of gastrointestinal illnesses including vibriosis that was linked to oysters imported from Baja California Sur.

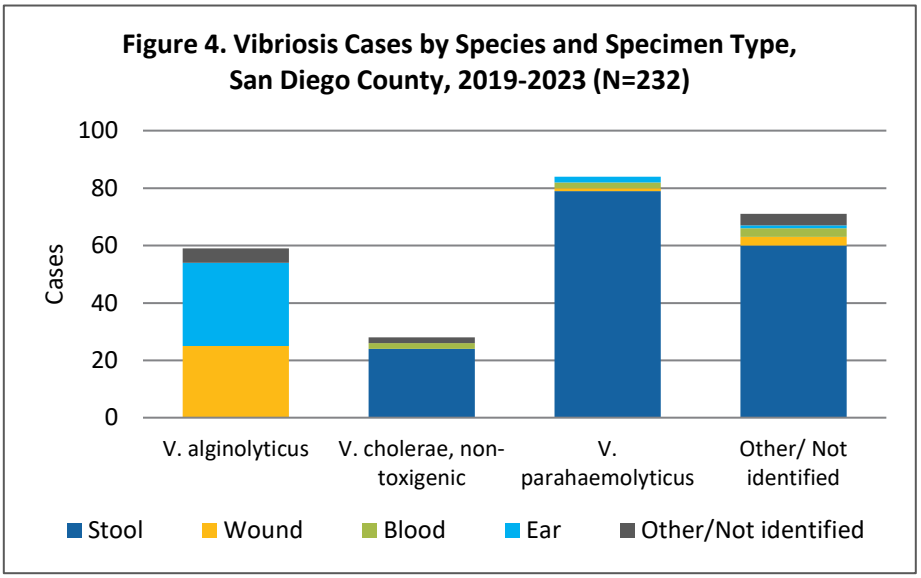
From 2019-2023, there have been 10 confirmed vibriosis outbreaks in San Diego County, all associated with eating raw oysters at local food facilities. Case counts for each outbreak ranged from two to four and oysters were sourced from multiple harvest beds.

Figure 3. Vibriosis Cases by Month of Onset*
San Diego County, 2019-2023 (N=232)



*When onset date was not available, date of specimen collection was used. Data current as of 4/29/2024. Data are provisional and subject to change as additional information becomes available.

Figure 4. Vibriosis Cases by Species and Specimen Type,
San Diego County, 2019-2023 (N=232)



Data are current as of 4/29/2024. Data are provisional and subject to change as additional information becomes available.

Federal Resources

- Centers for Disease Control and Prevention (CDC) *Vibrio* Species Causing Vibriosis website
- CDC *Vibrio* and Oysters website
- CDC Cholera and Other Vibrio Surveillance (COVIS) website
- CDC Cholera – *Vibrio cholerae* infection website
- Interstate Shellfish Sanitation Conference

State Resources

- California Department of Public Health (CDPH) Vibriosis (Non-Cholera) website
- CDPH Shellfish Program website

Suggested citation: Nelson J, Richardson M. Vibriosis. County of San Diego Monthly Communicable Disease Report 2024; 8(4):1-2.

MONTHLY COMMUNICABLE DISEASE REPORT

APRIL 2024

Volume 8, Issue 4: May 15, 2024

Table 1. Select Reportable Diseases

Disease and Case Inclusion Criteria (C,P,S)		2024 April	2024 March	2024 YTD	Prior Years 2023 YTD	Prior Years Avg YTD, 2021-2023	Prior Years 2023 Total
Botulism (Foodborne, Infant, Wound, Other)	C,P	0	1	1	0	0.7	1
Brucellosis	C,P	1	0	1	0	1.3	3
Campylobacteriosis	C,P	90	82	335	288	241.3	1,122
Candida auris	C	11	7	41	21	9.3	97
Chickenpox, Hospitalization or Death	C,P	1	0	2	1	1.3	7
Chikungunya	C,P	0	0	0	0	0.3	0
Coccidioidomycosis	C	33	28	151	156	144.3	481
Cryptosporidiosis	C,P	6	15	40	33	19.3	131
Dengue Virus Infection	C,P	2	2	8	1	0.7	26
Encephalitis, All	C	1	3	9	8	11.3	33
Giardiasis	C,P	15	17	73	66	52.3	236
Hepatitis A, Acute	C	1	1	7	25	13.0	45
Hepatitis B, Acute	C	1	0	1	4	6.0	13
Hepatitis B, Chronic	C,P	33	33	176	263	275.7	770
Hepatitis C, Acute	C,P	9	9	32	38	39.0	112
Hepatitis C, Chronic	C,P	142	154	646	757	1,060.0	2,176
Legionellosis	C	3	3	18	41	29.3	94
Listeriosis	C	0	1	2	4	2.0	11
Lyme Disease	C,P	0	0	1	1	1.7	12
Malaria	C	1	2	7	1	2.0	16
Measles (Rubeola)	C	0	1	2	0	0.0	0
Meningitis, Aseptic/Viral	C,P,S	5	5	18	20	21.3	63
Meningitis, Bacterial	C,P,S	6	4	18	11	11.0	42
Meningitis, Other/Unknown	C	2	3	9	9	7.0	25
Meningococcal Disease	C,P	1	1	4	1	0.3	4
Mumps	C,P	0	0	1	0	0.3	0
Pertussis	C,P	55	64	192	38	26.0	329
Rabies, Animal	C	0	0	0	0	0.7	8
Rocky Mountain Spotted Fever	C,P	1	0	1	0	0.3	4
Salmonellosis (Non-Typhoid/Non-Paratyphoid)	C,P	41	37	161	153	133.7	685
Shiga toxin-Producing *E. coli* (including O157)	C,P	11	16	61	53	52.3	264
Shigellosis	C,P	25	41	146	128	92.3	523
Typhoid Fever	C,P	0	1	2	2	4.3	7
Vibriosis	C,P	2	3	8	5	4.0	45
West Nile Virus Infection	C,P	0	0	0	0	0.0	0
Yersiniosis	C,P	12	10	40	27	13.7	81
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

MONTHLY COMMUNICABLE DISEASE REPORT

APRIL 2024

Volume 8, Issue 4: May 15, 2024

Figure 5. Select Enteric Infections by Month
May 2023 – April 2024

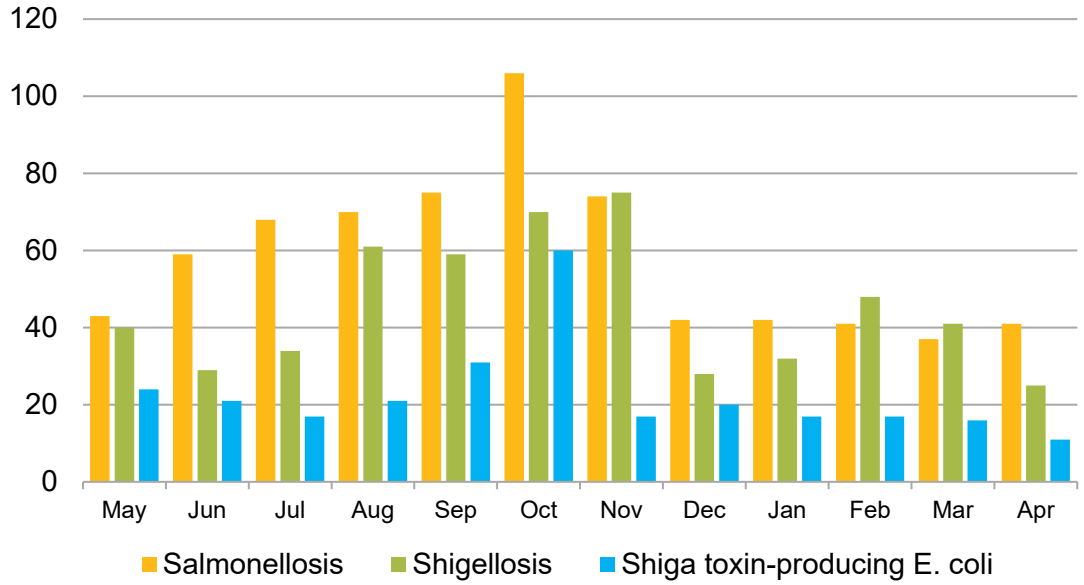
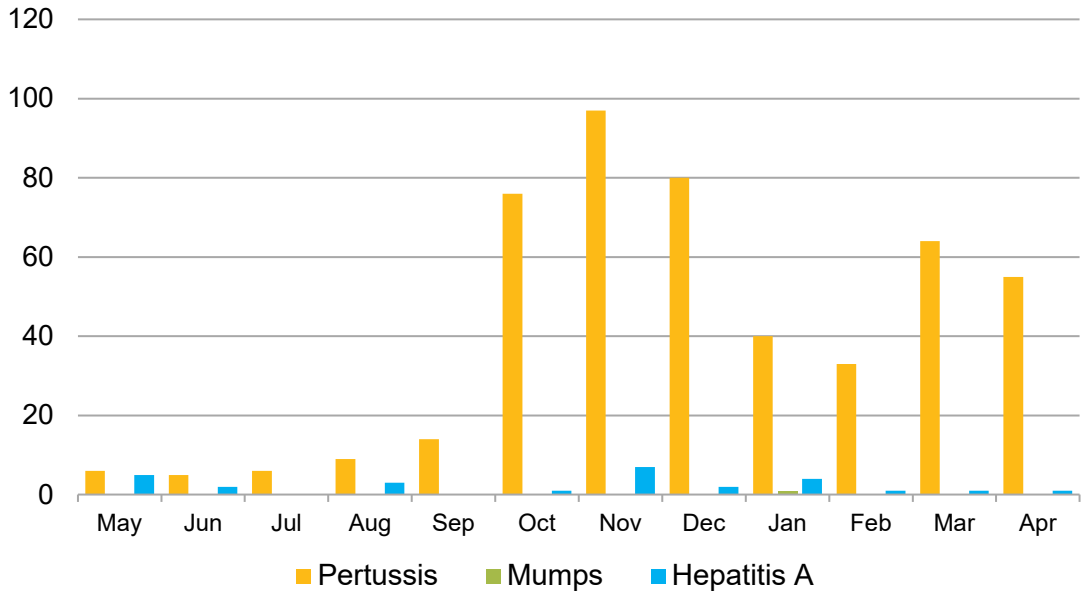


Figure 6. Select Vaccine-Preventable Infections by Month
May 2023 – April 2024



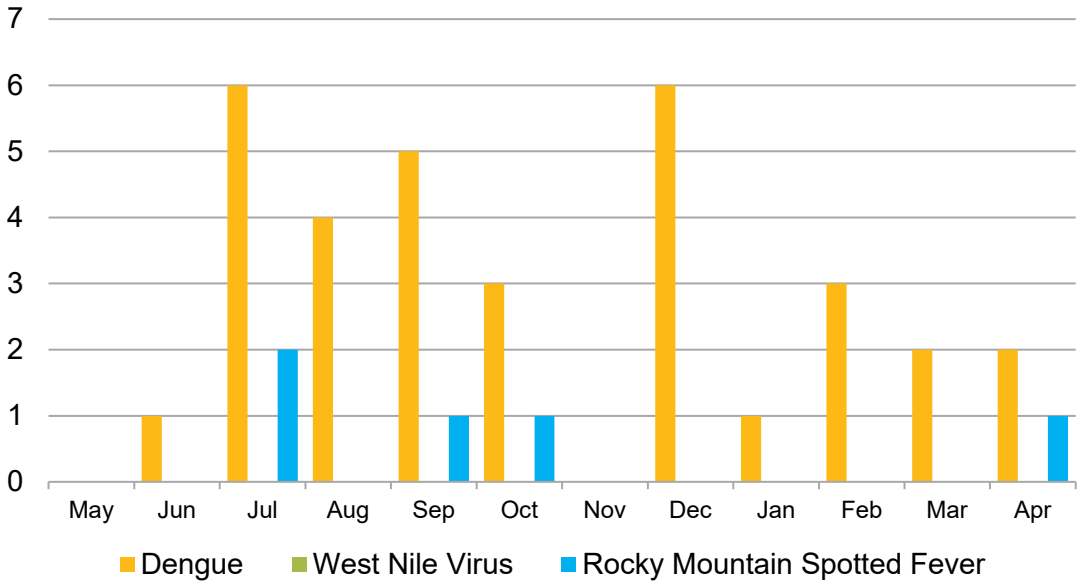
Case counts are provisional and subject to change as additional information becomes available. Cases are grouped into calendar months and calendar years on the basis of the earliest of the following dates: onset, lab specimen collection, diagnosis, death, and report received. Counts may differ from previously 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.

MONTHLY COMMUNICABLE DISEASE REPORT

APRIL 2024

Volume 8, Issue 4: May 15, 2024

Figure 7. Select Vector-Borne Infections by Month
May 2023 – April 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.