EPIDEMIOLOGY AND IMMUNIZATION SERVICES BRANCH

# MONTHLY COMMUNICABLE DISEASE REPORT

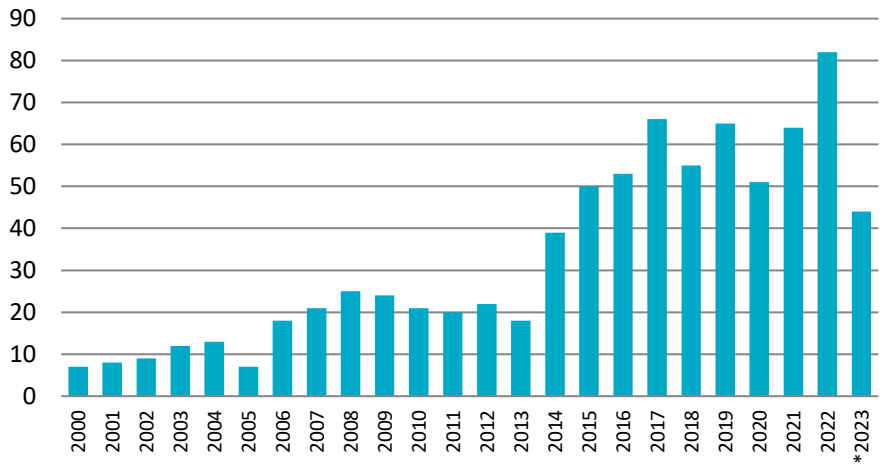
APRIL 2023

Volume 7, Issue 4: May 19, 2023

## LEGIONELLOSIS

Legionellosis is a respiratory infection caused by multiple species of *Legionella* bacteria. It manifests as two clinically distinct syndromes. Legionnaires' disease is characterized by pneumonia, with a presentation similar to other types of pneumonia, including cough, shortness of breath, fever, and myalgia. Other symptoms experienced by some patients with Legionnaires' disease include headache, diarrhea, nausea, and confusion. Pontiac fever is a milder infection that is self-limiting, with fever and myalgia, but not pneumonia. Pontiac fever is rarely detected outside of an outbreak and the vast majority of legionellosis cases identified are Legionnaires' disease.

**Figure 1. Legionellosis Cases, San Diego County, 2000-2023***

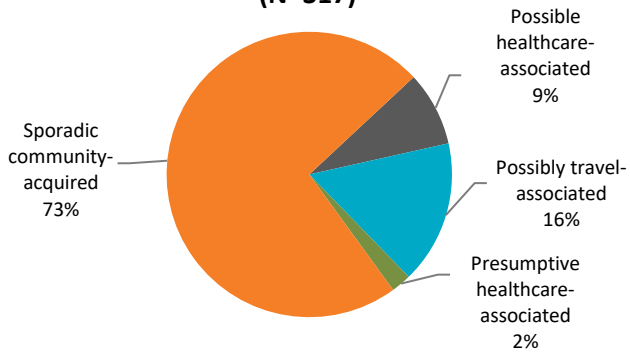



*2023 data are year-to-date; current as of 5/15/2023. Data are provisional and subject to change as additional information becomes available. Grouped by CDC disease years.

Incidence of legionellosis has increased steadily since 2000, though it is still believed to be underdiagnosed. In 2019, 8,890 cases were reported in the United States, compared to 1,127 cases in 2000. In California, there were 560 reported legionellosis cases in 2019. The highest annual total in San Diego County was in 2022 with 82 cases.

*Legionella* bacteria are commonly found in natural freshwater environments and soil; they become a health risk when they proliferate in human-made water systems, ranging from home showers to hot tubs and decorative fountains to the large, complex water systems used to heat and cool buildings such as hospitals and hotels. People become infected when they inhale aerosolized water droplets from these sources.

**Figure 2. Classification of San Diego County Legionellosis Cases, 2018-2022 (N=317)**




Excludes cases (9/317) with missing information. Data are provisional and subject to change as additional information becomes available. Grouped by CDC disease years.

Only a small proportion of those exposed to *Legionella* get sick. Those at increased risk for illness include: persons 50 years or older (85% of 2018-2022 San Diego County cases); current or former smokers (58% of 2018-2022 San Diego County cases); those with underlying health conditions such as chronic lung disease, diabetes, and kidney or liver failure; and those with compromised immune systems.

Health departments investigate reports of legionellosis to attempt to determine a source of infection. Because the bacteria are ubiquitous, the source for the majority of cases cannot be definitively identified. Most cases are considered to be sporadic community-acquired infections (73% of San Diego County cases in 2018-2022). When specific criteria related to

*Continued on next page*

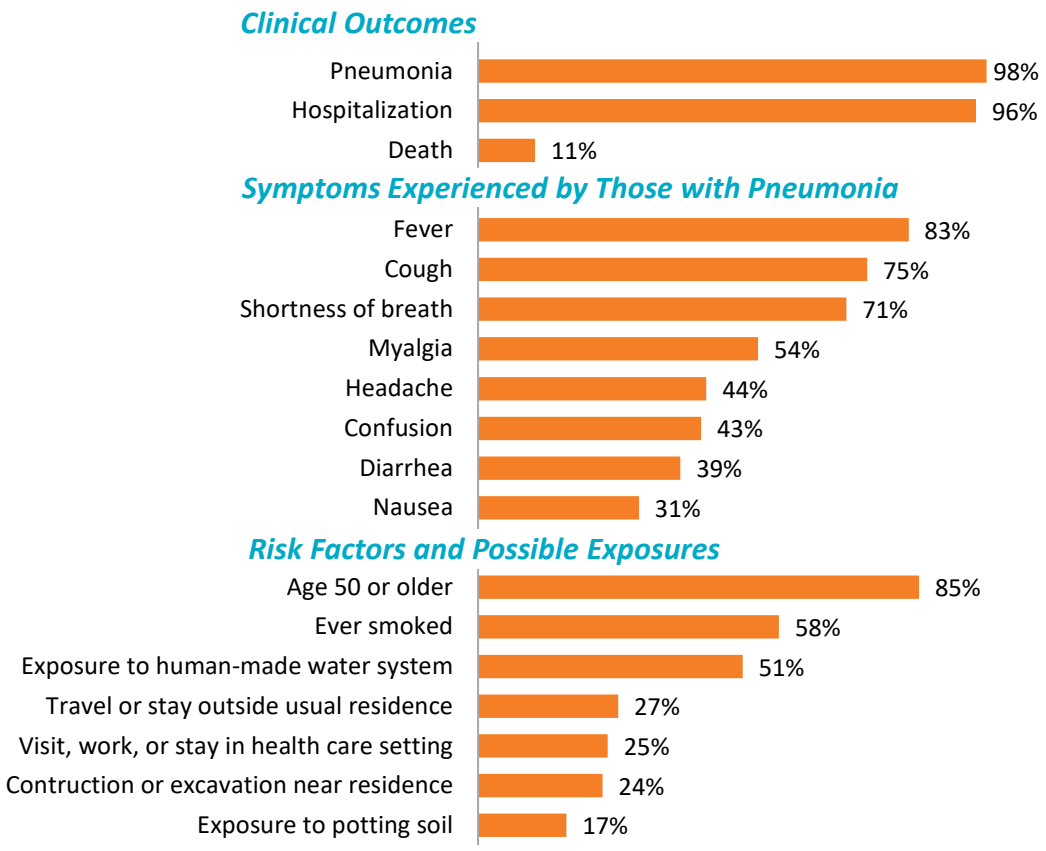
*The Monthly Communicable Disease Surveillance Report is a publication of the County of San Diego Public Health Services Epidemiology and Immunization Services Branch (EISB). EISB identifies, investigates, registers, and evaluates communicable, reportable, and emerging diseases and conditions to protect 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.*

# LEGIONELLOSIS, continued

continuous hospital stays during their exposure period are met, cases are classified as presumptive healthcare-associated. Other cases with healthcare exposures may be considered possible healthcare-associated, and cases where persons have spent a night away from their own home may be considered possible travel-associated cases.

The source of infection is often only determined in the context of an outbreak. In fact, the disease was first identified and named in 1976 after an outbreak of pneumonia among attendees of an American Legion convention in Philadelphia—a meeting that included many older, susceptible persons convening in a hotel with a cooling system later found to harbor the bacteria.

**Figure 3. Select Characteristics of San Diego County Legionellosis Cases, 2018-2022 (N=317)**




Cases with missing information excluded for each characteristic. Denominators range from 210-307 for all cases and 226-286 for cases with pneumonia. Possible exposures are not confirmed sources of illness. Water systems include: water storage, heating, or cooling systems; hot tubs, saunas, or swimming pools; misters; sprinklers; drinking fountains; decorative fountains; evaporative coolers; and humidifiers. Health care settings include hospitals, dental offices, and long-term care facilities. Data are provisional and subject to change as additional information becomes available. Grouped by CDC disease years.

Outbreaks, along with greater awareness and testing, may be contributing to the increased reported incidence of legionellosis. Since 2000, the highest number of outbreaks in the U.S. have been reported in Florida (123) and New York (74). Recent outbreaks include a prison outbreak in Florida and 19 cases in the Bronx of NYC, associated with a cooling tower. There have been three outbreaks, each involving two cases, identified in San Diego County in the past five years, two associated with a hotel and the other a vacation rental.

Most San Diego cases (96% of those with species identified) were due to *L. pneumophila*, the most common of the 48 species of *Legionella*, but also the only one detected by the commonly-used urine antigen test. Other species identified in San Diego County cases between 2018-2022 are *L. longbeachae* and *L. micdadei*. Prolonged shutdown or reduced operation of a building, such as during the COVID-19 pandemic, may increase the risk for spread of *Legionella* in water systems. CDC has updated their guidance for reopening buildings after shutdown.

### Resources

- Centers for Disease Control and Prevention (CDC) Legionellosis website
- CDC website on Guidelines, Standards, and Laws related to Legionellosis
- Environmental Protection Agency Legionella website
- California Department of Public Health (CDPH) Legionellosis website

Suggested citation: Guzman M, Nelson JA, Shah S. Legionellosis. County of San Diego Monthly Communicable Disease Report 2023; 7(4):1-2.

# MONTHLY COMMUNICABLE DISEASE REPORT

## APRIL 2023

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| Table 1. Select Reportable Diseases | | 2023 | | | Prior Years | | |
|---|---|---|---|---|---|---|---|
| Disease and Case Inclusion Criteria (C,P,S) | | April | March | January - April (YTD) | 2022 YTD | Avg YTD, 2020-2022 | 2022 Total |
| Botulism (Foodborne, Infant, Wound, Other) | C,P | 0 | 0 | 0 | 0 | 0.7 | 5 |
| Brucellosis | C,P | 0 | 2 | 2 | 2 | 1.3 | 5 |
| Campylobacteriosis | C,P | 73 | 77 | 291 | 222 | 214.3 | 955 |
| Chickenpox, Hospitalization or Death | C,P | 0 | 0 | 1 | 0 | 1.0 | 1 |
| Chikungunya | C,P | 0 | 0 | 0 | 1 | 0.3 | 2 |
| Coccidioidomycosis | C | 36 | 47 | 143 | 139 | 154.7 | 426 |
| Cryptosporidiosis | C,P | 12 | 12 | 32 | 15 | 13.7 | 93 |
| Dengue Virus Infection | C,P | 0 | 0 | 1 | 1 | 1.0 | 14 |
| Encephalitis, All | C | 0 | 0 | 4 | 9 | 14.3 | 27 |
| Giardiasis | C,P | 15 | 18 | 57 | 50 | 48.3 | 191 |
| Hepatitis A, Acute | C | 9 | 9 | 26 | 11 | 9.0 | 30 |
| Hepatitis B, Acute | C | 0 | 0 | 3 | 8 | 5.7 | 12 |
| Hepatitis B, Chronic | C,P | 73 | 65 | 260 | 319 | 269.7 | 904 |
| Hepatitis C, Acute | C,P | 0 | 3 | 12 | 39 | 34.7 | 88 |
| Hepatitis C, Chronic | C,P | 131 | 155 | 653 | 1,081 | 1,251.0 | 2,943 |
| Legionellosis | C | 12 | 5 | 41 | 24 | 20.7 | 84 |
| Listeriosis | C | 1 | 2 | 4 | 2 | 1.0 | 18 |
| Lyme Disease | C,P | 0 | 0 | 0 | 2 | 2.0 | 7 |
| Malaria | C | 0 | 0 | 0 | 4 | 3.3 | 11 |
| Measles (Rubeola) | C | 0 | 0 | 0 | 0 | 0.0 | 0 |
| Meningitis, Aseptic/Viral | C,P,S | 3 | 6 | 15 | 23 | 24.3 | 75 |
| Meningitis, Bacterial | C,P,S | 0 | 1 | 9 | 12 | 11.0 | 33 |
| Meningitis, Other/Unknown | C | 2 | 1 | 8 | 4 | 7.7 | 23 |
| Meningococcal Disease | C,P | 0 | 1 | 1 | 0 | 1.3 | 2 |
| Mumps | C,P | 0 | 0 | 0 | 1 | 5.7 | 3 |
| Pertussis | C,P | 4 | 5 | 35 | 25 | 80.7 | 102 |
| Rabies, Animal | C | 0 | 0 | 0 | 1 | 1.0 | 3 |
| Rocky Mountain Spotted Fever | C,P | 0 | 0 | 0 | 0 | 0.7 | 3 |
| Salmonellosis (Non-Typhoid/Non-Paratyphoid) | C,P | 28 | 35 | 150 | 135 | 121.0 | 680 |
| Shiga toxin-Producing *E. coli* (including O157) | C,P | 14 | 9 | 37 | 62 | 47.3 | 208 |
| Shigellosis | C,P | 34 | 20 | 127 | 100 | 75.7 | 527 |
| Typhoid Fever | C,P | 2 | 1 | 3 | 10 | 4.3 | 13 |
| Vibriosis | C,P | 2 | 1 | 5 | 4 | 4.7 | 38 |
| West Nile Virus Infection | C,P | 0 | 0 | 0 | 0 | 0.0 | 3 |
| Yersiniosis | C,P | 6 | 3 | 17 | 6 | 8.0 | 46 |
| Zika Virus | C,P | 0 | 0 | 0 | 0 | 0.0 | 1 |

***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 4. Select Enteric Infections by Month**
**May 2022 – April 2023**

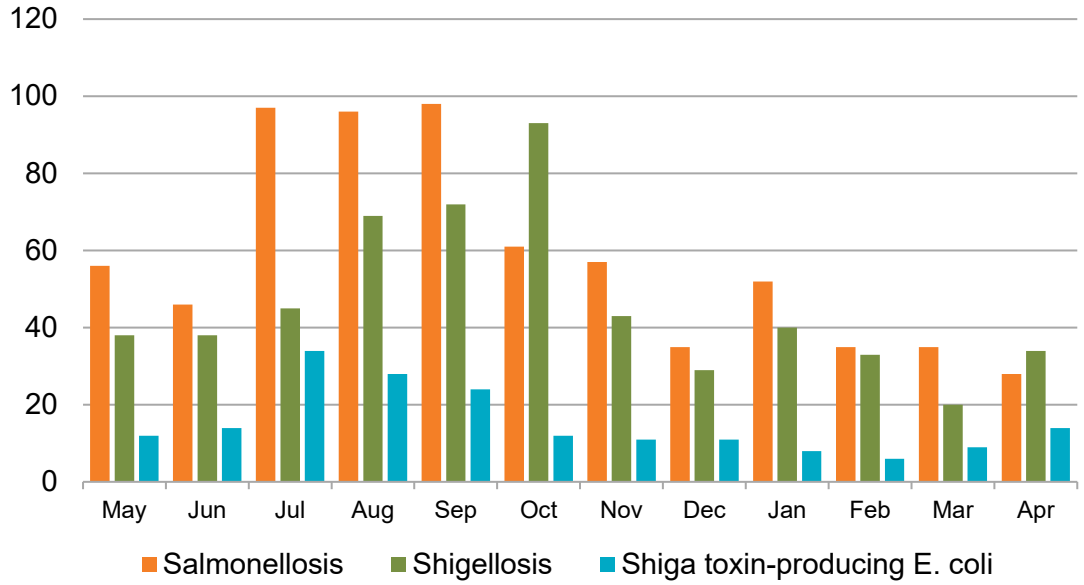


**Figure 5. Select Vaccine-Preventable Infections by Month**
**May 2022 – April 2023**

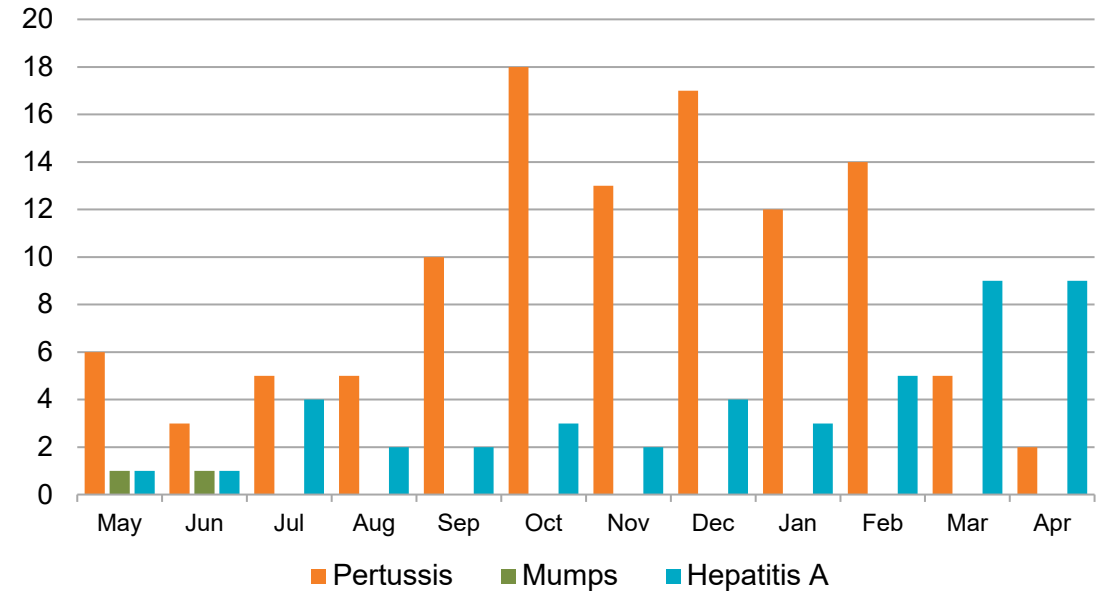


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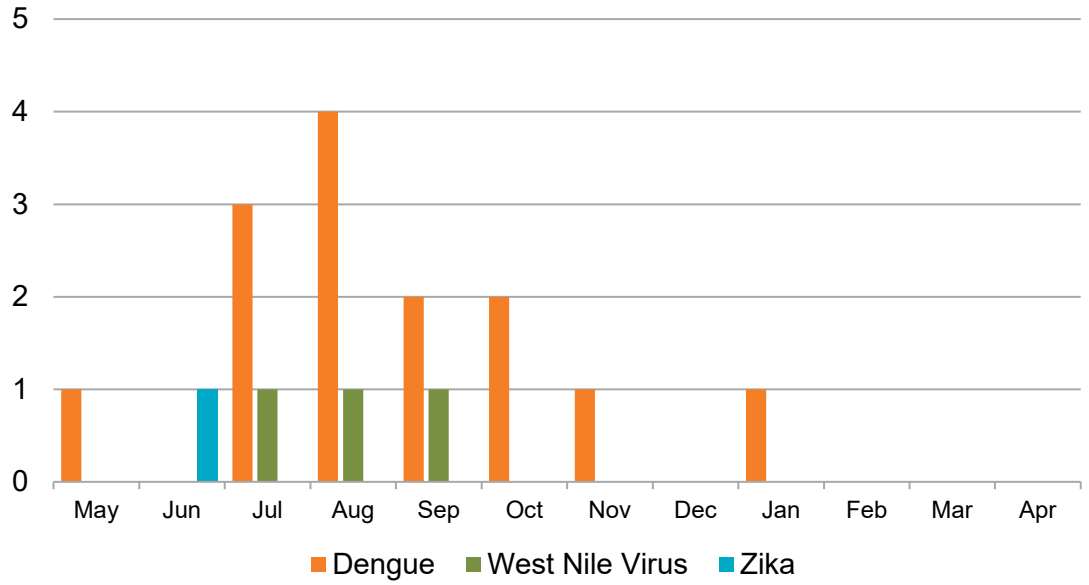
**Figure 6. Select Vector-Borne Infections by Month**
**May 2022 – April 2023**




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.

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.