EPIDEMIOLOGY AND IMMUNIZATION SERVICES BRANCH

MONTHLY COMMUNICABLE DISEASE REPORT

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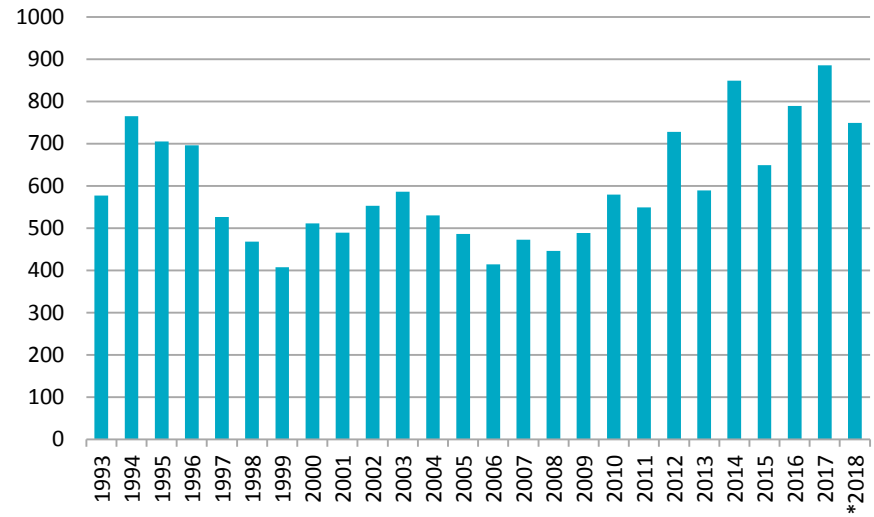
CAMPYLOBACTERIOSIS

Campylobacteriosis is an acute gastrointestinal infection caused by multiple *Campylobacter* species. Approximately 90% of human infections are caused by *C. jejuni*. Typical symptoms include diarrhea (which may be bloody), abdominal pain, fever, and sometimes nausea and vomiting.

Campylobacter bacteria are a leading cause of diarrheal illness in the United States (U.S.) and also commonly cause infection around the world. The Centers for Disease Control and Prevention (CDC) estimates that more than 1.3 million people are infected in the U.S. each year. Many of these infections, however, are undiagnosed or unreported. In 2017, there were 67,537 reported cases of campylobacteriosis in the U.S., 9,447 in California, and 885 in San Diego County. The rate of infection in San Diego, as in the U.S., is higher in males than females (24.0 vs. 21.5 per 100,000 county residents in 2013-2017) and is highest in children under five years of age (40.4).

Figure 1. Campylobacteriosis Cases, San Diego County, 1993-2018*



*2018 data are year-to-date; current as of 11/15/2018. Data are provisional and subject to change as additional information becomes available. Grouped by CDC disease years.

Most campylobacteriosis infections are self-limited, though more severe illness can occur, especially among immunosuppressed persons. In some cases, post-infectious syndromes such as irritable bowel syndrome, arthritis, and Guillain-Barré syndrome (GBS) may occur. CDC estimates that one in 1,000 reported campylobacteriosis cases results in GBS.

Most people become infected two to five days after eating raw or undercooked poultry or other foods contaminated by raw poultry. Unpasteurized milk, untreated water, and contact with infected pets, especially puppies and kittens, are also sources of infection. *Campylobacter* is rarely transmitted person-to-person.

Birds and other animals can be infected with *Campylobacter*, but show no signs of illness. However, the use of fluoroquinolones (e.g., ciprofloxacin) to control various types of infection in poultry flocks has contributed to antibiotic resistance in *Campylobacter*. In 2015, 25% of *C. jejuni* isolates were found to be resistant to ciprofloxacin.

Consumers can prevent *Campylobacter* infection by avoiding cross-contamination of vegetables and other foods with raw poultry, and cooking poultry to safe temperatures. The United States Department of Agriculture Food Safety and Inspection Service (USDA-FSIS) regulates meat and poultry and has instituted standards meant to limit contamination of chickens in processing plants. The Food and Drug Administration (FDA) routinely tests retail chickens for *Campylobacter* as part of the National Antibiotic Resistance Monitoring System (NARMS). The proportion of retail chickens testing positive declined from 60% in 2004 to 24% in 2015.

Resources

- Centers for Disease Control and Prevention (CDC) Campylobacteriosis website
- California Department of Public Health (CDPH) Campylobacteriosis website

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, send an email to EpiDiv.HHSA@sdcounty.ca.gov.

Table 1. Select Reportable Diseases		2018			Prior Years		
Disease and Case Inclusion Criteria (C,P,S)		Current Month	Prior Month	Year-to-Date (YTD)	2017 YTD	Avg YTD, Prior 3 Years	2017 Total
Amebiasis	C	0	1	8	9	14.3	10
Botulism (Foodborne, Infant, Wound, Other)	C,P	0	0	10	5	3.3	8
Brucellosis	C,P	0	0	1	5	3.3	5
Campylobacteriosis	C,P	60	96	723	795	669.3	883
Chickenpox, Hospitalization or Death	C,P	2	0	2	2	1.7	3
Chikungunya	C,P	0	0	5	2	5.0	2
Coccidioidomycosis	C	4	21	218	224	167.0	313
Cryptosporidiosis	C,P	3	16	74	46	31.3	54
Dengue Virus Infection	C,P	2	0	6	12	14.7	12
Encephalitis, All	C	5	1	34	39	59.3	43
Giardiasis	C,P	12	25	203	278	273.3	317
Hepatitis A, Acute	C	1	1	32	542	192.7	576
Hepatitis B, Acute	C	0	0	6	13	9.3	13
Hepatitis B, Chronic	C,P	75	74	725	726	722.0	868
Hepatitis C, Acute	C,P	0	0	1	4	1.7	4
Hepatitis C, Chronic	C,P	293	276	3,560	2,549	2,416.0	3,113
Legionellosis	C	2	6	35	56	48.0	66
Listeriosis	C	0	0	11	15	14.7	15
Lyme Disease	C,P	0	1	7	20	15.0	21
Malaria	C	0	1	5	7	8.0	8
Measles (Rubeola)	C	0	0	0	2	3.3	2
Meningitis, Aseptic/Viral	C,P,S	7	9	109	150	154.3	187
Meningitis, Bacterial	C,P,S	0	1	31	34	33.0	39
Meningitis, Other/Unknown	C	0	0	11	29	26.7	34
Meningococcal Disease	C,P	1	2	11	1	2.0	1
Mumps	C,P	2	1	9	14	11.3	15
Pertussis	C,P,S	32	35	550	907	680.3	1,161
Rabies, Animal	C	1	0	7	15	9.3	16
Rocky Mountain Spotted Fever	C,P	0	0	1	2	2.3	3
Salmonellosis (Non-Typhoid/Non-Paratyphoid)	C,P	74	109	686	473	483.7	576
Shiga toxin-Producing *E. coli* (including O157)	C,P	18	12	131	261	116.3	288
Shigellosis	C,P	52	66	307	271	200.7	334
Typhoid Fever	C,P	0	1	2	2	3.3	2
Vibriosis	C,P	3	6	51	46	39.3	50
West Nile Virus Infection	C,P	0	1	1	2	22.3	2
Yersiniosis	C,P	0	2	20	48	23.3	54
Zika Virus	C,P	0	1	6	17	30.3	21

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.

Figure 2. Select Enteric Infections by Month
November 2017 – October 2018

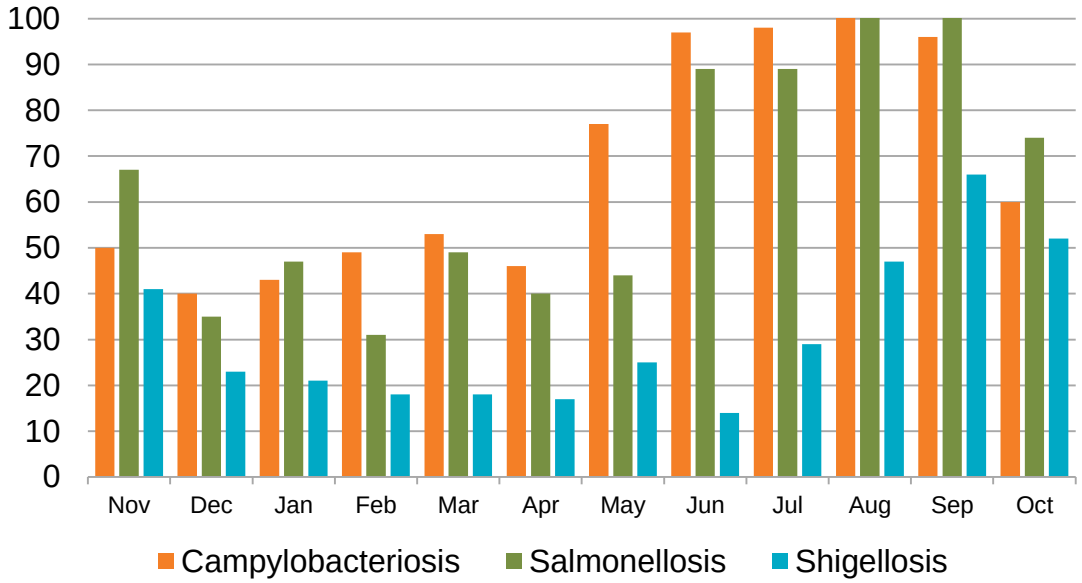


Figure 3. Select Vaccine-Preventable Infections by Month
November 2017 – October 2018

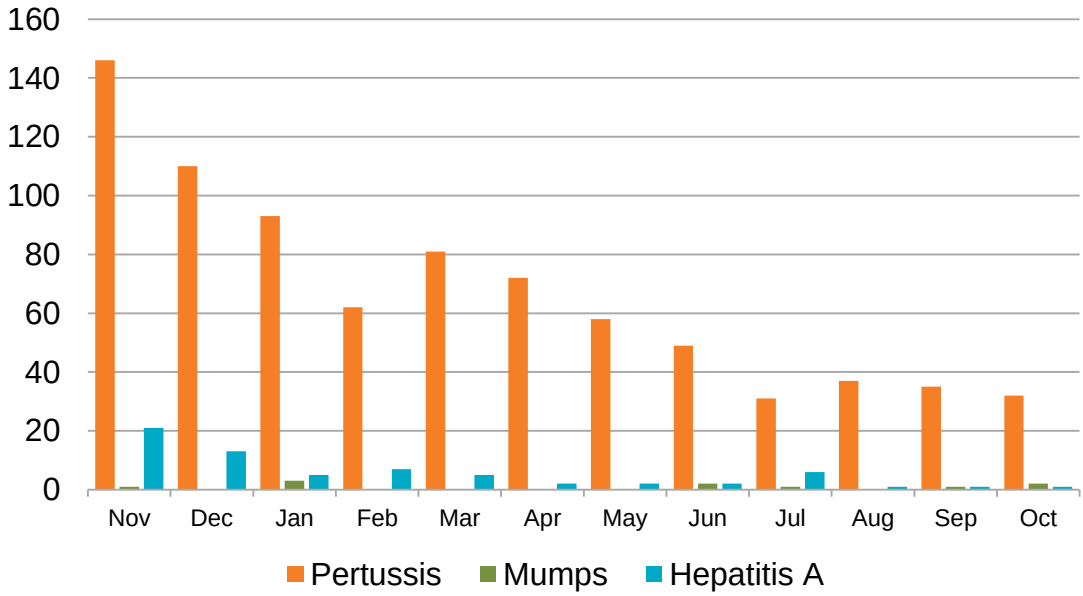


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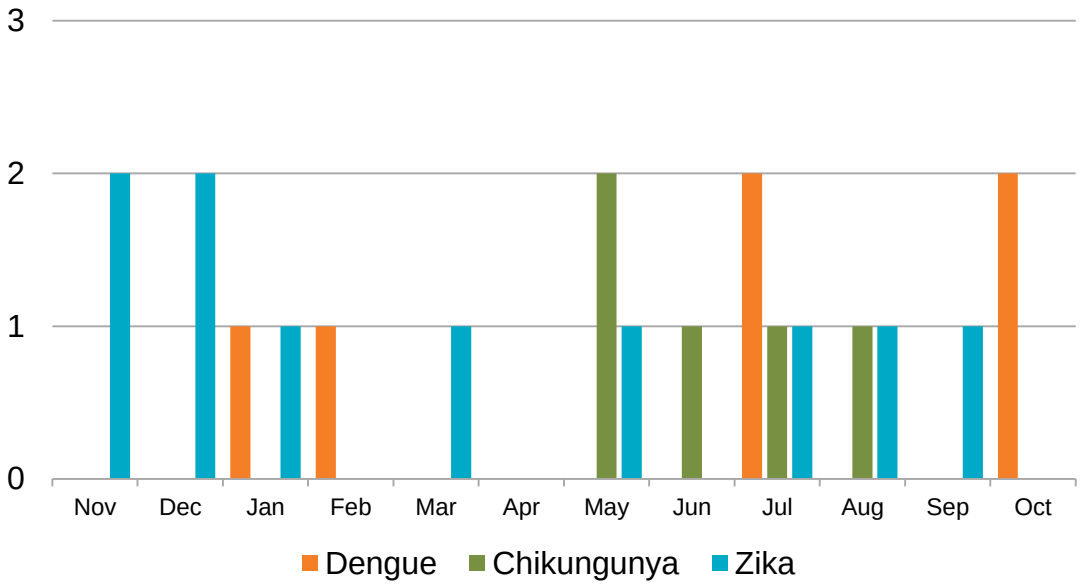
Figure 4. Select Vector-Borne Infections by Month
November 2017 – October 2018



All of these dengue, chikungunya, and Zika virus cases are travel-associated. For additional information on Zika cases, see the HHSA Zika 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.