EPIDEMIOLOGY AND IMMUNIZATION SERVICES BRANCH

MONTHLY COMMUNICABLE DISEASE REPORT

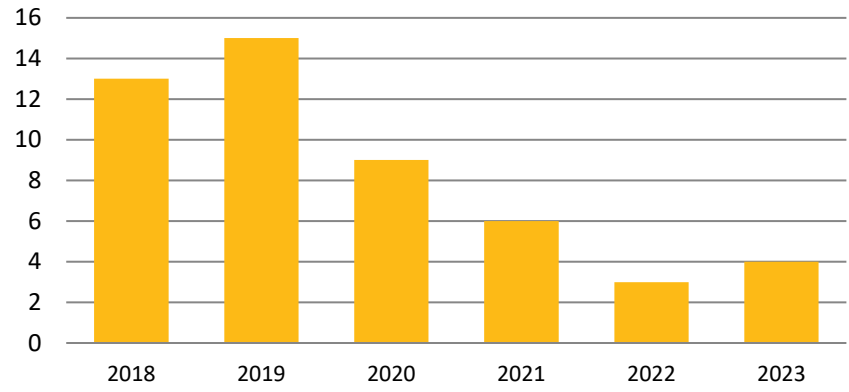
MARCH 2024

Volume 8, Issue 3: April 15, 2024

CHAGAS DISEASE (AMERICAN TRYPANOSOMIASIS)

Chagas disease is chronic, multiorgan parasitic infection caused by the parasite *Trypanosoma cruzi*. It is transmitted by the bite of triatomine bugs, colloquially known as "kissing bugs," and affects up to 8 million people annually throughout the American continents. It can also be vertically transmitted (transplacental) and acquired through solid organ transplantation or, rarely, by consumption of contaminated food. Highest incidence rates are in Bolivia, Argentina, and Paraguay.

Figure 1. Chagas Disease Cases Identified Via Retrospective Case Finding, San Diego County, 2018-2023



Retrospective case finding was conducted at sentinel healthcare facilities and the local blood bank. Case counts include resident and non-resident confirmed, probable, and suspect cases based on local case criteria.

Clinically, the disease manifests in three stages. The first, acute phase is short (4-8 weeks), and can be asymptomatic or present with fever, headache, fatigue, lymphadenopathy, and hepatosplenomegaly, among other vague symptoms. Rarely, more severe symptoms such as myocarditis, pericardial effusion, and meningoencephalitis can develop. There is often a local inflammatory reaction at the site of infection (chagoma) or the eye (Romaña sign). The second is a variable (years to life) asymptomatic stage. Finally, the third is a chronic end stage characterized by cardiac, digestive, or neurological damage and dysfunction, which can be fatal. The disease can also "re-activate" in times of host immunosuppression (HIV, chemotherapy, etc).

The gold standard for diagnosis is microscopic visualization of the parasite in blood smear in the acute phase. PCR may also be helpful. Diagnosis in the chronic stage, when parasitemia is no longer present, is achieved by serology. The diagnosis of congenital infection in seropositive mothers relies on PCR and microscopic examination of cord blood at birth and again at 4-6 weeks, followed by serology at 9 months if initial studies are negative. Treatment is essential to prevent end organ failure and should almost always be conducted by an expert. Unfortunately, treatment is contraindicated in pregnancy due to possible teratogenic effects.

The combination of its international epidemiology, global immigration trends, long asymptomatic phase, and potential for curable intervention has made Chagas disease a target, both in screening and surveillance. It is a concern for the local health department, given San Diego County's proximity to one of the busiest land borders in the world and large migrant population. As of April 14, 2024, Chagas disease is reportable in San Diego County. Vector control and blood bank/organ screening continue as crucial and ongoing components to the control of Chagas disease. Experts approximate that 300,000 people have Chagas disease in the United States; however, given the aforementioned worldwide incidence and geopolitical factors, that number may be a large underestimate.

Resources

- Centers for Disease Control and Prevention (CDC) Chagas Disease website
- California Department of Public Health Conenose (Kissing) Bugs and Chagas Disease website
- County of San Diego (COSD) Chagas Disease website
- COSD Vector Control Program Kissing Bugs website

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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

MARCH 2024

Volume 8, Issue 3: April 15, 2024

Table 1. Select Reportable Diseases

Disease and Case Inclusion Criteria (C,P,S)		2024 March	2024 February	2024 YTD	Prior Years 2023 YTD	Prior Years Avg YTD, 2021-2023	Prior Years 2023 Total
Botulism (Foodborne, Infant, Wound, Other)	C,P	1	0	1	0	0.3	2
Brucellosis	C,P	0	0	0	0	1.0	3
Campylobacteriosis	C,P	82	96	245	217	171.0	1,121
Candida auris	C	5	12	30	16	6.7	99
Chickenpox, Hospitalization or Death	C,P	0	0	1	1	1.3	7
Chikungunya	C,P	0	0	0	0	0.3	0
Coccidioidomycosis	C	0	39	74	110	113.3	458
Cryptosporidiosis	C,P	10	9	28	21	11.3	130
Dengue Virus Infection	C,P	2	2	5	1	0.7	25
Encephalitis, All	C	2	4	6	5	7.7	32
Giardiasis	C,P	11	21	51	45	39.3	235
Hepatitis A, Acute	C	0	1	5	16	6.3	45
Hepatitis B, Acute	C	0	0	0	4	4.3	13
Hepatitis B, Chronic	C,P	15	46	125	186	203.7	769
Hepatitis C, Acute	C,P	9	6	23	32	30.0	110
Hepatitis C, Chronic	C,P	152	181	507	578	820.0	2,189
Legionellosis	C	3	8	15	30	23.3	95
Listeriosis	C	1	1	2	3	1.0	11
Lyme Disease	C,P	0	0	1	1	1.7	11
Malaria	C	2	0	6	0	0.7	15
Measles (Rubeola)	C	0	0	1	0	0.0	0
Meningitis, Aseptic/Viral	C,P,S	5	5	12	13	14.3	62
Meningitis, Bacterial	C,P,S	1	2	8	10	9.0	39
Meningitis, Other/Unknown	C	1	1	3	7	5.7	25
Meningococcal Disease	C,P	1	1	3	1	0.3	4
Mumps	C,P	0	0	1	0	0.3	0
Pertussis	C,P	44	28	111	33	20.0	329
Rabies, Animal	C	0	0	0	0	0.7	8
Rocky Mountain Spotted Fever	C,P	0	0	0	0	0.3	4
Salmonellosis (Non-Typhoid/Non-Paratyphoid)	C,P	34	41	117	123	95.7	685
Shiga toxin-Producing *E. coli* (including O157)	C,P	13	17	47	31	31.3	261
Shigellosis	C,P	39	47	118	93	67.0	523
Typhoid Fever	C,P	0	1	1	1	3.3	7
Vibriosis	C,P	2	0	5	3	2.7	45
West Nile Virus Infection	C,P	0	0	0	0	0.0	0
Yersiniosis	C,P	9	11	27	20	8.3	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

MARCH 2024

Volume 8, Issue 3: April 15, 2024

Figure 2. Select Enteric Infections by Month
April 2023 – March 2024

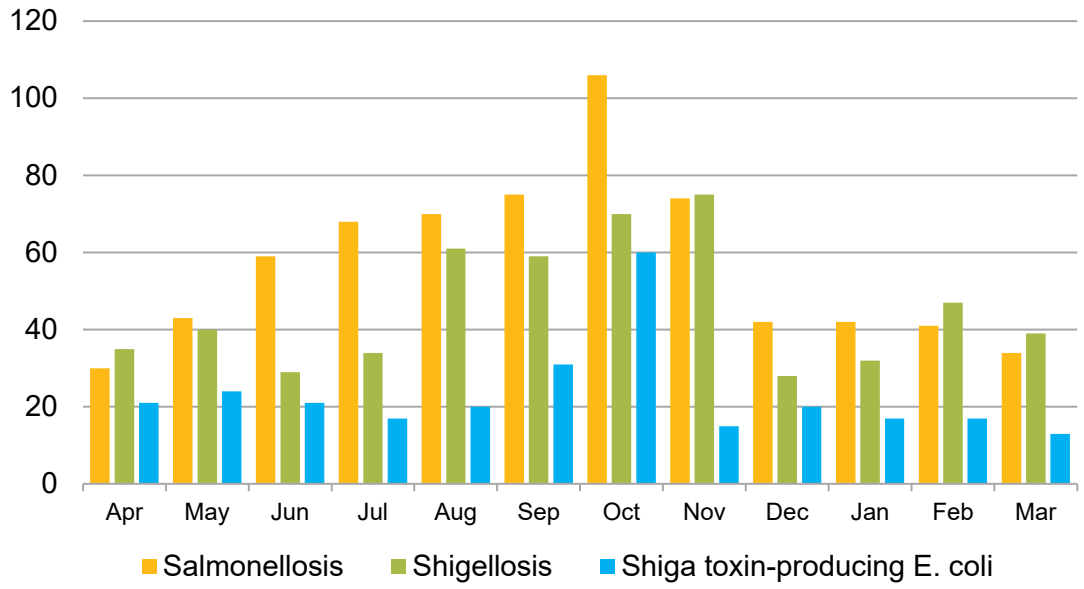
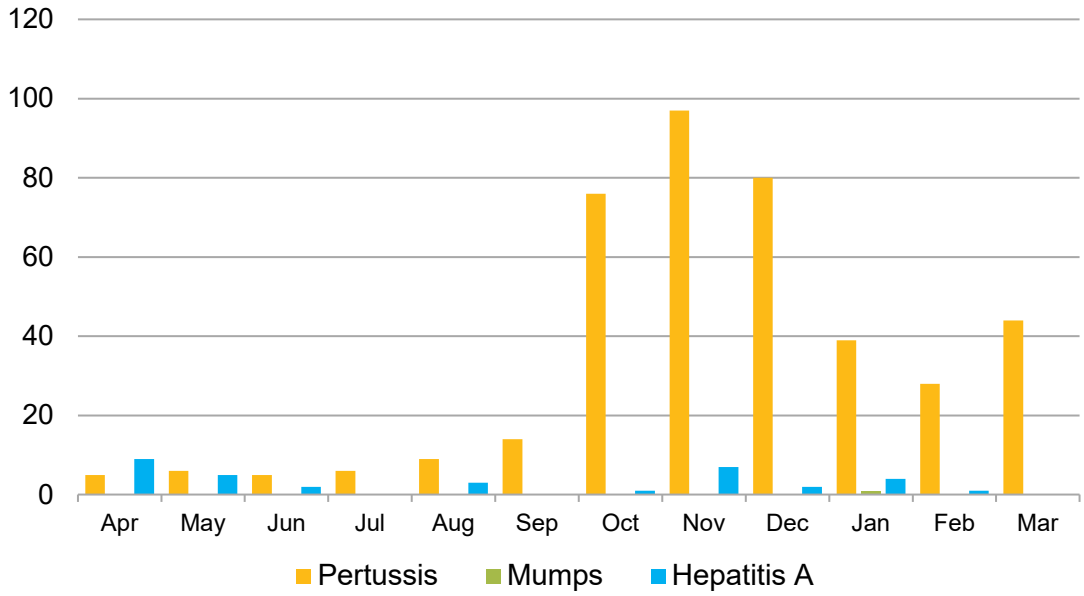


Figure 3. Select Vaccine-Preventable Infections by Month
April 2023 – March 2024



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MONTHLY COMMUNICABLE DISEASE REPORT

MARCH 2024

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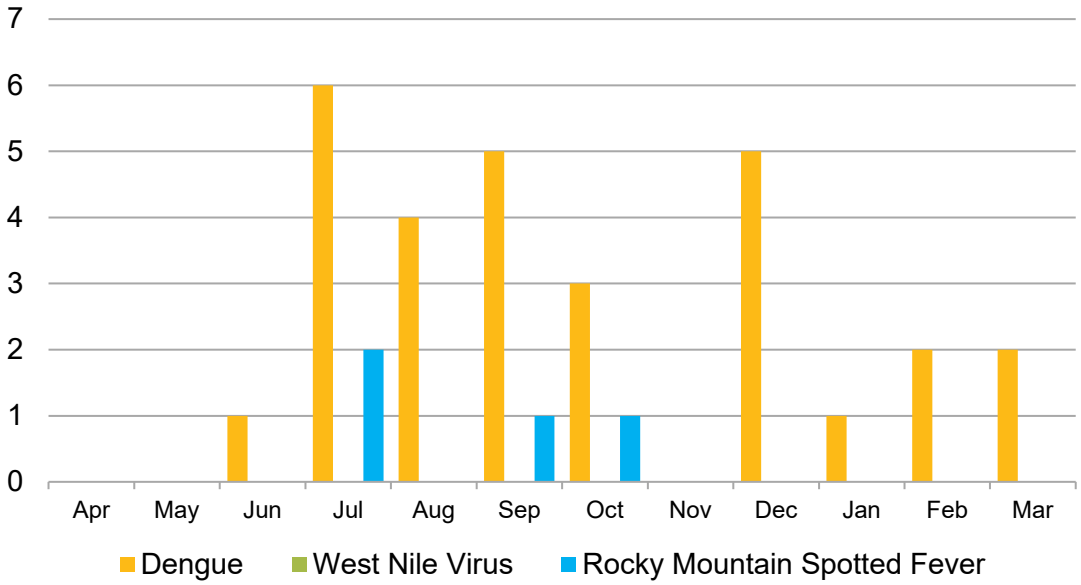
Figure 4. Select Vector-Borne Infections by Month
April 2023 – March 2024



All of the dengue cases are travel-associated. For more information on West Nile virus, see the County West Nile virus webpage.
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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.