

MONTHLY COMMUNICABLE DISEASE REPORT

NOVEMBER 2023

Volume 7, Issue 11: December 20, 2023

PERTUSSIS

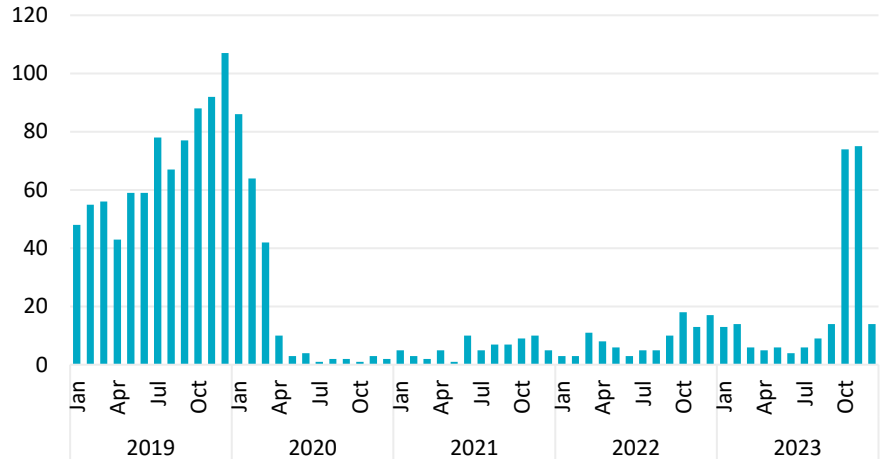
Pertussis, also known as whooping cough, is an acute, highly contagious respiratory infection caused by the bacteria *Bordetella pertussis*. The pertussis bacteria are spread through contact with airborne droplets of respiratory secretions, and illness is characterized by several weeks of increasingly violent coughing fits that produce mucous, vomiting, and a high-pitched inspiratory “whoop” sound after coughing ceases. Infants less than six months of age are at greatest risk for illness and complications, including encephalopathy, pneumonia, seizures, hospitalization, and death. Though illness is usually milder in otherwise healthy older children and adults, these groups can transmit bacteria to those at risk for complications.

There are two vaccines in the United States (U.S.) to help prevent whooping cough. DTaP protects children under seven years old, while older children, teens, and adults get Tdap. Both vaccines also include protection against tetanus and diphtheria.

[To protect newborns, pregnant women should receive Tdap vaccine in the third trimester of each pregnancy.](#) Infants can start the DTaP vaccine series as early as six weeks of age. Even one dose of DTaP may offer some protection against fatal whooping cough disease in infants. Vaccination is most protective within the first two years of receiving it, but can begin to wane after the first year post vaccination. Recommended [vaccination schedules](#) can be found on the Centers for Disease Control and Prevention (CDC) website.

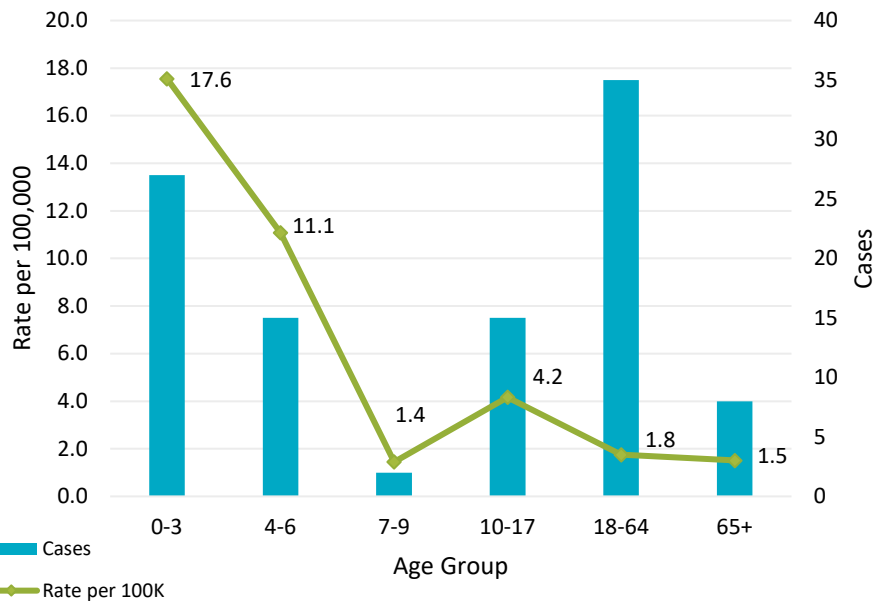
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Figure 1. Pertussis Cases By Month, San Diego County, 2019-2023*



*2023 data are year to date; current as of 12/15/23. Cases are grouped by episode date into CDC disease years. Prior to 2007, only confirmed cases were included. Data for 2008-2020 includes Confirmed, Probable, and Suspect cases. Data for 2020-2023 includes Confirmed and Probable cases per California Department of Public Health (CDPH) case criteria.

Figure 2. Pertussis Rates by Age Group, San Diego County, 2022 (N=102)



Data are provisional and subject to change as additional information becomes available. Rates are per 100,000 population and are calculated using SANDAG 2021 population estimates.

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.

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PERTUSSIS, continued

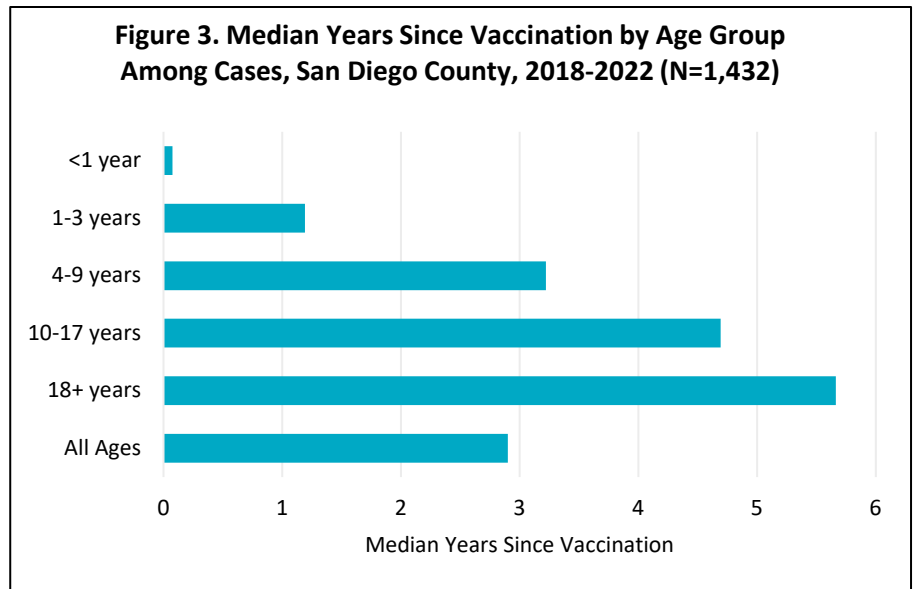
Since the transition to acellular pertussis vaccines in the 1990s, pertussis incidence tends to peak every three to five years. The vaccine is effective, but immunity wanes sooner than expected. The Tdap booster is recommended to bridge waning immunity, preventing illnesses and outbreaks. The 18,617 cases [reported](#) in the U.S. in 2019 were a recent national peak. Since the COVID-19 pandemic, case counts have been lower; however, local cases are starting to return to pre-pandemic levels.

In 2022, San Diego County incidence rates were highest among young children less than four years old at 17.6 per 100,000 population. The majority of cases during this period (58%) were among children under 18 years of age.

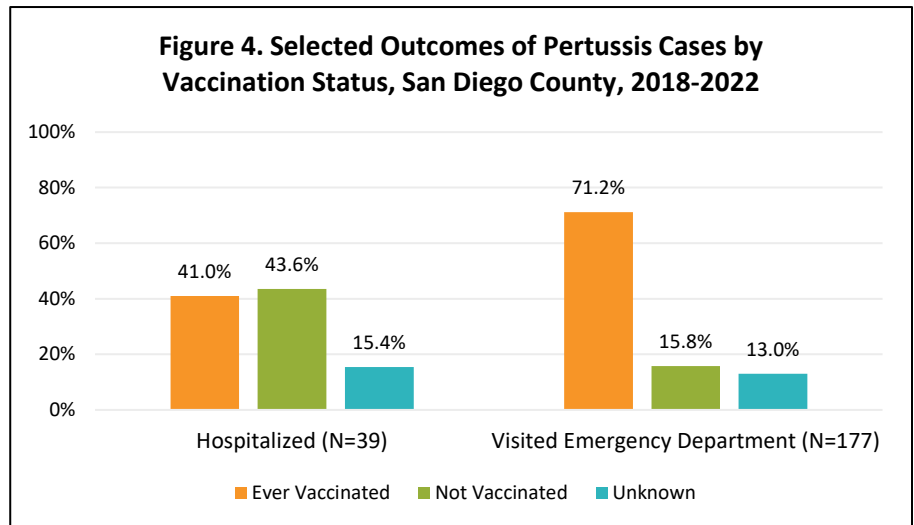
From 2018 to 2022, 1,879 pertussis cases were reported among San Diego County residents. There were no pertussis deaths during this period; however, there were 39 hospitalizations and 177 emergency department (ED) visits. Twenty-three (59%) hospitalizations and 44 (25%) ED visits were among infants less than one-year old. Only about a third (35%) of mothers of infant pertussis cases received a Tdap vaccine during pregnancy. Immunizing every pregnant person during each pregnancy provides critical protection for infants too young to be vaccinated, who are at greatest risk of severe disease.

Most case-patients during 2018-2022 had received at least one dose of pertussis vaccine (82.9%). Vaccination rates were lower among case-patients with more severe outcomes. Seventy-one percent of case-patients who visited the emergency department had ever been vaccinated, but only 41% of hospitalized case-patients had ever been vaccinated.

The preferred methods for the laboratory diagnosis of pertussis are culture and polymerase chain reaction (PCR). Prompt antibiotic treatment is recommended when clinical history is suggestive, especially in young infants who may experience rapid progression of disease.



Vaccination dates are entered in the San Diego County communicable disease registry from records in the California Immunization Registry (CAIR2). Vaccination dates are missing for 153 (10%) of cases that reported ever being vaccinated against pertussis.



Grouped by CDC disease years. Prior to 2020, Confirmed, Probable, and Suspect cases are included. Data for 2020-2022 includes Confirmed and Probable cases, per CDPH case criteria.

Resources

- [San Diego County Immunization Program website](#)
- [California Department of Public Health pertussis website](#)
- [CDC Pertussis website](#)
- [Epidemiology and Prevention of Vaccine-Preventable Diseases \(the Pink Book\) – Pertussis](#)

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Table 1. Select Reportable Diseases		2023			Prior Years		
		Nov.	October	January – Nov. (YTD)	2022 YTD	Avg YTD, 2020-2022	2022 Total
Disease and Case Inclusion Criteria (C,P,S)							
Botulism (Foodborne, Infant, Wound, Other)	C,P	0	0	0	5	3.3	6
Brucellosis	C,P	0	0	3	6	3.0	7
Campylobacteriosis	C,P	83	87	1,055	881	781.0	959
<i>Candida auris</i>	C	14	7	97	47	18.0	57
Chickenpox, Hospitalization or Death	C,P	0	0	7	1	1.3	2
Chikungunya	C,P	0	0	0	2	1.0	2
Coccidioidomycosis	C	9	39	402	420	416.7	461
Cryptosporidiosis	C,P	8	9	118	84	55.3	95
Dengue Virus Infection	C,P	0	3	19	14	7.3	15
Encephalitis, All	C	1	3	24	23	31.3	28
Giardiasis	C,P	5	20	197	178	160.7	193
Hepatitis A, Acute	C	7	1	43	26	17.0	30
Hepatitis B, Acute	C	0	1	11	12	11.7	12
Hepatitis B, Chronic	C,P	67	54	703	831	708.7	900
Hepatitis C, Acute	C,P	0	3	75	82	60.0	95
Hepatitis C, Chronic	C,P	173	201	2,180	2,807	3,193.0	2,998
Legionellosis	C	7	11	86	78	58.7	84
Listeriosis	C	0	0	11	18	14.0	19
Lyme Disease	C,P	0	0	12	7	8.3	8
Malaria	C	0	3	11	11	8.3	11
Measles (Rubeola)	C	0	0	0	0	0.0	0
Meningitis, Aseptic/Viral	C,P,S	6	3	52	72	61.3	75
Meningitis, Bacterial	C,P,S	2	1	31	31	23.7	35
Meningitis, Other/Unknown	C	0	3	18	23	26.7	26
Meningococcal Disease	C,P	0	0	4	2	2.3	2
Mumps	C,P	0	0	0	3	6.7	3
Pertussis	C,P	75	74	226	85	122.3	102
Rabies, Animal	C	0	1	8	3	5.0	3
Rocky Mountain Spotted Fever	C,P	0	1	3	2	2.0	2
Salmonellosis (Non-Typhoid/Non-Paratyphoid)	C,P	71	108	646	648	554.3	683
Shiga toxin-Producing <i>E. coli</i> (including O157)	C,P	14	56	228	197	150.0	208
Shigellosis	C,P	71	68	490	499	374.0	528
Typhoid Fever	C,P	0	0	5	12	8.7	13
Vibriosis	C,P	4	5	42	37	41.3	38
West Nile Virus Infection	C,P	0	0	0	3	2.3	3
Yersiniosis	C,P	4	3	67	44	30.7	46
Zika Virus	C,P	0	0	0	1	0.3	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](#)

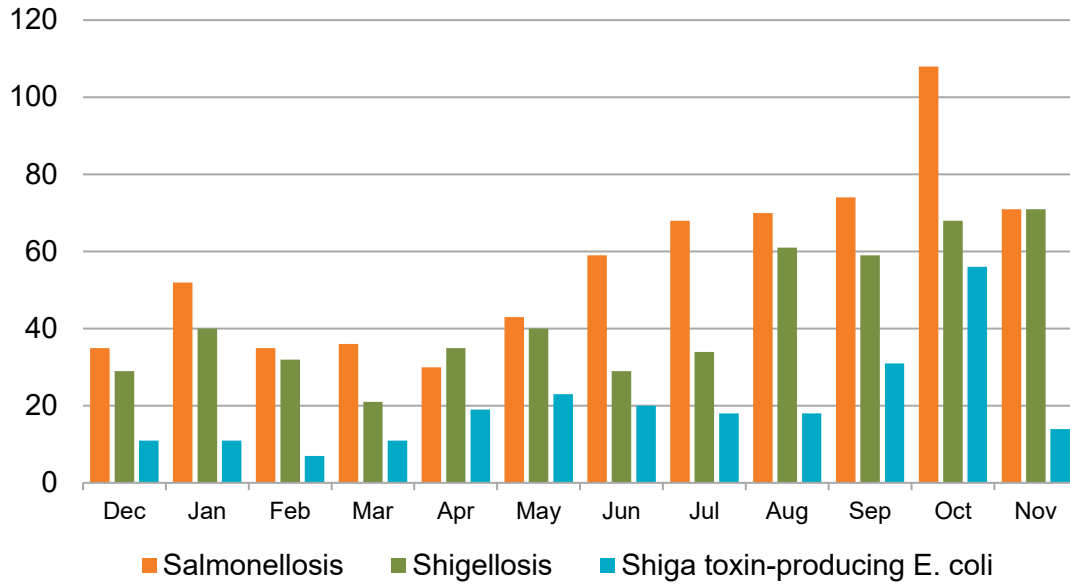


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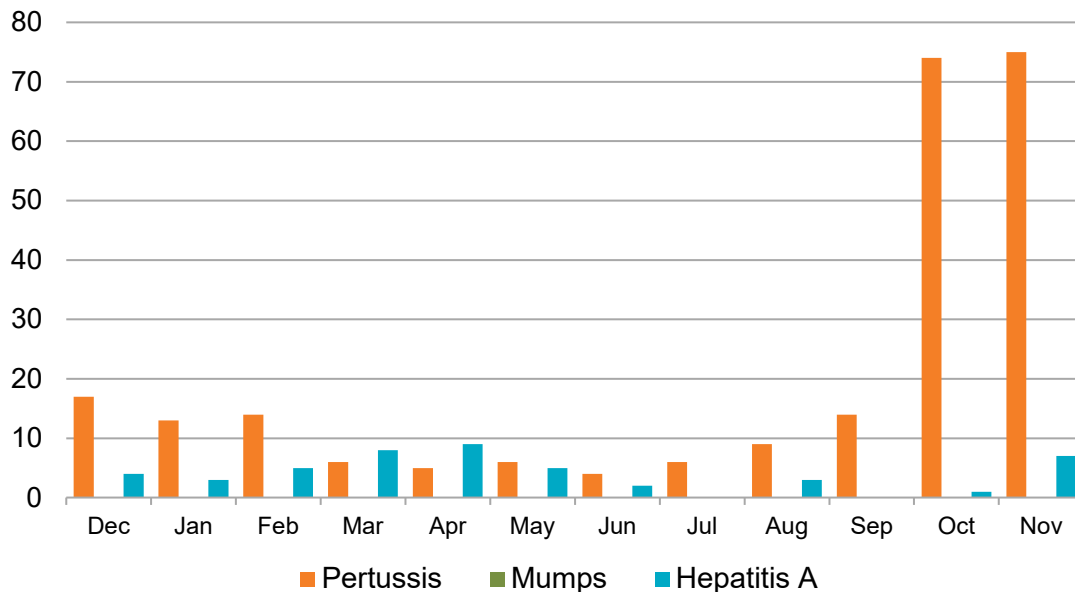
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**Figure 5. Select Enteric Infections by Month
December 2022 – November 2023**



**Figure 6. Select Vaccine-Preventable Infections by Month
December 2022 – November 2023**



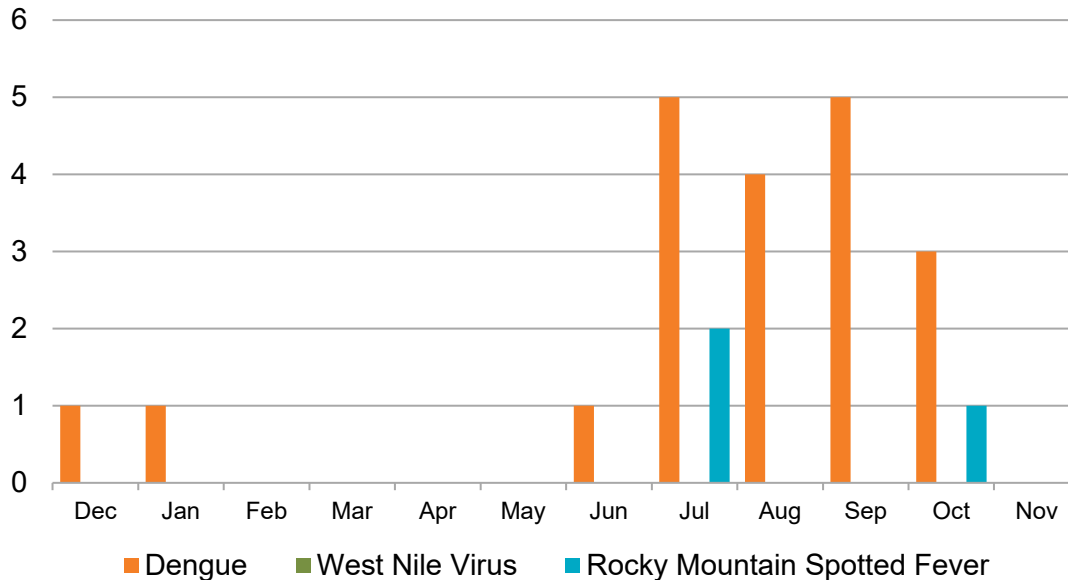
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**Figure 7. Select Vector-Borne Infections by Month
December 2022 – November 2023**



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>.