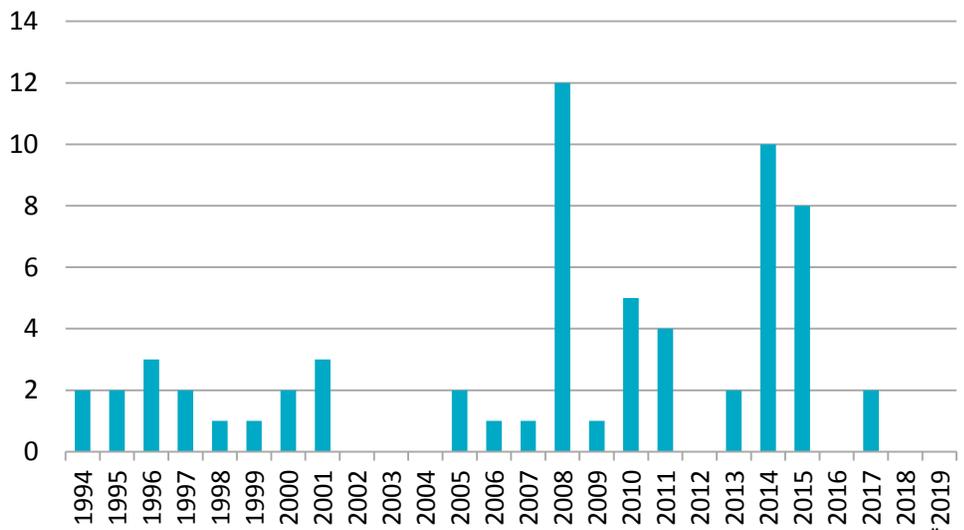


MEASLES

Measles, also known as rubeola, is an extremely infectious viral illness. Measles symptoms usually begin 10-12 days (up to 21 days) after exposure with a prodrome of fever as high as 105°F (40.5°C), malaise, cough, coryza, and conjunctivitis. Three to five days following onset of the prodrome, a maculopapular rash develops. Koplik spots (clustered white spots on the buccal mucosa at the first and second molars) may precede the rash and persist after rash onset. The rash usually begins around the ears and hairline and then spreads down to cover the face, trunk, arms, and legs.

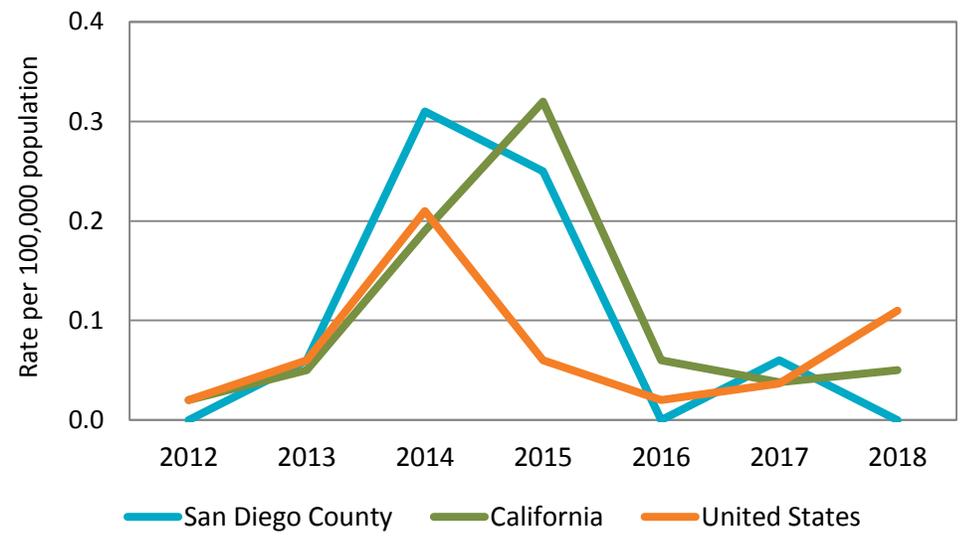
Measles can cause serious complications, including pneumonia and encephalitis, which often require hospitalization and can lead to death. One or two of every 1,000 measles cases in children will be fatal. Those at highest risk of complications include children under five years and adults over 20 years. Measles is highly infectious and is transmitted by airborne spread of respiratory droplets. The virus can remain viable in the air for up to two hours after an infectious person leaves an area. Typically, measles patients are contagious from 4 days before to 4 days after rash onset. Approximately 90% of susceptible persons with close contact to a person with measles will become infected.

Figure 1. Measles Cases, San Diego County, 1994-2019*



*2019 data are year-to-date; current as of 2/15/2019. Data are provisional and subject to change as additional information becomes available. Grouped by CDC disease years.

Figure 2. Measles Incidence, San Diego County, California, and United States, 2012-2018



Data are provisional and subject to change as additional information becomes available. United States and California data for 2018 are preliminary. Grouped by CDC disease years.

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 [Statistics and Reports](#) page on the Epidemiology Program website (www.sdepi.org) and click on the subscribe link.



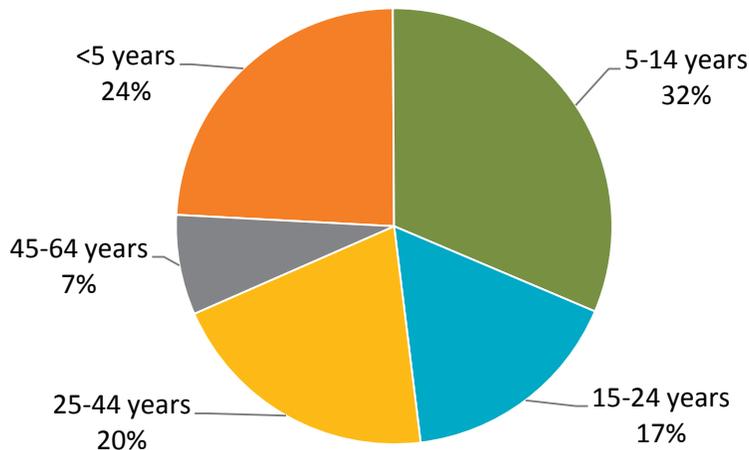
MEASLES, continued

Measles can be prevented through vaccination. Measles vaccines have been available in the United States (U.S.) since 1963. Two doses of measles-containing vaccine ([MMR or MMRV](#)) are more than 99% effective in preventing measles; two doses have been recommended since 1989. MMR is very safe and also protects against mumps and rubella; MMRV adds protection against varicella (chickenpox).

The Centers for Disease Control and Prevention (CDC) [reported](#) 372 confirmed measles cases in the U.S. in 2018. This is the second greatest number of annual cases reported since measles was eliminated in the U.S., in 2000. The greatest number was 667 cases reported in 2014. Most measles cases in the U.S. now are imported cases in unvaccinated persons, or are associated with imported cases and involve transmission in communities with low vaccination rates. Many states allow non-medical exemptions, which are increasingly being used by parents who prefer not to vaccinate their children. Since 2016, this type of exemption (i.e., personal belief exemption) is no longer allowed in California. Based on a 2016-17 random digit dial telephone survey, 93% of 19-35 month old children in San Diego County had [received at least one dose](#) of measles-containing vaccine.

Seventeen outbreaks were reported to CDC during 2018. The majority of these outbreaks were associated with international travelers who brought measles back from Israel, Italy, France and the United Kingdom, where large outbreaks have occurred. In the last year, CDC issued numerous level 1 travel notices regarding measles outbreaks in various countries. CDC regularly [updates](#) the list of countries with travel notices due to measles.

Figure 3. Measles Cases by Age Group, San Diego County, 1999-2018 (N=54)



Data are provisional and subject to change as additional information becomes available.

Resources

- [Centers for Disease Control and Prevention \(CDC\) Measles website](#)
- [Epidemiology and Prevention of Vaccine-Preventable Diseases \(the Pink Book\) – Measles](#)
- [CDC Measles, Mumps, and Rubella \(MMR\) Vaccination website](#)
- [California Department of Public Health \(CDPH\) Measles website](#)
- [CDPH Measles Quicksheet for post-exposure prophylaxis management](#)
- [San Diego County Immunization Program website](#)

Currently there is a measles outbreak in [Clark County](#), Washington, just north of Portland, Oregon, that includes over 50 cases. The majority of cases are unvaccinated. There are additional cases in other jurisdictions.

No measles cases have been reported in San Diego County since 2017, when a local resident developed measles after travel to Bali and a secondary case occurred after exposure at a healthcare facility. Each measles case requires a large public health effort. Because measles is highly contagious and can be severe, efforts are made to trace all contacts to assess for immunity and to track symptoms for 21 days. As a result of these two 2017 cases, the County Immunization Program followed up with 514 contacts.

Fourteen local cases were reported in 2014-2015 as part of the [multistate outbreak](#) originating in the Disney theme parks in Orange County. In early 2014, a San Diegan developed measles after travel to the Philippines. Three secondary cases occurred after exposure in a healthcare setting. In 2008, a local outbreak of 12 cases [originated](#) from an unvaccinated child who developed measles after a trip to Europe.

MONTHLY COMMUNICABLE DISEASE REPORT

JANUARY 2019

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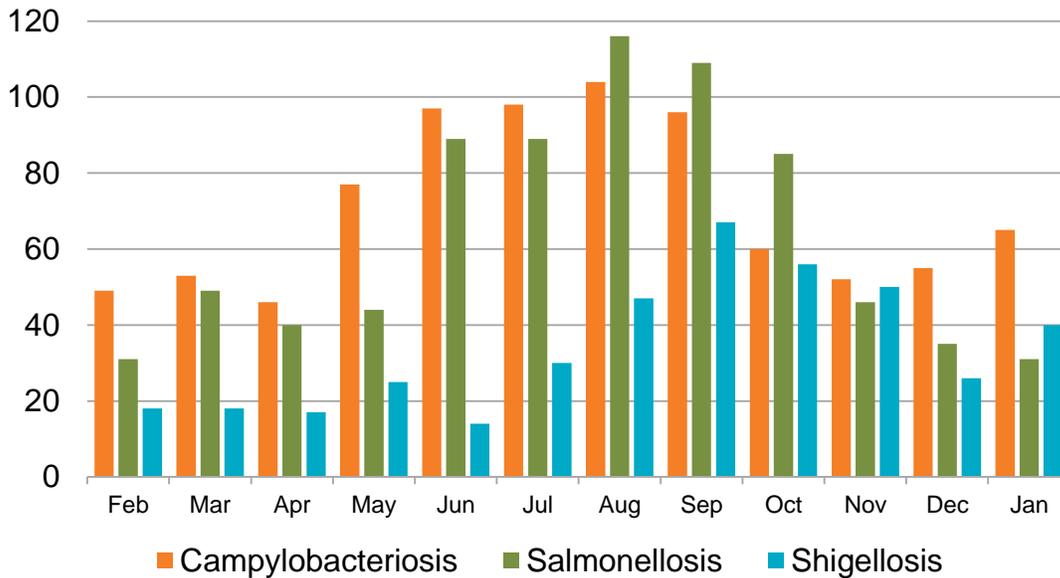


Table 1. Select Reportable Diseases		2019			Prior Years		
		Current Month	Prior Month	Year-to-Date (YTD)	2018 YTD	Avg YTD, Prior 3 Years	2018 Total
Disease and Case Inclusion Criteria (C,P,S)							
Amebiasis	C	2	0	2	2	1.0	10
Botulism (Foodborne, Infant, Wound, Other)	C,P	0	0	0	2	1.0	11
Brucellosis	C,P	0	0	0	0	0.0	1
Campylobacteriosis	C,P	65	55	65	43	53.3	827
Chickenpox, Hospitalization or Death	C,P	0	0	0	0	0.0	4
Chikungunya	C,P	0	0	0	0	0.3	5
Coccidioidomycosis	C	18	20	18	37	22.7	295
Cryptosporidiosis	C,P	5	5	5	4	3.0	90
Dengue Virus Infection	C,P	0	0	0	1	1.7	8
Encephalitis, All	C	1	12	1	3	4.7	60
Giardiasis	C,P	16	9	16	31	27.3	227
Hepatitis A, Acute	C	0	2	0	5	4.0	35
Hepatitis B, Acute	C	1	1	1	1	0.7	9
Hepatitis B, Chronic	C,P	66	59	66	85	74.0	874
Hepatitis C, Acute	C,P	1	0	1	0	0.0	1
Hepatitis C, Chronic	C,P	353	309	353	343	259.0	4,194
Legionellosis	C	3	12	3	6	5.7	53
Listeriosis	C	1	0	1	1	1.0	13
Lyme Disease	C,P	2	2	2	0	0.7	13
Malaria	C	0	0	0	0	0.0	7
Measles (Rubeola)	C	0	0	0	0	0.0	0
Meningitis, Aseptic/Viral	C,P,S	4	5	4	6	8.3	129
Meningitis, Bacterial	C,P,S	5	2	5	5	5.0	35
Meningitis, Other/Unknown	C	1	2	1	0	2.7	16
Meningococcal Disease	C,P	2	0	2	3	1.0	11
Mumps	C,P	3	0	3	3	1.3	9
Pertussis	C,P,S	35	39	35	93	60.7	648
Rabies, Animal	C	0	0	0	0	0.3	7
Rocky Mountain Spotted Fever	C,P	0	0	0	0	0.3	1
Salmonellosis (Non-Typhoid/Non-Paratyphoid)	C,P	31	35	31	47	34.3	772
Shiga toxin-Producing <i>E. coli</i> (including O157)	C,P	6	8	6	6	3.0	171
Shigellosis	C,P	40	26	40	21	18.7	386
Typhoid Fever	C,P	2	2	2	0	0.3	4
Vibriosis	C,P	4	2	4	0	2.0	57
West Nile Virus Infection	C,P	0	0	0	0	0.0	3
Yersiniosis	C,P	1	3	1	1	0.7	26
Zika Virus	C,P	0	0	0	1	2.3	7

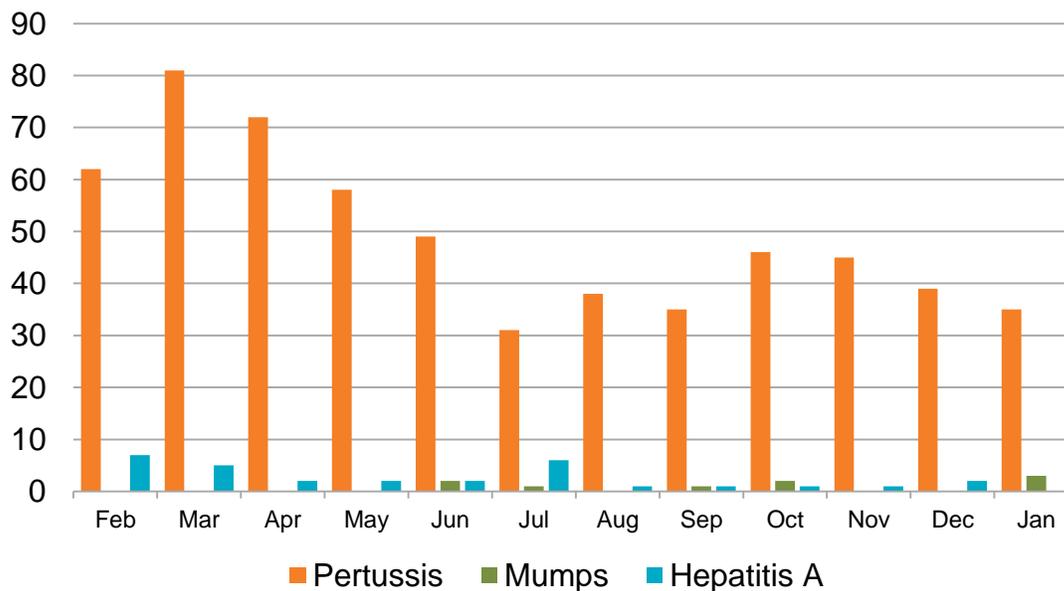
Case counts are provisional and subject to change as additional information becomes available. Cases are grouped into calendar months and calendar years on the basis of the earliest of the following dates: onset, lab specimen collection, diagnosis, death, and report received. Counts may differ from previously 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 4. Select Enteric Infections by Month
February 2018 – January 2019**

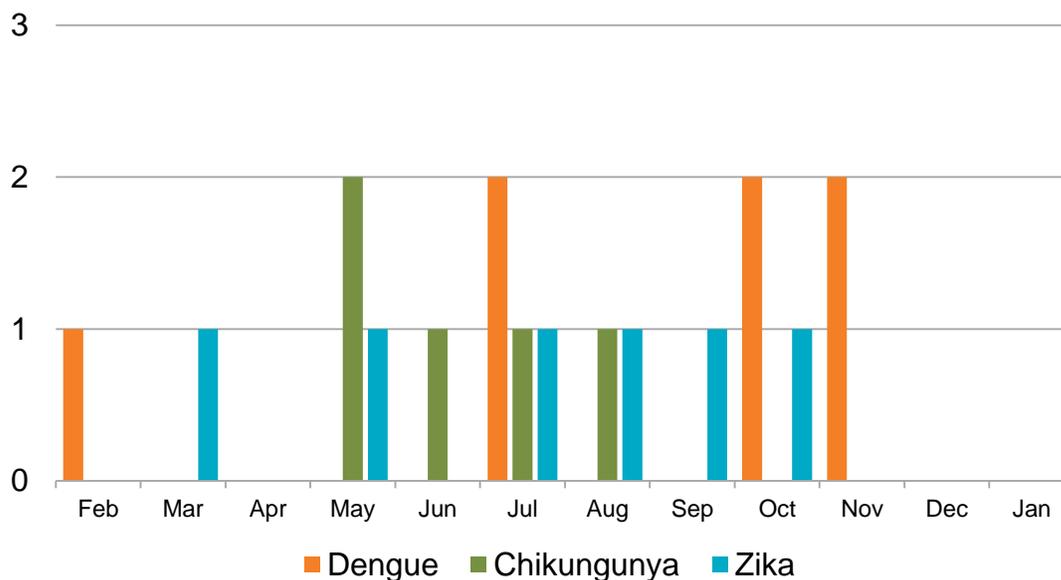


**Figure 5. Select Vaccine-Preventable Infections by Month
February 2018 – January 2019**



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 6. Select Vector-Borne Infections by Month
February 2018 – January 2019**



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>.