Volume 7, Issue 1: February 16, 2023

## **MEASLES**

#### Background

Measles, also known as rubeola, is an extremely infectious viral illness. It 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.

#### Presentation

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

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\*2023 data are year-to-date; current as of 2/15/2023. Data are provisional and subject to change as additional information becomes available. Grouped by CDC disease years.



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.

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 <u>Data and</u> <u>Reports</u> page on the Epidemiology Program website (<u>www.sdepi.org</u>) and click on the subscribe link.







Volume 7, Issue 1: February 16, 2023

## **MEASLES**, continued

complications include children under five years and adults over 20 years.

#### Prevention

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 (<u>MMR or MMRV</u>) are recommended and more than 99% effective in preventing measles. 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) <u>reported</u> 121 confirmed measles cases in the U.S. in 2022. The greatest number since 1992 was 1,274 cases, reported in 2019. 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 <u>California</u>. 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.

#### Historical Outbreaks

Twenty-two outbreaks were reported to CDC during 2019. Most of these outbreaks were associated with under-



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

#### Resources

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

immunized, close-knit communities. Two large outbreaks occurred in the New York Orthodox Jewish communities. CDC regularly updates the list of countries with <u>global measles</u> <u>outbreaks</u> and provides information for travelers.

No measles cases have been reported in San Diego County since 2019, when a local infant developed measles after travel to the Philippines 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 2019 cases, the County Immunization Unit followed up with 280 contacts.

Fourteen local cases were reported in 2014-2015 as part of the <u>multistate outbreak</u> 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.

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Epidemiology and Immunization Services Branch 619-692-8499 ♦ www.sdepi.org Page 2 of 5

Volume 7, Issue 1: February 16, 2023

Table 1. Select Reportable Diseases		2023			Prior Years		
				Year-to-		Avg YTD.	
		Current	Prior	Date	2022	2020-	2022
Disease and Case Inclusion Criteria (C,P,S)		Month	Month	(YTD)	YTD	2022	Total
Botulism (Foodborne, Infant, Wound, Other)	C,P	0	1	0	0	0.0	3
Brucellosis	, С,Р	0	1	0	1	0.3	4
Campylobacteriosis	C,P	82	72	82	47	53.7	921
Chickenpox, Hospitalization or Death	C,P	1	1	1	0	0.0	1
Chikungunya	C,P	0	0	0	0	0.0	2
Coccidioidomycosis	С	0	14	0	41	44.7	379
Cryptosporidiosis	C,P	3	11	3	4	2.3	87
Dengue Virus Infection	C,P	1	0	1	0	0.7	14
Encephalitis, All	С	2	4	2	1	4.3	13
Giardiasis	C,P	9	12	9	12	13.0	183
Hepatitis A, Acute	C	3	4	3	0	1.3	31
Hepatitis B, Acute	C	2	0	2	2	1.3	12
Hepatitis B, Chronic	C,P	54	70	54	80	73.0	891
Hepatitis C, Acute	C,P	5	3	5	5	8.3	66
Hepatitis C, Chronic	C,P	180	165	180	239	336.3	2,928
Legionellosis	C	9	6	9	11	7.7	72
Listeriosis	C	0	1	0	0	0.0	17
Lyme Disease	C,P	0	0	0	0	1.0	6
Malaria	C	1	0	1	0	1.0	11
Measles (Rubeola)	C	0	0	0	0	0.0	0
Meningitis, Aseptic/Viral	C,P,S	1	3	1	4	5.7	57
Meningitis, Bacterial	C,P,S	1	3	1	3	3.7	29
Meningitis, Other/Unknown	C	0	1	0	2	2.3	11
Meningococcal Disease	C,P	0	0	0	0	0.3	2
Mumps	C,P	0	0	0	1	1.0	3
Pertussis	C,P	8	11	8	3	31.3	89
Rabies, Animal	C	0	0	0	0	0.7	3
Rocky Mountain Spotted Fever	C,P	0	0	0	0	0.0	3
Salmonellosis (Non-Typhoid/Non-Paratyphoid)	C,P	48	35	48	25	29.0	675
Shiga toxin-Producing <i>E. coli</i> (including O157)	C,P	7	11	7	9	10.3	194
Shigellosis	C,P	36	28	36	27	23.0	517
Typhoid Fever	C,P	0	1	0	3	1.3	12
Vibriosis	C,P	2	0	2	3	1.3	36
West Nile Virus Infection	C,P	0	0	0	0	0.0	3
Yersiniosis	C,P	3	1	3	2	1.7	39
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.

San Diego County Sexually Transmitted Infection Data | San Diego County Tuberculosis Data







Epidemiology and Immunization Services Branch 619-692-8499 ♦ www.sdepi.org Page 3 of 5

Volume 7, Issue 1: February 16, 2023



Figure 5. Select Vaccine-Preventable Infections by Month February 2022 – January 2023



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Epidemiology and Immunization Services Branch 619-692-8499 ♦ www.sdepi.org Page 4 of 5

Volume 7, Issue 1: February 16, 2023



All of the dengue and Zika virus cases are travel-associated. For additional information on Zika cases, see the <u>HHSA Zika Virus webpage</u>. For more information on West Nile virus, see the <u>County West Nile virus webpage</u>. **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 <u>San Diego Health Connect</u> 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 <u>2500</u>, <u>2505</u>, and <u>2508</u>), 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, <u>www.sdepi.org</u>.

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.





