EPIDEMIOLOGY AND IMMUNIZATION SERVICES BRANCH

MONTHLY COMMUNICABLE DISEASE REPORT

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LISTERIOSIS

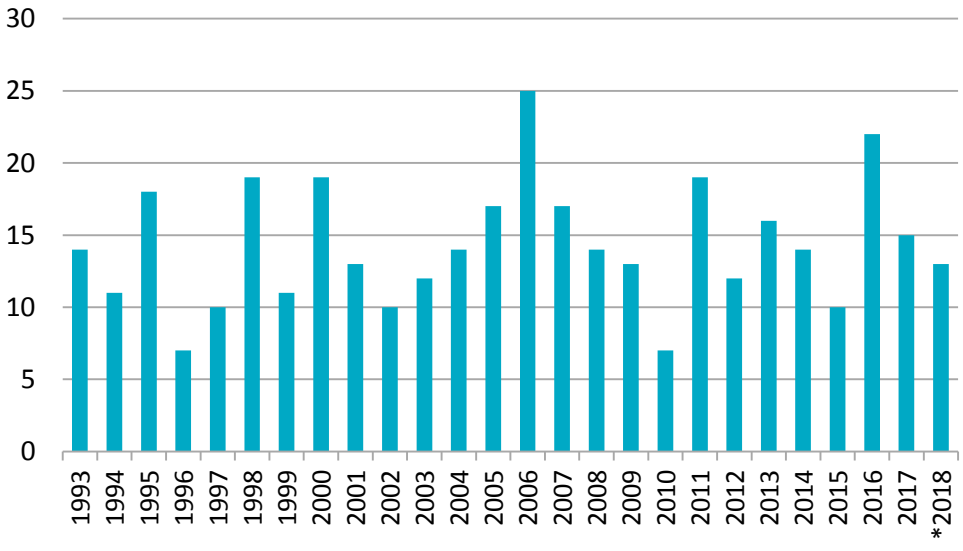
Listeriosis is a frequently severe infection caused by *Listeria monocytogenes* bacteria. Most diagnosed cases of listeriosis are invasive, causing symptoms typical of meningitis or septicemia, such as headache, stiff neck, confusion, fever, muscle aches, and convulsions. In addition to infection of the blood or cerebral spinal fluid, *Listeria* bacteria may also invade joints, bones, and chest or abdominal cavities. Those most at risk of infection are adults age 65 and older, persons with compromised immune systems, and pregnant women.

Infection during pregnancy may only cause a mild febrile illness in the pregnant woman, but can cause miscarriage, stillbirth, preterm delivery, or serious complications in the newborn. In healthy persons, *Listeria* infection may be asymptomatic or cause mild gastrointestinal symptoms. These self-limited infections are rarely diagnosed since *Listeria* is not included in routine stool cultures.

The Centers for Disease Control and Prevention (CDC) estimates that there are 1,600 cases of invasive listeriosis in the United States (U.S.) each year. Not all cases are diagnosed. In 2017, there were 887 reported cases in the U.S., 128 in California, and 15 in San Diego County. Incidence of listeriosis in

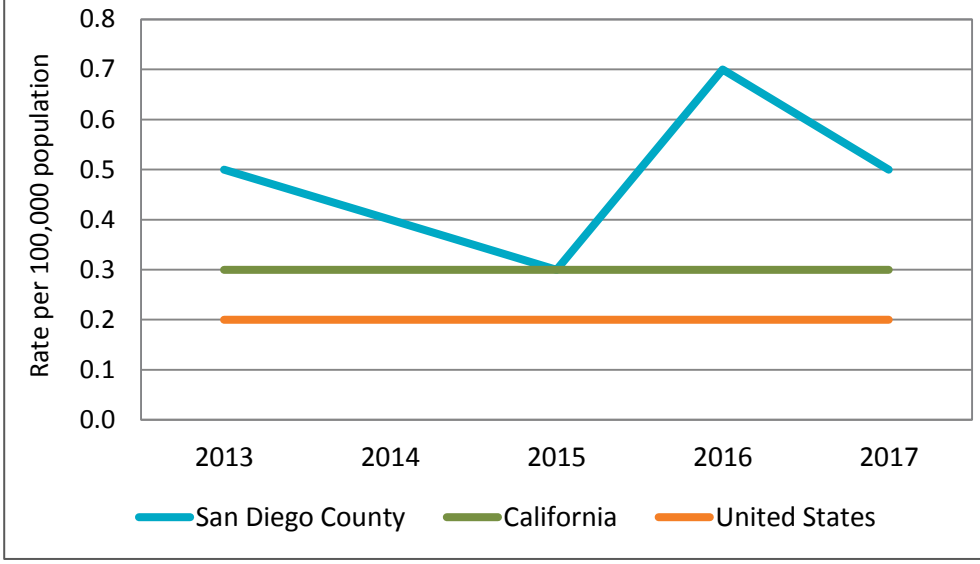
Continued on next page

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



*2018 data are year-to-date; current as of 12/17/2018. Data are provisional and subject to change as additional information becomes available. Grouped by CDC disease years.

Figure 2. Listeriosis Incidence, San Diego County, California, and United States, 2013-2017



Data are provisional and subject to change as additional information becomes available. 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, send an email to EpiDiv.HHSA@sdcounty.ca.gov.

LISTERIOSIS, continued

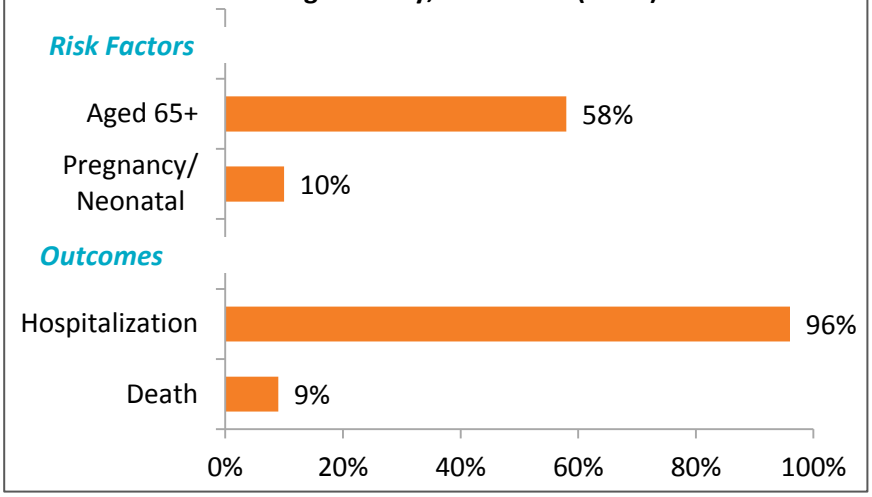
San Diego County has been higher during the past five years than incidence in the U.S. or California.

Most persons diagnosed with listeriosis are hospitalized. In San Diego County, between 2013-2017, 96% of the 77 persons with a reported infection were hospitalized. During the same time frame, there were 7 (9%) listeriosis-related deaths among San Diego County residents, lower than the CDC-estimated case-fatality rate of 20%.

The populations most at risk of invasive disease are borne out by local data, with 58% of San Diego County cases between 2013-2017 occurring in persons 65 years of age or older, and 10% of cases in pregnant women or neonates. Among eight pregnancy-related and neonatal cases, there were two fetal deaths and two preterm births.

Most *Listeria* infection is a result of foodborne transmission, with the exception of infection in neonates, where transmission occurs from mother to fetus. *Listeria* bacteria are found commonly in the environment and have been isolated from soil, water, vegetation, and livestock food. *Listeria* have also been found in a wide variety of food items. *Listeria* can survive many conditions, including freezing, heating, and drying, and unlike most foodborne pathogens, can multiply at standard refrigerator temperatures. High-risk food items include unpasteurized dairy products, hot dogs and deli meats, and produce.

Figure 3. Risk Factors and Outcomes, Listeriosis Cases, San Diego County, 2013-2017 (N=77)



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

Pregancy-related and Neonatal Cases San Diego County, 2013-2017

8 Cases

- **6 Pregnant women and 2 Newborns**
  - **2 Fetal deaths**
  - **2 Premature deliveries**

Because the bacteria are so widespread, exposure is likely frequent. Despite this, invasive disease is rare. One outbreak-related study estimated an attack rate of one in 10,000 exposed pregnant women. However, due to the risk of severe outcomes, those at risk of invasive disease are recommended to avoid high-risk food items.

Outbreaks can be difficult to detect because cases are rare and frequently dispersed in time and place. Since 2005, the *Listeria* Initiative, a nationwide surveillance system, has been collecting detailed exposure data from persons diagnosed with listeriosis and compiling molecular subtyping data from clinical, food, and environmental samples. This initiative has facilitated the detection and resolution of numerous outbreaks.

Recent outbreaks have been traced to food items such as soft unpasteurized cheese, deli meat, and produce, both fresh (cantaloupes, packaged salad) and frozen. In recent years, a wide variety of products, including frozen and packaged products, have been recalled after being traced to illnesses or after routine product testing found *Listeria*. Between 2013-2017, 40% (31) of San Diego County listeriosis cases were part of 13 national and state outbreaks, including outbreaks linked to cheese and frozen vegetables.

Resources

- Centers for Disease Control and Prevention (CDC) Listeriosis website
- California Department of Public Health (CDPH) Listeriosis website
- The *Listeria* Initiative website
- Foodsafety.gov Recalls and Alerts website

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	2	0	10	10	16.0	10
Botulism (Foodborne, Infant, Wound, Other)	C,P	1	0	11	6	4.0	8
Brucellosis	C,P	0	0	1	5	3.3	5
Campylobacteriosis	C,P	52	60	775	844	728.0	883
Chickenpox, Hospitalization or Death	C,P	2	2	4	2	2.0	3
Chikungunya	C,P	0	0	5	2	5.7	2
Coccidioidomycosis	C	8	18	246	266	191.7	313
Cryptosporidiosis	C,P	7	5	84	51	35.7	54
Dengue Virus Infection	C,P	0	2	6	12	16.3	12
Encephalitis, All	C	0	8	38	41	63.7	43
Giardiasis	C,P	8	17	216	298	318.0	317
Hepatitis A, Acute	C	1	1	33	563	201.0	576
Hepatitis B, Acute	C	0	0	6	13	9.3	13
Hepatitis B, Chronic	C,P	82	74	809	798	796.7	868
Hepatitis C, Acute	C,P	0	0	1	4	2.0	4
Hepatitis C, Chronic	C,P	278	303	3,882	2,848	2,652.3	3,113
Legionellosis	C	5	2	41	64	53.3	66
Listeriosis	C	1	0	13	15	15.3	15
Lyme Disease	C,P	0	1	9	21	15.3	21
Malaria	C	2	0	7	7	8.7	8
Measles (Rubeola)	C	0	0	0	2	3.3	2
Meningitis, Aseptic/Viral	C,P,S	7	10	121	177	174.3	187
Meningitis, Bacterial	C,P,S	0	0	32	37	37.0	39
Meningitis, Other/Unknown	C	0	0	11	30	28.3	34
Meningococcal Disease	C,P	0	1	11	1	2.0	1
Mumps	C,P	0	2	9	15	12.0	15
Pertussis	C,P,S	32	44	594	1,053	767.0	1,161
Rabies, Animal	C	0	1	7	16	9.7	16
Rocky Mountain Spotted Fever	C,P	0	0	1	3	2.7	3
Salmonellosis (Non-Typhoid/Non-Paratyphoid)	C,P	37	77	726	540	536.7	576
Shiga toxin-Producing *E. coli* (including O157)	C,P	12	18	147	282	126.3	288
Shigellosis	C,P	43	55	353	312	234.0	334
Typhoid Fever	C,P	0	0	2	2	3.3	2
Vibriosis	C,P	2	3	53	49	41.0	50
West Nile Virus Infection	C,P	0	0	1	2	22.7	2
Yersiniosis	C,P	3	0	23	51	24.7	54
Zika Virus	C,P	0	0	6	19	33.0	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
December 2017 – November 2018

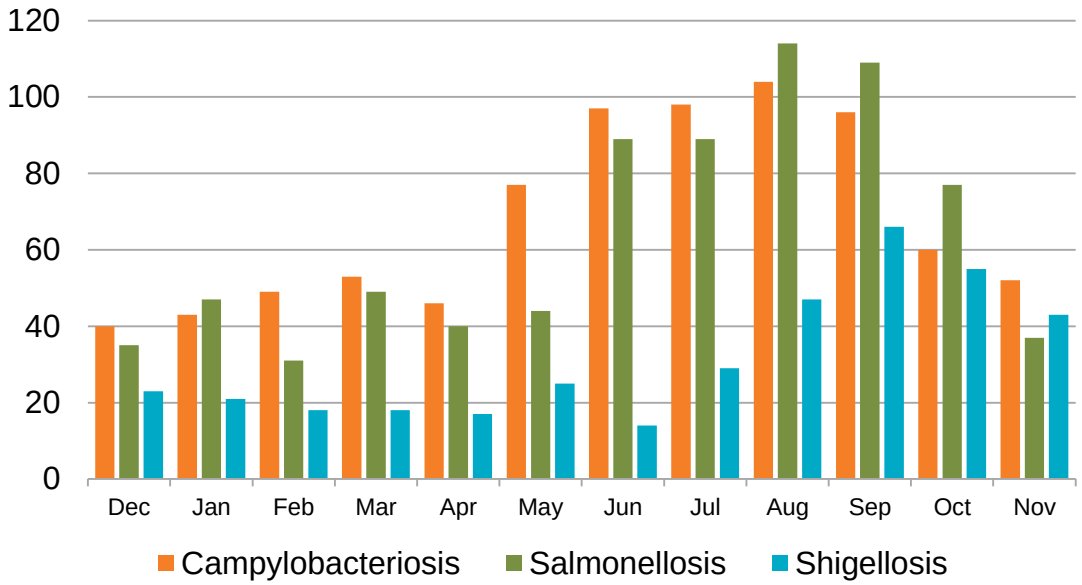


Figure 3. Select Vaccine-Preventable Infections by Month
December 2017 – November 2018

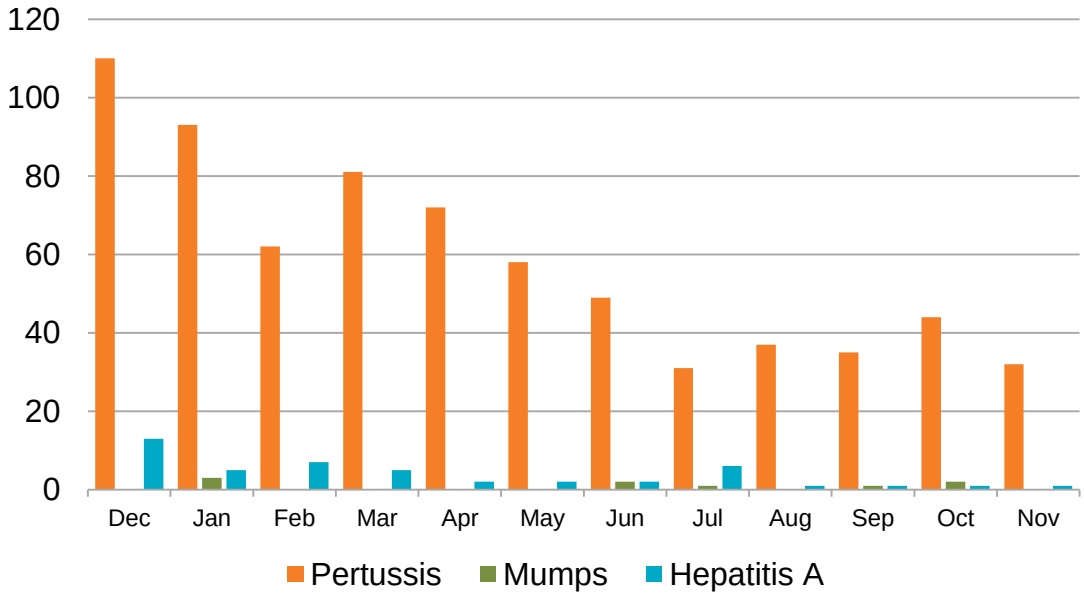


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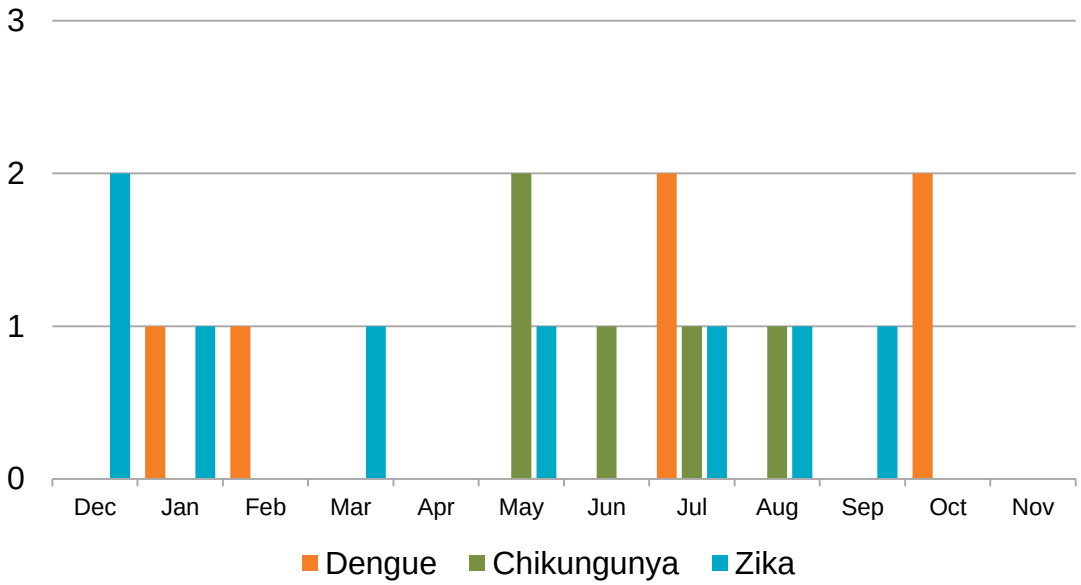
Figure 4. Select Vector-Borne Infections by Month
December 2017 – November 2018



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.