

FOODBORNE DISEASE OUTBREAKS

The Centers for Disease Control and Prevention (CDC) [estimates](#) that each year 48 million people get sick from foodborne illness, 128,000 are hospitalized, and 3,000 people die. While most people with foodborne illness get better without medical treatment, symptoms can sometimes be severe and even life-threatening, especially for pregnant women, young children, older adults, and those with compromised immune systems.

Over 250 pathogens can cause foodborne illness and outbreaks, including a variety of bacteria, viruses, and parasites. Toxins and chemicals can also cause foodborne illness. The top five pathogens responsible for foodborne illness in the United States are: [norovirus](#), [Salmonella](#), [Clostridium perfringens](#), [Campylobacter](#), and [Staphylococcus aureus](#).

The California Code of Regulations (CCR), Title 17 §2500, [defines](#) a foodborne disease outbreak as an incident in which two or more persons experience a similar illness after ingestion of a common food, and epidemiologic analysis implicates the food as the source of the illness. Outbreaks of any disease, including foodborne disease outbreaks, are reportable to the local health jurisdiction.

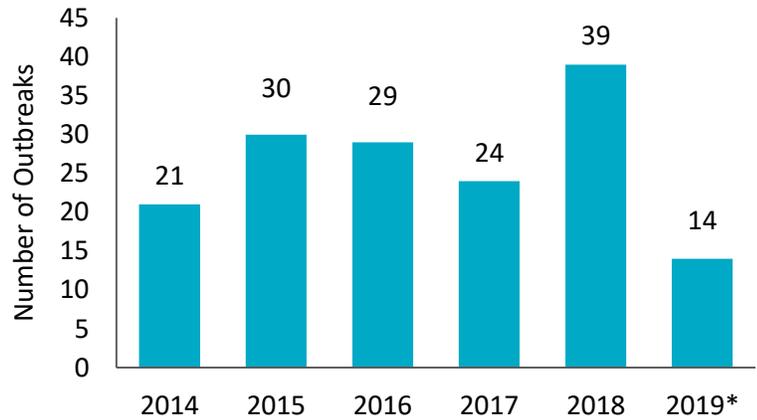
The County of San Diego Health and Human Services Agency (HHS) requires immediate reporting when two or more cases, or suspected cases, of foodborne illness from separate households are believed to have the same source of illness. Since 2014, HHS has investigated 157 foodborne disease outbreaks involving 1,294 outbreak-associated cases and 53 hospitalizations.

Most foodborne disease outbreaks investigated by HHS were associated with norovirus (41%) or unknown etiologies (33%). *Salmonella* and *Shigella* accounted for 10% and 4% of foodborne disease outbreaks, respectively. Other outbreak etiologies included suspected toxin-producing bacteria (7), scombroid fish poisoning (4),

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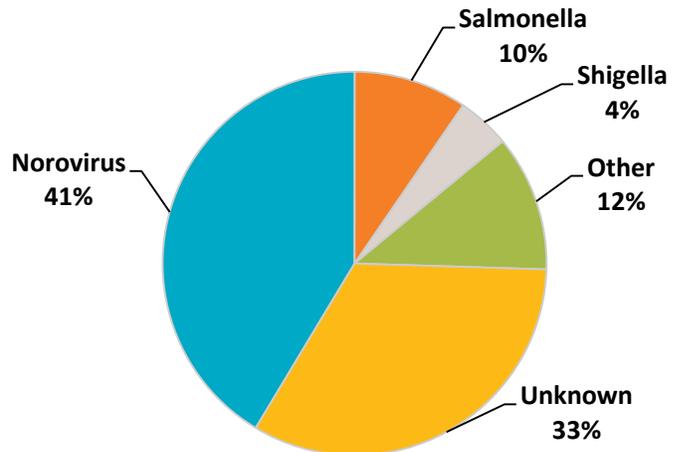
The Monthly Communicable Disease Surveillance Report is a publication of the County of San Diego Public Health Services Epidemiology and Immunization Services Branch (EISB). EISB works to identify, investigate, register, and evaluate communicable, reportable, and emerging diseases and conditions to protect 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.

Figure 1. Foodborne Disease Outbreaks, San Diego County, 2014–2019*



*2019 data are year-to-date; data current as of 8/14/2019. Data are provisional and subject to change as additional information becomes available.

Figure 2. Foodborne Disease Outbreaks by Etiologic Agent, San Diego County (N=157), 2014-2019*



*2019 data are year-to-date; data current as of 8/14/2019. Data are provisional and subject to change as additional information becomes available. Etiologic agents may be confirmed, probable, or suspect based on laboratory testing and/or clinical criteria. Other etiologies include various bacteria, viruses, toxins, and parasites.

FOODBORNE DISEASE OUTBREAKS, continued

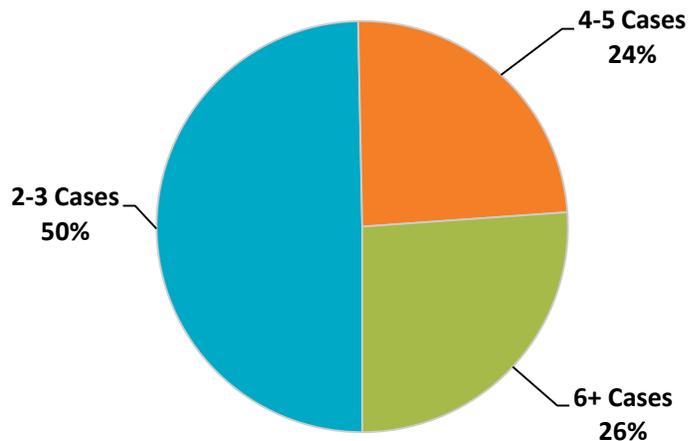
Shiga toxin-producing *E. coli* (2), *Clostridium perfringens* (1), *Bacillus cereus/Staphylococcus aureus* (1), sapovirus (1), *Cryptosporidium* (1), and *Vibrio parahaemolyticus* (1). Etiologic agents may be confirmed, probable, or suspect based on laboratory testing and/or clinical criteria. An etiologic agent is considered the confirmed cause of a foodborne disease outbreak when there are at least two laboratory confirmed outbreak-associated cases.

Half of the foodborne disease outbreaks investigated by HHS during this time period involved two or three cases of reported illness. Another 24% of outbreaks involved four or five cases. The remaining 26% involved six or more cases. Since 2014, local foodborne disease outbreak case counts have ranged from 2-240 reported cases (median three cases per outbreak).

A total of 121 (77%) foodborne disease outbreaks involved food prepared at restaurants. There were 36 (23%) outbreaks that involved food prepared at other or multiple locations, including caterers, grocery stores/markets, and private homes. This is consistent with [national data](#) showing that restaurants are the most commonly reported locations of food preparation associated with foodborne disease outbreaks.

The County of San Diego Department of Environmental Health Food and Housing Division (DEH-FHD) is responsible for investigating all locally-regulated food facilities, including restaurants, that are implicated in outbreaks. Single cases of suspected foodborne illness and general complaints regarding regulated food facilities may be directed to [DEH-FHD](#). Suspected foodborne illness associated with a reportable disease or condition diagnosed by a healthcare provider should be reported to the HHS [Epidemiology Program](#). Once reported, suspected foodborne outbreaks are jointly investigated by DEH-FHD and the Epidemiology Program in order to identify the source of illness and recommend corrective actions to prevent others from becoming ill. There are many ways that food can become contaminated during the [food production process](#). While it may be challenging to know exactly what caused a food item to become contaminated, everyone can play a role in making [food safety](#) a priority.

Figure 3. Foodborne Disease Outbreaks by Number of Cases, San Diego County (N=157), 2014-2019*



*2019 data are year-to-date; data current as of 8/14/2019. Data are provisional and subject to change as additional information becomes available.

Figure 4. Foodborne Disease Outbreaks by Location Food Was Prepared, San Diego County (N=157), 2014-2019*



*2019 data are year-to-date; data current as of 8/14/2019. Data are provisional and subject to change as additional information becomes available. Other locations include caterers, grocery stores/markets, private homes, and multiple locations including restaurants.

Resources

- [Department of Environmental Health Foodborne Illnesses website](#)
- [California Department of Public Health Foodborne Diseases and Outbreaks website](#)
- [CDC Foodborne Outbreaks website](#)
- [CDC Information for Healthcare Professionals about Foodborne Disease](#)
- [CDC People with a Higher Risk of Food Poisoning](#)
- [CDC How to Prevent Food Poisoning](#)
- [CDC A-Z Index for Foodborne Illness](#)

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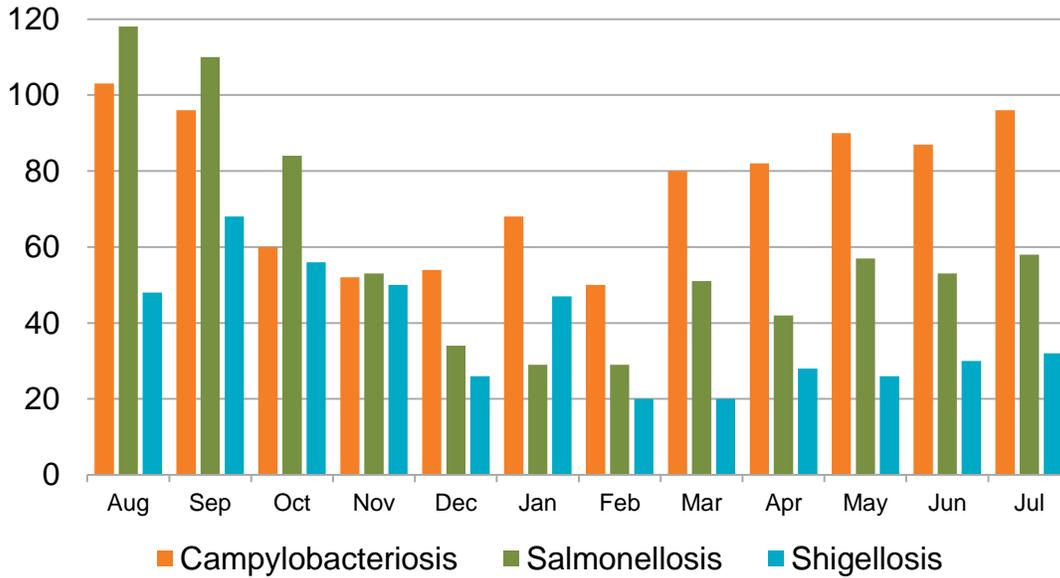


Table 1. Select Reportable Diseases		2019			Prior Years		
		Current Month	Prior Month	Year-to-Date (YTD)	2018 YTD	Avg YTD, Prior 3 Years	2018 Total
Disease and Case Inclusion Criteria (C,P,S)							
Amebiasis	C	0	0	6	6	5.7	10
Botulism (Foodborne, Infant, Wound, Other)	C,P	0	0	0	10	5.7	11
Brucellosis	C,P	0	0	1	2	2.3	2
Campylobacteriosis	C,P	96	87	553	465	480.3	828
Chickenpox, Hospitalization or Death	C,P	0	1	1	0	1.0	4
Chikungunya	C,P	1	0	1	4	2.0	5
Coccidioidomycosis	C	18	20	180	160	119.3	276
Cryptosporidiosis	C,P	18	9	47	43	28.7	90
Dengue Virus Infection	C,P	1	1	6	5	7.3	9
Encephalitis, All	C	2	2	19	29	32.7	66
Giardiasis	C,P	11	17	122	149	183.3	229
Hepatitis A, Acute	C	1	0	11	29	124.7	35
Hepatitis B, Acute	C	1	0	4	6	6.3	9
Hepatitis B, Chronic	C,P	99	51	590	507	503.3	867
Hepatitis C, Acute	C,P	2	6	30	1	1.7	2
Hepatitis C, Chronic	C,P	349	339	2,383	2,603	1,969.3	4,167
Legionellosis	C	2	3	29	28	33.3	54
Listeriosis	C	0	2	4	7	9.7	14
Lyme Disease	C,P	11	1	13	8	8.7	14
Malaria	C	1	0	3	5	4.3	8
Measles (Rubeola)	C	1	0	1	0	0.7	0
Meningitis, Aseptic/Viral	C,P,S	12	14	77	72	75.0	140
Meningitis, Bacterial	C,P,S	4	2	17	28	28.0	37
Meningitis, Other/Unknown	C	1	3	9	11	17.0	17
Meningococcal Disease	C,P	0	0	6	6	2.0	11
Mumps	C,P	8	8	27	6	9.3	9
Pertussis	C,P,S	46	57	367	446	444.3	656
Rabies, Animal	C	1	3	4	5	6.3	7
Rocky Mountain Spotted Fever	C,P	0	0	0	1	0.7	1
Salmonellosis (Non-Typhoid/Non-Paratyphoid)	C,P	58	53	319	392	310.3	787
Shiga toxin-Producing <i>E. coli</i> (including O157)	C,P	24	39	141	92	46.3	174
Shigellosis	C,P	32	30	203	145	124.0	391
Typhoid Fever	C,P	0	0	6	0	1.3	4
Vibriosis	C,P	8	6	27	28	23.7	58
West Nile Virus Infection	C,P	1	0	1	0	1.0	2
Yersiniosis	C,P	3	3	30	16	18.7	26
Zika Virus	C,P	1	0	4	4	15.3	7

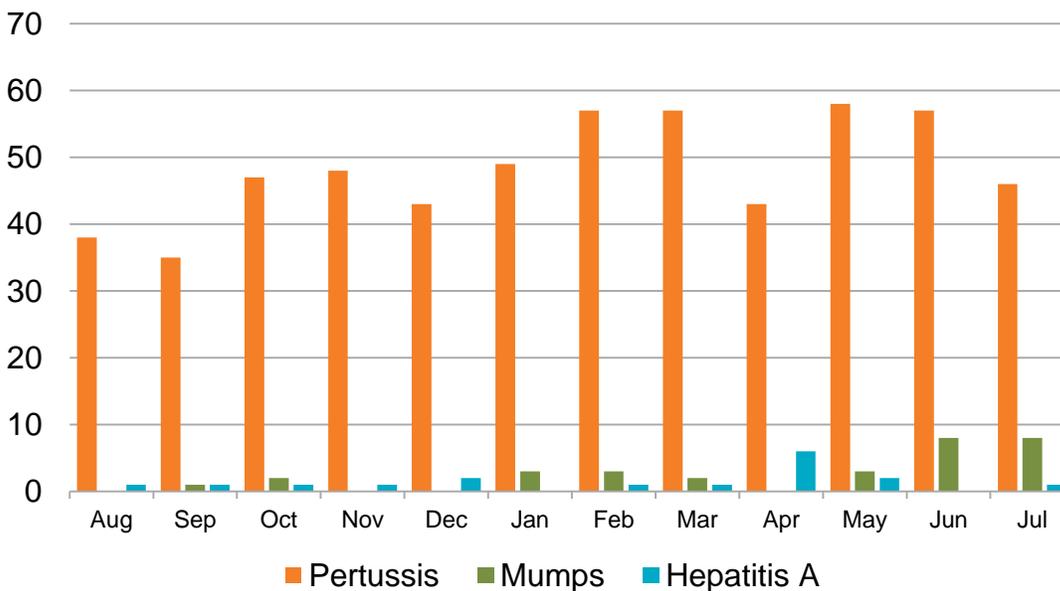
Case counts are provisional and subject to change as additional information becomes available. Cases are grouped into calendar months and calendar years on the basis of the earliest of the following dates: onset, lab specimen collection, diagnosis, death, and report received. Counts may differ from previously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

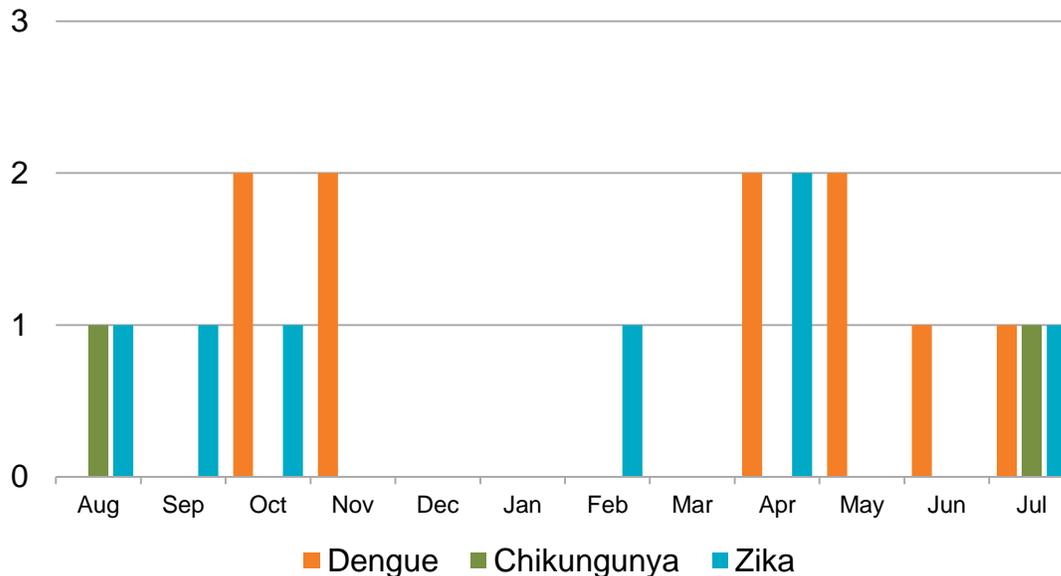


**Figure 5. Select Vaccine-Preventable Infections by Month
August 2018 – July 2019**



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**Figure 6. Select Vector-Borne Infections by Month
August 2018 – July 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>.