

HEPATITIS C

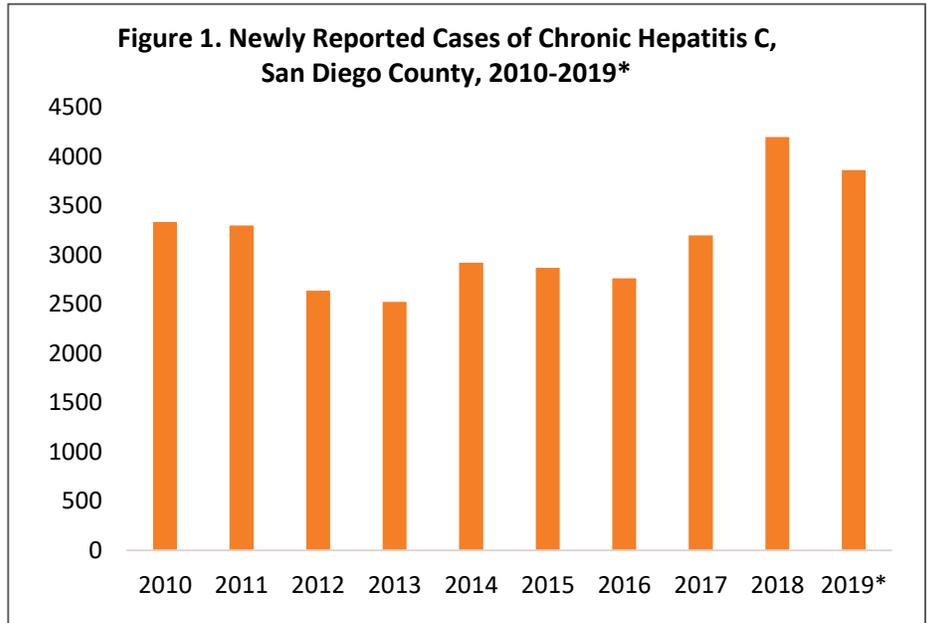
Hepatitis C is an acute or chronic liver infection in humans caused by the hepatitis C virus (HCV). Currently, HCV is most often spread through sharing of needles and other equipment used to inject drugs. Most people have no symptoms with acute infection. When symptoms do occur, they present within six months after exposure and may consist of mild abdominal pain, nausea, vomiting, diarrhea, fever, loss of appetite and headache. Less frequent symptoms include jaundice (yellowing of the eyes or skin), clay colored stools, and dark colored urine.

Some people infected with HCV will clear the virus spontaneously, but up to 80% become chronically infected. Chronic HCV infection is often without symptoms for many years, but it can eventually result in cirrhosis, liver cancer, and death. Fortunately, treatment is available; the U.S. Food and Drug Administration approved direct acting antivirals (DAAs) in 2011 to treat HCV infection. DAA treatment is extremely effective and well tolerated by patients, and essentially cures hepatitis C for most patients. Since those who are cured no longer carry the virus, they can no longer transmit the virus to others, thus reducing the spread of the disease.

HCV causes a large burden of morbidity in the United States and in San Diego County. Using data from 2013-2016, the Centers for Disease Control and Prevention (CDC) [estimated](#) that 2.4 million adults in the United States had chronic HCV infection. The California Department of Public Health (CDPH) estimated that almost 37,000 San Diegans were living with chronic HCV infection in 2017. Newly reported cases of chronic HCV infection in San Diego County have ranged from 2,500 to 4,200 per year in the last decade, but many cases remain undiagnosed. In 2018, the County of San Diego and a diverse set of local public and private stakeholders were motivated by examples from San Francisco and New York City and followed [guidance](#) from the World Health Organization to create the [Eliminate Hepatitis C San Diego County Initiative](#). The initiative is committed to eliminating hepatitis C as a public health threat in San Diego County by 2030, with the two primary goals of decreasing incidence of chronic HCV infection by 80% and reducing mortality caused by HCV infection by 65%. The initiative aims to promote awareness of HCV, increase proper screening of high-risk individuals, reduce barriers to treatment by linking those affected to care, and implement effective prevention strategies where needed to prevent new infections.

Screening high-risk populations is key to prevention efforts by ensuring that those most likely to have infection

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*2019 data are year-to-date; current as of 12/16/2019. Includes confirmed and probable cases following CDC/CSTE case criteria. Data are provisional and subject to change as additional information becomes available. Grouped by CDC disease year.

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.

HEPATITIS C, continued

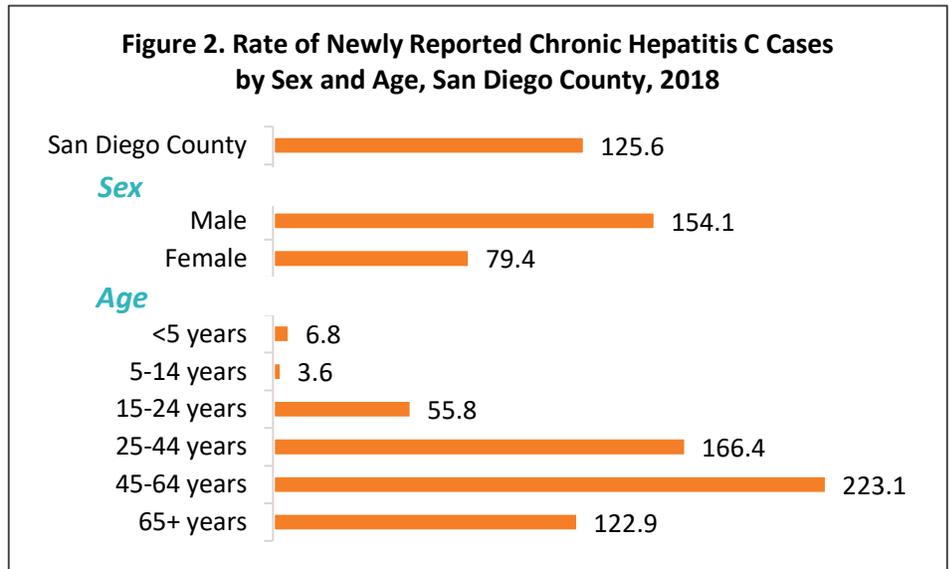
receive timely treatment. According to current CDC recommendations, former and current injection drug users, persons born from 1945 through 1965, persons infected with HIV, and children born to mothers with HCV should receive [priority screening](#) with serologic testing. Individuals with other risk factors should also be screened. Anyone with positive serology should be further tested to determine if virus is present. This would identify active infection as well as the need for and type of treatment.

Timely and accurate surveillance is necessary to monitor progress toward the initiative goals. Unfortunately, accurate hepatitis C surveillance is problematic. Because most people with acute and chronic HCV infections experience no or few symptoms, many cases are untested and not diagnosed. In addition, differentiating acute cases from chronic cases requires review of multiple sets of medical records and laboratory results. Most public health jurisdictions in the United States do not have the resources to investigate these cases, resulting in incomplete and inconsistent data.

Although the number of acute HCV infection cases reported nationally was about 3,200 in 2017, CDC [estimates](#) the true number to be closer to 45,000. San Diego County has reported an average of two acute cases annually over the last five years, relying primarily on direct reports from providers. Cases reported by laboratories have been minimally reviewed and are presumed to be chronic.

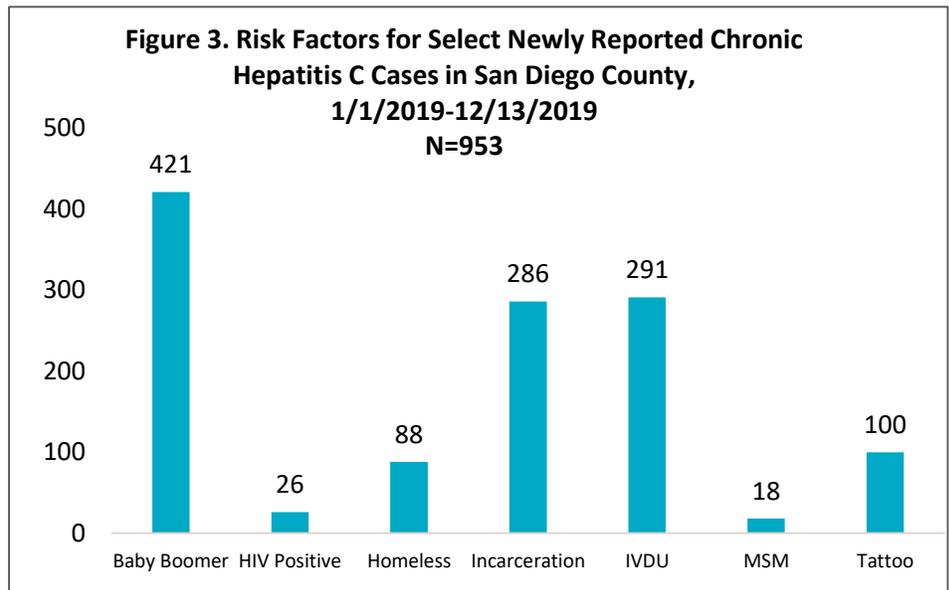
Since February 2019, the County has been reviewing medical records of a subset of cases with new positive HCV laboratory reports, identifying 50 acute cases and obtaining additional risk information on chronic cases. In addition to baby boomers, who made up 35% of the newly reported chronic cases, intravenous drug users and those incarcerated were significant risk groups.

Figure 2. Rate of Newly Reported Chronic Hepatitis C Cases by Sex and Age, San Diego County, 2018



Rates per 100,000 population. SANDAG population estimates for 2018, vintage July 2019. Data are provisional and subject to change as new information becomes available.

Figure 3. Risk Factors for Select Newly Reported Chronic Hepatitis C Cases in San Diego County, 1/1/2019-12/13/2019



Includes cases reviewed through enhanced surveillance efforts. Cases may have more than one risk factor. MSM: Men who have sex with men; IVDU: Intravenous drug users. Baby Boomer: born 1945-1965. Data are provisional and subject to change as more information becomes available.

Resources

- [CDC Hepatitis C website](#)
- [CDPH Office of Viral Hepatitis Prevention website](#)
- [American Liver Foundation website](#)

MONTHLY COMMUNICABLE DISEASE REPORT

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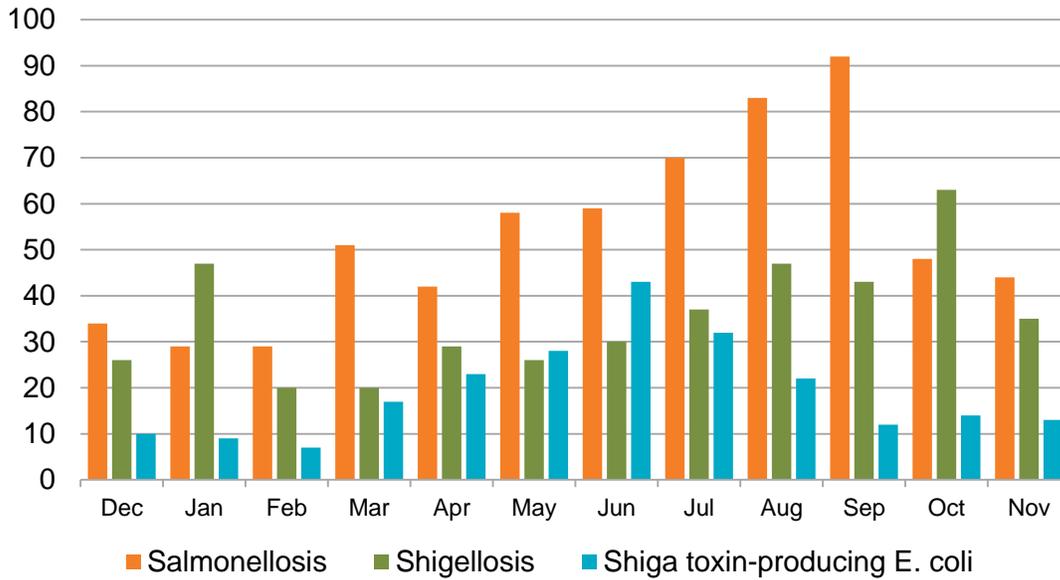


Table 1. Select Reportable Diseases		2019			Prior Years		
		Current Month	Prior Month	Year-to-Date (YTD)	2018 YTD	Avg YTD, Prior 3 Years	2018 Total
Disease and Case Inclusion Criteria (C,P,S)							
Amebiasis	C	0	0	7	10	8.3	10
Botulism (Foodborne, Infant, Wound, Other)	C,P	0	1	1	11	7.3	11
Brucellosis	C,P	0	0	1	2	3.7	2
Campylobacteriosis	C,P	60	74	933	776	788.0	828
Chickenpox, Hospitalization or Death	C,P	0	0	2	4	2.3	4
Chikungunya	C,P	0	0	3	5	4.0	5
Coccidioidomycosis	C	24	32	319	260	226.3	276
Cryptosporidiosis	C,P	8	12	93	85	56.0	90
Dengue Virus Infection	C,P	3	7	27	9	14.0	9
Encephalitis, All	C	1	1	36	52	55.3	66
Giardiasis	C,P	12	17	201	219	294.3	229
Hepatitis A, Acute	C	1	1	13	33	206.0	35
Hepatitis B, Acute	C	0	0	6	8	8.0	9
Hepatitis B, Chronic	C,P	59	80	848	808	804.0	867
Hepatitis C, Acute	C,P	0	1	50	2	2.0	2
Hepatitis C, Chronic	C,P	334	370	3,746	3,871	3,108.7	4,167
Legionellosis	C	5	3	52	42	51.3	54
Listeriosis	C	1	0	9	14	16.7	14
Lyme Disease	C,P	0	0	3	13	15.3	14
Malaria	C	1	0	7	8	8.3	8
Measles (Rubeola)	C	0	0	2	0	0.7	0
Meningitis, Aseptic/Viral	C,P,S	12	20	173	136	148.7	140
Meningitis, Bacterial	C,P,S	3	2	28	34	39.0	37
Meningitis, Other/Unknown	C	0	0	16	14	24.3	17
Meningococcal Disease	C,P	0	0	6	11	4.7	11
Mumps	C,P	9	10	61	9	15.0	9
Pertussis	C,P,S	58	85	682	614	677.3	656
Rabies, Animal	C	0	1	7	7	10.0	7
Rocky Mountain Spotted Fever	C,P	0	1	1	1	2.0	1
Salmonellosis (Non-Typhoid/Non-Paratyphoid)	C,P	44	48	605	757	603.7	787
Shiga toxin-Producing <i>E. coli</i> (including O157)	C,P	13	14	220	164	166.3	174
Shigellosis	C,P	35	63	397	367	300.7	391
Typhoid Fever	C,P	0	1	7	2	2.0	4
Vibriosis	C,P	3	5	53	55	44.3	58
West Nile Virus Infection	C,P	0	0	3	2	8.7	2
Yersiniosis	C,P	3	5	47	23	28.3	26
Zika Virus	C,P	1	1	7	7	35.0	7

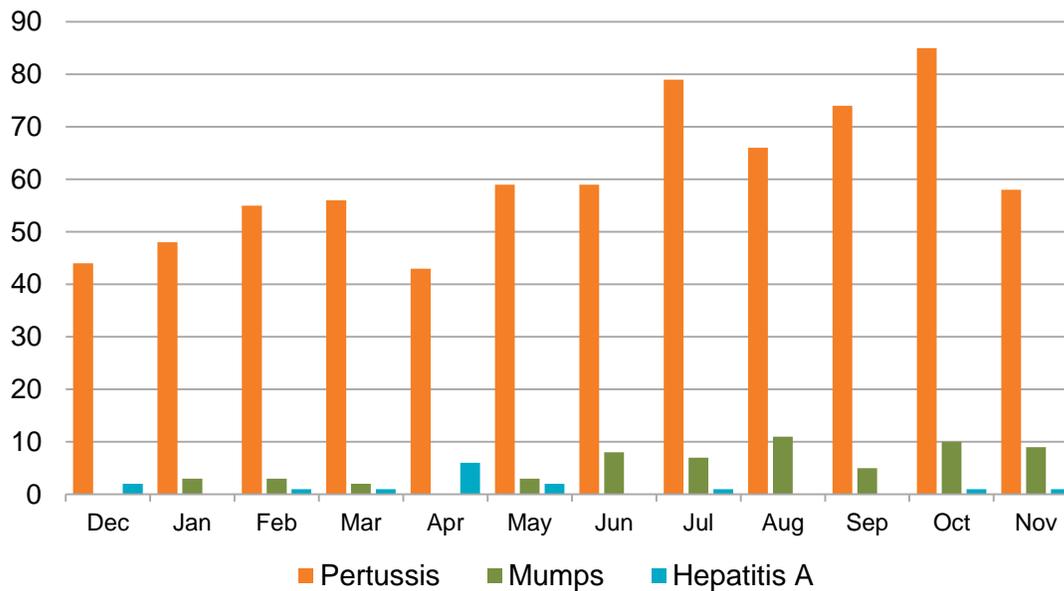
Case counts are provisional and subject to change as additional information becomes available. Cases are grouped into calendar months and calendar years on the basis of the earliest of the following dates: onset, lab specimen collection, diagnosis, death, and report received. Counts may differ from previously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

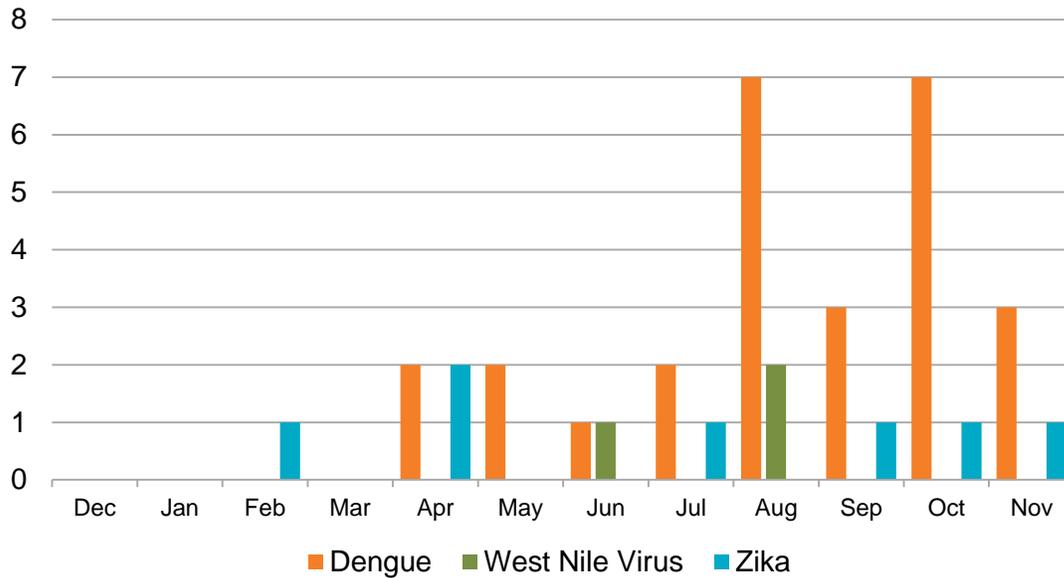


**Figure 5. Select Vaccine-Preventable Infections by Month
December 2018 – November 2019**



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**Figure 6. Select Vector-Borne Infections by Month
December 2018 – November 2019**



All of the dengue and Zika virus cases are travel-associated. For additional information on Zika cases, see the [HHS Agency Zika Virus webpage](#). 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>.