Annual Surveillance Report of Communicable Diseases in San Francisco 2017

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Communicable Disease Control & Prevention
San Francisco Department of Public Health

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Communicable Disease Control Unit Program Overview

The San Francisco Department of Public Health (SFDPH) Communicable Disease Control Unit (CDCU) in conjunction with the Applied Research Community Health Epidemiology and Surveillance Branch (ARCHES) is responsible for the control and surveillance of over 80 communicable diseases, not including HIV, sexually transmitted diseases, tuberculosis, and viral chronic hepatitis. Per Title 17 of the California Code of Regulations[1], health care providers and laboratories are required to report suspected, lab-confirmed, and clinically diagnosed cases of specific disease conditions within a specified timeframe to SFDPH. CDCU receives reports of communicable diseases, investigates cases and outbreaks, and ensures appropriate public health follow-up is implemented to control the spread of disease. Data are reported to the California Department of Public Health (CDPH), which in turn, reports to the Centers for Disease Control and Prevention (CDC).

Table 1: Case Counts & Rates of Reportable Communicable Diseases in San Francisco by Year, 2013-2017

Disease	2013		2014		2015		2016		2017	
	N	Rate*	N	Rate*	N	Rate*	N	Rate*	N	Rate*
Amebiasis[1]	64	7.7	55	6.5	57	6.7	50	5.8	0	0.0
Anaplasmosis/Ehrlichiosis	1	0.1	1	0.1	1	0.1	1	0.1	0	0.0
Anthrax	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Babesiosis	0	0.0	0	0.0	0	0.0	1	0.1	1	0.1
Botulism, Total	3	0.2	0	0.0	0	0.0	0	0.0	2	0.2
Botulism, Foodborne	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Botulism, Infant[2]	2	22.1	0	0.0	0	0.0	0	0.0	2	22.4
Botulism, Unspecified	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Botulism, Wound	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0
Brucellosis	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0
Campylobacteriosis[3]	396	47.5	405	48.2	514	60.6	454	53.0	422	47.9
Chikungunya Virus Infection[4]	-	-	2	0.2	8	0.9	6	0.7	0	0.0
Cholera	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Ciguatera Fish Poisoning	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0
Coccidioidomycosis	16	1.9	5	0.6	12	1.4	9	1.1	14	1.6
Creutzfeldt-Jakob Disease	1	0.1	4	0.5	0	0.0	1	0.1	0	0.0
Cryptosporidiosis	17	2.0	16	1.9	48	5.7	23	2.7	25	2.8
Cyclosporiasis	0	0.0	0	0.0	3	0.4	0	0.0	3	0.3
Cysticercosis or Taeniasis	1	0.1	0	0.0	2	0.2	1	0.1	1	0.1
Dengue Virus Infection	3	0.4	8	1.0	4	0.5	6	0.7	2	0.2
Diphtheria	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Domoic Acid Poisoning	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Encephalitis, Total	0	0.0	2	0.2	0	0.0	1	0.1	1	0.1
Encephalitis, Bacterial	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Encephalitis, Fungal	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Encephalitis, Parasitic	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Encephalitis, Unspecified	0	0.0	1	0.1	0	0.0	0	0.0	1	0.1
Encephalitis, Viral	0	0.0	1	0.1	0	0.0	1	0.1	0	0.0
Flavivirus Infection of Undetermined Species[5]	-	-	-	-	-	-	0	0.0	0	0.0
Giardiasis	193	23.1	164	19.5	199	23.5	215	25.1	246	27.9
Haemophilus influenzae, Invasive[6]	1	1.0	2	1.9	0	0.0	1	2.3	1	2.3
Hantavirus Infections	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Hemolytic Uremic Syndrome (HUS)[7]	6	0.7	0	0.0	1	0.1	1	0.1	1	0.1
Hepatitis A	4	0.5	6	0.7	5	0.6	3	0.4	20	2.3
Hepatitis B, Acute	3	0.4	2	0.2	4	0.5	2	0.2	1	0.1
Hepatitis C, Acute[8]	0	0.0	0	0.0	1	0.1	7	0.8	10	1.1
Hepatitis D (Delta)	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0
Hepatitis E, Acute	0	0.0	1	0.1	3	0.4	2	0.2	5	0.6
Influenza, Death (0-64 years old)[9]	1	0.1	1	0.1	1	0.1	0	0.0	2	0.3
Legionellosis	2	0.2	2	0.2	4	0.5	1	0.1	7	0.8
Leprosy (Hansen Disease)	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0
Leptospirosis	0	0.0	0	0.0	1	0.1	1	0.1	1	0.1
Listeriosis	8	1.0	8	1.0	8	0.9	4	0.5	5	0.6
Lyme Disease[10]	12	1.4	3	0.4	1	0.1	2	0.2	19	2.2
Malaria	3	0.4	8	1.0	5	0.6	7	0.8	6	0.7
Measles (Rubeola)	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0
Meningitis, Total[11]	6	0.7	11	1.3	23	2.7	23	2.7	38	4.3
Meningitis, Bacterial[11]	2	0.2	6	0.7	4	0.5	8	0.9	16	1.8
Meningitis, Fungal	3	0.4	2	0.2	9	1.1	7	0.8	4	0.5

Disease	2013		2014		2015		2016		2017	
	N	Rate*	N	Rate*	N	Disease	N	Rate*	N	Rate*
Meningitis, Parasitic	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
Meningitis, Unspecified	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Meningitis, Viral	1	0.1	3	0.4	10	1.2	8	0.9	17	1.9
Meningococcal Disease, Invasive	4	0.5	2	0.2	5	0.6	2	0.2	1	0.1
Mumps	2	0.2	1	0.1	1	0.1	9	1.1	11	1.2
Paralytic Shellfish Poisoning	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Paratyphoid Fever[12]	-	-	-	-	-	-	-	-	1	0.1
Pertussis[13]	45	5.4	79	9.4	55	6.5	11	1.3	35	4.0
Plague, Human	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Poliovirus Infection	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Psittacosis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Q Fever	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rabies, Animal[14]	2	N/A	6	N/A	3	N/A	2	N/A	4	N/A
Rabies, Human	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Relapsing Fever	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Respiratory syncytial virus (RSV), Death (<5 years old)[15]	-	-	-	-	-	-	0	0.0	0	0.0
Rocky Mountain Spotted Fever (RMSF)	1	0.1	1	0.1	0	0.0	0	0.0	1	0.1
Rubella (German Measles)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rubella Syndrome, Congenital (CRS)[2]	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Salmonellosis[16]	195	23.4	180	21.4	183	21.6	153	17.9	163	18.5
Scombroid Fish Poisoning	2	0.2	1	0.1	0	0.0	0	0.0	2	0.2
Shiga toxin positive feces	1	0.1	7	0.8	2	0.2	3	0.4	5	0.6
Shiga toxin-producing *E. coli* (including O157)	26	3.1	25	3.0	37	4.4	33	3.9	53	6.0
Shigellosis, Total[16]	119	14.3	267	31.8	315	37.1	183	21.4	186	21.1
Shigellosis, Group B (Flexneri)	58	7.0	65	7.7	57	6.7	61	7.1	58	6.6
Shigellosis, Group D (Sonnei)	56	6.7	190	22.6	184	21.7	39	4.6	69	7.8
Shigellosis, Other[16, 17]	5	0.6	12	1.4	74	8.7	83	9.7	59	6.7
Smallpox	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Spotted Fever Rickettsiosis (excluding RMSF)	2	0.2	0	0.0	0	0.0	0	0.0	0	0.0
Streptococcal Infections, Food & Dairy Workers	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Tetanus	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Trichinosis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Tularemia, Human	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Typhoid Carrier	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Typhoid Fever	1	0.1	1	0.1	1	0.1	3	0.4	4	0.5
Typhus and Other Non-Spotted Fever Rickettsiosis	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0
Varicella Hospitalization/Death	2	0.2	1	0.1	0	0.0	0	0.0	2	0.2
Vibrio Infections (Non-Cholera)	17	2.0	21	2.5	24	2.8	4	0.5	16	1.8
Viral Hemorrhagic Fevers (including Ebola)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
West Nile virus, Total	1	0.1	1	0.1	0	0.0	1	0.1	1	0.1
West Nile virus, Asymptomatic Blood Donor	0	0.0	1	0.1	0	0.0	1	0.1	0	0.0
West Nile virus, Disease	1	0.1	0	0.0	0	0.0	0	0.0	1	0.1
Yellow Fever	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Yersiniosis	4	0.5	4	0.5	6	0.7	4	0.5	10	1.1
Zika Virus Infection[5]	-	-	-	-	-	-	29	3.4	9	1.0

*Rates with numerators less than 20 are considered unreliable. Rates are cases per 100,000 population. Population estimates for rates are from the California Department of Finance.

(1) In 2017, only specimens specifically identified as *Entamoeba histolytica* were investigated and counted as a case. *E. histolytica* cannot be distinguished from *E. dispar* by microscopy; case counts from previous years include indistinguishable *E. histolytica/dispar* specimens. (2) Rate for residents age <1 yr. (3) Includes suspect cases in 2014. (4) Added to the list of notifiable diseases in California in 2016 but became reportable under Unusual Disease Occurrence in California in 2014. (5) Added to the list of notifiable diseases in California in 2016. (6) Prior to 2016, only reportable for cases <15 years (rate for residents age <15 years). Starting 2016, reportable for cases <5 years (rate for residents <5 years). (7) Includes HUS only and *E. coli* STEC cases with HUS. (8) Since 2016, a protocol for reporting seroconversions to CDCU from a study on hepatitis C among young people who inject drugs in San Francisco was implemented. (9) Rate for residents age < 65 years of age. (10) In 2017, CDCU began receiving ELR through the state surveillance system CalREDIE, leading to an increase in lab reporting of certain diseases such as Lyme. (11) Excludes meningitis caused by *Neisseria meningitidis*, which is reported under Meningococcal Disease, Invasive. (12) Prior to 2017, reported under salmonellosis. (13) Includes suspect cases in 2017. (14) Only includes confirmed cases. (15) Rate for residents < 5 years of age. (16) Includes suspect cases for years 2014-2016. (17) Includes *Shigella boydii, Shigella dysenteriae,* and *Shigella,* Unspecified.

Table 2: Reported Outbreaks of Communicable Diseases in San Francisco, 2017

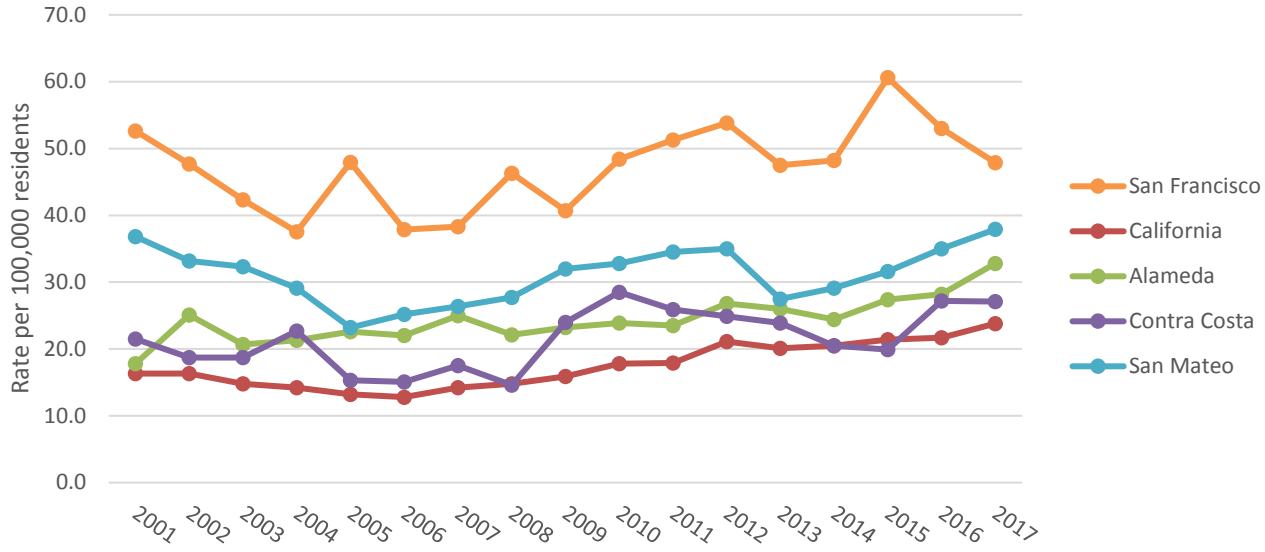
Disease	N
Gastrointestinal (N = 18)	
Gastrointestinal (unknown etiology)	15
Norovirus	3
Respiratory (N = 23)	
Influenza	20
Coronavirus	1
Rhinovirus	1
RSV	1
Other Illness (N = 2)	
Scabies	2

Summary of Select Communicable Diseases

Campylobacteriosis

Campylobacter infections are often associated with eating raw or undercooked poultry, unpasteurized dairy products, or other contaminated food or water. *Campylobacter* infections may cause symptoms such as diarrhea, abdominal cramps, and nausea. Campylobacteriosis remained the most frequently reported disease in San Francisco in 2017 (n=422, rate=47.9 per 100,000 residents), which was lower than in 2016 (n=454, rate=53.0 per 100,000 residents). Rates of campylobacteriosis in San Francisco were higher than in other Bay Area counties for all available years of data (Figure 1).

Figure 1. Annual rate of Campylobacteriosis for San Francisco by Year (compared to California, Alameda County, Contra Costa County, and San Mateo County [2,3]), 2001-2017



Hepatitis A

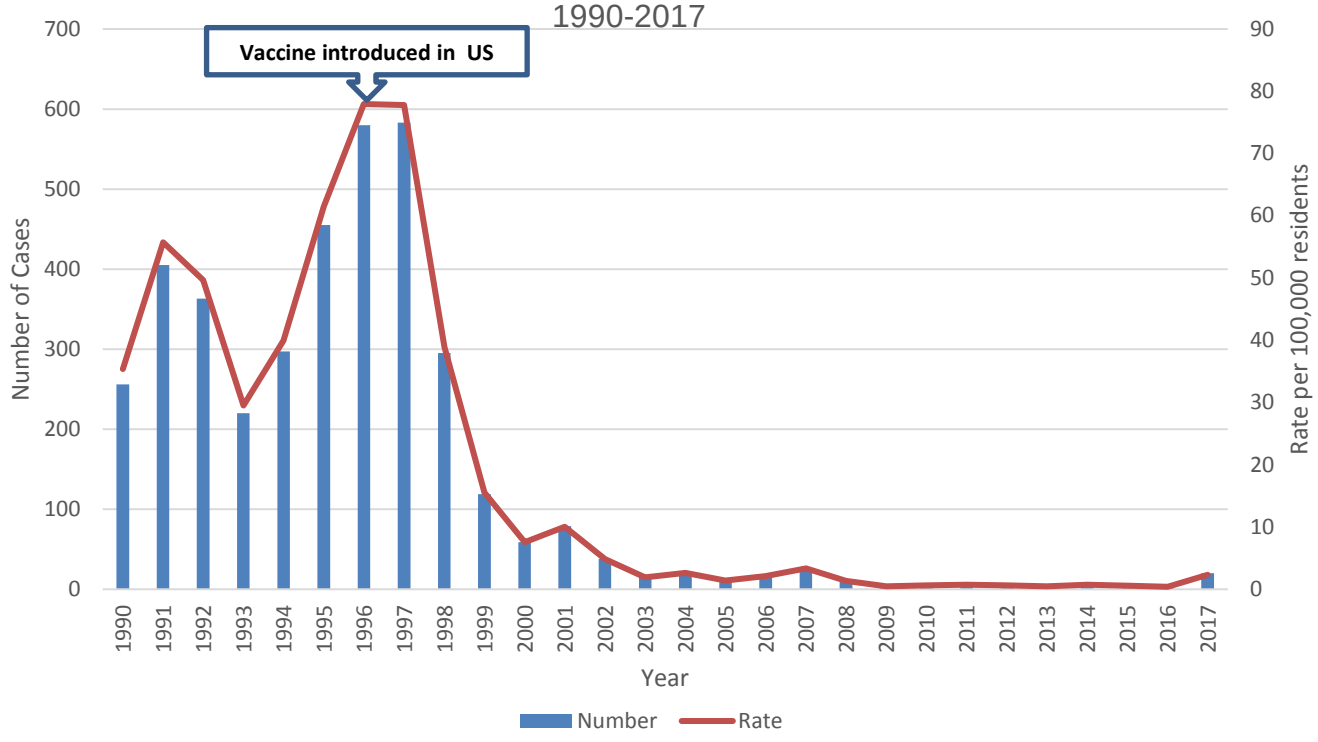
Hepatitis A is a vaccine-preventable disease caused by the hepatitis A virus and is characterized by abrupt onset of fever, malaise, anorexia, nausea, abdominal discomfort, dark urine and jaundice. It's a highly infectious enteric virus, transmitted through the fecal-oral route by person to person contact or ingestion of contaminated food or water. In 1996, when the vaccine became available in the U.S., CDC's Advisory Committee on Immunization Practices (ACIP) recommended vaccination of people at increased risk for disease, including international travelers, men who have sex with men (MSM), persons who use injection and non-injection drugs, and children living in communities with high rates of disease. In 2006, the recommendation was expanded to all children [4].

Since the introduction of the vaccine, rates of hepatitis A in San Francisco have decreased from a high of 77.9 per 100,000 residents in 1996 to less than 1 per 100,000 residents in 2009 (Figure 2). From 2009 to 2016, there was an average of 5 cases per year.

In 2017, there was an increase in hepatitis A cases (n=20, rate=2.3 per 100,000 residents) in San Francisco. This increase was identified primarily among MSM and was attributed to a genotype of the virus associated with outbreaks among MSM that were ongoing at the time in the United States and Europe. These cases were not associated with the large hepatitis A outbreaks seen in California and nationally among individuals experiencing homelessness and/or using illicit drugs in 2017 [5].

In 2017, SFDPH implemented a large outbreak prevention response to immunize at risk populations (individuals experiencing homelessness, populations that use drugs in settings with limited sanitation, workers that have frequent contact with at risk populations, and MSM). The goal was to prevent a local outbreak in San Francisco. SFDPH along with other city departments and community partners administered more than 7,000 vaccinations; there were no reported cases of outbreak-associated Hepatitis A during this time.

Figure 2. Rate and Number of Hepatitis A Cases by Year, San Francisco, 1990-2017



Mumps

Mumps is a vaccine-preventable viral disease that is spread by direct contact with saliva or respiratory droplets. Symptoms include parotitis, fever, headache, and muscle aches. In San Francisco, from 2001 to 2015, the annual number of mumps cases had been less than three; however, the number of cases has been increasing since 2016 (n=9 in 2016 and n=11 in 2017). This increase in cases has been observed statewide and nationally [6]. The nationwide increase has been partly driven by large outbreaks. In California, outbreaks in 2017 were among university students or the MSM community [6,7]. These outbreaks were likely associated with a combination of factors, including waning immunity following vaccination and cases living and/or congregating in close-contact settings [8]. In San Francisco, more than half of the cases reported domestic or international travel during the incubation period, with several traveling to areas with known mumps outbreaks ongoing at the time. In 2017, no mumps outbreaks were reported in San Francisco.

Rabies

Rabies is a viral disease that causes symptoms such as headache, fever, and malaise and eventually progresses to paralysis, confusion, and death. It is transmitted by the saliva of infected mammals. Four rabid bats were detected in San Francisco in 2017. Contact with bats presents a risk of rabies exposure to humans and pets. Rabies was not detected in any animals aside from bats in 2017. No cases of rabies have been reported in terrestrial animals (e.g., dogs, cats, skunks, raccoons, foxes, coyotes) in San Francisco since 1941.

The last human rabies case in San Francisco occurred in 1987, and the presumed source was a dog bite that occurred while the patient was in the Philippines.

Shiga toxin-producing *E. coli*

Escherichia coli (*E. coli*) are a large group of bacteria that occur naturally in the intestines of humans and animals. Most strains are benign, while some are harmful and may cause gastrointestinal illness. Shiga toxin-producing *E. coli* (STEC) is a group of *E. coli* bacteria that are known to produce a toxin that can cause human disease; the most common and well-known strain is *E. coli* O157:H7.

In 2017, there were 53 STEC cases, five Shiga toxin positive feces cases, and one hemolytic uremic syndrome (HUS) case in San Francisco. The increase in STEC cases from 2016 (n=33, rate=3.9 per 100,000 residents) to 2017 (n=53, rate=6.0 per 100,000 residents) is mainly attributed to cases that were part of a multistate foodborne outbreak associated with consumption of mixed leafy greens. In recent years, there have been multiple STEC multistate outbreaks associated with different widely distributed food items, such as vegetables or beef [9].

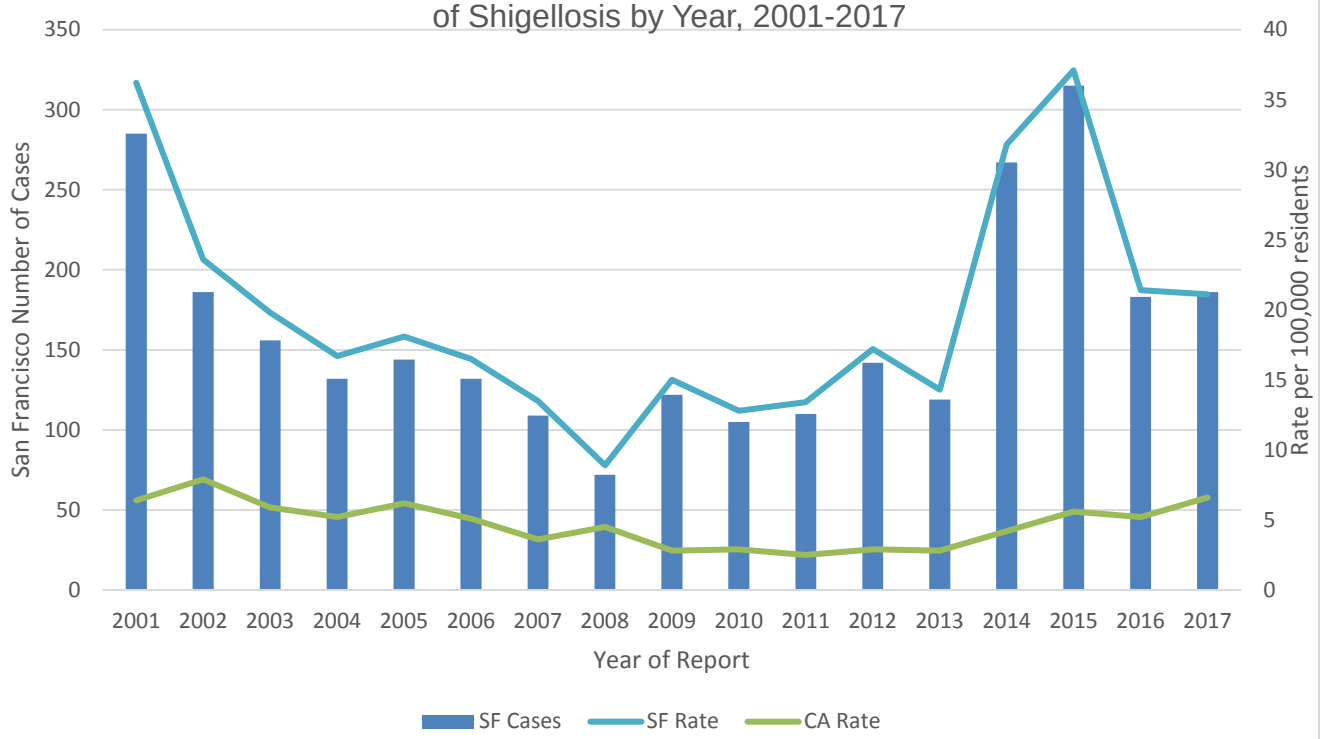
In general, STEC cases have been increasing overall in San Francisco since 2013, which is consistent with statewide trends [3]. The increase is hypothesized to be due to newly developed lab tests that can identify non-O157 Shiga toxin-producing *E. coli*, increased use of Shiga toxin testing by clinical laboratories, and an increased number of specimens forwarded to public health laboratories for culture and identification [10]. Beginning in 2014, clinical laboratories were required to submit Shiga toxin-positive fecal broths and Shiga toxin-producing *Escherichia coli* (STEC) O157 and non-O157 isolates to the local and state public health laboratories.

Shigellosis

Shigellosis is a highly infectious bacterial illness that causes gastrointestinal symptoms such as diarrhea, fever, and nausea. The rate of shigellosis in 2017 (n=186, rate=21.1 per 100,000 residents) was similar to 2016 (n=183, rate=21.4 per 100,000 residents) and lower than in 2015 (n=315, rate=37.1 per 100,000 residents). The higher rate of shigellosis in 2015 as compared to 2016 and 2017 is attributable to several local outbreaks, including a citywide outbreak of ciprofloxacin-resistant shigellosis that disproportionately affected homeless and marginally housed individuals in San Francisco.

Generally, the rates of shigellosis in San Francisco are higher compared to other California jurisdictions[2,3] and have been increasing since 2008 (Figure 3). The high rates of shigellosis in San Francisco have been partly attributed to sexual transmission among MSM [11].

Figure 3. San Francisco Cases & Rates and California Rates[2,3] of Shigellosis by Year, 2001-2017



Reported Outbreaks Summary

Outbreaks of any disease are notifiable to the local health department. However, congregate settings or institutions, such as residential facilities or schools, that have existing procedures in place to report outbreaks are more likely to recognize an outbreak and report it to the local health department. As a result, most outbreaks reported to SFDPH CDCU in 2017 were associated with residential care facilities/skilled nursing facilities/elderly care or daycare/preschools/schools (Figure 4).

In 2017, there were 43 communicable disease outbreaks in San Francisco reported to SFDPH CDCU. Definitions of outbreaks and criteria for SFDPH CDCU to investigate a suspected outbreak vary by disease and setting. At a minimum, an outbreak is defined as an increase in cases above the expected

number within a given time period or two or more cases with a common exposure within a given time period. In 2017, the majority of outbreaks reported were caused by respiratory illnesses (n=23, 53%), with most of these caused by influenza viruses (Figure 5).

Figure 4: Percent of Reported Outbreaks by Setting, San Francisco, 2017

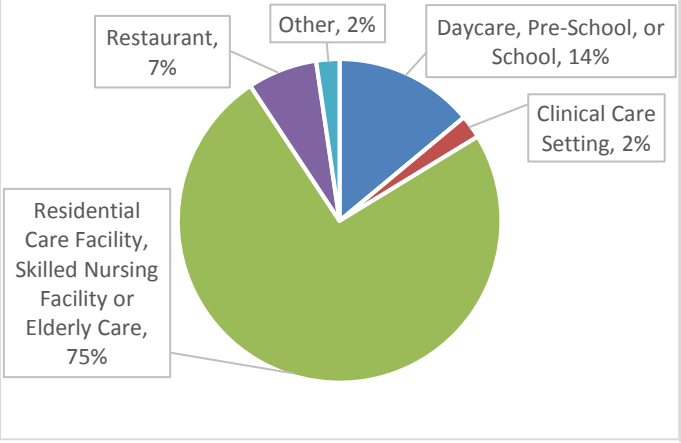
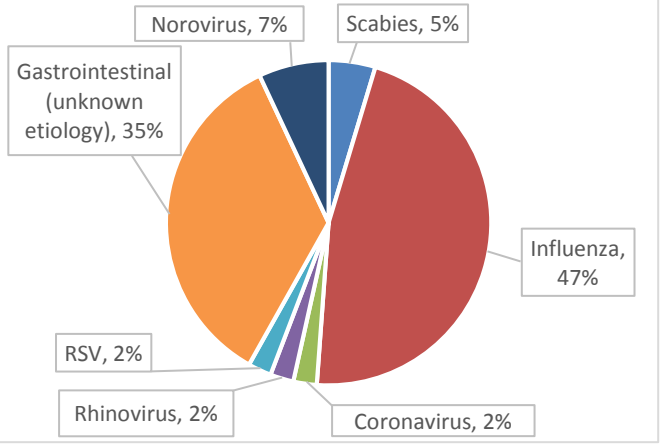


Figure 5: Percent of Reported Outbreaks by Etiology, San Francisco, 2017



Appendix

Citation

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Data, Methods, and Definitions

Data Collection

San Francisco health care providers, laboratories and other mandated reporters are required under Title 17, California Code of Regulations (CCR) (§2500, §2505, §2593, §2641-2643, §2800-2812) [1], to notify the local health authority of the diagnosis, detection or suspicion of certain diseases and conditions. Reports are confidentially received by fax, telephone, postal mail, secure electronic file transfer, or electronic lab reporting. Reports by fax and postal mail are generally submitted using the Confidential Morbidity Report (CMR) form [12]. Limited case demographic and clinical information is provided on the CMR. Depending on the disease or condition, disease control staff attempt to contact the health care provider, laboratory and/or patient for follow-up. Clinical and risk factor data are subsequently collected according to departmental and state protocols. Prior to 2017, data were managed using locally designed database systems. Starting in 2017, general communicable disease data are managed in CDPH's web-based surveillance system, CalREDIE.

Notifiable diseases managed by other SFDPH sections (HIV Surveillance, Environmental Health, STD Prevention and Control, Tuberculosis Control, and Chronic Viral Hepatitis Surveillance) are not presented in this report: Acquired Immune Deficiency Syndrome (AIDS), chancroid, *Chlamydia*

trachomatis infections, gonococcal infections, chronic hepatitis B, past or present hepatitis C infection, human immunodeficiency virus (HIV), lymphogranuloma venereum (LGV), pelvic inflammatory disease (PID), pesticide-related illness or injury, syphilis, and tuberculosis.

This report includes confirmed and probable cases, with the exception of campylobacteriosis (includes suspect in 2014), pertussis (includes suspect in 2017), rabies (only includes confirmed for all years), salmonellosis (includes suspect for years 2014-2016), and shigellosis (includes suspect for years 2014-2016). Confirmed, probable, and suspect outbreaks are included in this report.

For years 2013-2016, cases and outbreaks were presented by the year the cases or outbreaks were reported to SFDPH. For 2017, cases and outbreaks were presented by the earliest of the following dates (if available): onset date, diagnosis date, date of death, laboratory specimen collection date, or date report received. See 'Cases & outbreaks reported in 2017 not included in Tables 1 & 2' for more information.

Population Under Surveillance

CDCU reports cases of CCR Title 17 reportable diseases among residents living in the City and County of San Francisco. Cases of reportable diseases reported to CDCU occurring in non-residents are considered "out of jurisdiction" and are referred to their respective jurisdiction of residency for public health investigation. They are not included in this report.

San Francisco population estimates were obtained from the California Department of Finance (DOF) Demographic Research Unit [13]. DOF estimates are based on the U.S. Census counts. This report uses DOF numbers produced in 2018 for the 2017 San Francisco population. The population count was 880,418.

Notifiable Disease Definitions

The diseases required to be reported to public health, as well as disease definitions, can change over time. Changes in disease definitions can impact the numbers of cases reported to SFDPH. Disease definitions are based on the CDC/CSTE (Council of State and Territorial Epidemiologists) surveillance case definitions [14], unless otherwise noted.

Calculations

SAS version 9.3 (SAS Institute Inc., Cary, NC) was used to calculate crude incidence rates. For this report, the crude incidence rate (IR) is defined as the number of new cases of disease per 100,000 residents at risk during a given year. The denominator for all diseases was the total San Francisco population, except for infant botulism and congenital rubella (San Francisco residents less than one year of age), invasive *H. influenzae* (San Francisco residents less than 15 years of age for 2013-2015 and San Francisco residents less than 5 years of age for 2016-2017), RSV death (San Francisco residents less than 5 years of age), and influenza death (San Francisco residents less than 65 years of age). Age-adjusted rates were not calculated. Rates and proportions were generally rounded to one decimal place.

$$IR = \left(n \middle/ p \right) \times 100{,}000$$

where n= Number of Cases and p=Population at Risk, and each is identified for a one-year period.

Data Limitations

The surveillance data were reported by laboratories, clinicians and other mandated reporters to the local health authority in compliance with public health laws. Reports may be incomplete and/or important demographic, clinical or risk information may not be available upon active follow-up. Because not all cases

of disease were detected by the health care system and not all detected cases were reported to the public health department, the information presented in this report may underestimate the true incidence of disease.

Cases & outbreaks reported in 2017 not included in Tables 1 & 2

In 2017, SFDPH CDCU changed the reporting of cases and outbreaks in the annual surveillance report. Prior to 2017, cases and outbreaks were presented by the year they were reported to SFDPH. In 2017, this shifted to the earliest of the following dates (if available): onset date, diagnosis date, date of death, laboratory specimen collection date, or date report received. Because of this, there is a subset of cases and outbreaks reported to SFDPH CDCU in 2017 with onset dates, diagnosis dates, dates of death, or laboratory specimen collection dates prior to 2017 that are not represented in the main tables (Tables 1 & 2) of the 2017 report or any prior annual reports. Table 3 is a summary of these cases and outbreaks.

Table 3: Cases & outbreaks reported in 2017 with onset dates, diagnosis dates, dates of death, or laboratory specimen collection dates prior to 2017

Disease	N
Cases (N = 26)	
Campylobacteriosis	5
Coccidioidomycosis	3
Creutzfeldt-Jakob Disease	1
Cryptosporidiosis	1
Giardiasis	2
Lyme Disease	2
Meningitis, Bacterial	1
Salmonellosis	2
Shigellosis, Total	8
Zika Virus Infection	1
Outbreaks (N = 7)	
Gastrointestinal	3
Respiratory	4

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