



Number of Cases and Incidence Rates per 100,000 of Acute Communicable Diseases in Alameda County (excluding City of Berkeley), 2011-2015

Final version: January 2019

Disease	2011-2015 Total Count	Average Annual Count	2011-2015 Average Annual Rate Per 100,000 (95%CI)	2011 Count	2011 Rate per 100,000 (95%CI)	2012 Count	2012 Rate per 100,000 (95%CI)	2013 Count	2013 Rate per 100,000 (95%CI)	2014 Count	2014 Rate per 100,000 (95%CI)	2015 Count	2015 Rate per 100,000 (95%CI)
Amebiasis	118	23.6	1.6 (1, 2.5)	21	1.5 (0.9, 2.3)	19	1.3 (0.8, 2.1)	8	*	11	0.8 (0.4, 1.4)	59	4 (3.1, 5.2)
Anaplasmosis/Ehrlichiosis [1]	2	0.4	*	0		0		2	*	0		0	
Anthrax	0	0		0		0		0		0		0	
Babesiosis	3	0.6	*	1	*	0		0		0		2	*
Botulism, Foodborne	0	0		0		0		0		0		0	
Botulism, Infant ^	7	1.4	*	1	*	1	*	2	*	1	*	2	*
Botulism, Wound	5	1	*	2	*	0		0		2	*	1	*
Botulism, Other	0	0		0		0		0		0		0	
Botulism, Unknown	0	0		0		0		0		0		0	
Brucellosis	3	0.6	*	1	*	0		0		0		2	*
Campylobacteriosis	1834	366.8	25.6 (23, 28.3)	335	23.8 (21.3, 26.4)	364	25.6 (23.1, 28.4)	374	26.1 (23.6, 28.9)	349	24 (21.6, 26.7)	412	28.1 (25.5, 31)
Carbapenem-resistant <i>Enterobacteriaceae</i> (CRE) [2]	98	98	6.9 (5.6, 8.4)	NR		NR		NR		NR		98	6.9 (5.6, 8.4)
Cholera	0	0		0		0		0		0		0	
Ciguatera Fish Poisoning	0	0		0		0		0		0		0	
Coccidioidomycosis	137	27.4	1.9 (1.3, 2.8)	19	1.3 (0.8, 2.1)	25	1.8 (1.1, 2.6)	21	1.5 (0.9, 2.2)	32	2.2 (1.5, 3.1)	40	2.7 (2, 3.7)
Creutzfeldt-Jakob Disease ^^ [3]	7	1.4	*	2	*	1	*	0		2	*	2	*
Cryptosporidiosis	61	12.2	0.8 (0.4, 1.5)	9	*	19	1.3 (0.8, 2.1)	12	0.8 (0.4, 1.5)	12	0.8 (0.4, 1.4)	9	*
Cyclosporiasis	1	0.2	*	0		0		0		0		1	*
Cysticercosis/Taeniasis [4]	0	0		0		0		0		0		0	
Dengue Virus Infection	43	8.6	*	0		10	0.7 (0.3, 1.3)	17	1.2 (0.7, 1.9)	3	*	13	0.9 (0.5, 1.5)
Diphtheria	0	0		0		0		0		0		0	
Domoic Acid Poisoning	0	0		0		0		0		0		0	
Encephalitis (Total)	61	12.2	0.8 (0.4, 1.5)	34	2.4 (1.7, 3.4)	8	*	4	*	4	*	11	0.8 (0.4, 1.3)
Encephalitis - Bacterial	1	0.2	*	1	*	0		0		0		0	
Encephalitis - Fungal	0	0		0		0		0		0		0	
Encephalitis - Viral	12	2.4	*	6	*	2	*	0		1	*	3	*
Encephalitis - Parasitic	1	0.2	*	0		0		1	*	0		0	
Encephalitis - Not Otherwise Specified	47	9.4	*	27	1.9 (1.3, 2.8)	6	*	3	*	3	*	8	*
<i>E. coli</i> , Shiga-toxin Producing (Total)	233	46.6	3.2 (2.4, 4.3)	37	2.6 (1.8, 3.6)	36	2.5 (1.8, 3.5)	37	2.6 (1.8, 3.6)	52	3.6 (2.7, 4.7)	71	4.9 (3.8, 6.1)
<i>E. coli</i> O157 with HUS ^^	11	2.2	*	1	*	3	*	1	*	3	*	3	*
<i>E. coli</i> O157 without HUS ^^	94	18.8	1.3 (0.8, 2.1)	17	1.2 (0.7, 1.9)	19	1.3 (0.8, 2.1)	20	1.4 (0.9, 2.2)	26	1.8 (1.2, 2.6)	12	0.8 (0.4, 1.4)
STEC non-O157 with HUS ^^	3	0.6	*	1	*	0		0		1	*	1	*
STEC non-O157 without HUS ^^	108	21.6	1.5 (0.9, 2.3)	15	1.1 (0.6, 1.8)	10	0.7 (0.3, 1.3)	10	0.7 (0.3, 1.3)	20	1.4 (0.8, 2.1)	53	3.6 (2.7, 4.7)
Shiga toxin positive feces (without culture confirmation) with HUS ^^	0	0		0		0		0		0		0	
Shiga toxin positive feces (without culture confirmation) without HUS ^^	17	3.4	*	3	*	4	*	6	*	2	*	2	*
Giardiasis	520	104	7.2 (5.9, 8.8)	112	7.9 (6.5, 9.6)	93	6.5 (5.3, 8)	83	5.8 (4.6, 7.2)	92	6.3 (5.1, 7.8)	140	9.6 (8, 11.3)
<i>Burkholderia mallei</i> (Glanders)	0	0		0		0		0		0		0	
<i>Haemophilus influenzae</i> (invasive), all serotypes, <15 years of age only	9	1.8	*	2	*	2	*	1	*	2	*	2	*
Hantavirus Infections	2	0.4	*	0		2	*	0		0		0	



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Hemolytic Uremic Syndrome (HUS) without evidence of <i>E. coli</i> O157, other STEC, or Shiga toxin positive feces ^^	5	1	*	3	*	1	*	1	*	0		0	
Hepatitis A	29	5.8	*	4	*	4	*	6	*	8	*	7	*
Hepatitis B, Acute	25	5	*	5	*	7	*	5	*	6	*	2	*
Hepatitis C, Acute	6	1.2	*	1	*	1	*	2	*	1	*	1	*
Hepatitis D (Delta)	15	3	*	5	*	3	*	3	*	2	*	2	*
Hepatitis E, Acute	6	1.2	*	0		0		1	*	4	*	1	*
Influenza - Death (0-64 years old) ^^	30	6	*	3	*	7	*	7	*	11	0.9 (0.4, 1.6)	2	*
Influenza - Novel Strains (human)	0	0		0		0		0		0		0	
Legionellosis	36	7.2	*	5	*	3	*	2	*	7	*	19	1.3 (0.8, 2)
Leprosy (Hansen Disease)	6	1.2	*	4	*	2	*	0		0		0	
Leptospirosis	0	0		0		0		0		0		0	
Listeriosis	24	4.8	*	6	*	6	*	3	*	1	*	8	*
Lyme Disease	17	3.4	*	2	*	5	*	1	*	1	*	8	*
Malaria	58	11.6	0.8 (0.4, 1.4)	11	0.8 (0.4, 1.4)	16	1.1 (0.6, 1.8)	11	0.8 (0.4, 1.4)	8	*	12	0.8 (0.4, 1.4)
Measles (Rubeola)	10	2	*	0		0		0		4	*	6	*
<i>Burkholderia pseudomallei</i> (Meloidiosis)	3	0.6	*	1	*	2	*	0		0		0	
Meningitis (Total)	416	83.2	5.8 (4.6, 7.2)	119	8.4 (7, 10.1)	84	5.9 (4.7, 7.3)	85	5.9 (4.7, 7.3)	50	3.4 (2.6, 4.5)	78	5.3 (4.2, 6.7)
Meningitis - Bacterial (other than <i>H. influenzae</i> (<5 years old) and <i>N. meningitidis</i>)	77	15.2	1.1 (0.6, 1.7)	15	1.1 (0.6, 1.8)	11	0.8 (0.4, 1.4)	13	0.9 (0.5, 1.6)	14	1 (0.5, 1.6)	24	1.6 (1.1, 2.4)
Meningitis - Fungal (other than <i>Coccidioidomycosis</i>)	29	5.8	*	3	*	10	0.7 (0.3, 1.3)	8	*	6	*	2	*
Meningitis - Parasitic	0	0		0		0		0		0		0	
Meningitis - Viral	225	45	3.1 (2.3, 4.2)	77	5.5 (4.3, 6.8)	44	3.1 (2.3, 4.2)	36	2.5 (1.8, 3.5)	24	1.7 (1.1, 2.5)	44	3 (2.2, 4)
Meningitis - Not Otherwise Specified	86	17.2	1.2 (0.7, 1.9)	24	1.7 (1.1, 2.5)	19	1.3 (0.8, 2.1)	29	2 (1.4, 2.9)	6	*	8	*
Meningococcal Disease (Invasive)	22	4.4	*	3	*	7	*	5	*	5	*	2	*
Mumps	4	0.8	*	1	*	0		2	*	1	*	0	
Occurrence of any unusual disease	43	28.2	NC	14	NC	4	NC	8	NC	14	NC	3	NC
Outbreaks (Foodborne) ^^^	16	2.6	NC	3	NC	5	NC	5	NC	2	NC	1	NC
Outbreaks (Not foodborne) [5]	260	31	NC	47	NC	48	NC	60	NC	45	NC	60	NC
Paralytic Shellfish Poisoning	0	0		0		0		0		0		0	
Pertussis	941	188.2	13.1 (11.3, 15.1)	211	15 (13, 17.1)	63	4.4 (3.4, 5.7)	127	8.9 (7.4, 10.6)	355	24.4 (22, 27.1)	185	12.6 (10.9, 14.6)
Plague (Human)	0	0		0		0		0		0		0	
Poliovirus Infection or Poliomyelitis	0	0		0		0		0		0		0	
Psittacosis	0	0		0		0		0		0		0	
Q Fever	3	0.6	*	0		0		2	*	1	*	0	
Rabies (Animal) ^^^^	27	5.4	NC	5	NC	3	NC	4	NC	2	NC	13	NC
Rabies (Human)	0	0		0		0		0		0		0	
Relapsing Fever	2	0.4	*	1	*	0		0		0		1	*
Spotted Fever Rickettsioses (excluding Rocky Mountain Spotted Fever)	1	0.2	*	0		0		1	*	0		0	
Rocky Mountain Spotted Fever	2	0.4	*	0		0		1	*	0		1	*
Rubella (German Measles)	1	0.2	*	0		0		0		1	*	0	
Salmonellosis (Other than Typhoid Fever) ^^	1212	242.4	16.9 (14.8, 19.2)	235	16.7 (14.6, 18.9)	211	14.9 (12.9, 17)	229	16 (14, 18.2)	250	17.2 (15.1, 19.5)	287	19.6 (17.4, 22)



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Scombroid Fish Poisoning	2	0.4	*	2	*	0		0		0		0	
SARS	0	0		0		0		0		0		0	
Staphylococcus Aureus Infection (Severe Case)	7	1.4	*	3	*	2	*	1	*	1	*	0	
Shigellosis (Total)	345	69	4.8 (3.7, 6.1)	49	3.5 (2.6, 4.6)	44	3.1 (2.3, 4.2)	50	3.5 (2.6, 4.6)	73	5 (3.9, 6.3)	129	8.8 (7.4, 10.5)
Shigellosis, Group A (Dysenteriae)	1	0.2	*	0		0		1	*	0		0	
Shigellosis, Group B (Flexneri)	84	16.8	1.2 (0.7, 1.9)	16	1.1 (0.6, 1.8)	13	0.9 (0.5, 1.6)	30	2.1 (1.4, 3)	9	*	16	1.1 (0.6, 1.8)
Shigellosis, Group C (Boydii)	6	1.2	*	0		2	*	2	*	2	*	0	
Shigellosis, Group D (Sonnei)	130	26	1.8 (1.2, 2.7)	25	1.8 (1.1, 2.6)	23	1.6 (1, 2.4)	14	1 (0.5, 1.6)	38	2.6 (1.9, 3.6)	30	2 (1.4, 2.9)
Shigellosis, Unspecified	124	24.8	1.7 (1.1, 2.6)	8	*	6	*	3	*	24	1.7 (1.1, 2.5)	83	5.7 (4.5, 7)
Smallpox	0	0		0		0		0		0		0	
Streptococcal Infections (outbreaks and cases in food & dairy workers only)	0	0		0		0		0		0		0	
Tetanus	0	0		0		0		0		0		0	
Toxic Shock Syndrome	5	1	*	2	*	0		0		0		3	*
Trichinosis	0	0		0		0		0		0		0	
Tularemia	1	0.2	*	1	*	0		0		0		0	
Typhoid Carrier	1	0.2	*	0		0		0		1	*	0	
Typhoid Fever	41	8.2	*	9	*	6	*	8	*	11	0.8 (0.4, 1.4)	7	*
Typhus and Other Non-Spotted Fever Rickettsioses	0	0		0		0		0		0		0	
Varicella Hospitalization/Death	20	4	*	0		2	*	3	*	4	*	11	0.8 (0.4, 1.3)
Vibrio Infections (Non-Cholera)	39	7.8	*	3	*	7	*	12	0.8 (0.4, 1.5)	12	0.8 (0.4, 1.4)	5	*
Viral Hemorrhagic Fevers (e.g., Crimean-Congo, Ebola, Lassa and Marburg viruses)	0	0		0		0		0		0		0	
West Nile virus infection (Total)	5	1	*	0		2	*	1	*	2	*	0	
West Nile virus - Asymptomatic	0	0		0		0		0		0		0	
West Nile virus - Non-neuroinvasive (West Nile fever)	0	0		0		0		0		0		0	
West Nile virus - Neuroinvasive	2	0.4	*	0		0		0		2	*	0	
West Nile virus - Unspecified	3	0.6	*	0		2	*	1	*	0		0	
Yellow Fever	0	0		0		0		0		0		0	
Yersiniosis	28	5.6	*	4	*	3	*	8	*	6	*	7	*

Footnotes:

[1] Anaplasmosis not reportable until 2010 and data not recorded in CDSS until 2013; ehrlichiosis was reportable from 2007-2013

[2] CRE became voluntarily reportable in Alameda County in May 2015

[3] For 2011-2013 cases, case year classified by year of death as per CEIP/CDPH/CDC/WHO conventions. For 2014 onward, case year is determined by year of report to ACPHD

[4] Data for taeniasis not recorded in CDSS until 2013

[5] Only non-foodborne outbreaks in non-food facilities are included. Includes respiratory (influenza, legionellosis, pertussis and unknown pathogen), gastrointestinal (norovirus or unknown pathogen), and multidrug resistant organism (Acinetobacter baumannii and CRE) outbreaks.

^ Data for 2011-2013 cases from CDPH, Infant Botulism Treatment and Prevention Program

^^ Data for 2011-2013 outbreaks from CDC National Outbreak Report System.

^^ Data for 2011-2013 cases from California Emerging Infections Program (CEIP)

^^^^ Data from Alameda County Public Health Laboratory

* Rates not presented for diseases or time periods with fewer than 10 cases; average annual rates not presented for diseases with fewer than 10 average annual cases.

NR Not Reportable

NC Not Calculated



Data Sources and Rate Calculations:

- Case data: For all conditions unless otherwise indicated in footnotes, case data from 2011 to 2013 were exported from the Alameda County Communicable Disease Surveillance Database (CDSS) and case data from 2014 to 2015 were exported from the California Reportable Disease Information Exchange (CalREDIE) system.
- Population estimates: For 2011 rates, the population size of Alameda County was estimated from the California Department of Finance and the decennial Censuses. For 2012-2015 rates, population estimates were from Esri Demographics, a geographic information systems software program. All population estimates exclude the City of Berkeley, which is its own health jurisdiction. Alameda County population (excluding the city of Berkeley) estimates for 2011 to 2015 were as follows: 2011: 1,410,275; 2012: 1,420,375; 2013: 1,430,448; 2014: 1,452,078; 2015: 1,463,818
- Rate calculations: Crude incidence rates were calculated to describe the number of new disease incidents occurring in 100,000 people at risk for infection during a specific time period. Standardizing the frequency of disease using this method allows for direct comparisons of disease incidence across two or more populations of differing sizes.
- Confidence interval (CI) interpretation: CIs were calculated to estimate the reliability of rates, which are subject to random variation. CIs represent an interval within which the true underlying rate of disease may lie; that is, assuming the absence of bias, if the same population were repeatedly sampled, 95% of the 95% CIs calculated would contain the true rate of disease. A CI's width indicates the precision and variability of the rate estimate; the narrower the CI, the larger the size of the sample from which the estimate was drawn and therefore the more precise and less variable the estimate. In this report, rates and CIs were not calculated for diseases and time periods with fewer than 10 total incidents and average annual rates and CIs were not calculated for diseases with fewer than 10 average annual cases because estimates based on such small sample sizes would not be reliable.
- For detailed descriptions of methods and rate interpretation, please refer to the Summary of Communicable Diseases in Alameda County, 2007-2013 available at: http://www.acphd.org/media/423146/ac_cd0713.pdf
- For reportable disease counts rates for California and United States, please refer to the following reports:
 - A) California counts and rates (California Department of Public Health):
 - 1) Yearly Summaries of Selected General Communicable Disease in California, 2011-2016:
<https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/YearlySummariesofSelectedCommDiseasesinCA2011-2016.pdf>
 - 2) Vaccine-Preventable Disease Surveillance in California, 2014 and 2015 Annual Reports
<https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/VPD-AnnualReport2014.pdf>
<https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/VPD-AnnualReport2015.pdf>
 - * *Counts and rates for Alameda County in these reports may differ from those presented in these tables due to the use of a different date to define disease year.*
 - B) U.S. counts and rates (Centers for Disease Control and Prevention):
 - 2014: https://www.cdc.gov/mmwr/volumes/63/wr/mm6354a1.htm?s_cid=mm6354a1_w
 - 2015: <https://www.cdc.gov/mmwr/volumes/64/wr/mm6453a1.htm>