



Communicable Diseases (CD) Quarterly Report

San Mateo County Health System
CD Control Program

• Provider Reporting: 650.573.2346 (phone) 650.573.2919 (fax) • Issue No. 37 • Data to September 30, 2016

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Table 1. Selected Communicable Disease cases reported in San Mateo County Residents

Disease	2016		2015	
	3rd Qtr	YTD	3rd Qtr	YTD
Chikungunya [§]	0	0	8	17
Coccidioidomycosis	0	1	2	6
Dengue [§]	4	12	5	8
Infant Botulism	1	2	0	0
Listeriosis	2	4	3	5
Malaria	0	2	3	4
Meningitis - Bacterial* [§]	0	2	0	4
Meningitis - Fungal ^{†§}	0	2	0	0
Meningitis - Viral [§]	4	9	4	9
Meningitis - NOS ^{‡§}	0	2	0	2
Meningococcal Disease [§]	0	2	0	2
Zika ^{§1}	5	8	0	0

*Excluding meningococcal meningitis §Includes confirmed and probable cases †Excluding coccidioidomycosis ‡Not Otherwise Specified ¹Symptomatic, not pregnant

Table 2. Selected Gastrointestinal illnesses reported in San Mateo County Residents

Disease	2016		2015	
	3rd Qtr	YTD	3rd Qtr	YTD
Amebiasis	1	4	1	4
Campylobacteriosis	95	220	60	175
Cryptosporidium [§]	2	9	12	25
E. coli O157*	2	5	1	8
Giardiasis	19	41	18	39
Shiga Toxin Positive Feces	4	6	0	1
STEC w/o HUS*	5	12	9	16
Salmonellosis (non-typhoid) [§]	39	93	49	108
S. Enteritidis	3	15	8	15
S. I 4,[5],12:i:-	4	14	0	3
Pending/Others	32	64	41	90
Shigellosis [§]	13	26	9	24
Vibriosis (non-cholera)	2	2	1	4

*STEC categories exclude E. coli O157 §Includes confirmed and probable cases

Table 3. Selected Vaccine Preventable Diseases reported in San Mateo County Residents

Disease	2016		2015	
	3rd Qtr	YTD	3rd Qtr	YTD
Hepatitis A	0	1	1	2
Hepatitis B (acute)	0	0	0	4
Influenza - ICU Hosp (0-64 yrs)	0	6	0	11
Influenza Death (0-64 yrs)	0	2	0	5
Measles	0	0	0	4
Pertussis*	23	44	21	36

*Includes confirmed, probable and suspect cases

Sources: California Reportable Disease Information Exchange (CalREDIE)

Notes: Morbidity is based on the date the case was received; previous reports used date case incident was created in CalREDIE. Totals for past quarters may change due to delays in reporting from labs and providers, the use of different reporting systems, and changes to the resolution statuses of cases based on subsequent information received. All totals are for confirmed cases, unless noted otherwise.

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Focus on Infant Botulism Part 1

Botulism is a rare but potentially life-threatening paralytic syndrome resulting from the action of a neurotoxin elaborated by the bacterium *Clostridium botulinum*. This disease has a lengthy history; the first investigation of botulism occurred in the 1820s with a case series of hundreds of patients with "sausage poisoning" in a southern German town. Several decades later in Belgium, the association was demonstrated between a neuromuscular paralysis and ham infected by a spore-forming bacillus that was isolated from the ham. The organism was named *Bacillus botulinus* after the Latin word for sausage, botulus.

An average of 110 cases of botulism is reported each year in the United States according to the Centers for Disease Control and Prevention (CDC). Approximately 72 percent of cases are **infant botulism**, 25 percent are foodborne botulism, and the remaining 3 percent are wound botulism.

Infant botulism results from intestinal colonization by *Clostridium botulinum*, which produces a neurotoxin that blocks presynaptic cholinergic transmission, affecting skeletal and smooth muscle as well as autonomic function. Infant botulism affects infants between one week and 12 months of age, but most cases occur between two and eight months of age; the **median age of onset is three to four months**.

Clostridium species that cause infant botulism include types A, B, E, and F. The vast majority of cases are due to infection with types A or B. Type A is more prevalent in the western United States, while type B is more prevalent in the eastern United States. While infant botulism occurs worldwide, the disease occurs more commonly in areas where **environmental conditions** favor persistence of spores in the soil, including Pennsylvania, Utah, and California in the United States. Most cases in the United States are thought to result from ingestion of environmental dust containing *C. botulinum* spores, and residence near **activities that disturb the soil such as construction or agricultural cultivation may enhance exposure**. Foodborne cases can result from ingestion of **wild honey** or home canned foods contaminated with *C. botulinum* spores.

Young age and the absence of competitive bowel flora are factors that predispose to vulnerability. Colostrum in breast milk offers some protection, but breast fed infants may become susceptible during the transition to formula or solid foods.

The **clinical features** result from progressive neuromuscular blockade and range from mild to severe. Muscles innervated by the cranial nerves are affected first, followed by those of the trunk, extremities, and diaphragm. **Infants typically present with constipation and poor feeding. This presentation is followed by progressive hypotonia, and weakness.** Loss of deep tendon reflexes appears to occur more commonly in type B infection. Cranial nerve dysfunction is manifested by **decreased gag and suck**, diminished range of eye movement, pupillary paralysis, and **ptosis**. Autonomic signs include decreased tearing and salivation, fluctuating heart rate and blood pressure, and flushed skin. Infant botulism may present with or progress to life-threatening respiratory failure, and serious complications may develop during the course. **In a clinical trial, most infants required intensive care and about half required mechanical ventilation.** In atypical cases, infants may present with catastrophic collapse or rapid deterioration following brief periods of poor feeding but without the typical initial complaints of constipation, ptosis, or facial weakness.

About the Communicable Disease Control Program

The Communicable Disease Control Program is available to help meet the reporting needs and answer the questions of San Mateo County providers. To report a disease or outbreak, please call 650-573-2346 Monday through Friday, 8:00 am to 5:00 pm, or fax a Confidential Morbidity Report (CMR) to 650-573-2919.

You may download an electronic copy of the CMR at <http://www.smchealth.org/communicablediseasereporting>. Web-based reporting via CalREDIE is also available. Please contact us if you would like to know more about, and sign up for, web-based reporting. Non-urgent questions and/or general enquiries may be directed to SMCCDControl@smcgov.org.