



Communicable Disease (CD) Quarterly Report

San Francisco Department of Public Health

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Disease Reporting: 415-554-2830 (phone); 415-554-2848 (fax); <http://www.sfgdcp.org>

Tomás Aragón, MD, DrPH, Health Officer

Cora Hoover, MD, MPH, Director, Communicable Disease Control and Prevention

The **Communicable Disease Control Unit** receives and responds to reports of communicable diseases. For urgent reports during business hours, please call (415) 554-2830. For urgent or emergent reports after hours, please call (415) 554-2830 and follow instructions to page the on-call physician. For non-urgent reports, please fax a Confidential Morbidity Report (CMR) to (415) 554-2848.

Please see our website for more information: <http://www.sfgdcp.org>

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Table 1: Number of Select Reported Communicable Disease Cases

	2017 1st Qtr	2016 1st Qtr
Botulism	0	0
Invasive Meningococcal Disease	0	1
Meningitis— Bacterial [#]	2	0
Meningitis— Viral	2	2
Rabies, animal ^{***}	2	1
Rabies PEP recommendation	5	7
Zika	6	3

Table 2: Number of Select Reported Gastrointestinal Disease Cases

	2017 1st Qtr	2016 1st Qtr
Campylobacteriosis	115	115
Giardiasis	67	56
Salmonellosis [*]	29	30
Shiga toxin-producing <i>E. coli</i> ⁺	11	5
Shigellosis [*]	37	37
Vibriosis (Non-cholera)	2	1

Table 3: Number of Select Reported Vaccine Preventable Disease Cases

	2017 1st Qtr	2016 1st Qtr
Hepatitis A	5	0
Hepatitis B, Acute	1	1
Influenza Death (0 - 64 yrs)	1	0
Measles	0	0
Pertussis [*]	4	2
Pertussis [*] (< 6 mos of age)	0	0

Table 4: Number of Select Reported Outbreaks

	2017 1st Qtr	2016 1st Qtr
Gastrointestinal	10	6
Respiratory	14	7
Confirmed Influenza	13	5

Excludes Meningococcal Meningitis

** Includes confirmed cases only

^ Only detected in bats; no other animals

* Includes confirmed, probable, & suspect cases

+ Includes Shiga toxin in feces & *E. coli* O157

Pertussis: Vaccine-Preventable but Still a Concern

Pertussis is a vaccine-preventable disease which nonetheless occurs with frequency in the United States, California, and San Francisco. Despite high uptake of routine vaccination during childhood, there have been increases in pertussis cases and outbreaks in recent years. These increases may be in part due to waning immunity in immunized individuals. The use of acellular pertussis vaccine (which was substituted for whole-cell vaccine in the 1990s) may provoke a less durable immune response.

Pertussis, also known as whooping cough, is a highly contagious bacterial infection caused by the aerobic gram-negative rod *Bordetella pertussis*. Pertussis immunization involves a four-dose primary series of DTaP vaccine beginning in infancy, with a fifth dose given before starting kindergarten, and an additional booster dose at age 11-12 years. Adults aged ≥19 years should receive a single dose of Tdap. Given that infants are at highest risk of hospitalization and death from pertussis, pregnant women should receive Tdap during each pregnancy, in weeks 27-36, in order to maximize the maternal antibody response and passive transfer of antibodies to the newborn.

Pertussis incidence peaks every 3-5 years. California had an epidemic of pertussis in 2014, which involved 456 hospitalizations and three deaths. Since 2014, cases have declined, but given the cyclical nature of pertussis, another epidemic is likely to occur in the next several years.

The incubation period of pertussis is typically between 7-10 days. The first stage of the infection involves non-specific catarrhal symptoms. The second (paroxysmal) stage involves cough paroxysms that end with a high-pitched “whoop.” During attacks, patients can become cyanotic. Infants have paroxysms of coughing but may not demonstrate the characteristic whoop due to decreased strength; they may have apneic spells. Immunized individuals may be asymptomatic or have milder disease, and the characteristic inspiratory whoop is usually not present. Young infants are the most likely to suffer complications and death due to pertussis. Secondary bacterial pneumonia is the cause of most pertussis-related deaths.

While culture is considered the gold standard for laboratory testing, *B. pertussis* is a fastidious organism that is challenging to culture. PCR from posterior nasopharyngeal specimens has high sensitivity if obtained within 3-4 weeks of cough onset. Serologic testing is not recommended for the workup of pertussis. Treatment for pertussis is mainly supportive, but antibiotics can decrease transmission and potentially modify the course of illness if started early. A macrolide, such as azithromycin, is the preferred treatment. Secondary attack rates are 80% among susceptible household contacts, and thus close contacts should receive antibiotic postexposure prophylaxis regardless of age or immunization status. Priority should be given to “high-risk” close contacts such as infants, pregnant women, and their household members.

Resources:

CDC. Epidemiology and Prevention of Vaccine-Preventable Diseases. Hamborsky J, Kroger A, Wolfe S, eds. 13th ed. Washington D.C. Public Health Foundation, 2015.

CDC. Pertussis Epidemic – California, 2014. MMWR. 2014;63(48):1129-1132.

CDPH, Immunization Branch. Pertussis Report May 11, 2017. <https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/Immunization/Pertussis%20report%205-11-2017.pdf> Accessed July 31, 2017.

Notes: Data includes San Francisco cases and outbreaks through March 31st, 2017, by date of report. Unless otherwise noted, confirmed and probable cases and confirmed and suspect outbreaks are included. For outbreak definitions, please see the most recent Annual Report of Communicable Diseases in San Francisco, available at www.sfgdcp.org/publications.html. Numbers may change due to updates to case status based on subsequent information received and/or delays in reporting.

Authors: Cora Hoover, Yanyuan Liu, Melissa Ongpin, & Eric Tang (guest author)