

Key Findings and Public Health Messages

- The California Department of Public Health (CDPH) received reports of 5 cases of cholera with estimated onset dates from 2001 through 2008.
- Cholera stayed constant at 1 case per year during surveillance years 2003 to 2007.
- The median age among the cases was 45 years (range: 27 to 55 years).
- Three (60 percent) of the cholera cases were Asian, Pacific Islanders (60 percent). The ratio of male to female cases was 0.3:1.0.
- All of the cases had traveled outside of the U.S. and their illness onsets were within 2 days from their return. The majority of them (80 percent) reportedly did not have any education in cholera prevention before travel.
- When traveling to areas with epidemic cholera, following simple precautions such as drinking boiled or bottled water and eating thoroughly cooked foods may provide the best opportunities for prevention.

Background

Vibrio cholerae is the causative agent of cholera, a bacterial enteric disease. After an incubation period of a few hours to 5 days, cholera is characterized by sudden onset, profuse watery diarrhea and vomiting. Cholera has been rare in industrialized countries with modern sewage and water treatment systems, but it is still common in the Indian subcontinent and sub-Saharan Africa. The infection is often mild and with proper and timely rehydration the disease case fatality rate is less than 1 percent. Severe disease, however, occurs in

about 1 in 20 infected persons and in untreated cases rapid dehydration, shock, and death can occur. The fatality rate may exceed 50 percent in severe dehydrated cases.

The cornerstone of cholera treatment is timely and adequate rehydration and replacement of electrolytes. The United States (US) travelers to areas with epidemic cholera may become exposed to cholera bacteria from ingesting contaminated foods or drinks. Contaminated seafood brought into the U.S. has previously been a source of cholera cases.

We describe here the epidemiology of cholera in California from 2001 through 2008. Data for 2008 are provisional and may differ from data in future publications. For a complete discussion of the definitions, methods, and limitations associated with this report, please refer to Technical Notes¹. Because of the small numbers of reported cases, incidence rates were not calculated.

California reporting requirements and surveillance case definition

California Code of Regulations, Title 17, requires health care providers to report suspected cases of cholera to their local health department immediately by telephone. Cholera is not included in state regulations requiring notification by laboratories to local health officials. Local health officers are required by regulation to report to CDPH cases of cholera. CDPH officially counted cases that satisfied the Centers for Disease Control and Prevention (CDC) surveillance case definition. During the surveillance period, CDC defined a confirmed case as one with illness characterized by diarrhea and/or vomiting and isolation of toxigenic (i.e., cholera toxin-producing) *Vibrio cholerae* O1 or O139 from stool or vomitus, or serologic evidence of recent infection as laboratory criteria.

Epidemiology of cholera in California

The California Department of Public Health (CDPH) received reports of 5 cases of cholera with estimated onset dates from 2001 through 2008. These cases were reported in years 2003 through 2007. (Figure 1)

The median age among cases was 45 years (range: 27 to 55 years). Three (60 percent) of the cholera cases were Asian, Pacific Islanders and 4 (80 percent) were females.

The predominant reported illness symptom among the cases was diarrhea. Abdominal cramps, fever, dehydration and muscle pain were among some of the other symptoms reported. *Vibrio cholerae* O1 was the species isolated from the stool of all of the cases.

Two of the cases were reported by San Francisco County and 1 each was reported by the Alameda, Contra Costa, and Orange Counties. All of the cases had traveled outside of the U.S. and their illness onsets were within 2 days from their return. The majority of them (80 percent) reportedly did not have any education in cholera prevention measures before travel.

Comment

From 2001 through 2008, 5 cases of cholera were reported in California. All of these cases had traveled outside of the U.S. where they probably were exposed to cholera bacteria. When traveling to areas with epidemic cholera following simple precautions such as drinking boiled or bottled water and eating thoroughly cooked foods may provide the best opportunities for prevention.

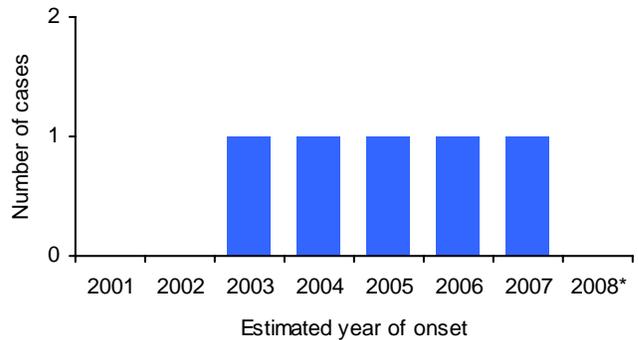
References and resources

¹Epidemiologic Summaries of Selected General Communicable Diseases in California, 2001-2008: Technical Notes <http://www.cdph.ca.gov/data/statistics/Documents/technicalnotes-episummary-aug2409.pdf>

Last updated 11/02/2009

Prepared by Farzaneh Tabnak, MS, PhD, Kate Cummings, MPH, and Duc Vugia, MD, MPH, Infectious Diseases Branch

Figure 1. California cholera case counts



Notes for Figure 1

*2008 data are provisional