

Successful production of epidemiologic summaries of 24 infectious diseases under surveillance in California from 2013-2019 for use by local health departments and the public



CONTRIBUTOR: *Vi Peralta, Epidemiologist, California Department of Public Health*

CATEGORY: **Epidemiology and Laboratory Capacity (ELC)**

CATEGORY: **Partnership and Innovation**

Understanding the importance of informing local health departments, media, and the public about disease trends in the state, the California Department of Public Health built comprehensive epidemiologic summaries and dashboards. These detail what each disease is, how people got infected, in which counties cases were reported, which age groups were affected, and how to prevent or decrease the risk for these infectious diseases.

The “What”

The California Department of Public Health (CDPH) Infectious Diseases Branch (IDB) of the Division of Communicable Disease Control oversees surveillance of over 50 infectious diseases and conditions that are reportable in California. Periodic epidemiologic summaries of several of these diseases are important to inform local health departments and the public of the recent annual number of cases and trends of each disease in California, as well as highlighting populations at risk and potential prevention measures.

IDB aims to raise awareness of these infectious diseases through various venues; summarizing and posting these epidemiologic summaries is part of IDB’s comprehensive approach to promote and improve public

health in California. However, analysis of these disease trends and summarizing in a language appropriate for both public health partners and the public involves a tremendous amount of effort and coordination of IDB surveillance staff and subject matter expert (SME) time. With several IDB staff redirected to the COVID-19 response during 2020-2022, completion of the IDB epidemiologic summaries would be extremely challenging.

Each epidemiologic summary is a comprehensive report on an infectious disease of public health concern in California. Each summary consisted of the following: 1) thorough analyses of surveillance data and graphing of results by research scientists; 2) interpretation of the results and provision of context by a SME; 3) pulling all components together with a synopsis of key findings in plain language on the front page. Key IDB staff, including multiple ELC-funded epidemiologists, planned, prioritized and executed the project.

Since late 2020, these key IDB staff have conferenced online regularly to prioritize and track the progress of these epidemiologic summaries. An online sharing and processing approach was adopted to move the analyses and results of surveillance data by research scientists to the SMEs who then reviewed and interpreted the results, provided context by adding background and discussion, and added recommended prevention measures particular to each disease.



More stories are available at stories.cste.org

SUBMITTED JUNE 2023

A health educator then reviewed each summary and drafted key findings onto a single front page using plain language for the public. Each final epidemiologic summary was reviewed by more than one manager for coherence, inclusion of appropriate prevention or risk reduction recommendations, and relevance to public health in California. This approach allowed flexibility as staff were largely working remotely, and most involved in various capacities with the COVID-19 pandemic response. ELC funding allowed IDB to maintain a team of epidemiologists with the capacity and experience necessary to effectively collaborate and complete this project despite the constraints of the pandemic response.



The “So What”

As of March 13, 2023, 24 epidemiologic summaries, including for salmonellosis, Shiga toxin-producing *E. coli* infections, listeriosis, campylobacteriosis, vibriosis (non-cholera), shigellosis, legionellosis, coccidioidomycosis, dengue, tularemia, and zika have been posted to the IDB webpage

(<https://www.cdph.ca.gov/Programs/CID/DCDC/Page/EpiSummariesofCDsCA.aspx>); the summaries are also linked to a Tableau dashboard for better visualization of the epidemiologic data ([2013-2019 Epidemiologic Summaries Data Dashboard \(ca.gov\)](#)).

These summaries are an important informational resource for all local health departments, news media, and the public who may want to know what each disease is, how people got infected, in which counties cases were reported, which age groups were affected, and how to prevent or decrease the risk for these infectious diseases.

The “Now What”

This project demonstrates IDB’s commitment to improving the use and review of surveillance data to assess the public health status of the community, identify opportunities for prevention/intervention, and define public health priorities. These epidemiologic summaries provide a valuable resource for local health departments to respond to local media and the public inquiries. These summaries have also highlighted increased risk of illness among some populations, which allows for local and state public health to focus on prevention measures and raising awareness among these populations to prevent illness.

For example, brucellosis is an uncommon but debilitating disease that affects more Hispanics/Latinos in California than persons of other race/ethnicities. This is because brucellosis in California is primarily a foodborne disease caused

by consuming unpasteurized dairy products that were often imported from Mexico.

The epidemiologic summary recommends that increased public education on the risk of brucellosis should target Hispanic/Mexican-American communities in a language-appropriate and culturally respectful manner (<https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/BruceellosisEpiSummary2013-2019.pdf>).

ELC funding allowed IDB to maintain a team of flexible epidemiologists with the capacity and experience necessary to effectively collaborate and complete this project despite the constraints of the pandemic response. Continued ELC funding will improve their ability to conduct more routine epidemiologic summaries for diseases, enhance skills to effectively interpret and share the epidemiological data to communicate risk to protect the health of the public, and facilitate communications using appropriate technologies.

Key contributors to this project include Duc Vugia, Seema Jain, Yanyi Djamba, Akiko Kimura, Vicki Kramer, Curtis Fritz, Alexander Yu, Amanda Kamali, Allyx Nicolli, Alyssa Nguyen, Anne Kjemtrup, Charsey Porse, Gail Cooksey, Hillary Rosen, Inderbir Sohi, Jeffrey Higa, Katherine Lamba, Kirsten Knutson, Margaret Kerrigan, Sarah Rutschmann, and Selam Tede, all with the California Department of Public Health.