

Epidemiology of Human Plague in the United States, 1900–2012

[Announcer] This program is presented by the Centers for Disease Control and Prevention.

[Sarah Gregory] The Epidemiology of Human Plague in the United States, 1900–2012 summarizes the characteristics of 1,006 cases of human plague occurring in the United States over 113 years, beginning with the first documented case in 1900. Three distinct eras can be identified on the basis of the frequency, nature, and geographic distribution of cases. During 1900 to 1925, outbreaks were common but were restricted to populous port cities. During 1926 to 1964, the geographic range of disease expanded rapidly, while the total number of reported cases fell. During 1965 to 2012, sporadic cases occurred annually, primarily in the rural Southwest. Clinical and demographic features of human illness have shifted over time as the disease has moved from crowded cities to the rural West. These shifts reflect changes in the population at risk, the advent of antibiotics, and improved detection of more clinically indistinct forms of infection. Overall, the emergence of human plague in the United States parallels the introduction of exotic plants and animals.

Dr. Kugeler has authored an article about the current risks of plague in the western United States. She's with us today to talk about it.

Dr. Kugeler, why was it important to write this synopsis?

[Kiersten Kugeler] This report summarizes information from human plague cases that have occurred in the U.S. since the disease first arrived in San Francisco by ship in 1900. Although we had collected volumes of information on plague cases since that time, it was all in bits and pieces. So, we needed to put all the pieces together in order to really tell the story of plague in the U.S.

The picture that finally emerged was that of a disease that has changed quite a bit over the past century. During the early 1900s, outbreaks erupted in crowded coastal cities, and minority populations were disproportionately affected. Eventually, the disease disappeared from these crowded cities, but rodents dispersed the disease throughout the western United States. Today, we see a different picture of who's at risk of plague than we did in 1900. The good news is that while plague is still with us, a lot has changed since 1900—specifically, the development of lab tests for quickly diagnosing plague and most importantly, antibiotics for treating plague.

[Sarah Gregory] What would you like people to know about plague in the United States?

[Kiersten Kugeler] Plague fascinates people. And many people don't know that the plague isn't just the dreaded Black Death of medieval Europe, but it has a role in 20th century American history and that—to this day—people get plague each year in the United States.

And so I'd say, "Be aware, but don't panic." Because the bacteria that causes plague lives in rodents, such as rats, mice, voles, and prairie dogs, throughout the western U.S., it will never go

away entirely. People who live in or travel to the western U.S. should be aware of what they can do to minimize their risk of getting the disease—most importantly, taking measures to prevent flea-bites and avoiding contact with sick or dead animals. We also encourage doctors to become familiar with the signs and symptoms of plague. It can be a very serious illness but is fully treatable when caught early enough.

[Sarah Gregory] I'm Sarah Gregory, for *Emerging Infectious Diseases*. You can read the entire January 2015 article, Epidemiology of Human Plague in the United States, 1900 to 2012, online at cdc.gov/eid.

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