



# A TALE OF TWO CITIES

## What history teaches us about disease control



## THE SPANISH FLU

*The Spanish Flu was a strain of influenza that ravaged the world during 1918-1919. It is estimated 500 million were infected world wide - about one third of the world's population at time. About 20 million to 50 million of those infected died. Methods citites used to control to the spread of the disease teaches us that early, sustained, and layered approaches nonpharmeceutical approaches are the best way to prevent a disease*

During the first hump of the Spanish Flu in San Francisco, citizens were required to wear masks in public. If a citizen was caught without a mask, they were fined \$5 (\$93.79 today). In addition, citizens practiced physical distancing and the city shut down a good portion of public facilities. In time, San Francisco opened up the city but kept the mask wearing in place. Citizens swarmed the town (wearing masks) after being pent up. They went about their normal lives prior to the pandemic, all while wearing masks. Eventually even the mask wearing rule of lifted. Despite wearing masks, San Francisco suffered a second hump of the Spanish Flu.

In contrast, Los Angeles went into semi-quarantine a week before San Francisco and stayed shuttered past San Francisco opening up again. Los Angeles did not focus on mask wearing, relying more on physical distancing and shutting down the city.

A study was conducted in 2007 reviewing the "excess" death rates from the second wave of the Spanish Flu in 43 U.S. cities. Both San Francisco and Los Angeles were included in the study. There is a projected number of deaths from the flu each year. "Excess" death rates refer to the amount of deaths the Spanish Flu contributed resulting in higher than what is normally expected. Los Angeles had an excess death rate of 493.6 per 100,000 people while San Francisco had an excess death rate of 672.7.



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What do San Francisco and Los Angeles methods of controlling the Spanish Flu tell us? Comparing the two cities reveals wearing a mask is not enough to prevent the spread of a virus, which is why physical distancing is important in curbing the spread. But Los Angeles still suffered a lot of deaths the second wave. These two cities tell us that wearing a face mask and physical distancing are not enough.

As mentioned, the study reviewed 43 U.S. cities. Excess death rates among these cities ranged from 210.5 per 100,000 to 806.8 per 100,000. The cities with the lowest rates of excess deaths shut cities down sooner, sustained the shut down past when other cities opened back up, and layered nonpharmaceutical approaches (physical distancing, hand washing, mask wearing).

The study reveals the most successful way to curb the spread of disease is early, sustained, and layered nonpharmaceutical approaches.