



COVID-19 and Other Pandemics: A COMPARISON

Don Nardo



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MAJOR PANDEMICS IN HISTORY

Name	Time period	Death toll
Antonine Plague	165–180	5 million
Plague of Justinian	541–542	30–50 million
Japanese Smallpox Epidemic	735–737	1 million
Black Death	1347–1351	200 million
New World Smallpox Outbreak	1520–	56 million
Great Plague of London	1665	100,000
Italian Plague	1629–1631	1 million
Cholera Pandemics 1–6	1817–1923	1 million+
Third Plague	1885	12 million (China / India)
Yellow Fever	Late 1800s	100,000–150,000 (US)
Russian Flu	1889–1890	1 million
Spanish Flu	1918–1919	40–50 million
Asian Flu	1957–1958	1.1 million
Hong Kong Flu	1968–1970	1 million
HIV/AIDS	1981–present	25–35 million
Swine Flu	2009–2010	200,000
SARS	2002–2003	770
Ebola	2014–2016	11,000
MERS	2015–present	850
COVID-19	2019–present	*1.4 million+

Johns Hopkins University estimate as of November 30, 2020*

Note: Many of the death toll numbers are best estimates based on available research.

Based on Nicholas LePan, "Visualizing the History of Pandemics,"

Visual Capitalist, March 14, 2020. www.visualcapitalist.com.

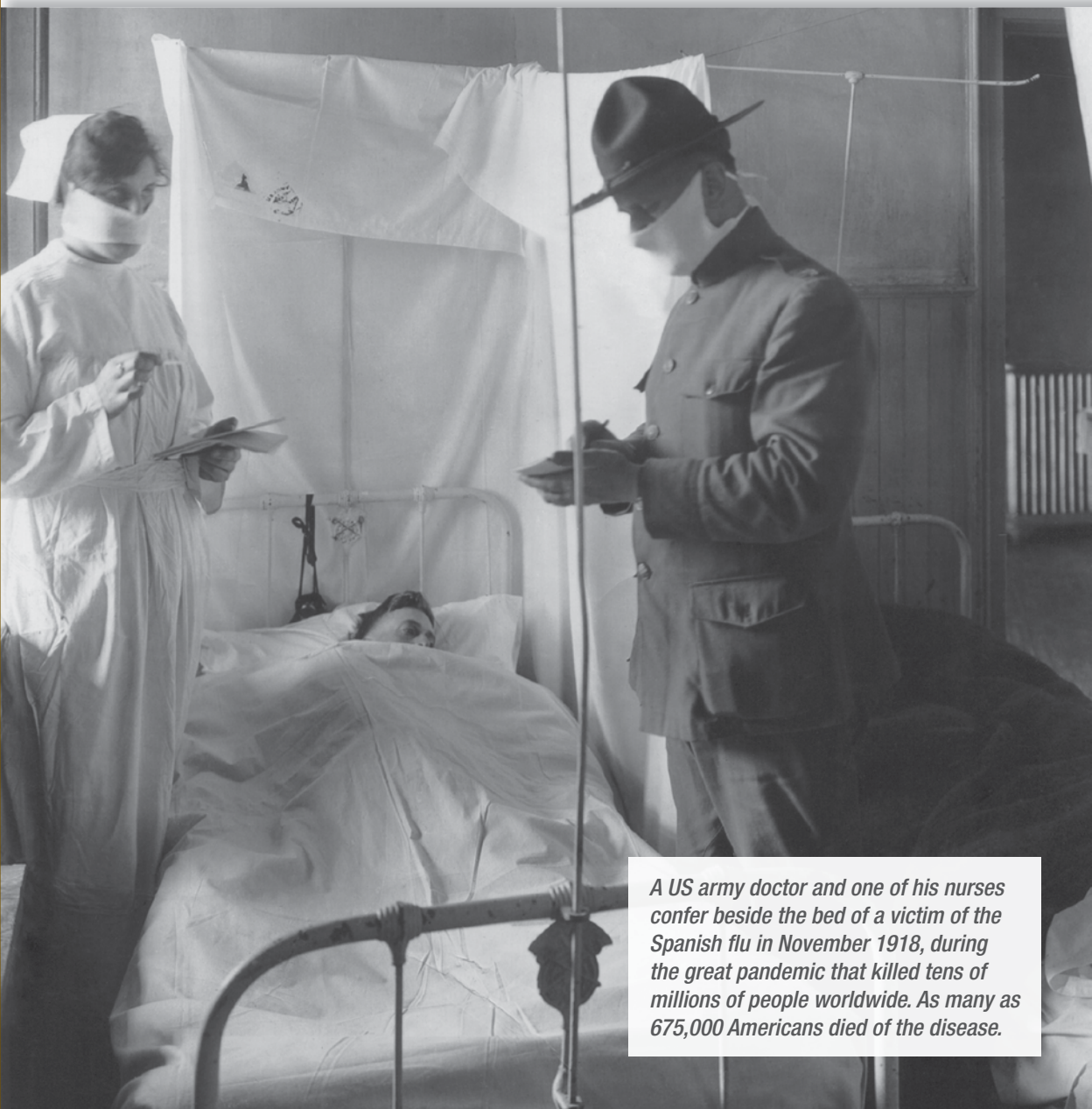
Influenza Sweeps the World

The most destructive pandemic experienced in the United States during the twentieth century—that of the so-called Spanish flu—appeared in 1918, seemingly out of nowhere. Some idea of how serious the crisis was is captured in a letter to a friend penned in October of that year by a Native American nurse. She toiled nearly day and night on a Kansas Indian reservation. There, at the height of World War I, the government had set up a makeshift US Army camp. “As many as 90 people die every day here with the ‘Flu,’” she wrote. “Orderlies carried the dead soldiers out on stretchers at the rate of two every three hours.” She added with a touch of despair, “It is such a horrible thing, it is hard to believe, and yet such things happen [here] almost every day.”³⁶

Meanwhile, in the US capital, Washington, DC, local businessperson Bill Sardo’s experiences and feelings mirrored those of most average American civilians. “From the moment I woke up in the morning to when I went to bed at night,” he later recalled, “I felt a constant sense of fear. We wore gauze masks. We were afraid to kiss each other, to eat with each other, to have contact of any kind.”³⁷

The Spanish flu, a strain within a group of viruses collectively called influenza, struck in a series of broad waves. The first wave, which emerged in the spring of

1918, was fairly mild, but the second wave, which struck globally in August, was far more lethal. At first, tens of thousands of people died, and eventually the toll rose into the millions. The third wave came in early 1919 and claimed still more victims. Worldwide the flu killed at least 20 million souls, and some experts put the total closer to 50 million. (In comparison, roughly 10 million people died fighting in World War I.) In the United States the pandemic's victims numbered somewhere between 650,000 and 675,000.



A US army doctor and one of his nurses confer beside the bed of a victim of the Spanish flu in November 1918, during the great pandemic that killed tens of millions of people worldwide. As many as 675,000 Americans died of the disease.

Symptoms: From Mild to Severe

Not only did the outbreak's waves differ in strength, at times they featured somewhat different symptoms and levels of severity. Most of those who contracted the illness during the first wave experienced what today are viewed as typical flu symptoms—fever, chills, and fatigue. Of these victims, the vast majority recovered in several days and thereafter displayed immunity to the virus.

By contrast, during the flu's more deadly second wave, only a few people experienced mild symptoms. Far more numerous were those who had, in addition to fever and chills, more severe and painful reactions. Many were horrified to see their skin turn blue, and it was common for their lungs to fill with fluid, causing

them to suffocate. For these individuals, death came speedily—in one to three days.

Some unfortunates suffered from symptoms that were both gruesome and frightening. One hospital worker later recalled witnessing victims' bodies inexplicably filling with

air. In such cases, he said, "air was trapped beneath their skin. As we rolled the dead up in sheets, their bodies crackled—an awful cracking noise which sounded like Rice Crispies when you pour milk over them."³⁸

By the NUMBERS

Health experts estimate that the Spanish flu pandemic temporarily lowered life expectancy in the United States by twelve years.

Communities Shuttered Out of Fear

Whatever symptoms the disease presented, one reality remained unchanged; namely, all attempts to halt or cure it proved futile. This is not surprising. No vaccine to protect people from the influenza virus had yet been found. Nor were there any antiviral drugs yet to help treat the contagion.

That left doctors and other health experts with only one viable approach—to do whatever they could to reduce the spread of the disease. Among those tactics were many of the ones employed

The Mask Slackers of 1918

During the 2020 COVID-19 pandemic, wearing face masks for safety reasons became controversial in some US cities and states. This was not the first time that people balked at wearing masks during a pandemic. An almost identical objection to mask wearing occurred during the devastating Spanish flu outbreak of 1918–1919. At the time, people who objected to donning masks derisively called them “dirt traps” or “muzzles.” Similar to anti-mask sentiments in 2020, in 1918 those cloth shields stirred up political divisions. In the face of millions dying of Spanish flu, health officials urged everyone to wear a mask to help keep the virus from spreading—and most Americans complied.

But a vocal minority viewed mask wearing as a nefarious attempt to control the citizenry. Supporters of this view denounced mandatory mask-wearing regulations imposed in Seattle, Denver, San Francisco, and other cities. They also formed protest organizations, the biggest of which was the Anti-Mask League. Its members defied such rules and even refused to pay the five- and ten-dollar fines for violations; as a result, about one thousand of them were arrested in San Francisco in November 1918. Their jail times varied from eight hours to ten days. In meting out such sentences, one judge lectured the anti-maskers, whom most Americans called “slackers.” Why did they not understand, he asked, that the masks were not meant to restrict people’s freedom but rather to help keep them from getting sick?

in the more recent COVID-19 pandemic. One was quarantining, or isolating, people who were sick from the virus and those who had been exposed to infected people. Another was practicing good personal hygiene, including washing one’s hands frequently and scrubbing often-touched surfaces with disinfectants. Health officials also urged people to limit the size of public gatherings, to stay several feet away from people one met in public (today called social distancing), and to wear a cloth mask over one’s mouth and nose when in public.



To Prevent Influenza!

Do not take any person's breath.
 Keep the mouth and teeth clean.
 Avoid those that cough and sneeze.
 Don't visit poorly ventilated places.
 Keep warm, get fresh air and sunshine.
 Don't use common drinking cups, towels, etc.
 Cover your mouth when you cough and sneeze.
 Avoid Worry, Fear and Fatigue.
 Stay at home if you have a cold.
 Walk to your work or office.
 In sick rooms wear a gauze mask like in illustration.

On October 18, 1918, the Illustrated Current News in New Haven, Connecticut, published a list of steps to take to avoid catching the Spanish flu, with a photograph of a Red Cross nurse wearing a mask. The list includes getting as much fresh air and sunshine as possible and wearing a protective mask.

In addition, officials in many communities shut down most public places, including schools, libraries, churches, and theaters. Sardo later recalled that most people “had no school life, no church life, no community life. Fear tore people apart.”³⁹ With schools closed, many parents turned to homeschooling their children, and the shuttered libraries stopped lending books. Meanwhile, numerous cities banned spitting in public—a common practice at the time. Related to that rule, members of New York City chapters of the Boys Scouts roamed the streets, and when they saw someone spit, they handed that person a card bearing the message “You are in violation of the Sanitary Code.”⁴⁰

From Public Bans to Super-Spreaders

In fact, in many US cities worry about contracting the virus was so prevalent that most people either avoided or altered deeply

ingrained social and religious practices. In Chicago in late 1918, for example, local officials proclaimed:

There shall be no public funerals held in Chicago over any body dead from any disease whatsoever. No wakes or public gatherings of any kind shall be held in connection with these bodies. No one except adult relatives and friends, not to exceed ten persons in addition to the undertaker, undertaker's assistants, minister, and necessary drivers shall be permitted to attend any funeral.⁴¹

The effectiveness of curtailing funerals, banning large-scale public meetings, and wearing masks naturally depended on the willingness of most people to follow such rules. Many people chose not to follow them. A number of mayors and other local authorities viewed the pandemic as overhyped by the media and not as dangerous as it actually was. As a result, these individuals made decisions that proved tragic.

Philadelphia's response to the crisis was a sad case in point. One of the city's directors of public health, Wilmer Krusen, claimed

that the mounting death toll was not caused by the Spanish flu but rather a different, less deadly form of flu. Therefore, he said, theaters and other public venues could remain open and a massive parade scheduled for September 28, 1918, to raise money for the war effort could be held as planned. Tens of thousands of people either marched in or watched the parade up close. Today this event would be called a "super-spreader" event.

Within two days of the parade, thousands of Philadelphians came down with Spanish flu, and eight days after that at least one thousand of them were dead. Over time, an estimated fifteen thousand Philadelphians who were involved in the parade or attended theaters and bars during the pandemic died. In contrast,

By the **NUMBERS**

The tiny American town of Brevig Mission, Alaska, lost 72 of its 80 residents to the Spanish flu.

Source Notes

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Classical historian, amateur astronomer, and award-winning author Don Nardo has written numerous volumes about medical and scientific topics, including *Technology and Medicine*; *Destined for Space* (winner of the Eugene M. Emme Award for best astronomical literature); *Tycho Brahe* (winner of the National Science Teacher's Association's best book of the year); *Planet Under Siege: Climate Change*; *Deadliest Dinosaurs*; and *The History of Science*. Nardo, who also composes and arranges orchestral music, lives with his wife, Christine, in Massachusetts.