



What Can We Learn From the 1918 Pandemic?

Analysis by [Tessa Lena](#)

STORY AT-A-GLANCE

- › It is estimated that the Spanish flu pandemic killed 20 to 50 million people worldwide
- › In the words of the CDC, "CDC researchers and their colleagues successfully reconstructed the influenza virus that caused the 1918-19 flu pandemic, which killed as many as 50 million people worldwide
- › Politicians in some cities were enforcing masks in the name of patriotism and public good – and the police were jailing dissenters – the scientists debated the value of masks for preventing the flu

This article is about the 1918 flu and the mythology that surrounds it. It is about mask mandates, aspirin overdoses as a possible cause of death, and fascinating historical parallels.

When it comes to history, we are dependent on the "expert opinion." History is usually written by the winners and shaped in real time to match the narrative that helps the winners sell their current point of view – and that is the reason why it is so fascinating to discover facts and hypotheses that go against the grain, such as the hypothesis about aspirin poisoning killing potentially a large number of people during the 1918 pandemic.

The History of the 1918 Pandemic

The **influenza pandemic of 1918 and 1919** is considered to be "the most deadly flu outbreak in history." It is estimated that the Spanish flu pandemic killed 20 to 50 million people worldwide, including around 675,000 Americans (that's according to the **CDC**; historical data is limited). The Census Bureau estimates that in 1918, the US population was just above 103 million people.

According to **history.com**, "The first recorded infection was in a U.S. Army private stationed at Fort Riley, Kansas on March 4, 1918. Although the United States and the other nations at war initially suppressed news of the flu ... there was a sense that following these new health precautions was patriotic."

In America, local authorities rolled out various measures designed to stop the spread of the flu. The measures varied region by region and included "closing schools and places of public amusement, enforcing no-spitting ordinances, encouraging people to use handkerchiefs or disposable tissues and requiring people to wear masks in public." In a number of American cities, mask-wearing ordinances were the centerpiece of the pandemic response.

Masks During the 1918 Pandemic

"As one Red Cross PSA put it, 'the man or woman or child who will not wear a mask now is a dangerous slacker.' This sense of wartime duty – and the fear of being seen as a 'slacker' – may have motivated those who complied with mask orders in cities like San Francisco, Seattle, Denver and Phoenix.

Yet even though compliance was high, some complained that the masks were uncomfortable, ineffective or bad for business. Officials were caught in public without masks. And after the war ended, and there was no longer a sense that people should wear masks to keep the troops safe, some dissenters even formed an 'Anti-Mask League' in San Francisco."

During the 1918 pandemic, mask-wearing ordinances were mainly issued on the west

coast. Reportedly, most people complied at a rate of 4 out of 5 people. Public officials "framed anti-flu measures as a way to protect the troops from the deadly outbreak." At the time, masks were made of gauze, and some people wore "fashion" masks that were even more porous.

Some people poked holes in their masks for cigarettes. The authorities were pretty lax as far as what kind of mask people wore as long as there was something on their face. Those who broke the ordinances altogether were punished severely, at least this is what the reports are [saying](#) today.

"Cities that passed masking ordinances in the fall of 1918 struggled to enforce them among the small portion of people who rebelled. Common punishments were fines, prison sentences and having your name printed in the paper. In one [horrific incident](#) in San Francisco [described in the Atlantic article from March 19, 2020] a special officer for the board of health shot a man who refused to wear a mask as well as two bystanders."

"This was far different from the treatment San Francisco's leaders received when they didn't comply.

At a boxing match, a police photographer captured images of several supervisors, a congressman, a justice, a Navy rear-admiral, the city's health officer and even the mayor, all without masks. The health officer paid a \$5 fine and the mayor later paid a \$50 fine, but unlike other 'mask slackers' they received no prison time (not to mention no one shot at them)."

Symbolism of Wearing Masks

Sounds familiar? I find it interesting to compare the psychological methods used in 1918 to the psychological methods used in 2020 and on in the context of COVID.

According to [Influenza Archive](#), "the wearing of a mask immediately became of a symbol of wartime patriotism ... By drawing on the rhetoric and imagery of the war

effort and the heavy-handed patriotism that went along with it, city and state health officials hoped to inveigle if not outright bully residents into compliance."

"For city officials, the importance was not so much in the specifics of mask construction but rather in compliance with the letter of the ordinance. While the vast majority of San Franciscans followed the mask order, police arrested one hundred and ten people on October 27 alone for failure to either wear or keep their masks properly adjusted.

Each was charged with 'disturbing the peace,' and the majority given a \$5 fine, with the money to go to the Red Cross. Nine unfortunate souls arraigned before one particular judge were sentenced to short terms in the county jail. The next day, another group of fifty violators were arrested; five were sent to jail, and seven others given fines of \$10 a piece.

Arrests continued in the following days, with the majority receiving small fines and a few being sentenced to a few days in jail. As the city chief of police later told reporters, if too many residents were arrested and given jail terms for failure to wear their flu mask, he would quickly run out of space in his cells."

It is also interesting to look at how in 1918, like today, it was more about the formal presence of a piece of cloth on the face than it was about stopping the virus. "Many of the masks were constructed of dubious materials even more porous and ineffective than the standard surgical gauze most often used.

Health officials and various mask 'experts' touted the effectiveness of all sorts of materials... The San Francisco Chronicle described some city residents as wearing masks ranging from standard surgical gauze to creations resembling nosebags, from the Turkish-inspired muslin yashmak veil to flimsy chiffon coverings draped lazily across the mouth and nose.

Some wore 'fearsome looking machines like extended muzzles' on their faces as they

walked the streets and shopped in downtown stores." I wonder if any of them looked something like this?

Mask Science From Back in the Day

While politicians in some cities were enforcing porous masks in the name of patriotism and public good — and the police were jailing dissenters — the scientists debated the value of masks for preventing the flu. For example, [this study from back in the day](#) stated the following:

"The failure of the mask was a source of disappointment, for the first experiment in San Francisco was watched with interest with the expectation that if it proved feasible to enforce the regulation the desired result would be achieved.

The reverse proved true. The masks, contrary to expectation, were worn cheerfully and universally, and also contrary to expectation of what should follow under such circumstances, no effect on the epidemic curve was to be seen. Something was plainly wrong with our hypothesis."

experimental study of the efficacy of gauze face masks

All in all, the study came to the following conclusion:

- 1. Gauze masks exercise a certain amount of restraining influence on the number of bacteria-laden droplets possible of inhalation.*
- 2. This influence is modified by the number of layers and fineness of mesh of the gauze.*
- 3. When a sufficient degree of density in the mask is used to exercise a useful filtering influence, breathing is difficult and leakage takes place around the edge-of the mask.*

4. *This leakage around the edges of the mask and the forcible aspiration of droplet laden air through the mask is sufficient to make the possible reduction in dosage of infection not more than 50 per cent effective.*
5. *It remains for future controlled experiments in contagious disease hospitals to determine whether the wearing of masks of such texture as to be reasonably comfortable are effective in diminishing the incidence of infection.*
6. ***Masks have not been demonstrated to have a degree of efficiency that would warrant their compulsory application for the checking of epidemics. [emphasis mine]***

Aspirin Overdoses

In 2009, Karen M. Starko, an American epidemiologist, published an interesting [paper](#) titled, "Salicylates and Pandemic Influenza Mortality, 1918–1919 Pharmacology, Pathology, and Historic Evidence." Her paper received positive feedback in the media and was even written about in the [New York Times](#) in the same year she published the paper. A direct quote from the New York Times:

"What raised Dr. Starko's suspicions is that high doses of aspirin, amounts considered unsafe today, were commonly used to treat the illness, and the symptoms of aspirin overdose may have been difficult to distinguish from those of the flu, especially among those who died soon after they became ill.

Some doubts were raised even at the time. At least one contemporary pathologist working for the Public Health Service thought that the amount of lung damage seen during autopsies in early deaths was too little to attribute to viral pneumonia, and that the large amounts of bloody, watery liquid in the lungs must have had some other cause."

In the words of Dr. Starko,

"The hypothesis presented herein is that salicylate therapy for influenza during the 1918–1919 pandemic resulted in toxicity and pulmonary edema, which contributed to the incidence and severity of early ARDS-like lungs, subsequent bacterial infection, and overall mortality.

Pharmacokinetic data, which were unavailable in 1918, indicate that the aspirin regimens recommended for the 'Spanish influenza' predispose to severe pulmonary toxicity.

A confluence of events created a 'perfect storm' for widespread salicylate toxicity. The loss of Bayer's patent on aspirin in February 1917 allowed many manufacturers into the lucrative aspirin market.

Official recommendations for aspirin therapy at toxic doses were preceded by ignorance of the unusual nonlinear kinetics of salicylate (unknown until the 1960s), which predispose to accumulation and toxicity; tins and bottles that contained no warnings and few instructions; and fear of 'Spanish' influenza, an illness that had been spreading like wildfire."

Dr. Starko proposed four lines of evidence support the role of salicylate intoxication in 1918 influenza mortality: pharmacokinetics, mechanism of action, pathology, and the spate of official recommendations for toxic regimens of aspirin immediately before the October 1918 death spike.

Official recommendations for aspirin were issued on 13 September 1918 by the US Surgeon General, on 26 September 1918 by the US Navy, and on 5 October 1918 by [The Journal of the American Medical Association](#). Recommendations often suggested dose regimens that today are known to be unsafe.

"At the US Army camp with the highest mortality rate, doctors followed Osler's treatment recommendations, which included aspirin, ordering 100,000 tablets. Aspirin sales more than doubled between 1918 and 1920."

*"The number of deaths in the United States **increased steeply**, peaking first in*

the Navy in late September, then in the Army in early October, and finally in the general population in late October. Homeopaths, who thought aspirin was a poison, claimed few deaths. Others may have suspected that aspirin was responsible.

On 23 November, 1918, Horder wrote in The Lancet that, for 'intensely toxic cases...aspirin and all so-called febrifuge drugs must be rigidly excluded from the treatment' (p 695)."

According to Dr. Starko

"Just before the 1918 death spike, aspirin was recommended in regimens now known to be potentially toxic and to cause pulmonary edema and may therefore have contributed to overall pandemic mortality and several of its mysteries. Young adult mortality may be explained by willingness to use the new, recommended therapy and the presence of youth in regimented treatment settings (military).

The lower mortality of children may be a result of less aspirin use... The occurrence of Reye syndrome-like illness before the 1950s is debated and consistent with the fact that children's aspirin was not marketed until the late 1940s. Varying aspirin use may also contribute to the differences in mortality between cities and between military camps."

The entire paper by Dr. Starko is fascinating, and I recommend that you read it and see for yourself. Looking back, it is hard to say to which extent precisely aspirin overdose was to blame comparing to other factors, and what was more deadly – the epidemic in itself or the enthusiasm of the health officials – but the hypothesis definitely makes one question the very foundations of what we know as "true." Again.

"Invisible Rainbow"

There is also a hypothesis by Arthur Firstenberg, the author of "Invisible Rainbow," that needs to be mentioned. [Firstenberg](#) "traces the history of electricity from the early eighteenth century to the present, making a compelling case that many environmental problems, as well as the major diseases of industrialized civilization — heart disease, diabetes, and cancer — are related to electrical pollution."

That angle deserves a story of its own — and that's regardless of how anyone feels about the heated argument between germ theory and the terrain theory. Germs or terrain, it is by now known very well known that electromagnetic pollution has a major impact on human cellular function and can impact human health. On the grounds of impacting the human immune system alone, it is worth investigating in earnest.

Personally, I suspect that when the censorship of the topic of the impact of electromagnetic pollution on human health finally goes the way of Teflon and asbestos, it will help us a lot. Not that Teflon and asbestos have disappeared ... in fact, asbestos is [newly cool](#) in the context of fighting the "climate emergency," believe it or not. But at least one can talk about Teflon and asbestos without being called a conspiracy theorist!

Reconstruction of the 1918 Flu Virus

In the early 2000s, the 1918 influenza virus was [reconstructed](#). In the words of the CDC, "CDC researchers and their colleagues successfully reconstructed the influenza virus that caused the 1918-19 flu pandemic, which killed as many as 50 million people worldwide." What a great idea! No really, what a great idea!

Sarcasm aside, there is a gruesome and disgusting detail to the reconstruction process. In order to create a genomic sequence of what the scientists agreed to believe was the 1918 flu virus, the scientists resorted to excavating a grave in Alaskan permafrost and desecrating the body of an Inuit woman who was buried there. They also extracted samples from the bodies of two late U.S. service members, one in South Carolina, and the other one in the state of New York.

It seems like whenever modern mechanical curiosity and thirst for control take over, the respect for life and death just goes away. It's not like there was a looming threat over humanity that required urgent measures. There was no such threat. The researchers did it simply because they were curious and felt entitled to sticking their fingers where they didn't belong. And as long as our science lacks soul, we'll be their lab rats.

I will end with a rhetorical question: Are we walking in circles? Will we learn? We can only hope! It is quite fascinating how history happens, then repeats – and then we forget.

About the Author

To find more of Tessa Lena's work, be sure to check out her bio, [Tessa Fights Robots](#).