

# A Contagion's Tale

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As the meat grinder known as World War One, or The Great War, was winding down towards the end of hostilities in the fall of 1918, a different sort of meat grinder was gaining traction. The influenza pandemic of 1918, the Spanish Flu, would engulf the entire globe in a matter of months and hold the world's population in its grip for over a year.

The Great War began in 1914 with tremendous patriotism and enthusiasm across Europe. Young men eagerly volunteered for duty, elated with the guarantee of glory and adventure. Celebrations erupted. Champagne bottles popped like machine gun fire. There existed an irrational certainty that the conflict would be short lived, a certainty that would be bloodily disproved over the next four years. Enthusiasm turned into tortured weariness and despair as the war consumed the lives of sixteen million combatants and civilians.

The Spanish Flu, so named because Spain, neutral in the war, had a free press compared to that of combatant countries. Thinking that the public could not endure additional existential emotional burdens, the governments of Britain, France, and Germany censored the news of the influenza's scope. In Spain however, the flu's impact was openly reported, including the King of Spain's desperate battle against the disease. Consequently, it was assumed that Spain had been the origin of the disease.

The actual origin of the pandemic is not clear. One likely theory is that it may have been brought into the European theater of combat operations by 96,000 Chinese laborers who were imported by Britain to perform non-combat military duties. A strikingly similar outbreak of flu had been reported in northern China in the fall of 1917. With the close quarters of those involved in the war in Europe, the disease quickly and easily spread. From there the trains and ships of the time transported not only soldiers, but the flu as well.

The Spanish Flu was the deadliest viral outbreak of all time. Worldwide, it infected an estimated 500 million people, or twenty percent of the populace at a time when the world population was a little over two billion. The death toll is estimated at between 50 and 100 million people, indicating that the mortality rate of those afflicted approached 20%. By comparison, a normal seasonal flu has a mortality rate of 0.10%.

To get a clearer understanding of the global devastation caused by the pandemic, let us extrapolate those numbers into today's population. If a similarly terrible pandemic struck today, almost one and a half billion people worldwide would contract the disease. Between 150 and 300 million of those would die.

The virus could kill in a matter of days. Many of the deaths resulted from the frequent contraction of pneumonia by victims. The disease also killed directly with hemorrhaging

of mucosal tissues throughout the body. Unlike the garden variety of seasonal flu that finds the vast majority of its victims in the youngest and oldest segments of the population, this strain significantly affected the young and healthy. Men and women in their twenties and thirties died at rates similar to those of the elderly and the young. In Cincinnati, it is estimated that twenty and thirty year olds accounted for 64% of the deaths. The reason for this was unknown at the time, but researchers now believe this was the result of a Cytokine Storm, wherein the body's immune system reacts in an overly aggressive manner, causing damage to healthy tissue, mainly that of the lungs in this instance.

The impact was global. Remote Pacific Islands lost up to 22% of their population. India's death toll was 17 million. Indonesia lost over one and a half million. Britain lost 250,000. France had over 400,000 dead. The United States had a death toll of 675,000, approximately five times as many as had died in the war.

The first cases reported in the United States occurred in March of 1918 amongst soldiers in Kansas. The disease did not fully get under way in the United States until late August when large numbers of cases started popping up on the east coast. By early September, inland newspapers were reporting the east coast epidemics.

Because of the rapid spread of the flu, routine life came to a halt. Cities across the nation grappled with the closing of schools, churches, universities, movies, theaters, weddings, clubs, courts, businesses, restaurants and saloons. Normally bustling streets were empty. Factories struggled to remain open as absenteeism climbed. Some workers avoided the workplace out of fear, others because of illness, and others because they had died. Hospitals and funeral homes were overwhelmed. Various buildings served as makeshift morgues. In Chillicothe, Ohio, the Majestic Theater, now a temporary morgue, was described as having corpses "stacked like cordwood." Schoolhouses were converted into makeshift hospitals. Because there was an extreme lack of trained medical personnel, vast numbers of whom were working the battlefields of Europe, calls issued forth across the country for volunteers to fill the holes in the medical line of defense.

Those cities who implemented general closure orders early and resolutely fared the best. Some cities relented on their closure orders and generally had mortality rates double of those cities who maintained strict controls on their citizens.

Not being a discriminatory disease, the flu hit rural and remote areas with as much, if not more, impact as urban areas.

A particularly notable example of how devastating the disease could be occurred in rural Alaska in the village of Brevig Mission, located approximately 70 miles northwest of Nome along the Bering Strait. In 1918, Brevig Mission had a population of 80. In a period of five days, 72 of them died of the flu, leaving five adults and two children to dig a mass grave deep into the permafrost. Their loved ones, frozen in the ground, would not rest in peace forever.

Thirty-three years later in 1951, Johan Hultin, a Swedish doctoral candidate studying at the University of Iowa, decided to travel to Brevig Mission to see if viable samples of the virus could be found in the bodies frozen in the permafrost. After arduous travel, he was granted permission by the village elders to dig into the mass grave to retrieve samples. Unfortunately, the expedition proved to be unsuccessful. He found no live or intact virus samples. The grave was reconstituted and left to the chill winds of the Bering Sea.

In 1997, forty-six years later, Dr. Hultin discovered that a researcher at the Armed Forces Institute of Pathology was looking for samples of the Spanish Influenza virus in order to sequence the virus' DNA. Dr. Hultin contacted the institute and arranged for a revisit to the sight in Brevig Mission. Again, the village elders consented. While searching through the corpses once more, Dr. Hultin found the body of a woman whose substantial fat layers had preserved her lungs to the degree that the samples taken from them allowed the institute to sequence the DNA many times over resulting in the discovery that the Spanish Flu was of the strain H1N1.

Cincinnati was not immune to either the pandemic or the uncertainty of dealing with it. Leading the defense was Dr. William Peters, Cincinnati's Health Officer. Well aware that the influenza had spread widely in the east, Dr. Peters monitored hospital reports for new flu cases.

On October 3, 16 cases of the flu had been reported. Dr. Peters promptly prohibited all visitors to hospital patients with the exception of extreme cases. He also advised the public that there was no reason for undue concern since there was not an epidemic in Cincinnati. Two days later, on Saturday October 5, Peters met with city leaders including the Mayor, representatives from the University, General Hospital and Board of Education to consider a general closure order as the number of estimated cases of influenza had grown to over 4,000. In a unanimous decision, they ordered the closing of all schools, churches, movie houses, theaters and any other public or private gathering whether indoors or outdoors. Restaurants and saloons, however, remained open. Retail businesses and factories as well continued operations. Peters once again urged calm, noting that Cincinnati was taking the necessary precautions to prevent an epidemic.

The halls of the Literary Club fell silent. Not since the Civil War had our members been forced to find other diversions on nights regularly scheduled for literary pursuits.

Two days later on the morning of Monday October 7, the Board of Health ordered the closing of all saloons. A justifiable panic set in. Howard N. Ragland, the grandfather of our fellow literarian Nick Ragland, led the charge to limit the financial impact on the saloons. Ragland, representing the Retail Liquor Dealers Association, argued that with prohibition commencing a scant nine months later in July 1919, the saloon owners must be given adequate opportunity to relieve themselves of their liquor inventories. He convinced the committee to allow saloons to sell bottles of spirits, but not serve over the counter, placing the saloons on an even footing with drug stores who sold packaged liquor.

Religious leaders were outraged. Churches were closed, but alcohol was flowing freely. Clearly, the governing bodies concluded that it was more efficacious to have the spirit disseminated to the masses by way of a bottle than a sermon. Praise the lord and pass the bottle.

On October 10, Dr. Peters proclaimed that the epidemic had been stopped. Two days after that he reiterated, "the spread of the disease had been checked definitely." However, the flu had not been checked. The numbers of ill increased rapidly over the next couple of days. Dr. Peters, based on his assumption that the increase was due to the burning of leaves, decreed a halt to all leaf burning. The next day, Peters fell ill with the flu.

His temporary replacement ordered all chairs and sofas removed from hotel lobbies to prevent loitering. He also ordered the police department to increase their enforcement of the saloon restrictions as, not surprisingly, spirits continued to flow glass by glass over the bar to thirsty and convivial patrons. In spite of the restrictions in place, the epidemic grew.

On October 27, Peters, now back at the helm of his department announced that the number of cases had grown to 25,000 and was increasing. Surprisingly, the next day, Peters reversed course and announced that the number of cases was in fact declining. In spite of that encouraging proclamation, restrictions stayed in place until November 11 when they were lifted coinciding with the welcomed news of an armistice. Spirits rose in the city and were consumed in the saloons openly. People returned to a more normal daily routine. Children were back in class. The disease appeared to have made a partial retreat.

During this period of October 5 through November 11, the Literary Club missed five meetings.

After the Thanksgiving holiday, the number of new cases dramatically increased as did the absentee rates at schools, which hit 32%. On Dec. 2, all of the schools were again closed indefinitely. Additionally, children under the age of 16 were banned from movies, theaters, stores, Sunday school, and any other public gathering. One can surmise that Dr. Peters believed that children were the main culprit in spreading the flu.

Peters considered a complete closure of the entire city with the only exceptions being those jobs essential to the operation of the city's infrastructure. Opposition to the city's edicts grew, with various business and social groups arguing against further restrictions. One business owner publicly urged citizens to disobey any orders and let the courts decide the issue in the future.

This pattern of closings and openings continued into mid December when the worst of the epidemic had passed. The Literary Club missed two more meetings for a total of seven.

Looking back at this period, the Literary Club's Secretary at the time, Nevin Fenneman, wrote in his Annual Report of the Secretary:

"Even more serious than the war to the Club's life, was the epidemic of influenza and pneumonia. We have the city Health Officer's word for it that the Literary Club was a most dangerous center of contamination." Later he continued, "During the first period, the Club shared its odium and its hardships with the public schools, saloons, churches, movies, the University, and every other source of contamination except the street cars. Their sanitary condition was considered above question. In the second quarantine, only the primary schools, Sunday schools, and the Literary Club were considered sufficiently dangerous to need abating. Probably the City Hall records will also show that here and there a sewing society was being shut up as being specially virulent. For this discriminating way of administering his duties, the health officer should be highly commended."

The total death count for Cincinnati was a little over 4,000. Fortunately, none of our members added to that sum. Perhaps our age demographic at the time was optimal.