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THE AMERICAN INFLUENZA EPIDEMIC OF 1918-1919: A DIGITAL ENCYCLOPEDIA

Welcome

“They are placed on the cots until every bed is full and yet others crowd in. The faces soon wear a bluish cast; a distressing cough brings up the blood stained sputum. In the morning the dead bodies are stacked about the morgue like cord wood.”

—Victor Vaughan, *A Doctor’s Memories*

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The 1918–19 Influenza Epidemic in Boston, Lowell, and Fall River

J. ALEXANDER NAVARRO



Editor’s Introduction: *This article on the 1918–19 influenza epidemic in three Massachusetts cities has been excerpted from the online American Influenza Epidemic of 1918–1919: A Digital Encyclopedia with the permission of its editors, J. Alexander Navarro and Howard Markel. They write that the nicknamed “influenza encyclopedia” has become the main “internet repository for historical documents on the American influenza pandemic of 1918–1919. One of the great benefits of a digital archive is its dynamic nature. As new material is found it can be readily incorporated.”*¹

*Since launching the site in 2012, the editors have continued to add hundreds of new archival materials, including contemporary medical journal articles, official military reports, newspaper accounts, and other key primary source documents. In all, they have made thousands of pages available to the public. In addition to these primary sources, the site includes detailed narrative essays describing the course of the epidemic in fifty U.S. cities, including Boston, Lowell, and Fall River.*²

The project’s origin is more relevant than ever given the current SARS coronavirus pandemic of 2020–21. In 2006 the Center for the History of Medicine at the University of Michigan entered into a collaboration with the U.S. Centers for Disease Control and Prevention (CDC) to study the effectiveness of non-pharmaceutical interventions (NPI), such as masks and social distancing, in U.S. cities during the 1918–1919 epidemic. Public health officials at the CDC

“were interested to know what lessons could be gleaned from 1918. How did American cities respond in the fall of 1918? Were their efforts successful? Could these methods be used effectively today?”³

The study concluded that “those cities that used social distancing measures and other non-pharmaceutical interventions in 1918 fared better than those that did not. More specifically, we found a strong association between early, sustained, and layered use of NPI and mitigating the consequences of the epidemic.”⁴ However, Navarro and Markel warn that:

Although influenza infected and affected nearly every community across the nation, each experienced the epidemic in markedly different ways. Contrary to the popular imagination, the history of the 1918 influenza epidemic is hardly a monolithic one and can be best characterized as many tales of multiple places and people. Consequently, narratives that capture the human dimension of epidemic response often can best be told from the local and personal perspective. At the same time, over-generalizations can discredit or distort the stories of the participants, the varying nature of community responses, and diminish the lessons that we can glean from studying the past.⁵

Thus, after this initial study was complete, Navarro and Markel continued their research, delving ever deeper by visiting hundreds of libraries and archival collections across the nation. A true labor of love, the online American Influenza Epidemic of 1918–1919: A Digital Encyclopedia currently represents the largest digital collection of materials relating to the 1918–1919 influenza epidemic, all freely available to the public at www.influenzaarchive.org. Dr. Navarro is the Assistant Director at the University of Michigan’s Center for the History of Medicine.

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BOSTON: EPICENTER OF THE PANDEMIC

“Unless precautions are taken the disease in all probability will spread to the civilian population of the city.” Thus wrote Dr. John S. Hitchcock, the head of the communicable disease section of the Massachusetts State Department of Health in a circular to local health officials. It was September 5, 1918. The disease of which he wrote was influenza, currently felling sailors aboard the Receiving Ship at Boston’s Commonwealth Pier.⁶

Influenza had broken out at the Receiving Ship on August 28, and within a week there were over two-dozen cases among sailors stationed there. Soon, the disease spread to other nearby naval installations and shipyards, and by mid-September it had infected nearly two thousand of the 21,000 sailors stationed in the Boston area. With so many cases, medical officers struggled to procure adequate healthcare facilities. Under the direction of Colonel William H. Brooks of nearby Brookline, the Massachusetts National Guard erected a tent hospital on Corey Hill, completing the work in a single day. Two hundred sick sailors were admitted to the new emergency hospital the next day, September 10. Meanwhile, Chelsea Naval Hospital, just north of Charlestown, quickly filled with influenza patients, two dozen of whom had already died from pneumonia caused by severe cases of influenza. The hospital at the immigration station on Gallups Island in Boston Harbor, with its 200 beds, was made available for influenza patients.⁷

Military officials did their best to stem the rising tide of cases and to protect the rest of the sailors and military personnel in the Boston area, as well as civilians. The approximately 2,500 non-ill sailors at Commonwealth Pier were relocated to tent barracks at the muster field in Framingham as a means of removing them from harm's way. The 200 men enlisted in the Naval Aviation Service—expected to board a train for the training station at the Charleston Naval Yard in South Carolina—were kept in place so as not to transmit influenza to the South.⁸ It was a futile attempt, but there was little else naval officials could do. Meanwhile, Camp Devens, an Army installation of some 50,000 men and located just 45 miles northwest of Boston, was in the midst of its own massive epidemic.⁹ Boston was surrounded on all sides.

Sure enough, cases among Boston's civilian population soon appeared. Initial civilian cases were reported on or about September 11. By September 16, there were hundreds of influenza cases in the city, causing overcrowding in both City Hospital as well as Massachusetts General. Six cases even appeared at the Charles Street jail, and countless more Bostonians were languishing in their homes.¹⁰ A total of 19 victims had died thus far; within a week that number would jump to 334.¹¹

Because of the rapidity with which influenza had spread to and within Boston's civilian population, local health experts assumed that the epidemic would quickly burn itself out with no interventions necessary. "I believe the plateau, if not the peak, of the contagion has been reached," Boston's health commissioner Dr. William C. Woodward—in office just seven weeks—told the public. "There is a chance that we shall continue at the same level until the first of the week and then a steady downward tendency may be expected." He called on the public to avoid fatigue and crowds, and to remain at home and

rest if sick.¹² Although there were cases circulating in the schools, no deaths yet had been reported among children. Woodward therefore felt confident in keeping schools open for the time being.¹³ Boston's member of the Executive Council, Lewis R. Sullivan, argued that influenza was entirely too contagious and dangerous to keep the schools open. "Last year the School Committee closed the schools in order to save coal," he told the State House, "and it seems to me that they should now be closed in order to protect the health of the little pupils that don't know how to protect their own health."¹⁴ The medical director for Boston schools, Dr. W. H. Devine, disagreed, arguing that there was no reason for greater alarm than there had been the previous week. Furthermore, he believed Boston's 100,000 students were safer in school, where trained nurses could examine them if they fell ill. Nevertheless, Boston School Superintendent Frank V. Thompson arranged to have all cases of influenza among students reported to his office as quickly as possible so that he could monitor the situation more closely.¹⁵

That situation was growing increasingly bleak. There were thousands of cases in and around Boston, with dozens of deaths occurring daily due to influenza and pneumonia. On September 24, Governor Samuel McCall held a conference call with the state Public Safety Committee, the Massachusetts Commissioner of Health, the United States Surgeon General, Health Commissioner Woodward, the manager of the New England Division of the American Red Cross, and representatives from nurses associations to discuss the dire situation in the state. The biggest issue: Massachusetts had been drained of physicians and nurses due to the calls for military service, and no longer had enough personnel to meet the civilian demand for healthcare. McCall issued a proclamation, asking every able-bodied person across the state with medical training to offer his or her aid in fighting the epidemic, and urging local authorities to close schools, places of amusement, churches, and other places where people gathered. Due to his absence from the state, McCall had Lieutenant Governor Calvin Coolidge sign the proclamation.¹⁶

BOSTON CLOSES DOWN

With Governor McCall's proclamation, Woodward and Boston school officials quickly changed their stance on issuing a closure order. Effective September 25, all public schools in Boston were closed indefinitely.¹⁷ Spurred to action by Governor McCall, and at the request of Woodward, Mayor Andrew J. Peters appointed a special Emergency Committee to advise and empower the health commissioner, to centralize command and allocation of the city's healthcare resources, and to interface with state and other

agencies.¹⁸ The Committee, headed by Woodward and staffed by Boston Public Safety Committee Chairman Victor A. Heath, the Superintendent of the Consumptive Hospital Dr. James J. Minot, Judge Michael H. Sullivan, and the Superintendent of the Instructive District Nursing Association Mary Beard, went to work immediately. At its first meeting, held on September 25, the Mayor's Emergency Committee and state representatives recommended that all places of public amusement—theaters, movie houses, concert halls, lodges, concert halls, and the like—be closed indefinitely. Judge Sullivan suggested that teachers be recruited as nurses, and that Boston's 265 school buildings, currently closed, be converted to temporary emergency hospitals.¹⁹ Meanwhile, Governor McCall made \$100,000 ready through his Executive Council to be used for a statewide campaign against influenza.²⁰

The next day, September 26, Woodward issued a closure order, shutting the doors of Boston's theaters, movie houses, and dance halls, and prohibiting public gatherings until at least 7:00 am on October 7. The State Board of Health did not think that church closures were warranted, and so Woodward and the Emergency Committee only recommended that houses of worship close for at least the next ten days; the decision whether or not to do so was ultimately left to clergy. Only a few churches in the city opted to remain open for service on Sunday, September 29. Woodward felt that there was no way to regulate the use of public transportation, but urged the public to avoid unnecessary travel on streetcars, subways, or trains.²¹

The closure order was none too soon. Physicians and nurses were being over-worked, and hospitals were overflowing with desperate patients. Thirty-two nurses from Brigham Hospital were out sick with influenza themselves, unable to care for patients. The Homeopathic Hospital refused admittance to some 400 influenza patients.²² Temporary emergency hospitals were being set up in and around Boston to relieve some of the pressure, but the lack of doctors and nurses meant that there were precious few to take care of patients. To help allocate scarce resources in the most efficient manner, Woodward established a hospital clearinghouse to keep track of daily hospital bed availability and distribute patients accordingly and to handle appeals for nurses and doctors. He also established a relief station in East Boston that was continually staffed with physicians and nurses. Woodward placed Boston's health department nurses under the supervision of Mary Beard and the Instructive District Nursing Association so that they could be assigned duties more efficiently. The Consumptives' Hospital Department did the same with its nurses, as did the Baby Hygiene Association, the School Committee, and area nursing schools.²³ Many Boston and Cambridge teachers, released from their usual work due to the school closures and informed that they would be paid their

regular salary if engaged in relief work, or volunteered to aid the city's nurses in combating the epidemic.²⁴ The Providence Health Department sent six nurses to Boston to help their northern neighbor.²⁵

Even with the extra help, Boston's doctors and nurses struggled to keep pace with the new cases the epidemic brought daily. One nurse recalled making nearly 100 home visits and tending for 500 patients during her four weeks of service. Another recalled visiting the home of a very sick husband and wife. The husband died, the doctor on the case brought the wife to his own home to recover. One never to be forgotten day at the height of the epidemic, this same nurse remembered, "it seemed as if all the city was dying, in the homes serious illness, on the streets funeral processions."²⁶ The Boston Dispensary, a charitable medical institution founded in 1796 to give medical aid to the city's poor, cared for over 2,000 influenza cases during the epidemic.²⁷

In order to gain a better handle on just how bad the epidemic situation was, the Massachusetts Department of Health made influenza a reportable disease, effective October 2. All physicians as well as householders would heretofore be required to report influenza cases to their local health officials, who would then make regular reports to the state.²⁸ Although the situation looked as if it might be improving—there was a slight dip in the number of deaths reported on October 2—Woodward extended the closure order until at least October 12, and education officials extended the school closure until at least October 14.²⁹ On October 8, Woodward ordered all retail, department, dry goods, specialty, clothing, and furniture stores and shops to not open before 10:00 am or close before 6:15 pm, and asked business offices to close at 4:00 pm in an attempt to prevent crowding on public transportation.³⁰ The Boston Elevated Railway Company, with over 700 of its platform employees out sick, pressed every car it could obtain into service to alleviate the crowding³¹. Two days later, officials discovered that the new business hours had not worked as expected. Instead of reducing congestion, it simply shifted it to other hours. Woodward therefore allowed stores and shops to return to their normal business schedules.³²

BOSTON: RETURN TO NORMAL AND AFTERMATH

By mid-October, over 3,500 Bostonians had died from influenza or pneumonia since the start of the epidemic.³³ Yet, there was hope. Death tallies had generally been decreasing in the past several days, leading Woodward and others to assert that the peak of the epidemic had passed. At midnight of Saturday, October 19, Boston's closure orders were removed.

Saloons, bowling alleys, poolrooms, theaters, and movie houses were allowed to reopen. Children would return to school on Monday, October 21. The District Nursing Association warned Bostonians that, despite the decrease in cases, there would likely be an even greater demand for nurses now that several hundred teachers and teaching nuns would be returning to their classrooms. Health authorities cautioned the public not to relax their guard against influenza lest the epidemic return to its former strength, however.³⁴

The warnings went unheeded. After being closed for three weeks, theaters and movie houses opened to huge crowds. Lines formed hours in advance. Shows sold out quickly. Many theaters broke their attendance records as patrons filled the seats and then began standing in the aisles. Those who were unlucky enough not to get tickets flocked to cafes and hotels instead. Even the roads were crowded with carloads of Bostonians looking for some fun and a psychological respite from the death and chaos of the epidemic.³⁵ As one reporter wrote, “Everything will be done today to make folks forget the epidemic and its awful price. For it was the epidemic which put the ban on Boston and made the city like a rural village without amusements or mirth.”³⁶

The day after Boston reopened, Woodward announced to the city that the epidemic had officially passed.³⁷ State health officials concurred, although they warned residents that influenza would continue to circulate to some extent throughout the winter.³⁸ Residents breathed a collective sigh of relief, as did Boston’s overworked nurses and physicians. The Instructive District Nursing Association reported that, at the height of the epidemic, the city had 3,074 influenza cases, many of which required medical attention or nursing care. Over sixty percent of the Association’s nurses contracted influenza during the epidemic. Fortunately, only one died.³⁹ The Red Cross Motor Corps reported that it carried nurses and physicians to and from cases on 5,880 calls during the epidemic, in addition to providing extra ambulance service for Boston City Hospital.⁴⁰ The number of influenza cases had finally dwindled enough to allow city hospitals to begin scheduling surgeries again and to reopen their outpatient departments.⁴¹ In fact, the situation in Boston—and across Massachusetts—had improved sufficiently enough that the city could afford to send eleven of its nurses to Harrisburg, Pennsylvania for service there. “We still have need for nurses,” Massachusetts Commissioner of Health Eugene Kelley told the public, “but just at present Pennsylvania’s need seems greater than our own, and for that reason we are hastening to their aid, just as they came to our relief when we called for assistance several weeks ago.”⁴² A few days later, Kelley issued a public appeal for doctors and nurses to aid the people of Pennsylvania.⁴³

As Thanksgiving approached, Boston experienced a slight rise in new influenza cases. Health experts attributed the increase to armistice celebrations, and asked residents to remain vigilant and to continue to avoid crowds and the ill whenever possible. Fortunately, these newer cases appeared to be milder. Woodward reminded Bostonians that, while the city's epidemic was over, they could expect to see cases throughout the winter.⁴⁴

Meanwhile, officials began to play the blame game as they tried to determine just why Boston's epidemic had been so bad and why it was still continuing. Edward McSweeney, the chair of the Board of Trustees at Consumptives Hospital, sent a letter to Massachusetts governor Samuel McCall criticizing the state health commissioner for his failure to take early and decisive action in combating the epidemic and for attempting to place the blame at the feet of local health officers and agencies across the state.⁴⁵ A Boston health department official attributed the recent increase in cases to "indiscriminate visiting to homes in which there are or have been persons ill with influenza."⁴⁶ Woodward believed it was all the coughing, sneezing, and even "forcible talking" occurring in crowds that was to blame, and he



Boston Mayor Andrew Peters and Dr. Timothy Leary

The mayor receives a flu vaccine from its developer, Dr. Leary.

VACCINE HOPES DASHED

In October of 1918, after weeks of furious work, Dr. Timothy Leary of Tufts College Medical School announced that he had developed an effective influenza vaccine. Boston Mayor Peters invited newsmen to record the scene as he rolled up his sleeve to receive Leary's injection. Thousands of Bostonians followed the mayor's lead. A few weeks later, the mayor sent an aide to deliver 17,000 doses to San Francisco.

By 1918, the successful use of vaccines, such as those against smallpox, rabies, typhoid fever, and diphtheria, led to high expectations for a vaccine against influenza. Drug manufacturers aggressively promoted their stock vaccines for colds and flu, none of which were effective. Many new vaccines were developed. University researchers and even private physicians made and distributed their own vaccines. However, the contemporary medical literature was full of contradictory claims regarding their success and there was no consensus at the time about their effectiveness.¹

In a sobering editorial in January 1919, the editors of the *American Journal of Public Health* tried to dampen expectations. They wrote that: "The causative organism of the influenza was still unknown, and therefore the vaccines being produced had only a chance at being directed at the right target. They noted that vaccines for secondary infections made some sense, but that all the vaccines being produced must be viewed as experimental. Acknowledging the somewhat ad hoc nature of vaccine development . . . they urged that control groups be used with all the vaccines."²

Sadly, none of these vaccines were effective in preventing viral influenza since they were designed to combat bacterial infections. We now know that influenza is caused by a virus. In 1918 there were no effective vaccines or antivirals to treat influenza. The first licensed flu vaccine didn't appear in the U.S. until the 1940s. In Massachusetts, during the last four months of 1918, more than 22,000 people died.

1. John M. Eyler, "The State of Science, Microbiology, and Vaccines Circa 1918," *Public Health Reports*, 2010; 125 (Suppl 3): 27–36.

2. Karie Youngdahl, "The 1918-19 Spanish Influenza Pandemic and Vaccine Development," blogpost September 26, 2018 at www.historyofvaccines.org (accessed July 3, 2020).

ordered signs printed to place all across the city to warn people to use better etiquette.⁴⁷ He also blamed physicians for failing to report influenza cases, as required by state law.⁴⁸ Many residents simply blamed Woodward and the city's health department. In fact, the criticism was so strong that Mayor Peters briefly considered reorganizing the health department altogether.⁴⁹ Instead, he created a panel of 11 prominent physicians to join Woodward to discuss all of the city's health problems. At the top of the list for Woodward was dirty dishware used in restaurants and ice cream parlors.⁵⁰

In reality, there was probably very little Boston could have done to have made its epidemic less severe. With the huge military presence in the area and with little warning of the impending doom, the city found itself in the midst of the epidemic before officials could react. Swifter action and more forceful leadership by Woodward and Mayor Peters may have mitigated some of the devastation, but the disease simply spread much too rapidly for an earlier closure order to have made much of a difference. Physicians and nurses quickly became overwhelmed with the sheer volume of cases, hospitals had more patients than beds, and even the Boston Elevated Railway had difficulty running with so many workers sick. Boston lost 4,794 of its residents to epidemic influenza and pneumonia in the fall of 1918 alone.⁵¹ Combined with the winter 1919 epidemic wave, Boston experienced an excess death rate of 710 per 100,000 residents, making it one of the worst hit cities in the United States. Only Pittsburgh and Philadelphia fared worse.⁵²

LOWELL: THE PANDEMIC SPREADS

As in many Massachusetts cities and towns, Lowell responded immediately to State Health Commissioner Eugene R. Kelley's September 20 request to receive reports of influenza cases and deaths. Going one step further, Lowell's Board of Health made the disease reportable on September 20 and immediately filed the city's first official case and informed the state.⁵³ Taking no chances, several hospitals in the city banned visitors the next day. But the nature of this infectious beast was explosive and by September 24, the number of new cases reported daily exceeded 100.⁵⁴

Two days later, Mayor Perry D. Thompson called a meeting to see how to minimize the spread of infection in Lowell. The leaders Mayor Thompson drew together were members of the Board of Health, the School Department, and the Public Safety Committee. Together, they decided to close schools, theaters, and movie houses for at least the rest of the week, to add beds for influenza cases at several hospitals, and open an emergency hospital devoted entirely to influenza cases. After the meeting, Thompson called theater

managers to his office, where they pledged hearty cooperation for the goal of influenza prevention.⁵⁵

Mayor Thompson also contacted Major-General H. P. McCain, commanding officer at Camp Devens, only 18 miles from the city, to discuss ways to prevent the spread of infection between the military and civilians.⁵⁶ By this time, there were at least 10,000 stricken at the camp, which made national headlines daily because of the devastating sickness and loss of life, and the desperate race to supply the camp with enough medical personnel. Camp Devens men weren't paying social calls in any Massachusetts towns by that time.⁵⁷

On September 29, the Board of Health and the Public Safety Committee met again and this time included Charles E. Simpson, the district's State Department of Health representative. One result was a ban on public gatherings, excluding church services. They also determined that the city's new isolation hospital, still under construction, was the best place to set up the emergency hospital. When officials tapped this unfinished isolation hospital as an emergency influenza hospital and declared its readiness an easy task, they were overly optimistic, as events later proved.⁵⁸

LOWELL'S HANDLING OF INFLUENZA

Over the next week, the Board of Health ordered more social restrictions and exceptions. For example, while undertakers limited the seating at funerals, poolrooms, bowling alleys and bars were allowed to remain open. It wasn't until October 7 that the Board ordered these gathering spots, along with large department stores, closed by 5 p.m. Days later, the Board agreed to a 6:30 p.m. closing time for both stores and bars for the convenience of people just getting out of work.⁵⁹

233 NEW CASES

**Lowell's Grippe Situation
Still Very Bad — Schools
and Theatres Still Closed**

It Is Expected All Pastors in
City Will Announce, "No
Services Sunday"

Initially, Lowell's churches made voluntary changes as the emergency developed. At the end of September, when the State Emergency Health Committee requested that churches cancel services, Lowell's Catholic churches shortened their

services, and Protestant churches cancelled many of their weekly social gatherings.⁶⁰ However, a week later, most Protestant denominations cancelled services entirely and Catholic Church services continued in an abbreviated form.⁶¹

Recognizing that homecare was as critical as hospital care, three Health Department nurses, two school nurses, and nine from the Lowell Guild joined forces at the end of September, when each nurse procured an automobile and list of homes to visit.⁶² The motor vehicle branch of the Public Safety Committee proved to be a reliable source of transportation for the nurses in the weeks to come, and soon each nurse averaged 21 visits a day.⁶³ Sisters of the city's various convents worked with the League of Catholic Women and the Knights of Columbus and also conducted hundreds of home visits.⁶⁴

The Red Cross helped provision the isolation hospital and eventually supplemented its nursing staff for a nurse/patient ratio of 1:30.⁶⁵ Public kitchens sprang up as well, including several organized by the Women's Welfare Committee of the Lowell Federation of Churches.⁶⁶ The Social Service League coordinated the efforts of several organizations to provide medical care, food, and other supplies to those in need.⁶⁷

The Board of Health began to meet daily, sometimes twice daily, laboring to orchestrate plans for increasing bed capacity at existing hospitals and hurrying completion of the emergency hospital for adults, and another for children connected to the Chelmsford Street Hospital.

Even as the daily report of new cases surpassed 500, the Board of Health suspected the actual number was higher, and members pleaded with physicians to report all cases. Physicians resisted at first, fearing the added work of physically placarding and unplacarding houses. The Board compromised by waiving the physical activity of placarding. Nonetheless, the Board expected physicians to speedily report accurate infection data to the Board of Health.⁶⁸ However, to report or not to report became a moot point when the state made influenza a reportable disease effective October 4, superseding any local preferences.

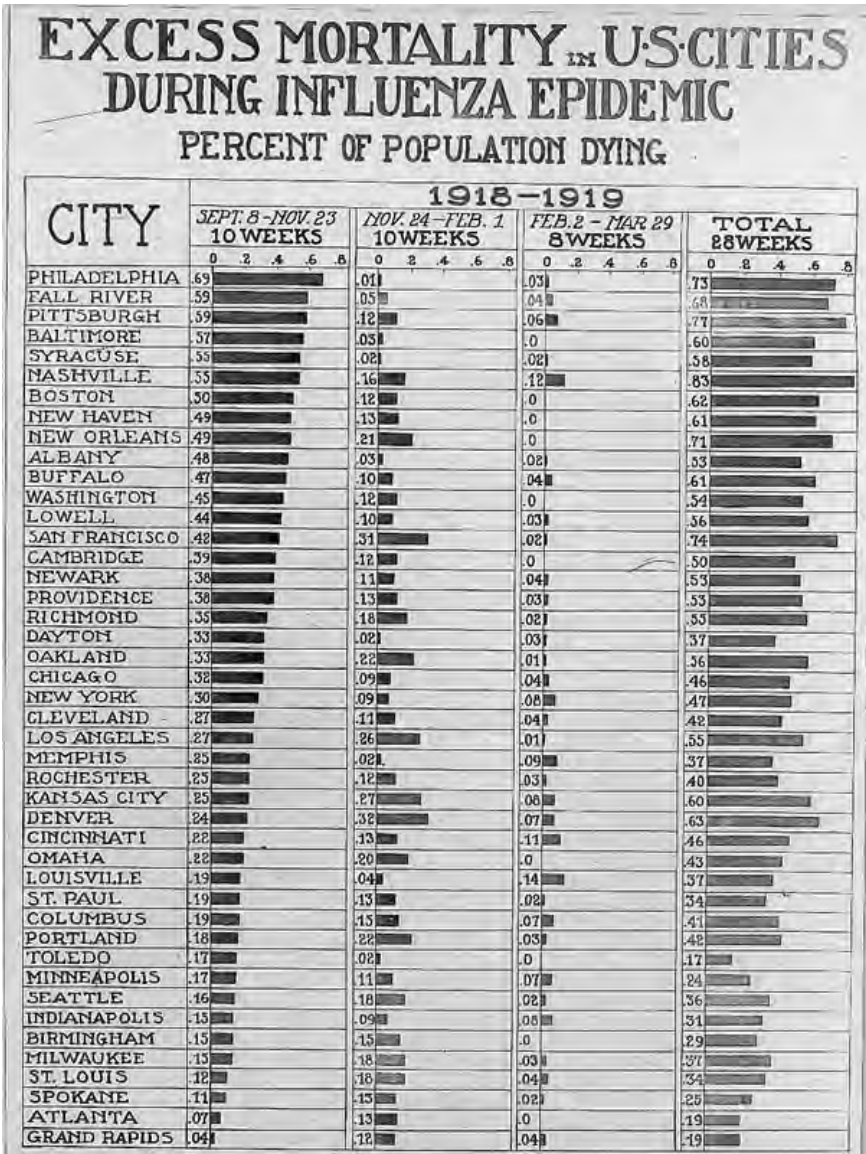
The voluntary nature of Lowell's church closings changed, too, when Massachusetts mayors received a telegram from Henry B. Endicott, Chairman of the State Emergency Health Committee. In it, Endicott asked mayors to order churches closed on Sunday, October 13. Lowell's Mayor Perry D. Thompson was only too happy to comply, and consequently issued an edict through the Board of Health.⁶⁹ Catholic churches, the only ones still holding services, defied the edict, though fear of infection made attendance at these services low.⁷⁰

Defiant churches weren't the only difficulty. Although the emergency hospital for children opened on October 3, problems loomed in the city's attempt to ready the isolation hospital for adult influenza patients. Gas and electricity were installed, but what to do with sewage, since there were no connections yet to the city sewer system? Apparently officials didn't delegate this decision, because Mayor Thompson and Dr. Simpson, the State Board of Health representative, decided together to dispose of the emergency hospital's sewage in underground receptacles.⁷¹

Finally, on October 9, one 25-bed ward of the isolation hospital opened, just as Dr. C. F. Eskey, Assistant Surgeon of the Public Health Service, arrived in Lowell to take general charge of Lowell's fight with influenza.⁷² One of his first encounters with the Board of Health included witnessing a dispute among physicians in attendance at the board's October 11 daily meeting. On the agenda was a physician demand for a clear procedure when admitting patients to the isolation hospital. At the heart of the matter were two issues. First, can the head of the municipal charities division appropriately rule on a patient's admissibility, since a review of medical rather than financial criteria for admitting critical patients is the norm? Second, does the admitting physician retain responsibility for the patient? After disagreeing for a day on these issues, the Board reached an agreement that was encapsulated as "official rules" published in community newspapers the next day, just in time for the opening of the emergency hospital's second ward.⁷³ The rules stated that patients must be acute cases of influenza or pneumonia and, once admitted, that their care was entirely in the hands of hospital staff. They directed city physicians to call the emergency hospital's physician in charge to arrange admission. Mayor Thompson also weighed in with a remark that the hospital ought to be in the hands of an outside physician to allow local physicians to remain in their private practices.⁷⁴

This outside physician was none other than Dr. C.R. Eskey of the United States Public Health Service. Once instated, he put in long hours at the hospital whipping it into shape, earning the respect of Lowell's physicians.⁷⁵ Eskey also participated in the daily Board of Health meetings on influenza, where his constant but necessary requests for adequate nursing staff were relayed to the Red Cross and other organizations recruiting nursing volunteers.

The issue of organizing volunteer teachers also paralyzed the Board of Health's decision-making apparatus. At the October 13 meeting, members discussed, but couldn't decide whether to recruit teachers to canvass the community for unreported cases. When the Board stalled, two outside officials took action the next day. Charles E. Simpson, the State Health Department's district representative, and Hugh J. Molloy, Superintendent



Excessive Mortality, 1918-19

As this bar chart reveals, Fall River, Boston, Lowell and Cambridge were all particularly hard hit from September to late November of 1918.

of Schools, called all teachers to an organizing meeting and the canvass commenced, in some cases with the help of school boys acting as interpreters. Within five days, the Board of Health received 15,000 out of 25,000 canvass cards from city teachers, with more expected.⁷⁶

The Lowell Sun detailed a significant finding in its Sunday, October 16 editorial: nurses, charitable services representatives, and teachers were the ones who brought Lowell's true plight to light, and this couldn't have been done without home visits. Poverty, lack of English and sometimes lack of a healthy adult in the home were barriers to better health for many of Lowell's residents. It was through these points of contact at home that agencies found those in need and arranged for their care, and that of their families.⁷⁷

LOWELL'S REOPENING

In the meantime, while Dr. Eskey struggled to locate enough staff to open a third ward at the emergency hospital, newspapers reported Boston's plan to lift its influenza bans at midnight, October 19. This sent ripples through Lowell's religious and retail organizations, which brought pressure to bear on the Board of Health to lift Lowell's influenza orders.⁷⁸ Churches openly defied officials when Lowell's Federation of Churches passed a resolution recommending churches to hold Mass on Sunday. However, the Board of Health held firm with the closing orders, and the Federation of Churches reversed its recommendation. Services at Protestant and Catholic churches remained in suspension.⁷⁹

By October 23, the daily number of new cases was reduced to 100, and the topic of lifting the bans came up daily at Board of Health meetings. Not surprisingly, members couldn't agree on when to set the date. Instead, they personally inspected the city's theaters and places of amusement, only to discover alarming conditions in most theaters. The managers were told to clean up and improve ventilation in preparation for a second inspection on October 26.⁸⁰

In the midst of this face-off with theaters, Lowell's epidemic dwindled to nothing. With relief, the Board of Health set all closure orders to lift on Monday, October 28, with special dispensation for churches to hold regular services on the 27th. Theaters opened individually, as they passed a final health inspection.⁸¹

In anticipation of another round of infections, on December 17 the Board of Health and Mayor Thompson met with the Red Cross and League of Catholic Women for a planning session. They were pleased to learn that the relief mechanisms at various Lowell agencies were still intact for that

very reason, so no extra measures were needed.⁸² The flu did make another appearance in Lowell starting the last week in December and persisted though the end of February 1919, but without the ruthless vigor of the autumn 1918 wave.

CONCLUSION: LOWELL'S FAILURE

Although the Lowell's Board of Health met at least once daily during the autumn 1918 influenza crises, none appeared willing to assume the role of crisis leader. After their early success at tapping a location for the emergency hospital, Board of Health members seemed more involved in minutiae such as setting hospital admission rules than making command decisions. Neither did Mayor Thompson take sustained charge as Lowell's chief executive. In spite of these organizational problems at the municipal level, individual charities and other public agencies organized swift, effective relief efforts focusing on home visits and nourishment for patients and their families.

Fortunately, influenza didn't have quite the hold on Lowell that it could have, considering its proximity to Camp Devens and its thousands of infected victims. Lowell's total excess death rate for the second wave of influenza was 523 per 100,000 in population. Nearby Fall River, Massachusetts, often clumped with Lowell in contemporary news reporting as 'the mill towns with uncontrolled influenza,' experienced a higher excess death rate of 621 per 100,000.⁸³

FALL RIVER'S ORDEAL

In a sense, Fall River was caught between the anvil and the stone in the fall of 1918. Boston—epicenter of the influenza epidemic—was just 50 miles away, while Newport, Rhode Island and its naval stations was even closer, a scant 22 miles. Personnel from military installations near both cities regularly paid visits to Fall River, and it was through such visits that influenza was brought to the city: of the first five cases reported to the Fall River Board of Health on September 16, two were soldiers on leave from Camp Devens and two were from the Boston Navy Yard.⁸⁴ City Health Agent Samuel Morriss and the Board of Health sprang to action. Morriss asked physicians caring for these patients to keep them well isolated so as to prevent the spread of the disease. The Board of Health instructed school inspectors to begin examining children for signs of illness, and asked police to keep residents from spitting on the streets. A prescient physician who correctly assumed that the Board of Health would be interested to know that influenza was now within Fall River city limits had reported the first crop of cases. On the suggestion of member

Richard Borden, the Board therefore unanimously voted to make influenza a mandatory reportable disease. Lastly, the Board prepared a public service announcement to be printed in the city's newspapers, advising the public on how to prevent and treat influenza.⁸⁵ The next day, physicians reported seven more cases of influenza.⁸⁶ Fall River's epidemic was about to get underway, but fortunately so were its officials.

In a little over a week there were 602 reported cases of influenza in Fall River and seventeen deaths due to the disease.⁸⁷ The sudden spike alarmed members of the Board of Health, who hurriedly met on the afternoon of September 26 to review the situation. Massachusetts Department of Health Director Dr. Eugene R. Kelly advised against closure orders, but other state officials—namely Governor Samuel McCall—disagreed.⁸⁸ With over 50,000 reported influenza cases circulating in Massachusetts, the spread of the epidemic to at least half the country, and the likelihood of the state of

SPANISH INFLUENZA EPIDEMIC HITS CITY

**Five Cases Are Reported to the Board of Health;
All in Government Service and Were Home
on Furloughs—Steps Taken to Check Fur-
ther Progress of Disease Here.**

Fall River has been hit by the epidemic of Spanish influenza which has been spreading for a week, or more through this part of the country. Five cases have been reported to the board of health. All five boys affected are in the government service and were home on furloughs when stricken. Two are stationed at Cal. Devens, two are attached to the Boston navy yard and one has been located at Quincy.

Since the reporting of this disease is purely voluntary on the part of physicians, it is possible that there are other cases here not yet known to the health officials. Agent Morris, realizing the gravity of the situation, last

week asked for the co-operation of physicians and he is much gratified at the willing response. Three physicians reported the five cases and stated that there appeared to be little doubt but that the diagnosis of Spanish influenza was correct. The five cases show symptoms of a very severe form of grippe.

Agent Morris will bring to the attention of the board of health at its weekly meeting this afternoon the question of drafting rules requiring that cases of Spanish influenza be made reportable. Army officials have urged that such steps be taken in order that the disease may be speedily checked and controlled.

Fall River Globe, Sept. 16, 1918

affairs in Fall River growing far worse before it got better, Morriss and his colleagues decided to side with McCall.

The Board ordered closed all public and private schools, movie houses, and theaters, banned assemblies, lectures, and other public gatherings, and requested that clergy close their churches and halt Sunday schools until the threat of the epidemic had passed. Most subsequently did. Restaurants and other places that served food or drinks were warned to keep their premises and their dishes and utensils clean.⁸⁹ The next day, Fall River Mayor James H. Kay issued a proclamation, declaring a state of emergency in the city and endorsing the actions of the Board of Health, which now included large wakes and public funerals on the list of prohibited gatherings. The school committee met and ordered schools to close, although, given that the Board of Health had full authority in the matter, this action was superfluous.⁹⁰ Authorities had already begun barring visitors at hospitals in an attempt to contain the epidemic, and had prohibited new admissions because of the lack of nurses, several of whom had already fallen ill.⁹¹ Fortunately, the Home Nursing department of the local chapter of the Red Cross was able to recruit a half-dozen nurses' aides to work at City Hospital.⁹²

Other organizations joined in the cause. On September 30, Mayor Kay convened a meeting of health and hospital officials and representatives of Fall River's various charities and relief societies. There, the group discussed the growing epidemic and outlined a plan of action to handle cases and to ameliorate the suffering of the ill and their families. The Sisters of Mercy of Mount St. Mary's convent offered their nursing services to the afflicted of the city, which included the wife of Board of Health Secretary Louis J. Cahill.⁹³ The Red Cross took on the role of clearinghouse for those trying to obtain a physician, and announced it would assist those who could not afford or locate one. To help those too sick to cook for themselves, it opened canteens to prepare and distribute meals. Volunteers used the kitchens of the city's now-closed schools to cook meals, turning out several hundred dinners per day.⁹⁴ The Women's Union made soups and custards to help fortify the ill.⁹⁵ The volunteers at the King Philip Settlement House at 334 Tuttle Street provided meals for stricken South End families. The rector of the St. Mary's Cathedral offered the use of the church's Bishop Stang Day Nursery for use as an emergency hospital, as did clergy at the St. Patrick's Day Nursery. The District Nursing Association recruited nurses and physicians to serve in the new temporary hospitals.⁹⁶ Some teachers lent a hand, volunteering as nurses' aides.⁹⁷ Morriss worked as hard as anyone, keeping the department of health open from 9:00 am until 10:00 pm to handle the workload, and answering calls during off hours at his

home.⁹⁸ Working through the Board of Health, the various city agencies and relief organizations did their best to help Fall River get through the epidemic.

RESISTANCE TO THE SHUTDOWN

Not all groups were as eager to join the cause. In particular, saloon owners and liquor dealers grew upset when the closure order came to include their establishments. Initially, Fall River's closure order did not extend to saloons, a move that angered some. Most upset were leaders of the temperance movement. In a scathing attack on the saloons, James E. Cassidy, Vicar General of the Diocese of Fall River, blasted city officials for not closing saloons. "Why are they [saloons] not ordered closed?" he wrote in an open letter printed in the city's newspapers. "Are not the motley gatherings of the 'great unwashed' assembling in these unclean places, particularly on Friday and Saturday nights, a thousand times greater a threat than the congregations of our churches? . . . Is German brewery power supreme in city and State House?"⁹⁹ A few days later, after state authorities requested that soda fountains close, the Board of Health met and recommended that the sale of beverages in saloons, drug stores, and soda fountains be halted. It was, in fact, an extension of the existing closure order, as the Board made it explicitly clear that a formal order would be issued if proprietors failed to comply with the request.¹⁰⁰ Unhappy saloon owners complained directly to Mayor Kay, who refused to budge on the issue.¹⁰¹ A few days later, the Board of Health voted to allow wholesaler liquor dealers to fill small orders for home delivery, a move that did not appease angry saloon owners.¹⁰²

Soda, ice cream shop, and drug store owners were in no better mood than were their counterparts in the saloon business. At first, some had attempted to circumvent the "request" by simply serving beverages and ice cream in paper cups rather than glasses, believing that sanitation was the primary concern of the Board of Health. It was not. The Board was most troubled by the propensity for such establishments to draw crowds. When warned to cease, several complained to Morriss, who relayed to the Board of Health the information that the proprietors felt put out about the situation. Borden replied that people needed to put up with some hardships given the nature of the crisis. When Morriss responded that Boston still allowed shops to serve beverages, Borden cut him off: "I don't care what they are doing in Boston and other places. We are handling the situation for this city." He then instructed the secretary to strike "recommends" and replace it with "orders" in the language of the Board's previous edict.¹⁰³

FALL RIVER: LOCAL AND OUTSIDE AID

Meanwhile, onward the epidemic marched. The first weekend of October saw an additional 1,914 influenza cases, bringing the total since the start of the crisis to over 6,600. The Red Cross announced that its volunteers would work 24-hours a day, seven days a week to handle the increasing number of calls for help. Boy Scouts volunteered to run errands and to distribute 15,000 pamphlets printed in Portuguese and Polish to workers as they left their factories and mills, advising them on influenza precautions and care. St. Anne's Hospital opened a ward to care for Fall River's influenza victims, and authorities opened the city's Technical High School as an additional 75-bed emergency hospital. Ten doctors from the United States Public Health Service and a dozen nurses from out-of-town arrived to lend their aid, as did 12 members of the State Guard to serve as ambulance drivers and hospital orderlies. The owner of the Hotel Mellen and the head of the girls' industrial school at the Deaconess Home offered their buildings as emergency hospitals as well, but for the time being the situation, precarious as it was, did not demand additional hospital space.¹⁰⁴ Moreover, the city would have been hard-pressed to staff them.

It was already becoming difficult to deal with the number of deaths. Undertakers were working as fast as they could to prepare bodies for burial, but they were still hard-pressed to keep up with the death rate. At the St. John's Day Nursery emergency hospital the body of an influenza victim lay for a night and day, awaiting the overworked undertaker to arrive. Finally, an alternate undertaker had to be contacted to come retrieve the body because the first one was simply too busy. Morriss and Kay conferred about the problem and decided that a temporary morgue would be established at the old police department to temporarily keep bodies until undertakers could prepare them for interment.¹⁰⁵ Even still, bodies piled up. At Notre Dame Cemetery, several dozen bodies accumulated in the vault and shed while the church's dozen gravediggers worked to prepare graves.¹⁰⁶ Adding to undertakers' vexations, the Board of Health placed on them the onus of ensuring that public funerals did not occur, requiring them to halt the funeral if anyone other than immediate family were present.¹⁰⁷ According to authorities, funerals amongst Fall River's large immigrant population were particularly problematic because of the large turnout they tended to bring. A rather unsympathetic newspaper reporter for the *Evening Herald* complained of the difficulty in making "these people understand the situation and it requires constant warning to restrict this infringement of rules and regulations of the Health department."¹⁰⁸

FALL RIVER: TENSIONS OVER REOPENING

By mid-October it appeared as if the crest of Fall River's epidemic had passed. The number of new cases being reported each day had started to dwindle, and the situation in the city's hospitals began to improve.¹⁰⁹ Outside experts following Fall River's epidemic concurred. In a special conference between the United States Public Health Service, Massachusetts health officials, Army medical officers, and city health officials, Morriss and his colleagues were praised for their good work in bringing about the end of the epidemic.¹¹⁰ Residents were undoubtedly happy as well, but were now growing restless with their lack of entertainment outlets. Many began pestering Morriss with inquiries as to when the closure order and gathering ban might be lifted. The beleaguered Health Agent responded that, with the exception of churches, the Board of Health would give no consideration to the matter until its next meeting, scheduled for the evening of Monday, October 21.¹¹¹ Protestant churches elected to remain closed for the time being, but Catholic services resumed on Sunday, October 20, albeit only with low mass.¹¹² Fall River would have to wait at least one more week to enjoy itself.

Fifty-four new cases of influenza were reported on October 21, prompting the Board of Health to defer a decision whether or not to remove the closure order. Weighing on the members were the opinions of the Chamber of Commerce, the Cotton Manufacturers Association, and the Board of Hospitals, all of which urged keeping the orders in place for an additional week to ensure that the epidemic was truly coming to an end. Several of the Board members were of the same opinion, although Borden believed that the epidemic would run its course in its own time, regardless of the interventions of authorities. He recommended that the Board meet the next afternoon and assess the situation then, adding that the issue of when to reopen schools should be left to education officials.¹¹³

When the Board met on the afternoon of Wednesday, October 23, the members had all altered their opinions slightly. No longer did anyone advocate for waiting an additional week. Instead, they believed that the peak of the epidemic had passed and that the disease had largely run its course. "I don't believe we will gain anything by continuing the restrictions," remarked City Physician Sandler. Another member stated that small numbers of cases likely would continue throughout the winter, implying that continuing the closure order and gathering ban would have no effect on the disease at this point. The others agreed. Beginning at midnight that evening, all restrictions save the closure of schools would be removed.¹¹⁴ School officials had previously weighed in that their buildings would not be ready to reopen for class until

Monday, October 28 at the earliest. Several days later, the school board met and made that date official. The three-week impromptu break would soon come to an end for the city's schoolchildren.¹¹⁵ In the meantime, Fall River could return to business as usual.

In most cities, the lifting of closure orders resulted in a great rush to the theaters, movie houses, saloons, and shopping districts as people sought to shake off the boredom and put their minds towards something else besides talk of the dreadful epidemic. In Fall River, however, theaters reported low attendance and proprietors of saloons and drug store soda counters said business was much less brisk than anticipated. It seemed that, despite the clamor to have the restrictions removed, residents were not keen on taking any chances that the epidemic was not truly over.¹¹⁶

FALL RIVER: RETURN TO NORMAL AND AFTERMATH

As the number of new influenza cases waned, Fall River's numerous emergency hospitals closed their doors and returned to their normal function. In late October, the Superintendent of Hospitals tasked a group of city workers with repainting and renovating the two Catholic day nurseries.¹¹⁷ Students at Technical High School—who for the time being had been attending class at adjacent Durfee High (which then stood at 289 Rock Street and now serves as a state courthouse) while their building was being used to care for influenza patients—returned to their usual classrooms on Monday, November 4 after that building had been cleaned and fumigated.¹¹⁸ New cases dwindled but still continued. Some of these resulted in death, but for the most part Fall River returned to its normal state of affairs.

With the crisis over, the city turned its attention to the epidemic's aftermath. In early November, city officials met with representatives of Fall River's various social and charitable agencies to discuss what steps needed to be taken now that the end of the epidemic had come. This "Epidemic Follow-Up Committee," as it was known, determined that, for the most part, Fall River was well on its way to recovery. A convalescent hospital, once thought necessary, was not needed. The Community Welfare Office found that majority of homes affected by influenza had returned to normal and needed no nursing after-care. What was needed was aid for families that had dealt with influenza, especially in cases where the primary wage earner had been ill for a length of time. Many of those families had been brought to destitution by the loss of income, and had desperate need for a few weeks' worth of clothing and milk for the children and coal to keep the home warm. The District Nursing Association would take on the task of working with dealers

to distribute milk to needy families, while the Red Cross canteen service would continue to operate until the most pressing need in the remaining families was addressed. After that, service organizations could return to their normal day-to-day operations.¹¹⁹

There was a brief and minor spike in new cases in mid- to late-November, which Morriss attributed to the Armistice Day celebrations and a spate of inclement weather. By mid-December, however, with the daily case tallies hovering around two dozen and an increase in student absences, Morriss began to grow concerned that the epidemic might be making a comeback. To prevent that from happening, the Board of Health briefly considered implementing modified restrictions such as placarding of houses with influenza cases. The majority of cases appeared to be milder than those that occurred during the midst of the epidemic, however, and Morriss and the Board believed that physicians mistakenly were reporting bad colds as influenza. Rather than subject residents to onerous placarding and quarantining, the Board instead focused on a thorough examination of each of the city's schoolchildren by school doctors in the week leading up to the winter recess. Those children found ill with influenza were sent home immediately to rest and recuperate over the holidays. In addition, the usual school Christmas assemblies were cancelled. Adults were simply warned against unnecessary crowding.¹²⁰ In the end, school doctors found that most of the absences were not due to illness, and the Board took no further action for the time being.¹²¹

On New Year's Eve, as the number of new cases began to creep up slightly, the Board of Health decided to enact a few minor restrictions. Those with an influenza patient in their homes were warned not to entertain guests. Nor were they allowed to borrow books from the library. School medical inspectors were instructed to keep a close eye on students and to send home any sick children immediately; sick children would not be readmitted to school without the written permission of the Board of Health. Lastly, undertakers were once again told to limit funeral attendance to immediate family.¹²² It was the last of Fall River's influenza epidemic control measures.

Influenza clung tenaciously to Fall River throughout the rest of the winter, although fortunately it caused only a handful of additional deaths. The overall toll of the epidemic on the city was staggering, however. Between September 16 and the end of 1918, 11,707 cases of influenza were reported to the Fall River Board of Health. Of these cases, 719 died.¹²³ For the period when the disease was considered epidemic—September 16 to October 31—Fall River experienced 10,624 cases and 629 deaths. These figures are undoubtedly low, however, given that influenza was not a reportable disease until October 4. The total excess death rate for the period through the end

of February 1919 was 621 per 100,000, lower than Boston's 710 but higher than either Cambridge (541) or Providence (574). Among the victims were two of Morriss's own children; the health agent lost his young daughter to influenza in early October, and his son—a physician in the Medical Reserve Corps—when he contracted influenza after returning home for his sister's funeral.¹²⁴ In addition to the lives lost, the epidemic cost Fall River \$19,075, not including the cost of disinfecting and renovating the various buildings loaned to the city for use as emergency hospitals or the \$1,100 paid by the Red Cross.¹²⁵

* * * * *

Editor's Conclusion: The 1918 pandemic spread quickly from Boston throughout Massachusetts and the U.S., overwhelming both military and civilian populations. By late September, nearly 50,000 people in Massachusetts had the flu, and the illness was spreading rapidly nationally. The situation was so dire that the U.S. Army canceled a draft call despite the fact that it badly needed more soldiers in Europe. In the next six months, twenty-five million Americans were affected and more than 675,000 died. Worldwide, the influenza took far more lives than did the war. Estimates vary greatly, but an estimated thirty to one hundred million people died. In Boston, children jumped rope and sang: "I had a little bird, and its name was Enza, I opened the window and in-flew-enza."¹²⁶

There were two waves of the 1918 pandemic. While highly contagious, the first wave brought a mild disease that began in Spain in February. The Boston outbreak was the beginning of the second and deadlier wave. No disease in human history, including the Black Death in the fourteenth century, caused so many fatalities in such a short time span. Its wide-ranging impact on human history is impossible to calculate. According to one source:

This disease weakened [military] forces on both sides, changing not only the course of the war but also the economies and population stability of every affected nation. In the long term, this particular outbreak would inspire research on an unprecedented scale and lead to advances in science and medicine, forever altering our understanding of epidemiology. From the spring of 1918 to early 1919, no aspect of life remained untouched by the pandemic for Americans at home and on the front.¹²⁷

Physicians searched frantically for a vaccine, none of which proved successful, as well as for ways to treat the symptoms. The disease was so virulent that it continued to mutate and resist eradication. The specific H1N1 virus that caused the outbreak was not identified until the 1930s. It is believed that all Influenza-A outbreaks since WWI have been descendants of the 1918 strain.¹²⁸

HJM

Notes

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79. "Churches Want to Open on Sunday," *Lowell Courier-Citizen*, Oct. 18, 1918, 8.
80. "Steady Improvement in Epidemic is Noted," *Lowell Courier-Citizen*, Oct. 25, 1918, 1.
81. "Votes to Lift Ban but Warns Public to Use Precaution," *Lowell Courier-Citizen*, Oct. 26, 1918, 1.
82. "Only Two New Cases of Influenza Reported at City Hall Today," *The Lowell Sun*, Dec. 17, 1918, 8.
83. Markel, et. al. op cit. 647.
84. "Spanish Influenza Here," *Fall River Evening News*, Sept. 16, 1918, 2.
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86. "Fourteen Influenza Cases," *Fall River Evening News*, Sept. 18, 1918, 6.
87. "Board of Health to Fight Epidemic," *Fall River Evening Herald*, Sept. 26, 1918, 1.

88. "Epidemic Cripples Hospital Staff," *Fall River Evening Herald*, Sept. 20, 1918, 1; "Suggests Theaters and Schools Close," *Fall River Evening News*, Sept. 25 1918, 3.
89. "Board of Health to Fight Epidemic," *Fall River Evening Herald*, Sept. 26, 1918, 1
90. "Mayor Endorses Board of Health," *Fall River Evening Herald*, Sept. 27, 1918, 1; "Offer of Nuns' Services as Nurses," *Fall River Evening News*, Sept. 28, 1918, 4; "No Action Needed by School Board," *Fall River Evening Herald*, Sept. 27, 1918, 1.
91. "Epidemic Cripples Hospital Staff," *Fall River Evening Herald*, Sept. 20, 1918, 1.
92. "Mayor Endorses Board of Health," *Fall River Evening Herald*, Sept. 27, 1918, 1.
93. "No Abatement in Influenza Wave," *Fall River Evening Herald*, Sept. 28, 1918, 1.
94. "Too Much Visiting of Sick People," *Fall River Evening News*, Sept. 3, 1918, 6; "Red Cross is Clearing House During Epidemic," *Fall River Evening Herald*, Sept. 30, 1918, 10; "Invalid Foods for Grip Victims," *Fall River Evening News*, Oct. 2, 1918, 2; "Another Diet Kitchen Opened," *Fall River Evening News*, Oct. 3, 1918, 2.
95. "Epidemic Figures Again Jump Upward," *Fall River Evening Herald*, Oct. 4, 1918, 1.
96. "Pool Efforts to Fight Epidemic," *Fall River Evening Herald*, Oct. 1, 1918, 1; *Report of the Board of Health for the Year Ending December 31, 1918* (Fall River, 1919), 22-23.
97. "Fall River Calls for 50 More Nurses," *Fall River Evening News*, Oct. 3, 1918, 3.
98. *Report of the Board of Health for the Year Ending December 31, 1918* (Fall River, 1919), 25.
99. "Shut the Saloons, Says Mgr. Cassidy," *Fall River Evening News*, Sept. 28, 1918, 1.
100. "Recommend That All Saloons Close," *Fall River Evening News*, Oct. 1, 1918, 11.
101. "390 Cases Less Than Yesterday," *Fall River Evening Herald*, Oct. 3, 1918, 1.
102. "Wholesalers May Open Their Places," *Fall River Evening Herald*, Oct. 8, 1918, 1.
103. *Ibid.*
104. "Red Cross Rooms Open All Night," *Fall River Evening News*, Oct. 5, 1918, 8; "Drop in Cases of Influenza," *Fall River Evening News*, Oct. 5, 1918, 1; "Little Change in Situation," *Fall River Evening News*, Oct. 7, 1918, 1.
105. "Situation Looks Very Much Better," *Fall River Evening News*, Oct. 10, 1918, 1.
106. "Crest of Epidemic is Thought Passed," *Fall River Evening News*, Oct. 14, 1918, 1.
107. "Stricter Ban on Public Funerals," *Fall River Evening News*, Oct. 10 1918, 2.
108. "294 Cases and 35 Deaths Reported," *Fall River Evening Herald*, Oct. 15, 1918, 1.
109. "47 New Cases and 9 Deaths Reported," *Fall River Evening Herald*, Oct. 22, 1918, 1.

110. "Crest of Epidemic is Thought Passed," *Fall River Evening News*, Oct. 14, 1918, 1.
111. "Thinks Epidemic is Under Control," *Fall River Evening Herald*, Oct. 16, 1918, 6.
112. "To Be No Let Up in Restrictions," *Fall River Evening Herald*, Oct. 17, 1918, 1.
113. "Health Board May Act Today," *Fall River Evening News*, Oct. 22, 1918, 1.
114. "Ban Taken Off on Gatherings," *Fall River Evening News*, Oct. 23, 1918, 1.
115. "Public Schools Reopen Monday," *Fall River Evening News*, Oct. 25, 1918, 1. For the time being, students of Technical High School attended Durfee High while their school was used as an emergency hospital.
116. "Epidemic Still Affects Business," *Fall River Evening Herald*, Oct. 25, 1918, 1.
117. "Only 50 Cases and 12 Deaths," *Fall River Evening Herald*, Oct. 28, 1918, 1.
118. "Influenza Report: 25 Cases, 4 Deaths," *Fall River Evening News*, Oct. 30, 1918, 2.
119. "Early Recuperation from the Epidemic," *Fall River Evening News*, Nov. 8, 1918, 5.
120. "Would Prevent New Influenza Outbreak," *Fall River Evening News*, Dec. 13, 1918, 6; "Board of Health Advises Care to Avoid Infection," *Fall River Evening Herald*, Dec. 14, 1918, 2; "Precautions to Check Influenza," *Fall River Evening News*, Dec. 17, 1918, 12; "Places Ban on Xmas Assemblies," *Fall River Evening Herald*, Dec. 18, 1918, 1.
121. "No Recurrence of Epidemic Looked For," *Fall River Evening News*, Dec. 24, 1918, 10.
122. "Service Brought Influenza Here," *Fall River Evening Herald*, Dec. 31, 1918, 1.
123. "New Rules to Guard Against Influenza," *Fall River Evening News*, Dec. 31, 1918, 1.
124. "907 New Cases of Influenza in City," *Fall River Evening Herald*, Oct. 2, 1918, 1; "Increase in Deaths, Decrease in Cases," *Fall River Evening Herald*, Oct. 11, 1918, 1, 8.
125. *Report of the Board of Health for the Year Ending December 31, 1918* (Fall River, 1919), 44, 37.
126. "August 27, 1918: Flu Epidemic Begins in Boston," www.massmoments.org/moment-details/flu-epidemic-begins-in-boston.html (accessed Aug. 3, 2020).
127. "America During the 1918 Influenza Pandemic," <https://dp.la/exhibitions/1918-influenza> (accessed Aug. 3, 2020).
128. *Ibid.*

1918 Influenza Memorial, Devens, Massachusetts

On May 17, 2019, the Fort Devens Museum held a ceremony at the Rogers Field Memorial Park to unveil a memorial to commemorate those who died and those who cared for the ill. The memorial reads:

Within days of arriving in Boston at the end of August 1918, the Spanish influenza epidemic quickly moved 40 miles west to Camp Devens where, on September 8, it began its devastation of the cantonment constructed for 35,000 troops. Overcrowded with almost 45,000 enlisted men, 15,010 fell ill with the virus and bacterial infections by month's end. By January 1919, when the worst of the epidemic was over, 821 enlisted men had died at Camp Devens from influenza and related respiratory diseases. Several doctors, nurses, other camp medical personnel, and a chaplain also lost their lives.

In remembrance of the stalwart men and women who died and those who cared for them during the 1918 influenza epidemic at Camp Devens.

Photo courtesy of Kara Fossey, Executive Director, Fort Devens Museum.

