



1918's DEADLIEST KILLER

THE FLU PANDEMIC HITS PENNSYLVANIA

Thomas J. McGuire



*I had a little bird,
Its name was Enza.
I opened the window,
And in-flu-enza.*

—*Children’s rhyme, 1918*

THE YEAR 1918 was arguably one of the darkest in modern times and the deadliest ever recorded in human history. Much of Europe was locked in a hideous, relentless military struggle that had dragged on for three years, killing millions of soldiers and bankrupting its governments. Famine stalked the continent and brought whole societies to the brink of chaos. Russia was knocked out of the war by the Bolshevik Revolution of October 1917 and was engaged in a murderous civil war, resulting in the deaths of nearly 10 million people and the establishment of the first major communist society. By the end of 1918 three other European empires would be toppled—Germany, Austria-Hungary and the Ottoman Empire—while three victorious empires—France, Great Britain and Italy—would be shaken to their foundations. New nations appeared as old monarchies vanished into exile or death down a mineshaft. One world power alone, the United States, would stand undamaged and financially solvent, though paying a bloody price for its involvement in “the war to end all wars.”

But the deadliest side of 1918 had little to do with machine guns, poison gas, rapid-fire artillery or U-boat torpedoes. The main killer was invisible, silent and relentless, suffocating its victims as it circled the planet, ravaging every continent except Antarctica. Its sudden ferocity confounded and terrified every country it visited, war or no war, and in the end, it killed more human beings in one year than any other known force in history.

It was *la grippe*, influenza, “the flu.” Because the first published reports about it

came out of Spain, it received the catchy but inaccurate name “Spanish flu” and a grim, lascivious nickname, “the Spanish Lady.” And in an even more bizarre and frightening twist, its main victims were not the very young and the very old, who are the usual population groups worst affected by flu, but young and healthy adults, mainly soldiers, at first, in the peak of health and physical condition.

Earlier this year, the “flu season” of 2017–18 gained notoriety as one of the worst in recent American history. The strains started in late October 2017 and, according to the Centers for Disease Control and Prevention (CDC), had spread more rapidly because of the timing of the holidays. Large gatherings of people for Thanksgiving, Christmas and New Year’s were the vehicles for widespread contagion.

Likewise, public venues like parades or sporting events pull masses of people together in close quarters for short periods of time, but enough for personal contact to spread ailments, especially air-borne particles spread by coughing and sneezing. Schools are often places where flu can spread quickly among students, teachers and staff and then get carried home.

Ironically, the worst health crisis ever to hit the United States (and the deadliest worldwide pandemic on record) occurred 100 years ago, starting in the winter and spring of 1918 and ravaging its way through the late summer and early autumn months, only to reappear in a third wave the following spring. This occurred towards the end of World War I, which up to that point had been the deadliest war in

The Liberty Loan Parade on September 28, 1918, in Philadelphia, with its close-packed crowds was ground zero for the spread of influenza in the city.

U.S. NAVAL HISTORY AND HERITAGE COMMAND

modern history, with more than 15 million soldiers killed and millions of others wounded or maimed for life. Of that number, some 57,000 American soldiers died in combat, while an equal number died of the flu. Back home, when it was over, more than 650,000 American civilians were dead, and the worldwide death toll is believed to have ranged between 20 million and 50 million (some sources place it as high as 100 million). In three awful months, the flu killed six times as many American civilians as soldiers who died in the war in 17 months. It seemed to come out of nowhere and then vanished almost as mysteriously as it appeared, especially from the history books.

Recently, during the week of February 4–10, 2018, Philadelphia went wild as the Eagles won the Super Bowl and brought the Lombardi Trophy to the City of Brotherly Love. The triumph was capped with a massive parade on Thursday, February 8, starting at the sports complex on South Broad Street, right by the old Philadelphia Navy Yard, and moving up to City Hall, where it turned and headed to the “Rocky steps” of the Philadelphia Museum of Art. Projections initially estimated a crowd of 3 million, but the actual number was closer to 1 million. Many schools were closed and hundreds of thousands took a holiday to participate in this long-awaited Philadelphia first.

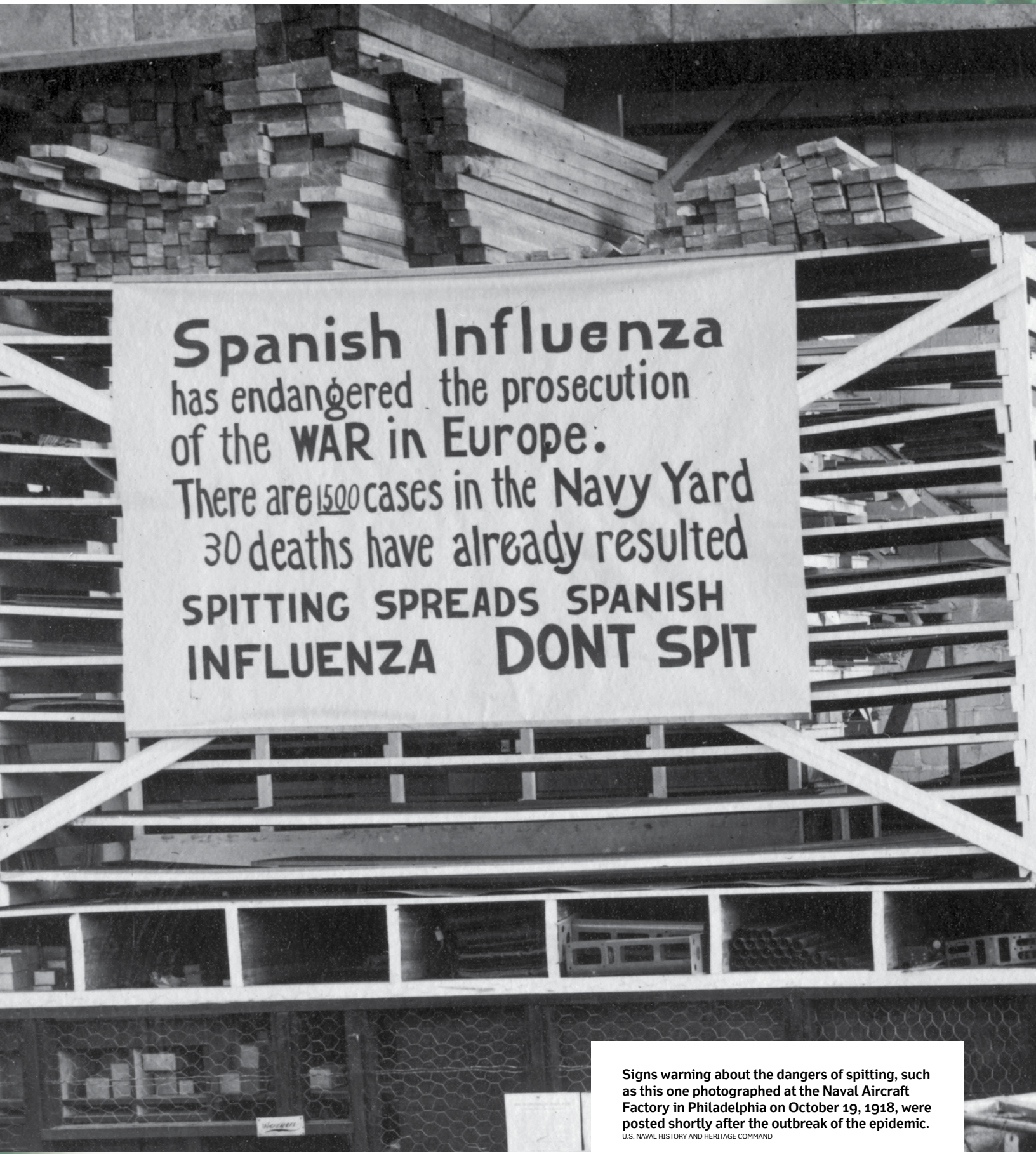
Back in 1918 Philadelphia, of all American cities, was the hardest hit by the flu. A variety of circumstances led to its outbreak in the city, but the main one, eerily enough, was a massive parade over much of the same route, but in reverse: down South Broad Street from City Hall to the Philadelphia Navy Yard. In September the government held Liberty Loan drives to raise cash for the war effort and rally the home folks to support one of the most intense and grinding war efforts in history. On September 28, an estimated 250,000 people lined Broad Street to cheer for the Army, Navy and Marines, listen to bands and patriotic speeches, and toss pocket change into large flags carried horizontally along the street. It was patriotic enthusiasm in a city that was booming with the manufacturing of ships at the Navy Yard and Hog Island, munitions at the Frankford Arsenal, steel at Midvale, and locomotives and artillery shells at the Baldwin Locomotive Works.

Unbeknownst to the public, some authorities were already aware of the danger posed by a hospital ship that had just arrived but were afraid to speak out for fear of causing panic or, worse yet, being accused of helping the enemy by spreading hysteria. Censorship during World War I was tight on all levels. The federal government had passed several emergency acts clamping down on freedom of speech and press, ruthlessly arresting violators in the name of national security; therefore, worried local authorities along with newspaper editors largely kept quiet until the sudden and massive scope of the sickness could no longer be ignored. Even as tens of thousands fell ill almost overnight and the death rates soared, news of the pandemic was at first kept to a minimum. By the time that it was safe to talk about it publicly, the damage was done and the horrors were unleashed.

The Philadelphia Navy Yard was ground zero for the 1918 sickness. The hospital ship full of wounded doughboys had docked in early September, traveling down from Massachusetts where influenza had broken out at Fort Devens, and many on board were now sick with flu. Crew members also carried it with them, and the parade on September 28 saw sailors mingling in the crowds of well-wishers. It soon spread like wildfire among the civilians who went to the parade, and by the first week in October, the city was in the death grips of the most shocking pandemic ever seen.

Where did all this mayhem begin? Historians are unsure, as research has uncovered reports from widely varying places such as Great Britain and China. In the U.S. the flu was long thought to have first appeared in early March 1918 at Camp Funston in Fort Riley, Kansas, where thousands of recruits were being trained. Subsequent investigation in Kansas found that a massive flu outbreak had occurred in Haskell County in early January. Because flu was an “unreportable disease” at that time and the area was so remote, tracking down the source has been challenging. “It had been cattle country . . . but Haskell farmers also raised hogs, which is one possible clue to the origin of the crisis that would terrorize the world that year,” historian John M. Barry recently wrote in the



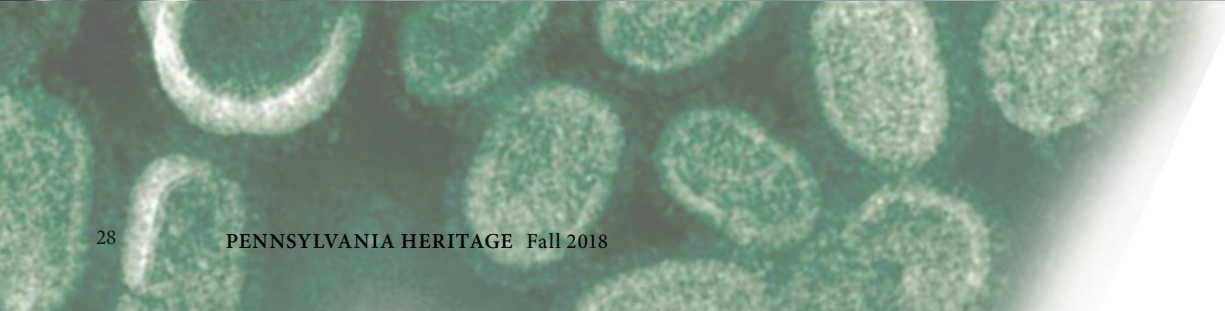
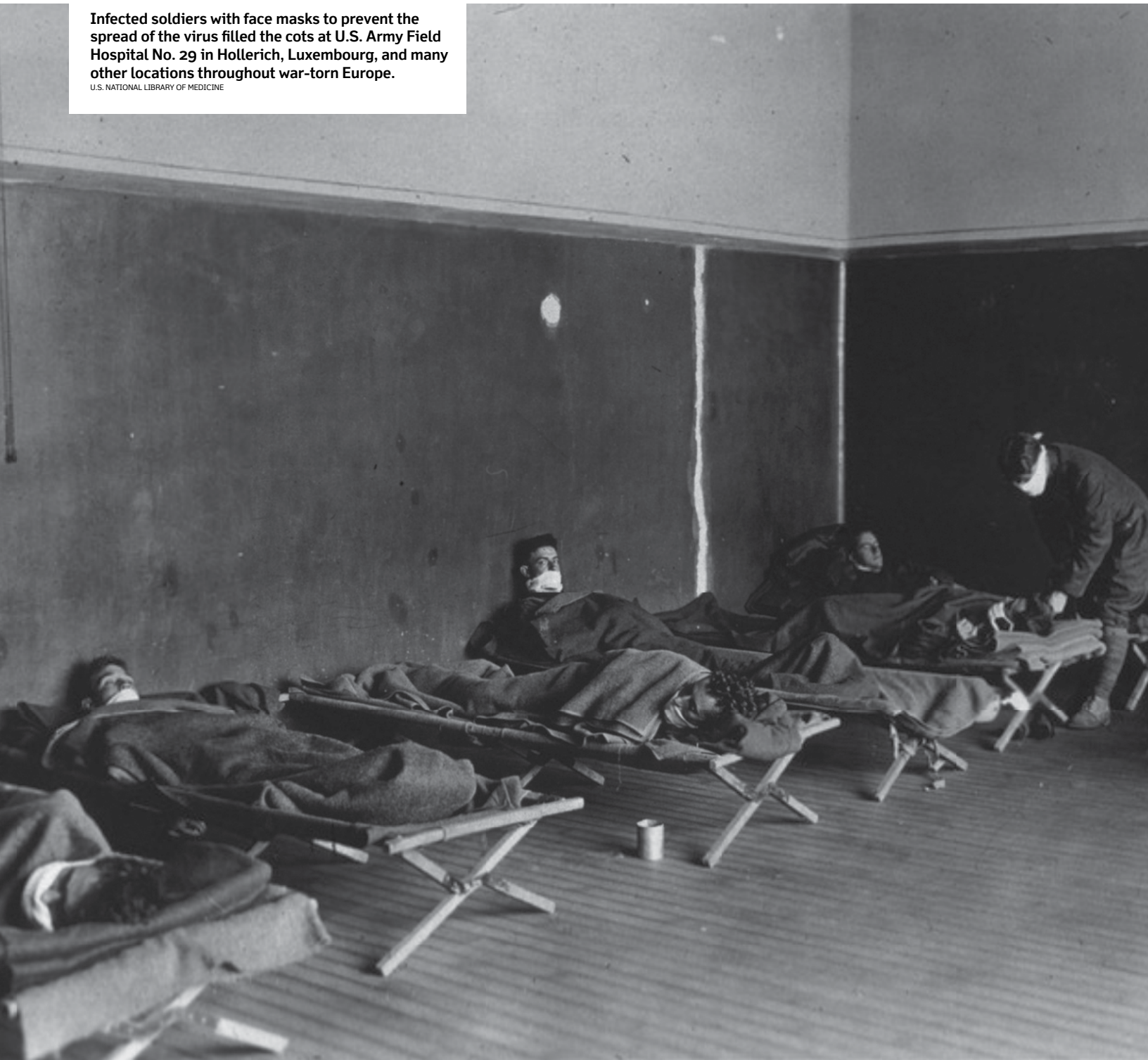


Spanish Influenza
 has endangered the prosecution
 of the **WAR** in Europe.
 There are 1500 cases in the Navy Yard
 30 deaths have already resulted
SPITTING SPREADS SPANISH
INFLUENZA DONT SPIT

Signs warning about the dangers of spitting, such as this one photographed at the Naval Aircraft Factory in Philadelphia on October 19, 1918, were posted shortly after the outbreak of the epidemic.
U.S. NAVAL HISTORY AND HERITAGE COMMAND

Infected soldiers with face masks to prevent the spread of the virus filled the cots at U.S. Army Field Hospital No. 29 in Hollerich, Luxembourg, and many other locations throughout war-torn Europe.

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November 2017 issue of *Smithsonian*. “Another clue is that the county sits on a major migratory flyway for 17 bird species, including sand hill cranes and mallards.” Viruses were yet unknown in 1918 and trying to identify the source of this particular outbreak has taken decades. Only in the past 20 years has the mystery been unraveled by CDC researchers who successfully reconstructed the flu strain. These dedicated scientists are very much concerned about the strong probability of another catastrophic outbreak worldwide.

The 1918 disease was a toxic combination of avian and swine flu, or influenza A (H1N1). “Scientists today understand that bird influenza viruses, like human influenza viruses, can also infect hogs,” Barry reported, “and when a bird virus and a human virus infect the same pig cell, their different genes can be shuffled and exchanged like playing cards, resulting in a new, perhaps especially lethal, virus.” Some of the civilians who had been in Haskell County later went to Camp Funston in Fort Riley, which is where the virus was probably transmitted through casual contact such as sneezing, coughing and shaking hands.

At Camp Funston, one soldier reported to the infirmary on the morning of March 4, soon followed by dozens of others. By the end of the day, several hundred were down with high fever, coughing and severe congestion. Sore, aching muscles and extreme fatigue added to the misery, along with severe pain behind the eyes and ears. Within days, thousands were sick in the barracks, and it quickly spread to other camps at Fort Riley. If pneumonia set in, the doomed victims began to turn bluish as their lungs filled with fluid. The speed at which this disease spread and killed was horrifying. Thirty-eight soldiers, all healthy young recruits in the prime of life, died in the camp.

But within a few weeks, the flu seemed to have run its course. Given the numbers of victims later claimed by the disease, the Camp Funston death toll seemed negligible. The survivors completed their training and were sent by trains and

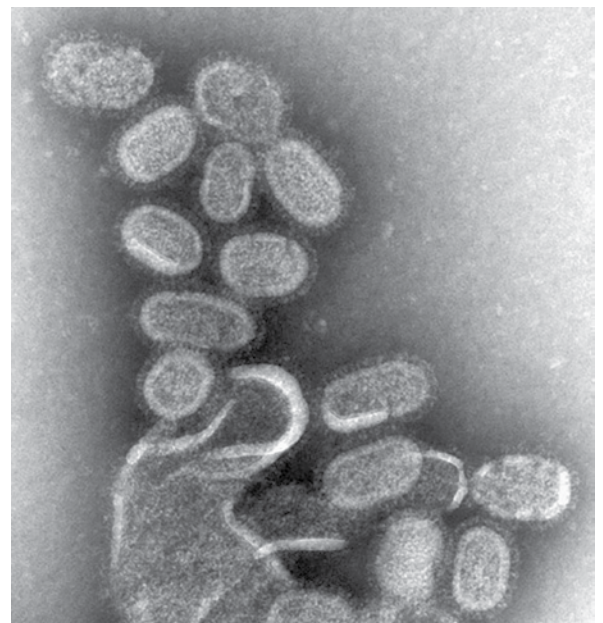
hundreds of ships to Europe. Somewhere along the way, the virus mutated and turned lethal as thousands of American soldiers arrived in France on crowded troopships in greater numbers every day and marched into the inferno of World War I. By the end of 1918 there were 2.5 million U.S. troops in Europe.

The soldiers arrived as the most devastating offensive of the war shredded the British and French lines and dislodged the front further than anything since the conflict broke out in 1914. With a million veteran troops freed up from the Russian Front, Germany was able to launch its largest (and last) offensive of the war in spring 1918, hoping to break the deadlock before American manpower could make a difference. Although the U.S. Army had been small and inexperienced at the start, German authorities knew that it was growing exponentially day by day, and the sheer number of Americans might turn the tide.

Beginning on March 21, a volcanic artillery barrage from 7,000 German guns lobbed 1.1 million shells at the Allied trenches in five hours; the bombardment could be heard in southern England, more than 100 miles away. The Ludendorff Offensive pounded the British and French forces with sickening effectiveness, inflicting half a million casualties over the next few weeks and driving the Allies to the breaking point. The participation of the American Expeditionary Force (AEF) under General John “Black Jack” Pershing was the straw that broke the camel’s back in stopping the German advance by plugging the gaps. By July the offensive was halted, and the Allies began to counter-attack. In the Argonne Forest in late September, the Germans were well dug in and the AEF faced the worst battle in U.S. Army history—a slow, grinding, inch-by-inch fight that slaughtered men by the thousands on both sides.

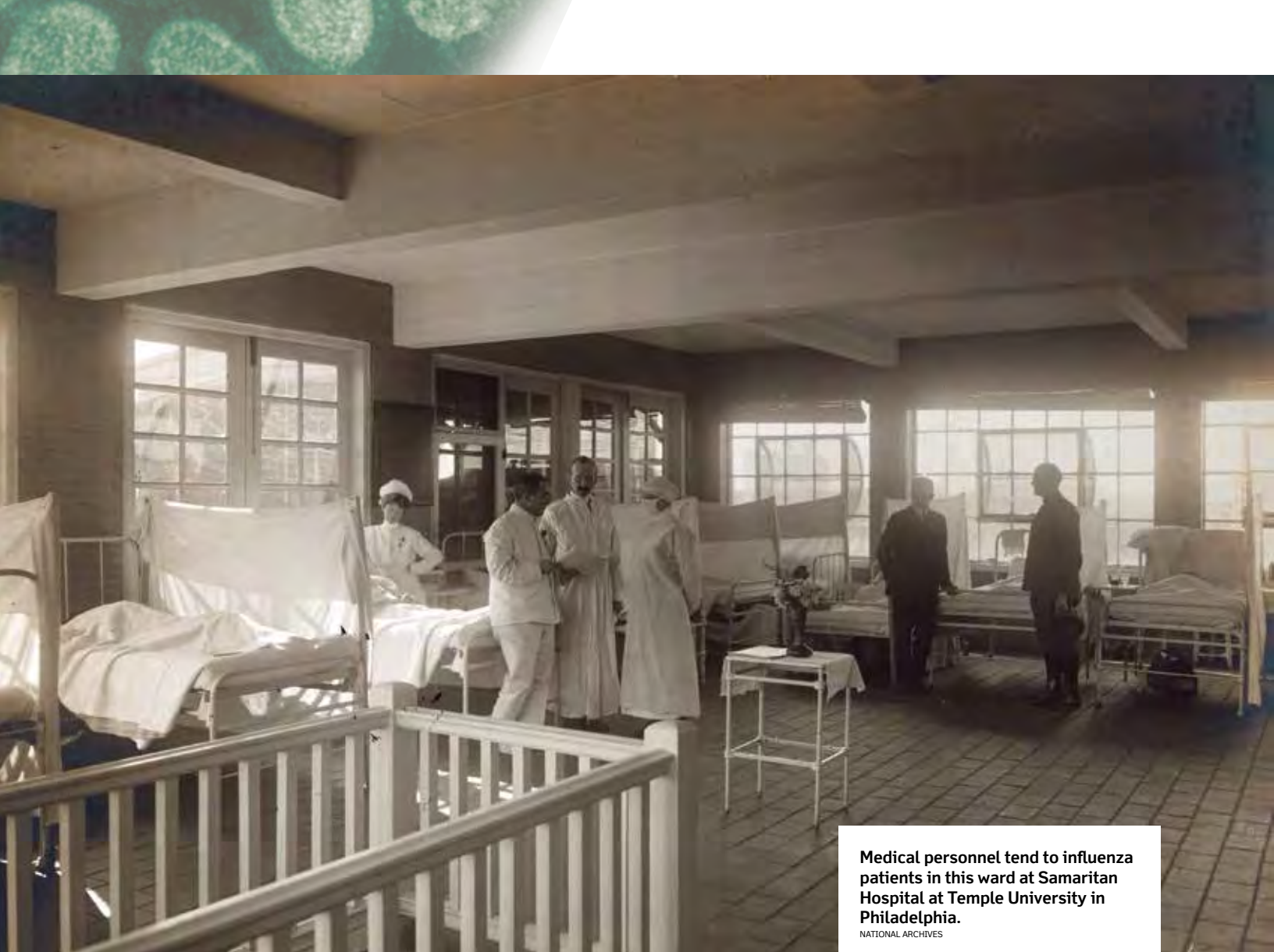
Some historians have suggested that the flu played a significant role in stopping the Ludendorff Offensive. Certainly, thousands of German troops got sick, as did French, British, Belgian and American soldiers, and many died from it. This war had assumed an even more sinister character than previous conflicts as scientists on both sides sought unthinkable ways to break their foes’ will by introducing dozens of types of poisonous gases, as well as experiments with anthrax and heaven knows what else. In America, some propaganda would later suggest that the flu was the work of the Germans, a continuation of their policy of *schrecklichkeit*, “frightfulness,” against civilians. But because of censorship, little was said about the disease at the time until it became widespread in a neutral country: Spain.

According to *Clinical Infectious Diseases*, published by the Infectious Diseases Society of America in September 2008, the rail travel of Spanish and Portuguese migrant workers in and out of France probably brought the flu to the Iberian Peninsula. It first made headlines in Madrid on May 22, 1918. Soon, millions were infected, including the king of Spain, and by the end of the year, a quarter of a million Spaniards were dead. Because



A microscopic image shows 1918 influenza virions recreated in 2005 at the National Center for Infectious Diseases.

CENTERS FOR DISEASE CONTROL AND PREVENTION'S PUBLIC HEALTH IMAGE LIBRARY / DR. TERRENCE TUMPEY / PHOTO BY CYNTHIA GOLDSMITH



Medical personnel tend to influenza patients in this ward at Samaritan Hospital at Temple University in Philadelphia.

NATIONAL ARCHIVES

Spain was not at war, censorship was not an issue, and the reporting of the pandemic breaking out in Spain gave it the name “Spanish flu.”

In France, American casualties began to mount in the late summer, and wounded doughboys were evacuated by hospital ships back to the U.S. Some of them were infected with the mutated strain of the virus, and the second and deadliest wave of disease, described by Barry as being like a tsunami, was about to be unleashed on the home front. In early September, the training center at Fort Devens, Massachusetts, experienced the full horror of a sudden outbreak. PBS’s *American Experience* in its documentary *Influenza 1918* quotes Roy Grist, a doctor stationed at Fort Devens, who wrote to a friend on September 28 that the flu had ripped through this camp of 50,000 and utterly

demoralized everyone. His description of what the disease did to its victims speaks for itself: “These men start with what appears to be an attack of *la grippe* or influenza, and when brought to the hospital they very rapidly develop the most viscous type of pneumonia that has ever been seen. Two hours after admission they have the mahogany spots over the cheek bones, and a few hours later you can begin to see the cyanosis extending from their ears and spreading all over the face.” Clinically, though with a shudder, he grimly commented, “It is only a matter of a few hours then until death comes, and it is simply a struggle for air until they suffocate. . . . We have been averaging about 100 deaths per day, and still keeping it up.”

When the flu arrived in Philadelphia, it swept through the city with frightening speed. Pennsylvania Hospital, the nation’s

oldest, and other institutions had made Philadelphia a center for health study and medical training for decades. Although there were several large hospitals in the city, they were all short-staffed because of the war. Some had less than half of their regular medical workforce and the health system was completely overwhelmed.

In early October, state authorities finally acted by ordering all theaters, movie houses, churches, schools and saloons closed. The Bell Telephone Co. announced that 27 percent of its operators were ill, so phone calls were to be curtailed unless for an emergency. People were warned not to cough, sneeze or spit in public, and some were actually arrested for doing so. Gauze masks were to be worn for protection—an absolutely useless precaution described in one analogy as “like trying to stop a dust storm with a cyclone fence.”

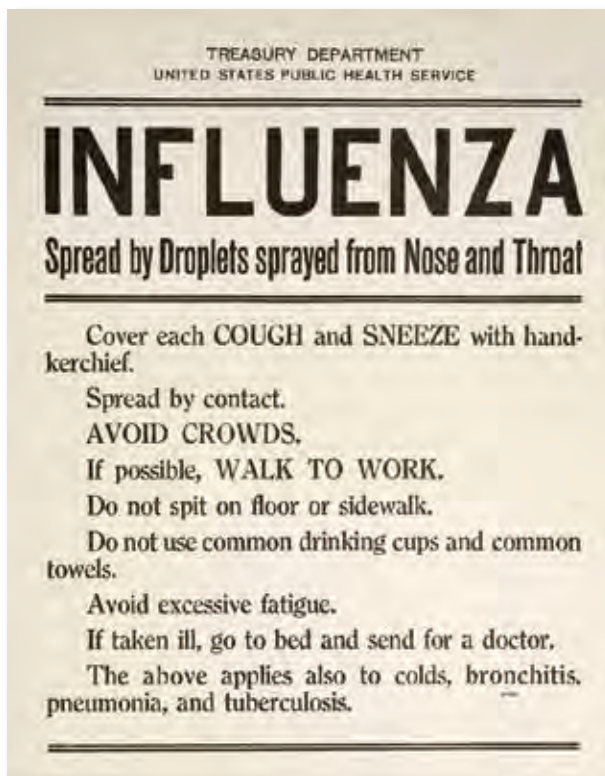
At the University of Pennsylvania, where more than 2,200 students were in officer training and the dorms were converted to barracks, a ghastly tally was kept by the school newspaper, *The Pennsylvanian*. On October 4, there were 636 new flu cases reported and 139 deaths in the city. Two of Penn's largest fraternity houses, Delta Psi and Phi Kappa Psi, were converted into infirmaries, staffed by third- and fourth-year Penn medical students. Pharmacies were so crowded that students from Temple and the Philadelphia College of Pharmacy were called into service to fill prescriptions. Two days later, 788 new flu cases and 171 deaths were reported. On October 8, there were 1,481 new cases and 250 deaths. By October 17, the death toll reached an incredible 711 reported victims in one day.

Coffins ran out. Some undertakers and grave diggers charged extortionate prices for burials. So many poor people died that bodies were stacked in wooden crates, and many were unidentified. In the absence of facilities to embalm or refrigerate the overwhelming number of dead, mass graves were dug as quickly as possible to prevent further outbreaks of disease from decaying corpses, and cold storage plants normally used for food were taken over for bodies. By the end of October, in this city of 2 million, the death toll had risen to 13,000.

As bad as things were in Philadelphia, Pittsburgh had it much worse statistically. "No other big city in the nation had a higher death rate from the 1918 flu than Pittsburgh," noted Allison M. Heinrichs, writing in the *Pittsburgh Tribune-Review* of November 13, 2005. "More than one in every 100 people—twice the national mortality rate—died that year, according [to] the federal Centers for Disease Control and Prevention. During the worst days here, a new person caught the flu every 70 seconds and someone died of it every 10 minutes."

June Earl Austin was 18 years old and working as a freight handler on the Pennsylvania Railroad in Pittsburgh in 1918. In an interview with Heinrichs for her 2005 article, Austin at age 105 recalled

with vivid memory, "There were so many dead people that the undertakers were all full—they didn't have enough coffins." He continued, "At the railroad stations, they piled the pine boxes with the dead three or four high on the platforms. The whole town was in mourning; there were dead everywhere." Pittsburgh's population was 500,000 in 1918; approximately 4,500 deaths were reported.



The U.S. government posted signs such as this one listing precautions to avoid spreading influenza.
U.S. NATIONAL LIBRARY OF MEDICINE

Statewide, the flu killed an estimated 50,000 people. The actual number will never be known, because many rural deaths went unreported and burials were often hasty. Requests to use county prisoners to dig mass graves were considered but were ultimately rejected. Not surprisingly, cities suffered the worst. In Harrisburg 45 people died on October 19 alone. Whole families were devastated. The Harrisburg *Courier* reported that Herman Sourbeer died early on a Thursday morning, followed by two infants. His wife died on Friday, leaving three orphaned children.

Scranton's first death occurred on October 4, and by December more than 900 in the city had succumbed to the sickness. Erie recorded more than 9,000 cases of the flu and nearly 500 deaths in three

months, with 28 deaths on November 21 alone. Allentown reported more than 500 deaths. Easton lost 382. Bethlehem, in full blast with wartime steel production, had 108 deaths, which some consider suspiciously low given reports of its filthy, dust-filled streets.

In Reading and Pottstown combined about 5,000 people died. Public gatherings were banned in many places. "Sunday was without a parallel in the history of Reading," the *Reading Eagle* reported on Monday, October 8. "It was churchless, preachless, gasless, singless, gameless, clubless and everything but influenza-less." The Boyertown Casket Company went into overtime production and could not keep up with demand: 17 truckloads of coffins per day went to Philadelphia.

Gradually, the infection level and corresponding death rate began to decline. By the end of the first week of November, there was a significant drop off in new cases. There was other news: On November 11 at 11 a.m. on the Western Front, the First World War came to an abrupt end. Celebrations broke out everywhere and soon the forgetting about the flu began as it receded.

Pandemic experts believe that this flu ran out of victims, though it would resurge elsewhere in the spring of 1919. Journalist Ashley Halsey III, in his January 27, 2018, *Washington Post* story about the pandemic, quoted Anthony S. Fauci, the director of the National

Institute of Allergy and Infectious Diseases: "One hundred years after the lethal 1918 flu we are still vulnerable," he warned. "Without a universal vaccine, a single virus would result in a world catastrophe."

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