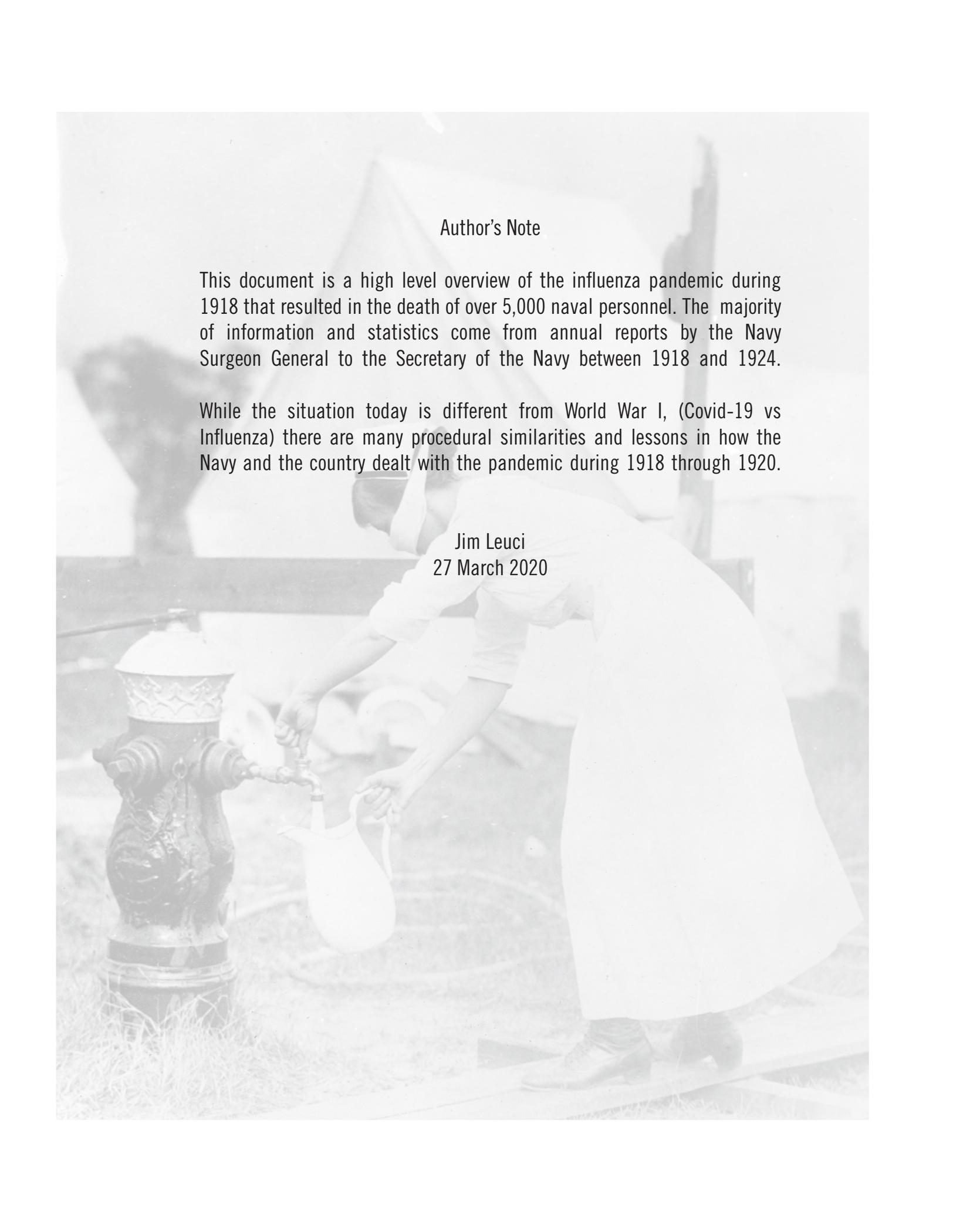


# The Navy and The Flu

## A War Within A War

by

James L. Leuci, MCPO, USN(Ret.)



### Author's Note

This document is a high level overview of the influenza pandemic during 1918 that resulted in the death of over 5,000 naval personnel. The majority of information and statistics come from annual reports by the Navy Surgeon General to the Secretary of the Navy between 1918 and 1924.

While the situation today is different from World War I, (Covid-19 vs Influenza) there are many procedural similarities and lessons in how the Navy and the country dealt with the pandemic during 1918 through 1920.

Jim Leuci  
27 March 2020



NHHC PHOTO

1890 I-r USS *Chicago*, USS *Yorktown*, USS *Boston*, and USS *Atlanta*, known as the The Squadron of Evolution experienced an Influenza epidemic in 1889-1890 which was minor compared to what would occur in 1918-1920.

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The 1918 Influenza Pandemic had a profound effect on the fleet and the lessons learned are still of value--especially today. The pandemic was most severe during 1918 and 1920. 5,000 Navy and Marine Corps deaths occurred during that time. The 1918 pandemic was unprecedented especially with regard number of infections and deaths. The U.S. Navy, which was familiar the threat of contagious infections at sea, experienced a precursor of what might come from a severe flu outbreak. The example was from 20 years earlier during the 1889-90 Influenza epidemic.

### **Influenza and the Squadron of Evolution 1889-1890**

Influenza was not a common disease aboard U.S. Navy ships during the mid-nineteenth century. However, in the winter of 1889, cases of influenza began to appear among the crews of Navy ships lasting through the spring of 1890. Influenza was first reported on ships of the Squadron of Evolution, also known as the European Squadron, during a port call in Lisbon, Portugal in December 1889.

On 21 December 1889, USS *Chicago*, USS *Boston*, and USS *Atlanta*, pulled into Lisbon. USS *Yorktown* arrived the following day. At the time, Lisbon was in the midst of an influenza epidemic that had been raging for several weeks. The first case of naval personnel becoming infected occurred aboard *Chicago* two days after arriving in port. The first victim was "an officer who had been on shore 36 hours previous to being attacked."<sup>1</sup>

Several new cases emerged over the following days from personnel who had been ashore for 24-36 hours. On December 30, the first case of a Sailor contracting the disease, who had not been ashore, occurred aboard *Chicago*.

By 28 December, influenza had spread to *Boston* and *Yorktown*. The disease eventually appeared aboard *Atlanta* on 30 December--ten days after arriving in port. *Atlanta* and *Boston* had a complement of 315 men each, *Chicago* had 470, and *Yorktown* 190--for a total of 1290. 486 influenza cases occurred

in the Squadron of Evolution which included one death.<sup>2</sup>

The epidemic within the squadron was short-lived ranging from 12-30 days. Generally, most of the patients recovered quickly. Their time on the sick list ranged from 1 to 9 days with the average time being 2-3 days.

### **East Coast Shore Installations 1889-1890**

Along the east coast of the United States the disease quickly spread to naval stations and shipyards in mid-December lasting from 27 days in Annapolis to 68 days in Boston. In Norfolk it lasted 44 days. The percentage of naval personnel becoming infected ranged from a few mild cases in Richmond, Virginia aboard ships stationed there, to an estimated 70% of personnel stationed or employed by the Washington Navy Yard. The infections did not appear to necessarily be influenced by age or location.

At the Philadelphia Navy Yard, 33% of naval personnel and shipyard workers were infected. This included men and women of all ages--mostly young and middle aged adults. However, at the Naval Academy in Annapolis, 75% of the midshipmen became sick. In contrast, at the Naval Retirement Home in Philadelphia only 2 cases out of 196 residents were observed. In Norfolk, around 25 % of naval personnel stationed at the Navy Yard and Naval Training Station were infected. However, on the receiving ship in the Norfolk Navy Yard, over 75% of the crew became ill.<sup>3</sup> Overall, along the east coast only one death occurred and that was in Boston.

Ships operating in the Gulf of Mexico, West Indies, and off the coast of South America experienced different situations relating to the infection of crew members. Naval Station Pensacola did not report any cases as of 5 March 1890. The situation was the same for ships cruising in the West Indies. Along the coast of South America, USS *Tallapoosa* was initially infected on 1 February, eventually peaking on 20 February. 20 % of the 161 man crew were infected.<sup>4</sup>



1918 Commonwealth Pier. The receiving ship at Commonwealth Pier in Boston was not actually a ship. The building was used by the Navy as a receiving station. This was the site of the first influenza case in the fall of 1918. NHHC PHOTOGRAPH

### West Coast Shore Installations 1889-1990

The situation varied on the west coast and the Pacific. Alaska did not experience an epidemic. However, at Mare Island the first case appeared on 1 January 1890 reaching an epidemic state around 20 January. On 10 February, the epidemic subsided after infecting 150 men of the 1000 stationed at Mare Island. The death rate was 4 per cent with most deaths resulting due to pneumonia complications.

Influenza, in an epidemic form, became less prevalent over the next 25 years. However, the situation began to change in 1916 when the death rates from the disease began to rise. By 1918, influenza was in an epidemic form in Europe which was engaged in the Great War involving millions of sailors and soldiers.

### 1918 Influenza Pandemic and the U.S. Navy

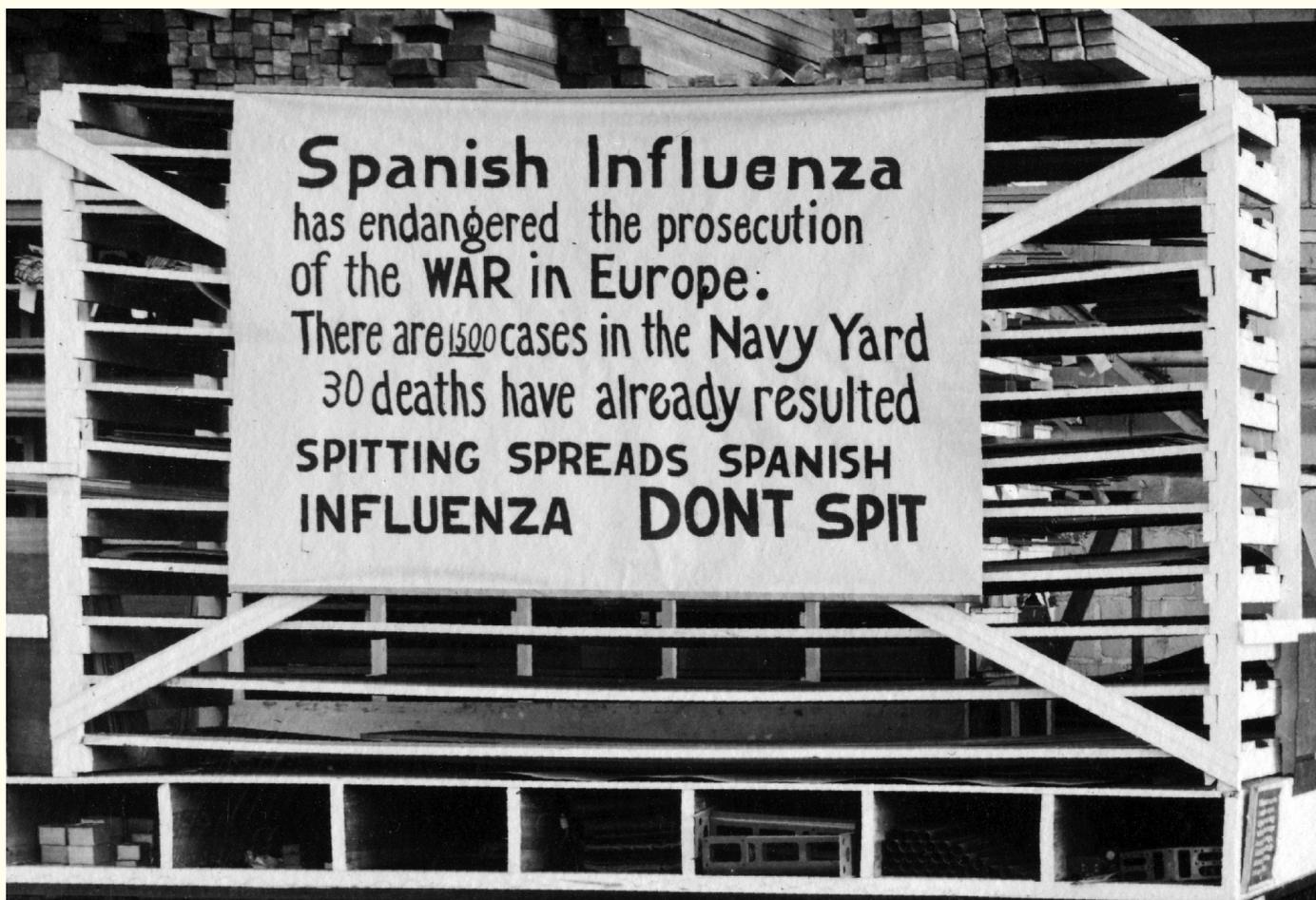
The 1918 Influenza epidemic occurred in two phases--in the spring and the fall. In January 1918, an attack of the flu broke out on USS *Minneapolis* at the Philadelphia Navy Yard. There were 21 cases of infection. Within two weeks the epidemic ended--at least on *Minneapolis*. However, the number of cases

on the east coast dramatically increased over the following weeks and months.

The outbreaks occurred aboard ships and at Naval Stations. Among ships, USS *Dubuque* at the Brooklyn Navy Yard experienced 11 cases on the low end. While, USS *New Jersey* experienced 220 cases. However the largest outbreak, 350-400 cases, occurred at the Naval Radio School located in Cambridge, Massachusetts.<sup>5</sup>

By March 1918, the epidemic was still spreading. USS *Frederick* at the Portsmouth, New Hampshire Navy Yard, reported 147 cases. USS *St. Louis* and USS *Charleston*, both in Norfolk, experienced 73 and 55 cases respectively. USS *Georgia* and USS *Kansas*, operating in the Chesapeake Bay reported a rise in cases among their crews.

From April through July 1918, the number of reported cases within the Navy continued to grow. In Norfolk, USS *North Carolina* had 100 mild cases. USS *May* with a crew of 80, had 20 cases. USS *Oregon* stationed at Mare Island reported 450 cases accounting for two thirds of the crew.



NHHC PHOTOGRAPH

Mounted on a wood storage crib at the Naval Aircraft Factory, Philadelphia, Pennsylvania, on 19 October 1918. As the sign indicates, the Spanish Influenza was then extremely active in Philadelphia, with many victims in the Philadelphia Navy Yard and the Naval Aircraft Factory. Note the sign's emphasis on the epidemic's damage to the war effort.

The situation was similar overseas. In May, USS *Dixie* deployed to Queenstown, Ireland, had 77 cases--11 % of the crew. USS *Texas*, operating with the Royal Navy experienced 80 cases with two deaths. USS *Nashville* operating in the Mediterranean was hit with 91 cases representing 47 % of the crew. Ashore in Northern France, Naval Air Stations at Dunkirk and Gujan-Mestras experienced influenza attacks affecting 90 and 40 % of their compliments respectfully.<sup>6</sup>

The disease migrated to the Pacific. In June 1918 USS *Monterey*, located at Pearl Harbor, reported 124 cases--66 % of the crew. By July 1918, the influenza had become a world-wide pandemic. However, during the July and August the cases of influenza within the fleet and ashore diminished.

During the period of 1 April through July 1918, the epidemic in France began to slow. In early August, the French government relaxed quarantine restrictions. However, it may have been too early to begin relaxing containment procedures. By the end of August the severity and number of new cases began to resurge in France.

### **Second Wave Resurgence Fall 1918**

On 22 August, an outbreak of influenza was reported among French Army in Northern France--in the Brest area. This time the influenza symptoms were more severe than what was experienced the previous spring. Pulmonary complications along with a quick and abrupt onset of pneumonia were common to the second wave. By the beginning of September, the pandemic began spreading to many nations across the globe. China, South Africa, India, Japan, Brazil, Spain and Portugal were a few of the countries that were affected by the second wave that was quickly spreading between communities.

### **The U.S. Navy September-December 1918**

The Navy experienced three cases of influenza at the receiving ship (Commonwealth Pier) in Boston on 27 August 1918. The symptoms of the new cases were more severe than earlier in the year. Also, the onset of symptoms were quick with many patients going from

good health to the flu in a couple hours. The epidemic at Commonwealth Pier, in Boston peaked in six days and was over by the first week in September. However, it was just beginning elsewhere.

The recruit training camp, located on Bumkin Island, in Boston harbor had a quick but severe epidemic beginning on 7 September. The epidemic included a couple peaks and abruptly ended on September 16. Throughout September the influenza pandemic spread throughout ships and shore stations.

Flu epidemics began appearing in the Atlantic Battleship Fleet in mid-September 1918. In general, most battleship epidemics peaked within 10 days. Five flu outbreaks on transport ships also occurred during the first week in September.

Navy studies showed that naval personnel assigned to ships were less affected by the flu epidemic than personnel assigned ashore. Sailors on ships lived in crowded conditions and those on transports were often exposed to disease by the troops they were transporting. Neither circumstance appeared to contribute to more severe epidemics at sea. The attack rate varied among different types of ships but remained relatively low compared to attacks ashore. The low attack rate in 1918 was consistent with the rates that occurred during 1889-1890.

The 1918 attack rate among ships:<sup>7</sup>

Battleships	16.3%
Cruisers	11.4%
Gunboats	29.4%
Destroyers	26.2%
Submarines	26.2%
Transports	8.8%

The armored cruiser, USS *Pittsburgh*, did not follow the average attack rate for cruisers. *Pittsburgh* was in Rio de Janeiro in October 1918, during the peak of a citywide pandemic. The first cases on *Pittsburgh* appeared on 7 October. Over the next week nearly



NHHC PHOTOGRAPH

1918 Naval Training Station San Francisco crowded sleeping area with sneeze screens erected as a precaution against the spread of influenza.





NAVAL HISTORY AND HERITAGE COMMAND PHOTO

1918 Naval Training Camp Gulfport Mississippi. Interior of an isolation ward in the Naval hospital during the influenza epidemic.

50% of the crew came down with influenza. Counting the mild cases that were not put on the sick list, the actual attack rate was estimated to be nearly 80%. The daily number of cases peaked in six days, at 211. Over the following days, the epidemic abruptly slowed. However, over the following six weeks, the total number of *Pittsburgh* cases reached 647. This included 58 deaths which amounted to a death rate of 8.9%.<sup>8</sup>

During the period of 1 September 1918 through 31 December 1918 there were 344 deaths aboard Atlantic Fleet ships resulting from 8,670 influenza cases. The Cruiser and Transport Force, which transported nearly 130,000 soldiers and marines during that period, experienced 733 deaths occurring among those troops along with 42 deaths of the various ship's companies.<sup>9</sup>

### **1918 The Navy Department in Washington, DC.**

The Navy Department in Washington, DC influenza statistics show the effects on military personnel living and working alongside the civilian communities. Nearly 7,500 Navy and civilian employees were assigned to the various bureaus that made up the Navy Department. There were nearly 1,600 cases resulting in 23 deaths. The statistics resembled the numbers that large cities around the country were experiencing. One cause of the high numbers was attributed to overcrowding. The Navy noted that office areas where overcrowding existed resulted in a higher instance of infection compared to less dense conditions.<sup>10</sup>

### **1918 and Beyond**

In the fall of 1918, the manpower of the Navy stood at nearly 600,000. During this time, August through December, there were nearly 92,000 cases of influenza, 6,425 cases of bronchitis, and 8,816 cases of pneumonia.<sup>11</sup> The number of deaths in the Navy, during this time, was 4,136. The actual number of cases of influenza was probably higher because many of the pneumonia cases may have been influenza related. Additionally, it was "estimated that at various

stations that for every 100 cases of influenza formally admitted to the sick list, from 50-75 mild cases were never recorded."<sup>12</sup> It was also noted that among the naval personnel who had influenza in the spring of 1918 most were not attacked again during the second wave in the fall of 1918.

The fatality rate among naval personnel would have been much higher if preventative measures had not been implemented and practiced. This included quarantine, daily inspections of personnel, taking temperatures daily, early isolation of the infected, wearing face masks and gowns, disinfecting, ensuring adequate ventilation, and the use of screens between bunks and hammocks. Other methods included restricting indoor crowds, along with restrictions on traveling. The most important practice was the enforcement of basic sanitary practices and education of naval personnel.

During WWI, the U.S. Navy suffered over 1,200 combat casualties including over 400 killed in action. The number of naval personnel who died from influenza was over 5,000 including over 4,000 who died in the fall of 1918. The pandemic would run its course over the next five years. In 1919, there were over 20,000 cases and 558 died. The following year, the number of cases dropped to 9,800 including 278 deaths. By 1921 through 1923 the number of cases would generally continue to decline and the number of deaths would drop to single digits.<sup>13</sup>

The lessons learned from the 1918 Influenza pandemic are still of valid today. Nothing can totally prevent disease, especially in overcrowded ships or shore stations. However, the preventive measures used to slowdown and help contain the spread of the disease were and are imperative in protecting Sailor's lives and, secondarily, the readiness of the Navy. That cannot be overstated, regardless of how inconvenient and disruptive many of the measures are to normal life. However, without these measures, "normal life" could have been a thing of the past.

Stay Safe and do your part.

## EndNotes

- 1 Annual Report Surgeon General, U. S. Navy 1919 page 361
- 2 Annual Report Surgeon General, U. S. Navy 1919 page 362
- 3 Annual Report Surgeon General, U. S. Navy 1919 page 363
- 4 Annual Report Surgeon General, U. S. Navy 1919 page 364
- 5 Annual Report Surgeon General, U. S. Navy 1919 page 367
- 6 Annual Report Surgeon General, U. S. Navy 1919 page 368
- 7 Annual Report Surgeon General, U. S. Navy 1919 page 383
- 8 Annual Report Surgeon General, U. S. Navy 1919 page 383
- 9 Annual Report Surgeon General, U. S. Navy 1919 page 384
- 10 Annual Report Surgeon General, U. S. Navy 1919 page 399
- 11 Annual Report Surgeon General, U. S. Navy 1919 page 399
- 12 Annual Report Surgeon General, U. S. Navy 1919 page 400
- 13 Annual Report Surgeon General, U. S. Navy 1924 page 92