A Fresh Shipment of Disease: The Navy's Legacy on the Transference of the 1918 Influenza

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> *My train was an old Pullman going to Chicago. I went right through our town and saw the light in the window that mother put there. I got to Chicago in the morning. When someone opened a paper in front of me I saw "6,000 in the hospital have Spanish Influenza in Great Lakes, Illinois." I said, "Oh, that's where I'm going. What is Spanish Influenza?"*[1]
>
> – Nurse Josie Brown

Humble beginnings, like those Josie Brown experienced, were common in the early twentieth-century. Raised on a farm, Brown decided she wanted more than the backbreaking life of a farmwife. After three years in training to be a nurse, she was called into action shortly after the United States entered World War I. Her actions and support were needed to fight the unspoken battle that the United States and nearly every other nation on the planet was silently fighting at this time. This was not a war of weapons, ideas, or beliefs. It was a war that did not discriminate, and one that is still quite hidden from sight today. It was the war against disease.

The battle against the 1918 Spanish Influenza was fought for nearly a year, and the disease itself was swift, strange, and deadly. Contemporary death toll estimates for the pandemic are at least fifty-million people worldwide.[2] But epidemics were nothing new. There had been countless—and arguably more potent—influenza outbreaks in the past. Why, then, was this disease so far spread as to be fought in nearly all corners of the globe at once, when other diseases and outbreaks of the past were more contained? The large scale transfer of soldiers to distant points on the globe can be traced back to the colonies of the British Empire, bringing the illnesses back and forth between the West Indies, Africa and Asia. Soldiers traveled in what proved the perfect vehicle for even distribution of pestilence: overcrowded and underprepared naval transport ships, whose commanders were not worried about the yearly "flu." Rather they concerned themselves only with the ever pressing war. Since the war had distracted leaders, and the impact of influenza and the need for quarantines fell to the wayside, the U.S. Navy's ships literally became vessels of disease. By and large, society remains uninformed about the effect and legacy of this pandemic on the world. This study emphasizes the disease's impact on the U.S Navy *itself*, revealing the navy's protocol shortcomings that failed to contain the disease. The spreading of the deadly flu remains of immense importance. In hindsight, health officials made changes in hopes that a disease like the Spanish Flu would never be able to travel via ship again.

[1] "A Winding Sheet and a Wooden Box," Naval History and Heritage Command, accessed April 7, 2018, https://www.history.navy.mil/research/library/online-reading-room/title-list-alphabetically/i/influenza/a-winding-sheet-and-a-wooden-box.html.

[2] "Remembering the 1918 Influenza Pandemic," Centers for Disease Control and Prevention, accessed May 7, 2018, https://www.cdc.gov/features/1918-flu-pandemic/index.html.

A Reflection on Naval Hygiene and Sanitation

Historically, the idea of sailors and cleanliness is often paired together as a joke. Men traversing the sea for weeks, months, sometimes even years at a time, had to contend with little to no fresh water, overcrowding, and unsanitary work. For instance, whalers lived and worked in an environment where every part of a whale was cut up and spread all over the ship as it was processed.[3] Medicine was in such infancy in this era when most still believed sickness was caused by unpleasant odors, or "miasmas." Later, with the transition to steam-powered vessels, conditions transformed as well—but not for the better. Sailors on steamships had to deal with coal dust settling into their skin and lungs, even as they continued to deal with the hierarchical disadvantages of being a lowly sailor. "Here on this ship they won't allow us enough water to wash in. We have to get water to wash in any old place we can, from the feed pump while at sea, and from reserve tanks and boilers whilst in port," recalled Frederick Nelson, a sailor on such a ship in 1900.[4]

The Royal Navy insisted it excelled at keeping ships "sanitary," with surgeons taking advantage of the new steam technologies to provide cleaner and drier spaces below deck, a goal they had been working towards since the eighteenth century. Even so, steamships provided their own new avenues for uncleanliness: heat from boilers, limited airflow below deck, and dampness from condensation on metal made a pleasant breeding ground for many unwanted lifeforms. Nonetheless, great steps to maintain hygiene aside, new efforts to promote "cleanliness" came more in the form of taking measurements and collating statistics, rather than studying what actually *caused* disease. Disease detection was still leagues away from real scientific understanding.[5] Given this limited level of knowledge, it is plain to see how disease could easily spread, even on these "sanitary" Royal Navy ships. After stepping ashore and perhaps standing too close to someone sneezing, a sailor would eventually return to his ship, sleep among others crammed below deck, and—clean ship or not—spread contagion in this tightly enclosed petri dish. Additionally, it was not simply the fact that ships were difficult to keep clean and well ventilated, but that the very act of sailing was instrumental in spreading sickness. Trying to maintain health in this isolated environment was a challenge of its own. Limited supplies and space depleted quickly, especially on long voyages, and simple deficiencies of basic food weakened the human body, leaving sailors all the more susceptible to diseases.[6]

To make matters worse, the Royal Navy strongly opposed *quarantining* at this time. The General Board of Health, which was created by the Public Health Act of 1848, agreed that maintaining good health on naval vessels depended on the "avoidance or removal of those [unsanitary] conditions" that caused disease, rather than measures like the quarantine, which, "were deemed medically useless and damaging to trade."[7] Despite the opposition to quarantining, the Royal Navy remained the most prominent naval power at this time. Thus, the United States most likely modeled its laws on the British, as Americans did with many other laws and regulations from Common Law. And, as is the case with Common Law, unless there was a very specific legal case to repeal the law, it stayed in effect.[8]

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[3] James Williford, "Whaling the Old Way," National Endowment for the Humanities, April 2010, accessed May 7, 2018, https://www.neh.gov/humanities/2010/marchapril/feature/whaling-the-old-way.

[4] David Colamaria, "A Sailor's Life in the New Steel Navy – Hygiene: Officer vs. Enlisted," The United States Navy, accessed May 7, 2018, http://www.steelnavy.org/history/hygiene.

[5] Elise Juzda Smith, "'Cleanse or Die': British Naval Hygiene in the Age of Steam, 1840-1900," National Center for Biotechnology, accessed May 7, 2019, Information, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5883164/ .

[6] Smith, "Cleanse or Die," accessed May 7, 2018, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5883164/.

[7] David Boyd Haycock and Sally Archer, *Health and Medicine at Sea, 1700-1900* (Woodbridge, UK: The Boydell Press, 2009), 124-127.

[8] "General Provisions (5 ILCS 50/1) Common Law Act.," 1874, accessed May 7, 2018, http://www.ilga.gov/legislation/ilcs/ilcs3.asp?ActID=78&ChapterID=2.

Origin and Timeline of Spanish Influenza up to the Second Wave

With poor health conditions on ships and the aversion to quarantining in mind, let us now look at the background and context of the Spanish Influenza itself. Historians have debated and analyzed the origins of "Spanish Flu" for decades. This common name of *Spanish* flu is a misnomer, becoming popular since Spain was neutral and did not have a media censor during the war, making it virtually the only European country that could report on such an outbreak.[9] One theory had the flu originating in a British army camp in Étaples, France. For a time, historians believed the flu emerged from Fort Riley in Kansas. More recently, consensus formed around a third hypothesis: the virus probably began its journey somewhere in northern China, traveling to Europe among the 140,000 Chinese laborers enlisted to perform manual labor as part of the war effort.[10] Besides the debate over the disease's illusive place of origin, the rest of the timeline of its travel is well-documented.

The influenza's arrival and attack occurred in three separate waves over the period from Summer 1918 to Spring 1919. The U.S. Navy's role in spreading the virus took place predominately during the second, and most deadly wave. Yet, some transference happened during the *first* wave as well, which is worth mentioning, as it reinforces how the second wave became so volatile.

As stated, the first wave of the Spanish Flu began in the Spring/Summer of 1918, with the first symptoms of sickness seen in the United States in March at Fort Riley, Kansas. Simultaneously, the flu also arrived in European trenches during fighting. This first wave seemed sporadic at best, hardly an epidemic yet. A conspiracy theory emerged that wartime gas attacks and overall trench-filth were the cause. This thought prevailed, even though the number of cases in Fort Riley quintupled in less than a week, a location which was obviously far from gas attacks.[11] This first wave, in comparison to that which would follow, seemed unlikely to reach regular citizens of the United States. This wave hit army camps and soldiers in the United States for the most part, and even though ships known to be carrying flu-like symptoms arrived on the East Coast during this time with more than enough potential to infect nearby citizens, there was no sudden outbreak. One such ship was a naval transport carrying 64th Infantry troops from Europe to America with forty-two confirmed cases of flu onboard. After arrival, however, the flu never spread substantially inland.[12] The reason for this remains unknown. One theory is that the earlier flu was weaker, but that with one and a half million men passing back and forth from the mostly flu-free continent to flu-riddled continent, the virus later mutated into a deadlier version.[13] This version would become the second wave, striking the United States later that fall.

It is clear then that the second wave was responsible for the outbreak and overall devastation in the United States, but why was this epidemic able to occur in the first place? How was such an obvious ailment allowed to enter through the nation's ports? After all, the navy was supposed to protect Americans, not infect them.

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[9] Alfred W. Crosby, *America's Forgotten Pandemic: The Influenza of 1918* (New York: Cambridge University Press, 2003), 26.

[10] Lindsey Konkel, "Why Was the 1918 Influenza Pandemic Called the 'Spanish Flu'?," History Stories, accessed May 22, 2018, https://www.history.com/news/why-was-the-1918-influenza-pandemic-called-the-spanish-flu.

[11] "1918 Pandemic Influenza Historic Timeline," Centers for Disease Control and Prevention, accessed May 3, 2018, https://www.cdc.gov/flu/pandemic-resources/1918-commemoration/pandemic-timeline-1918.htm.

[12] Crosby, *Forgotten Pandemic*, 29.

[13] Crosby, *Forgotten Pandemic*, 30-31.

A History of Maritime Quarantine and Protocol

The very idea of a "quarantine" is practically ancient in origin. Written evidence since at least the age of the Old Testament describes the isolation of lepers from healthy members of the community.[14] Legally-mandated maritime quarantines date from the fourteenth-century. Adopted in Venice during the spread of the Black Death across Europe, the Venetian practice kept ships out at sea for at least forty days before coming to port.[15] As such, the word "quarantine" was derived from the Latin word for "forty." Still, the Royal Navy resisted quarantining—resistance that transferred to America. To see how the U.S. Navy's protocol for quarantine during the era of the Spanish Flu was so vital to its spread, we need to look back at the development of quarantine procedures, for there within lies the shortcomings. Alongside the navy, public health organizations, such as the National Board of Health (NBH), and the United States Public Health Service (USPHS), also bare some blame.

While there were other, prior examples of laws and dealings with maritime quarantine, the Quarantine Act of 1863 – now also called the General Quarantine Act—deserves special attention. This act was likely the first of its scale, creating a permanent office of quarantine commissioner and a quarantine procedure for the port of New York.[16] This was the first time in the United States that we see a permanent quarantine law. The health commissioner in charge of this office had designated powers, such as detaining ships in port for as long as was deemed necessary and requiring cargo to be removed or fumigated. This system provided a foundation to build upon, while, simultaneously creating limitations too.

Almost immediately after this newly formed commissioner's office began its work, a crisis arose testing officials. In April 1866, the steamer *Virginia* arrived in New York Harbor riddled with cholera. "Thirty-eight deaths occurred on board during her passage, of which two were among the crew. The *Virginia* was anchored at the Lower Quarantine, which is about twenty miles from the city," reported *The New York Times*.[17] Due to the quick action of the newly appointed quarantine commissioner, the ship was isolated. Similar isolation practices for cholera in the region ultimately led to only about six-hundred deaths occurring from the outbreak, far fewer than earlier epidemics of cholera.[18] Legally enforced quarantining was in fact creating a noticeable decline in fatalities. The morbidity of cholera was very much reduced by the quarantine, which, as mentioned earlier, could easily become a quarantine "legal habit," and thus become common practice.

Adding to these legal precedents, in 1879 the National Board of Health was created. While it only lasted until 1883, it still made an impression that should be recognized. The nation was becoming ever more interconnected, and it became increasingly obvious that new laws and governing bodies for regulation of interstate commerce would need to be created. As such, Congress created the National Board of Health, charging it "[t]o Prevent the Introduction of Infectious or Contagious Disease into the United States and to Establish a National Board of Health."[19] In addition to these responsibilities, the NBH's main goal was obtaining information on all matters regarding public health, with special attention dedicated to developing quarantine legislation and a

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[14] Peter Tyson, "A Short History of Quarantine," PBS, Oct. 11, 2004, accessed May 7, 2018, https://www.pbs.org/wgbh/nova/article/short-history-of-quarantine/.

[15] Tyson, "History of Quarantine," https://www.pbs.org/wgbh/nova/article/short-history-of-quarantine/.

[16] "Quarantine Stations (Plague houses)," Ellis Island Database, accessed Dec. 1, 2018, http://www.ellisisland.se/english/quarantine_islands_newyork.asp.

[17] "The Cholera," *The New York Times*, April 19, 1866.

[18] Tyson, "History of Quarantine," accessed May 7, 2018, https://www.pbs.org/wgbh/nova/article/short-history-of-quarantine/.

[19] Jerrold M. Michael, "The National Board of Health: 1879–1883," National Center for Biotechnology Information, Feb. 2011, accessed May 7, 2018, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3001811/.

national quarantine system. The weakness of the board though, was ironically written into the very law that created it. A clause within the founding act gave quarantine powers to the board for only four years, which meant the bill would need to be reenacted after that time for it to continue. Due to disagreements over state and federal power, the NBH's apparent overarching authority became controversial. Supporters of the NBH argued for its reenactment, but, most likely due to the absence of infectious epidemic diseases at that time, it was deemed unnecessary, resulting in the NBH's discontinuation.[20] The argument came down to: what takes prime importance in Americans' lives. Should Americans keep funding a department that prioritized quarantining and control of epidemics at a time when there were no epidemics? Or should Americans abandon it because it seemed like a waste of time and money?

The abandonment of the National Board of Health reminds us of how humans tend to focus on what is in front of them at that moment, rather than looking to the future. The NBH was important because it started a pattern of giving epidemic disease prevention inadequate attention, a model that others would follow. This would indeed be reflected in the not-so-distant-future by the navy's resistance to quarantine-action. These issues of wrongful prioritization and unpreparedness that led to disaster in 1918 were not sudden, but had been building for quite some time.

Quarantine Protocol and the Navy: The Lead Up to Epidemic

Three combining factors then—naval hygiene, Spanish Influenza itself, and maritime quarantine practices—contributed to the Spanish Flu's power to wreak havoc in the interior of the United States. The Royal Navy viewed quarantining as useless, and the United States Navy accepted that view without questioning it. Furthermore, the limited laws for quarantining cholera in New York set precedents that lingered. Alongside the failure of the National Board of Health, the U.S. Navy's policies, themselves, proved severe obstacles to effective quarantining**.** These two issues, underestimating the need for quarantines, and a narrow interpretation of how quarantines should operate, would turn out to be the main contributors to this epidemic in America.

Not all the blame, however, can be solely placed upon the navy for the Spanish Influenza's spread inland (although the navy had options to further prevent this spread, but decided not to take these options). Responsibility also should fall on the United States Public Health Service, a branch of the Treasury Department and the primary agency responsible for defending the United States against the influx of infectious disease. This government agency, however, was not ready for an epidemic of such scale. "Its [the USPHS] problems were roughly the same as those which had faced the army when the war broke out: it was suddenly called upon to do a job for which it had been created in theory, but for which it had never been prepared in reality," concludes historian Alfred W. Crosby in his book *America's Forgotten Pandemic*.[21] The USPHS's inadequate response was a legacy of the National Board of Health's failure and unpreparedness. The NBH failed because people believed there was no reason to have a department that focused all its time on the prevention of epidemics via quarantine, with their main argument amounting to that notion that the country "did not have any epidemics." Yet, here was one, knocking at the door. The NBH's passivity was passed down to its successor organizations, no doubt resulting in its unpreparedness. In addition, the USPHS also embodied the problem of "law habits." Besides the Navy's failures, this is the single-largest issue that caused such spread of the second wave of flu.

[20] Michael, "National Board of Health," accessed May 7, 2018, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3001811/.

[21] Crosby, *Forgotten Pandemic*, 49.

As of 1914, there were only six diseases that the United States Public Health Service deemed quarantinable, and this was stated directly in the navy's official medical handbooks. These diseases, as per the 1914 edition of the *Manual for the Medical Department of the United States Navy*, were: Cholera, yellow fever, smallpox, typhus fever, plague, and leprosy.[22] Influenza was therefore not a quarantinable disease. More evidence of a dismissive attitude toward quarantining flu can be seen in another naval handbook, *Hospital Corps Handbook, United States Navy*. Under a section on threatening diseases titled "Methods of Control," influenza is dismissed with a simple notation: "Quarantine—None."[23] What this further proves is that the Public Health Service or the Navy *did* in fact take influenza into consideration, but it deemed it not worth isolating. The "law habit" effect is evident here, as only diseases that were problematic *at that time* (when the law was established) were considered, thus resulting in "habits" of only focusing on certain diseases: cholera—as in the New York incident—or the past epidemics of yellow fever in the United States. Officials looked to precedents for what diseases should be quarantined, when in reality, many more should have been on the list. But, with limited understanding of sanitation, disease, and a narrow conception of quarantining, the Public Health Service aided the navy in spreading the disease inland without ever realizing it. While not legally at fault, responsibility can be directly placed upon the navy for bad decision-making and prioritizing war, rather than public safety and containment of the flu.

Priorities and the Spread Inland

The U.S. Navy, of course, is not a cruise ship company or private yacht club. It is a branch of the U.S. Armed Forces. This means that the navy's priority and main concern was and remains the wars at hand and conflicts at sea. This may seem obvious, but it was perhaps the main contributor to the Spanish Flu's spread into America. While the Public Health Service may not have had any written legal way to quarantine the influenza at the ports, the navy could have taken matters into its own hands and curbed the flu's spread, but it largely did not.

The responsibility of the navy, in contrast to that of the Public Health Service, can be seen clearly in its medical protocol handbooks. Section 2733 of *Manual for the Medical Department of the United States Navy* reads: "The senior medical officer of the ship shall be prepared to furnish the quarantine officer, if required, with a statement relative to the health conditions prevailing on board ship." The section also states this stipulation: "Certain diseases of a contagious or infectious manner, not included among the quarantinable diseases under the quarantine laws and regulations of the Treasury Department will ordinarily be viewed by local or State authorities as constituting quarantinable diseases and their presence on board should be considered as rendering the vessel subject to quarantine restrictions."[24] Unmistakably, this says infectious diseases that were not listed under the quarantinable diseases section of the manual (such as Spanish Influenza, which was not one of the limited six seen earlier) *can* and *should* be subject to quarantine, and quarantines should be placed into effect by officers on the ship. However, the language states that the presence of such infectious disease "*should be considered* as rendering the vessel subject to quarantine restrictions." This usage of "should be considered" in the manual perhaps seemed less authoritative to naval officers: they had the power to *decide* if they wanted to quarantine their ships or not. With war at hand, a time-wasting quarantine was more than likely deemed pointless.

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[22] Government Printing Office, *Manual for the Medical Department of the United States Navy* (Washington: The Bureau of Medicine and Surgery, 1914), 158.

[23] Government Printing Office, *Hospital Corps Handbook, United States Navy* (Washington: The Bureau of Medicine and Surgery, 1923), 242.

[24] Gov. Printing Office, *Manual for the Medical Department*, 158.

Crosby demonstrates this issue of war-prioritization effectively. The acting surgeon general at the time, Crosby reveals, recommended to the army chief of staff that all troops bound for Europe be quarantined for one week prior to embarkation, that non-urgent troop movements overseas be suspended to prevent further spread of the Spanish Flu, and that the number of troops onboard ships be cut in half. But, "such were the demands of the Western Front that the War Department implemented only the first recommendation without stinting and rejected the others."[25] This meant that the same number of ships with the same number of troops were spreading flu, with only a one-week quarantine in place. This resistance to disease prevention can also be seen in the actions of Secretary of the Navy Josephus Daniels. Daniels was a very controversial secretary, and many of his decrees and acts were later investigated and criticized. Since he was secretary of the navy, one might assume that Daniels would have made mention of this terrible epidemic in his records at some point and made strides to help. However, after scouring sources, including a book written by Daniels himself about his wartime experiences, titled *The Navy and the Nation: Wartime Addresses by Josephus Daniels, Brief Messages, Letters, and Utterances on Special Occasions*, no mention was found of the epidemic. This leads to the probability that even high up on the chain of naval command, the outbreak was put on the back burner.[26]

Also, for comparison sake, it is worth noting that maritime quarantine practices did occur for the Spanish Flu with overwhelming success—just not by the U.S. Navy, nor in America. Australia actually had a very strict maritime quarantine against this flu, from fall of 1918 all the way until the winter of 1919. In addition, the nation's Quarantine Service issued strict quarantine procedures for every ship leaving port and going elsewhere in the Pacific in order to limit any spread. Thus, every island that was connected to the world exclusively by ships from Australia saw nothing of the epidemic. The urgency of war, however, seemed to make all the difference for America.[27]

What this Meant for America: Chicago as a Case Study

Chicago epitomizes the rapid changes defining early twentieth century life in urban America. From advances in architecture, to healthcare, manufacturing to movies, Chicago was the quintessence of progress in all forms. So, it is ironically fitting that this epidemic, symbolic of both needed change and of flaws in the health system, would have such an impact there. The fact that such devastation, leading to over 14,000 deaths from the flu or flu-complications, was brought to the midwestern city may seem strange, as it is so far inland.[28] The flu's spread to the city, in fact, resulted from naval transport ships, only, in this case, instead of by ocean, flu-infested vessels came via the Great Lakes. The precise location of the portal into Chicago was the Great Lakes Naval Training Base. Once the disease reached the base (and the story is the same with many other naval bases), yeoman sailors rather than naval personnel spread the disease. Although, health officials on base did try to implement some quarantine measures, it was too late, and the virus reached further into the city.[29] Curiously, what may have aided in this spread besides the late quarantine measures and yeoman sailors, was that for some reason civilians were still allowed to visit the base, even when it was under quarantine.[30] After visiting, civilians could step on a train, head downtown to the

[25] Crosby, *Forgotten Pandemic*, 124.
[26] Josephus Daniels, *Brief Messages, Letters, and Utterances on Special Occasions* (New York: George H. Doran Company), 1919.
[27] Crosby, *Forgotten Pandemic*, 234.
[28] Crosby, *Forgotten Pandemic*, 60-61.
[29] University of Michigan Center for the History of Medicine and Michigan Publishing, "The American Influenza Epidemic of 1918-1919: Chicago, Illinois," Influenza Encyclopedia, accessed Dec. 6, 2018, https://www.influenzaarchive.org/cities/city-chicago.html#.
[30] "Says Influenza at Great Lakes is Not Alarming," *Chicago Daily Tribune*, Sep 22, 1918.

country's largest railway junction, and spread flu everywhere they went. Businesses, pool halls, churches, dance clubs, and streetcars were closed to the public, but these measures were usually too-little too-late. As mentioned, all in all upwards of 14,000 Chicagoans died of influenza or influenza related complications, such as pneumonia, by the time the third wave of flu was over in March of 1919. To put this number in perspective, the population of Chicago as of 1918 was estimated at 2,596,681 people.[31]

Chicago offers a window to view the convergence of factors that led to the dire spread of this epidemic. The absence of legal quarantine procedures on the books and lack of experience in dealing with such issues, along with the navy's underestimation of the disease compounded initial mistakes and put millions at risk. This same story was repeated in countless port cities along the East Coast, creating an explosion of sickness.

What Has Changed, and What It Means Today

Most people at the time understood that the navy was one of the prime movers of Spanish Flu, though very little evidence was found suggesting people necessarily blamed or protested the navy at the time. No instances were found of any newspaper, sailor, or laymen specifically accusing the navy, or even suggesting the epidemic would be less virulent had the quarantine measures been stronger or if the navy had been less war-occupied. It appears people were more focused on how to survive the disease and war at hand, rather than determining fault.

This brings us full circle. Nurse Josie Brown risked her life heading into the flu-riddled city of Chicago in 1919. As soon as she stepped foot onto that Pullman, she was focused on helping others, not on who or what was to blame. The blame game did not garner any importance at the time. It is only in hindsight that historians see these common threads and focus on them. Still, understanding the past is important to planning for the future.

In regard to the responsibility of the navy, there have been significant changes in naval quarantine protocol leading up to current day—many a direct result of the Spanish Influenza epidemic. "Quarantine Regulations of the Navy," a document issued by the Department of the Navy in June 2006, states directly: "The communicable diseases for which quarantine are authorized are cholera, diphtheria, infectious tuberculosis, plague, smallpox, yellow fever, viral hemorrhagic fevers (e.g., Lassa, Marburg, Ebola, Crimean-Congo South American, and others not yet isolated or named), severe acute respiratory syndrome (SARS), and influenza caused by novel or reemergent influenza viruses that are causing, or have the potential to cause, a pandemic."[32] This statement lists previous quarantinable diseases, but with the very telling addition of influenza, as having the "potential to cause a pandemic." The fact that flu was made a quarantinable disease is in direct reference to the incidents of 1918.

Today, many in the United States and in developed countries around the world believe they are past the "ancient" problem of pandemics, let alone pandemics of the simple flu. What they may find surprising, however, is that experts say another pandemic is not only very possible, but to be expected. The most probable source of a future pandemic is not anticipated to be that of Ebola, MERS, or SARS, but influenza. In an interview, Centers for Disease Control Director Dr. Robert Redfield explained that "people ask me what keeps me up at night. And the thing that keeps me up at night is just what you brought up, pandemic flu. So, I think it's very possible."[33] The lack of

[31] Crosby, *Forgotten Pandemic*, 60.

[32] Department of the Navy, Office of the Chief of Naval Operations, "OPNAV Instruction 6210.2" (Washington, D.C., 2000 Navy Pentagon, 2006), 3.

[33] "CDC Director Robert Redfield Says Pandemic Flu is 'Very Possible'," CBSN, Oct. 30, 2018, accessed May 7, 2018, https://www.cbsnews.com/news/cdc-director-robert-redfield-fears-pandemic-flu-is-possible-today/?ftag=CNM-00-10aac3a.

knowledge and underestimation of the Spanish Flu virus of 1918 resulted in decimation. One hundred years later, we may have more knowledge of the flu, but this has perhaps led to complacency, once again. We have learned much since the days of the 1918 influenza, and we have become more prepared. But in some ways, we should also look at the past again, and see that we do not repeat our mistakes.