A War on Two Fronts: Influenza Outbreak of 1918

Zachary Rea

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Dr. Carls

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In World War I, the battles were not just between man and man, but man and nature as well. William Jackson Cavin and Charles Alexander Cavin were two infantrymen who felt the impact of disease first hand. Disease impacted the United States training camps greatly by causing soldier to be hospitalized and kept from active duty. The influenza pandemic of 1918 was a particularly devastating disease, but it was by far not the only thing to plague the training camps. Diseases in training camps were usually categorized by how they were believed to be spread: digestive, insect-borne, venereal, and respiratory. The information surrounding William and Charles Cavin is sparse, but what can be know is that both brothers were infected by these diseases. William survived his experience, but Charles, like many other soldiers, fell to his illness. With not much information about the brothers, another subject that can be followed is the care they received by medical personnel not just at that particular camp, but the training camps around the nation. The medical staff at the training camps were trained to fight off communicable diseases, but the outbreak of influenza in 1918 would prove different. The combined factors of overcrowding of the training camps and the violence of the 1918 influenza virus would show that the medical staff still had much to learn.

Surgeon General William C. Gorgas had a monumental task ahead of him. Within a short period of time he would have to provide the military with the medical staff it needed in both the training camps as well as the front lines. To begin the task of training medical personnel for the training camps and war, Gorgas set up training camps specifically for medical staff. Using a report by Colonel Munson, which stated, “…set out in general terms the principles Munson believed the Medical Department would have to follow to deal with any major expansion. He pointed out that for a hypothetical Army of 1 million men, the department would require 7,000 medical officers, as well as another 1,000 to cover what he called ‘wastage.’ Munson concluded
that of the physicians who could be called on to make up this total, only 500 were reasonably well trained while another 1,000 were partly trained. The remaining 6,500 of the total needed were yet to be trained.”i It should be noted that these were estimations and that Surgeon General Gorgas and Colonel Munson did not exactly know how many soldiers would join the military and how many medical personnel they would need. Munson’s recommendation continues stating, “The million-man Army would also require the services of 100,000 Medical Department enlisted men. Munson estimated those who were totally untrained would have to fill 90,000 of these slots. Providing the training required by such large numbers of officer and would obviously “strain every resource of the inadequately manned Medical Department.”ii The last of this quote shows that some in the military did believe the Medical Department to be understaffed. Surgeon General Gorgas understood that his department would be responsible for providing the instruction to the untrained medical staff as well as provide instructors to teach the medical staff.

On April 21 1917 Surgeon General Gorgas forwarded the plan he envisioned to the adjutant general. “…he emphasized the need for prompt action and called for medical training camps to be established to coincide with the opening of the ’general training camps’ for officers on 15 May. The department would provide physicians to conduct physical examinations of all officer-trainees and to care for the sick and injured among them. He also recommended that each training camp have a staff of 1 medical officer serving as instructor for every 50 students.”iii Gorgas also wanted an ambulance company and field hospital at every location that medical personnel were being trained. Other enlisted men were to be sent to camps to be trained to form six regimental sanitary detachments. Sanitation at the training camps proved to be an issue throughout the war. The general training camps were set to open for officers on May 15, 1917, but Surgeon General Gorgas did not receive a response from the adjutant general until May 11.
This put pressure on Gorgas because the date set for opening the training camps was only four days away. To fix this issue Gorgas, “…granted permission for the department to open the camps at the sites that Gorgas had proposed by 1 June 1917. The camps were to have a maximum of 600 officer-trainees each and to be directly controlled by the surgeon general. No increase in the number of regular officers in the Medical Corps and no change in their grade structure was to result from their operation.”iv Gorgas turned to the American Medical Association and its roster of physicians available for military service, to meet the Medical Department’s understaffed problem. The American Medical Association made its extensive roster of physicians available to Gorgas, which included the files on the background and training of all the nation’s approximately 145,000 physicians and medical students. The list also included a list of quacks, irregular practitioners, cults, etc. Even with the help from the American Medical Association, Gorgas had to attempt to find ways for nonmedical officer to serve and combat the shortage of medical officers. Using the Selective Service Act, President Wilson created the U.S. Army Ambulance Service and the Sanitary Corps. These two units allowed non-medical officers to join as well as veterinarians and dentists. Originally it was an issue of the medical department being understaffed, but now Surgeon General Gorgas had the exact opposite problem. “The influx of commissioned officers, the number increasing from fewer than 500 to more than 10,000 in the first three months of the war, placed an enormous burden on the Medical Department for training them. For the most part, those who joined the department after the United States entered the war were totally unfamiliar with the demands that the army would soon be placing upon them. The greatest challenge, however, involved giving thousands of physicians in the space of a few weeks “a general idea of the basic duties of a medical officer” and preparing them for service in the field to the point where they could function without either the supervision of an experienced
medical officer or the help of an experienced noncommissioned officer.” With so many untrained individuals on their hands the Medical Department had to set some priorities. “…the initial courses of instruction were designed to meet the most pressing need, namely, that for medical officers for the regiments and divisions in the process of being organized. Those officers would have to be trained not only to care for the Army’s sick and wounded but also to instruct divisional medical personnel, including enlisted men. Courses for Line of Communications personnel, for nonmedical branches of the department, and for the various medical specialties had to be postponed.” The Medical Department faced issues like the cancellation of the plans for a medical training camp. This saw an increase in the capacity of the remaining medical training camps to 1,000. Originally the number of individuals to be trained at each camp was 2,400 and with the increase in capacity it was pushed up to 3,000. “Further difficulties arose from the fact that officers and men began arriving at the camps before the Quartermaster Corps, “strained to the limit” by demands for new construction, had completed work.” At Fort Riley, for example, on the day that the camp opened 34 students and 9 Medical Corps instructors arrived. This was not that much of a strain, but this number increased daily. Five days after the instructions started at Fort Riley, 15 noncommissioned officers and 523 enlisted men reported for duty. By the end of the month over 1,800 officers and men occupied the camp. The last building of the camp was not completed for another month. The soldiers had to receive instruction in existing buildings as well as be housed in the buildings. Once soldiers began to enlist and come to the training camps, the Medical Department had to deal with diseases the soldier brought with them to the camp and those they might get while at the camps. One such disease that was prevalent throughout the training camps was venereal disease. Those infected with venereal disease could not perform their duties or receive training, and it led to rules against those who
had venereal disease to be put into place. An individual who had a venereal disease could be
court martialed for just having the disease and would also be required to inform their superiors of
where they might have received the disease from. Diseases at the camp were separated into
categories based on how they were spread. Venereal diseases, insect borne, digestive, and finally
respiratory. The last three categories could be place into a category themselves under sanitation
issues. Some camps used swamplands to expand and meet the needs of the military. These areas
would have insect that would spread disease like malaria throughout the camps. To prevent these
diseases from spreading required time to drain the swamps. At Fort Oglethorpe it became a
training exercise to bring the sanitation levels up to where they were required. The diseases at the
camps brought on by poor sanitation were diphtheria, scarlet fever, pneumonia, measles, mumps,
meningitis, tuberculosis, typhoid fever, dysentery, and cholera. The Medical Department issued
particular orders for how to stop some of the spread of the diseases from person to person,
particularly those spread in the mess halls. “Individuals who are ill, or are becoming ill, with
diphtheria, scarlet fever, pneumonia, measles, mumps, meningitis, tuberculosis, typhoid fever,
dysentery, or cholera are very likely to have their hands and mess kits more or less soiled with
the discharges from their noses, mouths, and intestines. These discharges contain the germs of
the above-mentioned diseases: When soldiers individually wash their mess equipment in
receptacles used in common, and dry them with dish towels used in common, there is danger of
transmitting the germs of these diseases from the hands and mess equipment of one soldier to the
hands and mess equipment of another. This transmission may take place through soiling the
hands with the dishwater contaminated by previous users, or by smearing the hands with the
moisture from the dish towels similarly contaminated. From the infected hands and mess
equipment of an individual the germs of these diseases may readily be transferred to his mouth
and nose, thereby causing the soldier to develop the malady in question. These matters are of particular and extreme importance at times when respiratory or intestinal diseases of a serious nature are prevalent." To combat the spread of these diseases, the medical personnel, required the dishes to be wash with warm water and soap. After that the dishes were then rinsed in hot water, afterwards the dishes were boiled to remove any left of disease particles. With the influx of soldiers into the training camps, the Medical Department required a screening process to inspect the troops on any diseases they might have. The medical staff involved in this process would try to immunize the soldier against communicable disease like typhoid, meningitis, smallpox, etc. These immunizations would prove to be somewhat of a hit or miss scenario. The science of the time had not fully stop the spread of the diseases with vaccinations. In the cases of immunization against pneumonia and influenza, “Scientists initially failed to appreciate the number and complexity of the organisms that could produce these illnesses, which were more prevalent and therefore more dangerous than meningitis.” Medical staff at the training camps faced a problem, that problem being the soldiers coming to the training camps. Each soldier from a different area in the United States brought with them diseases that were prevalent in the area in which they lived. Unlike venereal disease and digestive diseases, respiratory diseases were life threatening and hard to prevent. Respiratory disease also compounded another issue facing the training camps and that was overcrowding of the soldiers. “Because construction never kept pace with need and canvas for tents was in short supply, overcrowding was common and efforts to prevent the spread of respiratory infections were severely handicapped.” “The plan for the cantonment contemplates the provision of a base hospital of 1,000 beds and of a small infirmary for each regiment. The infirmaries will have from 6 to 10 beds to provide temporary care for patients until they can be sent to the base hospital. A sheet showing the allowance of medical
supplies at the camp infirmary is enclosed herewith. The medical supplies of a field hospital have been sent to the cantonment for use should it be necessary in case of emergency before the supplies for the base hospital arrive. This will afford sufficient material to enable resourceful surgeons to meet any ordinary emergency. It should be preserved as nearly intact as possible for issue to a field hospital organization later on as soon as it can be spared. It is essential that adequate, even if small, hospital accommodations should be provided to be available upon the arrival of the men, some of whom may need immediate attention.”

Influenza was not a new disease the world faced in 1918. This form of influenza was different than anything faced before because of how virulent the disease was. The disease further caused problems when it was complicated with pneumonia and proved to be deadly. The exact origins of the 1918 influenza are not known. What is known is that the disease was virulent and spread quickly. When the influenza virus came to the training camps it caused a virtual standstill of all operations at the camps. The Medical Department felt the effects of the influenza through the number of individuals it infected. Camp Devens in Massachusetts was hit especially hard by the virus mainly because the camp did not know it was heading to them. “…September 8, arrived “completely unheralded” at the Army’s Camp Devens, outside the city. Within 10 days, the base hospital and regimental infirmaries were overwhelmed with thousands of sick trainees.”

This strain of the influenza virus was particularly virulent because of how quickly once one showed
symptoms, that individual would need to be hospitalized. The influenza virus can stay dormant for 24-72 hours after being infected, and all that time one is able to spread more of the virus on to others. This proved especially detrimental because of the overcrowding problem in the training camps. With not enough buildings to meet the demands of the trainees, soldier were being crowded into barrack that were not meant to be overcrowded. For example, some camp’s barracks had over 1000 men inside them, when only around 600 were meant to be placed there. Surgeon General Gorgas constantly fought with the War Department about this, but there was not much either of them could do. To correct the problem of overcrowding in the training camps, new buildings would have to be built and that took time. With influenza spreading throughout the camps time was not on the side of the military. Colonel Hagadorn was the commander of Camp Grant in Illinois and at this camp overcrowding was an issue. “Only thirty thousand troops had been present…in June. Now the strength was in excess of forty thousand with no expectation of any decrease. Many men were forced into tents and winter-winter in northern Illinois, one year after a record cold-was only a few weeks away.”

Hagadorn had to think about the well-being of the troops under him, so he believed that moving the soldier in from tents to barracks would keep them warm. “Army regulations defined how much space each soldier had in the barracks. These regulations had little to do with comfort and much to do with public health. In mid-September Hagadorn decided to ignore the army regulations on overcrowding and move even more men from tents into barracks. Already the nights were cold, and they would be more comfortable there.”

Hagadorn was thinking of his men when he made this decision, but influenza is a crowd disease. This means that the influenza thrives in crowded area, where it can pass from person to person easily. By the time Commander Hagadorn moved the soldier into crowded barracks, Surgeon General Gorgas had issued warnings about influenza at the Great
Lakes Naval Training Station one hundred miles away. The medical staff at Camp Grant were watching out for the influenza virus and they knew where it might come from. Camp Grant had just received dozens of officers from Camp Devens. When the influenza of 1918 hit Camp Devens it hit without warning. Surgeon General Gorgas sent Vaughan, William Welch, and Rufus Cole, all of whom were well known physicians, to Camp Devens. Rufus Cole was an expert on respiratory diseases and his skills would be needed. “On 25 September, they reported that “the situation remains grave and many more fatalities are expected before the epidemic has run its course.” They recommended sixteen measures to control the epidemic at Devens and other camps, the most drastic being the suspension of all transfers into or out of Devens until the epidemic passed. They also called for additional medical personnel, screening around hospital beds and dining table to prevent contagion, and ultimately reducing the camp population by 10,000 to ease overcrowding and providing 50 square feet living space per man. But these measures could do little to delay the flu or cure the sick. Medical officers were acutely aware of their inability to help their patients. “I went to Camp Devens as soon as influenza was reported,” Vaughan later wrote, “and the realization of the utter helplessness of man in attempts to control the spread of this disease depressed me beyond words.” The medical care received by the soldiers in the training camps was basically nursing care. The medical staff could make the soldiers feel as comfortable as they could, but not much else was able for them to do. The infirmaries of the training camps began to become overwhelmed with the influx on sick trainees. At Camp Devens the issue was not only lack of room for the sick, but also the lack of help for the medical staff. The medical staff at the camps were not immune to the influenza virus, and several nurses and doctors began to fall ill from the disease. The disease was hard for the medical staff to identify since it had several symptoms. Symptoms of the influenza could include fever,
severe headache and body aches, blood coming from the nose, ears, etc., and lose of bodily functions. An American pathologist noted: “Fifty cases of subconjunctival hemorrhage [bleeding from the lining of the eye] were counted. Twelve had a true hemoptysis, bright red blood with no admixture of mucus…Three cases had intestinal hemorrhage…” It is no surprise that the medical staff at some camps misdiagnosed the influenza as other diseases. The severe body aches was something that could happen with dengue fever, and cholera was a digestive disease that would have affected the intestinal tract. At Camp Grant, to make up for the shortness of the medical staff soldiers who were healthy enough were consumed with attending to the sick. “Three hundred and twenty men were sent to the hospital as general support staff, then 260 more were added. Another 250 men did nothing but stuff sacks with straw to make mattresses. Several hundred others unloaded a stream of railroad cars full of medical supplies. Hundreds more helped transport the sick or cleaned laundry-washing sheets, making masks—or prepared food.” Forty-eight hours after September 21, 1918, every organization at Camp Grant was affect by the influenza. “The next day hospital admissions rose to 194, the next 371, the next 492. Four days after the first officer reported sick, the first soldier died. The next day two more men died, and 711 soldiers were admitted to the hospital. In six days the hospital went from 610 occupied beds to 4,102 occupied, almost five times more patients than it had ever cared for.” The medical staff at Camp Grant were overworked because of the influenza virus. Most of the staff worked in shifts and sleeping only a few hours a day. “There were too few ambulances to carry the sick to the hospital, so mules pulled ambulance carts until the mules, exhausted, stopped working. There were too few sheets for the beds, so the Red Cross ordered six thousand
from Chicago. There were too few beds, so several thousand cots were crammed into every square inch of corridor, storage area, meeting room, office, and veranda.xx To control the spread of influenza, some camps took drastic measures and quarantined the entire camp. “In efforts to contain the outbreak, Camp Upton’s commander John Mallory put its 30,000 inhabitants under quarantine, barring travel in and out except on “the most urgent business.”xxi The problem with the influenza virus was that even though efforts were taken to hold back the virus, it did not slow it down. The virus can be traced along the transfer routes of the soldiers. Until the virus became too much for the camps soldiers who were infected with influenza were being transfer from camp to camp. This allowed the virus to spread throughout the United States and even abroad causing a pandemic.

The influenza virus of 1918 was extraordinarily virulent compared to other influenza virus that had come before it. Even with the virulence of the virus the peak of death rates caused by the virus only last around two months. The worst months of the influenza virus were September and October now that is not to say cases did not show up throughout the rest of the year or after. “By 8 October 1918 influenza had infected 176,000 men. In the Army as a whole within the United States the epidemic peaked in that month, with 88,478 cases reported for the week ending the fourth of the month and 89,152 the following week but only 43,799 for the week ending the eighteenth. By 20 December influenza patients numbered less than 2,000 for the first time since the Medical Department began reporting cases on 20 September. By this point the cases were increasingly of the milder form with which physicians were more familiar.”xxii The total deaths in the U.S. Army according to a chart in Carol R. Byerly’s article was 115,660, 31 percent of those deaths were in the United States alone. Another chart in the same article shows the cause of deaths with 50 percent being diseases.xxiii Individuals affected by disease especially
those affected by influenza had to go on with their lives. Families lost several family members and loved ones. “Naomi Barnett of Brockton, Massachusetts, had sped to Upton to care for her fiancé Jacob Julian when she learned he was ill. They planned to be married before he departed for duty in France but the young woman died of pneumonia two days after arriving at the camp. Her beloved died 30 minutes later, “Relatives,” reported the local newspaper, “are planning a double funeral I Brockton.”xxiv This was not an uncommon experience for families during or after the influenza outbreak of 1918. According to newspaper articles as well as death certificates. The Cavin family was affected by the influenza virus of 1918. Charles Alexander Cavin, who was stationed at Camp Sheridan, Alabama, died of influenza as well as his father.

The influenza outbreak of 1918 came to the training camps and brought them almost to a standstill. The medical staff were well trained to combat infectious diseases and they had seen influenza before. This particular influenza virus was different in that it spread and killed so quickly. During the peak of the influenza, September and October, the training camp hospitals were overwhelmed with sick trainees. Most medical care received by the soldiers was purely nursing care, trying to make the soldiers as comfortable as possible. The combination of overcrowding and the lethality of the influenza virus lead to the deaths of many soldiers during the outbreak. It was all the medical staff could do to keep up with the demand of care for the soldiers.

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i Ibid, 21.
ii Ibid, 21.
iii Ibid, 21.
iv Ibid, 22.
v Ibid, 25.
vi Ibid, 25.
viil Ibid, 25.

ix Mary C. Gillett, *The Army Medical Department 1917-1941*, 147.

x Ibid, 152.


xiv Ibid, 212.

xv Carol R. Byerly, *Fever of War: The Influenza Epidemic in the U.S. Army during World War I* (New York: New York University Press, 2005), http://web.b.ebscohost.com/ehost/ebookviewer/ebook/bmxIYmtfXzEwNTlzNzRfX0FO0?sid=4a6aba96-464d-4d73-ac31-a67892c7ea01@sessionmgr120&vid=0&format=EK&lnid=ch03&rid=0.

xvi Ibid, 237.

xvii Ibid, 237.


xix Ibid, 214.

xx Ibid, 214.


Astute note-taking and citation management.