

CHAPTER 1

INTRODUCTION AND EARLY HISTORY

INTRODUCTION

On 28 April 1917, only twenty-two days after President Woodrow Wilson had declared war on Germany, Dr. George Crile received orders to mobilize Base Hospital No. 4. Ten days later, it sailed from New York on the H. M. S. *Orduna* and arrived in England on 17 May. After a week in England, the unit embarked for France, arriving in Rouen on 25 May. It replaced British General Hospital No. 9 and received patients on 28 May. The first unit of the American Expeditionary Forces (A. E. F.) to arrive in France,¹ it was treating casualties the day General John J. Pershing, the Commander-in-chief of the A. E. F., boarded the *Baltic* in New York for Europe.²

The rapid deployment overseas of Base Hospital No. 4 was not unique. On 27 April, the British medical liaison officer to the United States requested six base hospitals and 116 other medical officers.³ These hospitals rapidly

¹Historical Division, Department of the Army, United States, *United States Army in the World War, 1917-1919*. Vol. 15 *Reports of Commander-in-Chief, A. E. F., Staff Sections and Services*, (Washington, D.C.: Government Printing Office, 1948), 370. George Crile, *George Crile, An Autobiography*, edited with sidelights by Grace Crile, 2 Vol. (Philadelphia and New York: Lippincott, 1947), 274-80. U.S. Army. A.E.F. Base Hospital No. 4, *Album de la Guerre*, (Cleveland: Scientific Illustrating Studios, 1919), 4-10. Alexander T. Bunts and George Crile, Jr., *To Act as a Unit: The Story of the Cleveland Clinic*, (Cleveland: Cleveland Clinic Foundation, [1971?]), 7.

²Edward M. Coffman, *The War to End All Wars: The American Military Experience in World War I*, (New York: Oxford University Press, 1968), 122.

³Charles Lynch, Frank W. Weed, and Loy McAfee, *The Medical Department of the United States Army in the World War, Volume I, The Surgeon General's Office*, (Washington, D.C.: Government Printing Office, 1923), 101 (Hereafter referred to as *The Surgeon General's Office*).

mobilized and deployed to France in May 1917.⁴ The Army Medical Department assisted by the American National Red Cross proved itself ready to meet the initial challenge of mobilizing and deploying units overseas.

Later in the war, the situation worsened. The Medical Department conservatively estimated that approximately fourteen per cent of the A. E. F. needed to be medical personnel to provide adequate support. Unfortunately, the demand was greatest for infantry and machine gun units in 1918; the shipping priority schedule allowed only 7.65% of slots for medical units. The medical units in the A. E. F. had to handle shortages of personnel and units while meeting the increasing demands for medical support.⁵

By 18 July 1918, the A. E. F. had 26 divisions in France. Only eight evacuation hospitals supported this force.⁶ Doctrine called for two evacuation hospitals for each division at the front.⁷ Fortunately, there were 46 base hospitals in France at the time. The A. E. F. Chief Surgeon's Office organized surgical and shock teams from the base hospitals to augment the evacuation hospitals.⁸ Using the base hospitals did cause problems. A 30 July 1918 memorandum from the A. E. F. Chief Surgeon to the G-4 described this dilemma most succinctly:

⁴Ibid. Joseph H. Ford, *The Medical Department of the United States Army in the World War, Volume II, Administration American Expeditionary Forces*, (Washington, D.C.: Government Printing Office, 1927), 630-48. U.S. Army, A.E.F. Base Hospital No. 10, *History of the Pennsylvania Hospital Unit (Base Hospital No. 10, U.S.A.) in the Great War*, (New York: P. B. Hoebner, 1921), 35. Donna B. Munger, "Base Hospital 21 and the Great War," *Missouri Historical Review* 70 (April 1976): 272-90. Harvey Cushing, *From a Surgeon's Journal: 1915-1918*, (Boston: Little, Brown, and Company, 1936), 96-111.

⁵War Department, United States, *The Report of the Surgeon General, 1919*, (Washington, D.C.: Government Printing Office, 1919), 1290. Sanford H. Wadhams and Arnold D. Tuttle, "Some of the Early Problems of the Medical Department, A.E.F.," *Military Surgeon* 45 (December, 1919), 652-53.

⁶*The Surgeon General's Office*, 102.

⁷United States War Department, *Manual for the Medical Department, United States Army, 1916. Corrected to June 15, 1918*, (Washington, D.C.: Government Printing Office, 1918), 231-232.

⁸*The Surgeon General's Office*, 102.

The present surgical teams are obtained by stripping the base hospitals of a considerable extent of their surgical staffs at the very time when their services are needed at the hospitals because of the active evacuation of wounded from the front.⁹

The A. E. F. Medical Department averted disaster, but continued to wrestle with the problems of providing adequate support with limited personnel and equipment until the Armistice.

WHY STUDY WORLD WAR I?

The problems that the Army Medical Department faced in providing medical care to the A. E. F. in France are of significant interest. World War I was the first modern war fought by the United States Army. In it, the Medical Department faced problems that would continue to trouble it throughout the twentieth century. First, was the difficulty of implementing a health care system overseas for an expeditionary force. Second, was the ability to modify that system under the stress of combat. How the Medical Department met the demands of battles with numbers of casualties unforeseen before the war, provides modern medical planners with many lessons. There are two questions of particular concern. The first is what were the preparations that occurred before the war that allowed the Army Medical Department to meet the challenge in Europe? The second is how to deal with a massive army far from the continental United States with inadequate numbers of hospital units and personnel? These questions are not simply of historical interest. Planners in World War II, Korea, Viet Nam, and the Persian Gulf faced the problem of rapidly transporting and establishing a medical support system for a large expeditionary force. Presumably, in any future conflict, medical planners will face them again.

⁹Quoted in *The Report of the Surgeon General, 1919*, 1291.

As background, the discussion will go into how the Army had handled medical care in two previous wars, the Civil War and the Spanish-American War. From these wars, came major reforms to the medical system. These reforms led to the formation of hospital units that could quickly assume duties in combat on the Western Front. These units subsequently played a crucial role in providing adequate medical care at all levels during the war.

THE CIVIL WAR EXPERIENCE

The medical support provided the A. E. F. grew out of the experiences of the preceding 50 years. Before the Civil War, the Army had only to deal with small frontier forces and small battles, which never taxed it. The Civil War, with its large armies and deadlier weapons, produced more casualties faster than anyone anticipated before the war. In the opening campaigns, the Army's fossilized medical system proved incapable of providing for the soldiers. Surgeon General Clement A. Finley was a typical result of the seniority system of the day. When the war started, he was 64 years old, handsome, complacent, and self-satisfied.¹⁰ Frederick Law Olmsted of the Sanitary Commission described him less charitably as vain and incompetent. Finley ignored the proposal to organize an ambulance corps and incurred the wrath of the Sanitary Commission for the scandalous condition of medical care. He failed to provide a plan for care of the soldiers.¹¹

The Chief Surgeon for the Army of the Potomac, Charles Tripler, failed to provide an adequate evacuation and treatment system for the wounded

¹⁰P.M. Ashburn, *A History of the Medical Department of the United States Army*, (Boston and New York: Houghton Mifflin Company, 1929), 68-72.

¹¹Ibid. James M. Phelan "Clement Alexander Finley" *Army Medical Bulletin* 52, (April 1940), 38-41. Jane T. Censer, ed. *The Papers of Frederick L. Olmsted*, Vol. 4 *Defending the Union* (Baltimore and London: The Johns Hopkins University Press, 1986), 15-19. Mary C. Gillett, *The Army Medical Department, 1818-1865*, Army Historical Series, (Washington, D.C.: Center of Military History United States Army, 1987), 154.

also. He tried to remedy the deficiencies in hospitalization, sanitation, and evacuation, but was unable to devise new methods to solve them. When the Surgeon-General for the State of Pennsylvania, H. H. Smith, offered to provide an ambulance organization for the Army of the Potomac, Tripler refused the offer, because medical officers could not command lieutenants. He did refer the matter to the Secretary of War with a recommendation for approval, but allowed the matter to drop. In the spring of 1862, Tripler received another plan for an ambulance service. He turned this offer down, stating that it was too late to do anything. He even referred to general hospitals as "general nuisances," because they took soldiers from their units.¹²

HAMMOND AND LETTERMAN – BATTLEFIELD SUCCESS

Fortunately, two men arose who revolutionized medical care in the Army, Surgeon General William H. Hammond and Chief Surgeon of the Army of the Potomac, Jonathan Letterman. These men started the system of battlefield evacuation that the Army used in modified form in World War I. Hammond was only thirty-four when the Sanitary Commission recommended he be appointed Surgeon General. His youth and energy proved a marked contrast to Finley and Tripler. Hammond undertook a thorough reorganization of the Medical Department. He started a program to construct and equip military hospitals. He renovated medical supply procedures. He established standards for the surgeons and reorganized the examination procedures for selection. He recommended forming a hospital corps, founding an Army Medical School, establishing a permanent Army hospital in

¹²Gillett, *Army Medical Department, 1818-1865*, 166-67. Ashburn, *Medical Department History*, 68-72.

Washington, D.C., involving the medical department in construction of hospitals and transportation of supplies, and forming of a medical laboratory.¹³

Hammond appointed Letterman the Medical Director for the Army of the Potomac. This was one of his most important actions in improving care for the wounded. The Army of the Potomac had no system for recovering the wounded from the battlefield and treating them. A letter written 7 September 1862 by Surgeon General Hammond to Secretary of War Edwin M. Stanton described 600 wounded men left on the battlefield for 10 days after the Second Battle of Bull Run, where many died of starvation and neglect. Letterman created an ambulance service that no longer relied on the Quartermaster Department for vehicles, horses, and teamsters. He started the system of evacuation hospitals and field hospitals we use today with some modifications. This was the first time in history that a system existed for collecting wounded soldiers on the battlefield and transporting them to field hospitals run by the Army. Letterman's system worked in its first major test. Less than two months after he made his reforms, the ambulance service removed all the wounded from the Antietam battlefield within twenty-four hours.¹⁴

Unfortunately, Hammond's promotion over many senior officers combined with his forceful personality made him many enemies. The most powerful of these, Secretary of War Stanton, relieved Hammond of his duties as Surgeon General and had him court-martialed in 1864 on charges related to the purchase of medical supplies. Stanton pressured the court to find

¹³Ibid. 72-86. James M. Phelan, "William Alexander Hammond" *Army Medical Bulletin* 52, (April 1940), 42-44. Gillett, *Army Medical Department, 1818-1865*, 178-184.

¹⁴Ashburn, *Medical Department History*, 78-79. Gillett, *Army Medical Department, 1818-1865*, 189-193.

Hammond guilty and to dismiss him from the Army. Letterman left the Army of the Potomac about the same time. The medical system established by these two men outlasted them. Joseph K. Barnes, who succeeded Hammond as Surgeon General kept his policies in effect despite his own dislike for Hammond. This system provided the basis for field medicine in World War I.¹⁵

VOLUNTEER SOCIETIES AND MEDICAL CARE

Many volunteer societies formed during the Civil War to provide relief and assistance to the Union soldiers. Henry W. Bellows, a prominent New York Unitarian minister, obtained the approval of Secretary of War, Simon Cameron, in June 1861, to form a United States Sanitary Commission. Patterned after the British Sanitary Commission that provided medical assistance in the Crimean War, the U. S. Sanitary Commission pressured the Army to reform medical care. It started inspecting hospitals, building hospitals, furnishing medical supplies, and lobbying for a restructuring of the Medical Bureau. The tireless work of the Sanitary Commission and its inspectors markedly reduced the suffering of the soldiers in the Civil War.¹⁶

The Christian Commission and the Western Sanitary Commission were other volunteer relief organizations that provided support to the wounded. The latter performed in the West similar functions as the U.S. Sanitary Commission in the East. While the Christian Commission was more concerned with the religious development of the soldier, it helped the wounded on the battlefields and in the hospitals. These two organizations

¹⁵"Hammond," 44. Ashburn, *Medical Department History*, 86. Gillett, *Army Medical Department, 1818-1865*, 225-226.

¹⁶Censer, *Defending the Union*, 4-10. Gillett, *Army Medical Department, 1818-1865*, 160-162.

were the forerunners for the American Red Cross. They started the tradition of volunteer organizations working with the war wounded that proved essential in the first World War.¹⁷

THE FRONTIER ARMY, 1865-1898

After the Civil War, the size of the Medical Department decreased along with the rest of the Army. There was little thought toward providing medical care for a mass army. Instead, medical care focused on that required at scattered frontier posts during the Indian Campaigns. Civilian contract surgeons supplemented its meager staff.¹⁸ In contrast with the slow conditions in the frontier army, the period from 1865 to 1898 was a fertile one for medical science. Despite their small numbers, many Army doctors on the frontier actively participated in medical and other scientific research and contributed much to their fields.¹⁹

The Franco-Prussian War showed the importance of a comprehensive medical service. The Prussians used a medical system similar to that of Letterman, a hospital corps with evacuation and field hospitals. The French Medical Department had made few plans for evacuation and hospitalization of the sick and wounded. This forced them to depend solely on the Red Cross. The results were strikingly different. The Prussians claimed, for the first time in history of warfare, to have lost more men to wounds than to disease. The French had the opposite result, as diseases such as smallpox raged through their Army. The Prussian system where the Red Cross was integrated with the Army had outperformed the French where the Red Cross

¹⁷Bell Irvin Wiley, *The Life of Billy Yank: The Common Soldier of the Union*, (Baton Rouge and London: Louisiana State University Press, reissued 1978), 150. Gillett, *Army Medical Department, 1818-1865*, 160-162.

¹⁸Ashburn, *Medical Department History*, 127.

¹⁹Ashburn, *Medical Department History*, 127-28.

was independent. By the First World War, the Russian Army was the only one in which the Red Cross worked independently.²⁰

PEACETIME REFORMS

The next major advance for the United States Army was the creation of the Hospital Corps in 1887. For first time, the Medical Department had enlisted soldiers assigned, eliminating the need to take them from line units. With the formation of a Hospital Corps, the Medical Department for the first time formed medical units in peacetime and then trained these men in the medical skills necessary for care of the sick and wounded. The Hospital Corps markedly improved the quality of men serving in the hospitals. No longer could a commander dispose of his troublemakers and malingerers by detailing them to the hospital.²¹

The founding of the Army Medical School in 1893 in Washington, D.C. demonstrated the increasing emphasis by the Medical Department on professional medical care and showed that military practice required skills and training not provided in civilian schools. The school provided training in military surgery, care of the wounded, hospital administration, military hygiene, military medicine, Hospital Corps drill, and first aid to the wounded, as well as routine medical school courses. It trained all the officers who entered the Regular Army Medical Department from 1893 to the start of World War I except for a brief period during the Spanish-American War and the Philippine Insurrection.²²

²⁰*The Surgeon General's Office*, 43.

²¹Don Rickey, Jr., *Forty Miles a Day on Beans and Hay: The Enlisted Soldier Fighting the Indian Wars*, (Norman, OK and London: University of Oklahoma Press, 1963), 112. Ashburn, *Medical Department History*, 120,142. *The Surgeon General's Office*, 45.

²²*Ibid.*, 150.

The career of General George M. Sternberg demonstrates the increased professionalism of medical officers. Sternberg joined the Army on 28 May 1861 and first saw action at the First Battle of Bull Run where he was captured. He escaped and served throughout the rest of the war, being brevetted twice for his service. He served in Florida where he published two papers on yellow fever, becoming a recognized expert on the subject. After serving in the Nez Percé campaign in 1877, he returned to Washington where his researches brought him more prominence. He discovered the causative organism for pneumonia, became the first in the United States to isolate the typhoid and tuberculosis bacteria, and published the first manual of bacteriology in the United States. President Cleveland appointed him Surgeon General in 1893, over more senior medical officers. Surgeon General Sternberg started a program for better education of medical officers, which required strict examination for promotion.²³ This created a small, but well-trained group of medical officers and increased the professionalism in the Medical Department.

THE SPANISH-AMERICAN WAR

Despite these reforms, the Spanish-American War proved a disaster for the Medical Department. In 1898, the department lacked the plans, personnel and equipment, and effective doctrine necessary to support an army in the field. This was partially due to War Department neglect of medical care. When Congress authorized the volunteer army in April 1898, it failed to include any provision for a volunteer Hospital Corps to care for the sick and wounded. It only suspended the law limiting the numbers of

²³James M. Phelan, "George Miller Sternberg" *Army Medical Bulletin* 52, (April 1940), 70-74. *The Surgeon General's Office*, 46.

hospital stewards. This prevented the Hospital Corps from raising units of volunteers. The only way that the it obtained men was by recruiting from Regular and Volunteer regiments. In the end, approximately 6,000 men served in the Hospital Corps. This was less than three percent of the strength of the Army. Surgeon General Sternberg unsuccessfully argued for five percent, which fell short of the ten percent that the post-war reforms recommended.²⁴

Similarly, the act to expand to war footing of Congress of 15 May 1898 increased the strength of the Medical Corps only by fifteen assistant surgeons. It did allow the hiring of approximately 650 contract surgeons, as well as three volunteer surgeons for each regiment. Unfortunately, these men lacked military experience, and often lacked medical knowledge.²⁵ Here, too, the numbers proved woefully inadequate. Although the Army required 2,500 medical officers by post-war standards of one per 100 troops, it had 192 regular officers, 118 volunteer surgeons and 650 contract surgeons, a total of 960 when the war ended. This shortage of officers combined with the inadequate Hospital Corps strength contributed greatly to the difficulty in providing adequate medical support.²⁶

MEDICAL SUPPLY SITUATION

The acquisition of medical equipment and supplies by the Army proved an even worse situation. The Army had medical supplies for 28,000

²⁴Ibid., 49.

²⁵Congress, Senate, *Report of the Commission Appointed by the President to Investigate the Conduct of the War Department in the War with Spain*, 56th Congress, 1st Session, Document No. 221, Vol. 1, (Washington, D.C.: Government Printing Office, 1900), 170 (Hereafter referred to as *The Dodge Commission Report*).

²⁶Ashburn, *Medical Department History*, 48. U.S. War Department. "Report of the Surgeon General" *Annual Reports, 1901*. Vol. I, Part 2, (Washington, D.C.: Government Printing Office, 1901). James A. Tobey, *The Medical Department of the Army Its History, Activities and Organization* (Baltimore: Johns Hopkins Press, 1927), 26.

men at the start of the war. These supplies were those that the small, scattered Western posts required, not those required by an expeditionary force in a major war. Congress prohibited the Medical Department from contracting for medical supplies until after the declaration of war. On 1 May 1898, the department ordered medical and surgical field chests. By 16 May, only thirty medical chests were ready for issue. The ignorance of many medical officers on supply procedures worsened the situation, as they did not even know how to order the available supplies. This forced many units to deploy without any medical supplies.²⁷

The transportation system failed also. Articles shipped “fast freight” often required weeks to arrive. When medical supplies arrived, they often sat in warehouses or railroad cars for days. There was one 200-bed hospital that was lost and later found in an abandoned warehouse. The lack of equipment and the inability to find that available hampered the formation of medical units as well.²⁸

An even worse situation developed in Cuba. Many supplies shipped in early June, reached Cuba in the middle of July. This led to appalling situations, such as when the chief surgeon of the First Division had on hand, for eleven days in August, only castor oil, Epsom salts, and quinine.²⁹ After the war, Col. Charles R. Greenleaf, Chief Surgeon for the Army in Cuba, said, “There was a complete lack of material with which to work—tents, ambulances, litters, medical and surgical chests, and a variety of materials

²⁷*The Dodge Commission Report*, 174.

²⁸*Ibid.*

²⁹*Ibid.*, 175-76.

absolutely necessary to the establishment of hospitals was not manufactured.”³⁰

RESULTS OF THE WAR

This lack of medical preparedness caused a disaster. Typhoid raced through camps striking down soldiers. General Sternberg commissioned a Typhoid Fever Board composed of Majors Walter Reed, Victor C. Vaughn, and Edward O. Shakespeare. Their report noted that, “Every regiment constituting the First, Second, Third, Fourth, Fifth, and Seventh Corps developed typhoid fever.” It also noted that 86.24 per cent of all deaths, were due to typhoid alone.³¹ Overall, only 266 soldiers died in battle and 275 more died from wounds and accidents. At the same time, about 3500 died of disease. This devastation by disease forced the Army to withdraw its expeditionary force from Cuba in August.³²

Public outcry caused Congress to form a commission, headed by General Grenville M. Dodge, to investigate the problems in the war. The Commission recommended that the Medical Department needed

1. A larger force of commissioned medical officers.
2. Authority to establish in time of war a proper volunteer hospital corps.
3. A reserve corps of selected trained women nurses....
4. A year's supply for an army of at least four times the actual strength, ... to be held on hand in the medical supply depots.
5. The charge of transportation to such extent as will secure prompt shipment and ready delivery of all medical supplies.
6. The simplification of administrative “paper work,” so that medical officers may be able to more thoroughly discharge their sanitary and strictly medical duties.

³⁰*The Surgeon General's Office*, 49-50.

³¹Ashburn, *Medical Department History*, 177-78.

³²Tobey, *Medical Department*, 26.

7. The securing of such legislation as will authorize all surgeons in medical charge of troops, hospitals, transports, trains, and independent commands to draw from the subsistence Department funds for the purchase of such articles of diet as may be necessary to the proper treatment of soldiers too sick to use the army ration.³³

These recommendations served as the impetus for major reforms within the Medical Department.

SUMMARY

Although the Medical Department had matured from its early history as a small frontier force, it had shown itself unable to mobilize and adapt to the care of the sick and wounded in a mass army in the Civil War. The failure of adequate preparation had led to disaster on the battlefield. From the last half of the Civil War until the Spanish-American War, the Medical Department became more professional and more accepted in the Army. Yet, again, when faced with the need to support a large army in the Spanish-American War, it failed, because of inadequate preparation. As the nineteenth century ended, the reform process had started. The leadership of the country, the Army, and the medical profession realized the increased need for preparing the medical service for war. The next seventeen years before our entry into the First World War, would change the Medical Department to one that could withstand the long and difficult struggles of that war.

³³*The Dodge Commission Report*, 188. *The Surgeon General's Office*, 57. U.S. War Department. "Report of the Surgeon General" *Annual Reports*, 1908. Vol. II. (Washington, D.C.: Government Printing Office, 1909), 147-153.