ESSENTIAL CIVIL WAR CURRICULUM

# Civil War Hospitals

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To understand the structure and function of Civil War hospitals, it is necessary to know the organization of the medical department of the pre-Civil War army and its subsequent development in the Union and Confederate Armies.

Before South Carolina seceded from the United States in December 1860, the small Regular Army consisted of 1,117 commissioned officers and 11,907 enlisted men. Its Medical Department was composed of a surgeon general, with the rank of colonel; thirty surgeons, with the rank of major; and eighty-four assistant surgeons, with the rank for the first five years of first lieutenant, and thereafter, until promotion to surgeon, the rank of captain. These officers formed part of the General Staff of the army and were not permanently attached to any regiment or command. They were subject to duty whenever and wherever their services were required. This system served well an army scattered over a large territory in commands of less than regimental strength ( there were approximately1,000 men in a regiment.)[1]

President Lincoln's call for suppression of the rebellion in 1861, raised large numbers of state troops (militia). Each regiment contained a surgeon and an assistant surgeon commissioned by the state enlisting the troops. These officers were listed on the muster-rolls, were permanently attached to their regiment, and were not detached unless an urgent situation arose. By 1865, 547 surgeons and assistant surgeons of volunteers were appointed. Regimental surgeons numbered 2,109, and regimental assistant surgeons 3,882. The Union Army also employed 85 acting surgeons and 5,532 acting assistant surgeons, who served as "contract surgeons" in general hospitals. Except during huge battles, such as Antietam and Gettysburg, they did not serve on the battlefield.[2]

Congress radically changed the structure of the Medical Department of the Union Army on April 16, 1862, raising the rank of surgeon general from colonel to brigadier general, assuring his control through the Medical Department of patient care and welfare in the Union Army. The act also rid the army of high-ranking senescent medical officers whose rank rested on seniority and not ability. It directed that the surgeon general, assistant surgeon general, medical inspector general, and medical inspectors, immediately

[1] James I. Robertson Jr., *The Medical and Surgical History of the Civil War* (Wilmington, NC: Broadfoot, 1990), 12:899-901 (hereafter cited as MSHCW).
[2] Ibid., 12: 899-901.

be appointed by the president, with the advice and consent of the Senate, by selection from the medical corps of the army, or from the surgeons in the volunteer service, *without regard to rank, but with sole regard to qualifications*. [Emphasis added][3] Nine days later Lincoln appointed William A. Hammond, M.D., surgeon general.

The South was most fortunate in having a single competent surgeon general, Samuel Preston Moore, from July 30, 1861, until the conclusion of the war. Before the War, Moore was a member of the Medical Department of the United States Army, so it is not surprising that he structured the Medical Department of the Confederate Army in the same way.[4]

The number of medical officers in the Confederate Army has been estimated at 834 surgeons and 1,668 assistant surgeons; there were also seventy-three medical officers in the Confederate Navy. Unlike the Union Medical Department which was initially bogged down with senescent, disorganized doctors, the Confederate medical corps had no traditions hampering its officers.[5]

Let us now examine how soldiers wounded on the battlefield were cared for. Initially they walked or were carried to a field station, where they were triaged (sorted out) by severity of injury. Troops whose wounds were so serious they could not be helped were given narcotics; those who required immediate attention were treated at a field station; those with an injury that did not require emergency treatment, were transported to a field hospital out of range of the battle. Those requiring a general hospital were transferred accordingly. Early in the war there were also regimental hospitals, but these were small and in the regimental training camps, where the surgeon and assistant surgeon of the regiment cared for wounded or sick men. Intended to admit only men from a single regiment, hospital staff turned away outsiders. When these small hospitals filled up, there were no accommodations even for men from the same regiment. By 1862, the Union Army abolished regimental hospitals, replacing them with a vast system of well-staffed division, corps and general hospitals.

Field stations were set up at the edge of the battlefield by surgeons before a battle began. Dr. Clyde Kernek describes how one station functioned at Gettysburg. One group of soldiers was fighting only 100 yards from the station. "A red hospital flag was tied to a lower tree limb nearby to mark the dressing station location and help guide in the wounded." Bleeding wounds were packed with lint (scraped material from bed sheets or clothing). Fractures were splinted; those who could walk were instructed to walk to an ambulance. Tourniquets were placed for temporary use only and pressure dressings were applied to arrest bleeding until "prompt" surgery at field hospital. Abdominal wounds

[3] Ibid., 12:899-901
[4] S. P. Moore "Regulations of the Confederate States of America Medical Department", in *Regulations for the Army of the Confederate States.* (Richmond: Randolph, 1862), reprint, San Francisco: Norman Publishing, 1992), 236–58.
[5] M.A. Flannery, *Civil War Pharmacy: A History of Drugs, Drug Supply and Provision, and Therapeutics for the Union and Confederacy* (Binghamton, NY: Haworth Press, 2004), 21.

with bowel protruding or chest wounds were given pain relief and sent to a field hospital. A finger held onto a soldier's hand only with skin was amputated at the station and the finger tossed into the brush. Stewards gave opium pills and water to the wounded, held pressure on bleeding wounds and helped surgeons bandage them.[6]

Additional duties of surgeons at a field station included moving the station and the wounded into ambulances and out of the area as the enemy moved closer. At one station at Gettysburg more than 60 men were treated in one afternoon. After the battle, surgeons stayed at camp to treat any other wounded and then departed to the field hospital to work all night on the wounded there. Activities at another field station were described by John G. Perry, a volunteer contract assistant surgeon in the Union Army before The wilderness Campaign (May-June 1864). He had not yet been to medical school, nor did he have any experience with a practicing physician before the war. Just before fighting began he located himself behind the regiment, opened his medical equipment and dispatched the stretcher-bearers into the field. Shortly thereafter he tied off a briskly bleeding scalp wound, working on the ground. Later that day he was ordered to move all wounded to the rear, since the troops had to fall back. After heat stroke, surgeon Perry was transferred from his regiment in the field to a field hospital three miles in the rear, operating all day with an experienced surgeon.[7]

The field hospital served as the second level of care given to the wounded. We learned above that surgeons serving nonstop at Gettysburg field stations reported promptly to a house converted to a field hospital, where they worked all night on the wounded there. They operated by candle light. Long amputation knives and bone saws were placed in bloody water between operations. Regarding a gunshot wound to the elbow shattering the upper arm at the elbow joint, "amputation was needed immediately. The man could move his fingers and almost make a fist. If the situation were not so desperate and pressing, consideration could have been given to excision [removal] of bone at the joint and salvage of a flail but otherwise intact limb with a functioning hand. These were limited, emergency conditions. That night this injured young soldier would get an amputation." Windows of the house were open to dissipate the smell of chloroform. A surgeon threw the amputated arm out the window. By morning amputated limbs were stacked up in the yard of the house. The wounded awaiting surgery would have witnessed their comrades' wounds, there being no privacy in the yard of the house; they would have witnessed the surgeries, as well, when performed outdoors on hay bales. Another triage occurred at the field hospital, after surgery or wound dressing. The mortally wounded were given comfort. Minor wounds were bandaged; seriously wounded waited in the yard to be taken into the house for surgery. In this hospital knives had been used so much that they had to be sharpened! When 6 operating tables inside were not sufficient, 2 more were set up outside on bales of hay.

Daylight was better than candles, and chloroform was running out. Ether, the

[6] Clyde B Kernek, M.D., *Field Surgeon at Gettysburg* (Indianapolis: Guild Press of Indiana, 1998,), 45-9.
[7] Ibid., 50, 54; Harold Elk Straubing, In *Hospital and Camp* (Harrisburg, PA: Stackpole Books, 1993), 14-17.

other anesthetic available at the time, was highly flammable, and thus could not be used indoors where candles provided lighting for the surgeons. Morning sick call required surgeons to leave the operating theater and tend to the ill in camp. After most of the surgery had been done, the duties of surgeons at the field hospitals included changing dressings, treating fevers, and preparing the less severely injured soldiers for the trip to the railroad depot for the train ride to the general hospitals in the big eastern cities. Some Confederate prisoners were paroled to work as nurses and orderlies in one field hospital after the Gettysburg battle.[8] [The first School of Nursing in the U.S. was not founded until 1873, at Bellevue Hospital in New York City.]

As men improved or were transferred to other hospitals, field hospitals closed. Many sick or wounded at Gettysburg were transported to Camp Letterman General Hospital. Patients here would see hundreds of hospital tents, a cookhouse, small hospital shelters for wounded officers, a dead house, a graveyard, an embalming tent, tents for the Sanitary Commission, and access to railroad tracks for hospital trains carrying convalescing soldiers from Letterman to large general hospitals in Washington, Philadelphia and Baltimore. Their world inside the tents revolved about daily morning rounds by a surgeon, accompanied by a steward who took down the doctor's orders and a soldier detailed as a nurse, but without any training. The surgeon "noted that the ticket hanging at the foot of each wooden folding cot was almost blank except for the patient's name and rank. None of the tickets had been filled out for company, regiment, disease or injury, or date of admission." Severe doctor shortage left nurses unsupervised. Maggots were present and bandages foul. Duties of nurses were changing dressings, feeding men unable to feed themselves, assist them with going to the toilet, including using bedpans and urinals, and bathing them when possible. All were severely wounded; "if they weren't, they would have been evacuated by now." The Sanitary Commission was able to provide experienced some civilian volunteers to help with nursing. Hospitalized patients were also cared for by medical students, who were called cadets.[9]

Further insight into the lives of patients in general hospitals is provided by Houck in those in Lynchburg, Virginia. "Prior to the Civil War, the wounded in battle were treated on the battlefield or in tent hospitals; so the use of the railroads, ambulances, and the innovation of these converted buildings" improved patient care. There were no hospitals in Lynchburg before the Civil War. The soldier should have had a card at the head of his bed giving bed number, his name, diagnosis, date of admission. No mention is made, however, of a chart reflecting his condition day-by-day or of response to treatment. He might well have observed the surgeon in charge as he inspected each ward and every part of the hospital daily. "All major hospital cities like Lynchburg were required to have a central dead house where corpses were sent and prepared for burial." "If a family could afford transport of a corpse, it was sent home; otherwise, soldiers who were not local natives were buried in the Confederate cemetery." Patients would probably been aware of the pest house, a facility to isolate those with measles, typhoid,

[8] Kernek, *Field Surgeon*, 56-9, 66-7, 69, 71, 81.
[9] Ibid., 92-3, 99.

and smallpox in Lynchburg. One surgeon, John J. Terrell, wrote that the weeping smallpox sores were so fetid that he vomited on entering the site. He discovered that spreading dry sand removed the odor, improving the comfort of patients who lived, and those on their way to the dead house. Late in the War the CSA designated hospitals for particular problems, such as surgery, smallpox and intensive care nursing provided by women's corps. "Women made their debut as the future workers in hospitals, pioneering the nursing profession as an acceptable role for women."[10]

A discussion of field and general hospitals would be incomplete without mentioning hospital-acquired infections. Certainly, men did acquire diseases in hospital, but the definitive source for such information, *The Medical and Surgical History of the War of the Civil War*, states it was not possible to tabulate these, mainly because there was so much movement of patients as they were admitted, discharged or transferred to other hospitals. Hospital gangrene and erysipelas (possibly caused by "flesh-eating" or other varieties of strep) did occur and were promptly isolated and infected material surgically removed. Smallpox was promptly isolated as well.

Hospital gangrene was one of the most feared, because it could rapidly spread to other patients' wounds, with dreadful consequences: flesh might simply disappear within hours or days, leaving tendons, nerves and blood vessels hanging in space with no support. Pain was severe, death was common, and amputation above the dying tissues was often the sole treatment option. It appeared more commonly in flesh wounds than after fractures, although the post-amputation stump was often affected. The natural history of hospital gangrene is reflected by the experience of Surgeon J. H. Brinton, U.S.V. He was sent to Annapolis, where large numbers of prisoners from Richmond, had been transferred. His mission was to inquire into the origin of hospital gangrene, its treatment and its clinical course. Most of the first group of 153 in January 1863 were wounded, and all had been closely housed in Richmond's prisons and prison hospitals. Four had hospital gangrene on admission, and 31 contracted it shortly thereafter. "On January 29th, 421 additional patients were admitted from the same place and under the same circumstances; of these, gangrene existed in 14…at their admission. By February 5th the number of affected patients amounted to 60. All cases in which the process of destruction was advancing, or in which…[repair] had not fairly set in, were collected in special wards isolated from all other buildings, and special bedding, blankets, utensils, sponges, surgical dressings, and instruments were provided for them. In this manner the disease remained almost entirely confined to the paroled prisoners."[11]

Early in the War both armies converted civilian structures (private homes, churches, factories, among others) into temporary or permanent hospitals. They extended the number of beds by placing connecting tents next to such structures. Once it became obvious that the War was not going to end in a few months, that carrying sick and

[10] Peter W. Houck, *A Prototype of a Confederate Hospital Center in Lynchburg, Virginia*. (Lynchburg, VA: Warwick House, 1986), 33. 182, 35, 37, 56, 21-23.
[11] MSHCW, 12: 830.

wounded soldiers up winding stairways was a problem, and that supporting services (operating rooms, pharmacy, food service, latrines) were not constructed efficiently, both sides erected large general hospitals. These were usually designed as "pavilion hospitals," with patient beds in the center and support services arranged at the periphery. Although they were two stories high, only the bottom floor was occupied. The upper story had no floor, containing only large windows that could open widely, allowing the "bad air" (medical belief of the time held that noxious fumes emanating from the earth or from swamps caused disease) to escape away from patients. The Union Army operated 16 medical departments, the top two by bed capacity being Washington City (D.C.) and Pennsylvania. Philadelphia alone had more than 14,000 beds. Its two largest general hospitals, Satterlee and Mower had 4,000 and 3,000 beds, respectively. The largest hospital, however, was Chimborazo, operated by the Confederates in Richmond, with 7,000 beds.[12]

In addition to general hospitals there were specialty hospitals in both armies. Dr. Alfred Jay Bollet took note of the Federal Desmarres Hospital in Washington, D.C.,built in 1863 to treat eye injuries and a similar facility by the Confederate Army in Athens, Georgia in 1864. He also described specialty hospitals to treat fractures that did not heal and to make artificial legs for amputees established by both armies. The latter were called "stump hospitals". Jaw and facial injuries also were treated in specialty hospitals.[13]

The U.S. surgeon general authorized the formation of Turner's Lane Hospital in north Philadelphia in May of 1863. This institution cared for soldiers with spinal cord, brain, and nerve injuries, as well as epilepsy. Three doctors, Silas Weir Mitchell, George Read Morehouse and William Williams Keen, Jr., operated this hospital. All were acting assistant surgeons, U.S. Army, otherwise known as contract surgeons. Ten months after Turner's Lane was established, Acting Surgeon General Barnes published their paper *Reflex Paralysis, the Result of Gunshot Wounds*, and circulated it to all Union medical officers in early 1864. Mitchell's book, *Gunshot Wounds*, 1864, was still in use by the French in World War I. These remarkable men also conducted research on nerve injuries, narcotics, and breathing in turtles, as well as describing phantom limb (the faulty perception of amputees that their missing limb was still present). [14]

Other specialty hospitals included Gangrene, Memphis; Eye and Ear Diseases, St. Louis (1863); Erysipelas, Nashville; Feet and toes lost to frostbite, Wilmington, DE "Mutilated" Soldiers, New York City (1862); ; Hospital Number eleven, the "Female Venereal Hospital," Nashville, TN; Hospital Number fifteen, "Soldier's Syphilitic

[12] MSHCW, 6:964.
[13] Alfred Jay Bollet, *Civil War Medicine: Challenges and Triumphs* (Tucson, AZ: Galen Press, 2002), 70, 227-228.
[14] MSHCW, 12:729; S. Weir Mitchell, George R. Morehouse and William W. Keen, *Gunshot Wounds and Other Injuries of Nerves* (Philadelphia: J.B. Lippincott, 1864).

Hospital," Nashville, TN. ; Hospital for Serious Venereal Disease, 1864, Kingston, Georgia.[15]

No work on hospitals of the Civil War would be complete without acknowledging the legacy of Surgeon Samuel Hollingsworth Stout. Stout, Medical Director of Hospitals for the Confederate Army of Tennessee, developed the Mobile Army Hospital as he had to move his patients deeper into the south ahead of invading Union armies.

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[15] John Fahey, personal communication October 12, 2007, National Museum of Civil War Medicine Annual Conference, Frederick, MD; Thomas P. Lowry, *The Story the Soldiers Wouldn't Tell* (Mechanicsburg, PA: Stackpole Books, 1994), facing p. 82; Ibid., 107.