



# Bullet'n Backstory

Joint Munitions Command

Volume 9, Issue 8

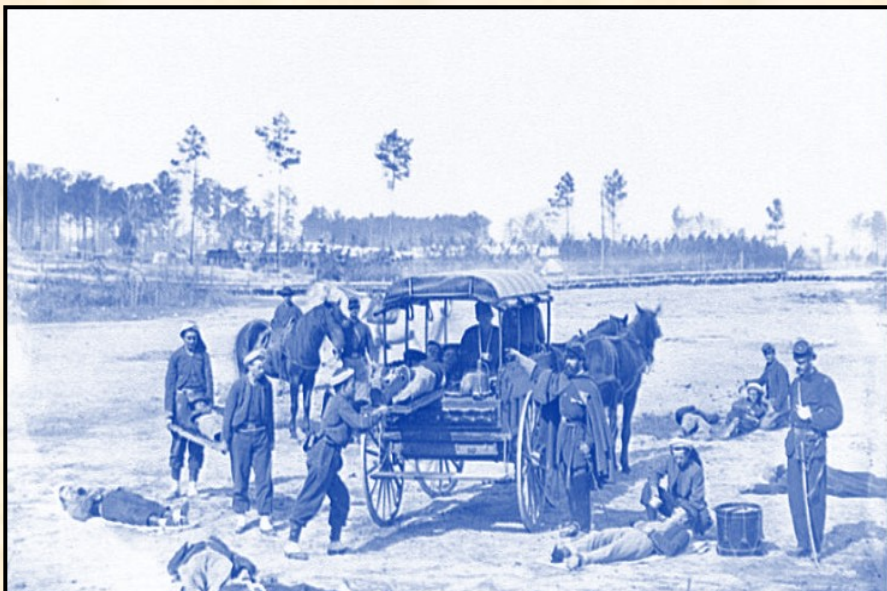
August 2021

## Civil War Medicine: Fact and Fiction — The View from an Illinois Regiment

In the history of the United States, no conflict has proven deadlier than the American Civil War. Two percent of the population (approximately 620,000) died during the conflict, more than all other American wars combined. While the quality of available medical care was far below that of current standards, it was by no means as primitive or brutal as press reports indicated at the time. Newspapers routinely claimed that surgery was done without anesthetic, that unnecessary amputations were standard, and that the standard of care failed to incorporate the medical knowledge of the day. Yet, according to medical historian Robert F. Reilly, none of these accusations were true. Certainly, many fundamental medical practices were not yet in use. This was “an era before the germ theory of disease was established, before sterile technique and anti-sepsis were known, with very few effective medications, [with doctors] often operating 48 to 72 hours with no sleep,” explained Reilly. “Despite this, many medical advances and discoveries occurred as a result of the work of dedicated physicians on both sides.”

Civil War soldiers faced death from two primary causes: injury and disease. At the onset of the conflict, no one was adequately prepared to respond to either medical concern. One problem was the overall inexperience of military surgeons. There were fewer than two hundred medical professionals in the United States military on the eve of the war. As the need for surgeons rose, men with little training were thrust into action simply to fill positions. There was also an inadequate system for retrieving injured soldiers. At the First Battle of Bull Run (July 1861), no military ambulance corps existed. The only available ambulances were manned by civilian volunteers, all of whom fled once the first shots were fired. Not one wounded soldier returned from Bull Run in an ambulance. Civilians continued to serve this function for the Union Army until the establishment of a military ambulance corps in August 1862.

Timely retrieval from the battlefield was a critical factor in the survival rate of wounded soldiers who, if left behind, faced exposure to the elements and brutal treatment by the enemy. In a letter to his wife after the Battle of Stones River, Caleb Cox of the 84th Illinois Volunteer Infantry Regiment lamented, “We left one hundred and fifty dead and wounded of our gallant boys on the field.” Louis Simmons, also of the 84th, later wrote of the consequences faced by those men. “On the morning of January 1<sup>st</sup>, 1863, we assisted in gathering together at one of the field hospitals all the wounded of the Regiment. [We] were unable to procure tents to shelter one tenth of them; nearly all for two or three days had to lie out of doors upon the damp ground, covered only with blankets. Here were acres of ground covered with hospital tents, [all] full of wounded men, nearly four thousand in all, and wounded in every possible manner. There were probably a hundred brave men dying daily at these hospitals.” Later, at Chickamauga, Simmons noted, “Many of our severely wounded, left in the hands of the rebels, died before the ambulances went out; and a large proportion of those brought in were too emaciated to recover. Probably not one out of twenty, of the severely wounded, survived.”



Zouave (North African immigrant) ambulance crew.



Civil War Field Hospital—Savage Station, Virginia

potential infection, inadequate medical care, or both. Most with serious injuries died on the battlefield, while others returned to hospitals with comparatively minor injuries only to die there. This was largely due to infection, as the medical field had not yet adopted the practice of sterilization. In addition, the type of wound contributed greatly to survival rates. Seventy-six percent of wounds came from the Minié ball, a soft .58-caliber lead bullet. Upon impact, the Minié would flatten and expand as it tore through tissue and bones, usually without exiting the body. Minié ball wounds to the extremities caused so much bone damage that amputation was sometimes the only reasonable treatment. Yet, while it is true that 75% of all surgical procedures performed during the Civil War were amputations, only 17% of Union soldiers receiving wounds to the extremities faced amputation; and just 1 in 15 doctors were authorized to perform the procedure. Moreover, the mortality rate for amputees was just 26.3%, despite the sensationalist suggestions of news correspondents.



Despite contemporary claims to the contrary, anesthesia (first introduced in the United States in the 1840s) was used for at least 80,000 surgical cases during the Civil War. The most common was chloroform, which could be used in small quick-acting doses, held over the patient's mouth and nose until he was unconscious. Sanitation was a problem however, as surgeons rarely took the time to wash their hands or instruments, making every aspect of Civil War surgery septic. According to one anonymous observer, "The surgeons and their assistants, stripped to the waist and bespattered with blood, stood around, some holding the poor fellows while others, armed with long, bloody knives and saws, cut and sawed away with frightful rapidity, throwing the mangled limbs on a pile nearby as soon as removed."

Exposure and disease were greater threats than injury. For every Civil War soldier who died in battle, two died of disease. This was an improvement from the Mexican War (1846-1848), during which as many as nine in ten deaths came from disease. In fact, battle wounds would not become more deadly than disease until World War II. Disease in the Civil War was due to several factors, including: inadequate physical examinations of recruits; the arrival of rural soldiers, who had no immunity to some diseases; poor hygiene and sanitation; disease-carrying insects and vermin; inadequate clothing, food, or equipment; exposure and poor weather conditions; and weakness caused by the combination of unhealthy diets and contaminated water. Simmons' chronicle of the march from Perryville to Nashville in 1862 tells of men traveling for weeks without tents, blankets, coats, or even shoes. "Frequently during the day [we saw] bloodstained footprints in the snow – from the sore and lacerated and almost frozen feet of the soldiers. [Scores] were sent to the Hospital, some never to return." As a consequence, "We had now but the wreck of a Regiment... about four hundred left out of nine hundred that started from Quincy, Ill., who were able for duty."

The most common illness was gastrointestinal distress, which impacted 711 of 1000 soldiers annually. Malaria was also frequent, affecting 224 of 1000 soldiers. Yellow fever was a major problem in the South, killing more than 10,000. There were also more than 75,000 cases of typhoid fever in the Union Army, due to exposure to contaminated food and water, as well as flies. Typhoid killed 17% of affected soldiers in 1861 and 56% in 1865. Measles outbreaks were also common, with at least 67,000 cases in the Union Army, resulting in 4000 deaths. Other diseases included rheumatic fever, from which Caleb Cox suffered for several weeks in 1863. Inadequate examinations of recruits contributed to these issues. Exams were often perfunctory, as officials needed to fill quotas and physicians were paid per recruit. As long as they could walk, weren't obviously ill, could fire a gun, and had front teeth (to tear open powder cartridges), they were accepted. The tooth issue was a common disqualification, considering the state of dental care at the time. This led to the disqualification code "4F" (missing 4 front teeth). The quality of physical exams improved with the Civil War Military Draft Act of 1863, when fines and prison sentences were put in place for physicians who were derelict in their duties, resulting in many more rejections. In addition, the extent and quality of care improved each year. By the end of the war, there were roughly 400 hospitals in the Union, with 400,000 beds, 2 million admissions, and an overall mortality of 8%. ~~ Dr. Paul-Thomas Ferguson

For more information, see: *Medical and surgical care during the American Civil War, 1861–1865*, by Robert F. Reilly.

Medical Advances	Use of quinine for the prevention of malaria Use of quarantine, which virtually eliminated yellow fever Treatment of hospital gangrene with bromine and isolation Development of an ambulance system for the wounded Use of trains and boats to transport patients Establishment of large general hospitals Creation of specialty hospitals
Surgical Advances	Safe use of anesthetics Performance of rudimentary neurosurgery Development of techniques for arterial ligation Performance of the first plastic surgery
JMC Historical Document Collection	

The JMC Public and Congressional Affairs Office (PCA) maintains the JMC Archives, which collects and maintains historically significant records, including: emails, manuscripts, letters, reports, studies, images, videos, films, photographs, oral history interviews, briefings, SOPs, policies, decision papers, memoranda, statistics, newspapers, newsletters, brochures, maps, blue prints, drawings, artifacts, and more. Such records are pertinent to the Army's institutional knowledge of active and predecessor installations, the ammunition industrial base, and JMC missions. JMC regularly uses these materials to research command history, and to answer research queries. When JMC workers leave positions or make physical moves, it is vital that their records be assessed before disposal. If employees are uncertain about the historical value of materials, the best policy is to make the items available to Command Historian Keri Pleasant (keri.j.pleasant.civ@mail.mil) or Archivist Paul Ferguson (paul.t.ferguson14.civ@mail.mil) in Room 661 for assessment.

**This Month in Military History**

August 6, 1497: Venetian explorer John Cabot returns to England after becoming the first European since the Vikings to reach North America (Newfoundland).

August 13, 1415: King Henry V (r.1413-1422) lands an army at the mouth of the Seine River, initiating the Lancastrian phase of England's Hundred Years' War with France (1337-1453).

August 20, 1781: Gen. George Washington begins moving south into Virginia to coordinate with troops under the Marquis de Lafayette and the French fleet under the Comte de Grasse to force a surrender by British Commander Lord Cornwallis.

August 27, 1832: Following pleas from the Ojibwas, Sauk and Ho-Chunk (Winnebago), war chiefs Black Hawk and Wabokieshiek surrender to United States officials in Prairie du Chien, officially ending the Black Hawk War (April - August 1832). They, along with eighteen other members of their band, would be incarcerated at Jefferson Barracks (near Lemay, Missouri,) by order of Col. Zachary Taylor, the future president.