LESSON 6: EVACUATING THE WOUNDED

INTENDED AUDIENCE

High-school students; first- or second-year undergraduates in history, social studies, or science

LEARNING OBJECTIVES

- Outline how the case for an ambulance system figured into an expanded demand upon the federal government to care for its citizen-soldiers.
- Describe the process of evacuating the wounded from the field.
- Describe how the creation of an ambulance corps was intended to enhance the military efficiency of an army.
- Assess how bureaucratic systems were integral to the medical care of Civil War soldiers.

TIME REQUIRED FOR LESSON

Assign the background question as homework and have the students read the other documents for this question before coming to class. The role-play (a thought exercise) and debriefing can be accomplished in an hour if the readings have been assigned beforehand. The class discussion begins with a discussion of the briefing question. The debriefing question is intended as a supplementary exercise to provide broader context to the classroom discussion.

KEY TERMS/WORDS

ambulance, evacuation, litter

MATERIALS REQUIRED

Readings that accompany this lesson.

BACKGROUND QUESTION

When the Civil War erupted, Union and Confederate medical departments were virtually bereft of a formalized ambulance system. The few vehicles in circulation only had two wheels, and they proved torturous for the wounded. Getting jostled around was excruciatingly painful for those suffering grievous injuries. Four-wheeled vehicles were in wide circulation by the second year of the war, and these ambulances not only provided more comfort for the wounded, they also enhanced the efficiency of evacuating men from the front. Union military operations along the Virginia Peninsula and outside Richmond in 1862 exposed the inadequacy of the ambulance system. In some cases, regiments were utilizing ambulances to store baggage and to handle other personal needs. There were some units who lacked ambulances entirely while other regiments had a lot full of vehicles at their disposal. In August 1862, an ambulance corps came into existence in the Army of the Potomac, and other major Federal forces followed suit. Confederate armies experienced a similar mobilization. Its regulations called for two ambulances per regiment (regiments typically ranged between 275 and 450 men), but they were often unable to meet this quota.

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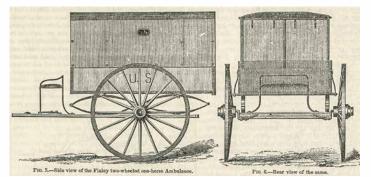
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The Northern argument for an ambulance corps centered on the need to provide immediate relief to the wounded. This was a compelling and an insurmountable case. The proponents for greater organization and central control extended their arguments in important ways that called for a closer relationship between the citizen soldier and his nation.

- For the Bowditch essay, have students outline the key talking points for the creation of an ambulance corps and identify the claims that the author makes upon the national government.
- Summarize Bowditch's arguments about what "common humanity" should require of the army's treatment of the wounded.

Images of Civil War ambulances in Medical and Surgical History of the War of the Rebellion, Appendix to Part I, 26-7. [Lesson 6 Attachment 1]

Henry I. Bowditch, A Brief Plea for an Ambulance System (Boston: Ticknor and Field, 1863), 6-22. [Lesson 6 Attachment 2]





Side and rear view of a horsedrawn ambulance carriage design.

Side view of the Rosenkrans or Wheeling ambulance carriage design.

Courtesy of Historical Medical Library of The College of Physicians of Philadelphia

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ROLE PLAYING QUESTION

Ask students to assume the role of a surgeon in the Army of the Potomac. You have been approached by an officer who is outraged that his regimental ambulances have been confiscated and reorganized as part of a centralized military system. He protests that his state had paid for the vehicles and that they were to be used exclusively for his men—and not utilized at the discretion of federal authorities.

• From the reports below, make a case as to why more lives will be saved by creating a centralized ambulance system. In students' response, explain how the system works, why the chief medical officer of the corps is given so much authority, and how this entire system could bring efficiency to the removal of the wounded.



Zouave crew drilling Courtesy of National Library of Medicine

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The officer insists that his men should be able to leave the ranks during battle and take care of their own. It seems humane to allow men to take care of their comrades in the spontaneous flow of battle, but students need to counter this point. Moreover, the outraged officer needs to understand how troops will be evacuated and why students think more lives will be saved.

William Grace, The Army Surgeon's Manual (New York: Bailliere Brothers, 1864), 90-93. Note that the complete manual may be found on-line at: https://archive.org/details/62510310R.nlm.nih.gov [Lesson 6 Attachment 3]

Jonathan Letterman, Memoir of Jonathan Letterman (Washington D. C. The Association of Military Surgeons, 1909), 33-37. [Lesson 6 Attachment 4]

DEBRIEFING QUESTIONS

- Based on students' understanding of military regulations regarding the use of ambulances and the care of wounded in the field—as spelled out in Grace's The Army Surgeon's Manual and Letterman's Memoir of Jonathan Letterman—evaluate E. Andrew's circular from December 1862. Do students see consistency in Andrew's attempt to bring organizational relief to the chaos of battle?
- After students have finished this analysis, examine the report of Surgeon John H. Brinton, Medical Director of the Army of the Tennessee. His 1862 abstract report of the Forts Henry and Donelson Campaign make for an intriguing comparison with Grace and Letterman. How did surgeons like Grace and Letterman address the challenges of removing and caring for the wounded that were seen early in the war at places like Forts Donelson and Henry?

E. Andrews, Complete Record of the Surgery of the Battles Fought Near Vicksburg (Chicago: George H. Fergus, Book and Job Printer, 1863), 4-6.

Surgeon John H. Brinton, "Extracted Report from Forts Henry and Donelson," in Medical and Surgical History of the War of the Rebellion, Appendix to Part I, 26-28.

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John S. Haller, Farmcarts to Fords: A History of the Military Ambulance, 1790- 1925 (Carbondale: Southern Illinois University Press, 1992). Text on-line at: http://books.google.com/books/about/Farmcarts_to_Fords. html?id=H5bfAAAAMAAJ

Glenna R Schroeder-Len, The Encyclopedia of Civil War Medicine (New York: M. E. Sharpe, 2008). On-line at: http://books.google.com/books/about/The_Encyclopedia_of_Civil War Medicine.html?id=fVZeGtxiMcYC



Bridge and train on the Orange and Alexandria Railroad, 1865 Courtesy of Library of Congress Prints and Photographs Division Washington, D.C.

WEB LINKS

(Trans-Mississippi Theater Virtual Museum) Field medicine image gallery (instruments) http://www.civilwarvirtualmuseum.org/medicine/field-medicine/

On Jonathan Letterman's contributions (Civil War Trust) http://www.civilwar.org/education/history/biographies/jonathan-letterman.html

More information on the Army of the Potomac (Encyclopedia Virginia) http://www.encyclopediavirginia.org/Army_of_the_Potomac

Pennsylvania Education Standards (see <u>http://www.pdesas.org/standard/views</u>) PA Core History and Social Studies standards

11TH GRADE

1.2.11.A-E; 1.6.11.A-B; 8.1.U.A-B; 8.3.U.A-D

12TH GRADE 1.2.11.A; 1.2.12.B-D; 1.6.12.A-B; 8.1.12.A-B; 8.1.U.A-B; 8.3.12.A-D

COMMON CORE 11TH-12TH GRADES

CC.1.2.11-12.A, B, I; CC.1.4.11-12.A, H, I; CC.1.5.11-12.A, D, G; CC8.5.11-12.A-C, F, H; CC8.6.11-12.H



Wounded soldiers, Battle of the Wilderness, Fredericksburg, VA, May 1864 Courtesy of Library of Congress Prints and Photographs Division Washington, D.C.

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AUTHOR:

PETER CARMICHAEL, PH.D.

Robert C. Fluhrer Professor of Civil War Studies

Gettysburg College

Director of the Civil War Institute and Robert C. Fluhrer Professor of Civil War Studies

Carmichael serves as co-chair of the Sesquicentennial Planning Committee on campus. His most recent book is The Last Generation: Young Virginians in Peace, War, and Reunion.

Carmichael has appeared in a number of media outlets surrounding the 150th anniversary of the Battle of Gettysburg, including the Associated Press, Pennsylvania Cable Network, C-SPAN, Popular Science, and a sponsored New York Times piece.

EDITORS:

ROBERT D. HICKS, PH.D.

Director, Mütter Museum / Historical Library / Wood Institute for the History of Medicine William Maul Measey Chair for the History of Medicine The College of Physicians of Philadelphia

MARY ELLEN DONATELLI

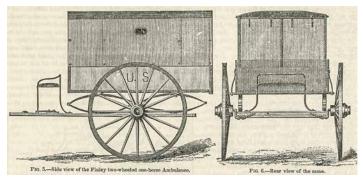
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A M B U L A N C E S





Side and rear view of a horsedrawn ambulance carriage design.

Side view of the Rosenkrans or Wheeling ambulance carriage design.

Usually every regiment possessed one or two two-wheeled ambulances of the pattern figured, and one or sometimes two, four-wheeled ambulance wagons. The former vehicles proved, practically, failures; they were too light in their construction, unsuited to the rough, miry roads of the country, and were easily broken. They accommodated but two or three invalids, and, especially in rainy weather, required two horses to draw them. The four-wheeled spring ambulance, figured [here], fulfilled its purpose better.

A BRIEF PLEA FOR AN AMBULANCE SYSTEM FOR THE ARMY OF THE UNITED STATES AS DRAWN FROM THE EXTRA SUFFERINGS OF THE LATE LIEUT. BOWDITCH AND A WOUNDED COMRADE

The foregoing address is printed, as will be seen by the annexed correspondence, in accordance with the wishes of the Graduating Medical Class of Harvard College, as expressed in its vote of March 11, 1863. The publication has been delayed, in consequence of my journey to the camp of the First Massachusetts Cavalry, to bring home the dead body of my eldest son, who had fallen, while leading a charge in this war for free institutions, and for liberty.

I little thought that, in less than one week from the hour at which I, in a few words, at the conclusion of my address, begged of the earnest youths, then before me, to do everything they could to alleviate the sufferings of the sick and wounded soldiers, I should have presented to me the terrible thought that my own son would, perhaps, need the care of stranger surgeons and soldiers for his own relief in his dying hour.

Since his death, I think that I stand in different, and, may I not say? somewhat wider relations, than those I enjoyed from the teacher's chair. Resting as I now do under the solemn cloud-shadow of a great but benignant sorrow, I hope that some words I may now write, will reach beyond the confines of my profession, and touch other human intellects and hearts — intellects and hearts of men and women, who will have influence upon those in power, and who will, with me, endeavor to persuade our leaders to do simple justice toward every wounded soldier in the armies of the United States.

May I not believe that now I can, of myself, exert a greater moral influence upon those in power, and that I can now do something — as all my previous efforts seem to have been vain — toward persuading the authorities to take some measures, that will secure to our wounded soldiers the Nation's fostering care, from the first moment of their fall upon the bloody field, until they arrive in our well supplied and most excellent hospitals.

This is not the case at present; for, under the want of all proper arrangements by the Government, a wounded soldier is liable to be left to suffer, and die, it may be, on the battle-ground, without the least attention, save what common humanity would lead one soldier to bestow upon a comrade.

This happens, first, because Congress steadily refuses to establish any definite and efficient Ambulance Corps in the armies of the Republic; second, because the War Department declines to do anything in the premises.

As an illustration of, and in addition to what has been already published by others, as well as by myself, I beg leave to state that Lieut. Bowditch, having been mortally wounded, in the first charge made after leaving Kelly's Ford, lay helpless on the ground, for some time, by the side of his dead horse. Two surgeons saw him, but they evidently had no means for carrying off the wounded officer, and it is believed no one connected with an Ambulance Corps ever approached him there. [Three days after the fight, I heard several staff officers — one of whom, certainly, was a surgeon,

— talk, not as if they approved of the fact, but as if it were a matter of course — saying that they "thought" a flag of truce ought to be sent over the river, to see to our wounded, many of whom were then, as they believed, still lying on the field!]

A stranger horseman — probably from the Rhode Island forces — finally assisted him to get into a saddle; and he rode off, leaning over the neck of the animal — a terrible mode of proceeding, considering his severe wound in the abdomen. All this happened when he was in the rear of our victorious army, or, in other words, at just the place and time, at which a thorough Ambulance Corps should have been busily at work, seeking out, and relieving, with every means a great Government should have had at its disposal, the wretched and, perhaps, dying sufferers. But what, in reality, does the Government do to meet such an emergency? It provides a carriage, which a perfectly healthy man would find exceedingly uncomfortable to drive in, even for a few miles, and one driver, sometimes not the most humane. There are, also, I doubt not, various articles of surgical dressings, etc., for the wounded; but these articles are generally far in the rear of the army. The United States Government did not then, and never does, provide any men, whose duty it is to hasten to meet and to relieve these hours of poignant suffering. After Lieut. Bowditch arrived at the ambulance carriage, there was no water to be found in the casks, connected with it, although, by law, there should have been. The driver was wholly ignorant of the names of those whom he was carrying. He actually, and in answer to a direct question from Col. Curtis, denied that Lieut. Bowditch was one of them. He did not get any water for the Lieutenant and his still more suffering comrade, although both longed and asked for it! A wretched and dying Sergeant begged much for it, and in vain! Had it not been for the kindness of Col. Curtis, who, after much difficulty, found out where my son was, no water would probably have been procured for either of the parched sufferers. As it was, it arrived at last, too late for the Sergeant, who was so much exhausted as to be unable to avail himself of the cup, finally proffered him by his wounded comrade.

I mention these shortcomings, as I deem them, of the Administration and of Congress, with great reluctance, and without a trace of any feeling, save of sorrow. A few months ago, when treating of this same subject, I felt, and may have, at times, expressed, indignation — not an unrighteous one, however, I hope — at such neglect. Now, with the solemn memories of the past few weeks resting on me, I am sure that all will believe that sadness, not anger, must be uppermost in my mind. But I would fain plead, with all the earnestness a stricken father might be supposed to have, when in sight of the mangled dead body of a darling, first-born son, that such enormities, as are now liable to happen, under the present want of any proper ambulance system in the United States army, shall not be permitted hereafter.

So far as the ensuing summer campaign is to be considered, it is already too late to do anything. The Senate of the United States, under the leadership of the Chairman of its Military Committee — an honorable Senator from Massachusetts — refused, a few days before the late Congress adjourned, to concur in the passage of a bill, previously passed, unanimously, by the House of Representatives. I am not an advocate of any particular bill or special plan. I only ask for some system. The Senate considered the plan proposed " impracticable," and therefore declined doing anything! If all things were managed by mortals, according to such a mode of reasoning, very little progress would be made, very little humanity be practised, in this world. The Senate and Government of this free people, decline to do for its citizen volunteer soldiery, what every despot of Europe carefully looks after, with reference to his conscripts or his hirelings!

Some have asked, "But does not the Government do all it can? What do you want?" My reply is, a corps of detailed soldiers, or, what may be deemed better, a corps of honest, brave, and humane men, enlisted for this special duty, is needed. Such a corps exists in every army in Europe. I have now before me a pamphlet devoted solely to giving an account of the French and English ambulance systems. From it I will quote the following table:

	Ambulance Division for 10,000 men.		_	AMBULANCE SECTIONS FOR COLUMNS OF											
			8 to 9,000 men.		6 to 7,000 men.		4 to 5,000 men.		2 to 3,000 men.		15 to 1800 men.		1,000 men.		OBSERVATIONS.
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Report of the number of mules attached to other parts of the Ambulance Apparatus.		333 94		278		222		168 57				974 274		75 <u>1</u> 16 <u>1</u>	1
Total of mules for the Southern columns,	Contraction of	427		358		295		225				125		92	3 - FOIT

TABLE A. General table, showing the formation, in the number of men employed, the amount and character of materials used, and the means of transportation, of an active ambulance service for a division of 10,000 men, and the sections of said ambulance service, that should follow the advancing columns of any smaller force.

Remembering that there were about 2,000 Union men in the fight at Kelly's Ford, the reader will be easily able to judge how many men would have been actually detailed as an ambulance corps, and how much of "apparatus," &c., for the same object would have accompanied the expedition, if our Government had the views of the French Government on the necessity and humanity of taking care of our wounded. One would think that *self-interest* would lead any Government to try, as much as possible, to save a wounded soldier for future use, even if common humanity were left out of sight.

The pamphlet from which this table is taken is one of 70 pages octavo, and is written by Mons. Boudin, Chief Physician of the Military Hospital at Bonle, Paris. [Systeme des ambulances ties Arniees Francaise et Anglaise; Instructions qui reglent cette branche du service administratif et medical, par M. Boudin, Officier de la Legion d'Honneur, Medicin en chef de 1' Hospital Militaire du Boule. Avec trois planches. Paris: J. B. Bailliere. 1855.]

From the table, the reader will see the number of officers and men and apparatus, connected with the ambulance service of the French army.

That service, it appears, is capable of being divided so that a certain portion of its effective force and supplies can be readily selected, at a short notice, for any number of regiments or brigades, etc.

The United States, doubtless, provides freely of supplies, but it steadily refuses to have any drilled corps to administer these supplies, in the most humane and most efficient manner. All is left, in a great measure, to chance!

A chance man carried Lieut. Bowditch from the field. Nothing scarcely was known until Col. Curtis sought for and found him, in the last carriage. The driver knew not whom he was carrying, though both of the wounded men were fully able to report their names and regiments. He had shamefully neglected to have water in his vehicle, or to get it for the sufferers, when one of them earnestly asked for it.

It may appear an absurdity to a military man, that a civilian should pretend to have any opinion upon the subject. But it seems to me that our immense armies need a corps of men for these special duties, of looking after the wounded soldier, as much as we need a special surgical corps, special paymasters, a special engineer corps, special men for cavalry, infantry, artillery service, &c. Certainly, the object is sufficiently great and humane. When thousands of men are inevitably to be wounded, it would seem to be perfectly suicidal in the Government, even in a selfish point of view, not to have a corps enlisted or detailed, to save as many as can be saved. As it is now, if a soldier be once put even temporarily, hors du combat, it would seem as if the Government were wholly indifferent whether he lived or died.

Again, by having such a corps, the number of combatants would not be so rapidly lessened, as it is now, by several men taking one wounded from the field. [One surgeon told me he saw eight men carrying off one wounded soldier! Four were bearers-- and four were intended for "relief"--and were walking by the hill, doing nothing. Few if any of these men returned to their posts.]

Such an ambulance corps should consist of able- bodied, brave men, --men not afraid to go to the front to save a fallen fellow-man. They should have a distinctive uniform. Arrangements might be concluded whereby the ambulance corps, in both armies, should be considered as the laws of war usually regard pickets, that is, as not to be molested in their specific duties, save perhaps, under extraordinary circumstances. Doubt less, many of such a body would fall, but it would be from random shots, and not from the voluntary barbarism of either army. It would be a brave, and noble, Christian death. Such a corps should take its place near the battle-field. It should be well trained to march, immediately to raise and carry off the wounded

APPENDIX A

The following are Reports of Drs. Stedman and Bowditch, who went with an ambulance train to the battle-field at Centreville. They are taken from Dr. Gay's Report to the War Committee of Ward IV. In introducing them, Dr. Gay says: "The statements in reference to the ambulance drivers demand universal action to instantly correct this brutal custom."

Dr. George H. Gay

Dear Sir, I beg to submit the following as a report of my experience during my late visit to the battle-field near Fairfax Court House, Va.

At 10 o'clock, Sept. 5, 1862, a message came to "Willard's," in Washington, from Surgeon-General Hammond, that two surgeons were much needed at a spot between Fairfax Court House and Centreville, where many soldiers lay wounded and starving. Dr. Bowditch and myself immediately volunteered our services, and at 11 P. M., we started in a train of fifty ambulances for the scene of suffering. The distance to be travelled was about twenty-two miles. The halts on the way were numerous, and some were prolonged most unnecessarily, as it seemed to us. The horses were stout, the weather cool till after sunrise, and then warm, but the heat not exhausting. At the end of the journey we were to find men dying from starvation and neglect of surgical attendance; and yet the horses must be allowed to walk a great portion of the way, and be watered every few miles, while the freight of each wagon was light. Beyond all example, the driver of the ambulance, in which it was my lot to ride, was the most vulgar, ignorant, and profane man I ever came in contact with. But in contrast with him, the driver of the ambulance in which I returned, was one of the most humane men. He had been a soldier in the regular army for nine years—had been wounded in one of our earliest battles—and since his recovery had been employed as Government teamster. On the wagon-master's command to him to drive faster, and keep up with the ambulances ahead of ours, he remonstrated, saying the men in his wagon were suffering intolerably already, and he did not intend to make them suffer more if he could prevent it. His expressions of sympathy were frequent, and doubtless afforded some consolation to the wounded. One or two other drivers, who came under my notice, behaved themselves with becoming humanity and gentleness in their assistance of the sufferers; though, as a body, these drivers were such as would disgrace, it may be, any menials ever sent out to the aid of the sick and wounded. The wagon-masters themselves, of whom we expected better things, were not overborne, apparently, by any deep sentiments of compassion for the sufferers. I noticed that in going to the battle-field they took no pains to hasten on the train. On the contrary, as before said, the halts were too frequent and prolonged. But in returning, though admonished by the groans of the soldiers, which were continuous from one end of the train to the other, they often urged the teamsters to drive faster.

On arriving at our place of destination, lying about on the grass or in an old house and its out houses, we found about one hundred and fifty soldiers, suffering from gunshot wounds of every description, inflicted five or six days before. Two had been shot through the lungs; one through both thighs and scrotum; some through the abdomen. In short, no part of the body had escaped. Four surgeons of the army were in attendance; but from want of food and sleep they were nearly exhausted; and being unable to perform but little duty, they requested me to remove some limbs, which operations were necessary to the more favorable transportation of the wounded to Washington. These were an amputation of the thigh, for a wound of the knee-joint and compound fracture of the former; and an amputation of an arm, for compound fracture and extensive laceration at elbow-joint.

And here let me notice the kind and assiduous attention to his wounded, of Dr. Joseph W. Hastings, Assistant-Surgeon, 21st Regiment, Massachusetts Volunteers, who was indefatigable in his service to all under his care. It was evident that his readiness, gentleness, and quiet

cheerfulness, as well as skill and capacity, had won the gratitude of his regiment. I would not depreciate the merits of the other surgeons at this station. I speak thus of Dr. Hastings only because of my more frequent opportunities of witnessing his conduct.

On the following morning, after dressing many wounds, I accompanied Dr. H. to the rebel hospital, about four miles farther, on the Warrenton road, for the purpose of removing Capt. Kelton, of the 21st Regiment, whose thigh had been amputated by Dr. Miller, the rebel surgeon. We found four of our soldiers there, and about seventy-five wounded rebels, lying on the hay in a very comfortable stone barn. I observed that the medicines and surgical appliances used there had Philadelphia labels. Had they been captured, stolen, or smuggled? Our men expressed themselves gratified with the attention they had received from the rebel doctor; for which I could do no less than thank him. We then placed Capt. K. in the ambulance, and returned to our hospital.

In the afternoon we loaded the ambulances with the wounded, and at $4\frac{1}{2}$ o'clock started for Washington, which, after a night of horror, made such by the cries and groans of the sufferers, the drunkenness, profanity, and inhumanity of the drivers, we reached about four o'clock the next morning. The men were deposited in the various hospitals in the city, and at noon I found some of them, those two especially upon whom I had operated, contented and cheerful as possible under the circumstances.

I shall never forget the anxiety with which I watched for the safety of those two men. But one ligature had been required in securing the artery in the thigh. Suppose from the constant jolting of the wagon, or from any other cause, that ligature should have come off; or that such should have been the case with the man whose arm had been lost, how could life have been saved? No one ambulance would have been allowed to stop, as the whole train would have then been compelled to wait, and the sufferings of all the other wounded would have been increased or prolonged. Thank Heaven no such accident occurred, and I hope no one was permanently afflicted by this sad journey.

It will appear from this narration that our expedition to Virginia was not unattended with good results to those whose distresses we were called on to succor. For my own part, I feel that should the sad opportunity again offer itself, the experience I have thus gained would avail for a more satisfactory service than any before rendered.

Respectfully, your friend and servant, C. H. Stedman.

At a meeting of the Boston Society for Medical Improvement, held Sept. 22, 1862, Dr. Bowditch remarked as follows:

"I desire to bring before the Society a subject of great importance to the future welfare of our wounded soldiers; although, at first sight, it may not seem exactly appropriate for a meeting of this Society.

"During my recent visit to Washington with other physicians, summoned there by the Secretary of War, I was brought immediately in contact with the abominable system, or rather no system, of ambulances now in use in our army. The atrocities I saw committed, are, I think, a sufficient reason for bringing the subject before you, in order that, either by the individual effort of the members, or by the united action of the Society, public opinion may be made so strong as to force the Government to devise some plan more in accordance with common humanity, and more truly military in its discipline."

SOURCE

Henry I. Bowditch, A Brief Plea for an Ambulance System (Boston: Ticknor and Field, 1863), 6-22

GENERAL ORDERS NO. 106 UNIFORM SYSTEM OF AMBULANCES WAR DEPARTMENT, ADJUTANT-GENERAL'S OFFICE

WASHINGTON, MARCH 16, 1864

The following Act of Congress is published for the information and guidance of all concerned:

PUBLIC.—**NO.**22.

An Act to Establish a Uniform System of Ambulances in the Armies of the United States.

Be it enacted by the Senate and House of Representatives the United States of America in Congress assembled, That the medical director, or chief medical officer, of each army corps shall, under the control of the medical director of the army to which such army corps belongs, have the direction and supervision of all ambulances, medicine, and other wagons, horses, mules, harness, and other fixtures appertaining thereto, and of all officers and men who may be detailed or employed to assist him in the management thereof, in the army corps in which he may be serving.

SEC. 2. And be it further enacted, That the commanding officer of each army corps shall detail officers and enlisted men for service in the ambulance corps of such army corps, upon the following basis, viz. one captain, who shall be commandant of said ambulance corps, one first lieutenant for each division in such army corps; one second lieutenant for each brigade in such army corps; one sergeant for each regiment in such army corps; three privates for each ambulance, and one private for each wagon; and the officers and non-commissioned of the ambulance corps shall be mounted: Provided, That the officers, non-commissioned officers, and privates so detailed for each army corps shall be examined by a board of medical officers of such army corps as to their fitness for such duty; and that such as are found to be not qualified shall be rejected, and others detailed in their stead.

SEC. 3. And be it further enacted, That there shall be allowed and furnished to each army corps two-horse ambulances, upon the following basis, to wit, three to each regiment of infantry of five hundred men or more; two to each regiment of infantry of more than two hundred and less than five hundred men or more; and one to each regiment of infantry of less than two hundred men or more; two to each regiment of five hundred men or more; and one to each regiment of artillery—to which battery of artillery it shall be permanently attached; to the head-quarters of each army corps two such ambulances; and to each division train of ambulances two army wagons; and ambulances shall be allowed and furnished to division brigades and commands not attached to any army corps upon the same basis, and each ambulance shall be provided with such number of stretchers and other appliances as shall be prescribed by the Surgeon-General: Provided, That the ambulances and wagons now in the service.

SEC. 4. And be it further enacted, That the horse and mule litters may be adopted or authorized by the Secretary of War, in lieu of ambulances, when judged necessary, under such rules and regulations as may be prescribed by the medical director of each army corps.

SEC. 5. And be it further enacted, That the captain shall be the commander of all the ambulances, medicine, and other wagons in the corps, under the immediate direction of the medical director, or chief medical officer, of the army corps to which the ambulance corps belongs. He shall pay special attention to the condition of the ambulances, wagons, horses, mules, harness, and other fixtures appertaining thereto, and see that they are at all times in readiness for service; that the officers and men of the ambulance corps are properly instructed in their duties, and that their duties are performed, and that the regulations which may be prescribed by the Secretary of War, or Surgeon-General, for the government of the ambulance corps are strictly observed by those under his command. It shall be his duty to institute a drill in his corps, instructing his men in the most easy and expeditious manner of moving the sick and wounded, and to require in all cases that the sick and wounded shall be treated with gentleness and care, and that the ambulances and wagons are at all times provided with attendants, drivers, horses, mules, and whatever may be necessary for their efficiency and it shall be his duty also to see that the ambulances are not used for any other purpose than that for which they are designed and ordered. It shall be the duty of the medical director, or chief medical of the army corps, previous to a march, and previous to and in time of action, or whenever it may be necessary to use the ambulances to issue the proper orders to the captain for the distribution and management of the same, for collecting the sick and wounded and conveying them to their destination. And it shall be the duty of the captain faithfully and diligently to execute such orders. And the officers of the ambulance corps, including the medical director shall make such reports, from time to time, as may be required by the Secretary of War, the Surgeon-General, the director of the army, or the commanding officer of the army corps in which they may be serving; and all reports to higher authority than the commanding officer of the army corps shall be transmitted through the medical director of the army to which such army corps belongs.

SEC. 6. And be it further enacted, That the first lieutenant assigned to the ambulance corps for a division shall have complete control, under the captain of his corps and the medical director of the army corps, of all the ambulances, medicine, and other wagons, horses, mules, and men in that portion of the ambulance corps. He shall be the acting assistant quartermaster for that portion of the ambulance corps, and will receipt for and be responsible for all the property belonging to it, and be held responsible for any deficiency pertaining thereto. He shall have a traveling cavalry forge, a blacksmith and a saddler, who shall be under his orders, to enable him to keep his train in order. He shall have authority to draw supplies from the depot quartermaster, upon requisitions approved by the captain of his corps, the medical-director, and the commander of the army corps to which he is attached. It shall be his duty to exercise a constant supervision over his train in every particular, and keep it at all times ready for service.

SEC. 7. And be further enacted, That the second lieutenant shall have command of the portion of the ambulance corps for a brigade, and shall be under the immediate orders of the first lieutenant, and he shall exercise careful supervision over the sergeants and privates assigned to the portion of the ambulance corps for his brigade; and it shall be the duty of the sergeants to conduct the drills and inspections of the, ambulances, under his orders, of their respective regiments.

SEC. 8. And be it further enacted, That the ambulances In the armies of the United States shall be used only for the transportation of the sick and wounded, and in urgent cases only, for medical supplies, and all persons shall be prohibited from using them, or requiring them to be used, for any other purpose,. It shall be the duty of the ambulance corps to report to the commander of the army corps any violation of the provisions of this section, or any attempt to violate the same, and any officer who shall use an ambulance, or require it to be used, for any other purpose than as provided in this section, shall, for the first offense be publicly reprimanded by the commander of the army corps in which he may be serving, and for the second shall be dismissed from the service.

SEC. 9. And be it further enacted, That no person except the proper medical officers, or the officers, non-commissioned officers, privates of the ambulance corps, may be specially assigned, by competent military authority, to duty with the ambulance corps for the occasion, shall be permitted to take or accompany sick or wounded men to the rear, either on the march or upon the field of battle.

SEC. 10. And be it further enacted, That the officers, non-commissioned officers, and privates of the ambulance corps shall be designated by such uniform or in such manner as the Secretary of War shall deem proper: Provided, That officers and men maybe relieved from service in said corps and others detailed to the same, subject to the examination provided in the second section of this act, in the discretion of the commanders of the armies in which they may be serving.

SEC. 11. And be it further enacted, That it shall be the duty of the commander of the army corps to transmit to the Adjutant-General the names and rank of all and enlisted men detailed for service in the ambulance corps of such army corps, stating the organizations from which they may have been so detailed; and if such officers and men belong to volunteer organizations, the Adjutant-General shall thereupon notify the governors of the several States in which such organizations were raised, of their detail for such service; and it shall be the duty of the commander of the army corps to report to the Adjutant-General from time to time the conduct and behavior of the officers and enlisted men of the ambulance corps, and the Adjutant-General shall forward copies of such reports, so far as they relate to officers and enlisted men of volunteer organizations, to the governors of the States in which such organizations were raised.

SEC. 12. And be it further enacted, That nothing in this act shall be construed to diminish or impair the rightful authority of the commanders of armies, army corps, or separate detachments, over the medical and other the non-commissioned officers and privates of their respective commands.

Approved March 11, 1864.

SOURCE

William Grace, The Army Surgeon's Manual (New York: Bailliere Brothers, 1864), 90-93.

AMBULANCE CORPS

HEADQUARTERS, ARMY OF THE POTOMAC

AUGUST 24, 1863 ----

GENERAL ORDERS, NO. 85

The following revised regulations for the organization of the Ambulance Corps, and the management of the Ambulance Trains, are published for the government of all concerned, and will be strictly observed.

- 1. The Army Corps is the unit of organization for the ambulance corps; and the latter will be organized upon the basis of the Captain as the commandant of the corps, one 1st Lieutenant for each division, one 2d Lieutenant for each brigade, one Sergeant for each regiment.
- 2. The Privates of this corps will consist of two men and one driver to each ambulance, and one driver to each medicine wagon.
- 3. The two-horse ambulances only will be used, and the allowance, until further orders, to each corps, will be upon the basis of three to each regiment of infantry, two to each regiment of cavalry, one to each battery of artillery, to which it will be permanently attached, and two to the headquarters of each army corps, and two army wagons to each division. Each ambulance will be provided with two stretchers.
- 4. The captain is the commander of all the ambulances, medicine and other wagons in the corps, under the immediate direction of the Medical Director of the Army Corps to which the ambulance corps belongs. He will pay special attention to the condition of the ambulances, wagons, horses, harness, etc., and see that they are at all readiness for service; that the officers and men are properly instructed in their duties, and that these duties are performed, and that the regulations for the corps are strictly adhered to by those under his command. He will institute a drill in his corps, instructing in the most easy and expeditious method of putting men in and taking them out of the ambulances, lifting them from the ground and placing and carrying them on stretchers, in the latter case observing that the front man steps off with the left foot and the rear man with the right, etc.; that in all cases his men treat the sick and wounded with gentleness and care; that the ambulances and wagons are at all times provided with attendants, drivers, horses, etc.; that the vessels for carrying water are constantly kept clean and filled with fresh water; that the ambulances are not used for any other purpose than that for which they are designed and ordered. Previous to a march he will receive from the Medical Director of the Army Corps his orders for the distribution of the ambulances for gathering up the sick and wounded previous to, and in time of, action; he will receive orders from the same officer where to send his ambulances, and to what point the wounded are to be carried. He will give his personal attention to the removal of the sick and wounded from the field in time of action, going

from place to place to ascertain what may be wanted; to see that his subordinates (for whose conduct he will be responsible) attend faithfully to their duties in taking care of the wounded, and removing them as quickly as may be found consistent with their safety to the field hospital, and see that the ambulances reach their destination. After every battle he will make a report, in detail, of the operations of his corps to the Medical Director of the Army Corps to which he belongs, who will transmit a copy, with such remarks as he may deem proper, to the Medical Director of this Army. He will give his personal attention to the removal of sick when they are required to be sent to general hospitals, or to such other points as may be ordered. He will make a personal inspection, at least once a month, of everything pertaining to the ambulance corps, a report of which will be made to the Medical Director of the Corps, who will transmit a copy to the Medical Director of this Army. This inspection will be minute and made with care, and will not supersede the constant supervision which he must at all times exercise over his corps. He will also make a weekly report, according to the prescribed form, to the same officer, who will forward a copy to the Medical Director of this Army.

- 5. The 1st Lieutenant assigned to the ambulance corps for a division, will have complete control, under the captain of his corps and the Medical Director of the Army Corps, of all ambulances, medicine and other wagons, horses; etc., and men in that portion of the ambulance corps. He will be the Acting Assistant Quartermaster for that portion of the corps, and will receipt and be responsible for all the property belonging to it, and be held responsible for any deficiency in anything appertaining thereto. He will have a travelling cavalry forge, a blacksmith, and a saddler, who will be under his orders to enable him to keep his train in order. His supplies will be drawn from the depot Quartermaster, upon requisitions approved by the captain of his corps, and the Commander of the Army Corps to which he is attached. He will exercise a constant supervision over his train in every particular, and keep it at all times ready for service. Especially before a battle will he be careful that everything be in order. The responsible duties devolving upon him in time of action, render it necessary that he be active and vigilant and spare no labor in their execution. He will make reports to the captain of the corps, upon the forms prescribed, every Saturday morning.
- 6. The 2d Lieutenant will have command of the portion of the ambulance corps for a brigade, and will be under the immediate orders of the commander of the ambulances for a division, and the injunctions in regard to care and attention and supervision prescribed for the commander of the division he will exercise in that portion under his command.
- 7. The Sergeant will conduct the drills, inspections, etc., under the orders and supervision of the commander of the ambulances for a brigade, be particular in enforcing all orders he may receive from his superior officer, and that the men are attentive to their duties. The officers and non-commissioned officers will be mounted. The non-commissioned officers will be armed with revolvers.

- 8. Two Medical Officers, and two Hospital Stewards will be detailed, daily, by roster, by the Surgeon-in-Chief of Division, to accompany the ambulances for the Division, when on the march, whose duties will be to attend to the sick and wounded with the ambulances, and see that they are properly cared for. No man will be permitted, by any line officer, to fall to the rear to ride in the ambulances, unless he has written permission, from the senior Medical Officer of his regiment, to do so. These passes will be carefully preserved, and at the close of the march be transmitted, by the senior Medical Officer with the train, with such remarks as he may deem proper, to the Surgeon-in-Chief of his Division. A man who is sick or wounded, who requires to be carried in an ambulance, will not be rejected, should he not have the permission required; the surgeon of the regiment who has neglected to give it, will be reported at the close of the march, by the senior surgeon with the train, to the Surgeon-in-Chief of his Division. When on the march, one-half of the privates on the ambulance corps, will accompany, on foot, the ambulances to which they belong, to render such assistance as may be required. The remainder will march in the rear of their respective commands, to conduct under the order of the Medical Officer, such men as may be unable to proceed to the ambulances, or who may be incapable of taking proper care of themselves until the ambulances come up. When the case is of so serious a nature as to require it, the surgeon, of the regiment, or his assistant, will remain and deliver the man to one of the Medical Officers with the ambulance. At all other times the privates will be with their respective trains. The medicine wagons will, on the march, be in their proper places, in the rear of the ambulances for each brigade. Upon ordinary marches, the ambulances and wagons belonging to the train will follow immediately in the rear of the division to which it is attached. Officers connected with the corps must be with the train when on the march, observing that no one rides in any of the ambulances except by the authority of the Medical Officers. Every necessary facility for taking care of the sick and wounded upon the march will be afforded the Medical Officers by the officers of the ambulance corps.
- 9. When in camp, the ambulances will be parked by divisions. The regular roll-calls, reveille, retreat, and tattoo, will be held, at which at least one commissioned officer will be present and receive the reports. Stable duty will be at hours fixed by the captain of the corps, and at this time, while the drivers are in attendance upon their animals, the privates will be employed in keeping the ambulances to which they belong in order, keeping the vessels for carrying water filled with fresh water, and in general police duties. Should it become necessary for a regimental Medical Officer to use one or more ambulances for transporting sick and wounded, he will make a requisition upon the commander of the ambulances are used, the officers, non-commissioned officers, and men belonging to them, will accompany them; should one ambulance only be required, a non-commissioned officer as well as the men belonging to it, will accompany it. The officers of the ambulance corps will see that ambulances are not used for any other purposes than that for which they are designed, viz.: the transportation of sick and wounded, and in urgent cases only, for medical supplies.

All officers are expressly forbidden to use them, or require them to be used, for any other purpose. When ambulances are required, for the transportation of sick or wounded at Division or Brigade Headquarters, they will be obtained, as they are needed for this purpose, from the Division train, but no ambulances belonging to this corps will be retained at such Headquarters.

- 10. Good, serviceable horses will be used for the ambulances and medicine wagons, and will not be taken for any other purpose except by orders from these Headquarters.
- 11. This corps will be designated for Sergeants, by a green band one and one-quarter inches broad around the cap, and chevrons of the same material, with the point toward the shoulder, on each arm above the elbow. For Privates, by a band the same as for Sergeants around the cap, and a half chevron of the same material on each arm above the elbow.
- 12. No person except the proper Medical Officers, or the officers, non-commissioned officers, and privates of this corps, will be permitted to take or accompany sick or wounded to the rear, either on the march or upon the field of battle.
- 13. No officer or man will be selected for this service except those who are active and efficient, and they will be detailed and relieved by Corps Commanders only.
- 14. Corps Commanders will see that the foregoing regulations are carried into effect.

By command of Major General Meade:

S. WILLIAMS Assistant Adjutant General.

HEADQUARTERS RIGHT WING 13TH ARMY CORPS

CIRCULAR

ON BOARD STEAMER "FOREST QUEEN"

- DECEMBER 20TH, 1862 -

To the end that the Medical Staff of this command may act with the greatest possible efficiency, in the necessary and proper care and treatment of the wounded on the battle field, the following instructions are issued for the guidance of Regimental and Division-Surgeons:—

The present organization of the division gives but one principal medical officer who is attached to the staff of the general commanding, and upon whom devolves the administrative duties. All other surgeons are relieved from duty with brigades, and will, therefore, be charged only with the care of their own regiments.

Before a battle, the senior surgeons of divisions will select a proper and convenient place to serve as a principal depot and field-hospital; notifying the surgeons of his division and the medical director of its location; and will make such arrangements as shall secure the prompt delivery, by the litter-bearers and ambulances of his division, of the wounded of the command, in order that they may receive immediate attention.

To secure the prompt delivery at the depot, and the immediate necessary attention, the hospital service will be systematized as follows:—

Division-surgeons will direct all ambulances belonging to the division to report to them at once, so soon as an action is deemed imminent, and will proceed to fit up their depot, asking for that service, for a sufficient detail under the charge of a competent lieutenant from the division commander. This detail should be made from the regiments, and should be large enough to furnish two men to each ambulance, in addition to the driver, who should not leave his team. These should not be boys and worthless old men; but strong, brave, and efficient ones. They will be distinguished by a strip of white bandage tied around the arm above the elbow; and no others shall be permitted to leave the ranks and carry wounded to the rear. The bands will assist in pitching tents and preparing shelter, and fuel, fires, and nourishment for the wounded. And these, with the above-mentioned detail, shall be placed under the charge of an assistant-surgeon, who shall be selected for the superintendence of this department of hospital duty.

Furthermore, the Hospital shall be organized as follows:-----

Three principal operators shall be selected from the Medical Staff of the Division-Surgeon; and they, under the direction of this senior medical officer, shall decide upon and perform all principal operations. They will be selected without reference to rank, but solely for the requisite qualifications and experience. Each operator shall have one assistant, to be selected in the same manner. One efficient assistant shall be selected to keep the records of the depot, and another to attend as above mentioned, to the providing of food, shelter, &c. It is understood that one assistant-surgeon with his hospital steward and attendants, shall accompany the regiment to which he is attached to the field, and select and station himself at a convenient and safe place in the rear, to which the wounded may be first brought from the ranks, where temporary dressings may be applied, and where the ambulances may collect them for transmission to the hospital or principal depot. He should be relieved, if the action continues, by another, that justice be done to all and each. All the medical officers should immediately report at the principal depot of their division, and assist in the general care of the wounded.

The division trains being usually posted in a secure place, and at generally too great a distance to make resort to the regimental medical stores in the wagons available; the medicine wagons, pannier sets, and hospital knapsacks, should be reserved with the ambulances before the commencement of an action, from the Quarter-Master's train, and used for the occasion as necessity may require. The knapsacks, as above mentioned, and the medicine wagons and pannier sets, with the proper proportion of instruments to be placed under the orders of the surgeon in charge at the principal depot. Care should be taken that the supplies of chloroform, ether, and stimulants are present and available.

Beef should be obtained at once, and with the stores of farina, tea, &c., the wounded can at once be nourished and made comfortable. Such cooks as shall be selected, shall be ordered to the principal depot; and such attendants as are not needed by the surgeon in the field, will assist in the care and nursing of the wounded.

Prompt and careful compliance with these instructions, it is hoped, will secure to our brave officers and soldiers who may be wounded in the battles which may follow, much cure and treatment as they nobly deserve; and such as the much sacrificing friends at home have just right to expect.

(Signed) Chas. McMillan, Medical Director, Right Wing 13th Army Corps

SOURCE

E. Andrews, Complete Record of the Surgery of the Battles Fought Near Vicksburg (Chicago: George H. Fergus, Book and Job Printer, 1863), 4-6.

REPORT FROM FORTS HENRY AND DONELSON

Before entering into any detailed account of the action of the medical department throughout the siege of Fort Donelson, it may be well, for a moment, to allude to its general condition at the commencement of the campaign. The medical resources of the expeditionary force of the Cumberland and Tennessee were altogether insufficient. Irregularities in the quartermaster's department had for months existed in the District of Cairo, and the supply of ambulance wagons and hospital tents to the troops composing the force, did not equal the average amount distributed to the other armies of the United States. The number of medical officers, also, was too small; but two, a surgeon and assistant surgeon, were, at that time, allowed to each regiment, while the regiments were, for the most part, of nearly maximum strength. The amount of labor which subsequently devolved upon the medical officers was immense, and when it is considered that the campaign about to be initiated was to be sustained in a malarious country, and that the troops were to be subjected to every privation and exposure, it will readily be seen how unenviable was the position of the medical staff. In addition to the ordinary hardships of the march and bivouac, great battles were to be fought, and the wants of vast numbers of men, placed suddenly hors de combat, were to be met and supplied. The theatre of the bloody drama was almost a wilderness. Towns and villages were comparatively few, and the region, to a great extent, was uncultivated. Farm houses were encountered only at intervals, and the country had been impoverished and drained of its resources by the enemy. The distances to be traversed were great, and the bases of supplies remote. At no time, during the early part of this campaign, were the conveniences for the establishment of large general hospitals to be found; in fact, the drugs, medicines, and hospital stores absolutely essential for the field, were, with difficulty, obtained. Fortunately for the Army of the Tennessee, Surgeon J. Simons, U. S. A., the medical director of the district of Cairo, had, at an early period, organized a general hospital at Mound City, Illinois, with a capacity of one thousand beds. After the surrender of Fort Donelson, and the battle of Shiloh, the capacity of this hospital was augmented to seventeen hundred beds. The hospitals at Paducah were also enlarged to the utmost, and it was the endeavor of the surgeons to keep, at all times, a certain number of beds vacant and in reserve. The regimental medical supplies, as a general rule, were less than the quota allowed by regulations. Usually every regiment possessed one or two two-wheeled ambulances of the pattern figured, and one or sometimes two, four-wheeled ambulance wagons. The former vehicles proved, practically, failures; they were too light in their construction, unsuited to the rough, miry roads of the country, and were easily broken. They accommodated but two or three invalids, and, especially in rainy weather, required two horses to draw them. The four-wheeled spring ambulance, figured on the preceding page, fulfilled its purpose better. Every regiment was furnished with the ordinary hospital knapsack, intended to be carried by the orderly accompanying the surgeon, in action. Most of the regiments possessed, also, in addition, a medicine chest, filled with drugs. This chest was carried in one of the ambulance wagons.

The surgeons of regiments were ordered by the medical director of the expedition to carry with them, each some fifteen or twenty extra blankets. The number of hospital tents did not exceed two to a regiment, and frequently there was but one. Of hand-litters or stretchers, two or three were usually carried. The very great degree of dampness and cold during the commencement of this campaign rendered some permanent means of warmth necessary for the comfort of the sick and wounded in the hospital tents. The stove usually adopted was the ordinary funnelshaped one of sheet iron; open at the bottom, and placed directly on the ground. It answered the purposes of heating a small tent sufficiently well, but was too small for the larger tents. Each regiment was also furnished with an hospital mess chest.

The arrangements for the accommodation and relief of the wounded, during the siege and assault of Fort Donelson, were as efficiently conducted as was possible under the circumstances. The medical department suffered great privations. The supplies of stores and medicines, for the reasons previously given, were but scanty, and the number of medical officers was hardly sufficient. Still, under the efficient supervision of Surgeon H. S. Hewit, U. S. Volunteers, at that time medical director of the expedition, such disposition was made of the men and means at hand, that all the wounded were rapidly removed from the field, and promptly and properly dressed. To accomplish this result the following system was adopted: every regiment, as it passed into action, was accompanied by one medical officer. This officer remained with the regiment and shared its fortunes and its dangers. In all cases of severe injury, and when the peril to life was imminent, the necessary surgical attentions were rendered on the spot, and under fire. When the case was less grave, and especially when the patient was able to walk, he was sent some two or three hundred yards to the rear of his regiment to the most advanced point attained by the ambulance train. This depot was generally so placed as to be removed from the immediate range of fire. The locality selected was commonly a ravine, and the route was so chosen as to wind in and out the valleys, with but little exposure. The fire from the enemy's guns, mounted on works creating the hills, was apt to be high, and this fact contributed to the ease and security with which the wounded were transported from the field to the large hospitals established in the rear, at points completely out of range. These hospitals were four in number. Three of them, A, B, and C, under the direction, respectively, of Surgeons H. P. Stearns, D. W. Hartshorn, and Horace Wardner, U. S. V., were established in small log huts and out-buildings. A fourth was formed of hospital tents, and was in charge of Surgeon C. Goodbrake, 20th Illinois Volunteers. The author acted as consulting surgeon.

A building occupied as headquarters, near the intersection of Hickman Creek and the Fort Henry road, was, during the progress of the siege, turned over to the medical department, and was also used as a hospital. To these hospitals all the wounded were transported as soon as they fell; those from the left wing to the hospitals at B and C; those from the centre to the hospital at A, and those from the right wing to an hospital near to A. As the division of General McClernand moved to the right, and when the severe fighting occurred on this wing, additional field hospitals were established by Surgeon Hp. P. Stearns at some small house on the roadside. All of the ambulances of the various regiments in the field were collected together for the formation of the ambulance trains. Each one of these trains was placed under the charge of a non-commissioned officer, whose business it was to see that a continuous line of the wagons should ply between the scene of conflict and the general hospitals. These orders were strictly followed, and as a result, the majority of the wounded on the field were in a few minutes, transported to points where every surgical attention could be rendered, and where their cases could be definitely acted upon. At the general hospital, the accommodations afforded by the log huts and stables were found to be utterly insufficient, and it became necessary to extemporize shelter for the injured. This was affected by littering the ground with hay and straw, and spreading, as a protection canvass covers obtained from the quartermaster's trains. Large fires were built, bullocks killed, soup, tea, and coffee prepared and thus the wounded were placed in a state of comparative comfort, despite the inclemency of the weather. The inmates of these field hospitals were allowed to remain four or five days, at the expiration of which time arrangements were perfected for their transportation to other points. They were shipped in steamers, sent down the Cumberland River, and were distributed to the hospitals at Paducah, Mound City, Cincinnati, Louisville, and St. Louis. Many of the operations performed in the field hospitals were of the most serious character, and the surgeons in charge labored incessantly for several days. The immediate results of these operations were, as far as known, successful. No case of death occurred under the knife, or following immediately any major operation. In almost every instance anaesthetics were employed, chloroform being commonly selected. No untoward result followed its use. In many cases of compound fracture of the lower extremity, and especially of the femur, attempts were made to save the limbs. These efforts, in some instances, were attended with remarkable success. At this period of the war in the West, the want of a number of hospital steamers, properly fitted up and well officered, became painfully manifest. The lack of such means of transportation was, in many cases, the cause of great misery to our poor invalids, and, to the certain knowledge of the author, many lives were, in consequence, sacrificed. It was not until some weeks after the events described that this deficiency was remedied by the action of the military authorities.

The strength of the national forces engaged, during the three days' attack upon Fort Donelson, was about thirty thousand men. The loss, as stated officially, amounted to four hundred killed, and one thousand seven hundred and eighty five wounded. The casualties resulting from cannon shot or shell, in this action, were comparatively small; by far the majority of the wounds were inflicted by the rifle. In many cases, the missile employed was the conoidal ball fired from the improved arm. In other instances, the wounds were produced by the round ball fired from the ordinary western rifle. The great predominance of injuries from small arms, as noticed at Fort Donelson, arose from the fact that the action was essentially one of sharpshooters. The enemy, from behind his earthen breastworks surmounted with legs, kept up an incessant fire, to which the Federal troops were unavoidably exposed for a protracted period. The only shelter of which they could avail themselves was the abatis of felled timber on the hillsides in front of the enemy's works. This cover was slight and precarious, and to extricate a wounded man from

the intertwined branches and prostrate trunks was painful and for him, and perilous for the litter bearers. Despite these difficulties, the wounded who could not drag themselves off were borne away early in the evening of each day by the ambulance attendants, whose courage and perseverance was worthy of the highest praise. In many instances they succeeded in removing the wounded from within a very short distance of the enemy's lines. The loss sustained in this action was disproportionately divided among the investing forces. Some divisions suffered far more than others. The casualties in General McClernand's first division were greatly in excess of the average. This was probably due to its exposed position, forming, as it did, the extreme right wing, stretching toward the Cumberland River and across the road leading from the fort to Clarksville, the path by which the enemy endeavored to his retreat.

The loss of the enemy during the siege and assault was probably not quite as heavy as that experienced by the national troops. The former fought behind earthworks deliberately and carefully constructed, and for the first two days they were but slightly exposed. During all this time, they were able to observe every movement of their assailants, and to mass their forces and direct their fire wherever an assault was threatened. Most of their wounded were rapidly conveyed, by steamers, to Clarksville and Nashville. At the subsequent capture of these towns, many of them fell into our hands. When the village of Dover, in the immediate rear of Fort Donelson, was occupied by General Grant, only a few of their injured were found, and the wounds of these were generally so severe, as to have forbidden their previous removal. During the vicissitudes of the fight of February 15th, one or two small temporary depots of the Federal wounded fell into the hands of the enemy. These patients were sent by the enemy, with their own injured, to Nashville, and a few days later were recaptured by the national force which occupied that city. Immediately after the occupation of Dover, all of the slightly wounded were placed in hospital in the houses of that town. The seriously injured, as has been already stated, were despatched in transports to large general hospitals, prepared for their reception, in the cities on the Ohio and Mississippi Rivers. The exposure of the troops during the siege was very great. The weather was, at first, excessively cold; a light fall of snow, degenerating into a sleet, then occurred. The troops resting on their arms during the night in the presence of the enemy were, of course, unprotected by tents. But their greatest suffering arose from the total absence of fires during the night, an absolute military precaution. Each morning, at sunrise, the firing recommenced, and it was with the greatest difficulty that provisions could be prepared. The suffering of the wounded during this protracted battle, although unquestionably great, was, however, not to be prevented. The hospital accommodations by the two or three mean farm houses in the neighborhood were, at best, but insignificant, and of hospital tents there were scarcely any. Transportation for the few tents in the possession of the medical when at Fort Henry, had been denied, simply because it could not be procured. In fact, the teams and wagons were too few in number to meet the wants of the army. Those at command were employed day and night in bringing up food and ammunition, and this was with difficulty accomplished. It was, however, a noticeable fact, that despite the benumbed condition of the men before being wounded, and their comparative exposure afterwards, not a single case of tetanus occurred

during their sojourn in the vicinity of Fort Donelson. Nor does this affection appear to have been met with subsequent to the removal of the same wounded to the general hospitals. At least no cases were reported, and the author has every reason to believe that they did not occur. The unavoidable exposure sustained by the troops at Fort Donelson resulted, ultimately, in grave diseases, which materially thinned the ranks of the army. Diarrhoea, dysentery, and pneumonia of a typhoid type became fearfully prevalent, and thousands of soldiers were broken down, and were then sent down the river to the general hospitals. During the two weeks following the surrender of the fort, the army lay, for the most part, on the surrounding heights. Detachments were pushed up the Cumberland River to Clarksville, and about the same time the division of Brigadier General Nelson, which had been detached from General Buell's army to reinforce General Grant, was directed by the latter to proceed in transports, under convoy of a gunboat, to Nashville. This, General Nelson accomplished, reaching Nashville simultaneously with the arrival of General Buell at Edgefield, on the opposite bank of the Cumberland. General Buell, with the army of the Ohio, had advanced by way of Bowling Green. General Nelson immediately landed his troops and occupied the town, which, on the following day, was formally surrendered by its mayor and prominent citizens to General Buell.

SOURCE

Surgeon John H. Brinton, "Extracted Report from Forts Henry and Donelson," in Medical and Surgical History of the War of the Rebellion, Appendix to Part I: 26-28.