

**Document-Based Question**  
**Medical Practices on the Civil War Battlefield**  
**8<sup>th</sup> Grade (Advanced) or 11<sup>th</sup> Grade (Regular/Advanced)**  
**Scott Fields – McKeel Academy**

**Directions:**

The following documents focus on medical procedures that were performed on the wounded soldiers of the Civil War. You are to read/analyze each of the following documents in the order that they appear. Following each document you are to answer the questions based upon your reading/analysis to the best of your ability. Then you will utilize the documents, your answers to the questions, and your prior knowledge to write a well-organized 5-7 paragraph essay based on the following prompt. Your essay should include an introductory paragraph followed by a body that includes specific details from the documents that have been provided for you.

**Essay Prompt:**

Historians refer to the era of the American Civil War as the “medical Middle Ages.” Do you agree or disagree with this statement? Using your prior knowledge and the primary documents that have been provided to you, write an essay that reflects your opinion. Be sure to include details from the documents that you have read and/or analyzed that led to your conclusion.

**HISTORICAL BACKGROUND:**

When Americans and Confederates went to war in the spring of 1861, most were not prepared for the horrors of battle. In past wars, battles had been fought in hand-to-hand combat using bayonets. During the Civil War, improved weaponry made killing at a distance much easier. Rifles, which replaced muskets, were more accurate over longer distances. Improved cannons and artillery also made it easier for armies to rain down death on men large distances away. After encountering a particularly gruesome scene after a heated battle, one Southern soldier wrote, “The sights and smells that assailed us were simply indescribable. Corpses were swollen to twice their size, some actually burst asunder.... The odors were so deadly that in a short time we all sickened [and] ... most of us [were] vomiting profusely.”

Unfortunately, medical care was not as advanced as the weaponry. The Civil War produced huge numbers of casualties, and doctors struggled to tend the wounded. In the mid-19<sup>th</sup> century, doctors had little understanding of infectious diseases or germs. They used the same unsterilized instruments on patient after patient. Few bothered to wash their hands between patients, not that it would have helped a great deal given the shortage of soap. As a result, infection spread quickly in the field hospitals. Battlefield physicians often used extreme measures in treating casualties: faced with appalling wounds, doctors often amputated arms and legs to prevent gangrene and other infections from spreading to other parts of the body. Battlefield hospital death rates were so awful that soldiers often refused medical care. One injured Union soldier from Ohio wrote that he returned to the battlefield rather than see a doctor, “...thinking that I had better die by rebel bullets than Union Quackery.”

Disease was another of the greatest threats facing Civil War soldiers. As staggering as the death tolls were, far more soldiers died of diseases than wounds. In many cases, regiments lost half their men to illness before ever going into battle. Crowded together in army camps, drinking from unsanitary water supplies, many soldiers became sick. Smallpox, when it erupted, could be deadly, as could dysentery, typhoid, and pneumonia. In one year alone, 995 out of every thousand men in the Union army contracted diarrhea and dysentery.

Resources: *The American Vision* (2003 edition), Glencoe, and *History Alive! The United States* (2002), TCI

*Excerpt from “Men at War: An Interview with Shelby Foote”*

**Interviewer:** What made it [the Civil War] such a bloodbath?

**Foote:** It was brutal stuff, and the reason for the high casualties is really quite simple: the weapons were way ahead of the tactics. Take the rifle itself. It threw a .58-caliber soft lead bullet at a low muzzle velocity, and when it hit, the reason there were so many amputations was that if you got hit in the upper arm, say, it didn't just clip the bone the way the modern steel-jacketed bullet does: you didn't have any bone left up there. They had no choice but to take the arm off. And you'll see pictures of the dead on the battlefield with their clothes in disarray, as if someone had been rifling their bodies [searching them for valuables or ammunition]. That was the men themselves tearing their clothes up to see where the wound was, and they knew perfectly well that if they were gut-shot, they'd die.

**Interviewer:** Someone once remarked that the Civil War occurred during the medical Middle Ages. What was it like?

**Foote:** When you see the instruments used in surgery, it's enough to make your hair stand on end – the bone saws and things. I'm sure they did the best they could. In many instances on the Southern side they didn't have medicines to use. Lack of chloroform, for instance, during amputations was a horrible thing to contemplate.

They not only didn't subscribe to the germ theory: they didn't suspect that it existed. Blood poisoning ... pneumonia, even measles was a big killer. They did not know how to treat them, let alone not having penicillin... It's a wonder they did as well as they did.

In the early days of the war especially, a camp, whether northern or southern, was an uproarious thing with the coughing. There was a tremendous amount of coughing in the camps in the early days. They all shook down. You couldn't tell a city boy from a country boy after they'd been in the army a year or two.

*The Civil War: An Illustrated History* by Geoffrey C. Ward with Ric Burns and Ken Burns

## **Part I**

### **Document A:** Picture of a Minie Ball

([http://scottsvillemuseum.com/forkids/Museum\\_in\\_a\\_Trunk/minieb\\_all.htm](http://scottsvillemuseum.com/forkids/Museum_in_a_Trunk/minieb_all.htm))

For nearly 200 years, the smoothbore musket had been the standard weapon for soldiers in Europe and then in North America. Those muskets were fast to load, but terribly inaccurate. Their effective range was 100 to 200 yards, but in reality they were only reliable at 40 yards or less. The term "couldn't hit the broadside of the barn" was literally true when applied to the accuracy of smoothbore muskets. At 300 yards, only 1 shot in 20 would hit a target of 18 square feet. The guns didn't even have an aiming device. "You might fire at a man all day from a distance of 125 yards without him ever finding it out," Gen. U.S. Grant wrote in his memoirs. The limitations of the smoothbore led directly to the accepted military tactic of massing troops into lines and firing coordinated volleys. It was even considered bad form to draw a bead on an enemy combatant.

In the mid 1840s, two French Army Captains Claude-Étienne Minié and Henri-Gustave Delvigne developed what was later called the Minié ball (or minie ball), which was the first modern bullet. The minie ball was shaped like a blunt cone with a hollow base that had three grooves packed with grease. The bullet was slightly smaller than the barrel's diameter so it could be loaded quickly. It came packed in a paper cartridge filled with gunpowder. To fire it, the soldier would rip open the cartridge with his teeth, pour the powder down the muzzle of the rifle and then ram the minie ball firmly down on top of the powder with a rod. Using this method, a soldier could fire three or four rounds per minute.

Initially, minie balls were adapted for flintlocks, but the development of weapons like the Model 1861 Percussion Rifle-Musket (better known as the Springfield 1861) resulted in a battlefield transformation. The Model 1861 was a single-shot, muzzle-loading gun detonated with a percussion cap, which was much more reliable than flintlock firing systems. It fired a .58-caliber minie ball and had a maximum effective range of 500 yards. It's estimated that more than a million Model 1861s were manufactured during the Civil War. It was the most common firearm in use by both Union and Confederate forces.

So why were these small-arm developments so crucial? Most Civil War battles were fought at close range, 400 yards or less, and well within the effective range of rifle-muskets. A soldier could look at a charging enemy, take aim and drop him. That was something new in warfare. The minie ball was a particularly deadly round, tearing an enormous wound on impact. Abdominal or head wounds were almost always fatal, and a hit to an extremity usually shattered any bone encountered. Those shattered limbs often had to be amputated.

Of the approximately 175,000 wounds to the extremities received among Federal troops, about 30,000 led to amputation; roughly the same proportion occurred in the Confederacy. While some 110,000 Union and 94,000 Confederate men died of wounds inflicted during battle, disease was actually the biggest killer during the Civil War. Infection caused by bullets carrying dirt, fabric and germs into a wound was just part of the problem.



Minie Ball  
Civil War

Physicians of the era generally had little formal training, often just two years or less with little clinical experience. Medical laboratories were non-existent. Harvard University, for instance, did not own a single stethoscope or microscope until after the war. While most surgeons were aware of a relationship between cleanliness and low infection rates, they did not know how to sterilize their equipment. Due to a frequent shortage of water, surgeons often went days without washing their hands or instruments, thereby passing germs from one patient to another as he treated them. The resulting vicious infections, commonly known as "surgical fevers," are believed to have been caused largely by *Staphylococcus aureus* and *Streptococcus pyogenes*, bacterial cells which generate pus, destroy tissue, and release deadly toxins into the bloodstream. Gangrene, the rotting away of flesh caused by the obstruction of blood flow, was also common after surgery. Despite these fearful odds, nearly 75 percent of the amputees survived.

Source: "Minie Balls Were Battlefield Evolution" by Mike West, *The Murfreesboro [TN] Post*

#### Questions

- 1.) Why were pre-Civil War muskets generally thought to be ineffective? What military strategies evolved as a result of these weapons?
- 2.) How did the minie ball, combined with the grooved-barrel rifle, change 19<sup>th</sup>-century warfare?
- 3.) Despite the advanced methods of killing people developed during the Civil War, what were the biggest causes of death?

#### **Document B:** Excerpt from the August 10, 1861 edition of *Harper's Weekly*

"Surgeon Barnes, of the New York Twenty-eighth Volunteers, was in the fight all through, and came out of it in his shirt sleeves, having lost coat, sash, watch, and all his surgical instruments, having been charged on by the Black Horse Cavalry and compelled to leave the field, being driven from under a tree where he had established his temporary quarters, and where he was attending to the wounds of about twenty-five injured men, part of whom were secessionists. Surgeon Barnes went up to the battle-field in the rear of the attacking column, and, as soon as our men began to fall, he took a position with his assistants under a tree, in a little ravine. The wounded men were brought to him, and he took off his green sash and hung it on the tree to signify that the place was under the charge of a surgeon. The injured men were brought in rapidly, and in fifteen minutes he had under his charge nearly thirty. As fast as possible he attended to their hurts, and in a short time had been compelled to perform a number of capital operations. He amputated four legs, three arms, a hand, and a foot, and attended to a number of minor injuries. By this time the enemy had discovered the place, and the nature of the men in charge, and began to pour in musket-balls, and projectiles from rifled cannon. The place became unsafe for the wounded men, and it was seen to be necessary to remove them. The Surgeon's Assistants and servant had become separated from him, and he had no one to send for ambulances, and was obliged to leave the wounded men and go himself. It was no easy matter to procure ambulances enough, and it was probably thirty minutes before the Surgeon returned with the necessary assistance. When he returned he found that every one of those wounded men had been bayoneted or sabred, and was dead. They were literally cut to pieces."

Source: "The Wounded at the Battle of Bull Run," *Harper's Weekly*, August 10, 1861, p. 510.

#### Questions

- 4.) Why did Union Surgeon Barnes hang his green sash from a tree while tending to wounded soldiers, both Union & Confederate?
- 5.) What difficulties might a surgeon encounter while tending to wounded soldiers in the heat of battle? What evidence in the passage leads the reader to this conclusion?



**Document C:** Union Zouave soldiers practicing loading wounded troops onto an ambulance wagon.

The first battles of the Civil War revealed gaping holes in the capabilities of the medical commands to evacuate wounded men from the battlefield, render immediate care, and arrange long-term hospitalization. Outdated military regulations relied on regimental musicians to remove the wounded. Surgeons were required to treat

only men from their assigned regiment, but even then they were soon overwhelmed by the chaos of battle. In some cases, days passed before men were removed from the battlefields. Townspeople became nurses. Their carts and wagons served as ambulances and their homes were outfitted into makeshift hospitals.

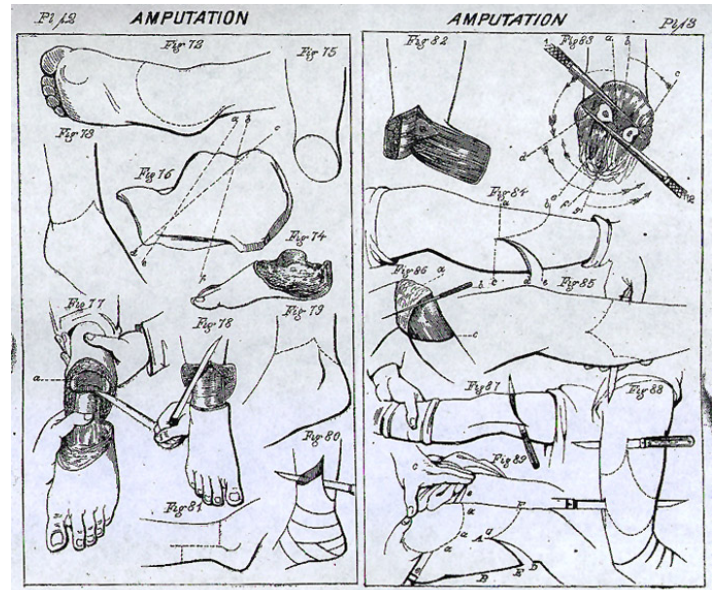
The public and military medical personnel grew outraged by these conditions. Their reactions forced significant changes in evacuation and hospital systems. Troops were organized and trained to recover and transport wounded men in ambulances. New types of ambulances were designed and built. Railcars and ships were outfitted to move the wounded from field hospitals to general hospitals. Large general hospitals holding thousands of patients and hospitals specializing in particular diseases and medical conditions were built. Surgeons planned the location of evacuation points and field hospitals before battles commenced. The procedures developed during the Civil War-rapid evacuation, assessment in the field, and transportation to a hospital far from the battle lines-are still in use by the American military.

Source: "Some on the Bare Ground, Some on Planks and Stretchers: Evacuation and Hospitalization" – National Museum of Health and Medicine (<http://nmhm.washingtondc.museum/exhibits/nationswounds/evacuation.html>)

### Questions

- 6.) What evidence from the reading passage details the need for a more organized ambulance corps during Civil War battles?
- 7.) What technological innovations were used to transport wounded soldiers from the battlefields more efficiently? Which of these innovations still in use today?

**Documents D & E:** (left) Surgical case, belonging to Pinchney Webster Ellsworth, M.D., 1860, a surgeon in the Civil War, and (right) a diagram from pp. 42-43 of "A Manual of Military Surgery" by Samuel D. Gross



Sources: Images from the Menczer Museum of Medicine and Dentistry of the Hartford Medical and the Hartford Dental Societies (<http://library.uhc.edu/hms/surgcase.html>) and "A Guide to Civil War Materials" in the Rare Book, Manuscript, and Special Collections Library at Duke University (<http://scriptorium.lib.duke.edu/pathfinders/civil-war/medicine.html>)

### Questions

- 8.) What items from the surgeon's case do you recognize? What might be the use of these items?
- 9.) At the outbreak of war between the Union and the Confederacy, the South could claim only two dozen surgeons qualified to practice battlefield medicine. Efforts were made to train dozens more. Describe your feelings as a Confederate soldier wounded on the battlefield to find your surgeon reading out of a manual before treating you.

**Documents F & G:** Union army surgeons amputate a soldier's leg (left picture) and another soldier's right arm (right picture).



Sources: (left photo) *The Civil War: An Illustrated History* by Geoffrey C. Ward with Ric Burns and Ken Burns, p. 296, and (right photo) *The American Vision*, Glencoe, p. 367.

#### Questions

- 10.) For what reasons would several men be involved in a wounded soldier's surgical procedure?
- 11.) What evidence in these pictures shows the lack of knowledge of germs and other causes of infection in the mid-19<sup>th</sup> century?

**Documents H & I:** (Left) Picture of a field amputation being performed in a hospital tent at Gettysburg, PA, July 1863, and (right) excerpt from a letter written by Union General Carl Schurz



“At Gettysburg the wounded - many thousands of them - were carried to the farmsteads behind our lines. The houses, the barns, the sheds, and the open barnyards were crowded with moaning and wailing human beings, and still an unceasing procession of stretchers and ambulances was coming in from all sides to augment the number of the sufferers.

“A heavy rain set in during the day - the usual rain after a battle - and large numbers had to remain unprotected in the open, there being no room left under roof. I saw long rows of men lying under the eaves of the buildings, the water pouring down upon their bodies in streams.

“Most of the operating tables were placed in the open where the light was best, some of them partially protected against the rain by tarpaulins or blankets stretched upon

poles. There stood the surgeons, their sleeves rolled up to the elbows, their bare arms as well as their linen aprons smeared with blood, their knives not seldom held between their teeth, while they were helping a patient on or off the table, or had their hands otherwise occupied; around them pools of blood and amputated arms or legs in heaps, sometimes more than man-high.

“Antiseptic methods were still unknown at that time. As a wounded man was lifted on the table, often shrieking with pain as the attendants handled him, the surgeon quickly examined the wound and resolved upon cutting off

the injured limb. Some ether was administered and the body put in position in a moment. The surgeon snatched his knife from between his teeth, where it had been while his hands were busy, wiped it rapidly once or twice across his blood-stained apron, and the cutting began. The operation accomplished, the surgeon would look around with a deep sigh, and then – 'Next!'"

Source: (photo) The Civil War Home Page (<http://www.civil-war.net/searchphotos.asp?searchphotos=Medical%20and%20Hospitals>) and the Carl Schurz home page (<http://212.74.5.57/USAschurz.htm>)

#### Questions

- 12.) For what reasons would amputations be performed in broad daylight during the Civil War?
- 13.) What evidence in these pictures shows the lack of knowledge of germs and other causes of infection in the mid-19<sup>th</sup> century?
- 14.) A skilled surgeon was one which could work very quickly. Why would it be important for a Civil War-era surgeon to be able to treat a dozen soldiers per hour?

**Document J:** Soldiers recover from their battle wounds at Carver General Hospital in Washington, DC



Source: The Civil War Home Page (<http://www.civil-war.net/searchphotos.asp?searchphotos=Medical%20and%20Hospitals>)

#### Questions

- 15.) What appears to be the mood of most of the soldiers in this picture? What steps have been taken in the aesthetic quality of the ward to improve morale?
- 16.) What may be going through the mind of the young soldier in the wheelchair, just right of center in the photograph?

**Documents K & L:** (Left) Private Columbus Rush, a 22-year-old Confederate soldier from Georgia, was wounded in both legs at the Battle of Fort Stedman, VA, on March 25, 1865, two weeks before the war ended. On the right is Private Charles L. Sewell, who had his left arm amputated as a result of his battle wounds.



Sources: (left) The University of Vienna's "Walking Art" online exhibit (<http://www.univie.ac.at/cga/art/history.html>) and the State of Florida's "Florida in the Civil War" online exhibit (<http://dhr.dos.state.fl.us/museum/mfh/exhibits/civilwar/13.cfm>)

#### Questions

- 17.) What difficulties might the two Civil War veterans shown above encounter in everyday life as a result of their respective injuries?
- 18.) Based on your knowledge of Civil War weaponry, do you think there may have been alternatives to amputation in treating these men and others that received similar injuries.

### **Part II**

For Part B, use your answers from Part A, information from the documents, and your prior knowledge related to these issues to write a well organized 5 paragraph essay. In that essay please address the following DBQ question:

Historians refer to the era of the American Civil War as the "medical Middle Ages." Do you agree or disagree with this statement? Using your prior knowledge and the primary documents that have been provided to you, write an essay that reflects your opinion. Be sure to include details from the documents that you have read and/or analyzed that led to your conclusion.

## DBQ Rubric

Name: \_\_\_\_\_

### Score of 5

- Thoroughly addresses all aspects of the task by accurately analyzing and interpreting most of the documents.
- Incorporates relevant outside information
- Richly supports outline with relevant facts, examples, and details
- Writes a well-organized outline, consistently demonstrating a logical and clear plan of organization.
- Includes a strong introduction
- Includes a strong conclusion
- Includes an original thesis statement

### Score of 4

- Addresses all aspects of the task by accurately analyzing and interpreting most of the documents.
- Incorporates relevant outside information
- Supports outline with relevant facts, examples and details-may be more descriptive than analytical
- Writes a well-organized outline, demonstrating a logical and clear plan of organization
- Includes a good introduction
- Includes a good conclusion
- Includes a clear thesis statement

### Score of 3

- Addresses most aspects of the task or all aspects in a limited way
- Incorporates limited or no relevant outside information
- Uses some facts, examples, and details-but is more descriptive than analytical
- Writes a satisfactorily developed outline, demonstrating a general plan of organization
- States the theme in the conclusion
- Includes a thesis statement

### Score of 2

- Attempts to address some aspects of the task by accurately analyzing and interpreting most of the documents
- Incorporates limited or no outside information
- Uses few facts, examples, and details-simply restates contents of documents
- Writes a poorly organized outline, lacking focus
- Has a vague or missing introduction
- Has a vague or missing conclusion
- Lacks a clear thesis statement

### Score of 1

- Shows limited understanding of the task with vague, unclear references to the documents
- Presents no relevant outside information
- Attempts to complete the task but demonstrates a major weakness in organization
- Uses few or no accurate or relevant facts, details, or examples
- Has vague or missing introduction or conclusion

### Score of 0

- Fails to address the task
- Writing is illegible
- Blank paper