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**The American Medical Association and the Civil War:
Influences, Improvements, and Outcomes**

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Senior Research Methods

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Abstract

The development of medicine during and as a result of the American Civil War is well-documented. However, most accounts overlook the impact of the American Medical Association and its influence on medicine in the northern states during the war. Almost all the attention of past research has focused on the surgeon-generals and their policies. However, through their high-ranking military positions, members of the AMA heavily influenced Union medical policy during the war. Noticeable disparities developed between the medical corps of the Confederate and Union States, partially as a result of the AMA.

Archives of the American Medical Association were relied upon heavily for this research. Hundreds of primary documents including military dispatches, letters, journals and medical publications were analyzed to trace the influences of the AMA on medicine in the Union Army. General comparisons are also made between the medical corps of the Confederate and Union states in order to make the case that the AMA was a key difference-maker.

Through the development of a superior ambulance system, better organization of hospitals, and better pay of physicians, the medical system of the north experienced better patient outcomes than the south. These developments can be partially attributed to the influence of the AMA. This organization contributed to advantages in medical care and the well-being of surgeons in the north, conveying a military advantage to the Union army and influencing the outcome of the war.

Introduction

The American Civil War is perhaps the most tumultuous time in our nation's history. This conflict fostered upheaval in America's political, societal, and cultural institutions. The effects of this war on healthcare and medicine are also well documented. Conflict often spawns new medical research and practices, and the Civil War was no exception to this precedent. However, one aspect of the medical history of the Civil War that is often overlooked is the influence of the American Medical Association. This institution affected policies in the Union army medical corps, and many of their members occupied high positions in the military hierarchy. The influence of the AMA in the north contributed to the disparity between the condition of the medical corps in the Union and Confederate states. Doctors in the north were paid more than in the south, Union hospitals were superior in construction and organization, and standards for military conscription of physicians were higher in the north.

All of these factors can be traced back to the influence of the American Medical Association and its members, and taken together, these factors gave the Union medical corps a measurable advantage over the Confederate States. Without these AMA members in high-ranking offices of the Union Medical service, certain changes may not have been implemented that changed the course of healthcare during and after the war. The impact of these changes is still visible today, as the AMA pressured to transform medicine into a standardized and professional industry.

Historiography

The most important secondary sources used in this research have been *Doctors in Gray* by H. H. Cunningham and *Doctors in Blue* by George W. Adams, published in 1958 and

1952, respectively. These books documented the experiences of the medical departments of the Confederate Army and the Union Army, respectively. Although *Doctors in Blue* only mentions the American Medical Association in passing, both books provide helpful background information and establish contexts for the history of medicine during the American Civil War. Both books are fairly broad in their assessments, but their bibliographies contained a wealth of primary sources and archives that were utilized for more specific research. Oddly, neither book utilized footnotes with corresponding bibliographical entries, but instead just had an alphabetical bibliography of every source used in the work. This made it difficult to track down sources specific to a particular factoid in the book.

Unfortunately, the AMA requires membership in order to access their physical archives and some of their journals, and AMA membership is only available to medical doctors. Fortunately, the Digital Archives of the American Medical Association are available to the public, and they contain the majority of the primary sources used in this paper. The “Transactions of the American Medical Association” were also heavily utilized, as they contain the agenda from the meetings of the AMA, as well as selected publications of AMA members and the membership lists.

The Union Army, as well as the medical department and the United States Sanitary Commission kept impeccable records during the war. These records are consolidated into two major works. The first is Joseph K. Barnes *Medical and Surgical History of the War of the Rebellion*, which comprised three volumes of two parts each. These volumes contain some editorializing, but for the most part it is a collection of statistics and memos regarding the practice of medicine in the Union Army. The second major work is William Grace’s

Army Surgeon's Manual. Published in 1865, this collection contained all the memo's and "circulars" (letters sent from officials to subordinates) that the War Department and Surgeon General's Office dispatched. The evidence in these collections was essential to making the case that the AMA influenced Union policies during the war.

Problems and Limitations

As mentioned previously, the bulk of the limitations in this research stem from the author not being a medical doctor or professional historian, which prevented full access to all of the American Medical Association's journals and archives. Although the AMA does have some freely available online archives, which were very useful, the physical archives may contain more publications and information about members that could benefit the study of this organization and its impact on medical care during the war.

The most challenging aspect of this work is the relative lack of mention of the AMA in primary sources from the civil war. Professional organizations were a brand-new development in American career fields at this time, and as such, they were often overlooked or rejected as possible sources of influence. Since the AMA had only been established in 1847, they were not widely recognized at the outset of the war. However, the war did help to greatly increase their prestige through their influence on post-war professionalization. Regardless of these post-war developments, there is almost no mention of the American Medical Association in wartime documents. Instead, their influence must be traced back to individual physicians in their membership, or to

recommendations that were made by physicians on behalf of the AMA, as seen in the case of the ambulance system and the hospital recommendations by Dr. E. Andrews.¹

There were further limitations in dealing with the wartime documents of both the Union and Confederate governments. The Union kept excellent records during the war, but there is some confusion brought about by the complex hierarchy of military and government departments. For example, the Union Army was itself actually a collection of several smaller armies, each with their own medical department. The United States Sanitary Commission, a private relief organization funded by a federal grant also influenced military policy. Additionally, the Union medical departments could be given orders by the surgeon general of the Army, Navy, or the surgeon general of the United States of America. For these reasons, it is sometimes difficult to ascertain who originally established a new rule or standard in the medical departments. Similarly, the Confederate Army had a military medical department with a surgeon general, but several states, notably Tennessee, had their own state medical departments that operated under the umbrella of the Confederate Army. The issue in the Confederate Army is further complicated by the burning of Richmond in April, 1865, resulting in the loss of most of that government's military records.

History of the American Medical Association, 1847-1865

The AMA was founded in 1847, and had clear goals established early in its existence. These four goals included elevating the standard of medical education, improving the status of private medical teachers, promoting the advancement of the profession through

¹ "The Transactions of the American Medical Association," *Transactions of the American Medical Association*, Vol. 14, no. 1, (1864): 131.

research, and developing and enforcing a higher standard of qualifications for physicians.² This last point is crucial, as the American Medical Association was groundbreaking in its desire to improve the regulation and standardization of the American healthcare system. The hospital system was poor (in both senses of the word) and ineffective, and most physicians made a living off of wealthy patients who paid medical expenses out of pocket.³ The AMA was the first professional organization to address these issues at the highest organizational levels, and their goals for medicine are clearly evident through their actions during the Civil War.

When the war began, the American Medical Association did not formally split, and attempted to maintain political neutrality. This attempt failed miserably. During the only wartime meeting of the AMA in 1863, no delegates were present from any Confederate States.⁴ On paper, the American Medical Association continued to operate outside the conflict, but the reality was different. Even before the war, the presence of the AMA was much stronger in Northern states. In 1850, physicians from southern states represented 45% of the total physicians in America.⁵ However, in 1847, more than two-thirds of AMA members hailed from states that would eventually be Union states.⁶ This imbalance in representation led to the AMA's much greater influence in the Union during the war compared to the Confederate States. This imbalance gave the Union medical department

² Nathan Smith Davis, "History of the American Medical Association, From its Organization up to January, 1855," Archives of the American Medical Association (ama_arch/AD0000001/0040HIST), 27.

³ Charles. D. Rosenberg, *The Care for Strangers* (New York: Basic Books Inc. Publishers), 116.

⁴ Morris Fishbein M.D., "History of the American Medical Association 1847-1947," Archives of the American Medical Association (ama_arch/AD000001/0038HIST), 70.

⁵ These physician populations are discussed further later in this paper, in the "Disparities" section.

⁶ "The Transactions of the American Medical Association," *Transactions of the American Medical Association*, Vol. 1, no. 1, (1848): 389-400.

certain advantages during the war, and continued to contribute to the superior status and lifestyle of physicians after the war.

Staffing the War Effort

At the outset of the war, the north and south both scrambled to find capable physicians and nurses to serve in their respective armies. The Union Army Medical Department in 1861 was woefully understaffed and generally unprepared for the scale of the war.⁷ However, they were able to muster a large number of surgeons fairly quickly, as evidenced by the United States Sanitary Commission's 1861 report to the Secretary of War. This report highlighted that of the 200 regiments surveyed by medical inspectors, 176 were found to have "sufficiently well qualified" surgeons, while only seven regiments lacked a surgeon.⁸ At its peak, the Union Army would employ more than twelve thousand surgeons.⁹ Meanwhile, the Confederate medical department was only able to muster around three thousand surgeons, giving a much poorer ratio of surgeon-to-soldier than the Union forces.¹⁰

Despite the pressing need for a huge number of surgeons, the Union quickly established standards for hiring. These standards helped establish new norms in the healthcare industry. By 1862, military medical boards were established at the national level to examine candidates' qualifications and their standards were remarkably modern,

⁷ Shauna Devine, *Learning from the Wounded: The Civil War and the Rise of American Medical Science*, (Chapel Hill, NC, UNC Press Books, 2014), 37.

⁸ United States Sanitary Commission, *A report to the Secretary of War of the operations of the Sanitary Commission: and upon the sanitary condition of the volunteer army, its medical staff, hospitals, and hospital supplies*, (Washington DC, McGill and Witherow, 1861), 43. Retrieved from US National Library of Medicine Digital Collections, <http://resource.nlm.nih.gov/101524714>.

⁹ George W. Adams, *Doctors in Blue: The Medical History of the Union Army in the Civil War*, (Baton Rouge, LA, LSU Press, 1996), 9.

¹⁰ H. H. Cunningham, *Doctors in Gray: The Confederate Medical Service*, (Baton Rouge, LA, LSU Press, 1993), 37.

requiring knowledge of chemistry, physiology, toxicology, as well as practical skills such as examinations and surgical operations.¹¹ Before 1862, each state had adopted its own examination system, or had declined the endeavor entirely. In his memoir, John H. Brinton, who would go on to become the first curator of the National Museum of Health and Medicine, commented that the exam was “chiefly written, and not very rigid.” Significantly, he was notified immediately at the conclusion of his exam that he had passed. Some doubts have been raised about the fairness of these exams, since much of the grade was left up to the interpretation of the medical examiner, who could even exempt physicians entirely from the tests.¹²

Continuing its trend of emulating Union practices, the Confederate medical board soon established its own examinations for prospective surgeons. These exams were met with mixed approval, and their efficacy was debated. Notably, some candidates passed this exam without ever treating a patient and were immediately sent into the field with no experience.¹³ Regardless of the adequacy of these exams, it is interesting to note that even when faced with dire shortages of medical personnel, both the Union and Confederacy established some modicum of standardization and professionalization in their respective medical corps. This is strong evidence of the American Medical Association’s impact on the American healthcare industry, and its influence on the Civil War. The AMA’s significant stance on the professionalization of medicine in the prewar years shaped how both armies organized this essential wartime service. Without this new trend in standardization and

¹¹ “Information for Persons Desirous of Entering the Medical Staff of the Army,” circulars and Circular letters of the Surgeon General’s Office, p. 5-8, entry 63, RG 112, NARA.

¹² John H. Brinton, *Personal memoirs of John H. Brinton, major and surgeon U.S.V., 1861-1865*, (New York: Neale Publishing Co, 1914): 20.

¹³ Cunningham, 34.

licensure of physicians, the medical corps of both sides may have been composed of lower-caliber surgeons.

At the beginning of the war, the Confederate States did not have an organization equivalent to the Army of the Potomac's Medical Department, instead opting for each state's provisional army to run its own medical board, at least for the time being.¹⁴ However, they were quick to adapt, and in August 1861, just six days after the election of Jefferson Davis, the Confederate States established their own Army medical board.¹⁵ The Confederate medical department had extremely meager beginnings, consisting of only one Surgeon General, four surgeons with the rank of major, and six assistant surgeons granted the rank of captain. Legislation soon followed to expand the service by allowing the employment of private physicians on a monthly basis and the new appointment of surgeons by the president or surgeon general.¹⁶

Disparities

There are several factors that contributed to greater involvement of northern doctors in the war effort compared to their southern counterparts. These include higher wages for Union physicians, greater opportunities for rank and career advancement in the Union service, and better access to medical tools due to the Confiscation Act of 1861, which allowed the Union to confiscate property from rebellious states. Overall, Union doctors enjoyed conditions and benefits far superior to Confederate doctors, and many of these discrepancies can be traced back to the AMA.

¹⁴ Glenna R. Schroeder-Lein, *Confederate Hospitals on the Move: Samuel H. Stout and the Army of Tennessee*, (Columbia, SC, USC Press, 1994), 41.

¹⁵ Cunningham, 21.

¹⁶ Confederate States of America War Department, *Regulations for Medical Department of Confederate States Army*, (Richmond: Ritchie and Dunnivant, 1862): 5-6. Retrieved from U.S. National Library of Medicine Digital Collections, <http://resource.nlm.nih.gov/62441310R>.

The first disparities emerge when the salaries and ranks of surgeons are compared in the Confederate and Union armies. In both services, the surgeon general was awarded the rank of Brigadier General, but the Union surgeon general was paid \$315 a month to the Confederate's \$300 a month. This wage gap remains fairly constant throughout the ranks. In both services, surgeons were majors, and assistant surgeons were either first lieutenants or captains, depending on length of service in the Union army, and exclusively captains in the Confederacy.¹⁷ Once again, the Union officers made \$15 more per month than their southern counterparts, with surgeons in the Union pulling \$165 a month and assistant surgeons either \$130 or \$100 depending on rank.¹⁸ Across all ranks and positions, wages for southern surgeons were lower than in the Union, contributing to the much larger medical corps found in the Union army.^{19,20}

Conditions in the medical corps of the Union Army and the Confederate Army were very different, both for the wounded and the caregivers. Much of this disparity can be attributed to the limited resources that the Confederate States had compared to the Union. One stark example of this disparity is found in the number of physicians employed by each side. At the end of the war, the Union had twelve thousand physicians in its employ, while

¹⁷ William Grace, *The army surgeon's manual: for the use of medical officers, cadets, chaplains, and hospital stewards : containing the regulations of the Medical Department, all general orders from the War Department, and circulars from the Surgeon-General's Office from January 1st, 1861, to April 1st, 1865*, (New York: Bailliere Bros, 1865): 9. Retrieved from U.S. NLM Digital Collections, <http://resource.nlm.nih.gov/62510310R>.

¹⁸ Alberta A. Nofi, *A Civil War Treasury*, (Cambridge, MA, De Capo press, 1992), 381-383.

¹⁹ It is important to note that there was a slight wage gap between the northern and southern states, beginning in 1830 and escalating into 1850, as discussed by Robert A. Margo in "Geographic Aspects of Labor Market Integration before the Civil War." However, this wage gap is not large enough to entirely account for the disparity between the pay of Union and Confederate physicians.

²⁰ Margo, Robert A, *Wages and Labor Markets in the United States, 1820-1860*, (University of Chicago Press, 2000): 95-118.

the Confederate could only field three thousand.²¹ It is difficult to explicitly compare the expenditures of the Confederate and Union Medical Departments for several reasons. The first being the loss of many documents in the Richmond fire, and the second being a difference in record-keeping by both the Union and Confederacy. Union documents published after the war state a highly specific number of forty-seven million dollars of expenditures, but this excludes salaries of officers, which complicates the equation considerably.²² Based on the number of employed and contracted surgeons and their standardized salaries, a rough estimate can be made about the cost of physician salaries in the Union: seventy-three million. This brings total Union expenditures to about one hundred twenty million. The most reliable number published for Confederate expenditures is seventy-four million dollars, including salaries of medical officers. Clearly, the Union had a strong monetary advantage over the Confederate medical service.

In addition to fully conscripted surgeons given military rank and honors, both the CSA and the Union employed thousands of private physicians on a contract basis without official conscription into the military. These physicians generally worked for three to six months at a time and were paid less than their conscripted complements. In the Union, an average of about 1500 contracted surgeons served throughout the war, making up about 10% of the total surgeons. The Confederate army paid a private physician at most \$80 per month, while the Union offered \$100 per month.^{23,24} Once again, the Union outbid the Confederate states for the services of the nation's surgeons. It is easy to imagine that a

²¹ Robert F. Reilly, "Medical and Surgical Care during the American Civil War, 1861-1865," *Articles from Proceedings (Baylor University Medical Center)* 29 (2016): 138-142.

²² Joseph K. Barnes, *Medical and Surgical history of the War of the Rebellion*, part III, vol. 2 (Washington DC, Government Printing office, 1883), 902.

²³ *Regulations...*, 12.

²⁴ Grace, 116.

physician in a divided state such as Virginia or North Carolina could see himself signing up with the Union over the Confederates simply for monetary reasons.

The ranks of surgeons in the Confederate states remained unchanged throughout the war after their initial establishment. However, in the Union, the AMA was again at work. Since the vast majority of surgeons were awarded the rank of major, there was considerable inequality in this position when the workloads of surgeons are considered. Even medical directors, who oversaw the medical operations of multiple brigades or regiments were still considered majors and awarded the same pay as a company surgeon, albeit with a few perks. This was changed in 1865 by legislation that was lobbied by the American Medical Association, which promoted these medical directors to the rank of colonel or lieutenant colonel, dependent on the number of beds they oversaw.²⁵ No such appointment was given to surgeons in similar positions in the Confederate army. This is another case in which the American Medical Association affected policy in the Union medical service.

There is considerable evidence that AMA members were disproportionately represented in the highest offices of the United States Army Medical Corps. The AMA's total membership in 1860 was around two thousand two hundred, with between one thousand to twelve hundred of those joining the Confederate states at the outset of the war.²⁶ This means that out of twelve thousand surgeons serving in the Union Army at this time, at most 9% were members. In 1861, the United States Army Medical corps appointed thirty-five new surgeons to the position of Brigade Surgeon, the third highest rank that

²⁵Adams, pg. 47.

²⁶ "The Transactions of the American Medical Association," *Transactions of the American Medical Association*, Vol. 13, no. 1, (1860): 859-927.

surgeons could attain at this time.²⁷ Of those thirty-five, a whopping sixteen, or about 46% were on the membership rolls of the AMA in 1860. This trend continued throughout the war in the Union Army. In 1862, eight surgeons were promoted to the rank of Lieutenant Colonel or higher.²⁸ Five of these were AMA members. In 1863, fourteen more surgeons were promoted to Lieutenant Colonel or higher to replace vacated positions.²⁹ As seen in Table 1, once again, a disproportionate number of promotions were awarded to AMA members: six out of fourteen, or 43%.³⁰

Table 1

	Percentage of Union Doctors with AMA Memberships	Physicians promoted to Lt. Col or higher	Percentage of promotions awarded to AMA members
1861	9%	35	46%
1862	9%	8	63%
1863	9%	14	43%

²⁷ Grace, 31.

²⁸ Grace, 49.

²⁹ Grace, 79.

³⁰ The numbers in this paragraph were obtained by cross referencing the names of the promoted officers found in the Army Surgeon's Manual with the list of permanent members found in the appendix of the Transactions of the American Medical Association, 1860.

As a result of these inequalities, physician participation in the war effort was much higher in the North. According to census record in 1850, there were roughly forty thousand physicians practicing in America in at this time.³¹ By 1860, that number had risen to fifty four thousand.³² As mentioned previously, between fourteen and fifteen thousand physicians served in the American Civil War. This means that roughly one fourth of all practicing physicians served in the war. The Union states experienced a much higher participation rate of physicians in the army compared to the total number of physicians. In 1860, twenty-four thousand physicians lived and (presumably) practiced in the southern states, but only three thousand eventually served in the Confederate States Army.³³ Of the thirty thousand physicians in northern states, eleven to twelve thousand served in the Union Army. The percentages of physician participation can be seen in Table 2.³⁴

Table 2

	Union States	Confederate States	Total
Total Physicians	30,000	24,000	54,000
Physicians in the war effort	~11,500	3000	14,000
War effort involvement percentage	38%	13%	26%

³¹ United States Census Bureau, "Occupations of the Male Inhabitants," 1850.

³² United States Census Bureau, "Occupations of the Male Inhabitants," 1860.

³³ Cunningham, 37.

³⁴ Adams, 9.

Homeopathy versus Allopathy

Although the effects of the Civil War on the medical profession in America are fairly apparent, these changes were not without conflict. The increased levels of professionalism and standardization were not universally lauded or accepted. The main conflict that epitomizes these feelings was that between homeopaths and allopaths during the war. The AMA was founded with strong allopathic biases, as allopathy was the conventional method of medicine at this time. From its inception, the AMA had promoted the practice of what came to be known as “heroic medicine.” These practices included the famous practice of bloodletting and the administration of poisons and caustics to induce vomiting. Allopathic physicians, who comprised 90% of the physicians in America at this time, viewed their homeopathic counterparts as subpar and unscientific caregivers. Meanwhile, homeopaths decried these acts of heroic medicine as overtly harmful and promoted gentler remedies.³⁵

Throughout the war, homeopaths faced severe discrimination in the Union medical corps. This can be partially attributed to the leadership positions of the U.S. Army Medical Board being occupied exclusively by allopaths. These leaders shared the belief that homeopathy was not true medicine, and homeopaths lived in ignorance of scientific rationales. Additionally, the existence of two distinct therapeutic systems in army hospitals could have wreaked havoc in the system.³⁶ It was determined that one standardized system was superior, and that system was allopathy. The American Medical Association’s call for the standardization of medicine can be seen heavily influencing Union Army policies in this instance.

³⁵ Lainie W. Rutkow, and Ira M. Rutkow, “Homeopaths, Surgery, and the Civil War: Edward C. Franklin and the Struggle to Achieve Medical Pluralism in the Union Army,” *Archives of Surgery* 139, no. 7 (2004): 785-791.

³⁶ Rutkow, 788.

In contrast to the Union Army, the Confederate States Army displayed no such discrimination against homeopaths. Although the exact numbers of employed homeopaths are difficult to pinpoint, the examining boards in the south demonstrated no preference for allopathic physicians. This can be attributed to several factors. The first is that the Confederate States constantly struggled with a shortage of qualified surgeons, so turning away any skilled practitioner would be more detrimental than in the Union. Second, the AMA's influence did not reach the South, and therefore their opposition to homeopathy had little to no effect on the employment of physicians in the CSA medical departments. Finally, since the CSA medical department was started from scratch at the beginning of the war, there were no preexisting prejudices among the leaders as there were in the Union. For these reasons, homeopathic physicians were able to serve in the Confederate States Army, but not in the Union Army.

Not only did homeopathic physicians serve as caregivers in the southern army hospitals, they also influenced army-wide policies. As mentioned previously, the southern states faced huge shortages of medical supplies and medicines as a result of the Confiscation Act of 1861. This led Samuel Preston Moore, surgeon general of the Confederate States Army, to issue a series of dispatches urging physicians to employ herbal remedies in their treatments, paying special attention to plants native to the south. Moore even gave a special assignment to the notable confederate surgeon Franchis Porcher to take a break from running a confederate hospital to publish a book about native remedies. This book was distributed to physicians in the Confederate service and played a large role

in validating homeopathy as medical science in the south.³⁷ The surgical manual of the army even included a table for identifying these remedies in the field and their uses.³⁸ This is textbook homeopathy, and the influence of these physicians reached the highest levels of the Confederate States medical corps, in stark contrast to their outright rejection from the Union Army.

Improvements in Care Practices

One area in which the Union Army vastly outpaced the Confederate Army was in hospital construction. At the beginning of the war, Union military hospitals were improvised in jails, schools, and other public buildings, but these quickly became inadequate for the volume of casualties and operations. Under the guidance of William Hammond, surgeon general, and Jonathan Letterman, medical director of the Army of the Potomac, the Union quickly developed an advanced system of field tent hospitals and general hospitals. This system was years ahead of most other nations, and European observers traveled to the United States during the war to learn from the Union system.³⁹ The war also caused a massive increase in the number of hospitals in the United States, and by the war's end there were 204 hospitals containing 136,000 beds in the Union alone.⁴⁰

Although there are horror stories told about these hospitals, they were quite advanced for their time, and many improvements were made as the war progressed. Despite germ theory not being discovered yet, in the Union there was a basic

³⁷ Porcher, Francis Peyre, *Resources of the Southern Fields and Forests, Medical, Economical, and Agricultural: Being Also a Medical Botany of the Confederate States: with Practical Information on the Useful Properties of the Trees, Plants, and Shrubs*, (Steam-Power Press of Evans & Cogswell, 1863): iii.

³⁸ Confederate States of America War Department, *Regulations for Medical Department of Confederate States Army*, (Richmond: Ritchie and Dunnivant, 1862): 108. Retrieved from U.S. National Library of Medicine Digital Collections, <http://resource.nlm.nih.gov/62441310R>.

³⁹ Adams, 150.

⁴⁰ Adams, 153.

understanding that gathering many sick people in the same area often led to disease. This is another area in which the American Medical Association influenced Union policy during the war. At the 1863 meeting of the AMA, Dr. E. Andrews presented his paper of three “diatheses,” which are theories about the development and causations of disease. His second diathesis revolved around ventilation, and he argued that using poorly ventilated buildings like hotels and schools as hospitals was detrimental to patient health. He even encouraged surgeons who were operating in these theaters to knock down walls and open corridors to the outside to promote ventilation.⁴¹ The United States Sanitary Commission adopted this idea. In 1863, they developed new standards for the construction of pavilion field hospitals that were larger, with wider hallways and rooms to enhance ventilation. These practices, encouraged by the AMA conferred Union hospitals with an advantage over the relatively rudimentary Confederate hospitals, and by the end of the war, Union military hospitals boasted an impressively low 8% mortality rate.⁴²

Conditions in the Confederate Army Medical Department ranged from poor to mediocre. The army struggled with overcrowded and poorly administrated hospitals throughout the war. In 1862, a special inspector remarked of the “almost utter hopelessness of adequate hospital arrangements.”⁴³ Early in the war, the Confederacy enacted a policy of “furloughing,” in which wounded soldiers were sent home to recover.⁴⁴ This policy is evidence of the tremendous shortage of hospital beds that faced the Confederacy. Despite this troubling start, changes were quickly implemented and the

⁴¹ “The Transactions of the American Medical Association,” *Transactions of the American Medical Association*, Vol. 14, no. 1, (1864): 131.

⁴² Ina Dixon, “Civil War Medicine: Modern Medicine’s Civil War Legacy,” last modified October 29, 2013, accessed November 21, 2016.

⁴³ Cunningham, 49.

⁴⁴ Frank Freeman, *Gangrene and Glory*, (Chicago: University of Illinois Press, 1998), 34.

number of hospitals in the South increased dramatically. However, the Confederate army still frequently utilized hotels, schools and churches as makeshift hospitals, despite unsanitary conditions presented by these locations. This trend of using civilian buildings as hospitals was especially profound in the Confederate states capital of Richmond, Virginia, as seen in Figure 1.

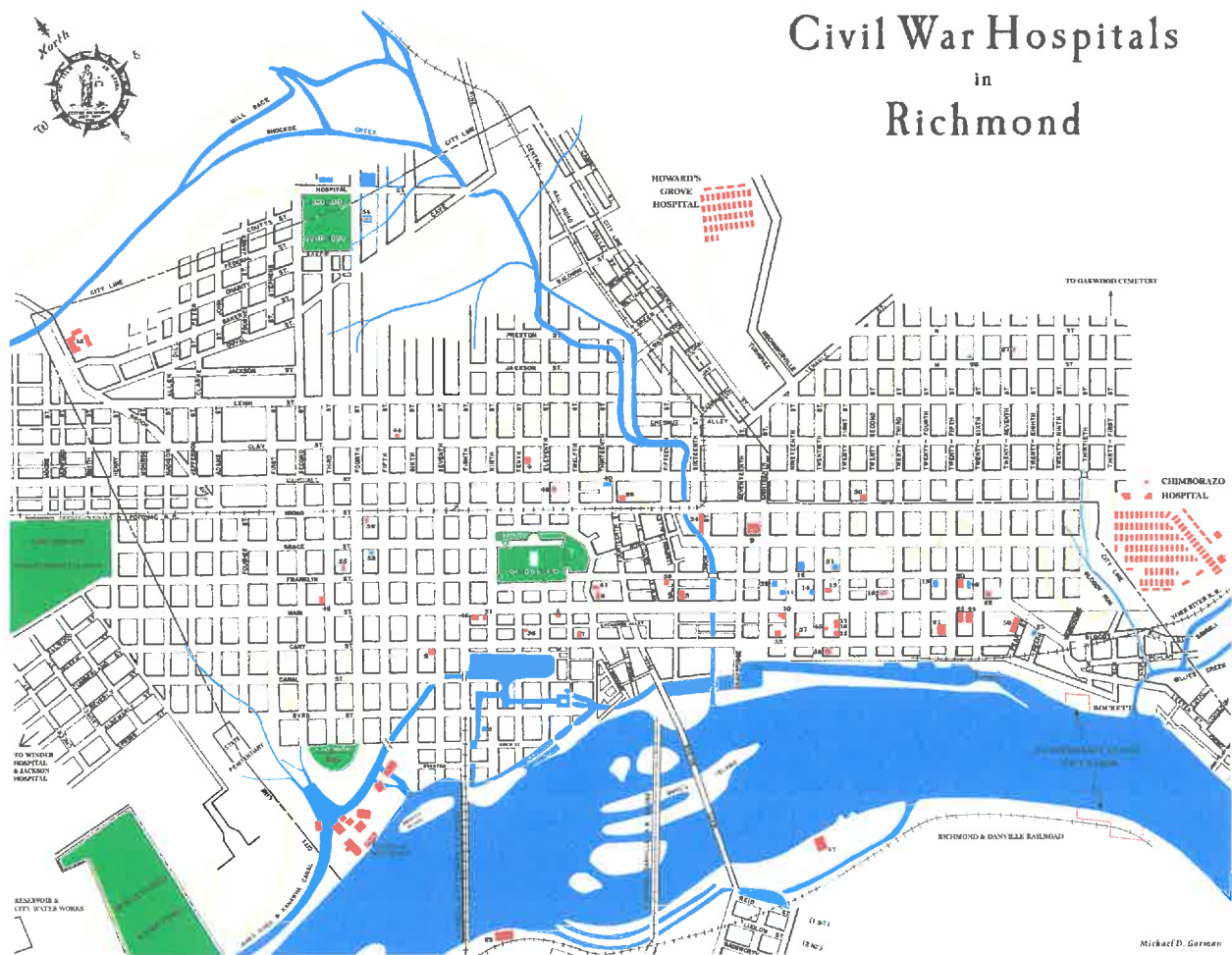


Figure 1: A map of Richmond from 1863, highlighting public buildings that were adapted to serve as hospitals for the overwhelming number of wounded (red areas denote hospitals)

Although both the north and south made some improvements in their hospital systems, these hospitals would have been useless without an effective and complex structure of transportation for the wounded. The Union in particular boasted a highly advanced ambulance system that is widely credited with greatly reducing mortality in the union army.⁴⁵ Dr. Henry Bowditch, an AMA member, lobbied forcefully for this ambulance system. In 1862, he distributed a pamphlet among AMA members urging support for an ambulance system to be established in the Union medical corps. Thanks to the disproportionate number of AMA members in high offices of the Union medical corps, this system was established a year and half later, which is relatively quick for bureaucratic time. The Confederate medical corps fell behind the Union in this respect. Without the lobbying power of the AMA, the Confederate states did not institute an ambulance system until much later in the war, and with less success than in the Union. Yet again, the AMA had shown its ability to improve medical care in the Union army.

Conclusion

Despite facing incredible shortages, both the Union and Confederate Army Medical Departments made huge advances in battlefield medicine and organization. The system of mobile field hospitals and the complex ambulance systems enacted by both parties were the envy of the world. However, the Union medical department was more effective by several measures, thanks in part to the influence of the American Medical Association on changing Union policies. The Union's ambulance system, improved hospital design, and greater number of qualified surgeons can be all be traced back to the AMA's influence, and

⁴⁵ Scott McGauh, *Surgeon in Blue: Jonathan Letterman, The Civil War Doctor Who Pioneered Battlefield Care*, (New York: Arcade Publishing, 2013), 106.

taken together, these aspects gave the Union medical service an advantage over the Confederates.

This research has unearthed several other questions that could be studied. First, were AMA certified doctors preferentially hired in the years following the war? Second, an economist could study the AMA's influence on the spending policies and physician wages in the Union service, and how those related to wage gaps between the north and south. Third, an in-depth study of patient mortalities and hospital stay durations could be conducted to analyze disparities between the Confederate and Union states. Finally, the differences in medical practices in the north and south during the reconstruction era could be studied and traced back to AMA influences during the war.

The influence of the American Medical Association during the Civil War not only gave the Union an advantage in the war, but these influences continued to impact American healthcare during the reconstruction era and the years to follow. The AMA shaped the direction of American healthcare in this transitional time in American history, and its effects can still be seen today in the highly standardized and professionalized industry of medicine.

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