

# Wounds, Disease, and Civil War Era Medicine

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# Civil War medicine

- Popular depictions of Civil War medicine portray it as unscientific and brutal
  - Understandable from a current-day perspective
- But the Civil War was in many ways a triumph of modern medicine
  - Napoleonic Wars: 9/10 soldiers who died perished from disease
  - The ratio was about 2/3 in the Civil War
- Depictions of amputations performed without anesthesia inaccurate and misleading
  - Amputations were awful, but often lifesaving

# Anesthesia

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- Civil War was fought *after* discovery of chloroform (1851) and ether (1846)
  - Morphine also used; led to a serious addiction problems after the war
- But *before* the development of germ theory
  - 1867: Joseph Lister discovered the role of antiseptics in preventing infection
  - 1878: Robert Koch discovered that bacteria cause disease/infections
- Still, Civil War doctors understood the general importance of sanitation
  - Notion of “bad air” (miasmic theory of medicine)
  - Understood that people spread disease to one another
    - “Crowd diseases”
    - But no understanding of microbes or dangers of mosquitos
    - And no real understanding of how to check the spread of disease

# State of the medical profession

- No standard medical training
- Physicians learned on the job
- Both sides started with very few physicians and hospital beds
- Public pressure led to improved, more systemized care
- Physician faced new challenge
  - Soldiers faced brutal injuries
  - Minié ball – very destructive to human flesh





Leg bone hit by  
minie ball

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“Left femur of a  
Confederate soldier,  
exhibiting attempts at  
repair of a gunshot  
fracture...”

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# Amputations in the Civil War

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- Around 60k amputations
  - Proportionally much higher than prior – or later – wars
- Often performed outside in field hospitals
  - Unsterile conditions
  - But physicians needed light to see properly
- Discovered that chances of survival higher if surgery was performed asap
  - Survival rates also depended on how close the amputation was to the trunk of the body
  - Improved over the course of the war
  - By war's end, survival rates for amputations not so different from today

Detail from  
Operating Tent,  
Camp Letterman,  
Gettysburg,  
Pennsylvania,  
1863, The  
Metropolitan  
Museum of Art,  
New York



# Civil War Amputation Kit



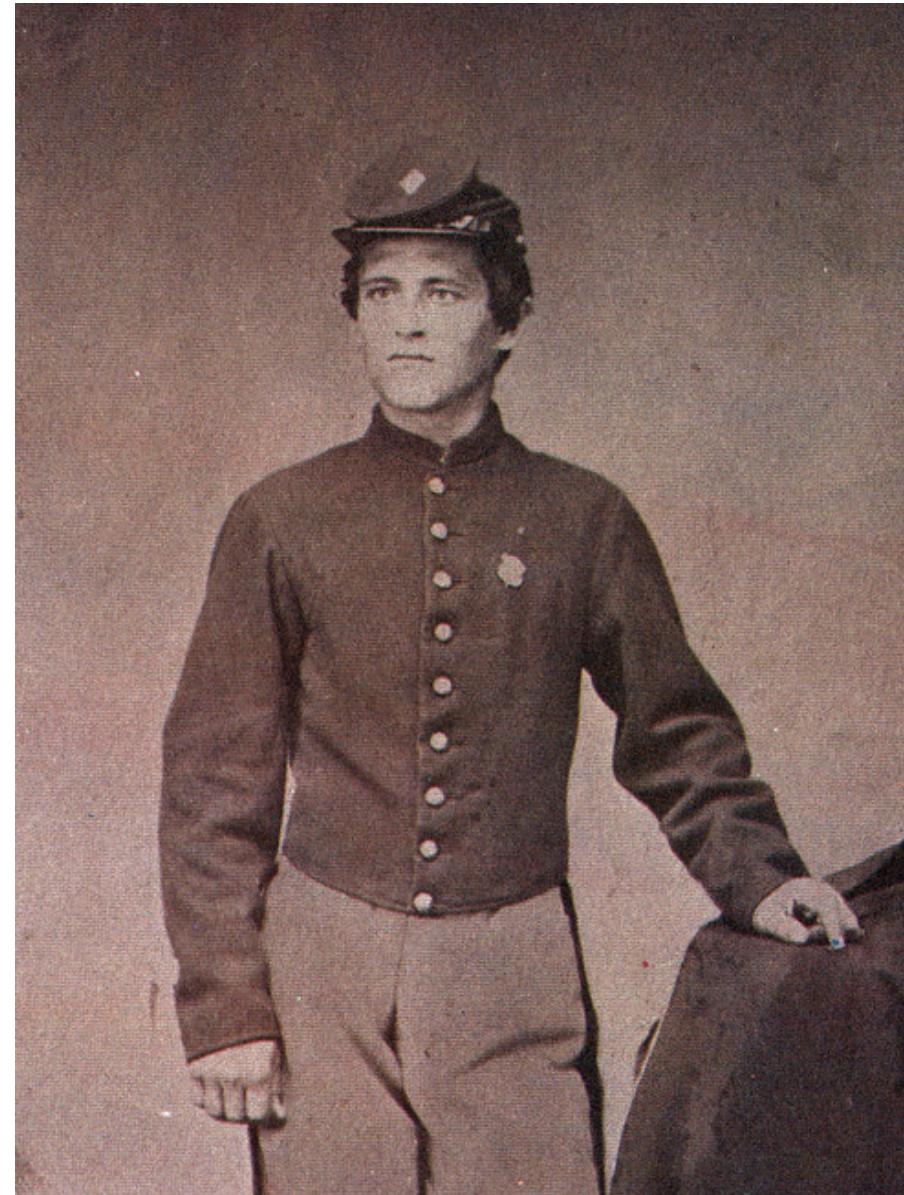
# Alfred Bellard, *Gone for a Soldier*

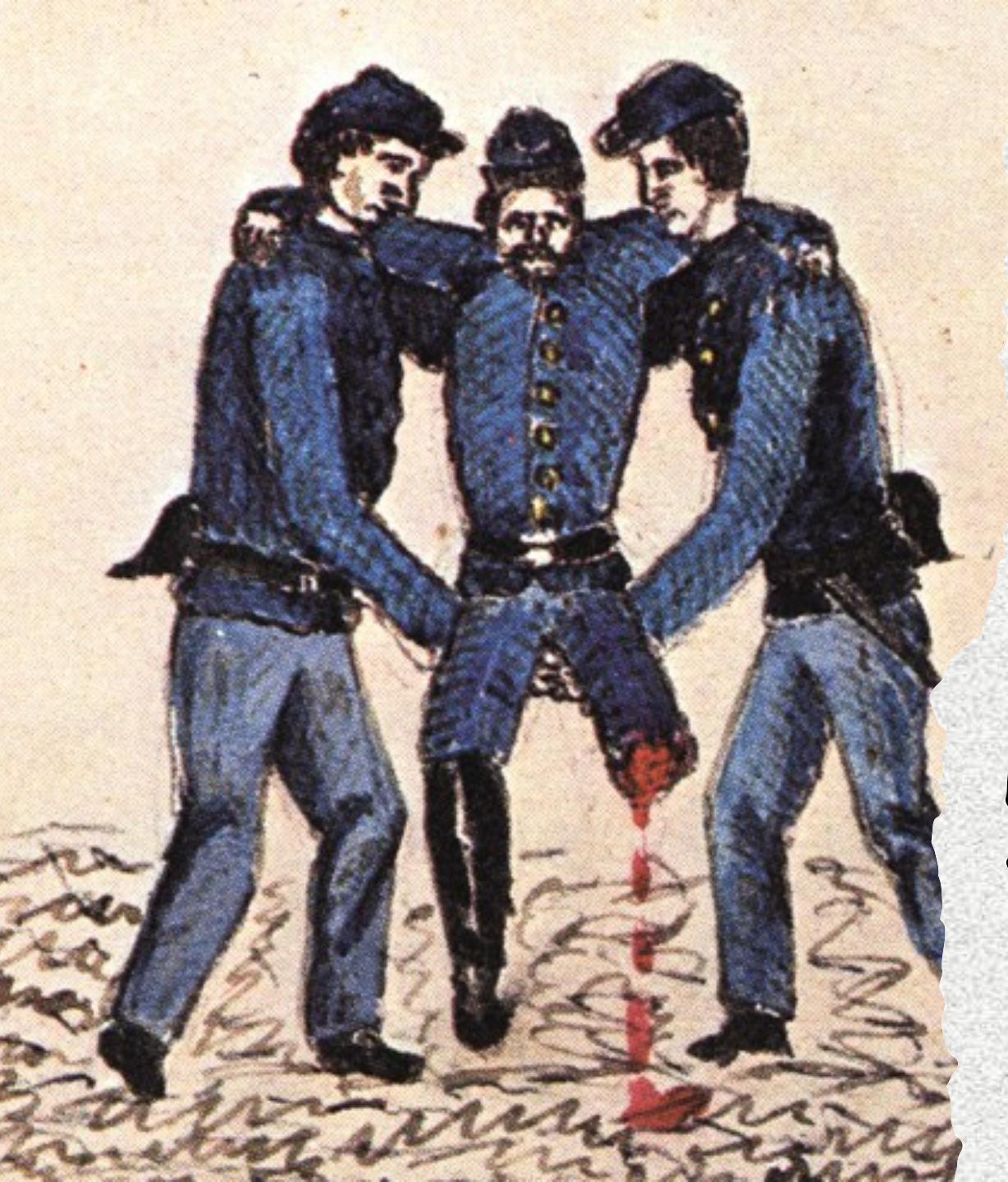
- Kept diary and completed many sketches and watercolors
- His work showed up at an estate sale in 1962

## XIV. *Chancellorsville* chapter:

In the afternoon I went over to the corps field hospital, where the doctors were busy in probing for balls, binding up wounds, and in cutting off arms and legs, a pile of which lay under the table. One drummer boy was brought in to be operated upon, who had both hands shattered by the explosion of a gun barrel. He has picked up a gun barrel on the field, and was holding it in the fire to have a little fun, when it exploded. His hands were shattered all to pieces, saving nothing but a thumb on one hand, and a thumb and finger on the other. When the doctors had him on the table and under the influence of cloraform [chloroform], they picked out the pieces of bone with their fingers. One of the men died at this hospital who had been shot through the breast and was held by a vivandiere of one of the regts. in her lap, until he was dead.

Alfred Bellard,  
18-year-old  
volunteer,  
5<sup>th</sup> NJ Infantry





Bellard's  
watercolors



# “The honorable scar”

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# Protheses

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- War led to developments in prostheses
  - 1845-61: 34 patents were issued for prosthetic limbs
  - 1861-73: 133 patents
- US federal government subsidized artificial limbs for Union amputees
  - Washington provided an artificial limb or a financial commutation of up to \$75
    - But many veterans found them hard to use
- Confederate veterans were ineligible, though some southern states started their own programs

# Common medical treatments

- Quinine for malaria
- Quarantine (especially for yellow fever)
- Treatment of gangrene with bromine and isolation
- Improved techniques for arterial ligation
- But many of the improvements in mortality rates were the result of better organization and “sanitation” (women’s work)
  - Cleanliness, fresh air, improved foods, frequently changed bandages, etc.

# U.S. Sanitary Commission

- Largest voluntary organization
- Commissioned by Congress in June 1861
- Umbrella group for 7-10k ladies' aid societies
- Produced food and clothing
- Raised money hospitals, which the national organization distributed
- Worked to police/improve sanitary conditions in hospitals and camps
- Raised over \$25 million in money & goods

# Official seal of the Sanitary Commission



# Sanitary Commission, cont.

- HUGE operation
  - Whenever a battle was fought, the USSC was there to hand out goods and supplies
  - Would have a tent that provided supplies directly to military commanders
- USSC even had offices in Europe during the last two years of the war
- Important lasting legacies
  - Efficiency, coordination in providing relief

Thomas Nast,  
"Our  
Heroines,"  
*Harper's  
Weekly*, April  
9, 1864

April 9, 1864.]

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# Nurses and hospital workers

- Some 20,000 – more in Union than Confederacy
- In the US, Dorothea Dix was named Superintendent of Army Nurses
  - Only woman to hold a federal appointment
  - Intended to personally approve all nurses
  - But in the end, nursing occurred on an ad-hoc basis
- Women usually were not on the battlefield
  - But nursing was still hazardous
- 1892 Army Nurse Pension Act
  - First time the US recognized a group of women recognized as military veterans

# Progress over the course of the war

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- Examining boards established to weed out the incompetent physicians
  - Standardized medical kits
  - Trained ambulance corps established
  - Hospital steamers and dedicated rail carriages to transport the wounded
  - Enormous hospitals constructed



# Civil War Ambulance Corps



Civil War Hospital Ship



Lincoln General Hospital,  
just 15 blocks from the capital

# Jonathan Letterman (1824-72)

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- Started the Ambulance Corps, trained men to act as stretcher bearers and run wagons to gather wounded from the field
- Instituted the concept of triage for battle casualties
  - Field Dressing Station
    - On or next to the battlefield; medical personnel would apply the initial dressings and tourniquets to wounds
  - Field Hospital
    - Close to the battlefield, usually in homes or barns; additional treatment given, and emergency surgeries performed
  - Large or General Hospitals
    - Far behind the lines; providing facilities for the long-term treatment of patients
- Pioneered efficient distribution system for medical supplies



# Letterman's Legacy

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*"I often wondered whether, had I been confronted with the primitive system which Letterman fell heir to at the beginning of the Civil War, I could have developed as good an organization as he did. I doubt it. There was not a day during World War II that I did not thank God for Jonathan Letterman."*

— Major General Paul Hawley, Chief Surgeon of the European Theater in WWII



Wounded at Savage Station, June 1862

General  
Hospital at  
Chestnut  
Hill,  
Philadelphia

