



BIVOUAC

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**“MEDICAL ADVANCES DURING THE CIVIL WAR”
A TALK BY FRED MARQUINEZ
SHELTER HOUSE, FRED FULLER PARK, KENT
TUESDAY, NOVEMBER 11, 2025, AT 7:30 P.M.**

At the beginning of the Civil War, the U.S. Army Medical Department was ill-prepared to handle the thousands of battle-related casualties and medically ill soldiers. It is said that the Civil War was fought at the “end of the Medical Middle Ages”- a time of transition in medical knowledge. Papers on antiseptics and “germ theory” wouldn’t be published until years later. Medical Staff members were forced to quickly adapt to the ongoing crisis. Throughout the course of the war, the surgeons gained experience, Dr. Letterman developed a system to deal with mass casualties, improvements in public health, nursing, and other innovations were made. As a result, care of the wounded and ill improved dramatically and new standards in trauma and military medicine were established, some of which are still in use today.

Kent native Dr. Fred Marquinez is a medical oncologist and a Clinical Associate Professor of Internal Medicine at the Northeast Ohio Medical University. He is also a flight surgeon and the Commander of the 179th Medical Group in the 179th Cyberspace Wing of the Ohio Air National Guard and United States Air Force.

Our optional pre-meeting dinner will be at Eddy’s Deli & Restaurant, 4581 Kent Road in Stow, beginning at 5:30 p.m.



Union medical wagon drivers 1865

Common Diseases of the Civil War

By Paige Gibbons Backus

Disease was a critical problem among Civil War armies. Out of more than 700,000 soldiers who died during the Civil War, two-thirds of soldiers died from disease or infection rather than battle wounds themselves. Why was disease such a big issue? What diseases were the most common?

Unfortunately, at the beginning of the Civil War, medical personnel had limited modern knowledge about diseases. While there were studies in bacteriology and anatomy, doctors had little knowledge of what caused illness, how it affected the body internally, and how it spread. Thus, physicians focused on treating the symptoms of the disease, not the cause itself. Unsurprisingly it did not take long for disease to spread through camps.

At the beginning of the Civil War thousands of soldiers gathered in camps young and old, urban and rural. While soldiers from cities were not as strong as those who grew up working on a farm, they lived in densely populated areas and had a stronger immune system due to exposure of different diseases. Many soldiers from rural communities lacked this exposure to various illnesses such as smallpox and measles, causing a high rate of infection.

There were several epidemics (defined as a widespread occurrence of an infectious disease in a community at a particular time) that spread throughout the armies during the Civil War. Many history enthusiasts may have heard of the smallpox epidemics that took place during the American Revolution. These epidemics were so deadly, killing 3 out of 10 Continental soldiers, that Washington ordered all troops inoculated in 1777. The process of inoculation involved taking a scab that had fallen off a smallpox patient and rubbing it into a cut on a healthy patient's arm. The patient would get sick, but not as sick as contracting the virus naturally, and they recovered they would be immune to the disease. By the 19th century, the smallpox vaccination was discovered by giving patients cowpox, a similar virus found in animals that gave immunity to smallpox. This reduced the amount of smallpox cases. From May 1861 to June 1866, there were only 12,236 recorded cases of smallpox in the U.S. Army which numbered in the millions.

Much more prevalent during the Civil War was measles, which was often ignored since it was considered a childhood disease. The symptoms of measles are like smallpox. Victims had a fever, cough, runny nose, and eventually a rash of red spots that could cover the entire body. With camps teaming with people never exposed to measles, many soldiers were highly susceptible to the disease. By the end of the Civil War, 67,000 Union soldiers contracted measles and more than 4,000 died.

On top of the rapid rate of spread among soldiers, lack of adequate hygiene routines could make camps just as dangerous as the battlefield. Garbage piled up in camps without proper disposal. Latrines were dug too close to water sources causing contamination. Soldiers bathed infrequently creating a suitable environment for pests, such as lice. To rid themselves of these pests, some soldiers sanitized lice-infested clothing in a pot filled with boiling water. They then cooked food in the same pot.

Many of these soldiers had little experience with cooking. Before enlisting in the army their wives, mothers or enslaved had taken care of that for them. As a result, many soldiers over-boiled meat and vegetables cooking all the nutrients out of them. While food was plentiful at the beginning of the war, it did not take long for food to become scarce. Fresh fruits and vegetables that had proper vitamins and nutrients did not last long so soldiers had little access to them. Soldiers received some meat, but

often, it spoiled or was too full of preservatives to eat. With the lack of proper nutrients, a soldier's immune system became more susceptible to disease.

Some of the most common diseases found during the Civil War were intestinal diseases caused by contaminated food and water, as well as poor living conditions. Most common was a bacterial infection called typhoid fever. Symptoms include muscle aches, headache, stomach pain, diarrhea, and it was one of the most feared diseases throughout camp because it was so common. Known as "camp fever" it caused about 1/4 of the deaths caused by disease. Unfortunately, doctors did not know the cause of typhoid fever and so treated only the symptoms with opiates, turpentine, quinine, capsicum (an herbal medicine), and calomel (mercury chloride).

Another intestinal disease, dysentery, was caused by bacteria or parasites caused by poor living conditions or contaminated food or water. Marked by bloody diarrhea, fever, nausea, and cramps, it acquired many humorous names from soldiers. Some called it the "the runs," the "Tennessee Trot," or the "Virginia Quickstep." Purgatives like turpentine or castor oil were used to treat dysentery. The disease was not always fatal, but it did cause many deaths because of the treatments used. For example, in October 1863, Private John Leopold of the 74th Pennsylvania was admitted to the hospital with dysentery. Surgeons tried medicines such as turpentine, lead acetate, aromatic sulfuric acid, tincture of opium, silver nitrate, belladonna, and calomel to treat the disease, but unfortunately, he died after twelve days of treatment.

Even the environment was a hazard to soldiers' health. Mosquitos carried parasites that caused many deadly illnesses. Most common were yellow fever and malaria. They both have similar symptoms including fever, tiredness, vomiting, headache and in severe cases, yellow skin, seizures, and death. But, while yellow fever is a virus, malaria can be treated with medicine. In the 1860s, there two treatments were found to help alleviate the symptoms: arsenic and quinine. During the Civil War, many soldiers were issued a ration of quinine, often mixed with whiskey to cover the unpleasant taste. This method proved effective and is still used today to treat the disease.

While many of these illnesses are still around today, they are not nearly as prevalent or deadly as they were 161 years ago.

