To mark 100 years since the First World War came to a close, we look at the conditions in the trenches and hear from the diaries and letters of those who endured the horrific conflict.

The First World War is estimated to have claimed 20 million lives and to have left 21 million wounded. The total number of deaths included 9.7 million military personnel and about 10 million civilians. Of these deaths, an estimated 5.7m were soldiers fighting for the Allies.

Many died in combat, through accidents, or perished as prisoners of war. But the majority of loss of life can be attributed to famine and disease – horrific conditions meant fevers, parasites and infections were rife on the frontline and ripped through the troops in the trenches.

Among the diseases and viruses that were most prevalent were influenza, typhoid, trench foot and trench fever.

The biggest risk
Ceri Gage, Curator of Collections at the Army Medical Services Museum in Aldershot, says that infection posed one of the greatest medical risks.

“A simple cut to a finger from cleaning your gun or digging a trench could quite quickly become infected and develop into pneumonia,” she says.

“The men were knee-deep in mud nine out of 12 months of the year, surrounded by bacteria from the bodies of men and animals in no-man’s-land.

“Their bodies were weaker anyway from a lack of sleep, wet and dirty clothes and a restricted diet in which a piece of fruit or vegetable was a treat.”

Field ambulance records show how the pattern of offensives and attacks dominated work for the doctors at times.
On a single day, up to 300 men could be admitted with gas poisoning and on days where there was no fighting, medics were able to treat non-urgent cases, such as tooth decay. But despite the threat of fighting, documents show that the top five conditions treated by 51st Field Ambulance were pyrexia (a catch-all term for fevers) (8.7%), influenza (6.6%), trench foot (6.3%), diarrhea (5.2%) and scabies (5.0%).

The figures come from the Western Front documents show that the top five conditions treated by 51st Field Ambulance were pyrexia (8.7%), diarrhea (6.3%), influenza (6.6%), trench foot (6.3%) and scabies (5.0%).

The soldiers would hit water after a couple of feet and the trench would flood. After long periods standing in soaking wet socks and boots, trench foot would start to set in. The men’s feet would swell and go numb and then the skin would start to turn red or blue. Untreated feet often became gangrenous and the condition could lead to nerve damage, tissue loss and ultimately the need for amputation.

At the time, the causative agent was identified and grouped with the Rickettsia and named Rickettsia Quintana. After the war, R. quintana would subsequently join the genus Bartonella.

Trench fever
Trench fever, often classed as “pyrexia,” is a condition that was first reported from troops in Flanders in 1915, when individuals suffered from a febrile illness that relapsed in five-day cycles. At the time, the cause of the disease was unknown.

It is estimated to have affected 300,000 to 520,000 members of the British army and had a debilitating effect, leaving a large numbers of men incapacitated. A lot of research was carried out by the British and US to identify the cause and mechanism of transmission. Due to its similarity to Malaria, many thought that lice were the cause, but attempts to find a treatment were not successful, and efforts to prevention were mainly focussed in using insecticides to delouse clothing.

Rats
The trenches were home to millions of rats, which could double up to 900 young a year, meaning attempts to kill and curb the rat population proved futile. Private Harold Saunders enlisted in the 12th London (Ladon) Scottish in November 1915, and went to France with the 2nd Battalion in June 1916. When the 60th Division left France for Salonika, he was left behind with a septic heel. He was then transferred to the 1st Battalion and was finally discharged April 1918.

In an account of his experiences, published in the 1910 anthology Everyman at War, he wrote: “Once we got used to many things, but I never overcame my horror of the rats. They abounded in some parts, great loathsome beasts gorged with flesh. I shall never forget a dog-out at the back of the line near Amin. It was at the foot of rising ground, at the top of which was a French war cemetery. “About the same time every night the dog-out was invaded by swarms of rats. They gnawed holes in our haversacks and devoured our iron rations. We hung haversacks and rations on the roof, but they went just the same. Once we drenched the place with creosote. It almost suffocated us, but did not keep the rats away. They pattered down the steps at the usual time, paused a moment and snoozed, and then got to work on our belongings. A battalion of jerry would have terrified me less than the rats did sometimes.”

Flies
Harold William Cronin, Lieutenant in the 5th Bedfordshire Regiment, described the conditions in which diseases thrived in a letter home. “In the trenches it was fairly bad, they are so narrow and smelly and one is being potted at and shelled all the time.”

In his poems, the most famous of which were published posthumously, he lays out the horrors of trench and gas warfare. We hear of men marching who had lost their boots “but limped on, blood-shod” “lame”, “blind” and “drunk with fatigue”. While he is the most famous chronicler of the conditions of the war, many lesser-known voices also recorded the situations they endured.

To minimize the chances of contacting trench foot, men were ordered to change into dry socks as often as possible. And around 1916, John Logie Baird started to delouse clothing.

Fig. 1. An officer of the 5th Battalion, Cameronians (Scottish Rifles) leads the way out of a shop.

Fig. 3. Gonorrhea bacterium

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Frontline nurses
Sergeant Horace Reginald Stanley served the 1st Cambridgeshire Regiment on the front line at Ypres and the Somme and kept a diary, published decades after his death when his granddaughter found it hidden in the attic.

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