



A Waterloo, 1815, by Henri Duprey.



B The stark reality of Vietnam.

One of the times when medical help is most needed is during wartime. But when we see an artist's impression of war it is like that shown in picture A. It was not until the invention of photography that accurate pictures of wars could be mass produced. Even then only certain pictures were allowed to be published.

In all wars the wounded soldiers have suffered a lot. For example, at the battle of Gettysburg, in the American Civil War, 33 000 soldiers were wounded and 7000 died. However, the way they were looked after depended on the army they were in and what people thought about war in those times.

It is not necessarily true that the treatment of soldiers always improved through time. How have wars affected medicine?



C Helping a wounded soldier, 1914–1918. The soldier on the left is an American, the soldier on the right is German.

Questions

- 1 Look at picture A. What impression of Waterloo has the artist given?
- 2 What differences are there between A and B?
- 3 How might pictures A, B and C be useful to the historian? Explain your answer.
- 4 How do you think the following developments might have changed the way people think about war:
 - a newspapers
 - b photography
 - c T.V.?
- 5 Pictures like C were not often allowed to be printed in newspapers. Why not?

- 6 Copy and complete the chart below as you read through the units on war.

<i>Ways in which wars help medical progress</i>	<i>Ways in which wars hinder (hold back) medical progress</i>
Accurate pictures of casualties gave doctors valuable information about how to treat the wounded.	Lots of people suffer. At Gettysburg in the American Civil War, 33 000 were wounded.

War and transport

Before the wounded can be treated they must be taken quickly from the battlefield. This was not always an easy job. In the Middle Ages men would be left to die where they fell unless their friends carried them away. Earlier the Romans did have special soldiers to help the wounded, and from about the end of the 18th century most armies had medical orderlies whose job it was to help the casualties get to a doctor or surgeon. Unfortunately, this system did not work very well because there were always many more wounded than there were helpers, so army doctors began to look for a solution to this problem.

During the Napoleonic Wars (1789–1815), a French doctor called Baron Dominique Larrey came up with a solution. He designed a light ambulance wagon which brought the wounded to field hospitals where they were treated.

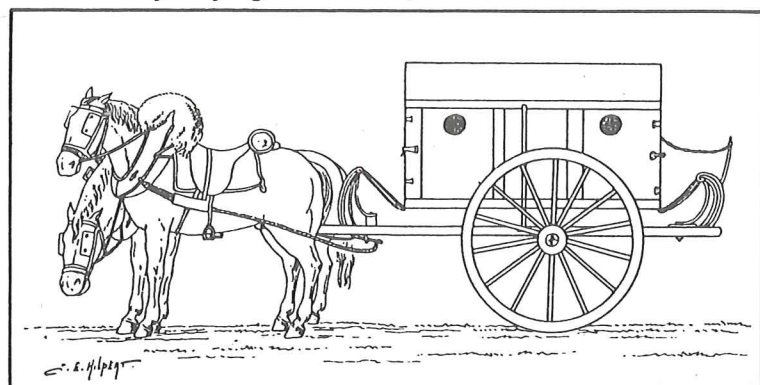
Larrey's ambulance wagon worked quite well and soon the idea was being copied by other armies. During the Crimean War (1853–1856) the

armies all had horse-drawn wagons but, because of the conditions on the battlefield, they could not always be used.

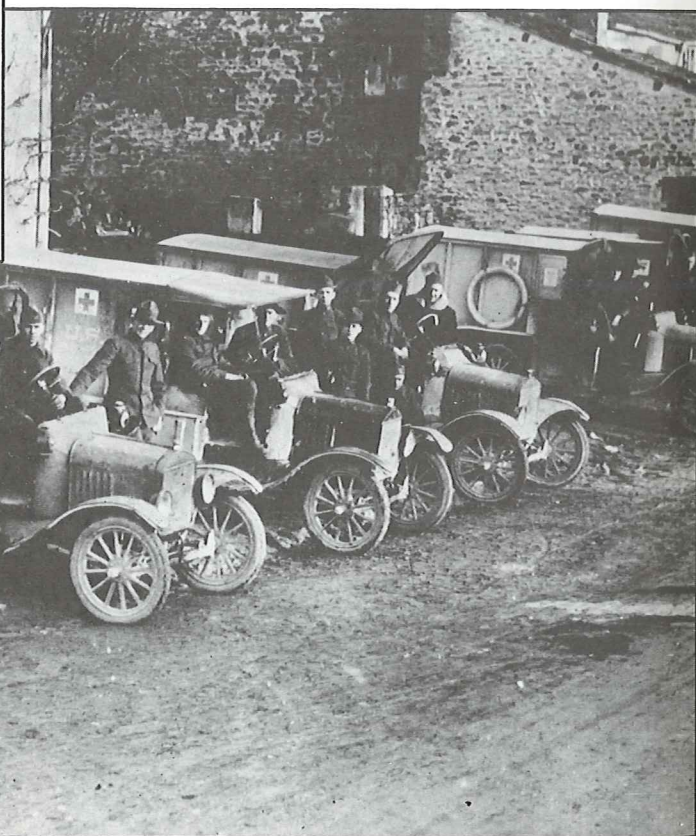
B Surgeon-General Hammond of the Union (Northern) army in the American Civil War (1862–1865), writing after the battle of Bull Run (20 August 1862).

“ The frightful state of disorder existing in the arrangements for removing the wounded from the field of battle, the lack of ambulances, organization, and the drunkenness and incompetency of the drivers, the total absence of ambulance attendants, are now working their results. . . Wounded remain on the battlefield. Many have died of starvation, many more will die. . . of exhaustion, and all have endured torments which might have been avoided.

A Dr Larrey's flying ambulance, 1797.



C American ambulances in France at a dressing station in the First World War (1914–1918).



Since the 1800s there have been great changes in methods of transportation. During the First World War (1914–1918) trains were used to transport injured soldiers back to hospitals which were a long way from the battlefield. But advances in technology did not necessarily make it easier for the wounded to be taken from the battlefields, especially when these were as muddy as those of the First World War. The Second World War (1939–1945) saw the development of aircraft as a means of transporting the wounded from the front line to hospitals hundreds of miles away. However, aircraft need runways, and it was only when helicopters came into general use that casualties could be taken directly from almost any battlefield straight to the hospital. In the Falklands War the wounded men could be taken by helicopter to ships waiting nearby which had been converted into hospitals.



D Vietnam wounded are taken from a helicopter, 1969.

Wordbox

orderlies helped doctors in the army
incompetency uselessness
endured gone through

Questions

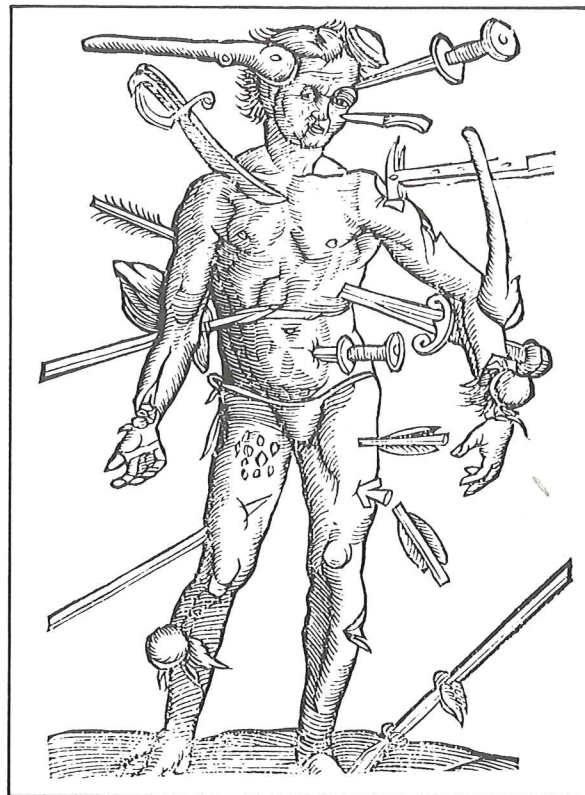
- Copy and complete the chart using pictures A, C and D.
- Read document B. Do you think medical services have improved much since Larrey's time or not? Support your answer with a quotation from document B?

War	Middle Ages 1100-1500 (paragraph 1)	Napoleonic Wars 1790-1815 (picture A)	First World War 1914-1918 (picture C)	Vietnam War 1969 (picture D)
a How were the wounded soldiers taken off the battlefield?				
b Roughly how many people can be taken in this way?				
c How fast is this method of transport?				
d How well and how comfortably could soldiers be treated?				
e On the way to hospital, under what sort of battlefield conditions can this type of movement be used?				

Wars wound more soldiers than they kill. The injuries depend on the sorts of weapons used in battle. If the medical services are good, then more soldiers have a chance of survival. Napier, a historian of the Napoleonic Wars (in the early 19th century) commented that the remarkable work of the medical officers might be said to have saved the day at the battle of Vittoria (1813), for their exertions had added between 4000 and 5000 men to Wellington's army without whom Wellington might well have lost.

A Extract from 'The Roman Imperial Army', G Webster (1979).

There is a scene on a monument called Trajan's Column showing a wounded legionary sitting on a rock being attended by an orderly who appears to be carrying out an examination. Next to him is an auxiliary having a thigh wound bandaged. The main task of the field orderlies was to patch up the wounds and get the men into a hospital as soon as possible. The main tasks of the medic would have been the cleaning and stitching of gashes and sword cuts and extraction of missiles.



In the unit on medieval surgery we saw that Roman methods of dealing with the wounded were not continued. The injured often had to look after themselves, or suffer the pain of hot tar, burning oil and the cautery iron being put on to their wounds. We saw that Paré used a different method – a soothing ointment and some ligatures – which seemed to be more successful. However even while Paré was alive we find this comment:

C Description of the quality of surgeons, by the surgeon Thomas Gales in the 16th century.

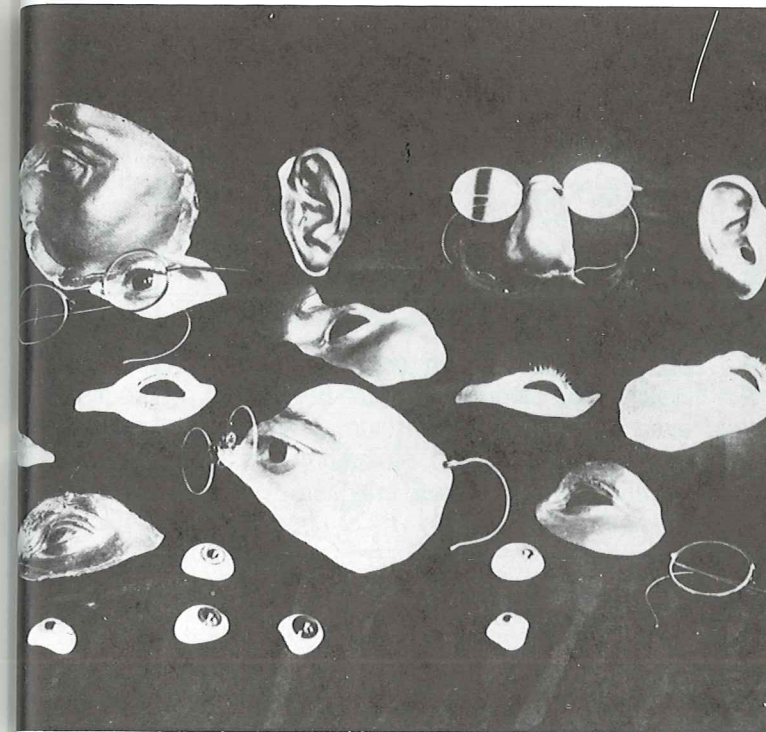
I remember the war at Montremil, 1544, when there was a great rabble that called themselves surgeons. Some were tinkers, others were shoe repairers. The general became suspicious about the large number of people that died of small wounds. He sent for me and for other surgeons so as to find out how these people had died. Was it because of their wounds, or because of the lack of knowledge of the surgeons? We searched the camp and demanded to know if these men really were surgeons. They showed us their surgical equipment. Grease for horses' heels, shoemakers' wax, rusty pans. When threatened by the general to be hanged, this rabble confessed their true occupations.

However, 300 years later, people were still worried about the treatment of the wounded, and at last something was done.

D From 'Soldiers', a television programme, 1985.

Sickened by the sight of casualties at the battle of Solferino in 1859, the Swiss businessman Henri Dunant swore to change the habits of nations. What shocked Dunant was that many of the wounded still lay out for days, as they always had. The others were cared for in ramshackle field hospitals whose doctors were overwhelmed by the scale of their task. His campaign brought about the first Geneva convention, which set up the Red Cross, an organization which treated the wounded of both sides.

B (Left) A 'wound man' from a book published in 1593.



E Plates for First World War soldiers with facial injuries.

Infections from wounds were the most serious problems with which war doctors had to deal. Although progress was being made in the early 20th century towards the production of drugs to fight this kind of infection, it was not until 1943 that penicillin was mass produced by the American chemical industry to meet the huge demands of the Second World War. Although penicillin was a very powerful drug it didn't cure all infections caused by wounds. Another drug had been developed in the 1930s called sulphonamide. Like penicillin, it was mass produced so that by 1943 all American soldiers carried with them a packet containing 12 sulphonamide tablets and a small amount of powder for smearing on any wound.

In England, newly discovered blood transfusions increased enormously the chances of survival. By the time of the Second World War, blood transfusions had improved so much that it was possible to do them on the battlefield.

Because more people recovered from their wounds it meant that, even if you lost a limb in war, you still had a good chance of survival. This meant that there was more demand for all sorts of artificial limbs. At first they were made out of wood. Later, plastics were used.

Wordbox

- auxiliary** assistant
- medic** medical helper on a battlefield
- extraction** pulling out
- missile** weapon sent through the air
- ligature** something used to tie up the veins to stop the bleeding
- tinkers** travellers selling small goods
- ramshackle** untidy mess
- convention** agreement

Questions

- 1 Read document A. What sort of wounds did soldiers get in Roman times and how were they dealt with?
- 2 Look at picture B. List the wounds that soldiers got. What differences do you notice from Roman times?
- 3 If you were a wounded soldier, when would you prefer to be treated and why:
 - a Roman times, or
 - b Middle Ages?
 Explain your answer.
- 4 Read document D. Why do you think the Red Cross was an improvement on earlier ways of dealing with war wounded?
- 5 Look at picture E.
 - a What materials seem to have been used?
 - b How successful might they have been?
- 6 Add the examples from these two pages to the chart started on page 103.

Each war brings new medical problems. Of all the new weapons in the First World War (1914–1918) which tested the skills of doctors, gas, the 'devil's breath' was the most feared.

A Extract from BBC TV programme 'Soldiers', 1985. The soldier from the First World War remembers a gas attack.

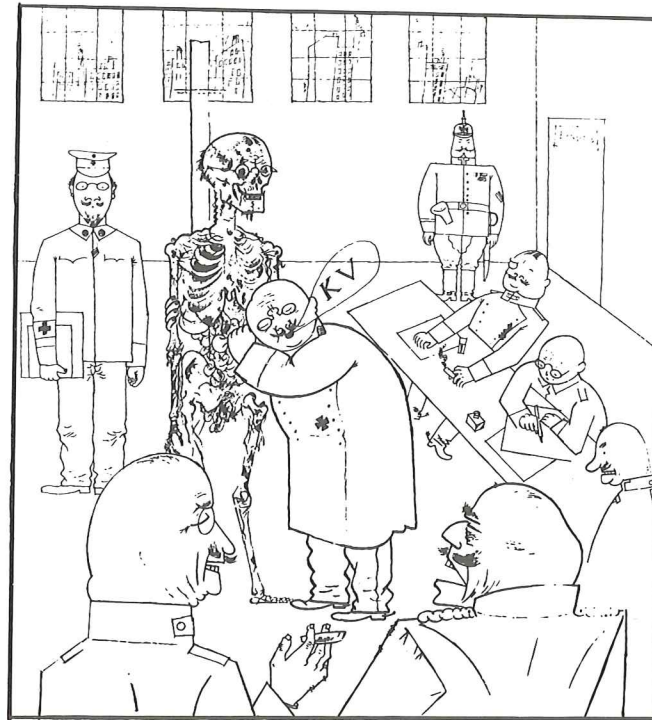
“ It killed thousands and when you'd seen the others you thought, I hope it doesn't get me like it got them. Those who saw the state the gas victims were in would rather have got shot through the heart straight away than get over it. It was horrible. As we were running into the gas one man suggested tying a wet handkerchief round your nose and mouth. Then our officer said that'd be no use at all. He said it's chlorine gas and the antidote to chlorine is salammoniac. We can't get the salammoniac, the nearest we can get to it is your pee. So what we did was tear our shirts and urinate on them. Nobody would help you because they wanted their own shirt.

” The First and Second World Wars were different from other wars in history because they affected everybody in the countries at war in some way or other, as we see in these documents.

Another feature of European wars in the 20th century has been rationing. This is a method introduced by governments to make sure that people have a fair amount of food.

C Extract from 'A History of Medicine' by Brian Inglis, 1965.

“ The only time when preventive medicine really flourished was during wars, when the need to prevent people from falling sick, as distinct from curing them when they did, was urgent. It took conscription in the First World War to reveal the depressingly low physical standards of soldiers in many countries; and this was to lead to greater attention later being paid to physical check-ups and better school meals.



B German cartoon about the health of a new soldier who has been conscripted into the German army in the First World War. (KV in German is short for 'fit for active service'.)

D From 'Life in Wartime Britain' by E R Chamberlain, 1972.

“ It is probable that the very poor ate better during the war than at any period before. Feeding the hungry was no longer a charity but part of the 'war effort'. The numbers of school children receiving free or heavily subsidised meals soared: their parents could get balanced meals at proportionately less than they had paid for the bread, marge, and fish and chips diet of pre-war years. The vast majority of the population kept good health.

Wordbox

chlorine a yellowish gas
antidote something that stops a poison
salammoniac ammonium chloride
conscripted made to go in the army
CND Campaign for Nuclear Disarmament

Of all the weapons developed for use in warfare, the atomic bomb presents medicine with the largest number of problems. It has obvious immediate effects, but even 40 years after the dropping of the first atomic bomb, people are still dying from it. These documents give different points of view about the chances of survival.

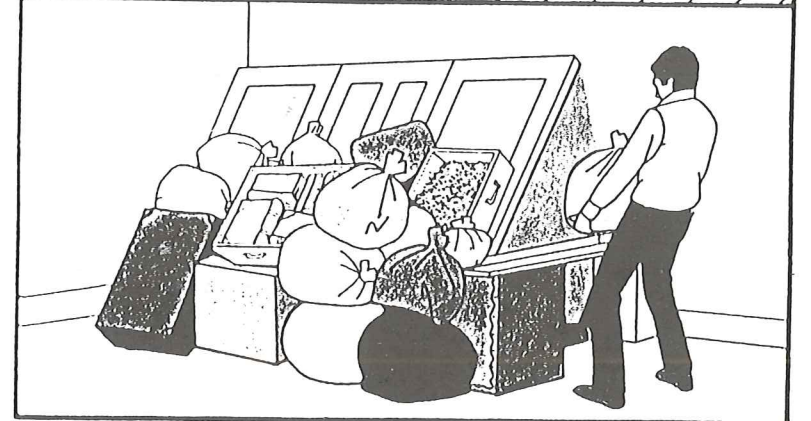
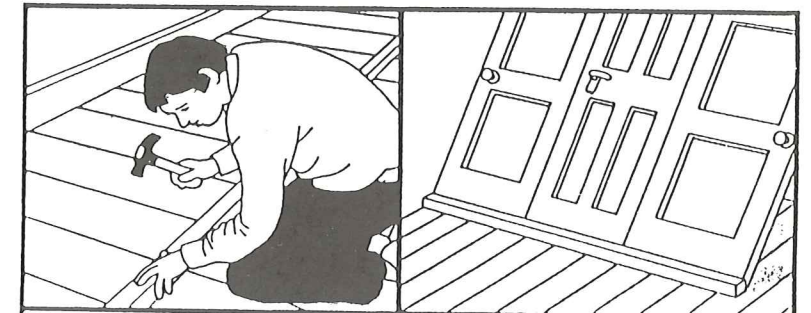
E Leon Brittan MP, 'The Times', 22 December 1980.

“ What I have always said is that nuclear war would lead to appalling results and millions of people being killed. But, however horrible, much could be done to save lives. Outside the immediate target area even the simplest ideas in 'Protect and Survive', the government booklet, would lead to a massive reduction in casualties.

” 'Protect and Survive' is a booklet produced by the British government. It advises people how to survive an atomic explosion.

F Statement issued by the 30th Pugwash Conference on Science and World Affairs. Quoted in 'Sanity', the magazine of CND, April/May 1981.

“ Effective civil defence against nuclear attack is impossible . . . in sum, there are no defences against the lethal effects of nuclear weapons, and there is no effective treatment for those who initially survive a nuclear attack.



G Pictures from the British government booklet 'Protect and Survive'.

Questions

- 1 Look at cartoon B. What does the cartoonist think about conscription?
- 2 How did wars encourage the improvement of the health of poor people? Give examples from documents C and D.
- 3 What are the advantages and disadvantages of cartoons as a source of evidence (picture B)?
- 4 What advice is being given in the booklet 'Protect and Survive' as seen in picture G?
- 5 What are the differences between documents E and F? Explain why they disagree.
- 6 Add examples from this page to the chart (question 1) on page 105.
- 7 'War leads and medicine follows.' What do you think this means? Support your answer with evidence from any of the war chapters.