



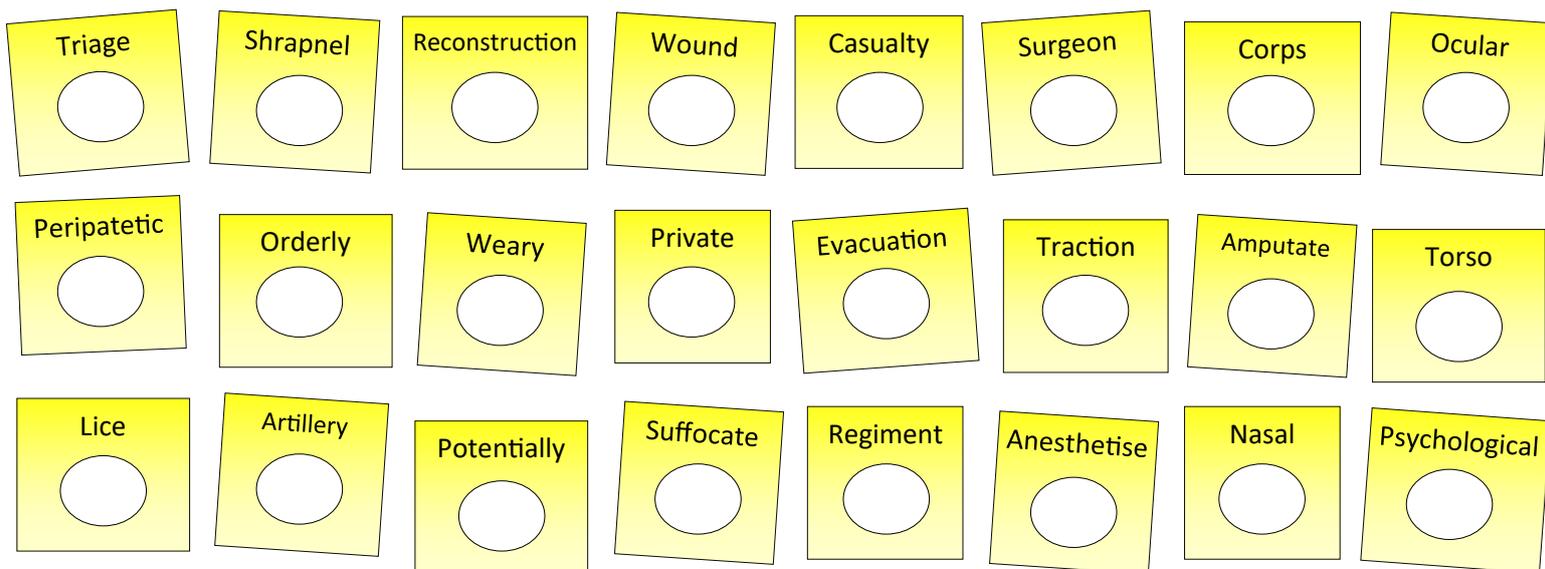
**MEDICINE**

**WW1**



# Medicine in the First World War: unit key words

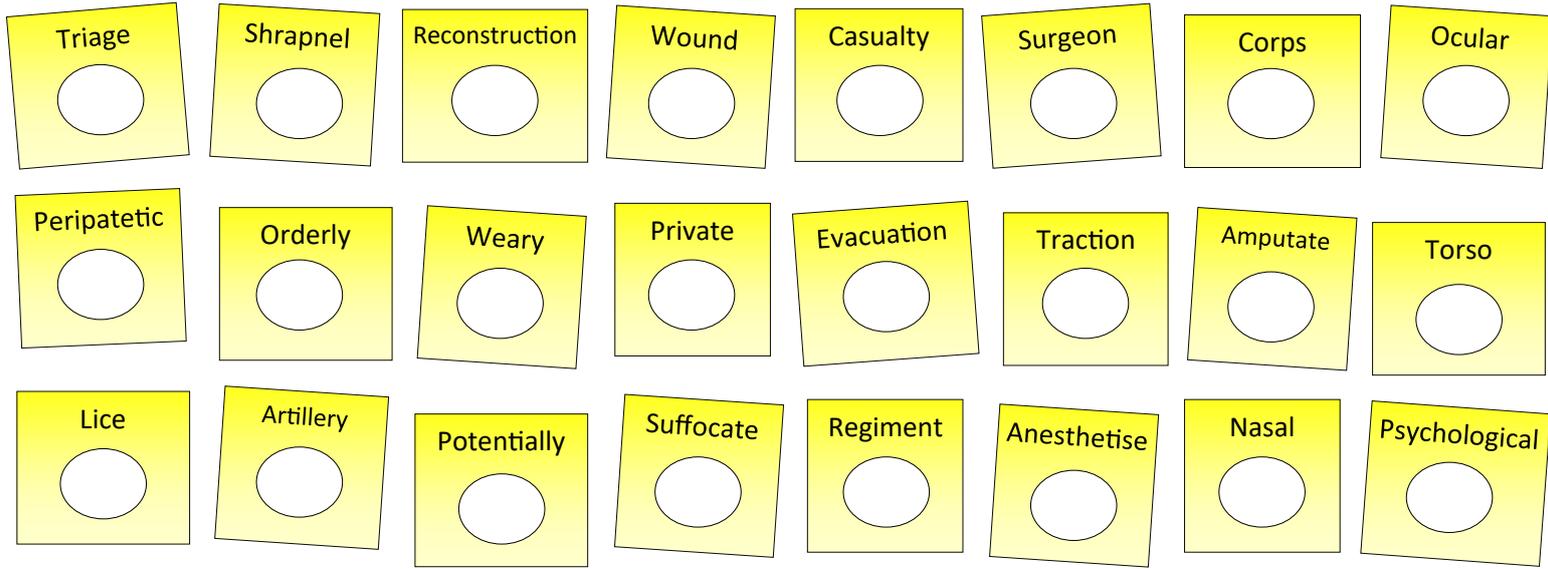
 **Discover:** key unit vocabulary **Explore:** key word definitions **Skill:** vocabulary development.



Words	Definitions	Similar Words	?
	Repair	R _ _ _ _ _	A
	To do with the workings of the mind		B
	Helps with non medical treatment of patient— EG cleaning and moving		C
	A smaller part of an army - consisting of more than 2 divisions		D
	To keep an injury or part of the body still		E
	A doctor who performs operations		F
	Relating to eyes		G
	Pieces of metal from artillery shells		H
	Moving from place to place	M _ _ _ _ _	I
	An injury		J
	Lowest ranking position in the army		K
	To cut off		L
	Moving a person from one place to another		M
	Bombs	S _ _ _ _ _	N
	Something that may happen in the future		O
	A person hurt or injured		P
	Inability to breathe		Q
	A large unit in the army		R
	Body		S
	A small animal that lives on skin, hair or in clothes		T
	Tired	E _ _ _ _ _	U
	To assess a casualty and decide how urgent or serious the injury is		V
	To be put to sleep or made unconscious		W
	Relating to the nose		X

# Medicine in the First World War: unit key words

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# Background: Medicine in WW1

 **Discover:** how warfare changed during WW1 **Explore:** the roles of the RAMC and FANY.

World War One was fought on a scale unlike any war fought before. At the Battle of 1. \_\_\_\_\_ in 1815, the musket could fire a bullet every 25 seconds. By 1916, at the Battle of the 2. \_\_\_\_\_ machine gunners fired 3. \_\_\_\_\_ rounds a minute. These new weapons traumatised the human body, pulverising soft tissue and splintering bones. And worse, much fighting took place on farmland fertilised by 4. \_\_\_\_\_ meaning that wounds quickly became 5. \_\_\_\_\_ with gangrene. *A British surgeon noted ... "every gunshot wound, almost at the moment of infliction was 6. \_\_\_\_\_".* Soldiers suffered not only from injuries in battle but also from illnesses and diseases caused by the dreadful conditions in the trenches. Faced with this challenge, new equipment and techniques were invented that, across four years of fighting, would end up saving thousands of lives.

Much of the medical support for the soldiers was provided by the Royal Army Medical Corps and the First Aid Nursing Yeomanry. The 7. \_\_\_\_\_ was founded in 1898. More than half of British doctors served in the RAMC and on the 8. \_\_\_\_\_ Front. The main role of the 9. \_\_\_\_\_ was the evacuation, treatment and rehabilitation of soldiers with a view to returning them to fighting. Data shows 55% of the soldiers treated were successfully sent back into action. The RAMC had help from 10. \_\_\_\_\_ organisations such as the British Red Cross, St John's Ambulance and hundreds of other private and charitable ventures.

The First Aid Nursing Yeomanry was formed in 1907. When the first six 11. \_\_\_\_\_ arrived on the Western Front, the British Army wanted 12. \_\_\_\_\_ to do with them. Rather than give up and go home the nurses worked in hospitals and casualty clearing stations for the Belgian and French Armies. By 1916, the British army allowed nurses to replace male British Red Cross 13. \_\_\_\_\_ drivers. The 14. \_\_\_\_\_ also helped to deliver supplies, clothes and food to the front lines, created mobile 15. \_\_\_\_\_ units and set up theatres to boost soldiers morale. Although nurses wore a military style uniform they were not part of the Regular Army.

1: How many shots per minute could be fired in 1815?

2: Why was almost every bullet wounds potentially deadly?

3: What was the main role of the RAMC ?

4: Why did the British army want nothing to do with the FANY at first?

5: Write a question of your own based on the topic of medicine in WW1



Poo

Everything

Ambulance

600

YMCA

Bath

Waterloo

Nurses

Nothing

Infected

Shower

Western

Eastern

Somme

Volunteer

FANY

Manure

Smelly

RAMC

Poo

# Background: Medicine in WW1

Everything

**Discover:** how warfare changed during WW1 **Explore:** the roles of the RAMC and FANY.

Ambulance

World War One was fought on a scale unlike any war fought before. At the Battle of 1. **Waterloo** in 1815, the musket could fire a bullet every 25 seconds. By 1916, at the Battle of the 2. **Somme**, machine gunners fired 3. **600** rounds a minute. These new weapons traumatised the human body, pulverising soft tissue and splintering bones. And worse, much fighting took place on farmland fertilised by 4. **manure** meaning that wounds quickly became 5. **infected** with gangrene. *A British surgeon noted ... "every gunshot wound, almost at the moment of infliction was 6. infected"*. Soldiers suffered not only from injuries in battle but also from illnesses and diseases caused by the dreadful conditions in the trenches. Faced with this challenge, new equipment and techniques were invented that, across four years of fighting, would end up saving thousands of lives.

600

YMCA

Bath

Waterloo

Nurses

Much of the medical support for the soldiers was provided by the Royal Army Medical Corps and the First Aid Nursing Yeomanry. The 7. **RAMC** was founded in 1898. More than half of British doctors served in the RAMC and on the 8. **Western** Front. The main role of the 9. **RAMC** was the evacuation, treatment and rehabilitation of soldiers with a view to returning them to fighting. Data shows 55% of the soldiers treated were successfully sent back into action. The RAMC had help from 10. **volunteer** organisations such as the British Red Cross, St John's Ambulance and hundreds of other private and charitable ventures.

Nothing

Infected

Shower

The First Aid Nursing Yeomanry was formed in 1907. When the first six 11. **nurses** arrived on the Western Front, the British Army wanted 12. **nothing** to do with them. Rather than give up and go home the nurses worked in hospitals and casualty clearing stations for the Belgian and French Armies. By 1916, the British army allowed nurses to replace male British Red Cross 13. **ambulance** drivers. The 14. **FANY** also helped to deliver supplies, clothes and food to the front lines, created mobile **bath** units and set up theatres to boost soldiers morale. Although nurses wore a military style uniform they were not part of the Regular Army.

Western

Eastern

Somme

1: How many shots per minute could be fired in 1815?

Volunteer

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FANY

3: What was the main role of the RAMC ?

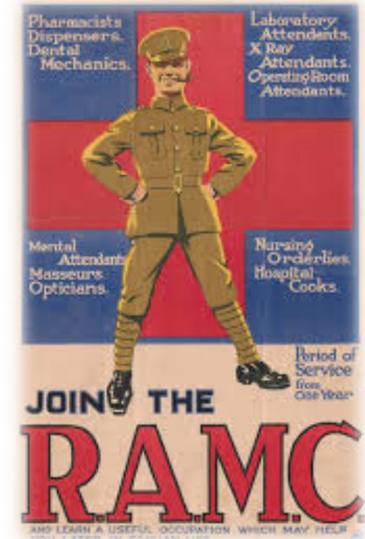
Manure

4: Why did the British army want nothing to do with the FANY at first?

Smelly

5: Write a question of your own based on the topic of medicine in WW1

RAMC





'In their diaries and letters home, the nurses' characterizations were not only patronizing but sometimes unkind: shock patients, often incontinent, were "very pathetic"; they formed "one of the most pitiful groups" of soldiers. Dorothea Crewdson referred to them as "dithery shell shocks" and "old doddering shell shocks." A patient who without warning got out of bed and raced down the hall clad only in his nightshirt was a "dotty poor dear." "It is sad to see them," wrote Edith Appleton. "They dither like palsied old men, and talk all the time about their mates who were blown to bits, or their mates who were wounded and never brought in. The whole scene is burnt into their brains and they can't get rid of the sight of it.'

Sourced from [adoseofhistory.com](http://adoseofhistory.com)

**Who** created this source: \_\_\_\_\_ their job, role or position: \_\_\_\_\_

**Who** is it for / audience: \_\_\_\_\_

**When** was it created: Year: \_\_\_\_\_ Century: \_\_\_\_\_ BCE  CE  Primary  Secondary  Tertiary

**Where** is the person who created the source from? \_\_\_\_\_

**What** type of source is it: Letter / Speech / Diary / Other : \_\_\_\_\_

**What** is the content of the source. Summarise this in your own words rather than just copy out lines.

Firstly the source says: \_\_\_\_\_

Furthermore it reveals: \_\_\_\_\_

Additionally it illustrates : \_\_\_\_\_

Finally it shows us : \_\_\_\_\_

**Why** was the source created. Is there a special reason or motive? \_\_\_\_\_

Use the bias indicators below to help decide if the source is reliable or not. Think about 1: **Provenance**, the origins or where the source came from . 2: **Content**, what the source says 3: **Corroboration**, is the content supported by other sources or your own knowledge?

C O N T E N T	What		P R O V E N A N C E	Who	When	Where	Why
	Unreliable	Reliable			Could the person know things others do not?	Primary sources from a good eyewitness may be truthful, <u>but</u> they can also be confused or emotional. Primary sources may be recorded a long time after the event so the person may have forgotten some details.	Where a person comes from may influence the reliability of a source. For example, a German in 1942 may be biased towards a Jewish person and a Jewish person may feel angry towards Germans even today.
Uses opinions	Uses facts		Do they have an important job?	Secondary sources may get changed over time. The person was not there, <u>but</u> they can be written with less emotion and using information that was not available at the time..		Does the person have a reason to tell the truth?	
One sided	Balanced		Is the person trustworthy?			Could it be propaganda?	
Strong Language	Softer Language		Could their 'audience' influence what is said or written?				
Emotional	Calm						
Confused	Clear						
Boastful	Modest						
Exaggerates	Understates						
Subjective	Objective						
Not Corroborated	Corroborated						

Unreliable      1      2      3      4      5      6      7      8      9      10      Reliable

1: Source provenance may  may not  make the source reliable because: \_\_\_\_\_

Example from the source : " \_\_\_\_\_ "

2: The source content may  may not  make the source reliable because: \_\_\_\_\_

Example from the source : " \_\_\_\_\_ "

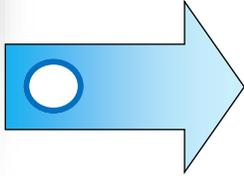
3: Any other ideas why the source may or may not be reliable. Is the source supported / corroborated?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# Trench Life: disease, illnesses and dangers.

 **Mission** : to complete the tasks outlined bellow!

**Task : 1:** colour code or label ( 1-4 ) each of the four circles below. **2 :** Match with the sources provided **3 :** Write a few sentences about each category below.  
**4 :** Answer questions provided.



## Shellshock



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\*  
\*  
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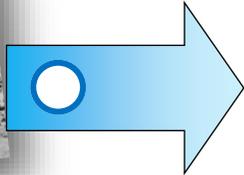
## Possible Causes ?

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## Gas Attacks



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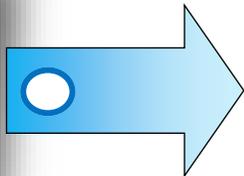
## 3 Types of Gas

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## Trench Foot



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\*  
\*  
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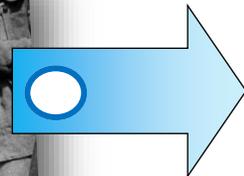
## Cures for Trench Foot

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## Other



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\*  
\*  
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## Irritating Animal ?

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The most widely used, **mustard gas**, could kill by blistering the lungs and throat if inhaled in large quantities. Its effect on masked soldiers, however, was to produce terrible blisters all over the body as it soaked into their woollen uniforms. Contaminated uniforms had to be stripped off as fast as possible and washed - not exactly easy for men under attack on the front line.

BBC New Magazine



Nurses were unconcerned with the animated debate among physicians on the nature of shell shock. Was it a kind of brain concussion that resulted from the blast force of exploding shells? A physiological response to prolonged fear? A psychological reaction to the impact of industrial warfare?

adoseofhistory.com

Trench fever was an unpleasant disease caused by body lice during World War One. The fever was easily passed between soldiers, causing them to suffer from high fever, headaches, aching muscles and sores on the skin. It was painful and took around twelve weeks to get better from. For many soldiers, it was an illness that struck them more than once.

BBC Schools



Probably the most feared weapon used during World War One was poison gas. A hit by an artillery shell usually resulted in an instant or quick death. A hit from a machine gun was also usually fatal but quick. Poison gas was so feared because its impact would be over time and death could be days away – possibly even more. Experienced soldiers in the trenches were attuned to gas attacks and quick to put on their respirators. They knew that diving into a shell hole during a gas attack for safety was potentially fatal as poison gas was heavier than air and would drop down into craters.

Historylearningsite.co.uk

Victims of a **chlorine** attack would indeed choke. The gas reacts quickly with water in the airways to form hydrochloric acid, swelling and blocking lung tissue, and causing suffocation.



Some soldiers suffered from a condition called trench foot. This was caused by standing in water and mud for a long time and losing blood circulation. In some cases, soldiers' socks started to grow on to their feet. In severe cases, soldiers had to have their feet or legs amputated .

BBC Schools



By 1917, chlorine ( gas ) was no longer being used alone. Another, more dangerous "irritant", phosgene, was the main killer. But phosgene is slow to act - victims may not develop any symptoms for hours or even days.

".... and then I smelt gas and realised that these were gas shells. I had my respirator on in a hurry and most of our men were as quick. The others were slower and suffered for it. One man was sick all over the sandbags and another was coughing his heart up. We pulled four men out of the debris unharmed. One man was unconscious, and died of gas later. Another was hopelessly smashed up and must have got it full in the chest."

H S Clapham, a British soldier on the Western Front

"If you have never had trench foot described to you, I will explain. Your feet swell (grow) two to three times their normal size and go completely dead. You can stick a bayonet into them and not feel a thing. If you are lucky enough not to lose your feet and the swelling starts to go down, it is then that the most awful pain begins. I have heard men cry and scream with pain and many have had to have their feet and legs amputated . I was one of the lucky ones, but one more day in that trench and it may have been too late." **Harry Roberts.**

"If a soldier wouldn't climb the ladder when ordered to go over the top an officer would come down and shoot them for being a coward. The man was no more of a coward than you or I. He just could not move. That's shell shock."

'The Last Tommy', Harry Patch.



YouTube search ...  
'Verdun Shellshock'



# Source analysis exercise: dangers in the trenches

 Skill : source analysis

List 5 dangers found in trenches

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What was the biggest killer in the trenches ?

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Describe the causes of trench foot

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'Some injuries were not physical. Most soldiers got used to living in muddy areas filled with rats, rotting corpses, and exploding shells, but others could not. As the war progressed, a mental illness caused by these conditions became known as shell shock. Sufferers could be hysterical, disoriented, paralyzed, and unable to obey orders.

Soldiers lived and fought in trenches that were little more than swamp like holes in the ground—a perfect breeding ground for disease. Doctors and nurses could do little to help soldiers with influenza and intestinal flu, and these diseases killed more men than machine gun bullets.

Unmerciful pests such as lice also lived in the trenches. One North Carolinian remarked, "At first we had only one kind [of lice]; but now we have the gray-back, the red, the black, and almost every color imaginable." Lice lived on the soldiers' unclean clothes and bodies. The only way to get rid of the itchy pests was to bathe and change clothes, but often weeks passed before they could do this. Many soldiers also suffered from what doctors called trench foot. After they stood in water for weeks at a time, their socks would begin to grow to their feet. In severe cases, the soldiers' feet had to be amputated.'

Ncpedia.org

Write down a question you would like answering about life in the trenches

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# How Were Soldiers Injured in WW1?

**Task:** match statements to each part of the body ( 'Google' 'BBC iWonder How Were Soldiers Injured ' for information



Trench foot

Many soldiers hit here never made it to hospital

Most common form of injury here

High number of these wounds

More or less every gunshot wound more or less is infected upon the moment of infliction

Often needed to be amputated

12 % of recorded wounds here

Mud and water in trenches caused this injury

Brodie

Often caused by shrapnel or explosive shells

This helmet ' became standard hit in 1915

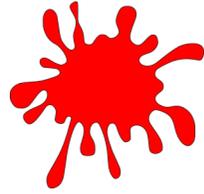
Infection caused the flesh to decay and die

Write up notes into the table

Head <input type="radio"/>	
Torso <input type="radio"/>	
Arm <input type="radio"/>	
Leg <input type="radio"/>	
Foot <input type="radio"/>	

Blank lined area for notes on Injuries.

**Injuries**



**WW1  
Injuries  
and  
Illnesses**

Blank lined area for notes on Shellshock.

**Shellshock**

Blank lined area for notes on Gas Attacks.

**Gas Attacks**

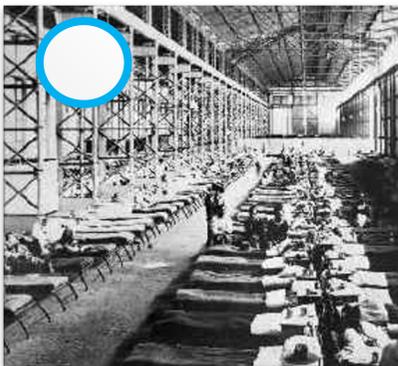
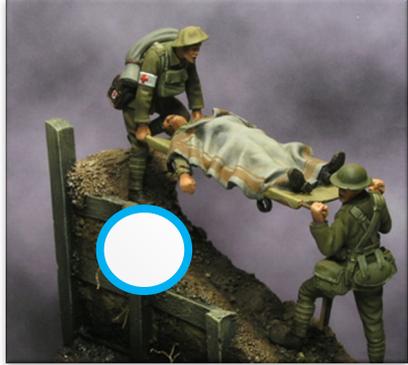


Blank lined area for notes on Illnesses.

**Illnesses**

# Injured Soldiers: pathways to treatment

 **Task:** match each image, with the heading and the text.



  
Regimental  
Aid Post

  
Motor  
Ambulance

  
Stretcher  
Bearer

  
Hospital  
Train

  
Base  
Hospital

  
Casualty  
Clearing  
Station

They could be used as mobile hospital along the Western Front. They were organised by the **Royal Army Medical Corps** with surgical wards and essential medical supplies. Trains were used to evacuate over 100,000 British casualties from the battlefield at Flanders in one month of 1914 alone .

This was usually position within 200m from the frontlines. Wounded men would walk in or be carried in by stretcher-bearers.. It was led by a Regimental Medical Officers but could not cope with serious injuries.

Located near the French and Belgian coasts. They contained 2500 beds by 1917. Wounded separated according to injuries by specialist doctors. Once here a wounded soldier stood a good chance of surviving. Would be sent back to fight or to Britain for further treatment.

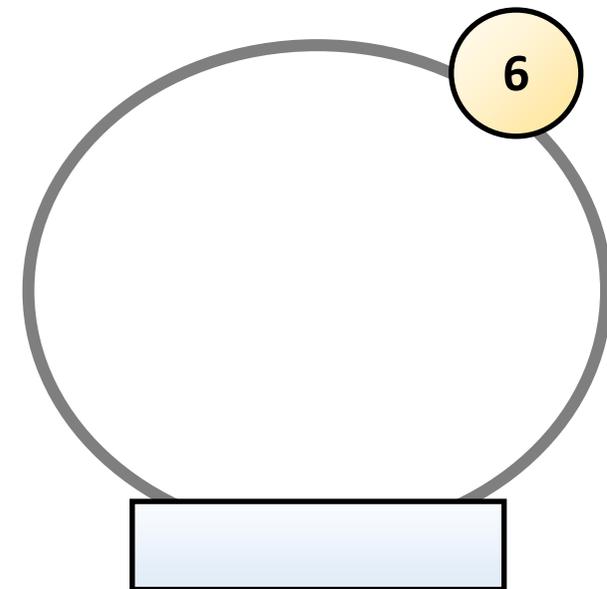
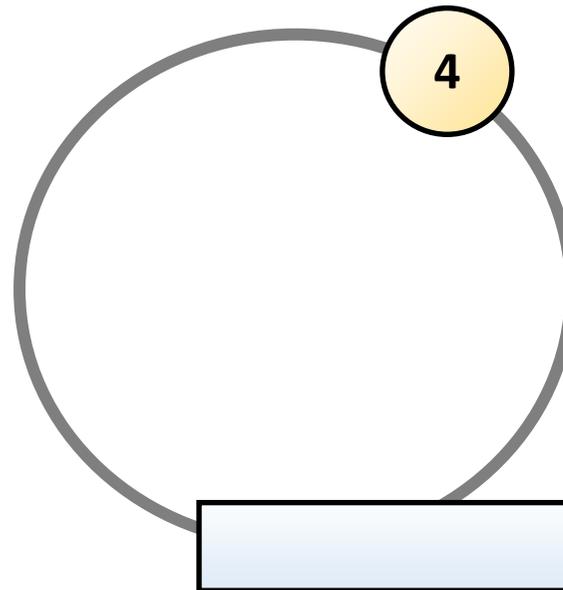
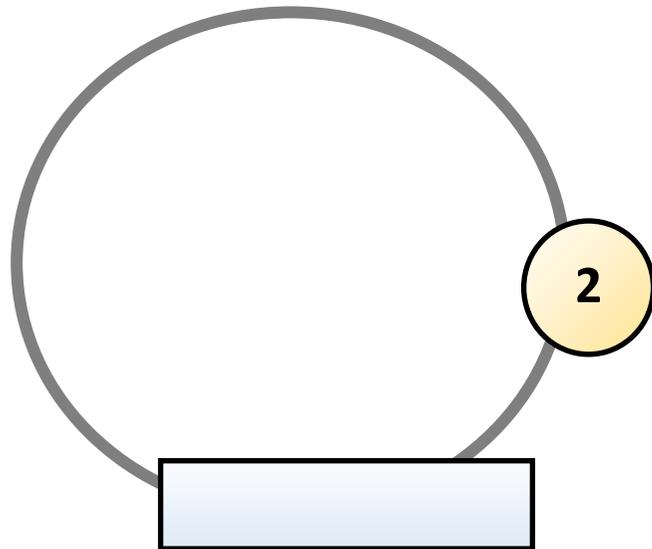
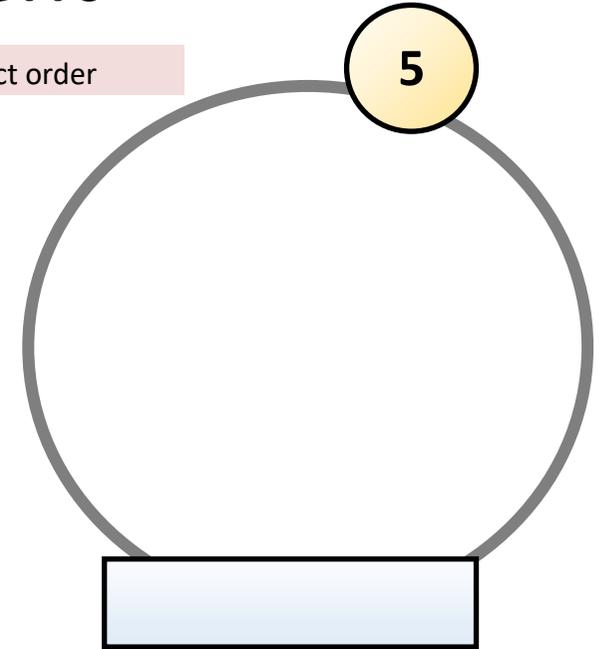
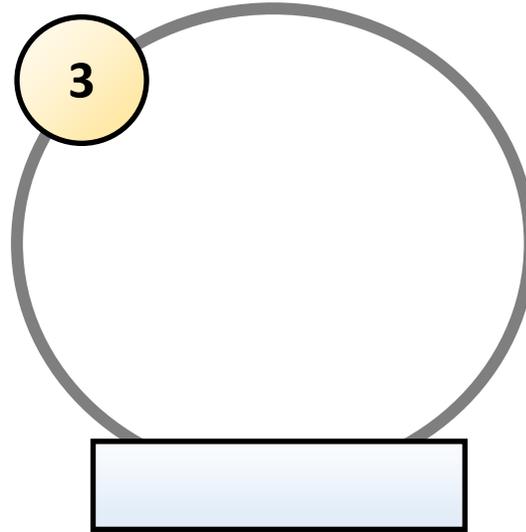
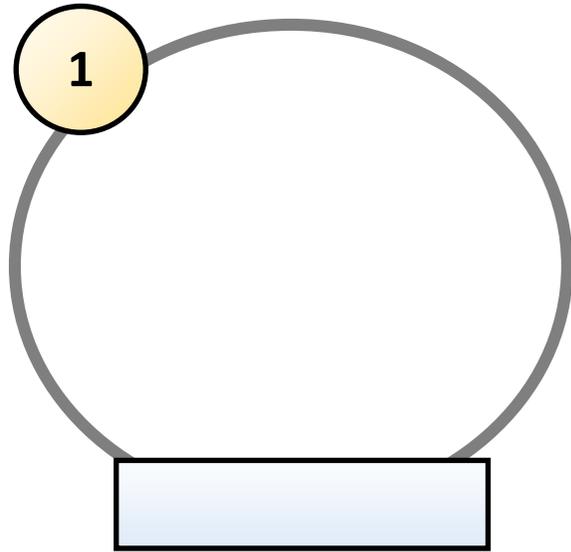
The first, large, well-equipped care for a wounded soldier. Close enough to the front lines to save the seriously injured but far enough away to be safe from artillery and attack. Often in schools or factories and close to or on to railways. They specialised in critical injuries to the chest and head. When soldiers arrived they were triaged. Could hold about 1000 men.

The first motorised versions of these were used during the First World War and began to replace horse drawn versions. They delivered more seriously injured to the CCS. Traction splints were used to help stabilise soldiers with leg injuries.

Soldiers involved in combat were not allowed to stop and care for their soldiers. An injured soldier had to wait until the \_\_\_\_\_ arrived. There were usually four of these for each company of soldiers ( about 250 men ).

# Injured Soldiers: pathways to treatment

 **Review:** write a short summary of each stage of the pathways to treatment ensuring they are in the correct order



# The Roles of The RAMC and FANY

**Discover:** the ways the RAMC and FANY provided medical support and support for the soldiers fighting on the Western Front.



British society was very much male dominated in 1914. There were many in power both in the military and politics who still held the view that a woman's place was in the home. Therefore, in August 1914, when World War One was declared, there was no obvious role for FANY and many in the military took the simple view that women had no part to play in it.

Historylearningsite.co.uk

**A**

*It was not until September 1907 that I was able to found a troop of young women to see how my ideas on the subject ( improving medical care for soldiers ) would work. My idea was that each member of this Corps would receive, in addition to a thorough training in First Aid, a drilling in cavalry movements, signalling and camp work, so that nurses could ride onto the battlefield to attend to the wounded who might otherwise have been left to a slow death."*

Captain Edward Baker,

**B**

'Our Yeomanry nurses who, among other work, drive, clean and manage their own ambulance cars ...have done prodigies ( wonders) along the Belgian front. One of their latest activities has been to devise and work a peripatetic bath. Ten collapsible baths are packed into a motor car which circulates behind the lines. The water is heated by the engine in a cistern in the interior of the car and offers the luxury of a hot bath to several score men.'

At the outbreak of the Great War, just 16 years after its formation, there were 9,000 Warrant Officers and Men of the RAMC; this grew to 130,000 by 1918. The British Army had never before fielded a field ambulance in conflict, the last of the great armies to have understood the importance of medical discipline, and hold medical science in high esteem, within their fighting forces were the old civilisations, such as the ancient empires of Greece and Rome.

From Pat Beauchamp's autobiography, Fanny Goes to War 1919.

**C**



RAMC – WW1.com

**D**

'We orderlies meet each convoy at the front door of the hospital. The walking cases are the first to arrive — men who are either not badly enough wounded, to need to be put on stretchers in ambulances. They come from the station in motor-cars supplied by the London Ambulance Column. The few minutes which the walking cases spends in the receiving hall are occupied in drinking a cup of cocoa and in 'having his particulars taken'. Poor soul! - he is weary of giving his 'particulars'. He has had to give them half-a-dozen times at least, perhaps more, since he left the front. At the field dressing station they wanted his particulars, at the clearing station they wanted his particulars, at the base hospital on another train, on the steamer, on the next train and now in this English hospital.'

Ward Muir , Lance Corporal in the RAMC, worked in a London hospital that received soldiers at the end of the chain of evacuation. ( 1917 )

**E**

How reliable is source E ?
The content (what ) is / is not reliable because ..
The provenance (who ) is / is not reliable
Mostly reliable <input type="radio"/> Mostly unreliable <input type="radio"/>

How far does source B support A
Point of support / corroboration
P1 :
P2 :
Point not supported / corroborated
P1 :
P2 :
Mostly supports <input type="radio"/> Does not support <input type="radio"/>

Quick Questions
How many RAMC in WW1 by 1918 ?
Which source is the most reliable ?
Which source is the least reliable ?
Which source is the most useful?
Which source is the least useful ?

List 3 roles of FANY
Main difference between FANY + RAMC

# The Roles of the RAMC and FANY



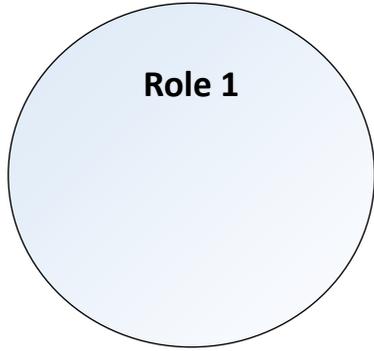
 **Research:** the roles of the RAMC and FANY.

## RAMC

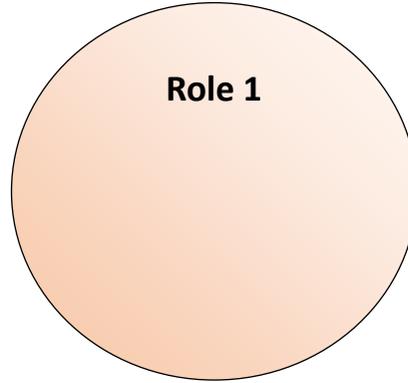
R \_\_\_\_\_  
A \_\_\_\_\_  
M \_\_\_\_\_  
C \_\_\_\_\_



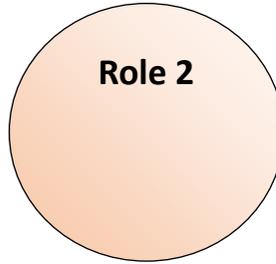
Role 1



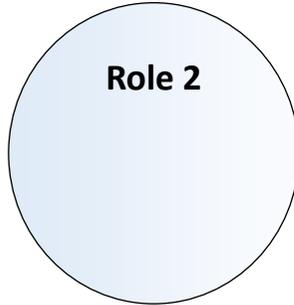
Role 1



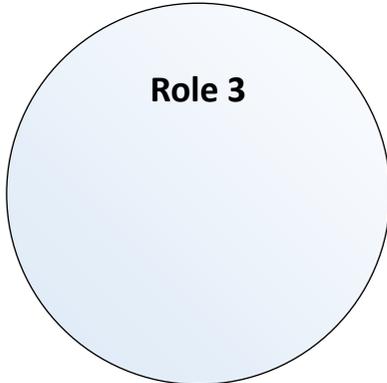
Role 2



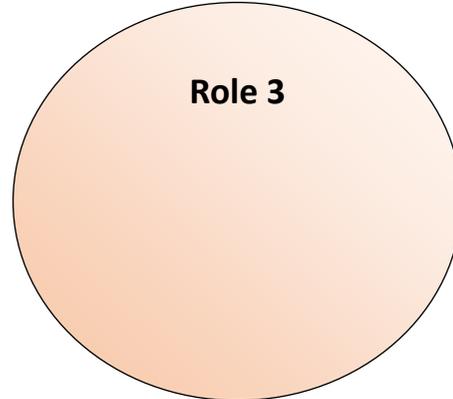
Role 2



Role 3



Role 3



## FANY

F \_\_\_\_\_  
A \_\_\_\_\_  
N \_\_\_\_\_  
Y \_\_\_\_\_



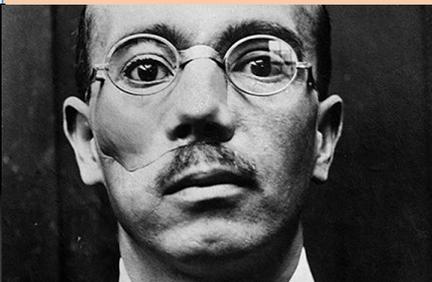
# Medical advancements during WW1

**Discover:** five ways the First World War helped bring about improvement in medicine. (Ordered)

Blood Transfusions	X - Rays	Surgery	Organisation	Other
				
<p>Before WW1, doctors could transfer blood directly from one person to another. In 1914, it was found that <b>sodium citrate</b> was a very good anticoagulant that stopped blood from clotting. In 1916, <b>Heparin</b>, a better anticoagulant was found.</p>	<p>X-rays were first used 20 years before WW1. During WW1, X-Ray machines were much more <b>widely produced and used in hospitals</b> along the Western Front.</p>	<p>New Zealand Medical Officer, <b>Harold Gillies</b> fixed wounds to the face and head. He set up a special <b>plastic surgery unit</b> that treated 2,000 patients after the Battle of the Somme alone.</p>	<p>Armies had to become better organised to treat the wounded. A clear <b>pathway of treatment</b> was set up—from taking the wounded off the battlefield to sending those unable to be rehabilitated back home.</p>	<p><b>At the beginning of the war in 1914, 80% of soldiers with broken thigh bones died.</b> The use of the Thomas splint meant that, by 1916, 80% of soldiers suffering that injury survived.</p>
<p>US Army, Medical Officer, <b>Oswald Robertson</b> began a new way to perform blood transfusions - using <b>stored blood</b> of different groups and then using them on matching patients.</p>	<p>X-Rays immediately improved the success rate of surgeons in <b>locating</b> and removing deeply lodged bullets and shrapnel which would otherwise have caused <b>fatal infections</b>.</p>	<p>The first <b>skin grafts</b> were carried out to help the large number of soldiers whose faces were damaged. The main types of grafts were skin grafts and bone grafts. <b>The Queen's hospital in Sidcup</b> was set up in 1917 specifically to perform plastic surgery</p>	<p>From January 1915, the British military ensured that <b>Casualty Clearing Stations</b> were now better equipped and, crucially, more surgeons were closer to the battlefield.</p>	<p>There were other significant advances, including more widespread use of treatments and <b>vaccinations for deadly diseases like typhoid.</b></p>
<p>Previously, blood was taken freshly from a donor and transferred almost immediately to the patient. Robertson showed that in order to save lives it was better to have a stored <b>'blood bank'</b> ready for immediate use.</p>	<p><b>Mobile X-Ray machines</b> were also used called 'petit curies' after Marie Curie a Polish scientist who showed how X-Rays could be used to detect and treat cancer. Many operations were successful thanks to this advancement in medicine.</p>	<p>During the war improvements in <b>anesthetising</b> wounded soldiers meant that operations that would not have been tried before now could be. This was thanks to the development of less toxic, <b>morphine</b> based anesthetic agents</p>	<p>There were now <b>fewer delays in giving life-saving treatment.</b> Soldiers with wounds that would have been fatal were now more likely to survive.</p>	<p>WW1 also brought improvements in <b>prosthetic devices</b> for those with amputated legs, feet, arms and hands. Nasal, ocular or other prostheses were also developed to help those with facial injuries.</p>

# Medical advancements during WW1

**Discover:** five ways the First World War helped bring about improvement in medicine. ( jumbled—use for a ‘cut and stick’ into frame or paste into books or review cards)

Blood Transfusions	X - Rays	Surgery	Organisation	Other
				
<p>WW1 also brought improvements in <b>prosthetic devices</b> for those with amputated legs, feet, arms and hands. Nasal, ocular or other prostheses were also developed to help those with facial injuries.</p>	<p>There were now <b>fewer delays in giving life-saving treatment</b>. Soldiers with wounds that would have been fatal were now more likely to survive.</p>	<p>X-Rays immediately improved the success rate of surgeons in <b>locating</b> and removing deeply lodged bullets and shrapnel which would otherwise have caused <b>fatal infections</b>.</p>	<p><b>At the beginning of the war in 1914, 80% of soldiers with broken thigh bones died.</b> The use of the <b>Thomas splint</b> meant that, by 1916, 80% of soldiers suffering that injury survived</p>	<p>Previously, blood was taken freshly from a donor and transferred almost immediately to the patient. Robertson showed that in order to save lives it was better to have a stored '<b>blood bank</b>' ready for immediate use.</p>
<p>There were other significant advances, including more widespread use of treatments and <b>vaccinations for deadly diseases like typhoid</b>.</p>	<p>US Army, Medical Officer, <b>Oswald Robertson</b> began a new way to perform blood transfusions - using <b>stored blood</b> of different groups and then using them on matching patients.</p>	<p>Armies had to become better organised to treat the wounded. A clear <b>pathway of treatment</b> was set up—from taking the wounded off the battlefield to sending those unable to be rehabilitated back home.</p>	<p>From January 1915, the British military ensured that <b>Casualty Clearing Stations</b> were now better equipped and, crucially, more surgeons were closer to the battlefield.</p>	<p>Before WW1, doctors could transfer blood directly from one person to another. In 1914, it was found that <b>sodium citrate</b> was a very good anticoagulant that stopped blood from clotting. In 1916, <b>Heparin</b>, a better anticoagulant was found. .</p>
<p>New Zealand Medical Officer, <b>Harold Gillies</b> fixed wounds to the face and head. He set up a special <b>plastic surgery unit</b> that treated 2,000 patients after the Battle of the Somme alone.</p>	<p>The first <b>skin grafts</b> were carried out to help the large number of soldiers whose faces were damaged. The main types of grafts were skin grafts and bone grafts. <b>The Queen’s hospital in Sidcup</b> was set up in 1917 specifically to perform plastic surgery</p>	<p>During the war improvements in <b>anesthetising</b> wounded soldiers meant that operations that would not have been tried before now could be. This was thanks to the development of less toxic, <b>morphine</b> based anesthetic agents</p>	<p><b>Mobile X-Ray machines</b> were also used called ‘petit curies’ after Marie Curie a Polish scientist who showed how X-Rays could be used to detect and treat cancer. Many operations were successful thanks to this advancement in medicine.</p>	<p>X-rays were first used 20 years before WW1. During WW1, X-Ray machines were much more <b>widely produced and used in hospitals</b> along the Western Front.</p>

# Medical advancements during WW1

Feeling creative? Drawings or diagrams are usually a more effective way to help our brains remember. Complete the table with a mix of text, images and diagrams as you choose.

**Discover:** five ways the First World War helped bring about improvement in medicine. ( write up brief summary or stick information into appropriate square )

Blood Transfusions	X - Rays	Surgery	Organisation	Other
				

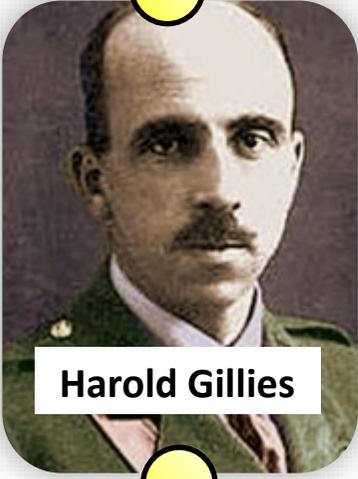
# Medical advancements AND setbacks during WW1

Task 1 : research the roles of Harold Gillies and Harvey Cushing during WW1 . Task 2: be able to provide balance by showing ways medicine did NOT advance during WW1

Achievements ...

Setback in WW1

Achievements ...

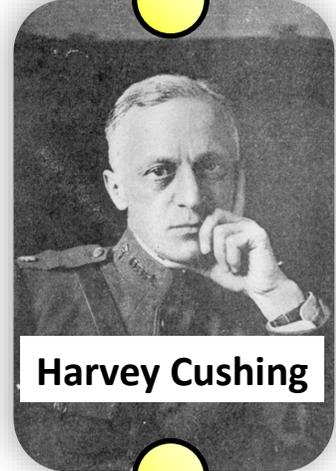


Harold Gillies

Setback in WW1



Setback in WW1



Harvey Cushing

Setbacks ?

Setback in WW1

Setbacks ?

# Medicine in WW1

'5 Square' Puzzle  
( complete )

**Dangers**  
  
Shellshock

**Pathway**  
  
1. Stretcher Bearers

Wounds



Trench foot

2. Regimental Aid Post



3. Casualty Clearing Station

**RAMC**  
  
Worked in treatment pathway

Illness and Disease

Doctors + Surgeons



130,000 by 1918

4. Base Hospital

Welcomed into French and Belgian Army hospitals

Harvey Cushing  
(Brain)

Organised travelling bath system



Ambulance Drivers

Worked in British Army Hospitals

Harold Gillies  
(Facial Repair)



Oswald Robertson  
( Blood Bank )

Delivered food, supplies and clothes

Marie Curie  
(Mobile X Ray)

**FANY**

**Key Players**

# Medicine in WW1

5 Square Puzzle  
( Cut and stick option )

**Stretcher Bearers**

**Harvey Cushing**  
( )

**Base Hospital**



**Trench foot**

**Ambulance Drivers**



**Worked in treatment pathway**

**Shellshock**

**Write in**

- Brain
- Mobile X-Ray
- Facial Repair
- Blood bank

**Worked in British Army Hospitals**

**Wounds**

**Casualty Clearing Station**



**Harold Gillies**  
( )

**Illness and Disease**

**Welcomed into French and Belgian Army hospitals**

**Regimental Aid Post**

**130,000 by 1918**



**Marie Curie**  
( )

**Doctors + Surgeons**



**Oswald Robertson**  
( )

**Delivered food, supplies and clothes**

**Dangers**

**Pathway**

**RAMC**

**Key Players**

**FANY**

**Organised travelling bath system**



# MEDICINE in WW1

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