

A background image of several red poppies with dark centers, some in full bloom and some as buds, set against a bright, slightly overexposed white background. The flowers are scattered across the frame, with some in sharp focus and others blurred.

Life After the Armistice

Session 1 – Health and Wellbeing



Influenza Pandemic – 1918-19



*I had a little bird,
Its name was Enza.
I opened the window,
And in-flu-enza.*

1918 Children's Skipping Song



littlefoureyes.com



Influenza Pandemic

- The 'Spanish Flu' pandemic of 1918 was one of the greatest medical disasters of the 20th century.
- This was a global pandemic, an airborne virus which affected every continent.





Influenza Pandemic

- It is still not clear where the virus started.
- China, America and Flanders are all contenders.
- It was nicknamed 'Spanish flu' as the first reported cases were in Spain.
- As this was during World War I, newspapers were censored so although there were influenza (flu) cases elsewhere, it was the Spanish cases (Spain was neutral) that hit the headlines.
- One of the first casualties was the King of Spain.





Influenza Pandemic

- Young adults between 20 and 30 years old were particularly affected and the disease struck and progressed quickly in these cases.
- Onset was devastatingly quick.
- Those fine and healthy at breakfast could be dead by tea-time.
- Within hours of feeling the first symptoms of fatigue, fever and headache, some victims would rapidly develop pneumonia and start turning blue, signalling a shortage of oxygen.
- They would then struggle for air until they suffocated to death.





Influenza Pandemic



- Hospitals were overwhelmed and even medical students were drafted in to help.
- Doctors and nurses worked to breaking point, although there was little they could do as there were no treatments for the flu and no antibiotics to treat the pneumonia.



Influenza Pandemic

- During the pandemic of 1918/19, over 50 million people died worldwide and a quarter of the British population were affected.
- The death toll was 228,000 in Britain alone.
- Global mortality rate is not known, but is estimated to have been between 10% to 20% of those who were infected.
- By the end of pandemic, only one region in the entire world had not reported an outbreak: an isolated island called Marajo, located in Brazil's Amazon River Delta.





Influenza Pandemic

- A lack of clear government advice left the door open for companies to exploit public fears.
- These throat tablet would have proved useless against the virus.
- In 1918–19, antiviral agents were unknown but various over-the-counter palliatives were promoted, although not directly described as cures.
- These included inhalers for congestion, aspirin, quinine, opium, ammonia, iodine, turpentine, salt water, beef tea, Vick vapour rub and Bovril.



Why catch their Influenza?

YOU need not! Just carry Formamint with you and suck these delicious tablets whenever you are in danger of being infected by other people.

“Suck at least four or five a day”—so says Dr. Hopkirk in his standard work “Influenza”—for “in Formamint we possess the best means of preventing the infective processes which, if neglected, may lead to serious complications.”

Seeing that such complications often lead to Pneumonia, Bronchitis, and other dangerous diseases, it is surely worth while to protect yourself by this safe, certain, and inexpensive means. Protect the children, too, for their delicate little organisms are very exposed to germ attack, especially during school epidemics. Be careful, however, not to confuse Formamint with so-called formalin tablets, but see that it bears the name of the sole manufacturer: Genatoun, Limited (British Purchasers of Sanatogen Co.), 12, Clements Street, London, W.C. 1. (Chairman: The Viscountess Rhonda.)

“Attack the germs before they attack you!”

Though genuine Formamint is scarce your chemist can still obtain it for you at the low rate price—2/6 per bottle. Order it to-day.

Formamint
THE GERM KILLING THROAT TABLET



Influenza Pandemic

- A rather surprising, and hazardous, remedy was drinking carbolic acid, as recommended in a letter to *The Scotsman* newspaper.
- However a notice appeared subsequently warning patients that it was an irritant poison and that the quantity suggested was sufficient to poison 250 people and cause 50 deaths.



Adverts from Liverpool Newspapers

GEORGE HENRY LEE AND CO.,
LIMITED.

INFLUENZA EPIDEMIC.

We are Sole Agents in Liverpool for
DEODAR SPECIALITIES:

- DEODAR GERMICIDE ESSENCE.
- VAPORISERS AND SPRAYS.

The Ministry of Munitions has issued Certificates for the immediate supply of Deodar Essence for use in the Munition Factories.

BASNETT STREET, LIVERPOOL.



KEEP
"QUINPHOS"
ALWAYS BY YOU.

"QUINPHOS," the Great Tonic,
is the best thing for
INFLUENZA, COLDS,
NEURALGIA, SLEEPLESSNESS,
LOSS OF APPETITE, DEPRESSION.
BUT GET "QUINPHOS,"
NOT A SUBSTITUTE.

Liquid or Tablets, 2/11; Double size, 4/-.
All Chemists.

Influenza

Bocril Ltd. wish to express their regret at the shortage of Bocril during the recent Influenza epidemic.

The proprietors of Bocril, recognizing that those who are deprived of the body-building powers of Bocril may more easily fall victims to the epidemic, have done their utmost to increase the supply, but the lack of bottles has seriously hampered—and still hampers—their endeavours. Efforts are being made to collect empty bottles, and it is hoped that supplies will soon be increased by the release of men for the bottle factories.

It is suggested that those consumers who have a stock of Bocril should avoid purchasing at present, and thus leave the available Bocril for those who have more pressing need of it at this critical time.

INFLUENZA DANGER.

INSURE while you are in good health.
A premium of £5 will secure an Assurance of

£500

IN CASE OF DEATH
due to **INFLUENZA, PNEUMONIA,** or any other illness or **ACCIDENT,** including **AIR RAID RISKS.**

Write now for particulars to
THE WESTERN AUSTRALIAN INSURANCE COMPANY, LIMITED,
London Offices:
45-47, CORNHILL, E.C. 3.
Liverpool Branch:
11, BROWN'S BUILDINGS.
R. A. WILK, District Representative.

The above premium is for healthy lives between age 18 and 40. Older lives pay a few shillings more.

And some advice from a hobby horse ...

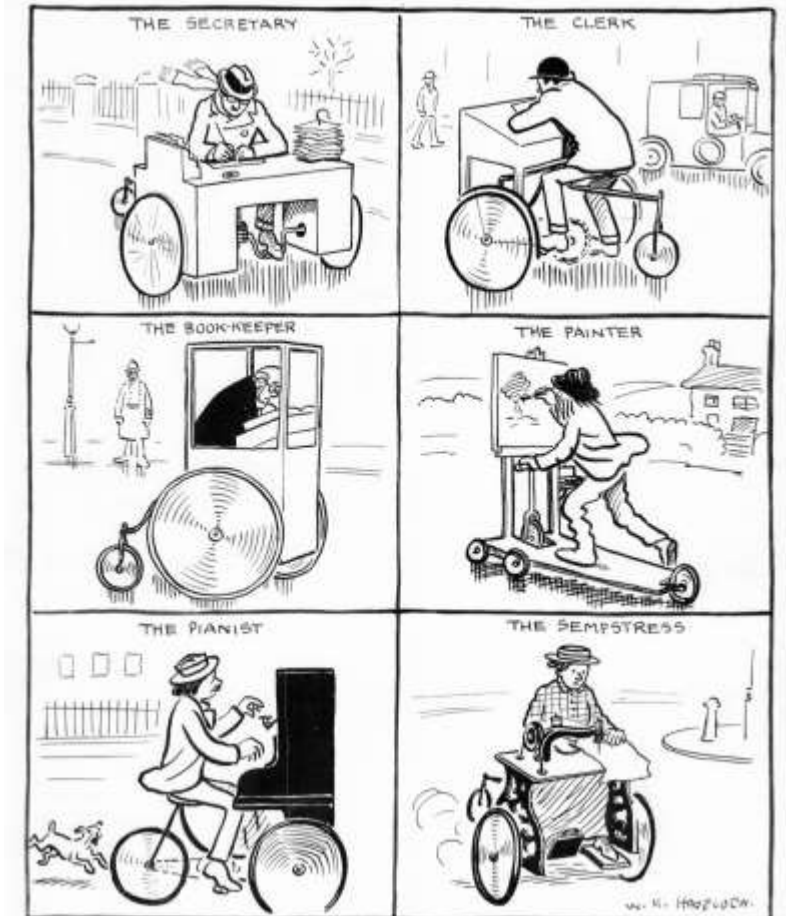
Sir,—Some years ago the late Dr. Watson, in one of his memorable sermons at Sefton Park Church, spoke with great contempt and in very scathing terms of the unfortunate position of young men, who from the commencement of their business careers were forced to sit at work in stuffy offices owing to the selfishness of other and older men who insisted on all windows being kept closed.

The rev. gentlemen pointed out the injurious effect such stuffiness would have on the young men, and went on to say that such old men ought to be collected and placed in a sealed box and be allowed to suffocate in their own vitiated atmosphere.

The above remarks are brought rather forcibly to my memory, particularly when influenza is so prevalent, the old clerks being represented for the present purpose by those people who insist on closing all ventilation in trams and railway carriages.

As a suggestion, could not the Liverpool tramway authorities and the officials in charge of the local railway services be persuaded to fix open certain ventilators which could not be closed at will by the above-mentioned selfishly-stuffy members of the community?—

Yours, &c., J. A. M'FARLANE.
15, Devonshire-road, Liverpool.

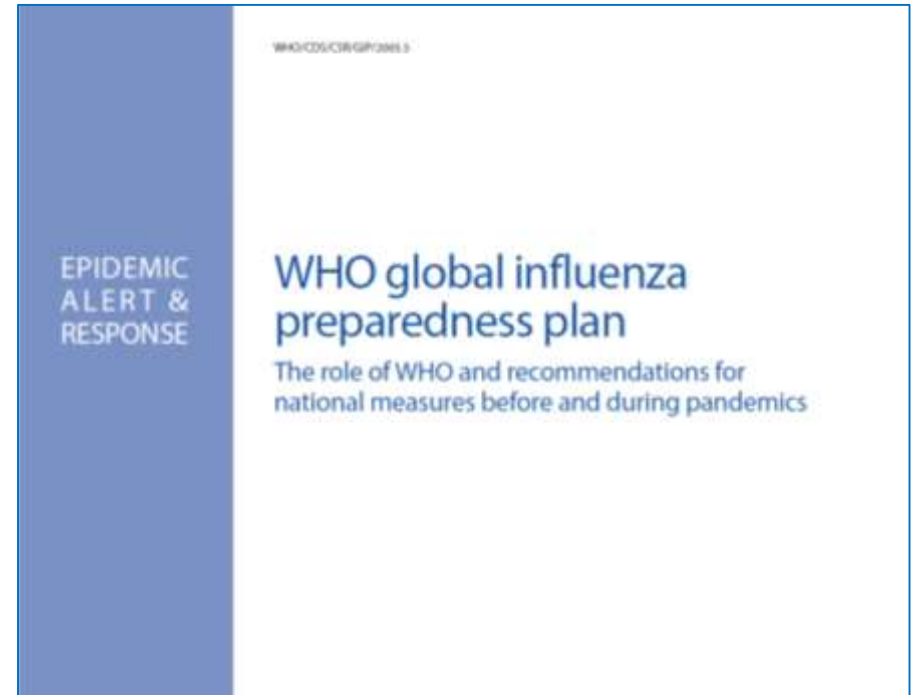


Liverpool Daily Post - Saturday
2nd November 1918



Future Pandemics

- We will have another pandemic like the 1918 virus but the world has learned a lot.
- The World Health Authority, national governments and local authorities all have plans in place to cope.
- Antibiotics exist now that will help with secondary infections.
- Anti-viral immunisation is much more sophisticated.





Future Pandemics

- It is accepted that communication is essential – people must know what is happening and be given advice about what to do.
- It is also seen as essential that every country in the world must have a health system able to cope with an epidemic.
- This is one of the reasons that overseas aid is seen as essential to help poorer countries.





Infection Management



Blood Transfusion



Blood Transfusions

- At the start of the First World War blood transfusion technology was largely untested and not widely accepted.
- Blood types had first been identified at the turn of the century, but where transfusions were carried out surgeons did not test the blood for compatibility.
- This could be fatal where the patient's immune system attacked the new blood cells.





Blood Transfusions

- Transfusions were 'direct' using a tube to carry blood from an artery in the donor to a vein in the patient.
- This carried the risk that blood would clot and block the tubes.
- As is so often the case in war, new techniques were advanced in the urgency of the battlefield.
- In this case, a Canadian, an American and an Englishman all played vital roles.





Blood Transfusions

- The Canadian was Lawrence Bruce Robertson.
- He was posted to the Canadian Army Medical Corps' No. 2 Casualty Clearing Station.
- He persuaded the British surgeons at the casualty clearing stations to practice 'indirect' blood transfusions, where blood was transferred using syringes and canulae to overcome problems of clotting .
- This was a technique he had used at Toronto's Hospital for Sick Children.





Blood Transfusions

- Robertson set up the first blood transfusion equipment at a casualty clearing station on the Western Front in Spring 1917 and began to record the results of the transfusions he performed.
- In an article in *The Lancet* published on 24 November 1917, Robertson described 36 cases where he had used the indirect transfusion method.





Blood Transfusions

- The article was printed with a note by Colonel Charles Gordon Watson, the consulting surgeon to the British Expeditionary Force, which said
- *'During the past year I have had the opportunity of observing the technique and the results of blood transfusions by Major Bruce Robertson and other workers. Without doubt transfusion of blood after primary haemorrhage is a life saving device of the greatest value and enables urgent operations to be successfully performed under conditions otherwise hopeless.'*





Blood Transfusions

- Another Robertson, this time an American by the name of Oswald Hope, played an equally important role in developing blood transfusion technology.
- Oswald Robertson was born in England in 1886 but emigrated to America as a child.
- He qualified as a doctor in 1915 and joined the Western Front as a volunteer with the United States Army, attached to the 48th casualty clearing station.



Wellcome Images



Blood Transfusions

- He built the world's first blood bank – storing blood mixed with a citrate and dextrose solution in glass bottles kept on ice.
- The blood could be kept for up to 26 days and moved to casualty clearing stations ready to be used in transfusions to patients.

Lieut.-Colonel Launcelot M. Purcell, U.S. Quartermaster Corps, i./c. Knotty Ash Rest Camp.

Lieut.-Colonel John George Quekemeyer, U.S. Cavalry (A.D.C. to C.-in-C.).

Major Oswald Hope Robertson, M.O.R.C., attd. 48th Casualty Clearing Station, R.A.M.C.

Colonel Samuel Grant Shartle, U.S. General Staff.

T./Hon. Major George Cheever Shattuck, late Harvard Unit, attd. 10th Casualty Clearing Station, R.A.M.C.



Blood Transfusions

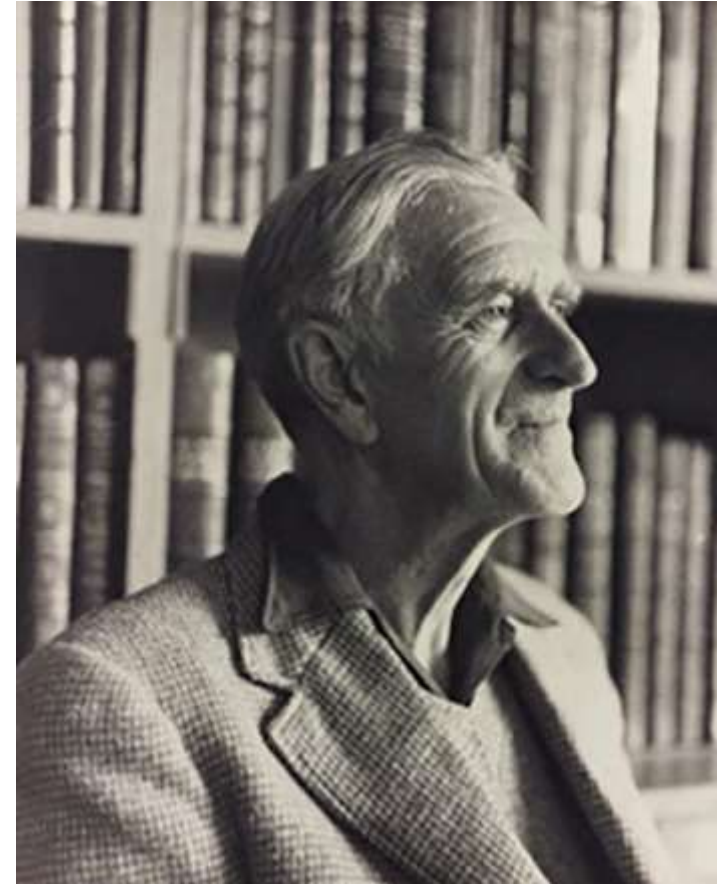
- During heavy fighting a casualty clearing station received many seriously wounded men at once.
- The less seriously wounded, who would normally have been able to donate blood, were not taken to the casualty clearing stations.
- This meant that having a stock of stored blood allowed the medical services to give transfusions quickly and easily.
- Robertson was awarded the Distinguished Service Order by the British Government in recognition of the lives his techniques had saved.





Blood Transfusions

- Another aspect of blood transfusion technology was developed by an Englishman, Geoffrey Keynes.
- Born in 1887, Keynes qualified as a surgeon with the Royal College of Surgeons in London and in 1917 he married Margaret Darwin – granddaughter of Charles Darwin.
- Keynes developed equipment that enabled blood transfusions to be carried out away from established medical facilities.





Blood Transfusions

- Where there was no refrigeration available to store blood, the best hope a patient had was to get a transfusion there and then from another person.
- Keynes' equipment enabled 'indirect' transfusions by regulating the flow of blood between the donor and the patient.





Blood Transfusions

- The National Blood Transfusion Service was set up in 1946.
- By 2015, hospitals in England were provided with 1.6 million units of blood each year provided thanks to around 900,000 donors.
- Every blood donation can save or improve up to three lives.
- Each day NHS Blood and Transplant needs more than 6,000 donors.





Orthopaedics



Orthopaedics

- Only about 5% of the casualties during the Great War died on the battle field.
- The rest died during treatment.
- One of the big problems was the treatment of fractures which potentially caused death by infection or long-term disability.
- The war led to drastic improvements in orthopaedic surgery and treatment.
- Today's fracture clinics are a direct descendant of these innovations.





Orthopaedics

- Dr Robert Jones was brought up in London.
- At 16 he left the family home and went to live with his uncle Hugh Owen Thomas, in 11 Nelson Street, Liverpool.
- Robert attended the Liverpool School of Medicine from 1873 to 1878 where he learned about fracture care and the manufacture of braces.
- He continued to work with his uncle, and in 1887 was appointed Honorary Assistant Surgeon to the Stanley Hospital in Liverpool.
- At this time, Robert and his uncle were among the few surgeons interested in the treatment of fractures.
- Robert received his FRCS (Fellowship from the Royal College of Surgeons) in 1889





Orthopaedics

- Dr Jones was appointed Surgeon-Superintendent for the construction of the Manchester Ship Canal in 1888.
- Here he was responsible for the injured among the thousands of workers during the construction period.
- Robert organised an efficient accident service by dividing the site into 3 sections, and establishing a hospital and first aid posts in each section.
- He staffed the hospitals with medical personnel trained in fracture management.
- Robert also personally operated on hundreds of casualties, which improved his skills and knowledge of fracture management.





Orthopaedics

- At the outbreak of war Robert was mobilised as a Territorial Army surgeon where he could observe treatment of fractures in hospitals at the front and at home.
- He felt improvements could be made, leading to the introduction of military orthopaedic hospitals.
- Robert was appointed Inspector of Military Orthopaedics, with responsibility for over 30,000 beds.
- He devised new procedures and changed the after care and rehabilitation of wounded soldiers, with a tremendous success rate.





Orthopaedics

- In 1914 Robert worked in Alder Hey military hospital where he applied the techniques of civilian orthopaedic surgery to the limbs and spinal casualties of wounded soldiers.
- 400 beds were later reserved for this purpose.





Orthopaedics

- The majority of patients at Alder Hey were not sent direct from the fighting at the front, but transferred from other hospitals, where there was every chance the patient would recover.
- The hospital also had an occupational workshop, where disabled soldiers could learn new skills and possibly take up a skilled trade when they were discharged from the hospital.
- A link was created with the Old Swan Technical Institute and a workshop in Knotty Ash Village Hall, where a variety of classes were held from gardening to typewriting.





Orthopaedics

- Robert's uncle, Hugh Owen Thomas, became known as the "father of modern orthopaedics".
- Among a myriad of medical innovations, Hugh is best known for the invention of the "Thomas splint".
- In his lifetime the splint was used for the treatment of fractures, but it was Robert Jones who demonstrated the importance and life-saving potential of the Thomas splint amid the chaos of World War I.





Orthopaedics

- A Royal Army Medical Corps training manual from 1908 instructed that

“A ‘rifle splint’ may be applied to a fractured thigh ... if an old-pattern rifle is used, see that the rifle is not loaded. Place it on the side of the injured limb; butt in the armpit, trigger guard to the front...”
- However, a report by the British Medical Association in 1921 cited that the correct application of a rifle splint

“... is difficult, and when applied it has many disadvantages... The mortality that attended cases of fractured femurs was, at this period, appallingly high”





Orthopaedics

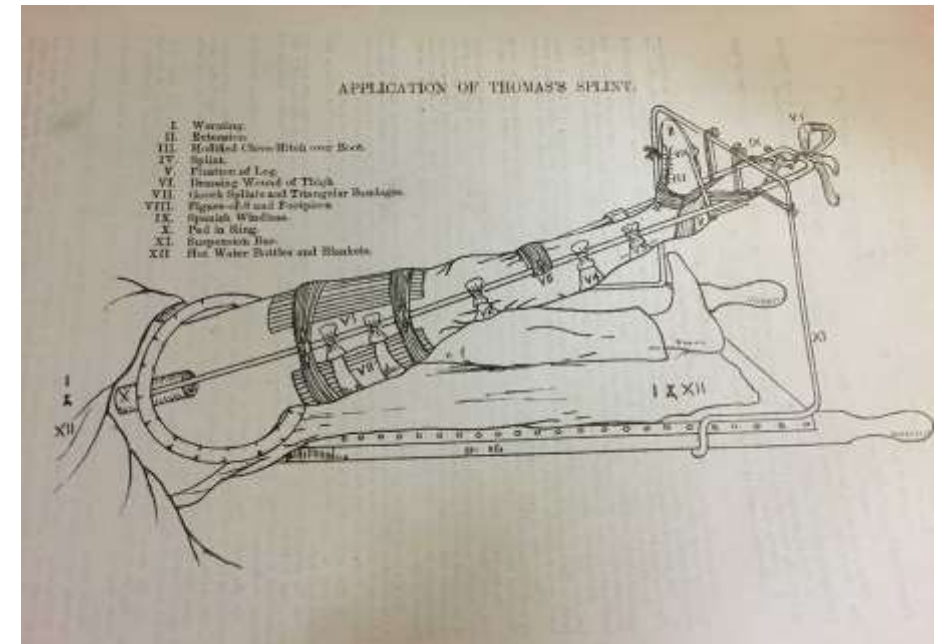
- Very often, by the time the patient arrived at a field hospital, the damage was so severe that amputation was the only option.
- Statistics from France in 1916 suggest that the mortality rate from fractures of the femur was, in fact, up to 80%.
- The majority of those servicemen who died – around 50% – died in transit, or at casualty clearing stations before they ever reached a field hospital.





Orthopaedics

- In 1916 Robert demonstrated the use of Thomas's splints in casualty clearing stations in France.
- From then the Thomas's caliper saved thousands of limbs, helped transport of the wounded and reduced deaths from this type of injury.
- Robert also wrote two books on military orthopedics, which influenced the work of many doctors working on the Front.
- Robert was promoted several times throughout the war, obtaining the rank of Major General.





Orthopaedics

- After the war Robert switched his attention to child health, campaigning for better standards of care for fractures and orthopaedics and setting up orthopedic departments in many British teaching hospitals.
- Robert died aged 75 in Llanfechain, Wales.
- After his death Robert's ashes were scattered at Liverpool Cathedral.





X-Rays



X-Rays

- In 1895 the German physicist Wilhelm Conrad Röntgen (1845-1923) discovered X-rays.
- He called them "X" because their nature was then unknown.
- The nature of the rays was not understood until 1912 when another German physicist, Max von Laue (1879-1960), managed to diffract them through a lattice of crystal.





X-Rays

- X-Rays for medical purposes first came into their own in the First World War.
- Again, the need was to act quickly (preferably within an hour, to prevent infection.
- Up until this point X-ray machines were only found in big city hospitals.





X-Rays

- Marie Curie realised that x-ray machines needed to be taken to the battlefields.
- Curie's solution was to invent the first "radiological car."
- This was a vehicle containing an X-ray machine and photographic darkroom equipment – which could be driven right up to the battlefield where army surgeons could use X-rays to guide their surgeries.





X-Rays

- One major obstacle was the need for electrical power to produce the X-rays.
- Curie solved that problem by incorporating a dynamo – a type of electrical generator – into the car's design.
- The petroleum-powered car engine could thus provide the required electricity.



Source: GALLAGHER / Getty Images Collection of France



X-Rays

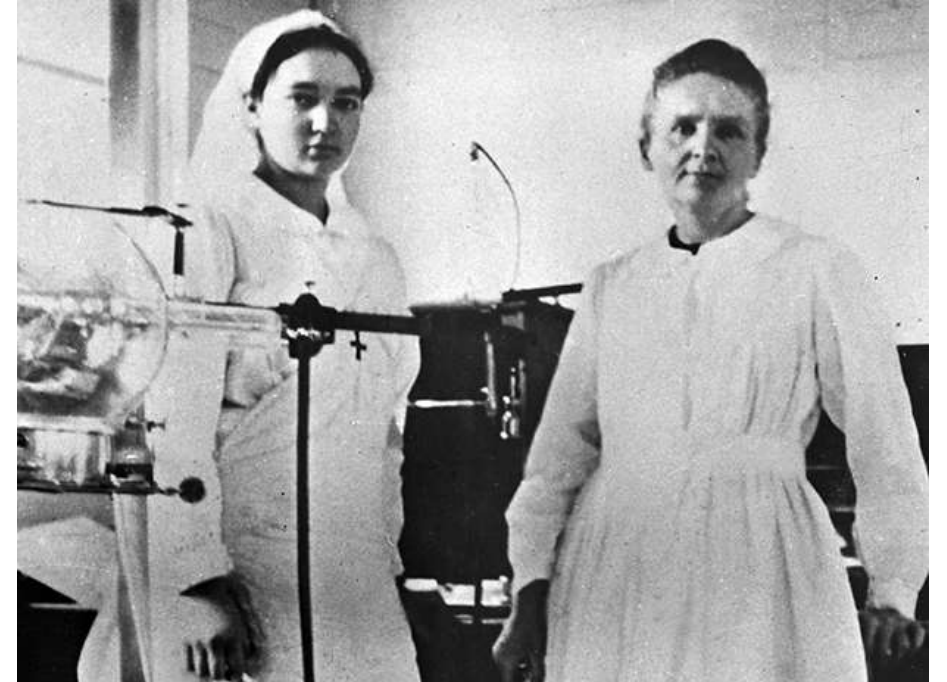
- Frustrated by delays in getting funding from the French military, Curie approached the Union of Women of France.
- This philanthropic organization gave her the money needed to produce the first car, which ended up playing an important role in treating the wounded at the Battle of Marne in 1914 – a major Allied victory that kept the Germans from entering Paris.





X-Rays

- More radiological cars were needed.
- So Curie exploited her scientific clout to ask wealthy Parisian women to donate vehicles.
- Soon she had 20, which she outfitted with X-ray equipment.
- But the cars were useless without trained X-ray operators, so Curie started to train women volunteers.
- In the end, a total of 150 women received X-ray training from Curie.





X-Rays

- Not content just to send out her trainees to the battlefield, Curie herself had her own “little Curie” – as the radiological cars were nicknamed – that she took to the front.
- This required her to learn to drive, change flat tyres and even master some rudimentary auto mechanics, like cleaning carburettors.
- Curie also oversaw the construction of 200 radiological rooms at various fixed field hospitals behind the battle lines.





Plastic Surgery & Prosthetics

Plastic Surgery & Prosthetics





Emotional Trauma



Emotional Trauma

- Although emotional trauma in was certainly not new, the Great War brought it into public view and led to a revolution in treatment.
- Millions of men suffered psychological trauma as a result of their war experiences.
- Symptoms ranged from uncontrollable diarrhoea to unrelenting anxiety.
 - Soldiers who had bayoneted men in the face developed hysterical tics of their own facial muscles.
 - Stomach cramps seized men who knifed their foes in the abdomen.
 - Snipers lost their sight.
 - Terrifying nightmares of being unable to withdraw bayonets from the enemies' bodies persisted long after the slaughter.
- For some the trauma did not start until after the war.





Emotional Trauma

- It was clear to everyone that large numbers of combatants could not cope with the strain of warfare.
- By the end of World War One, the army had dealt with 80,000 cases of 'shell shock'.
- As early as 1917, it was recognised that war neuroses accounted for one-seventh of all personnel discharged for disabilities from the British Army.
- Once wounds were excluded, emotional disorders were responsible for one-third of all discharges.





Emotional Trauma

- Even more worrying was the fact that a higher proportion of officers were suffering in this way.
- According to one survey published in 1917, while the ratio of officers to men at the front was 1:30, among patients in hospitals specialising in war neuroses, the ratio of officers to men was 1:6.
- What medical officers quickly realised was that everyone had a 'breaking point'.





Emotional Trauma

- More difficult, however, was understanding what caused some panic-stricken men to suffer extremes of trauma.
- In the early years of World War One, shell shock was believed to be the result of a physical injury to the nerves.
- In other words, shell shock was the result of being buried alive or exposed to heavy bombardment.





Emotional Trauma

- The term itself had been coined, in 1917, by a medical officer called Charles Myers.
- But Myers rapidly became unhappy with the term, recognising that many men suffered the symptoms of shell shock without having even been in the front lines.
- As a consequence, medical officers increasingly began emphasising psychological factors as providing sufficient cause for breakdown.





Emotional Trauma

- The president of the British Psycho-Analytic Association, Ernest Jones, explained: war constituted 'an official abrogation of civilised standards' in which men were not only allowed, but encouraged:

'...to indulge in behaviour of a kind that is throughout abhorrent to the civilised mind.... All sorts of previously forbidden and hidden impulses, cruel, sadistic, murderous and so on, are stirred to greater activity, and the old intrapsychical conflicts which, according to Freud, are the essential cause of all neurotic disorders, and which had been dealt with before by means of 'repression' of one side of the conflict are now reinforced, and the person is compelled to deal with them afresh under totally different circumstances.'



Emotional Trauma

- Consequently, the 'return to the mental attitude of civilian life' could spark off severe psychological trauma.





Emotional Trauma

- From the start, the purpose of treatment was to restore the maximum number of men to duty as quickly as possible.
- During World War One, four-fifths of men who had entered hospital suffering shell shock were never able to return to military duty.
- It was imperative that such high levels of 'permanent ineffectives' were reduced.





Emotional Trauma

- However, the shift from regarding breakdown as 'organic' (that is, an injury to the nerves) to viewing it as psychological had inevitable consequences in terms of treatment.
- If breakdown was a 'paralysis of the nerves', then massage, rest, dietary regimes and electric shock treatment were invoked.
- If a psychological source was indicated, the 'talking cure', hypnosis, and rest would speed recovery.





Emotional Trauma

- In all instances, occupational training and the inculcation of 'masculinity' were highly recommended.
- As the medical superintendent at one military hospital in York put it, although the medical officer must show sympathy, the patient

'must be induced to face his illness in a manly way'.





Emotional Trauma

- Sympathy was only rarely forthcoming.
- Sufferers had no choice but to acknowledge that their reputations as soldiers and men had been dealt a severe blow.
- When the shell shocked men returned home, things were not much better.
- Men arriving at Netley Hospital (for servicemen suffering shell shock) were greeted with silence.
- People were described as hanging their heads in 'inexplicable shame'.





Survivors - Siegfried Sassoon

*No doubt they'll soon get well; the shock and strain
Have caused their stammering, disconnected talk.
Of course they're 'longing to go out again', -
These boys with old, scared faces, learning to walk.
They'll soon forget their haunted nights; their cowed
Subjection to the ghosts of friends who died,
Their dreams that drip with murder; and they'll be proud
Of glorious war that shatter'd their pride...
Men who went out to battle, grim and glad;
Children, with eyes that hate you, broken and mad.*

