

**Paper 1, Option 11: Medicine in Britain, c1250–present
and The British sector of the Western Front, 1914–18:
injuries, treatment and the trenches**

Revision Resources

MEDIEVAL MEDICINE

Knowledge organiser

Topic 1

Key Dates

EVENTS IN THE MIDDLE AGES

400 BC: Hippocrates develops his Theory of the Four Humours, and creates the Hippocratic Oath.

130-210 AD: Galen develops Hippocrates ideas and creates his Theory of Opposites.

1250: Our course begins at this point, focussing on the later medieval period.

1348: The Black Death sweeps through Europe and enters Britain. It killed around 60% of the population.

TREATMENT OF DISEASE

FOUR HUMOURS

Galen's Theory of Opposites is used to treat an imbalance in the humours. Cold/phlegm = have hot or spicy food. Also, physicians encouraged the use of leeches and cupping to remove the bad blood and purging using herbs to draw out yellow bile.

HERBAL REMEDIES

Wise women have homemade remedies that did work for example honey for infections or mint for the stomach.

RELIGIOUS

People would pray for God to cure them of their illnesses. If God was the one causing it then only he could cure it. An example of this is the Flagellants during the Black Death in 1348

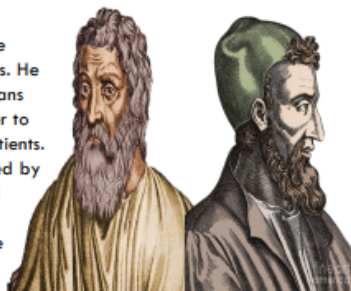
SURGERY

Barber surgeons used trepanning to remove demons from skulls, basic antiseptic like wine, experienced in times but high chance of death due to the dirty tools. They had limited anatomical knowledge.

HIPPOCRATES

Hippocrates developed the Theory of the Four Humours. He also stated that all physicians should swear an oath never to intentionally harm their patients. These ideas were supported by the Church in the Medieval period, as they followed similar ideas to those in the Bible.

ANCIENT MEDICAL IDEAS



GALEN

Galen built on the ideas of Hippocrates, but instead developed the Theory of Opposites. This became a method of treating disease.

He said that whichever humour is out of balance, to use the opposite to rebalance them. This also fit in with the ideas of the Bible.

IDEAS ABOUT THE CAUSE OF DISEASE

FOUR HUMOURS

The theory of the Four Humours said that the body was made up of four elements – blood, phlegm, black bile and yellow bile – which must be balanced in the body. If these humours were not balanced, then you would become sick.

ASTROLOGY

The alignment of the stars and planets also had influence over diseases. Physicians would use the star charts, when a patient was born, and when they fell to diagnose them. The church began to support this idea after the Black Death, as they argued that God himself would control the position of the stars and planets.

RELIGION

The lack of education meant that most people had to learn from the church. The church taught them that disease was a punishment from God for this who had committed a sin, or a test of faith from the Devil. Because people were taught that God controlled every aspect of the world, it was easy to believe that he sent illness too.

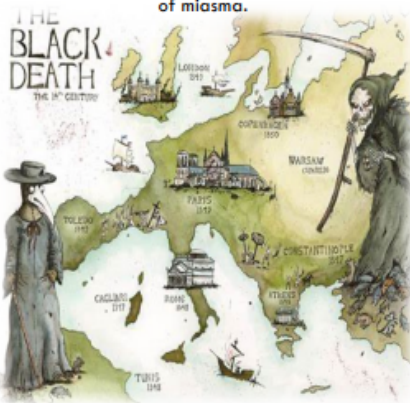
MIASMA

A miasma is a bad smell containing harmful fumes. Both Hippocrates and Galen had written about Miasma, which they said came from rotting bodies, swamps and sewage.

THE BLACK DEATH 1348

Causes of the Black Death were thought to be supernatural – either as a result of alignment of the planets or as a punishment for God – or a cause of miasma.

Treatments included
prayer, strong smelling herbs and herbal remedies. To begin with, physicians tried purging but this made the patients worse.



Prevention was better than treatment: once you caught the Black Death, it was very likely that you would die. People tried to avoid catching it by avoiding the infected.

Town authorities and other local governments tried quarantining people but there was no widespread attempt to control the spread. The government did not feel it was their place to get involved.

PREVENTION OF DISEASE

RELIGION

Most people thought ONLY God could prevent disease, so they focussed on prayer, fasting, pilgrimages to religious sites or shrines. During the Black Death, flagellants publicly whipped themselves to avoid getting sick by punishing their sins.

LIFESTYLE

Hygiene and diet advice was provided by physicians in a set of instructions called the Regimen Sanitatis. Keeping clean by bathing was important. What you ate was believed to affect the humours in the body. Eating too much was discouraged, and many people would regularly purge themselves to avoid digestive problems.

PURIFYING THE AIR

People purified the air by carrying sweet herbs (such as lavender) or a bunch of flowers. There was some action from local government, who tried to tackle the miasma by keeping towns clean. For example, they tried to make sure no rotting animals were left lying around.

CARE AND HOSPITALS

PHYSICIANS

Trained by church at university, no anatomical knowledge as dissection was banned. Took observations and diagnosed. They were trained at university where they read the works of Hippocrates and Galen.

APOTHECARIES

These were chemists who made herbal remedies. They often learned these from their families as they were passed down from person to person. They never had any formal training unlike the physicians.

WISE WOMEN

These were local women with medical skills such as midwifery and making remedies. They were the first port of call for the poorer people as they could not afford physicians or the treatments at apothecaries.

HOSPITALS

The first hospital called St Bartholomew's opened in 1123 and over 500 hospitals by 1400. They offered 'care not cure' and thought God would treat them. They turned away any with diseases.

History Knowledge Organiser: MEDIEVAL MEDICINE

1250	90% of work was farming	Less than 100 physicians in England	The Black Death 1350	12 teams of rakers in London	1400	More than 500 hospitals in England	1450	Invention of the Printing Press 1500
Greece/ Rome: Hippocrates & Galen		Astrology used in doctors' training	King Edward III orders Mayor of London to clean up	13 communal privies in London				c.50% of England could read

Ancient Greece	Ancient Rome
Hippocrates: Theory of the Four Humours Clinical Observation Hippocratic Oath	Galen: Theory of Opposites Pig experiment: Brain controls the body Many mistakes



Factors

RELIGION – The Catholic Church was dominant. People paid **tythes**. Belief in Heaven & Hell affected how people led their lives. The Church controlled education and did not allow dissections.

GOVERNMENT – Kings were preoccupied with defending England in war. They didn't collect taxes so had little to do with medicine. King Edward III did order London to clean up.

ATTITUDES – Attitudes were **conservative**. They followed tradition and people didn't question the Church. There was a belief in superstition and new ideas spread slowly as the printing press wasn't invented until the 1470s.

INDIVIDUALS – Hippocrates (Ancient Greece) and Galen (Ancient Rome) were the main influencers. They both wrote many books and didn't challenge God so they were accepted.

The Black Death: 1348-1351 – Also known as the Bubonic Plague, or the Pestilence.
CAUSES: Fleas on rats, who then bit humans. It would spread very quickly; killing victims in less than 5 days.
PERCEIVED CAUSES: God, punishing people for their sins; Miasma (bad air); Superstition: Misalignment of the planets; Cats & dogs; Jews. Imbalanced Humours.
PREVENTION: **Flagellants** came from Europe and would walk the streets, whipping themselves. They thought that if they punished themselves, God wouldn't need to. They also prayed and paid for special prayers to be said by the clergy. They burned candles. Killed cats & dogs and punished Jews. They burned barrels of tar and fired muskets into the sky to try to break up the 'bad air'.
TREATMENT: Cures such as tying toads or chickens to buboes were common. More prayer, and candle lighting. King Edward III ordered that London was cleaned up (even though it was for the wrong reason: miasma). People would blood let; following Hippocrates' teachings on the Four Humours.

Public Health: Historians used to think that Medieval towns were filthy but more recent evidence suggests that in some places, they tried hard to keep their towns clean. They didn't know that germs caused disease so water sources were often dirty in towns (but much better in the country – especially in monasteries). London was the first town in Europe to have a piped water supply. In the hope to get into Heaven, many people left donations in their wills for improvements to latrines, or pipes. Medieval people began lining **cesspits** with stone or brick so that waste was less likely to seep into surrounding water supplies. Rakers were employed to sweep streets and laws were passed to make throwing waste into the streets and rivers illegal. Public toilets were introduced in major cities..

Medieval Healers	
Women	Wives and mothers treated a lot of things from home. Often the Lady of the Manor was called for her skills and knowledge. In some towns, midwives were licensed but not often. Women were not allowed to become Physicians but could become surgeons.
Hospitals	First appeared in the 11 th century. Mostly cared for the infirm and were run by nuns and monks. They wouldn't treat the sick for fear of spreading disease. One of the most famous early hospitals was St. Bartholomew's in London.
Physicians	Trained for 7 years in universities, reading the likes of Hippocrates and Galen, along with Arab writers like Rhazes and Ibn Sina. Only the rich could afford their fees and there were less than 100 in England by 1300.
Barber Surgeons	Trained as apprentices and learned through practise. They often did simple surgery like bleeding, removing surface tumours and making splints for bones. There were no effective anaesthetics at this time.
Apothecaries	Mixed ingredients to make medicines and ointments for physicians. They sometimes mixed their own medicines to sell to the sick.

Key Words
Harvest – Medieval England relied heavily on farming. Harvest was when the crops were chopped down to sell/eat.
Flagellants – Christians who arrived from Holland. Whipped themselves as a punishment.
Pestilence – A Medieval term for the Plague.
Superstition – A belief in the supernatural (ie. Planets)
Miasma – A belief that bad air caused illness
Latrines – Medieval term for toilets.
Rakers – Team of men cleaning the streets with rakes.
Cesspits – Where the contents of the latrine would end up.
Physician – Medieval term for doctor.



A Medieval Urine Chart

RENAISSANCE MEDICINE

Knowledge organiser Topic 2

Key Dates

EVENTS IN THE RENAISSANCE

1476: The Printing Press is first introduced in England, meaning things can be printed in a much faster way.

1500: The start of the Renaissance period.

1543: Vesalius writes his book 'On the Fabric of the Human Body' and revolutionises dissection and the human anatomy.

1628: William Harvey discovers the heart acts as a pump and circulates blood around the body through veins and arteries.

1660: The Royal Society receives the Royal Charter from King Charles II, showing an interest in science and technology.

1665: The Great Plague hits London, causing 68,596 people in London alone.

1676: Thomas Sydenham published 'Observationes Medicae', which shows all the diseases and their treatments, including Scarlet Fever.

WHY WERE NEW IDEAS SHARED MORE EASILY?

PRINTING PRESS

The printing press enabled medical information to spread further and more quickly and contributed to the eventual decline of the influence of the church. New physicians were able to publish books that criticised Galen.

THE ROYAL SOCIETY

Founded in London in 1660 to discuss new ideas in astronomy, medicine and science. Made it possible for scientists and physicians to study one another's works.

ANDREAS VESALIUS

- ✓ Studied anatomy, became a professor of surgery and anatomy at Padua. He was allowed to do dissections.
- ✓ Did his own dissections and wrote books on his observations using accurate diagrams.
- ✓ He pointed out Galen's mistakes. Vesalius said there were no holes in the septum of the heart and they the jaw bone is made of two bones.
- ✓ He encouraged doctors to dissect and look for themselves.



THOMAS SYDENHAM

- ✓ He was nicknamed the English Hippocrates because he believed in careful observation of the human body.
- ✓ He moved ideas away from Galen, as he encouraged doctors to look for themselves.
- ✓ He wrote a book called 'Observationes Medicae' where he wrote down all the diseases, their symptoms and treatments.
- ✓ He discovered new diseases doing this such as Scarlet Fever.



WILLIAM HARVEY

- ✓ He discovered that blood circulated around the body. Instead of being made in the liver.
- ✓ He proved the heart acted as a pump, propelling blood around the body.
- ✓ Harvey's work had little impact at first, because it couldn't be used to improve medical treatments.
- ✓ Harvey inspired other scientists to carry out further experiments, building on his discoveries about blood and circulation.



Renaissance means 're-birth', it was a period when old ideas were questioned and new ideas were discovered. However, this led to very little change

PREVENTION, TREATMENT AND CARE

CONTINUITY

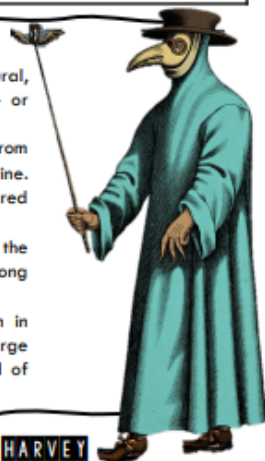
- Bloodletting, purging and sweating
- Herbal remedies
- The practise of Regimen Sanitatis
- The removal of bad air
- Treatment of the sick by apothecaries and surgeons for those who could not afford a physician
- Women cared for the sick who did not go to hospitals

CHANGE

- People started to believe in transference
- People began to look for chemical cures for disease rather than relying on herbs and bloodletting
- Ideas that the weather conditions were the cause of disease became more popular and so people would relocate to avoid a disease
- Hospitals began to treat people with wounds and curable diseases such as fevers
- Hospitals that specialised in one particular disease were now in this period. These became known as pest houses.

THE GREAT PLAGUE 1665

- Causes of the Great Plague were thought to be supernatural, either to do with the planets as a punishment from God – or Miasma.
- Most people now recognised that the plague was spread from person to person, and so there was an effort to enforce quarantine. People would be locked into their homes for 6 weeks with a red cross painted on their door.
- Prevention methods included creating a strong smell to ward off the bad smells, this could be done using a pomander or strong perfumes.
- The local government in London took a lot more action than in previous outbreaks. They closed down theatres, banned large funerals and weddings, and collected dead bodies at the end of each day.



IDEAS ABOUT THE CAUSE OF DISEASE

FOUR HUMOURS

Although many physicians were now challenging the Four Humours, most ordinary people still believed in it. Therefore, most physicians stuck to the idea even though they were beginning to doubt it. Patients were paying physicians to treat them, not experiment on them.

ASTROLOGY

Though not as popular as before, people still believed that astrology influenced disease. Some blamed the 1665 plague on an unusual alignment between Saturn and Jupiter between October and November 1664.

RELIGIOUS EXPLANATIONS

Most people now recognised that God did not send diseases, although in desperate times of epidemic (the Great Plague) they still turned to religious explanations. Humanism was on the rise – this was a way of thinking that broke away from religious or supernatural explanations, and believed that humans could make up their own minds about the world.

MIASMA

Most people still believed in Miasma and that it caused disease. A miasma could be caused by rotting food, decaying corpses, excrement or any other smelly, dirty place.

History Knowledge Organiser: RENAISSANCE MEDICINE

1500	Printing presses being used throughout Europe	1543 – Vesalius publishes <i>Fabrica</i>	1550	Throughout 1600s → Plague Orders introduced	1600	1645 first meeting of the Royal Society	1650	1665 – First attempt at blood transfusion	1665 – Great Plague breaks out	1700
------	---	--	------	---	------	---	------	---	--------------------------------	------

						1628 – Harvey publishes <i>On the Motion of the Heart</i>	Thomas Sydenham begins taking the pulse	1666 The Great Fire of London	1660s → St Barts takes in sick patients
--	--	--	--	--	--	---	---	-------------------------------	---

Factors

RELIGION – The Church was still dominant. Belief in Heaven & Hell affected how people lived. The Church controlled education but had begun to allow dissections.

GOVERNMENT – Kings began to think about how the country was running. Charles II joined the Royal Society and built an observatory on one of the palaces.

ATTITUDES – The majority of attitudes were still conservative. However new ideas were spreading as the printing press shared accurate knowledge discovered.

INDIVIDUALS – Harvey and Vesalius both moved medicine forward in this time period, as they began experimenting on the human body rather than animal dissections.

The Great Plague 1665

The Plague killed around 20% of the population in London throughout the 1600s. In 1665 alone, 100,000 died in London.

Traditional beliefs reigned about the causes of Plague: a punishment from God, **miasma**, the **Four Humours**, the **supernatural**. However, people were beginning to recognise the effects of **contagion**.

Following **Plague** Orders councils began painting crosses on the doors of plague victims and **quarantining** them. They were usually quarantined for 40 days with a **watchman** posted outside. A **searcher** would then check to see if the family had died or recovered. **Pest houses** were also used to house the homeless.



Changes

Thomas Sydenham: Sydenham was the first person to publicly believe that each disease had a different cause. He studied Scarlett Fever specifically. He used clinical observation to carefully note a patients' symptoms and was the first to begin taking a **pulse**. He was known as **English Hippocrates**.



The **Royal Society** were established in London in the 1600s who met to discuss big questions and new ideas. Charles II joined in 1662 and supported the group by building laboratories & observatories. Richard Lower attempted the first blood transfusion in 1665 between a sheep and a student.

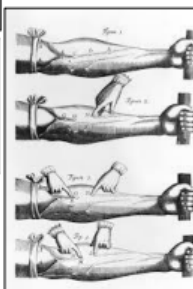
The **Printing Press** helped scientists to share their ideas quickly, which meant that many previous mistakes could be corrected.

Individuals



Andreas Vesalius: Prior knowledge of anatomy had mainly come from Galen's books and his work on dissecting animals. This meant that he made many mistakes such as thinking the jaw was made up of two bones.

Vesalius begins to do public dissections on humans where he corrects many of Galen's mistakes. Because these dissections are public, he is able to share this information quickly. He publishes his book *Fabrica* in 1543 which contained many 'muscle men' to show people what the human body looked like.



William Harvey: Before Harvey, Galen had suggested that blood travels across the heart and is burned off. He said it was reproduced in the liver. Harvey, in 1628, proves that it flows in a one-way system around the body. He shows that the heart is a pump. He does this using metal rods to prove the existence of valves, dissecting cold blooded animals & looking to the water pump for inspiration.

Healers & Treatments

Some physicians were trained at **St. Barts** where they would train on the job. **Microscopes** and **thermometers** were invented & improved. Training began to take a **scientific** approach. People began to **dissect** more. Women and apothecaries still provided the cheapest way to receive medical help.

Key Words
Observation – Looking at a patient's symptoms (or signs of disease).
Quarantine – Where infected people were kept away from healthy people, locked in their house.
National government – Orders which had come from the King.
Local government – Orders coming from individual towns (like a local council).
Miasma – A belief that bad air caused illness.
Enquiry – Being curious and questioning traditional beliefs.
Anatomy – The make up of the human body (bones, muscles).
Dissection – Cutting something apart to understand how it works.

Bleeding & Purging

The majority of the population still believed in the Four Humours and wanted to rebalance them by bleeding or purging the patient.



Herbal

Herbal remedies were still handed from mother to daughter. Often they were successful eg. Using garlic (which has antibacterial properties). Often these were discovered through trial & error.

God/ the King

In 22 years over 92,000 people visited King Charles II. They believed that if he touched them he could cure them as he was chosen by God.

Folk remedies

People still used cures based on magic. There us a treatement recorded for malaria advising people to put hair and nails of the patient in a hole in an oak tree and then plug the hole in the tree up.

INDUSTRIAL MEDICINE

Knowledge organiser Topic 3

Key
Dates

EVENTS IN THE INDUSTRIAL PERIOD

1700: The Industrial Medicine period begins, this coincides with the industrial revolution in England.

1796: Jenner develops the Smallpox Vaccine.

1847: James Simpson discovers chloroform as an anaesthetic and tests it on women in childbirth.

1854: John Snow discovers the link between the 1854 cholera outbreak and the Broad Street Pump.

1854: Florence Nightingale treats wounded soldiers in the Crimean War.

1859: Nightingale publishes her Notes on Nurses.

1860: Florence Nightingales School for Nurses opens.

1861: Pasteur discovers Germ Theory

1866: Joseph Lister begins to use carbolic acid as an antiseptic in surgery

1875: The Second Public Health Act

1881: Pasteur develops a vaccination for anthrax

1882: Robert Koch discovers bacteria causes tuberculosis

1895: William Rontgen discovers x-rays

FIGHTING CHOLERA

- ✓ Cholera first appeared in Britain in 1831
- ✓ There were four major epidemics in the 19th century and they particularly affected the poor people living in cities.
- ✓ John Snow thought that cholera was spread by water, not by a miasma.
- ✓ During the 1854 epidemic, he mapped the cholera fatalities around Golden Square in Soho. The evidence suggested that the outbreak was connected to the Broad street pump.
- ✓ He presented his findings to the government. However, they did not take action straight away.
- ✓ By 1858, the government were ready to take action to provide clean water for the population.

From 1700, the church began to lose its influence over disease and illness as there was a focus on scientific explanations. This period saw the growth of cities, which brought threatening diseases such as small pox.

PUBLIC HEALTH

Before the 1800s, the government had a laissez-faire (leave alone) attitude towards public health. They felt it was not their responsibility. In 1842, Edwin Chadwick published his Report on the Sanitary Conditions of the Labouring Classes. It shows the poor people in cities had a much lower life expectancy. Chadwick suggested that local governments should be responsible for public health.

1848 PUBLIC HEALTH

- ❑ Created as a response to Chadwick's report.
- ❑ National board of health set up
- ❑ Local councils encouraged to raise taxes to pay for new public health improvements
- ❑ Councils were allowed to appoint medical officers to oversee public health
- ❑ IT WAS NOT COMPULSORY.

1875 PUBLIC HEALTH

- ❑ Created because of cholera and germ theory
- ❑ Provide clean water
- ❑ Dispose of sewage safely – not in the river!
- ❑ Build public toilets
- ❑ Employ a public health officer to monitor disease
- ❑ THIS WAS COMPULSORY

EDWARD JENNER'S SMALL POX VACCINATION

Jenner was a country doctor. He heard that milkmaids who had cow pox were not getting smallpox and so investigated. He tested this by giving his gardeners son – James Phipps – cow pox, and then later small pox. Phipps never got the symptoms of small pox and so Jenner realised it worked.

REACTIONS TO THE VACCINE

- ✓ Jenner could not scientifically explain how his vaccination works, especially as Germ Theory was still 100 years from being created.
- ✓ Inoculators were afraid of losing money so did not want to use the new vaccinations
- ✓ Many were worried about the side effects – they worried about giving themselves a disease that comes from cows.
- ✓ Some members of the church believed that vaccinations were not natural.



IDEAS ABOUT THE CAUSE OF

DISEASE

SPONTANEOUS GENERATION

This was a new theory that developed in the early 1700s, which said that microbes were created by decaying matter (e.g. rotting animals or food). It seemed logical because scientists were able to see microbes. In actual fact microbes are the cause of decay, not created by it.

THE GERM THEORY

In 1861, Louis Pasteur came up with the Germ Theory and proved that bacteria in the air caused decay (rotting), this proved Spontaneous Generation wrong. At first, Germ Theory was not believed and many rejected the theory. In the 1870s, the Germ Theory was developed by Robert Koch, who's experiments (growing and dying bacteria) proved that specific bacteria caused disease. This was a huge breakthrough, and became the basis for identifying bacterial disease we use today. The Germ Theory took over 30 years to be accepted.

SURGERY AND HOSPITALS

FLORENCE NIGHTINGALE	Trained as a nurse, helped in Crimean war in 1854. She made changes to the cleanliness of the ward making the death rate fall from 40% to 2%. In 1860 she set up a school for nurses.
JAMES SIMPSON	The development of anaesthetics such as chloroform, which was discovered by Simpson in 1847, greatly improved the success rate of surgery. This however led to the Black Period in Surgery.
JOSEPH LISTER	He developed the first antiseptics using carbolic acid, which he discovered after reading Germ Theory and looking at its use in sewers in Carlisle. This reduced infection and ended the black period in surgery.



History Knowledge Organiser: INDUSTRIAL MEDICINE

1750

1798 – Edward Jenner developed the Smallpox vaccine

1800

1831-32
Cholera

1842 – Chadwick writes his report

1847 – Simpson: chloroform

1848

1854 – John Snow's work on cholera

1853-54

1861 – Pasteur's Germ Theory

1867 – Lister: Carbolic Acid

1876 – Koch's work on bacteriology

1900

Factors

SCIENCE & TECHNOLOGY – With improving microscopes and an ever-advancing field of Science, work of people like Pasteur and Koch were helped greatly by new technology.

GOVERNMENT – The government had a mainly l'aissez faire attitude towards matters of public health. As time passed and the working class could vote, this changed.

COMMUNICATION – With ideas spreading quickly, competition between scientists spread up progress in medicine as rivalries like Koch & Pasteur's developed.

INDIVIDUALS – It's undeniable that most of the work in the Industrial Revolution happens because individuals begin to question and experiment more than before.

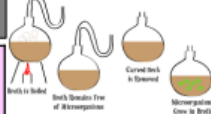
Causes of Disease

Edward Jenner was investigating smallpox in 1798. He noticed that milkmaids didn't get smallpox but did get cowpox. He took some cowpox pus from Sarah Nemes, a milkmaid and placed it into a cut on a healthy boy James Phipps. When Phipps was later infected with smallpox he didn't catch it.

Many people **opposed** vaccination through the Antic Vaccine Society, as they thought it was ungodly, Jenner couldn't explain it and the **inoculators** were losing money!

Louis Pasteur discovers that germs cause disease when he is investigating why beer & wine was turning bad. He disproves the theory of **spontaneous generation**. He uses a **swan necked flask** to prove this. He couldn't prove, though, which specific bacteria caused which disease.

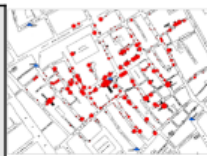
Pasteur's Test of Spontaneous Generation



In 1876 **Koch** begins experimenting with anthrax and uses agar and an industrial purple dye to pinpoint this exact bacteria which causes **anthrax**.

Pasteur continues building upon Koch's work and finds treatments for anthrax, chicken cholera and eventually rabies.

In 1854 **John Snow** discovered that **cholera** was waterborne by plotting the deaths around the Broad Street Pump. He had the handle removed and people stopped dying immediately when forced to use a different pump.



Public Health

In 1842 **Edwin Chadwick** was commissioned by the government to investigate the **Sanitary Conditions of the Labouring Population**. In his report he highlighted the poor conditions and suggested that the rich should sort the housing, water and waste and appoint a Medical Health Officer. In 1848 the government introduced the **voluntary Public Health Act**. Roughly 1/6th of local councils acted upon it. The ratepayers had a l'aissez faire attitude and didn't want to spend their money on the poor.



In 1875 a new Public Health Act was introduced which was **compulsory**. This saw local councils forced to improve the conditions in their towns, regardless of the cost. They had to appoint sanitary inspectors to check improvements were made.

Surgery & Hospitals



In 1854 Nightingale led a party of nurses out to **Scutari** hospital in the Crimea. There she worked on improving hygiene and drastically reduced the death rate. When she returned home she wrote **Notes on Nursing** and set up a nursing school in 1860.

The first half of the 1800s was bad for surgery. Infection, blood loss and pain were all big killers, with solutions being sought.

In 1847 **James Simpson** discovered that **chloroform** could be used as an **anaesthetic**. This solved the problem of pain and blood loss. Many objected to the use of anaesthetic because they thought that pain was sent from God. However when **Queen Victoria** used it in childbirth she declared it was "blessed chloroform" and many began using it afterward.



In 1867 **Lister** discovered that Carbolic Acid could be used to fight infection which was one of the biggest killers within surgery. He had noticed it being used on sewers and began to spray it on his patients, equipment and himself. In 3 years he reduced his death rates from 46% to 15%. Other surgeons objected because it cracked their skin, was expensive and took additional time.

Key Words

Inoculation – Physicians took a portion of a disease and put it into healthy patients to protect them from the disease.

Spontaneous Generation – The belief that microbes appeared out of nowhere and caused decay to occur.

Public Health – Concerning housing, water and waste. The conditions that the public are living in.

Anaesthetic – Something to slow the heart and send a patient to sleep.

Antiseptic – Used to kill bacteria and prevent infection.

L'aissez faire – The belief that the poor should be 'left well alone'. That the rich shouldn't help the poor.

In 1867 the government introduced the **Reform Act**. This gave working class men the vote. It meant that the government had to address some of the concerns of the poor, in order to get their votes.



MODERN MEDICINE

Knowledge organiser

Topic 4

Key Dates

EVENTS IN THE MODERN PERIOD

- 1901:** Karl Landsteiner discovers blood groups.
- 1906:** first magic bullet is created by Paul Ehrlich (Salvarsan 606)
- 1906-14:** Liberal Government pass series of laws focused on individual health.
- 1928:** Alexander Fleming accidentally discovered penicillin bacteria.
- 1932:** second magic bullet created by Gerhard Domagk (prontosil)
- 1938:** Florey and Chain develop penicillin research into a working drug.
- 1941:** US companies mass produce penicillin
- 1942:** Beveridge Report is written producing a blueprint for the welfare state.
- 1948:** The National Health Service is founded
- 1953:** DNA discovered by Crick and Watson
- 1986:** the Human Genome Project to map DNA begins
- 2007:** Smoking ban introduced in public places in the UK
- 2010:** First human face transplant successfully carried out in Spain.

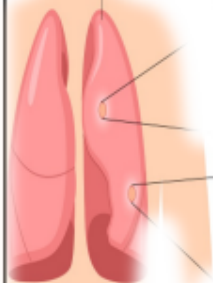
TREATMENTS OF DISEASE

ANTIBIOTICS

An antibiotic is a treatment that kills or limits the growth of bacteria in the body. The first antibiotic was penicillin. Penicillin is different to magic bullets in that it is created using microorganisms, not chemicals. British doctor Alexander Fleming discovered Penicillin by chance in 1928. In 1940, Howard Florey and Ernst Chain found that Penicillin seemed to kill bacteria in infected mice.

CHANGE

Magic bullets were chemical cures which attacked disease causing microbes, while leaving the body unharmed. Paul Ehrlich developed the first magic bullet in 1909. He tested hundreds of arsenic compounds, and on the 606th attempt found one which cured syphilis. This became known as Salvarsan 606. In 1932, Gerhard Domagk discovered that Prontosil cured blood poisoning in mice.



Lung cancer

Non-small-cell cancer cells

Small-cell cancer cells

FIGHTING LUNG CANCER

- ✓ Lung cancer became a much more common disease in the 1900s.
- ✓ In the 1950s, the government found a link between smoking and lung cancer.
- ✓ There is no known treatment for lung cancer other than chemotherapy and radiotherapy, so the government have focussed on prevention instead.
- ✓ The ban on tobacco advertising began with a ban on cigarette television advertising in 1965.
- ✓ Over time, the rules governing how and where cigarettes could be advertised were extended, until the government banned cigarette advertising in 2005.



SMOKING CAUSES LUNG CANCER

The twentieth century saw great changes in diagnosis, treatment and prevention as a result of advancing science and technology. After accepting its responsibility for public health, the government adopted a major role in providing medical care.

DIAGNOSING DISEASE

The biggest change in the 20th century was that treatment was now based on medical testing, using science and technology.



BLOOD TESTS

From the 1930s, used to test for conditions such as anaemia or deficiencies.



X-RAYS

From 1890 they were used to spot broken bones and shrapnel.



BIOPSY

A sample of human tissue can be used to identify diseases e.g. cancer



CT SCANS

Advanced X-rays which can be used to diagnose some cancers



ULTRASOUNDS

Using sound waves to look at children in women or kidney stones

THE FORMATION OF THE NHS

The NHS was launched by the government in 1948. Its aim was to provide medical care to everybody that was free at the point of contact, and would be paid for through a National Insurance Tax that everyone would pay. It was overseen by the Minister of Health: Aneurin Bevan, and was inspired by a 1942 report by William Beveridge. The NHS took over existing hospitals and surgeries, but the government could not afford to update them initially. Therefore, in the short term access to medical care improved but the care itself did not. The government made changes in the 1960s, including building more hospitals across the country, and introducing a GPs charter in 1966, which improved standards of care.



IDEAS ABOUT THE CAUSE OF DISEASE

GENETICS AND DNA

DNA identified by Watson and Crick in 1953 showed that some diseases could be passed down family lines. This could be a predisposition to specific illnesses such as heart disease or diabetes, or genetic conditions such as cerebral palsy. This allowed doctors the chance to identify what caused some diseases.

THE GERM THEORY

In 1861, Louis Pasteur came up with the Germ Theory and proved that bacteria in the air caused decay (rotting), this proved Spontaneous Generation wrong. At first, Germ Theory was not believed and many rejected the theory. In the 1870s, the Germ Theory was developed by Robert Koch, who's experiments (growing and dying bacteria) proved that specific bacteria caused disease. This was a huge breakthrough, and became the basis for identifying bacterial disease we use today. The Germ Theory took over 30 years to be accepted.

LIFESTYLE FACTORS

Work was done to identify the risk certain lifestyles had on your health. Eating habits, not enough sleep and stress were all noted as potential causes for illnesses throughout your life. This could also be linked to smoking and taking drugs causing more severe diseases.

History Knowledge Organiser: 20th CENTURY MEDICINE

1901 Landsteiner discovers blood groups	1909 – Salvarsan 606 invented	1928 – Fleming discovers Penicillin	1931 – Electron microscope invented	1941 – Casualties from D-Day are treated with Penicillin	1950 – Crick & Watson discover DNA structure	1967 – First heart transplant	1986 – Human Genome Project started	2007 – Smoking ban
---	-------------------------------	-------------------------------------	-------------------------------------	--	--	-------------------------------	-------------------------------------	--------------------

1891-1903 – Booth & Rowntree's reports	1911 – National Insurance Act	1938 – Florey & Chain begin mass production of Penicillin	1942 – Beveridge's report	1948 – NHS created	1970s – chemotherapy starts to be used	2001 – Human Genome Project completed
--	-------------------------------	---	---------------------------	--------------------	--	---------------------------------------

Factors

SCIENCE & TECHNOLOGY – Advances in technology move rapidly in the 20th century with keyhole surgery, radiotherapy & chemotherapy all making huge advances.

GOVERNMENT – The government has taken a huge role since 1900, to the extent that it is sometimes referred to as a 'Nanny State' because it's now too involved in lives.

COMMUNICATION – Communication has led to huge developments in the 20th century – Florey & Chain's mass production of Penicillin being a key example.

INDIVIDUALS – Many individuals contribute to progress eg. Fleming, Ehrlich, Domagk, Florey, Chain, Bevan. However, it also sees individuals working together more.

Penicillin

In 1928, Fleming left a pile of petri dishes on his lab bench before going on holiday. When he returned there was mould on one of them and around the outside, the staphylococci bacteria had disappeared. He found it hard to create enough Penicillin to treat anything with so his discovery didn't evolve much.



In 1938, Florey & Chain were investigating how germs could be killed and found Fleming's research papers. The American government recognised the importance of their work and funded them for 5 years' research. They proved that the Penicillin could treat infections in mice but needed 3000 times more Penicillin to treat a human. They began growing it in whatever they could.



They eventually used Penicillin to treat Albert Alexander who had septicaemia and successfully treated the infection before running out. By 1941 with WWII killing soldiers, the American government started releasing interest-free loans to companies to buy equipment to mass produce Penicillin. By D-Day in 1944, over 2.3 million doses were used to treat allied troops. It is estimated that it saved nearly 15% more men than would have survived.

DNA

During the 1900s scientists were able to take the first photographs of human cells due to improving electron microscopes. In 1953 Crick & Watson discovered the structure of DNA and showed how it passed on information from parents to children. They worked with a huge team of experts to do this & the government funded their expensive research.



The complete set of genes in a living thing is called a **genome**. In 1986 the **Human Genome Project** began which set out to map the purpose of every gene in the human body. This task was completed in 2001 and used scientists from 18 countries. This work helps scientists to treat genetic illnesses like **Diabetes, Down's Syndrome & Cystic Fibrosis**.

Technology

Improvements in microscopes, endoscopes, & scans have led to huge improvements, alongside x-rays, radiotherapy & chemotherapy, transplants and blood transfusions.

Lifestyle

Between 1899-1901 **Booth & Rowntree** wrote reports about London & York suggesting that around 1/3rd of people there were living in extreme poverty. After discovering this the government began to take some action. **Liberal Reforms** in the early 1900s saw the introduction of **Free School Meals, National Insurance & the Nursing Act**.

After the Wars, there was a call for the government to look after people who fought for England. In 1942 Beveridge wrote a report which suggested that the government should provide health care for its' people. In 1948, Bevan introduced the NHS after a long fight against the BMA. This was the epitome of the **welfare state**.

The government have offered advice on a variety of things, including HIV/AIDS and lung cancer. Lung cancer has increased greatly and over 90% of cases are attributed to smoking. The government has introduced things like the **smoking ban** in 2007 & changed laws on advertising & packaging to deter people from smoking.



Medicine

The 1900s saw the rise of **pharmaceutical** companies like Boots. They funded research into specific medicines. In 1909, Ehrlich discovers the first **magic bullet**. A manmade drug which killed specific bacteria – in this case, the bacteria which caused **syphilis**. He called it **Salvarsan 606** because it took him 606 attempts to crack it. In the 1930s Domagk then discovered **Prontosil** which killed the bacteria causing septicaemia. These drugs were based on **sulphonamides**.

Key Words

Radiotherapy & Chemotherapy:

Used to treat various cancers. **NHS:** National Health Service. Health care paid for through taxes, introduced in 1948.

Welfare: The health and happiness of a group.

Sulphonamides: Chemical in early magic bullets, used to treat specific bacteria.

Genome: The complete set of genes in a living creature.

Genetics: The study of genes and inherited traits.

Antibiotics: A medicine which kills infection-causing bacteria.

Liberal Reforms: Series of laws introduced in the early 1900s which were designed at improving the welfare of Britain.

Other improvements included the use of plastic surgery during WWI, dialysis machines & pacemakers. Ground-breaking research into the use of gene therapy (for example, using stem cells) to regrow damaged nerves. Anaesthetics have been improved in this century, meaning we can now be injected straight into the blood stream & can sedate patients for much longer.

WESTERN FRONT

Knowledge organiser

Topic 5

Key Dates

KEY BATTLES IN WWI

September 1914: WWI begins.

Oct-Nov: First Battle of Ypres – The British stopped the Germans from capturing the port of Calais

Apr-May 1915: Second Battle of Ypres – A German attack using Chlorine gas for the first time.

July-Nov 1916: Battle of the Somme – Major attack led French and British to move German troops from Verdun.

Apr-May 1916: Battle of Arras – large scale allied attack. Very high casualties.

July-Nov 1917: Third battle of Ypres – aim to capture Passchendaele ridge near Ypres. The ground turned to mud.

Nov-Dec 1917: Battle of Cambrai – first use of a large number of tanks by the British. 40,000 British casualties

SPRING 1918: The German Spring Offensive – Large scale German attack to bring the war to an end before the Americans arrive.

11 Nov 1918: Germany surrendered and the war ended.

FANY

First Aid Nursing Yeomanry. Founded in 1907, helped the wounded as ambulance drivers and nurses. They supports the Queen Alexandra's nurses trained in Nightingale's image.

RAMC

Royal Army Medical Corps. This organisation organised and provided medical care. It consisted of all ranks from doctors to ambulance drivers and stretcher bearers.

WEAPONS OF WAR

RIFLES- Loaded from a cartridge creating rapid fire. Pointed bullets which drove deeper into the body.

ARTILLERY- continuous bombardments which could last weeks and months. Caused 1/2 of all casualties.

MUSTARD GAS- odourless gas, worked in 12 hours. Caused blisters & could burn the skin through clothing.

MACHINE GUNS – Could fire 500 rounds in a minute. Pierced organs and fractured bones.

SHRAPNEL – exploded mid-air. Caused maximum damage, injured arms and legs. 58% of all wounds.

PHOSGENE GAS- faster acting than Chlorine but with similar effects. Could kill a person within 2 hours.

The First World War was a turning point in modern medicine. With the new weaponry being designed to produce maximum casualty rates, medicine had to keep up with the constant medical challenges they faced.

INJURIES, WOUNDS AND TREATMENT

MOBILE X-RAY UNITS

6 mobile vans were used throughout the British sector of the Western Front to identify bullets and shrapnel.

BLOOD TRANSFUSIONS

Blood loss was a major problem and so transfusions were used at base hospitals. They used a syringe and tube to transfer blood from patient to donor. Sodium citrate was later added to blood so it could be stored.

THOMAS SPLINT

In 1914 men with a thigh wound had a small chance of survival. In 1915 the Thomas Splint was invented which kept the leg stable while being transported, meaning the survival rate increased to 80%

BRAIN SURGERY

Injuries to the brain were almost always fatal. New techniques such as magnets to draw out shrapnel, local anaesthetic to avoid brain swelling and specialist brain hospitals were set up to cope with this injury.

PLASTIC SURGERY

Harold Giles pioneered plastic surgery in WWI. He set up Queens Hospital in Kent in 1917, using skin grafts and jaw splints, wiring and metal replacements to restructure facial injuries

GAS GANGRENE

Infections caused by Gas Gangrene and no aseptic surgery led to amputation to stop the spread of the infection. The Carrel Dakin method was introduced which sterilised a wound before closing it to remove the infection and prevent amputation.

THE EVACUATION ROUTE

STRETCHER BEARERS

These would advance on No Mans Land at night to collect the dead or the wounded. Each battalion had 6 stretcher bearers and it took four men to carry a stretcher.

REGIMENTAL AID POST

These gave immediate first aid. Aimed to get as many men as possible back to the fighting. Could not deal with serious injuries – these patients would move onto the next stage. These were usually located near to the frontline, in communication trenches or abandoned buildings.

FIELD AMBULANCE & DRESSING STATION

Field ambulance was a large medical unit with medical officers and support staff. Dressing station was where emergency treatment was given to the wounded.

CASUALTY CLEARING STATION

These often dealt with critical injuries. Set up in buildings such as factories and schools. Often near a railway line. Had x-ray machines and wards with beds.

BASE HOSPITALS

Located near the coast so wounded men could be shipped back to Britain. They divided patients up into different wards according to their wounds. This allowed doctors to experiment and specialise in a specific injury.

ILLNESSES ON THE WESTERN FRONT



TRENCH FOOT

Caused by waterlogged trenches. Prevented by changing socks regularly and keeping feet dry. Rubbing whale oil into feet.



TRENCH FEVER

Caused by body lice. Prevented by disinfecting clothes with a repellent gel and setting up 'delousing stations' behind the lines.



SHELL-SHOCK

Caused by the stressful conditions of war. This was not well understood and so patients were told to rest or given shock treatment.

History Knowledge Organiser: The British Sector of the Western Front (TRENCHES)

1914	Aug-Sept 1914 First trenches dug	Oct-Nov 1914 First Battle of Ypres	1915	August 1915 Gallipoli Landings	1916	July-Nov 1916 Battle of the Somme	1917	April-May 1917 Battle of Arras	July-Nov 1917 Third Battle of Ypres	1918	Spring 1918 German Spring Offensive
August 1914: War begins		April-May 1915 Second Battle of Ypres			July-Nov 1916 Battle of the Somme		April 1917 America joins the war		Nov-Dec 1917 Battle of Cambrai		11th Nov 1918 War ends



The Battles

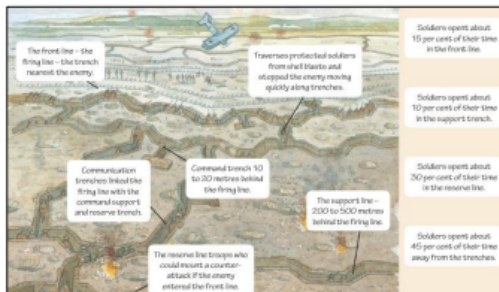
Ypres – Called 'Wipers' by the British. Most direct route to Calais/Dunkirk. Ypres Salient ('bulge') was vulnerable as Germans could fire down on it. Became waterlogged. Second Battle saw the first use of gas.

Somme – Huge casualty rate: over 60,000 on day one. By the end of the battle, over 400,000 Allied casualties and 450,000 Germans. Casualties overwhelmed the medics.

Arras – Soldiers from New Zealand had dug tunnels in the chalky ground. These rooms were fitted with electricity and running water. The hospital had over 700 beds. It also allowed secrecy and shelter.

Cambrai – This battle saw the first large-scale use of tanks (over 450). No preliminary bombardment so it was a surprise. Not backed up by the infantry so eventually they lost ground

The Trench System



Illness & Injury

Trench Fever AKA PUO (Pyrexia of Unknown Origin). Caused by lice in the seams of men's uniforms. Bath houses were introduced to combat but with limited success.

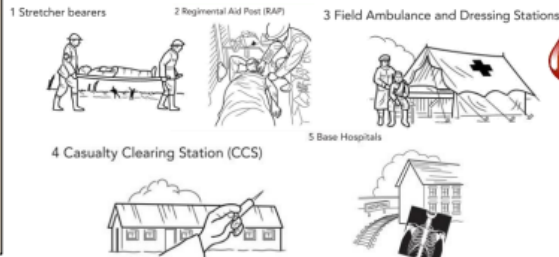
Trench Foot Due to waterlogged trenches, men's feet began to rot and quickly turn to gangrene which often led to infection. In 1915 one division lost 12000 men to trench foot.

NYD.N Not Yet Diagnosed. Nervous. (Shell shock). A huge rise in cases during the Somme, men were often considered cowardly and treated poorly by the Army.

Infection New weapons carried shrapnel deep into the body which caused infection. Also being led on No Man's Land for extended periods in the mud.

Gas Chlorine gas suffocated its' victims. Although fewer than 5% of British soldiers died in gas attacks it still caused blindness, coughing and burns.

Evacuation Route



Nurses and Doctors

RAMC: Royal Army Medical Corps. All medical staff belonged from doctors to ambulance drivers. 9000 staff in 1914, increased to 113,000 by 1918.

VAD: Volunteer Aid Detachment. Middle & upper class women who did a lot of cleaning. By 1917 they had more medical duties like nursing and dressing wounds.

FANY: First Aid Nursing Yeomanry. Founded in 1907 by a soldier who wanted women riding in to help wounded soldiers. Many were ambulance drivers & nurses.

Medicine in the War

Aseptic Surgery: Moving to remove bacteria from the theatre, altogether,
In WWI: Hygiene in surgery is poor. To combat problems of infection the Carrel-Dakin method was introduced: The wound was continually flushed with chemicals to stop infection & often made deeper to remove affected tissue.

X-rays: Rontgen discovered xrays in 1895. This helped with identifying shrapnel in wounds during WWI.

In WWI: Mobile x-rays were introduced. Initially there were only 2 but spnn every CCS & hospital had one.

Blood Groups: Karl Landsteiner discovered blood groups.

Transfusions were possible as long as donor & patient were in the same room.

In WWI: Storing blood was problematic. It was discovered that if sodium citrate was added & it was chilled, it would last longer. Mobile blood banks were also introduced.

The Thomas Splint: 80% of men who had been shot in the femur died. The two sharp ends of broken bone caused more blood loss. The Thomas Splint pulled the bones apart to stop them grinding on the flesh. The death rate reduced from 80% to 20%. People were trained to use it in R.A.P.s.

Key Words

Nature: WHAT is the source?
Origin: WHO made the source?
WHEN was it made? **WHERE** was it made?
Purpose: WHY was it made?

Provenance/Attribution: The bit which tells you where the source has come from (sometimes in *italics*).

Utility: How useful a piece of evidence is.

Inference: A historical guess using the evidence and your knowledge.

Medicine Continued

Plastic Surgery: Skin grafts developed during WWI. Over 11000 plastic surgeries were carried out – mostly on the face.

Brain Surgery – In 1914 head injuries received little surgery; doctors didn't really know how to do it. Eventually, blood transfusions reduced the number of deaths and x-rays allowed surgeons to better anticipate problems inside the skull. A magnet was invented to draw out bullets!

MEDICINE & WESTERN FRONT

Glossary

AMPUTATION the removal of a limb by surgery.

ANAESTHETICS A drug or drugs given to produce unconsciousness before and during surgery.

ANATOMY The science of understanding the structure and make-up of the body.

ANTHRAX An infectious disease mostly affecting animals but occasionally people

ANTIBIOTIC A drug made from bacteria that kill other bacteria and so cure an infection or illness.

ANTIBODIES A substance produced in the body to counter infections.

ANTISEPTICS Chemicals used to destroy bacteria and prevent infection.

APOTHECARY A pharmacist or chemist in the medieval period

ASEPTIC SURGERY Surgery where microbes are prevented from getting into a wound in the first place, as opposed to being killed off with an antiseptic.

ASTROLOGY The study of planets and how they might influence the lives of the people.

BACTERIA A tiny living organism, too small to be seen by the naked eye, which causes disease.

BARBER SURGEON Barbers with sharp knives, so as well as giving people hair cuts, they also carried out medical procedures such as blood-letting.

BIOCHEMISTRY The study of the chemical processes that occur in living things.

BLEEDING The treatment of opening a vein or applying leeches to draw blood from the patient. Also means the loss of blood caused by damage to the vessels.

BLOOD TRANSFUSION Blood taken from a healthy person and given to another.

CHEMOTHERAPY Treatment of a disease such as cancer but the use of chemicals.

CHLOROFORM A liquid whose vapour acts as an anaesthetic.

DISSECTION The cutting up and examination of the body.

DNA Deoxyribonucleic acid, the molecule that genes are made of.

DYSENTERY very severe diarrhoea

EPIDEMIC A widespread outbreak of disease.

FOUR HUMOURS The ancient Greeks believed the body contained four humours of liquids – blood, black bile, yellow bile and phlegm.

FLAGELLANT People who whipped themselves to show God they repented their sins and wanted mercy. They hoped to avoid getting sick.

GAS GANGRENE the infection of dead tissue, causing a foul smelling gas.

GENE Part of a cell that determines how our bodies work. Genes are passed from parents to children.

GENE THERAPY Medical treatment using normal genes to replace defective ones.

GERM A micro-organism that causes disease.

GERM THEORY The theory that germs cause disease.

HERBAL REMEDY A medicine made up from a mixture of plants.

IMMUNE SYSTEM The body's defence system against infections

IMMUNOTHERAPY A method of treating disease by stimulating the body's immune system to work more effectively

INFECTION The formation of disease causing germs or micro-organisms.

INNOCULATION Putting a low dose of a disease into the body to help it fight against a more serious attack of the disease.

LEECHES Blood-sucking worms used to drain the blood from a wound.

LIGATURE A thread used to tie a blood vessel during an operation

IMMUNOTHERAPY A method of treating disease by stimulating the body's immune system to work more effectively

MIASMA Smells from decomposing material were believed to cause disease

MICROBE A living organism that is too small to see without a microscope. Microbes include bacteria.

PASSIVE SMOKING The involuntary inhaling of smoke.

PENANCE A punishment inflicted on yourself to show that you are sorry for your sins.

PENICILLIN The first antibiotic drug produced from a mould to treat infections

PHYSICIAN A doctor of medicine who has trained at university

PHYSIOLOGY the study of how the body works

PLAGUE A serious infectious disease spread to humans by fleas from rats and mice.

PNEUMONIA The inflammation of the lungs due to an infection

POLIO A contagious illness that can cause paralysis and death

PUBLIC HEALTH refers to the well-being of the whole community

PUS A pale yellow or green fluid found in the body

QUARANTINED Separated from the rest of the local population because of illness.

RADIOTHERAPY Treatment of a disease, such as cancer, by the use of radium

REMEDY A drug or treatment that cures or controls the symptoms of disease.

SCARLET FEVER An infectious disease mostly affecting children

SCROFULA Tuberculosis of a gland in the neck. It was believed the touch of the king could cure you

SEPTICAEMIA blood poisoning caused by the spread of bacteria from an infected area.

SMALLPOX A dangerous disease causing fever that was a major cause of death until it was beaten by vaccination

SUPERSTITION An unreasonable belief based on ignorance and sometimes fear

SYPHILIS A sexually transmitted disease that was common from the late fifteenth century until the introduction of penicillin

TRANSFUSION The transfer of blood from one person to another

TRANSCERENCE Belief that an illness or disease could be transferred to something else.

VACCINATION The injection into the body of killed or weakened organisms to give the body resistance against the disease

VIRUS A tiny micro-organism, smaller than bacteria, responsible for infections such as colds, flu, polio and chicken pox

VOLUNTARY HOSPITALS Hospitals supported by charitable donations.

WISE WOMAN A woman believed to be skilled in magic or local customs.

History Knowledge Organiser: MEDIEVAL MEDICINE
FOCUS ON EXAM TECHNIQUE

Q3 – Explain one way... (4)	Q4 – Explain why/how... (12)	Q5 OR Q6 – History Hands (16 + 4)
See this in two parts: Part a) Identify one thing relevant to the question. Part b) Explain how that feature that you've identified does what the question asks. Time: Maximum 4 minutes Quantity: 4 sentences (or less if you're more concise) Tips: Don't waste time writing loads for this question. 	In this question, you'll be given two 'stimulus points' (bullet points). Try to use them as a last resort. Bullet point anything you could use aside from the stimulus points and try to write from your own knowledge FIRST, before you use the bullet points. You don't have to use them at all so you could write it entirely from your own knowledge. A simple way to answer this question is using 3 x PEE paragraphs. You should make sure you explain three reasons, with at least one from your own knowledge. Time: Maximum 15 minutes Quantity: 3 paragraphs Tips: No introduction or conclusion. Use your own knowledge before the bullet points.	Read & plan BOTH questions. Decide which you could write more easily about. In this question, you'll be given two 'stimulus points' (bullet points). Try to use them as a last resort. Bullet point anything you could use aside from the stimulus points and try to write from your own knowledge FIRST, before you use the bullet points. You don't have to use them at all so you could write it entirely from your own knowledge. This is a History Hands question (on one hand, on the other hand...). For top marks you should have a sustained argument. This means that you tell the examiner which side you're on from the beginning, and you should be able to follow that golden thread from your introduction, through each side of the argument and then into the conclusion. Time: Maximum 25 minutes Quantity: Introduction; One hand; Other hand; Conclusion Tips: Write a great intro. You do not have to have equal amounts of writing on each side. Hammer your argument home in each paragraph you write.
Want More Practise? Explain one way that Medieval people tried to prevent the Black Death. Explain one way that women helped to treat illness in the Middle Ages. Explain one thing that Medieval people believed caused disease.	Want More Practise? Explain the role of hospitals in the Middle Ages. Explain how the Black Death spread so quickly in the Middle Ages. Explain how medical progress was made in Medieval towns.	Want More Practise? 'There was little progress in medicine in the Middle Ages'. How far do you agree? 'The role of the Church was the main reason that there was little change in medicine in the Middle Ages'. How far do you agree?

History Knowledge Organiser: RENAISSANCE MEDICINE
FOCUS ON EXAM TECHNIQUE

Q3 – Explain one way... (4)	Q4 – Explain why/how... (12)	Q5 OR Q6 – History Hands (16 + 4)
See this in two parts: Part a) Identify one thing relevant to the question. Part b) Explain how that feature that you've identified does what the question asks. Time: Maximum 4 minutes Quantity: 4 sentences (or less if you're more concise) Tips: Don't waste time writing loads for this question. 	In this question, you'll be given two 'stimulus points' (bullet points). Try to use them as a last resort. Bullet point anything you could use aside from the stimulus points and try to write from your own knowledge FIRST, before you use the bullet points. You don't have to use them at all so you could write it entirely from your own knowledge. A simple way to answer this question is using 3 x PEE paragraphs. You should make sure you explain three reasons, with at least one from your own knowledge. Time: Maximum 15 minutes Quantity: 3 paragraphs Tips: No introduction or conclusion. Use your own knowledge before the bullet points.	Read & plan BOTH questions. Decide which you could write more easily about. In this question, you'll be given two 'stimulus points' (bullet points). Try to use them as a last resort. Bullet point anything you could use aside from the stimulus points and try to write from your own knowledge FIRST, before you use the bullet points. You don't have to use them at all so you could write it entirely from your own knowledge. This is a History Hands question (on one hand, on the other hand...). For top marks you should have a sustained argument. This means that you tell the examiner which side you're on from the beginning, and you should be able to follow that golden thread from your introduction, through each side of the argument and then into the conclusion. Time: Maximum 25 minutes Quantity: Introduction; One hand; Other hand; Conclusion Tips: Write a great intro. You do not have to have equal amounts of writing on each side. Hammer your argument home in each paragraph you write.
Want More Practise? Explain one way that people in the Renaissance tried to prevent the Great Plague. Explain one way that physicians helped to treat illness in the Renaissance. Explain one way that Vesalius corrected the mistakes Galen had made.	Want More Practise? Explain how people in the Renaissance dealt with the Great Plague. Explain what people in the Renaissance thought caused illness. Explain how Harvey was able to prove the existence of the circulatory system.	Want More Practise? 'Harvey made more significant contributions to medicine than Vesalius'. How far do you agree? 'There was little medical change between the Middle Ages and the Renaissance'. How far do you agree? 'Communication was the most important factor for medical progress in the Renaissance'. How far do you agree?

History Knowledge Organiser: INDUSTRIAL MEDICINE
FOCUS ON EXAM TECHNIQUE

Q3 – Explain one way... (4)	Q4 – Explain why/how... (12)	Q5 OR Q6 – History Hands (16 + 4)
See this in two parts: Part a) Identify one thing relevant to the question. Part b) Explain how that feature that you've identified does what the question asks. Time: Maximum 4 minutes Quantity: 4 sentences (or less if you're more concise) Tips: Don't waste time writing loads for this question. 	In this question, you'll be given two 'stimulus points' (bullet points). Try to use them as a last resort. Bullet point anything you could use aside from the stimulus points and try to write from your own knowledge FIRST, before you use the bullet points. You don't have to use them at all so you could write it entirely from your own knowledge. A simple way to answer this question is using 3 x PEE paragraphs. You should make sure you explain three reasons, with at least one from your own knowledge. Time: Maximum 15 minutes Quantity: 3 paragraphs Tips: No introduction or conclusion. Use your own knowledge before the bullet points.	Read & plan BOTH questions. Decide which you could write more easily about. In this question, you'll be given two 'stimulus points' (bullet points). Try to use them as a last resort. Bullet point anything you could use aside from the stimulus points and try to write from your own knowledge FIRST, before you use the bullet points. You don't have to use them at all so you could write it entirely from your own knowledge. This is a History Hands question (on one hand, on the other hand...). For top marks you should have a sustained argument. This means that you tell the examiner which side you're on from the beginning, and you should be able to follow that golden thread from your introduction, through each side of the argument and then into the conclusion. Time: Maximum 25 minutes Quantity: Introduction; One hand; Other hand; Conclusion Tips: Write a great intro. You do not have to have equal amounts of writing on each side. Hammer your argument home in each paragraph you write.
Want More Practise? Explain one way that Louis Pasteur proved the existence of germs. Explain one way that surgery improved in the 1800s. Explain one way that beliefs about the causes of disease changed in the 1800s.	Want More Practise? Explain how Pasteur & Koch's rivalry led to improvements in medicine. Explain why public health improved so rapidly during the second half of the eighteenth century. Explain how treatments in hospitals improved during the 1800s.	Want More Practise? 'The discovery of germs is the most important reason for that medicine improved in the 1800s'. How far do you agree? 'The l'aissez faire attitude of the ruling classes restricted medicine improvement in the 1800s'. How far do you agree? 'Communication was the most important factor for medical progress in the Industrial Revolution'. How far do you agree?

History Knowledge Organiser: 20th CENTURY
FOCUS ON EXAM TECHNIQUE

Q3 – Explain one way... (4)	Q4 – Explain why/how... (12)	Q5 OR Q6 – History Hands (16 + 4)
See this in two parts: Part a) Identify one thing relevant to the question. Part b) Explain how that feature that you've identified does what the question asks. Time: Maximum 4 minutes Quantity: 4 sentences (or less if you're more concise) Tips: Don't waste time writing loads for this question. 	In this question, you'll be given two 'stimulus points' (bullet points). Try to use them as a last resort. Bullet point anything you could use aside from the stimulus points and try to write from your own knowledge FIRST, before you use the bullet points. You don't have to use them at all so you could write it entirely from your own knowledge. A simple way to answer this question is using 3 x PEE paragraphs. You should make sure you explain three reasons, with at least one from your own knowledge. Time: Maximum 15 minutes Quantity: 3 paragraphs Tips: No introduction or conclusion. Use your own knowledge before the bullet points.	Read & plan BOTH questions. Decide which you could write more easily about. In this question, you'll be given two 'stimulus points' (bullet points). Try to use them as a last resort. Bullet point anything you could use aside from the stimulus points and try to write from your own knowledge FIRST, before you use the bullet points. You don't have to use them at all so you could write it entirely from your own knowledge. This is a History Hands question (on one hand, on the other hand...). For top marks you should have a sustained argument. This means that you tell the examiner which side you're on from the beginning, and you should be able to follow that golden thread from your introduction, through each side of the argument and then into the conclusion. Time: Maximum 25 minutes Quantity: Introduction; One hand; Other hand; Conclusion Tips: Write a great intro. You do not have to have equal amounts of writing on each side. Hammer your argument home in each paragraph you write.
Want More Practise? Explain one way in which understanding of the causes of illness were similar in the late 19th and twentieth centuries. Explain one way in which understanding of the causes of illness was different in the late nineteenth & 20th centuries.	Want More Practise? Explain why there have been changes in understanding the causes of illness during the 20th century. Explain why there have been changes in methods of preventing illness during the 20th century. Explain why there have been changes in methods of treating illness during the 20th century.	Want More Practise? 'The development of penicillin was a major breakthrough in the treatment of illnesses during the 20th century' How far do you agree? 'The discovery of DNA was a major breakthrough in medicine during the 20th century'. How far do you agree?

These are great revision series playlists on Medicine c1250-present day:

These ones are short and a good starting point on key topics:

https://www.youtube.com/watch?v=nVJV8iEAm88&list=PLcvEcrsF_9zJ8AqMTFZycm46Ks4DdSaLM&ab_channel=BBCTeach

These ones go into more detail and are great for higher level revision:

https://www.youtube.com/watch?v=ar3ijNoZuf8&list=PL9bgSdxfgbwpsrcUayiSupU1tvMGU_6zM&ab_channel=MrClopeHistory

These ones are specifically for Medicine on the Western front in WW1:

https://www.youtube.com/watch?v=-dIOowtYef4&list=PL9bgSdxfgbwqdRnp7KO5fNLwZw719tsQp&ab_channel=MrClopeHistory

https://www.youtube.com/watch?v=iqehK_WpaLo&list=PLkG1vXH2kl4b3RXrBI7EkWfZD4Bu9g99r&ab_channel=CHSGHistory

How to approach the different questions in the exam

On the next slides remember:

Good things to do in an answer are in BLUE!

Bad things to do in an answer are in RED!

Question 1 – 2 x 2 marks – 6 minutes

Did you (for EACH feature!)...

Give a **DETAIL** about the issue in the question. Add some further **DETAIL** for another mark.

GOOD ANSWER for ONE feature:

The trenches were difficult for stretcher-bearers to use (1). This is because the trenches were very narrow and zig-zagged (1).

Its bad if you don't add words you know to do with the Western Front – like stretcher-bearer, zig-zag trenches, artillery explosions, motor transport, horse-drawn ambulances, dressing stations etc

Question 2 (a) – 8 marks – 12 minutes!

Focus on what this tells us about the topic of the question
Focus on how the SOURCES are useful (to a historian!)
Write equally about both sources
Write about how the information is USEFUL – this is the main focus rather than how it is NOT USEFUL!
How the information in the source is CORROBORATED from your own knowledge or other sources (GOOD!)

Just repeat the very basic information from the source (BAD!)
Add knowledge but didn't link it to details of the source
Make general points about nature, origins or purpose but don't link it to details in the source
Didn't mention provenance at all? Provenance is the nature, origins and purpose of the source!

Question 2 (b) – 1 + 1 + 1 + 1 = 4 marks in total – 6 minutes

Did you...

Write something for each part of the answer even if you were unsure

Make a general comment for the last part rather than focus on specific information you could gain from the source

- **FIRST part – MUST be a short quote directly from the source!**
(IF THE FIRST PART IS WRONG THEN THE REST IS WRONG!)
 - **SECOND part – MUST be a specific question based on the quote!**
 - **THIRD part – MUST be a specific source like – a report in a medical journal (magazine) about the effectiveness of this specific treatment**
 - **FOURTH part – MUST be a specific way that specific type of source could help**
-
- **BAD...**
 - **“It’s a primary source” – so what? How does this make it useful?**
 - **“Primary sources are more reliable.” – No, they aren’t! They might be or they might not be - judge each source on its provenance!**

Question 3 – 4 marks – 6 minutes

- **BAD - Misunderstand the time period of the question!**
- **Write about a specific similarity**
- **Write something specific about ideas**
- **Give dpecific details about ideas**

A good answer:

In both periods there was the idea that having an unhealthy lifestyle could make you more likely to become ill. In the medieval period many people agreed with Hippocrates ideas about a balanced lifestyle, diet and exercise. In the modern period there were many healthy living campaigns by the British government such as the stop smoking and 5-a-day campaigns.

Question 4 – 12 marks – 18 minutes

- Only write about the period in the question!
- **ATBQ – Answer the Question, read it CAREFULLY!**
- Write about three separate examples
- If you miss out one of the “may use” suggestions add an extra one of your own!

Good examples:

Access to GPs (General Practitioners) improved as a result of the establishment of the NHS in 1948. This removed the cost of paying for a doctor's visit and the treatment yourself and so more people accessed this service.

Access to specialist treatment in hospitals improved even before the NHS as new medical technologies, such as X-rays, allowed more people to be treated for injuries.

The NHS was the main way access to treatment improved and this was a result of the Beveridge Report in 1942 and the impact of the Second World War on the British population who demanded a universal healthcare system.

Question 5 OR 6 – 16 marks + 4 marks for SPAG! – 24 minutes

- **MOST COMMON PROBLEM – A distinct lack of specific knowledge about individuals and key events! This requires revision!**
- **ATBQ**
- **Write in sentences where one sentence extends the idea of the sentence before**
- **Extend your explanation about WHY something was important**
- **Write in paragraphs about different factors**
- **Add an extra factor paragraph from your own knowledge**
- **If you miss out one of the “may use” suggestions add an extra one of your own!**
- **Check SPAG at the end – there’s as many marks for that as for Question 1!**
- **Use specialist history and medical terms to boost your SPAG marks!**

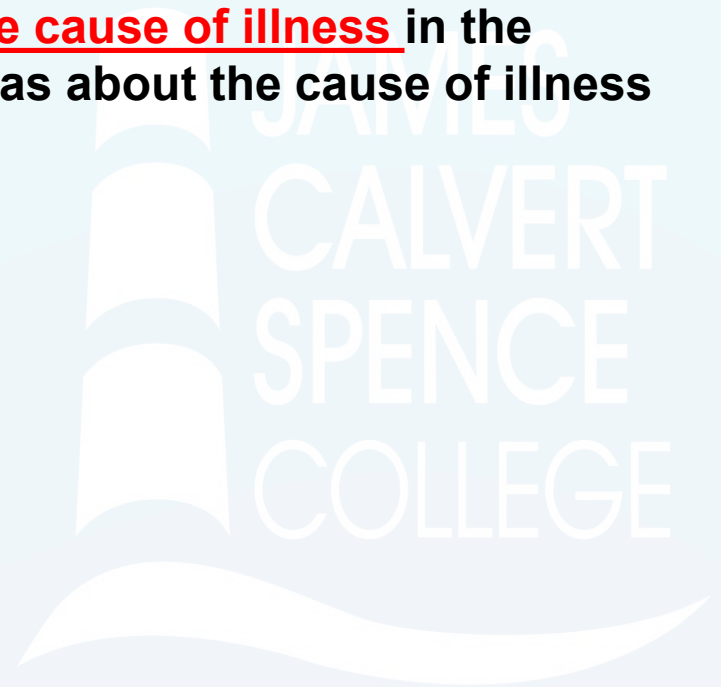
Question 5 OR 6 – 16 marks + 4 marks for SPAG! – 24 minutes

- **MOST COMMON PROBLEM – A distinct lack of specific knowledge about individuals and key events! This requires revision!**
- **ATBQ**
- **Write in sentences where one sentence extends the idea of the sentence before**
- **Extend your explanation about WHY something was important**
- **Write in paragraphs about different factors**
- **Add an extra factor paragraph from your own knowledge**
- **If you miss out one of the “may use” suggestions add an extra one of your own!**
- **Check SPAG at the end – there’s as many marks for that as for Question 1!**
- **Use specialist history and medical terms to boost your SPAG marks!**

Example answer to Question 3 -

3 Explain one way in which ideas about the cause of illness in the years c1700–c1850 were different from ideas about the cause of illness in the years c1900–present.

4 marks



3 Explain

This is the command word. Here it is asking you to: write in detail about differences.

one way in which

Focus on ONE way they were different in some detail – NOT loads!

ideas about the cause of illness

This is the topic – beliefs about what caused disease in the years c1700–c1850

This means the 18th and 19th century UP TO (but not after!)

Pasteur

were different from ideas about the cause of illness in the years c1900–present.

This means modern ideas about the cause of disease AFTER Pasteur!

4 marks

What do you write about?

ATBQ!

This question is about changing ideas about the cause of disease.

Make a list of everything you know about ideas about the causes of disease in c1700-c1850.

Make a list of everything you know about ideas about the causes of disease in c1900-present day.

Share your ideas with others.

Tick ideas which you can say were definitely very different.

Next – compare your list with the **INDICATIVE CONTENT** from the exam board (this list is **NOT** what you have to do – its just what the examiners think you might use)

Relevant points may include:

- **In the years c1700-c1850 some people believed that illness was caused by spontaneous generation but in the years c1900-present people believed in the germ theory that microbes caused disease.**
- **In the years c1700-c1850 some people believed that illness was caused by miasma but in the years c1900-present people know that some illnesses are caused by genetic conditions.**

Mark a student answer

Use the mark scheme to mark this student answer.

First work out which Level on the mark scheme it would get.

Then work out how good it is within that Level.

There is a right answer because this was marked by the Chief Examiner! Don't worry – you don't have to get it right – this is about learning what they expect!

Question		
3		Explain one way in which ideas about the cause of illness in the years c1700-c1850 were different from ideas about the cause of illness in the years c1900-present. Target: Analysis of second order concepts: difference [AO2]; Knowledge and understanding of features and characteristics of the period [AO1]. AO2: 2 marks. AO1: 2 marks.
Level	Mark	Descriptor
	0	No rewardable material.
1	1–2	- Simple or generalised comment is offered about a difference. [AO2] - Generalised information about the topic is included, showing limited knowledge and understanding of the periods. [AO1]
2	3–4	- Features of the period are analysed to explain a difference. [AO2] - Specific information about the topic is added to support the comparison, showing good knowledge and understanding of the periods. [AO1]

3 Explain **one** way in which ideas about the cause of illness in the years c1700–c1850 were different from ideas about the cause of illness in the years c1900–present.

People ~~had~~ believed disease and illness came from miasma in the years c1700–c1850 which is bad smells which is proven to be wrong as from c1900–present people have now realised illness and disease is caused by bacteria and germs which was scientifically proven by Robert Koch.

This is what the Chief Examiner said about this answer:

The answer identifies a valid difference in the beliefs about miasma and bacteria as the cause of disease. Supporting detail is offered to explain the idea of miasma and to show that Koch identified the microbes causing several diseases.

This answer has met all the demands of the **Level 2 mark scheme and received the **3 marks**.**

How could it get 4 marks?

Assessment – Question 3
I DO – model answer by Mr E

Between 1700 and 1850 people believed that the Theory of the Four Humours still held some truth to it. While the Four Humours was going out of fashion at this time there were still many quacks and even actual physicians who applied this defunct idea. However, after 1900 people developed ideas related to Pasteur's germ theory. This was one of the greatest medical breakthroughs in modern history and fundamentally changed the way medicine was practiced across the world and was further developed by many other scientists including Koch, Lister, Ehrlich and Fleming.

Assessment – Question 3

WE DO – Model answer by previous Year 11s

Between 1700 and 1850 people believed that cholera, for example, was caused by miasma. This meant that they thought cholera was spread through foul smells and this meant they had no real way to deal with cholera as this was erroneous.

However, after 1900 people had learnt that cholera was a water-borne disease. John Snow demonstrated that cholera was a water-borne disease through the use of statistical analysis in 1854. But this was ultimately proven when Pasteur published his germ theory in 1861.

How to write an answer to questions 5 or 6 – the 16-marker!

6 ‘Providing access to care and treatment has been the most important development in the role of government in medicine in the years c1800–present.’ How far do you agree? Explain your answer.

(16 marks)

You may use the following in your answer:

- National Health Service (NHS), 1948
- Public Health Act, 1875

You must also use information of your own.

(Total for spelling, punctuation, grammar and use of specialist terminology = 4 marks)

(Total for Question 6 = 20 marks)

Why is each highlighted phrase important?

6 'Providing access to care and treatment

– this is the topic – provision of healthcare!

has been the most important development in the

– This is telling you this is an essay. You need to constantly make judgements.

role of government in medicine in the years

– This is the factor you are considering. Stick to it!

c1800–present.' – This is the time period! Don't stray outside of it!

How far do you agree? Explain your answer.

– This is also telling you this is an essay. You need to constantly make judgements.

You may use the following in your answer:

- National Health Service (NHS), 1948
- Public Health Act, 1875

You must also use information of your own.

You don't HAVE TO use these two but its probably a good idea. But you do have to have THREE in total!

What do you write about?

ATBQ!

This question is about the role of government in providing treatment and healthcare.

Make a list of everything you know about the role of government in medicine 1800-present day.

Next – compare your list with the INDICATIVE CONTENT from the exam board on the next slide (this list is NOT what you have to do – its just what the examiners think you might use)

Relevant points that support the statement may include:

- The creation of the NHS by the government was a major development since treatment was funded from taxes and free at the point of delivery and therefore accessible to all.
- The government-funded NHS provides specialised treatment from highly trained personnel and high-tech equipment, which otherwise might not be available.
- The government has expanded its role in medicine by providing funding for training, research and experimental treatments.

Relevant points to counter the statement may include:

- The introduction of the 1875 Public Health Act showed the government taking responsibility for public health on a nationwide scale.
- The 1875 Public Health Act made it compulsory for local authorities to provide clean water and improve sanitation, showing an extension of government responsibility.
- The government made it compulsory for people to be vaccinated against smallpox during the nineteenth century.
- The government provided funding for prevention of illness through vaccinations campaigns such as vaccination against smallpox during the nineteenth century and against diphtheria in the twentieth century.
- Governments during the twentieth century introduced measures to improve public health such as providing free school meals, the school medical inspection to keep children healthy and campaigns such as 'five a day' and 'stop smoking'.

Essay-style Questions – “How far do you agree?”

ATBQ!

In essay style questions like this it is really important to remember:

An essay is an argument with yourself!

**You need to provide an opinion about the key issue: Provision of healthcare
= most important development in role of government?**

It does these things:

Key words (or synonyms of those words) from the question

- **Knowledge used as evidence to back up opinion**
- **Judging words which offer an opinion in answer to the question**
- **Counter-arguments to opinions already offered**

I DO - Part of an exemplar answer by Mr E

Perhaps the most important development in access to medical care in Britain over the last hundred years has been the establishment of the NHS in 1948. The British government was the key factor in the creation of the NHS and as a consequence of this service the government had a huge impact on allowing all people access to healthcare free at the point of delivery. For the first time all the British people could gain access to healthcare without fear of the humiliation of being unable to pay. This had an enormous impact on the working class especially. While it may be true to say that the 1875 Public Health Act had a massive impact on the health of the nation by forcing councils to provide proper sanitation this provision, by itself, did not actually provide anyone with access to healthcare and failed to address the issue of lack of medical care.

I DO - Part of an exemplar answer by Mr E

Perhaps the most important development in access to medical care in Britain over the last hundred years has been the establishment of the NHS in 1948. The British government was the key factor in the creation of the NHS and as a consequence of this service the government had a huge impact on allowing all people access to healthcare free at the point of delivery. For the first time all the British people could gain access to healthcare without fear of the humiliation of being unable to pay. This had an enormous impact on the working class especially. While it may be true to say that the 1875 Public Health Act had a massive impact on the health of the nation by forcing councils to provide proper sanitation this provision, by itself, did not actually provide anyone with access to healthcare and failed to address the issue of lack of medical care.

WE DO – Answer by other Year 11s

On the other hand government's introduction of the Public Health Act of 1875 was very important because it obliged councils to spend money on improving the sanitation of the towns.

This led to help in stopping the spreading of diseases especially among the poor who couldn't fend for themselves. This was ultimately all the result of government action – the British government had instigated Chadwick's original report in 1842 and this had led to the 1848 Public Health Act. It was this act which eventually led to the 1875 Public Health Act which actually addressed the cesspits which many British cities had become.

In some ways this is more important than care and treatment because this prevented the need for treatment of dozens of diseases including cholera, typhoid and tuberculosis ultimately preventing millions of deaths in in the long-term.

WE DO – Answer by other Year 11s

On the other hand the Public Health Act of 1875 could be seen as the single most important contribution of government to medicine as it enforced the creation of sewers on all towns and cities in Britain. This drastically reduced the death rate in industrial Britain where pollution and disease had been running rampant due to poor sanitation.

While it did not contribute to access to care and treatment what it did do was significantly reduce illness and especially infant mortality rates. In some ways this is more important than care and treatment because it meant that far fewer people actually required treatment and care.

YOU DO – Write your own paragraph

While the NHS was a hugely significant government intervention in the development of surgery, regulation of the medical profession and government funding for antibiotics research were also very important.

For example _____ meant that...

This contributed greatly to improved care and treatment because...

However this could also be seen as a failure of government in that...