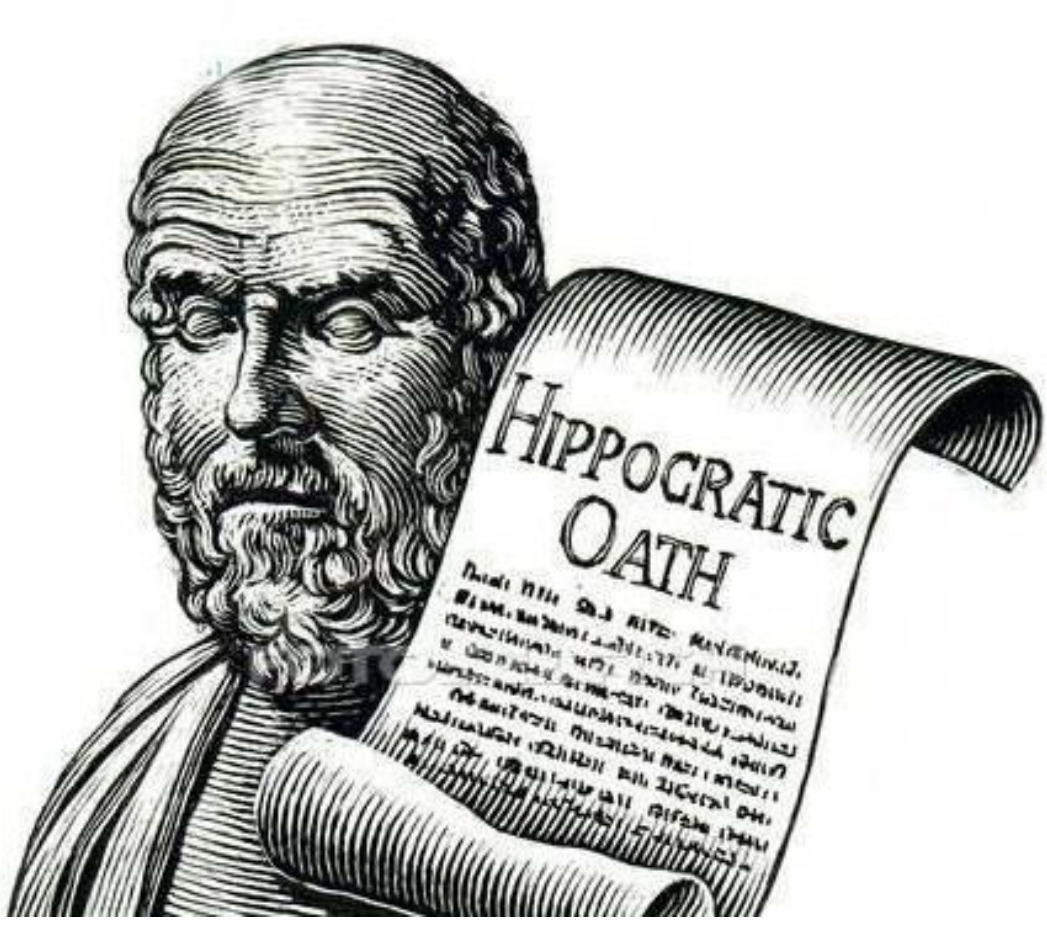
Sharples SCHOOL
History Department

AQA GCSE History

Health and the People c1000 to the Present Day

Workbook



Introduction

L.O: To gain an overview of the topics we will be covering in this unit.

- You each have on your table a pack of sources.
- Your first task is to sort through these and find themes.
- Group them into themes and create a label for each.
- Put the pictures on the table- each theme in a different area.
- Use your marker to create links between the different themes.

Which themes did your team identify?

_____
_____
_____
_____
_____
_____
_____

What links can you find between your identified themes?

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

SCC: I got these sources from a textbook. Does that make them useful? Why/why not?

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Medieval Medicine

L.O: To understand the significance of the work of Galen

Hippocrates

Hippocrates was born c.460BC on the Greek Island of Cos where he worked as a doctor and a teacher of doctors. Very little else is known about him. He died c.370BC.

- The Hippocratic Oath:

This was a pledge that Doctors had to make in order to make people have faith in them. They promised to do the best for their patients, not just make money. It made it clear that doctors were not magicians and that they would keep high standards of behaviour and treatment.

- The Hippocratic Collection of books:

Hippocrates would have written several of the books in this collection, but many others would have been written by those wishing to further his ideas. They form the first detailed list of symptoms and treatments. Doctors continued to use the theories and methods in these books for many centuries.

- Observation and recording:

Hippocrates showed that it was very important to observe and record carefully the symptoms and development of diseases. This had two advantages. Doctors were more likely to choose the right cure if they took care to find the cause of the problem. These notes could then be used to help with diagnosis and treatment of future patients.

First look at the patient's face. The following are bad signs – a sharp, pointed nose, hollow eyes, dry skin on the forehead, strange face colour such as green, black, red or lead coloured. If the face is like this at the beginning of the illness, the doctor must ask the patient if he has lost sleep or had diarrhoea, or not eaten. Then record how his condition changes each day.

- Natural Treatments:

Hippocrates encouraged doctors to look for natural treatments for illness rather than praying to the gods for help.

We must use natural treatments because illnesses have natural causes. For example, many illnesses can be treated by rest and a change in diet. Then, when you feel stronger, take regular exercise. If this does not work then we can bleed or purge you to remove excess humours.

A medieval lecture theatre

Label the diagram- which features do you recognise?

The Four Humours

Humour liquids in the body	Blood	Yellow bile	Black bile	Phlegm
Four elements	Air	Fire	Earth	Water
Four seasons	Spring	Summer	Autumn	Winter
Four Humours	Moist	Hot	Dry	Cold
Leading to these human characteristics	Passionate Active Emotional	Angry Ill-tempered	Sad Gloomy Dreamy	Unexciting Dull Even-tempered

Galen

THE WORK OF GALEN	
Area of Medicine	**What Galen did/said**
Cause of Illness	Galen supported the work of Hippocrates. He believed in the Theory of the 4 Humours.
Treating Illness	Galen **built** on the Theory of the 4 Humours by advocating the **Use of Opposites** as the appropriate treatment, e.g. too much phlegm – something hot like pepper.
Anatomy	Galen **dissected** pigs and apes (no access to human corpses). He stated that (1) **septum of the heart** had holes in it; (2) he also said that the jaw is made up of 2 bones.
Physiology	Galen said that blood moves from one side of the heart to the other through holes in the septum (middle of the heart).
Galen published a wide range of books that were accessed and supported by the Church.	

TASK

Read pages 8-9 in the Orange textbooks and answer the following questions:

1. Where could you find medical advice in the medieval period if you were a) poor or b) rich?

_____
_____

2. Where did a medieval doctor's knowledge come from?

_____
_____
_____
_____

3. List at least two ways in which medical knowledge was passed on in the medieval period.

_____
_____
_____
_____

4. Study Source C. What do you think this treatment is trying to cure?

_____
_____
_____
_____

5. In your own words, explain how a patient could be treated using the theory of the four humours.

_____
_____
_____
_____
_____
_____
_____
_____

SCC: What are the obvious differences between medieval doctors and modern doctors today?

_____
_____
_____
_____
_____
_____

A medieval doctors toolkit

- one bone saw
- one hinged clamp
- one hinged scissor
- two bistoury knives (one large, one small)
- one pick-probe
- two hooked apparatus (one singular, one double-headed)

Summarise this topic in 5 bullet points:

- _____
  _____
- _____
  _____
- _____
  _____
- _____
  _____
- _____
  _____

Was the Influence of Christianity on Medieval Medicine a positive one?

L.O: To assess the contribution of Christianity to medical progress in Medieval Britain.

A Medieval Hospital

Which features do you recognise?

_____
_____
_____
_____

SCC- What are the issues here? How are they different to our hospitals today?

_____
_____
_____
_____
_____
_____

Christian influences

- Medieval Europeans believed in the Christian God, so politics and everyday life, as well as medicine, were dominated by the **Roman Catholic Church**. Most peasants were extremely superstitious.
- The **key** aspect of the Middle Ages was the emphasis on **authority** - people would believe what they were told against the evidence of their own eyes, and people who questioned authority risked execution.
- After 1066, civilisation began to recover. Universities were established, eg in Paris in 1110, Oxford in 1167. Kings grew more powerful, and established courts as centres of culture and wealth. Trade and communications, especially, by sea, developed. Towns grew up, which created public health problems.

- **In 1258**, Baghdad was destroyed by the Mongols, and much **ancient knowledge** that had been retained in the east but lost to the west was carried **back** to the west by fleeing scholars.

Medical stagnation in the Middle Ages

Causes of medical stagnation in the Middle Ages included:

- the loss of medical knowledge/bad doctors
- the encouragement by the Church of prayer and superstition
- the emphasis on 'authority' rather than on observation and investigation
- the lack of resources to build public health systems
- social disorder and war, which disrupted communication and learning

The **Church** played a big part in **medical stagnation** in the Middle Ages. It discouraged progress by:

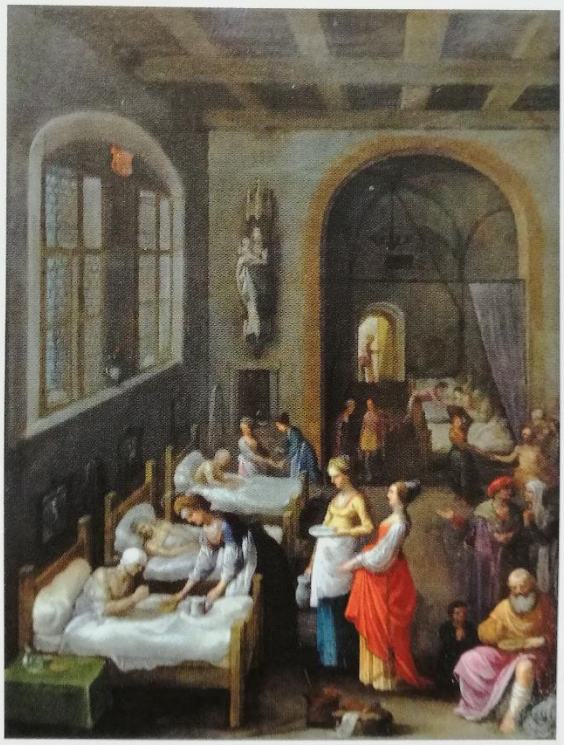
- insisting that people agree with the writings of Galen
- encouraging people to rely on prayers to the saints and superstition to cure them of disease
- encouraging the belief that disease was a punishment from God - this led to **fatalism** and prevented investigation into cures

However, the Church did encourage people to go on **Crusades**, meaning that people travelled to the Middle East. Here they came into **contact** with Muslim doctors, who were significantly more skilled than their counterparts in Britain.

Self assessed

How useful is this source to an Historian studying Christian attitudes towards dealing with the sick? (8)

▼ **SOURCE B** *A sixteenth-century painting showing Saint Elizabeth of Hungary (tending to the patient, bottom left), who was famous in the thirteenth century for helping the poor and the sick*



WWW:

EBI:

MAP:

Summary: Help or Hindrance?

- Built hospitals
- Did not believe in curing the sick
- Followed the work of Galen - he believed in one God
- Controlled the universities – where Medicine was the second subject taught (after religion)
- Training was based on old methods - not finding new ones

Summarise this topic in 5 bullet points:

- _____
  _____
- _____
  _____
- _____
  _____
- _____
  _____
- _____
  _____

What was the Contribution of Islam to Western Medieval Medicine?

L.O: To assess the impact of Islamic contributions to medicine.

6 Important Islamic Achievements in Medieval Medicine

The Islamic achievements in medieval medicine were ground-breaking. While medieval European medicine was still mired in superstitions and the rigid Catholic teachings of the Church, the advent of Islam in the 7th century A.D. gave rise to impressive growth and discoveries in many scientific fields, especially medicine. Islamic scholars and doctors translated medical texts from all over the known world, including the Greeks and Romans, Persians and Indians. They not only gathered this knowledge and translated it into Arabic (and later into Latin), they added their own medical observations and methods. Islamic doctors developed new techniques in medicine, dissection, surgery and pharmacology. They founded the first hospitals, introduced physician training and wrote encyclopaedias of medical knowledge. Before the 12th century in Europe, medical practice was stalled—there were few new discoveries, and, as the Church considered disease a punishment from God, doctors could do little for their patients. However, when new translations, books, observations and methods from the Islamic world gradually became known in the 12th century, Western medicine finally moved forward. Ideas, insights and methods from Islamic doctors brought many new advances to European medicine, essentially forming the basis of modern medicine as we know it today.

Islamic Achievements in Medieval Medicine: Translations

In the 7th century, Arab and Persian scholars began translating medical texts from Greek, Syriac, Sanskrit and Pahlavi into Arabic, and from Arabic into Latin, thus saving those texts from disappearing entirely. During the 8th century in Baghdad, Islamic scholars and doctors translated the works of the Roman doctor Galen, as well as Persian and Indian medical texts. As these doctors translated medical texts from around the known world, they also added their own observations, thus creating encyclopaedias of medical knowledge. Many Islamic medical texts, such as Ibn Sina's Canon of Medicine, Al-Razi's Libor Almartsoris and Al-Zahrawi's Kitab al Tasrif became central to medical education in European universities for hundreds of years. (Westerners knew these doctors as Avicenna, Rhazes and Albucasis, respectively.)

Islamic Achievements in Medieval Medicine: Hospitals and Doctor Training

Rather than viewing disease as a punishment from God as the Christians thought, Islam looked at disease as just another problem for mankind to solve. The Prophet decreed that the sick and injured should be cared for, not shunned. The first medical center was established in Persia (Iran) in the 6th century; in the 800s, the great Islamic doctor Al Razi oversaw Baghdad's Audidi Hospital, with its two dozen doctors on staff. By 1000, Baghdad had five public hospitals, and hospitals were founded in Cairo, Aleppo, Damascus and Al-Andalus. These early Islamic medical centres would be recognizable as hospitals today: they had wards for different diseases, outpatient clinics, surgery recovery wards and pharmacies. They also functioned as medical education centers for doctor training.

Islamic hospitals pioneered the use of antiseptics such as alcohol, vinegar or rose-water in cleaning wounds. Everything was to be kept as clean as possible—in stark contrast to the near total lack of sanitation and cleanliness in Christian lands at that

time. Muslim doctors were familiar with the use of opium as an anaesthetic during long surgeries and for extracting teeth.

Islamic Achievements in Medieval Medicine: Blood Circulation and Anatomy

While Westerners credit William Harvey for discovering blood circulation in 1616, pulmonary circulation had already been described by the Arabic doctor Ibn Al-Nafis 300 years before. While his knowledge was incomplete, Al-Nafis knew that the heart had two halves and that blood passed through the lungs when traveling from one side of the heart to the other. He also realized that the heart is nourished by capillaries.

Besides his description of the circulatory system and the heart, Al-Nafis advocated dissection as a means of truly learning anatomy and physiology, although he also writes that he didn't perform dissections because of his strict Muslim beliefs. He described his observations on the brain, nervous system, bone structure and gall bladder and more in his great medical encyclopaedia Al-Shamil. Unfortunately, not many of Al-Nafis' writings were translated into Latin, leaving Christian doctors befuddled regarding basic anatomy until much later.

Islamic Achievements in Medieval Medicine: Infectious Diseases

Islamic medicine recognized that some diseases were infectious, including leprosy, smallpox and sexually transmitted diseases. To these, the great Islamic doctor Avicenna added tuberculosis and described how contagious diseases spread and necessary methods of quarantine.

Islamic Achievements in Medieval Medicine: Surgery and Surgical Instruments

The 10th century Arabic doctor Al Zahrawi established the basis of surgery in Al-Andalus in Cordoba, where he worked as a doctor for the Caliph Al-Hakam II. He wrote a great medical treatise, the Kitab al-Tasrif, a 30-volume book of medicine and surgery. Al Zahrawi invented over 200 surgical instruments, many of which are still used today, including forceps, scalpel, surgical needle and retractor, specula and catgut sutures.

Islamic Achievements in Medieval Medicine: Pharmacies

Islamic pharmacies, called saydalas, began at the same time as the hospitals, in the late 700s, as part of the Islamic health care system. While Western apothecaries sold ground mummies, dried dung and other strange substances as well as herbs and spices, Muslim pharmacists focused on empiricism—they used substances that showed a positive effect on the patients. In other words, if an herb, spice or other ingredient worked by assisting a sick person to heal, it was used. As Islamic pharmacology evolved, the great Muslim doctors like Al Razi, Avicenna and Al kindi discovered many healing substances for their pharmacies.

Arab pharmacies were government-supervised to ensure the purity and overall quality of the medications, which were weighed in verified scales and labelled correctly. Pharmacies began to spread throughout the Muslim world during the 9th century onwards, whether connected to a hospital or standing alone. Al-Nifas, besides his work on the circulation system, also developed a system of dosage for medications using mathematics.

As Islamic medical knowledge and methods began to filter into Western medieval medicine during the 12th century, so did their treatments for specific diseases. New healing substances were added to Western apothecaries while certain Western medicines, such as theriac, moved into Arab countries due to the growing Arab-European trade.

TASK

- Complete the table comparing Christian (p.10-11) and Islamic (p.12-13) medicine.
- *Remember to focus on the differences, not the similarities.*
- Use the text books, last lesson and what you have just read to help you.

Christianity	Islam

Compare Christian with Islamic contributions to medicine.

In what ways were they different?

Explain your answer with reference to both. [8 marks]

WWW:

EBI:

MAP:

SCC: Which made the most significant contributions?

Summarise this topic in 5 bullet points:

-
-
-
-
-

HOMEWORK: READ, HIGHLIGHT AND ANNOTATE:

Medieval medical knowledge

- Knowledge went into reverse in the west in Medieval times - many of the books of the Greeks and Romans were lost, and the knowledge they contained was replaced by mere speculation and superstition.
- Even when universities developed, after 1100 - Montpellier, Bologna and Salerno had famous medical schools - lectures on anatomy were rudimentary. They consisted simply of a butcher pointing to the different parts of a body, while the lecturer read a text by an authority such as Galen.
- Although students did debate the ideas of Galen, any new ideas were judged on the debating skills of the student, not on scientific proof. The Church said that Galen's ideas were so correct that there was no need to investigate any further.
- Therefore, knowledge was hard to come by - and ignorance led to numerous errors and misunderstandings on the part of Medieval doctors. For example, the Italian doctor Alderotti claimed that combing the hair 'comforts the brain'.

Medieval superstitions and Muslim knowledge

- Although many Medieval doctors continued to believe in the theory of the four humours, they also said disease was caused by demons, sin, bad smells, astrology and the stars, stagnant water, the Jewish people etc.
- Ultimately, they believed that life was controlled by God and his saints, and a plague such as the Black Death was seen as a punishment from God. Guy de Chauliac, the Pope's doctor, blamed the Black Death on a conjunction of Saturn, Jupiter and Mars.
- Things were different only in the Muslim Middle East where, during the reign of Harun al-Rashid, 786-809, the books of Hippocrates were translated into Arabic. At first, Muslim doctors like al-Razi ('Rhazes known as the Galen of Islam') conserved the ideas of the Greeks and Romans.
- Later, Muslim doctors such as Avenzoar and Ibn an Nafis actually began to challenge errors and to develop new ideas. However because the Christian Church was at war with Islam, Muslim ideas spread only slowly to western Europe. The exception was a book by Ibn Sina, often known as Avicenna - the *Canon of Medicine*.

Techniques of Medieval surgery

- Medieval surgeons realised how to use wine as an **antiseptic**, and they used natural substances - mandrake root, opium, gall of boar and hemlock, as **anaesthetics**.
- Medieval surgeons could therefore do **external surgery** on problem areas such as facial ulcers and even eye cataracts. There was also, surprisingly, some **internal surgery** undertaken, e.g. to remove bladder stones.
- There was some further progress in dealing with infection after surgery. Heodoric of Luca encouraged wounds to be cleaned and bandages soaked in wine used to dress them. This challenged the idea of Galen's that pus in a wound was a sign that it was healing.
- However, they still had **no idea** that dirt carried disease, and most operations of Medieval times, if carried out today, would end in a suit for criminal negligence. Deep wounds still caused **death from bleeding, shock and infection**.
- A medieval surgeon might cure an epileptic patient by trephining the skull to let the demon out.

Methods of diagnosis

- Many Medieval doctors carried with them a **vademecum**, meaning '*Go-with-me*', book of diagnoses and a **urine chart**. Usually, they examined the colour, smell and taste of the patient's urine, and made an on-the-spot guess as to what they might be

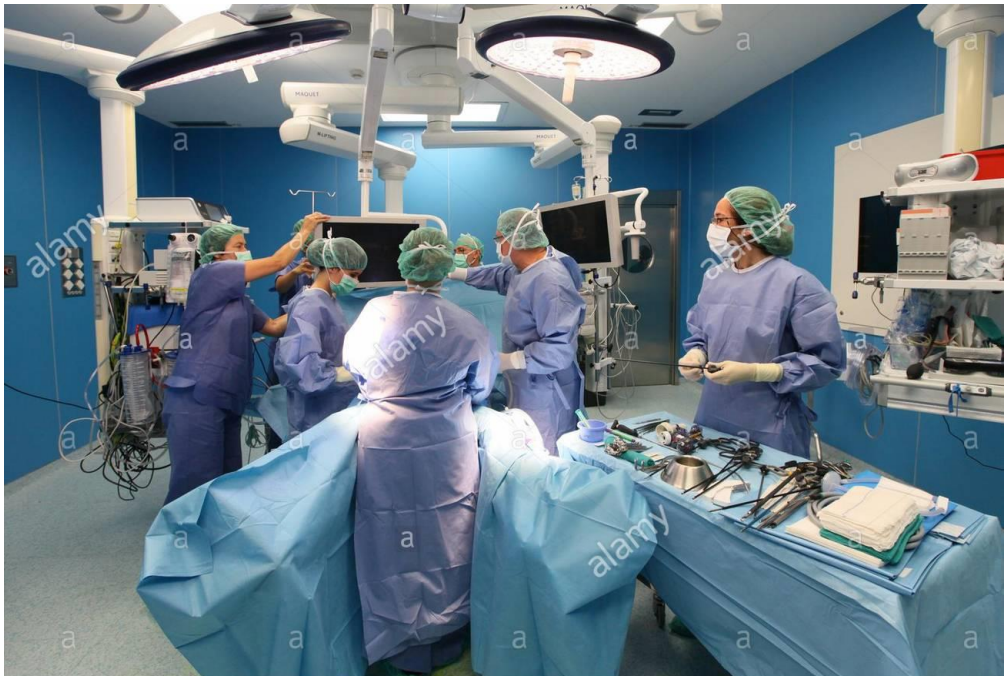
suffering from. Pictures from the time make it clear that doctors also did clinical observation, and took their patient's pulse.
- Other essential doctor's equipment included **posies, oranges or lighted tapers**. Since they believed that bad smells carried disease, they believed that they could protect themselves from catching the disease by carrying something nice-smelling.

Methods of treatment
- Since they still believed in the theory of the four humours, many of their cures involved balancing the 'humours overflowing'. They did this by bleeding, applying leeches, or causing purging or vomiting in their patients. Other ways of balancing the 'natural heat' included the taking of hot baths, drinking a soup of yellow lentils, or applying water cooled with snow.
- The Medieval English poet Chaucer describes how a doctor was followed by a 'tribe' of apothecaries, and it is known that medieval doctors had access to a huge range of **natural healing herbs** and substances. These included red rose ground fine with 'bamboo juice' for smallpox, and fig poultices for plague sores.
- However, **superstition increased** throughout the period. Monarchs thought that by touching patients suffering from the 'King's Evil' (scrofula) they could cure them. Peasants prayed to St Roch to cure their toothache or the plague, or turned to St Anthony to cure them of 'St Anthony's Fire' (ergotism).
- During the time of the plague, huge Christian processions were held, at which people flagellated (whipped) themselves, to try to show God how sorry they were for their sins.

Medieval public health
Medieval towns did not have systems of sewers or water pipes like Rome had. Medieval towns were probably filthy. Garbage and human waste was thrown into the streets. Houses were made of wood, mud and dung.
Rats, lice and fleas flourished in the rushes strewn over the clay floors of people's houses, often changed only once a year.
However, we can't conclude that Medieval people were personally filthy, or careless of their health:
- They had their own version of the Greek's Programme for Health. The doctor Alderotti advised people to stretch their limbs, wash their face, clean their teeth, exercise etc.
- Guy de Chauliac, the Pope's doctor, realised the importance of a good diet, and that a poor diet made people more vulnerable to the plague.
- Monasteries developed comprehensive systems of public health, including fresh running water, 'lavers' (wash rooms), flush 'reredorters' (latrines) with running sewers, clean towels and a compulsory bath four times a year.
- Nobles took regular baths, perhaps two a year.
- Towns had bath houses, which were also restaurants and brothels.
- People realised that a room next to a privy was unhealthy, and towns paid 'gongfermers' to clear out the cess pits.
- Medieval kings passed laws requiring people to keep the streets clean.
- Leaders in Venice realised that sexually transmitted diseases were infectious, and ordered checks on the city's prostitutes.
- During the time of the plague many towns developed quarantine laws, and boarded up the houses of infected people. People with leprosy, likewise, were confined to lazar houses, a place for people with infectious diseases.
- During the Middle Ages the first hospitals were built since Roman times, eg St Bart's in London.

Medieval Surgery

L.O- To understand the surgical conditions in medieval times and how they contributed to disease.



A modern surgery theatre. What steps are taken to ensure patients are kept healthy?

_____
_____
_____
_____
_____
_____
_____

Background

- The two most common types of surgery in medieval times were bloodletting- to restore the humours- and amputations.
- There were no anaesthetics so patients usually had to be held or tied down.
- Surgeons used to cauterise wounds (burn them) to stop them bleeding. **OUCH.**
- Most surgery was performed on battlefields- it was seen as too dangerous in every day life.
- Barber surgeons were used by people who couldn't afford to see a doctor. As the name suggests, this was the same man as you would see for a hair cut.

Advances were made in medieval surgery by the key surgeons who did try new methods.

TASK

1. **Using page 15, make <u>brief</u> notes on these key individuals.**

2. **Decide which you think was the most significant. Explain your answer.** *(Short, medium, long)*

SCC- Was there any real progress in this period? Explain your answer.

Summarise this topic in 5 bullet points:

-
-
-
-
-

Towns and Monasteries

L.O- To compare health in towns with health in monasteries.

TASK 1

You have 10 minutes to use your knowledge of your subject to make an information sheet for someone with no knowledge **using only pictures.** *(Use p16/17 or 18/19)*

TASK 2

1. Find a partner to work with who had the opposite subject.
2. Teach it to each other.
3. Now, write down everything you have learned from your partner here:

OPEN YOUR EXAM BOOKS

Teacher assessed

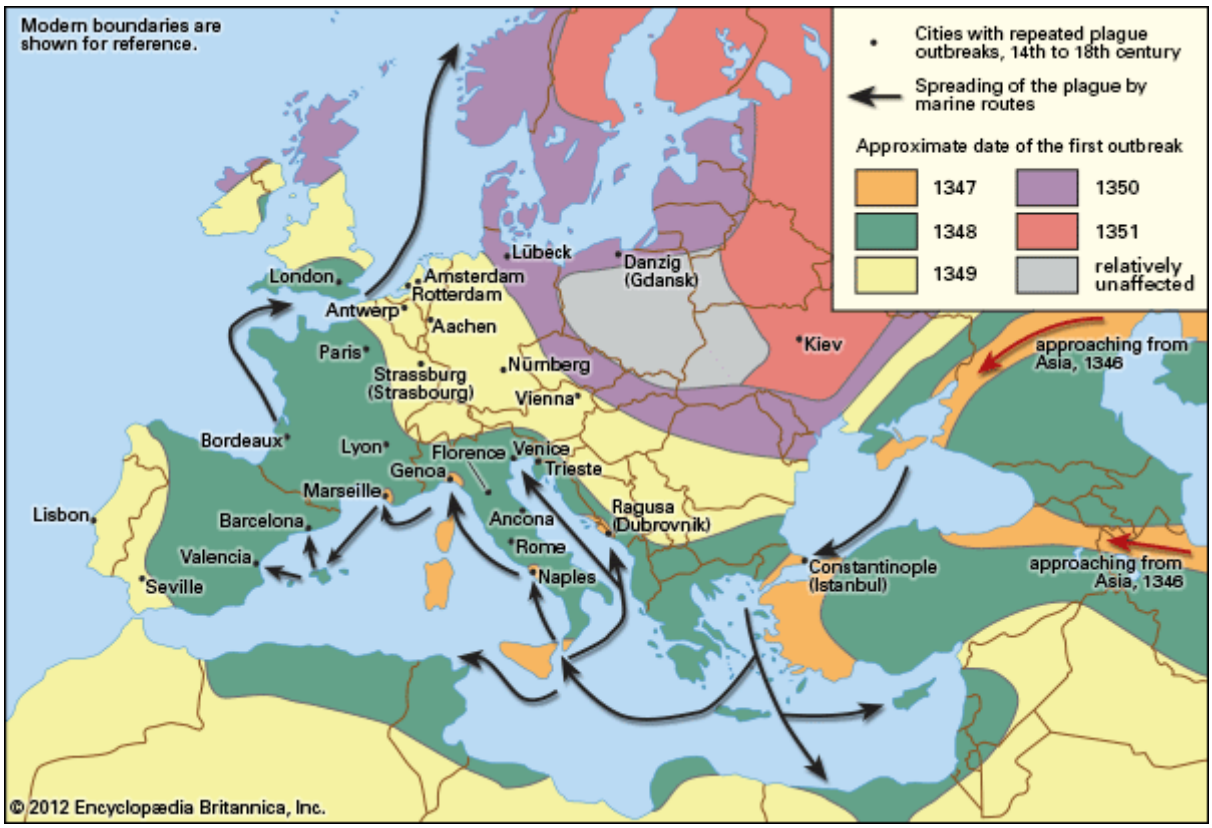
Compare public health in a Medieval town with public health in a Medieval monastery. In what ways were they different? [8 marks]

We'll plan together first.

Tip: Water supply, sewage, attitudes to cleanliness.

The Black Death

L.O- To know the causes and effects of the Black Death



What do we already know about the Black Death?

The Black Death

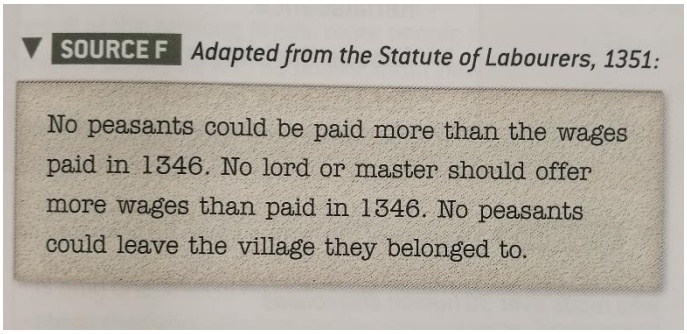
Sort the cards on your tables into the following categories:

- Causes
- Cures(?)
- Consequences

Fleas, which arrived on rats which came on boats from Asia	Rubbing a boiled chicken on the sores	Sitting in a room between 2 huge fires	Smelling herbs	Killing all of the cats and dogs in the towns
A punishment from God	Poisoning of wells by the Jews	Poor sanitation and hygiene	Positions of the stars and the planets	Bad air
Crowded and cramped living conditions	Lack of medical knowledge and understanding	Drinking mercury	Quarantining infected places	Self-flagellation (not welcome in England.)
Food shortages- not enough farmers to farm the land	Higher wages for peasants- their work was in demand	The Peasants Revolt 1381	Change of opinion about the Catholic Church	1/3 of the population died

SCC- What did the devastating effects of the Black Death highlight about medical understanding?

Self assessed



▼ SOURCE F *Adapted from the Statute of Labourers, 1351:*

No peasants could be paid more than the wages paid in 1346. No lord or master should offer more wages than paid in 1346. No peasants could leave the village they belonged to.

How useful is Source F to a Historian studying the impact of the Black Death?

WWW:

EBI:

MAP:

SCC: What if the Black Death returned today?

Summarise this topic in 5 bullet points:

-
-
-
-
-

HOMEWORK: REVISE FOR END OF TOPIC ASSESSMENT (COMPLETED IN EXAM BOOKS)

What was the Renaissance?

L.O- To gain an understanding of the impact of the Renaissance on medicine

What is this?

_____

SCC- Why is it so important?

_____
_____
_____

Renaissance = 'Rebirth'

Read the information on page 24 of the textbook.

Summarise the Renaissance in no more than 20 words:

_____
_____
_____
_____
_____
_____

SCC- Which other areas developed other than medicine due to this 'rebirth'? Give examples.

_____
_____
_____
_____
_____
_____

TASK
Use the 'Consequences of the Renaissance' spider diagram on p.25.

Rank them in order of importance for medical knowledge from 1-5 and write them here: (SCC- Justify your choices.)

1.
_____
_____
_____
_____

2.
_____
_____
_____
_____

3.
_____
_____
_____
_____

4.
_____
_____
_____
_____

5.
_____
_____
_____
_____

<u>Summarise this topic in 5 bullet points:</u>

- _____
  _____
- _____
  _____
- _____
  _____
- _____
  _____
- _____
  _____

HOMEWORK

You will be split into 3 groups.

Your task is to put together a presentation on your individual.

1. Andreas Vesalius
2. Pare
3. William Harvey

Success Criteria

• the situation before the discovery

• the discovery – methods, characteristics and challenges

• the impact and significance of the discovery

SCC- How significant was your individual?

Individuals in the Renaissance

L.O- To evaluate the role played by individuals in medical progression during the renaissance.

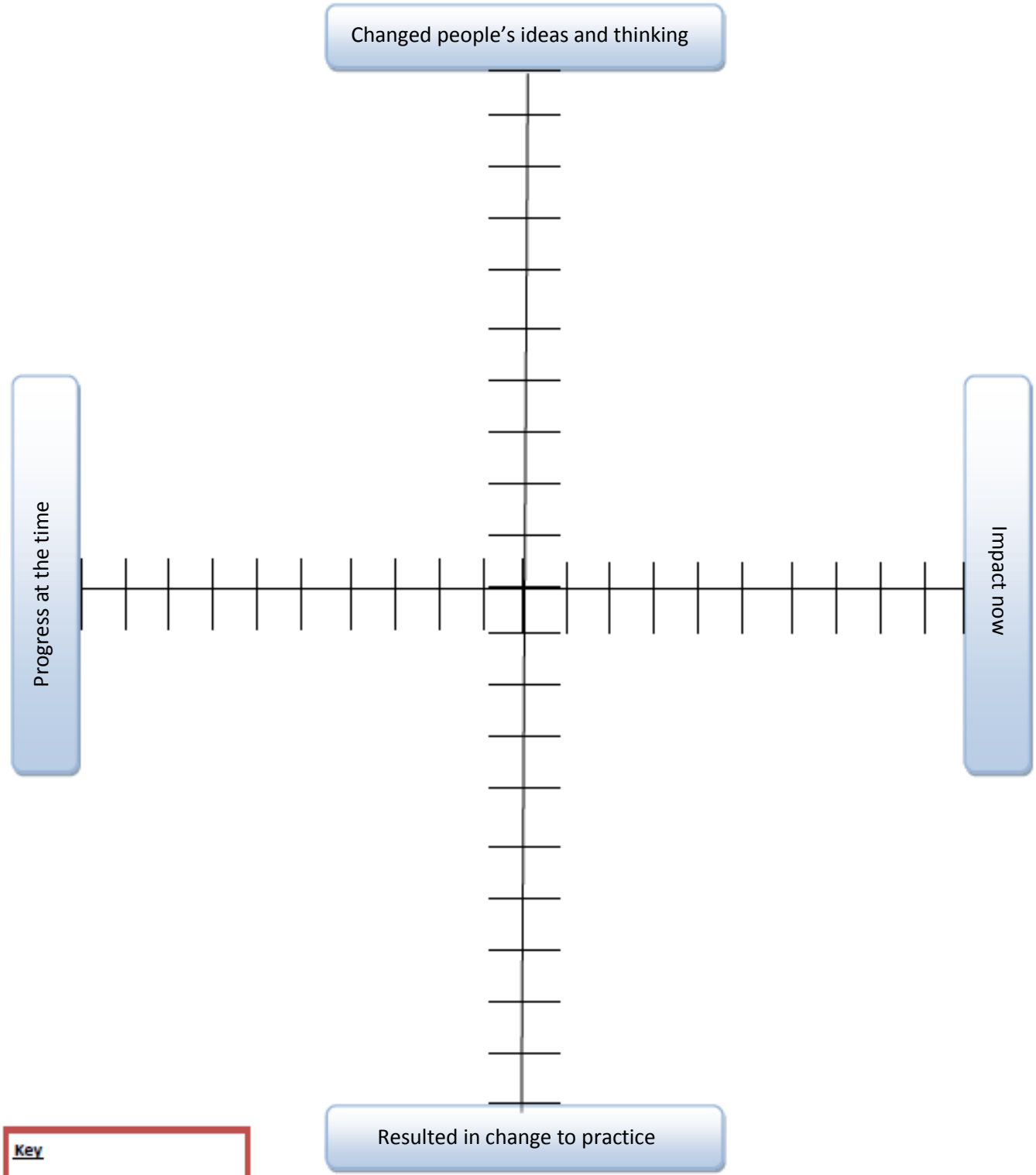
Make notes on each individual based on the presentations:

William Harvey

Andreas Vesalius

Pare

Who was the most significant medical pioneer?



Key

Vesalius

Pare

Harvey

Judging significance

1. Decide where on each of the branches each of the doctors sits e.g. very or not significant.
2. Join them up so that you have a triangle thing for each.
3. Decide which is the most significant (the one with the wider triangle thing) and explain why:

SCC- Justify your decision for each doctor on each branch on your sheet

Summarise this topic in 5 bullet points:

-
-
-
-
-

From the Black Death to the Great Plague

L.O- To evaluate the changes in treating illness between 1348 and 1665

Read the information sheet about the Lord Mayor's rules to combat the Great Plague. Highlight the rules.

The Lord Mayor's Rules- 1665

The Lord Mayor of London, Sir William Lawrence, issued orders for the prevention of the spreading of the plague and these came into force on July 1st 1665. The so-called 'Lord Mayor's Orders' (a collection of earlier orders issued in previous epidemics) had legal clout as he was one of the most senior men left in the city as so many had fled, including the king Charles II. The Lord Mayor's Orders were introduced to stop the plague spreading more than it had done already but the statistics that historians have show that this did not happen. In the week before the Lord Mayor's Orders were introduced 267 Londoners died. For the final week in July, when the orders had been in force for a month, 1843 Londoners died.

The 'Orders for Health' stated that examiners, watchmen and searchers had to be established in each parish.

"First, it is thought requisite and so ordered, that in every parish there to be one, tow or more persons of good sort and credit chosen and appointed by the Alderman, his deputy and Common Council of every ward, by the name of examiners, to continue in that office the space of two months at least. And if any fit person so appointed shall refuse to undertake the same, the said parties for refusing, to be committed to prison until they shall conform themselves accordingly.

That these examiners be sworn by the Alderman to enquire and learn from time to time what houses in every parish be visited and what persons be sick, and of what diseases, as near as they can inform themselves; and upon doubt in that case, to command restraint of access until it appear what the disease shall prove. And if they find any person sick of the infection, to give over to the Constable that the house be shut up, and if the Constable be found to be remiss or negligent, to give present notice thereof to the Alderman of the ward.

That to every infected house there be appointed two watchmen, one for the day and one for the night; and that these watchmen have a special care that no person goes in or out of such infected houses, whereof they have the charge, upon pain of further punishment. And the said watchmen to do such further offices as the sick house shall need and require; and if the watchman be sent upon any business, to lock up the house and take the key with him. And the watchman by day to attend until ten of the clock at night and the watchman by night until six in the morning.

That there be a special care, to appoint women searchers in every parish, such as are of honest reputation, and of the best sort as can be got in this kind. And these to be sworn to make due search and true report to the utmost of their knowledge, whether the persons, whose bodies they are appointed to search, do die of infection, or of what other diseases, as near as they can. And that the physicians who shall be appointed for cure and prevention of the infection, do call before them the said searchers who are or shall be appointed for the several parishes under their respective care, to the end they may consider whether they are fitly qualified for that employment."

Men were also employed to kill cats and dogs. Figures from the time, suggest that as many as 40,000 dogs and 20,000 cats were killed. Taverns and inns were shut from 21.00 onwards and begging and street entertainment was stopped. The orders also

stated that plague burials had to be between the hours of sunrise and sunset and that plague graves had to be at least six feet deep and that there had to be no public gatherings at such graves.
These orders had seemingly little impact on London as the number of deaths after they were issued rose markedly. However, it has been argued that the number of deaths could have been a lot worse if these orders had not been issued.
The main problem for the Lord Mayor was the sheer scale of the problem and the simple fact that his orders were so difficult to enforce. The two most obvious orders that were disobeyed were the shutting up of infected houses and the shutting of inns after 21.00. It was common for taverns and inns to remain open past this time as there were so few officials around who could enforce the law. People in houses they were shut up could simply break out despite the presence of watchmen. Writing some years after the 1665 plague outbreak, Daniel Defoe believed that between 18 and 20 watchmen were killed during escape attempts from the occupants of plague houses.
“One particular watchman was blown up by gunpowder, and while the poor fellow made hideous cries for help, the whole family escaped." (Defoe)
Those who broke the orders were rarely caught or brought to justice simply because there were so few law enforcement officials around. The lack of enforcement probably accounted for more and more people side-stepping the orders.

SCC- Why were many of these rules ineffective? However, what did they show?

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Compare the treatment of the Black Death to that of the Great Plague.

Are advances in medicine evident during this period?

Give examples to support your answer.

_____
_____
_____
_____
_____
_____

SCC- How did the plague die out?

Summarise this topic in 5 bullet points:

-
-
-
-
-

What should John Hunter be remembered for?

L.O- To assess the improvements in Hospitals by 18th century and the contributions of John Hunter

John Hunter (1728-1793) came to London in 1748 at the age of 20 and worked as an assistant in the anatomy school of his elder brother William (1718-83), who was already an established physician and obstetrician. Under William's direction, John learnt human anatomy and showed great aptitude in the dissection and preparation of specimens. William also arranged for him to study under the eminent surgeons William Cheselden (1688-1752) and Percivall Pott (1714-88).

Hunter was commissioned as an army surgeon in 1760 and spent three years in France and Portugal. As well as developing new ideas on the treatment of common ailments - such as gunshot wounds and venereal disease - Hunter spent time collecting specimens of lizards and other animals. On his return to England in 1763 he began to build up his private practice. His scientific work was rewarded in 1767 when he was elected a Fellow of the Royal Society. In 1768 he was elected Surgeon to St George's Hospital, and in 1783 he moved to a large house in Leicester Square, which enabled him to take resident pupils and to arrange his collection into a teaching museum.

Hunter devoted all his resources to his museum. It included nearly 14,000 preparations of more than 500 different species of plants and animals. As his reputation grew, he was supplied with rare specimens such as kangaroos brought back by Sir Joseph Banks from James Cook's voyage of 1768-71.

While most of his contemporaries taught only human anatomy, Hunter's lectures stressed the relationship between structure and function in all kinds of living creatures. Hunter believed that surgeons should understand how the body adapted to and compensated for damage due to injury, disease or environmental changes. He encouraged students such as Edward Jenner and Astley Cooper to carry out experimental research and to apply the knowledge gained to the treatment of patients.

By the 1780s Hunter enjoyed widespread recognition as the leading teacher of surgery of his time. However, the acclaim did little to mellow his blunt-speaking and argumentative nature. His temper was to be his downfall: Hunter died in 1793 after suffering a fit during an argument at St George's Hospital over the acceptance of students for training.

Hunter is today remembered as a founder of `scientific surgery'. He was unique in seeking to provide an experimental basis to surgical practice, and his museum is a lasting record of his pioneering work.

TASK

Using the information above, as well as p. 38-39 in the orange books, create a timeline of Hunter's life on the following page.

SCC- Why were some people opposed to Hunter and his work?

Which was John Hunter's most significant contribution? Explain your answer

Summarise this topic in 5 bullet points:

-
-
-
-
-

HOMEWORK

How did Hospitals change in the eighteenth century?

TASK: Read p.36-37 in the orange books and answer the following questions:

1. What types of people founded hospitals in the eighteenth century?

_____
_____
_____

2. Other than caring for the sick, what else did eighteenth-century hospitals do?

_____
_____
_____
_____
_____

3. What was new about hospitals at this time?

_____
_____
_____
_____
_____

4. Why had attitudes to hospitals changed? In what ways did religion affect hospitals?

_____
_____
_____
_____
_____

Summarise this topic in 5 bullet points:

- _____
  _____
- _____
  _____
- _____
  _____
- _____
  _____
- _____
  _____

How much credit does Florence Nightingale deserve?

L.O- To investigate the contribution of Florence Nightingale to the improvement of Hospitals.

https://www.youtube.com/watch?v=hBVX5s43_Ks

Notes:

Edward Jenner and the first Vaccine

L.O: To explain the significance of Edward Jenner's discovery.

Inoculation vs. Vaccination

Vaccination is the more commonly used term, which actually consists of a "safe" injection of a sample taken from a cow suffering from cowpox... Inoculation, a practice probably as old as the disease itself, is the injection of the variola virus taken from a pustule or scab of a smallpox sufferer into the superficial layers of the skin, commonly on the upper arm of the subject. Often inoculation was done "arm to arm" or less effectively "scab to arm"...

A brief history of smallpox

An estimated 300 million people died from smallpox in the 20th century alone. This virulent disease, which kills a third of those it infects, is known to have co-existed with human beings for thousands of years. As the world's population grew, and travel increased, so the virus that Edward Jenner called the "speckled monster" grasped every opportunity to colonise the world.

The earliest physical evidence of smallpox is the pustular rash on the mummified body of Pharaoh Ramesses V of Egypt, who died in 1157 BC. Traders carried the disease from Egypt to India during the 1st millennium BC. From there it swept into China in the 1st century AD and reached Japan in the 6th century. Returning crusaders provided a way for smallpox to spread through Europe in the 11th and 12th centuries.

Smallpox was particularly successful in virgin populations. The Spanish inadvertently owe much of their success in conquering the Aztecs and Incas in Mexico in the 16th century to smallpox. Unlike the Spanish, the native Indians had no immunity to the disease, having never encountered it before. It wiped out huge numbers of them. A century later the North American Indians suffered a similar devastation. In the 18th century smallpox decimated the aborigines when it reached Australia, the last corner of the world to have escaped its ravages.

The Spanish inadvertently owe much of their success in conquering the Aztecs and Incas in Mexico in the 16th century to smallpox.

People struggled to find ways to battle with smallpox. Variolation was a process developed in the 10th century in China and India. It involves taking pus from the pocks of someone suffering from smallpox and inoculating healthy people with it. Usually a mild case of smallpox developed, giving lifelong immunity afterwards. There was a risk of death from this, but in a world where smallpox was rife the odds made it worthwhile; about 0.5-2 percent of people died after variolation, compared with 20-30 per cent after natural smallpox. A major disadvantage of the practice was that variolated people could pass on severe smallpox to others.

Edward Jenner's breakthrough

Lady Mary Wortley Montagu (1689-1762) is credited with introducing variolation to Britain in 1721. Severely pockmarked herself after surviving the illness, she learnt about variolation in Constantinople, where her husband was the British Ambassador. She had her children inoculated and persuaded the Princess of Wales to do the same.

The real breakthrough in fighting the virus came in 1796, when Edward Jenner carried out his famous experiment. He inserted pus extracted from a cowpox pustule

on the hand of a milkmaid, into an incision on the arm of an eight-year-old boy, James Phipps. Jenner was testing his theory, drawn from the folklore of the countryside, that milkmaids who suffered the mild disease of cowpox never contracted smallpox. Jenner proved conclusively that contracting cowpox provided immunity against smallpox as well. He was quick to realise the enormous potential of vaccination. In 1801 he wrote 'It now becomes too manifest to admit of controversy, that the annihilation of the Small Pox, the most dreadful scourge of the human species, must be the final result of this practice.'
It was to be well over a hundred years before Jenner's vision finally began to be realised. In 1959 the World Health Assembly passed a resolution to undertake the global eradication of smallpox. The goal of eradication made sense to the developed countries in Europe and North America. Although vaccination had largely wiped out the disease from these areas, they all continued to suffer outbreaks of smallpox caused by imports from developing countries where the disease was endemic. There were a number of outbreaks that demonstrated how a few smallpox cases could spark mass panic and large-scale disruption. In 1947 a Mexican businessman, unaware he was incubating smallpox, travelled by bus to New York. Worried that a smallpox epidemic would spiral out of control in the densely populated city, the health authorities decided to act pre-emptively and mass vaccinate New Yorkers. Over six million people were vaccinated within a month at hundreds of vaccination stations in hospitals, firehouses, and police stations. In all, 12 people caught smallpox and two of them, including the Mexican, died. Ironically six people also died from adverse reactions to the vaccine.

Explain the significance of Edward Jenner (8 marks)

PLAN:

• His work was used worldwide.
• By 1853 vaccination in Britain was compulsory.
• He had shown that it was possible to fight disease.
• His idea could not be used for other diseases as he did not know why it worked.
• Jenner had observed the possible benefits of cowpox.
• He did not know what caused smallpox (or cowpox).
• He did not know about germs.
• Men like Koch and Pasteur would take the fight against disease further.
• Eradication of smallpox
• Discoveries of vaccinations for other diseases- MMR, TB

Remember- short term, medium term, long term!

WWW:

EBI:

MAP:

SCC- Why did some people oppose Jenner's discovery and methods?

Summarise this topic in 5 bullet points:

-
-
-
-
-

HOMEWORK: REVISE FOR END OF TOPIC ASSESSMENT (COMPLETED IN EXAM BOOKS)

Simpson and Chloroform – How was pain conquered?

L.O: To understand why there was so much opposition to chloroform and how this was overcome

What were the two biggest problems for surgeons in the medieval and renaissance period?

1. _____
2. _____

SCC- How were these "overcome" before the 1840s?

_____
_____
_____
_____
_____
_____
_____

Why was there so much opposition to Simpson's discovery?

1. When and how did Simpson "discover" chloroform?

_____
_____
_____
_____
_____
_____
_____

2. Read page 43 in the text book and sum up the reasons for opposition into 3 bullet points.

- _____
  _____
  _____
  _____
  _____
  _____
- _____
  _____
  _____
  _____
  _____
  _____
- _____
  _____
  _____
  _____
  _____

3. Why was this opposition overcome?

SCC- Why did the development of anaesthetics not revolutionise surgery in the 1840s and 1850s?

<u>Summarise this topic in 5 bullet points:</u>

-
-
-
-
-

OPEN YOUR EXAM BOOKS

Teacher assessed

Compare 19th century anaesthetics with medieval surgery. In what ways were they similar? (8 marks)

Germ Theory

L.O: To know how Germ Theory was discovered and its impact on the treatment of disease in Britain

What did people believe caused infection before 1800?

_____
_____
_____
_____
_____

Public Health Debate

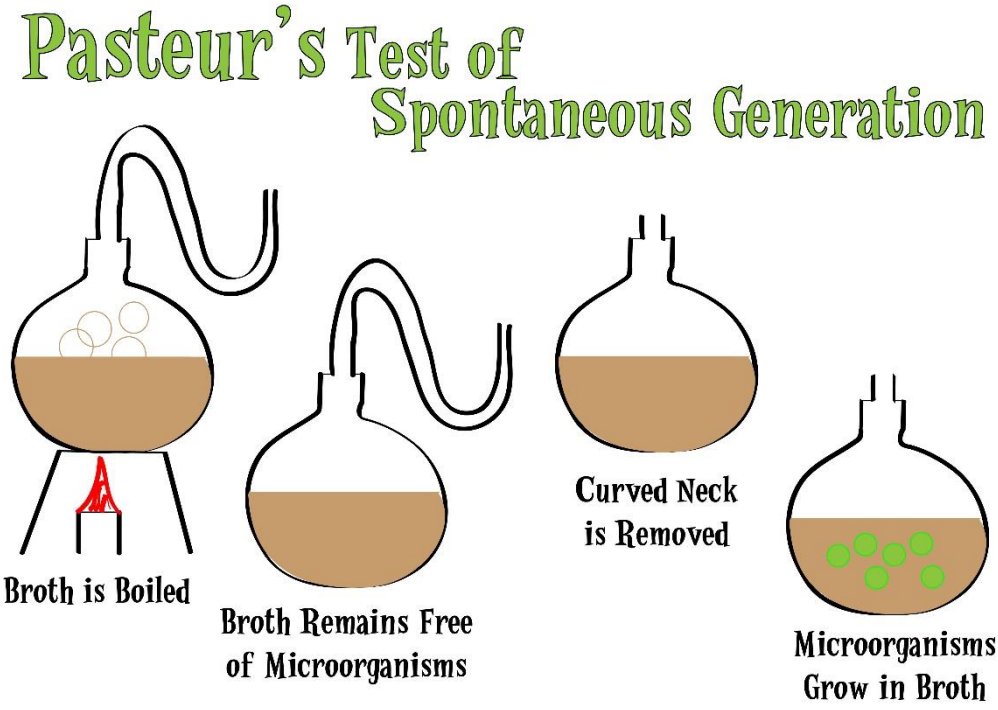
- **Anti-contagionists** (Florence Nightingale, James Simpson)- believed that infection spread by interacting with the environment (soil or water). This was linked to the theory of miasma: the idea that there was 'bad air'.
- **Contagionists** (John Simon)- believed that infection was spread by contact with an infected person or bacteria. *They were correct but could not prove this as some people who came into contact with the infection did not become sick.**

***Why not?**

_____
_____
_____
_____
_____

Louis Pasteur

- Pasteur wanted to find out what was turning beer and wine sour.
- He identified the microbe and showed that by heating it, they would be killed.
- He showed that infection was biological, not chemical.
- This was **GERM THEORY**.



In your own words, describe:

- Pasteur's experiment

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

- Germ Theory

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

SCC- Do you think Pasteur could make a change by himself?

_____
_____
_____
_____
_____

Summarise this topic in 5 bullet points:

- _____
  _____
- _____
  _____
- _____
  _____
- _____
  _____
- _____
  _____

Joseph Lister and Antiseptic Surgery

L.O: To assess why there was opposition to Lister's antiseptic approach in Britain

Recap

What was Pasteur's main problem with his Germ Theory?

1. Describe Lister's antiseptic techniques in surgery

2. Explain how Lister applied Pasteur's Germ Theory to his own discoveries.

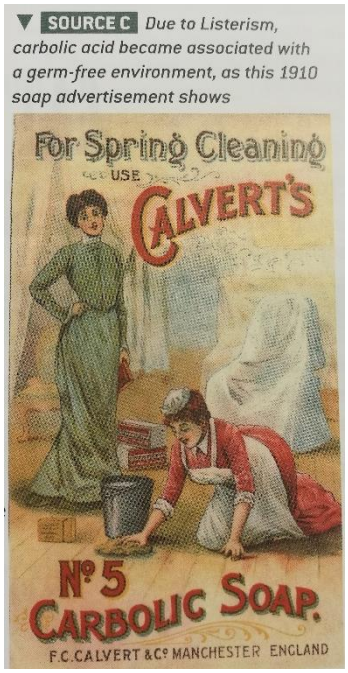
3. Why was there opposition to Lister's antiseptic ideas?

SCC- How could this opposition be overcome?

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Source analysis

What does this source suggest to a Historian studying the significance of Lister's work?



▼ **SOURCE C** *Due to Listerism, carbolic acid became associated with a germ-free environment, as this 1910 soap advertisement shows*

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Summarise this topic in 5 bullet points:

- _____
  _____
- _____
  _____
- _____
  _____
- _____
  _____
- _____
  _____

The Steps to Accepting Germ Theory

L.O: To examine the contribution of British scientists and doctors to the acceptance of Pasteur's Germ Theory

Anti vs. Aseptic Surgery

- By the 1890s, surgeons had developed Aseptic surgery.
- This meant that rather that soaking everything in carbolic acid to remove the microbes, they were absent from the start.
- Doctors had to be scrubbed, covered by robes and gloves, and all equipment was sterilised.
- Rooms were also smaller to reduce the risk of infection.
- Aseptic techniques was based on acceptance of Pasteur's Germ Theory. So how did this happen?...

How does antiseptic surgery differ from aseptic surgery?

Antiseptic:

_____
_____

Aseptic:

_____
_____

Using p.48 and 49 in the orange books, you are going to find out and explain how Pasteur's theory was accepted.
Include:

- The Cattle Plague of 1866
- Typhoid fever
- John Tyndall
- Lionel Beale
- Joseph Lister

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

SCC- Arrange these contributions into a timeline below:

Summarise this topic in 5 bullet points:

-
-
-
-
-

The Contributions of Robert Koch

L.O: To explain Koch's impact in Britain and compare to Pasteur

Yes, his name sounds like a rude word. Please laugh about that now and get it out of your system... Please also remember it is not spelt phonetically!

Pasteur's problem

- Louis Pasteur was a chemist, not a biologist. Therefore, even though he linked germs to microbes and showed that they could cause wine to sour, he could not apply this to disease.
- It took a doctor- Robert Koch- to make the link between germs and human disease.

Robert Koch

Koch grew the germ responsible for causing anthrax and injected it into mice, giving them the disease. This was enough proof to show that the germ caused disease. He also found ways to dye specific microbes and perfected the methods that allowed scientists to hunt specific disease causing microbes.

Reactions in Britain

Using p.51, add the work of Roberts and Cheyne to yesterday's timeline.

Compare the work of Pasteur and Koch, in what ways were they similar? (8 marks)

Tips-

- How much change in medical thinking did each bring?
- How many lives were affected by their work?

Plan:

Answer:

WWW:

EBI:

MAP:

SCC: Who was the most significant?

Summarise this topic in 5 bullet points:

-
-
-
-
-

The Search for Vaccines and Cures

L.O: To explain the factors involved in the search for vaccines between 1800 and 1900

Pasteur vs. Koch

- Now that Germ Theory had been accepted, the race was on to make more scientific medical discoveries.
- There was competition between the two to make the next breakthrough, but other scientists also wanted some of the action…

Below are the 6 factors contributing to the scientific breakthroughs in the 1880s and 1890s. You need to summarise each one into **3 symbols** and **5 words** to make them easier to remember.

THIS WILL MAKE A GOOD REVISION TOOL.

SCC- Number the factors from the most to the least important and justify your choices.

War

Government and finance

Individual Character

Luck

Communication

Teamwork

Summarise this topic in 5 bullet points:

- _____
- _____
- _____
- _____
- _____

Homework- TO BE COMPLETED TO THE SAME STANDARD AS CLASS WORK!

Was luck the main factor in the development of vaccines between 1800 and 1900? [16 marks]

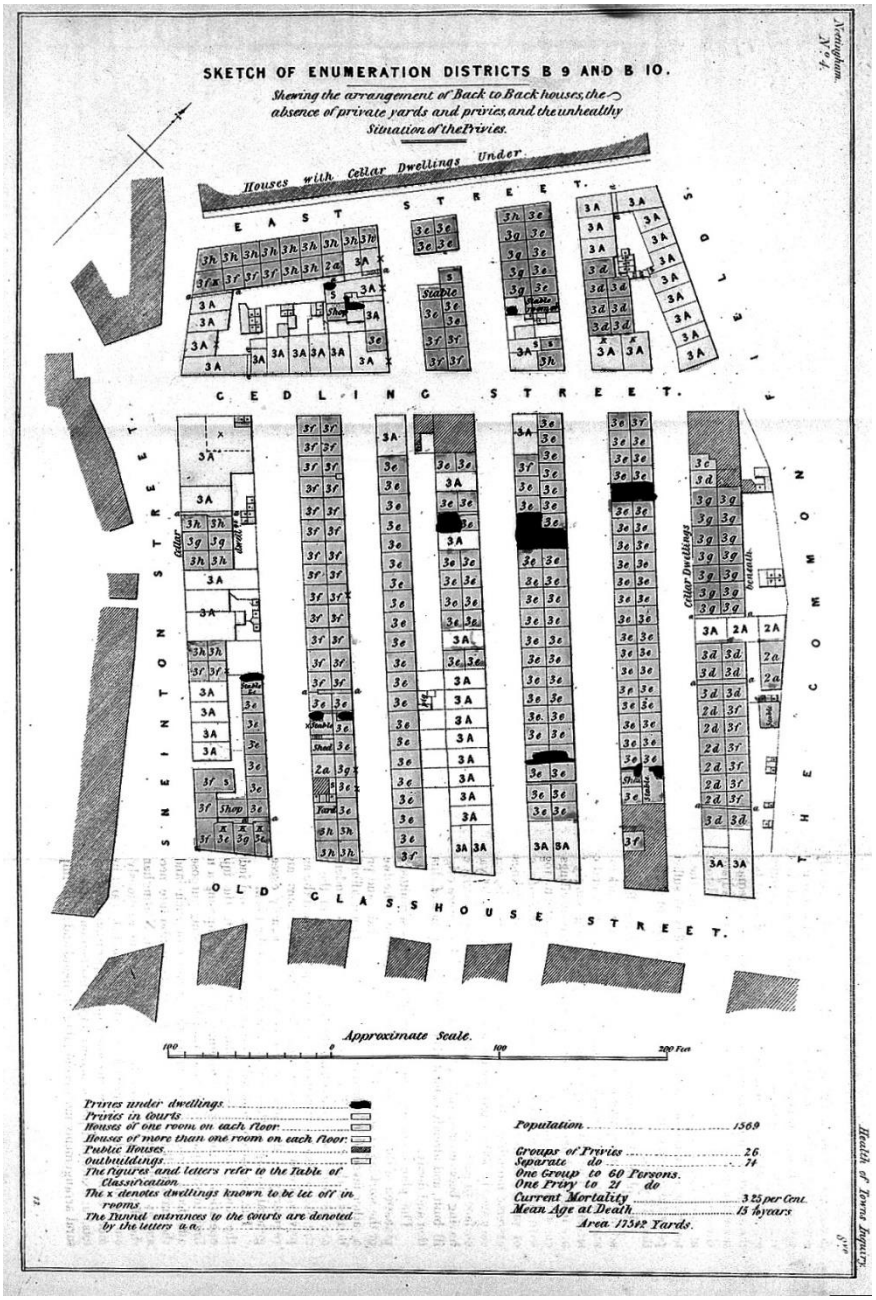
WWW:

EBI:

MAP:

Towns in the early 1800s

L.O: To examine public health problems in industrial Britain



What can you infer about the quality of living from this housing plan in 1800?

Using p.54 to 55, list all of the reasons it was so easy for disease to spread in 19th century towns.

SCC- Why did the government find it so hard to deal with the health crisis in the towns?

OPEN YOUR EXAM BOOKS

Teacher assessed

Lack of sanitation was the main reason for the spread of disease in the 19th Century.
Do you agree? (16 marks)

<u>Summarise this topic in 5 bullet points:</u>

-
-
-
-
-

Cholera

L.O: To examine the main cholera epidemics of the 19th Century.

Watch the clips and answer the following questions:
Part 1:
http://www.bbc.co.uk/education/clips/zr787ty
Part 2:
http://www.bbc.co.uk/education/clips/zk6q6sg

1. What did people believe caused cholera?

_____
_____
_____
_____
_____

2. What did Chadwick's report suggest?

_____
_____
_____
_____
_____

3. Why was this important?

_____
_____
_____
_____
_____

John Snow to the rescue!

John Snow (1813-58)

Snow was a famous surgeon who worked in Broad Street, Soho, London. In 1854, over 700 people living in this street, or in nearby streets, died of cholera within 10 days, so Snow began to investigate. Through meticulous research, he found that all the victims in this small area got their water from the Broad Street water pump. Those who didn't die seemed to be getting their water from other places. Snow asked permission to remove the handle of the water pump so people were forced to use another. There were no more deaths in the street! Snow investigated further and found that a street toilet, only one metre from the pump, had a cracked lining that allowed polluted water to trickle into the drinking water. Snow had proved that cholera was not carried through the air like a poisonous gas or miasma. Instead it was caught through contagion: by coming into direct contact with a cholera sufferer, or in this case, drinking some water contaminated by a victim's diarrhoea.

Task:

Imagine you are John Snow in 1854. Write a letter to the National Board of Health explaining how cholera is spread (give your evidence) and what you think should be done about it.

SCC- Snow had proved how cholera had spread, but what was still missing?

Summarise this topic in 5 bullet points:

-
-
-
-
-

The Great Stink

L.O: To assess the impact of Public Health reform

1848 Public Health Act The Central Board of Health was created and although it was abolished 10 years later, the Act also **encouraged** local Boards of Health to be set up to appoint a Medical Officer, provide sewers, inspect lodging houses and check food which was offered for sale.

1875 Public Health Act This brought together a range of Acts covering sewerage and drains, water supply, housing and disease. Local authorities **had to** appoint Medical Officers in charge of public health. Local sanitary inspectors were appointed to look after slaughterhouses and prevent contaminated food being sold. Local authorities were **ordered** to cover sewers, keep them in good condition, supply fresh water to their citizens, collect rubbish and provide street lighting.

Which important breakthrough came between these two acts?

Watch the clip and summarise the work of Bazalgette

http://www.bbc.co.uk/education/clips/zhdy4wx

Study source A. How useful is it to a historian studying the development of public health in Britain? (8 marks)

The Great Stink

▼ **SOURCE A** *A Punch cartoon commenting on the state of the River Thames in 1858; 'Father Thames' introduces his children, Diptheria, Scrofula and Cholera, to London*

WWW:

EBI:

MAP:

SCC- Make notes on the new sewer system using p.60 and 61

Summarise this topic in 5 bullet points:

-
-
-
-
-

Penicillin

L.O: To explore the development of the pharmaceutical industry.

Fleming and Penicillin

In his lab in the 1920s, Alexander Fleming was searching for an effective antiseptic. His discovery was lysozome, an enzyme that is found naturally in sweat and tears. Fleming found that this enzyme has an antibacterial effect but is unable to tackle the strongest of infections.

Fleming's lab was always very busy and his latest discovery caused a lot of excitement, but this hive of activity meant that his lab was often a mess. This proved to be very fortunate. In 1928, Fleming was tidying his lab and came across a pile of petri dishes, which contained bacteria that he had forgotten he had been growing. Before placing the petri dishes into cleaning fluid, Fleming decided to take a look at them. One in particular made him stop and think. On closer examination, he realised that mould was growing on it. In itself this was nothing unusual but, on this particular sample, all around the mould the bacteria he had been growing was dead.

Fleming wondered if it was the mould, a strain called Penicillium notatum, that had killed the bacteria. Fleming knew that he needed to test his prediction and, therefore, set up a control experiment. The experiment consisted of a petri dish, which contained the mould and bacteria, and one that did not. When he came back to look at the petri dishes, he observed that the bacteria around the mould were dead but that they continued to grow in the petri dish that did not contain the mould. He concluded that his prediction must be right.

Fleming spent many years studying the mould and found that it was non-toxic and that it could be used successfully to control many types of bacteria. Unfortunately, he did not have the resources to experiment more widely.

Fleming and penicillin

Use the table on the next page to log the stages that Alexander Fleming went through in order to be sure of what he had discovered.

What prediction did Fleming make?	
Which observations led him to make his prediction?	
How did he ensure that his prediction was correct (give details!)?	
What evidence did he gather which enabled him to draw a conclusion that proved his prediction?	

Using page 64 and 65, create a flow chart showing how penicillin was developed. Include the following: Fleming, Florey & Chain, WWII.

How have drugs and treatments developed since 1945?
In pairs or groups of three – examine the advances shown in the timeline on pages 66-68.

Which would you choose as the three most significant advances since 1945?

1. _____
2. _____
3. _____

SCC- Justify your choices:

1. _____
   _____
   _____
   _____
2. _____
   _____
   _____
   _____
3. _____
   _____
   _____
   _____

Explain the significance of:

- IVF treatment

_____
_____
_____
_____
_____
_____
_____
_____
_____

- DNA

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Alternative medicine (p.70-71 for reference)

Summarise this topic in 5 bullet points:

- _____
- _____
- _____
- _____
- _____

The impact of war and technology on surgery and health

L.O: To compare the impact of the two World Wars on health care

Which Major war in the 20th Century had the biggest impact on medical advances and the health of the nation?

In 1899, England entered the Boer war. This war called for men from around the country to sign up to fight. This was a significant turning point in the state of health care in the country. Many of the men who signed up to fight in the war were severely unfit and therefore unable to fight. It was this realisation which caused the government to take immediate action in improving health care. Historians have commented that "The difficulties encountered during the Boer war of 1899-1902 came as a shock to the British and led to a series of major reforms." In the 19th Century and at the very beginning of the 20th, the majority of people in England lived and worked in poverty. They lived in very unhygienic conditions where disease was very easily spread. In the early 20th century, between 8 and 10 per cent of the population were living below subsistence levels. Along with living in poverty, the lower classes did not have sufficient amounts of money to be able to afford a doctor, which meant that the spread of disease was even more common. Women were still responsible for taking care of the sick and treating them as best they could before an illness became more serious. These treatments included things such as keeping a sweaty sock around the neck to cure a sore throat; things that today we know would have had absolutely no effect. However, the turn of the 20th Century did bring about medical advances and brought with it huge advances in the standards of health care and treatment of illnesses. As far back as Hippocrates, war has been a major factor in medicine, "War is the only proper school of the surgeon". In this essay, I am going to discuss using the views of different historians and decide which war of the century had the most important impact on improving the health of the nation and medical advances and come to a conclusion based on my findings.

There were several medical advances in terms of treatments and discoveries at the start of the new century. Several vaccinations were created thanks to the work done in 1796 by Edward Jenner when he developed the first vaccination against small pox. These new vaccinations included such against tuberculosis in 1906 and the first 'Magic Bullet' Salvarsan 606, discovered by Dr Sahachiro Hata in 1909 which was against diphtheria. Also, the vaccination for typhoid saved around 5000 lives annually. Along with the work done by Edward Jenner, other scientists were also making breakthroughs in the medical world at this time. In the early 1850s, Louis Pasteur came up with the germ theory which linked micro-organisms to decaying matter. However, Pasteur was a scientist and not a doctor and so it was the German doctor Robert Koch who was able to make the link between micro-organisms and disease which was a major breakthrough in medicine as the causes of different diseases were now able to be researched.

Due to the governments new found interest in improving the health of the nation, access to health care and the standards of the medical care available were also improved by law. By 1900, most cities in the country had infirmaries, fever houses and asylums to care for the poor along with local cottage hospitals and specialised

sanatoriums. In reference to the Sanitary act of 1866 and the 'Stamping out' method of controlling diseases, Anne Hardy said that "This new perspective, combined with the powers conferred under the 1866 Act, brought something of a revolution to the methods of sanitary departments, consolidating their activities and directing them more precisely towards the effective prevention of infectious disease." Michael Sigsworth of Sheffield University stated that, "The working class were commonly referred to as 'the Great Unwashed', purportedly ignorant and indifferent on matters of personal hygiene, environmental sanitation and hence health." This view shows that there was very little effort at this point to improve the health of the working class as they could not afford medical treatment and therefore were left to their own devices. Throughout the rest of the century, we see this dramatically change and war was a vital participant in making this change happen.

In terms of access to health care, a number of measures were introduced including health visitors being introduced to visit new mothers and care for their babies with the hope of improving infant mortality in 1907 and the National Insurance Act of 1911. This act covered working men's medical costs which were paid by the men themselves, their employers and the government. It did not however cover their families and only applied to certain groups of men. Some people thought this act to be one of great benefit to the workers "the insured person received 10 shillings for each of 13 weeks and 5 shillings for each of 13 subsequent weeks in any one year; in addition, he enjoyed free treatment from a doctor." This shows that the men insured did recognise the benefits of the act. It did however attract criticism from trade unions whose members already subscribed to their own forms of insurance and also "feared competition from the state" "the British Medical Association also objected to state intervention." Due to the fact that these changes happened before the war, we could assume that massive improvements would have been made to health care in the event of no war. However, the wars have both contributed to medicine in very specific ways.

In terms of the standard of health care available, measures were also introduced to improve this. By 1900, doctors had to have a medical university degree which included training such as numerous dissections and accompanying a doctor in a hospital for a certain amount of time. The doctors then chose to either become either a General Practitioner or a doctor in a hospital with some kind of speciality. In 1902, the Midwives Act was introduced which ensured that midwives were thoroughly trained to a high standard which was also aimed to improve child mortality. However, Policy and Practice in health provision states that "The midwives act was only a partial victory as it allowed lay midwives to register and continue to practice as 'bona fide' midwives. Clarke (1995) also states that "the Act preserves the midwife in name who, in return for the benefits of education and registration, had to surrender to medicine's control of midwifery and accept a reduced sphere of competence and practice." The midwives act therefore did little to improve the state of midwives and degraded current midwives as they were set to the level of newly trained incompetent midwives.

There were also various other acts introduced in this period by the government to improve the Welfare State. These included free school meals for poorer students being introduced in 1906, medical inspections in schools provided by the School Medical Service to check on the health of young children as of 1907 and the OAP Act of 1908 which introduced pensions for old people. These acts showed steady improvements in public health and show the government taking notice of the conditions English people had to live in. This was a direct response to the Boer war as this was when the government realised the poor state of the health of the nation.

However, even with these improvements, there were still many issues surrounding health care. Doctors could choose to accept as their patients and if people could not pay them, they were turned away without treatment. Hospitals were also a problem because despite the government training doctors to work at them, they did not have sufficient funds to support them financially. The hospitals therefore relied heavily on charity. Initially, I believe that the Boer war lead to this improvement in the long term, however, again these changes could have occurred in time if war was not present.

The outbreak of World War I in 1914 showed the government that even more had to be done to improve the medical facilities available to the people of the country. A severe outbreak of influenza in 1918-1919 which became an epidemic, showed the government that there just was not enough hospital beds available to treat all the sick. Also, as the National Insurance Act only covered men, many women and children with the virus could not pay for medical care and therefore had to wait longer to receive treatment and sometimes did not. Historian L.C.B Seaman has the view that the National Insurance Act was “financed by a regressive tax which took no account of ability to pay and provided cash benefits which related only to the barest necessities of life and which, in this particular respect, gave the working class too little and the middle class virtually nothing.” which shows the negative view of the Act and why not all workers were pleased with it. Similarly, Andrew Marr states that “The Insurance system excluded many elderly people, housewives and children, who were therefore put off visiting a doctor at all unless they were in the greatest pain or gravest danger.”

Developments were also made in the area of prosthetic limbs. Due to the number of soldiers losing limbs in the war, prosthetic limbs were developed and administered to the soldiers who required training in order to use them successfully. Also, there was a plastic surgery unit set up in the British army because of the number of soldiers who had suffered disfigurement in explosions. Around 5000 soldiers were given medical treatment due to disfigurement and many men’s faces had to be reconstructed. Many of these soldiers had to return in the following years to have follow up operations. This showed a significant development in health care as soldiers were given free treatment as compensation to their injuries and a far advanced standard of care than they could have had. It was also a huge advance in medical techniques, creating the basis of the plastic surgery methods we experience today. Pat Baker states that “the Western Front played a vital role in the development of plastic surgery.”

The Nursing Act was introduced in 1919 which ensured that all nurses were thoroughly trained to an acceptable level to match the level of trained doctors.

Technological medical advances were also made during the war, particularly in the area of blood transfusions. Prior to the war, blood transfusions had not been very successful and often failed as it had not been realised that the blood type of the blood being received and the patient had to match. Also, the blood could not be stored because of clotting so the patient and donor both had to be present. Due to the number of injuries during the war and loss of blood in soldiers because of this, the science of blood transfusions had to be perfected so more research was done and many successful blood transfusions were carried out. The war played a vital part in the developments and improvements in this particular surgery. Dr N. C. HUGHES, F.R.C.S. says, “War has always provided a great stimulus for reconstructive surgery and the First World War was no exception.” We now see medical improvements which were made due to the First World War which we can recognise as being a huge part of cosmetic and medical surgery today which shows the importance of the war in this field as without the developments, the surgery would not be as advanced and available as we find it today.

As the country started to receive news of the end of the war nearing in early 1918, they were unaware of what lay ahead in the form of Spanish influenza. The virus killed between 20 and 40 million people worldwide and claimed more lives in one year than Black Death did in the four years from 1347 to 1351. The virus first reached Britain in Glasgow in May 1918 and in just a few months, 228,000 people had died. Unlike most flu viruses, which affect the young and old, this virus made 20 to 30 year olds with the strongest immune system the most vulnerable. Factors which made the virus so widespread was the fact that the soldiers were arriving home across the country from battle with the virus and public gatherings made the virus spread very quickly, such as public celebrations of the end of the war in November 1918. In 1921, local councils started treating the public for tuberculosis as many people developed the disease as a result of the Spanish influenza. The death rate from tuberculosis decreased from 1918 when the virus first struck from 46200 to 33300 in 1921 but the authorities still felt that something must be done to treat those affected. The virus spread due to the First World War and so the developments in the treatment of this disease were a significant development in public health due to the war. Eugenia Tognotti states that “while the most appalling epidemic ever to sweep through the world since the ‘Black Death’ of the 1300s was still raging, the scientific community had to admit that influenza originated not from a microbe, but from a virus.” This supports the scientific medical developments made during the war which led to better health care today. According to Rob Baggot, “the influenza epidemic of 1918/19 was blamed for at least 20 million deaths.” This shows that the epidemic was a cause for major medical development and it was also a result of the First World War as the infection was brought to England by soldiers returning from Spain.

Several acts were passed by the government to improve the health and wellbeing of the nation. In 1919, the Housing Act generated “homes fit for heroes to live in” which were developed across the country following funding from the government from 1919 to 1923. This shows a direct response to the war from the government as they aimed to improve the facilities for the wounded and otherwise soldiers returning from the front line. Also, the government aimed to improve the lives of families that had lost their ‘male provider’ figure during the war. Again in 1930, a second Housing Act was passed which was a five year programme aiming at clearing the country of slums and as a result the local authorities were made to provide suitable housing as a replacement. The Local Government Act of 1929 made the local authorities responsible for workhouses and infirmaries, all under the control of medical officers of health. In schools, more progress to do with children’s health was made when free milk became available to school children in 1935 meaning those who could not afford it otherwise were still receiving the necessary nutrients. It has been said that “the inspection and treatment of schoolchildren forced the LGB to take a greater interest in public health.” This also shows a response to the war because due to the poor living conditions and malnutrition of children during a time of national debt and rationing during the war, children’s health had deteriorated. This is another example of public health improving due to the First World War. It has been noted that “state responsibility for the social welfare of the individual continued to increase in the first post-war decade.”

During World War II, the bombings and air raids in the major cities brought medical care to the government’s attention once again. They produced many casualties and as a result the Emergency Medical Service was created by the government. This put all the hospitals in the country under the control of the Ministry of Health. The Ministry then built new hospitals and 1000 new operating theatres to deal with the casualties. Patients received free treatment which had never been administered before and if this was not the case, many people would have died as a result of their injuries and not being able to afford medical attention do to their low salaries and the high prices of doctors at the time.

Also as a result of the bombings, the Blood Transfusion service was set up and donated blood, which was able to be stored as of World War I, was kept in hospitals readily available to any patient needing an urgent blood transfusion. An ambulance service also became available for the first time which made it possible for patients to be transported from the site of an explosion to the hospital much more efficiently. This saved a very large number of lives. However, as Brian Craggs explains, some people did not think that this service was as very hygienic or efficient, “Though gaining importance during this time, ambulance work was regarded as little more than manual labour, with minimal clinical control and regulation.”

Penicillin was produced on a mass scale for the first time during World War II in order to stop infection in hospitals. Alexander Fleming first observed the antibiotic effects of penicillin in 1929. However, no one had the need at this time to invest in penicillin as it was simply not needed. It was only during the Second World War when infection was great that the drug was needed on such a large scale. The Americans then invested in the mass production of penicillin and it quickly became

the most used antibiotic. Peter Neushul claims that “Mass production of the antibiotic penicillin was among the most significant achievements of WW II science and technology. Penicillin saved thousands of soldiers from the horrors of gas gangrene and the other bacterial diseases that were rampant during previous conflicts.” which shows the importance of the developments of medicine during the war in improving health and treatment.

Children were evacuated from major cities to the countryside as a result of the war. When they arrived at their temporary homes, people from outside the cities were shocked to learn of the conditions they were living in- without real toilets and many were covered in nits and lice. Due to the quality of the water during the war, the government launched a diphtheria campaign urging all children to be vaccinated against the disease as it was claiming many lives. This was an important improvement to health care during the war as it effectively stamped out a disease which caused many deaths before and during the war years. Hilary Butler states that “after the 1939-1945 war the death and incidence trend continued to fall, until the disease appeared to have almost vanished by 1985.” It is improvements to health care such as this which lead to the NHS after the war years. The government realised the dramatic improvements that could be made by simple health care and hygiene techniques during the war and this developed further after the war.

During the war, food was unable to enter the country- this resulted in rationing. Each person was only allowed a certain amount of food per day and there were huge shortages of products such as fats and sugar. This meant that people were encouraged and largely forced to eat more vegetables. Because of this, many people, particularly the poor, found that their standard of health had increased by the end of the war due to their changed diet as luxuries such as sweets were rationed, the public were encouraged to “Dig for Victory” and grow their own vegetables which resulted in a much improved diet. However, recent research has shown that the rationing of this period has “affected the brains of babies in the womb” and people who were in the womb at this time have lower results in mental tests that those who were not.

This war also brought about sufficient medical and health advances. As a US army official said, “For the medical profession at least, war has been a very efficient school master” this shows that both the first and second World Wars have been very important in the development of medicine.

In 1948, the National Health Service was introduced to Britain. This service was possibly the biggest step taken by the government to make health care more accessible to the public. This service was a direct response to the Second World War as a decline in public health had been seen due to rationing and poor living conditions. Also, due to debt the government realised that the public could not afford the required medical attention and services desired in order to restore them to full health. This service gave every person the right to see a GP free of charge and be referred to a hospital if necessary. It also gave them right to see a dentist and an optician regularly as part of their standard health care. Extra health care was provided for pregnant women, young children and elderly people. For the first three

years of the NHS, all health care and treatments were all completely free of charge, this is because the government thought that the need for the NHS would decrease over the years as more and more people were being treated for disease and illness. This however was not the case and in 1951 the government introduced prescription charges as they realised that they could not carry on to completely fund the NHS due to rising costs. Every other service remains free of charge. Rob Baggot states that "The creation of the NHS in 1948 can be regarded as a major public health achievement."

However, even though the NHS was very popular with the public as they no longer had to pay for their medical care, it was not as popular with doctors. The doctors were opposed to the NHS as many had to give up their practices and join the service and they feared that they would get paid less under the NHS than they had previously earned when they charged their patients themselves. Historian Andrew Marr states that "In a poll of doctors, for everyone who said he would work in the new NHS, nine said they would refuse to take part" but also that, "If there was one single domestic good that the British took from the sacrifices of the war, it was a health service free at the point of use."

In conclusion, looking over the whole hundred year span of medicine in the twentieth century it is notable that the major advances in health and medicine, such as the National Insurance Act, the development of plastic surgery and the NHS, have all occurred after a major war. This is due to the fact that each of the wars were a major eye-opener for the government and they realised the poor state of the health of the nation and felt that they needed to improve this in order, at the very least, to improve the health and state of their armed forces. I do not believe that there is a definitive difference between the First and Second World War in terms of their impact on medical advances and the health of the nation. After thoroughly studying both wars and their effects, I believe that they both contributed in different ways. World War One had the biggest impact on medical advances because as a consequence of this war plastic surgery was developed, x-rays were used effectively and blood transfusions were made possible. This war therefore helped towards technological advances in the field of medicine. The Second World War also contributed but in a different way. The major development in health care due to this war came in the form of the NHS. This led to free health care, far superior health care facilities and overall better general health for the entire nation. Therefore, both wars impacted medical advances and the health of the nation but in different ways.

Written by Miss Southern, 2010.

TASK

Summarise how each of the wars impacted on health:

WWI:

WWII:

Additional notes using p.74 and 75:

SCC- Explain how technological developments since WWII have made an impact on surgery and health.

Summarise this topic in 5 bullet points:

-
-
-
-
-

Liberal Reforms

L.O: To assess the importance of the Liberal reforms on public health

The Liberal reforms are very important - they show a marked change in government policy from a
largely laissez-faire approach to a more 'collectivist' approach.
The government now accepted that it should have a much larger role and responsibility in helping those sections of society who could not help themselves.

Between 1906 and 1914 the Liberal reforms attempted to deal with the problem of poverty. The Liberals focused on four groups in society:

- the old
- the young
- the sick
- the unemployed

Winston Churchill summed up the aim of the reforms, saying If we see a drowning man we do not drag him to the shore. Instead, we provide help to allow him to swim ashore. In other words, the Liberals tried to provide some help for the poorer sections of society in order that they could help themselves.

Booth and Rowntree

- The reports of Charles Booth and Seebohm Rowntree showed clear evidence that, no matter how hard poorer people tried, they could not lift themselves out of poverty.
- The reports showed that poverty had definite causes, such as low pay, unemployment, sickness and old age, for which the cures were beyond the individual efforts of the poor.
- People were usually poor through no fault of their own. The concept of the "deserving poor" – those who were poor through no fault of their own – took root and was an important theme running through the Liberal reforms.

Other influences

- National Security – The South African War. There was a rejection of almost 25% of volunteers on fitness grounds. The figure was even higher from volunteers from the cities. The government was seriously alarmed about this. Politicians were also concerned. They asked could Britain protect its Empire or even survive against a stronger enemy if the nation's "fighting stock" of young men was so unhealthy?
- National Efficiency – By 1900, Britain was no longer the strongest industrial nation. It was facing serious competition from the new industrial countries like Germany. It was argued that, if the health and educational standards of British workers got worse, then Britain's status as a leading industrial power would be threatened. In addition, Germany had introduced a system of welfare benefits and old age pensions in the 1880s. Could Britain not do likewise?

- Political Advantage – Some historians argue that political advantage was a key factor in motivating the Liberals to introduce social reforms. The majority of working men were now voters, and the new Labour Party was actively competing for their votes! Were the Liberals concerned about retaining the traditional working class support?
- New Liberalism – "Old" Liberalism believed that poverty was due to personal defects, but, as the realisation grew that poverty itself imposed restrictions on choices available to individuals, a new definition of Liberalism developed. "New" Liberals argued that state intervention was necessary to liberate people from social problems over which they had no control.

The Young

- Children were thought to be the victims of poverty and unable to escape through their own efforts. In this way they were seen as 'the deserving poor'. Child neglect and abuse were seen as problems associated with poverty.
- The Provision of School Meals Act allowed local authorities to raise money to pay for school meals but the law did not force local authorities to provide school meals.
- Medical inspections after 1907 for children were made compulsory but no treatment of illnesses or infections found was provided until 1911.
- The Children's Charter of 1908 banned children under 16 from smoking, drinking alcohol, or begging. New juvenile courts were set up for children accused of committing crimes, as were borstals for children convicted of breaking the law. Probation officers were employed to help former offenders in an attempt to avoid re-offending.
- The time taken to enforce all the legislation meant the Children's Charter only helped improve conditions for some children during the period.

The Old

- Rowntree had identified old age as the time when most people dropped below his poverty line. Old age was inescapable so was clearly associated with the problem of poverty.
- The Old Age Pensions Act (1908) gave people over 70 up to 5 shillings a week. Once a person over 70 had income above 12 shillings a week, their entitlement to a pension stopped. Married couples were given 7 shillings and 6 pence a week.
- The level of benefits was low. Few of the elderly poor would live until their 70th birthday. Many of the old were excluded from claiming pensions because they failed to meet the qualification rules.

The Sick

- Illness can be seen as both a cause and a consequence of poverty.
- The National Insurance Scheme of 1911 applied to workers earning less than £160 a year. Each insured worker got 9 pence in benefits from an outlay of 4 pence – 'ninepence for fourpence'.
- Only the insured worker got free medical treatment from a doctor. Other family members did not benefit from the scheme. The weekly contribution was in effect a wage cut which might simply have made poverty worse in many families.

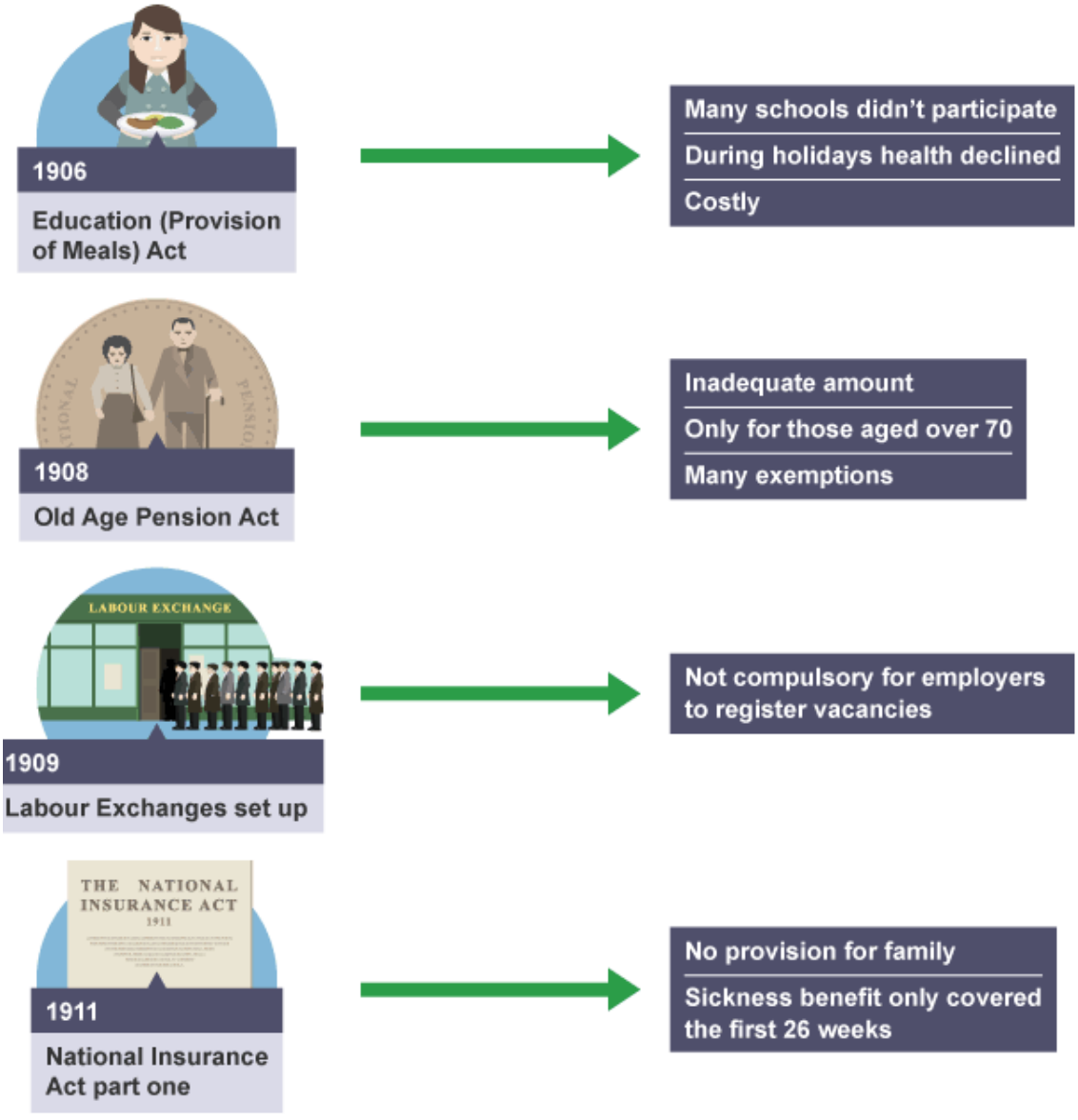
The Unemployed

- Unemployment was certainly a cause of poverty.
- The National Insurance Act (Part 2) only covered unemployment for some workers in some industries and like Part 1 of the Act, required contributions from workers, employers and the government. For most workers, no unemployment insurance scheme existed.
-

Other poverty related reforms

- In 1906 the Workman's Compensation Act covered a further six million workers who could now claim compensation for injuries and diseases which were the result of their working conditions.
- In 1909, the Trade Boards Act tried to protect workers in the sweated trades like tailoring and lace making by setting up trade boards to fix minimum wages.
- The Mines Act and the Shops Act improved working conditions.

Limits of the reforms



Peer assessed

Explain the significance of the Liberal social reforms for the prevention of disease. (8 marks)

(p.78 and 79)

WWW:

EBI:

MAP:

Summarise this topic in 5 bullet points:

-
-
-
-
-

The Creation of the Welfare State

L.O: To explore how and why public health improved after 1945

http://www.bbc.co.uk/education/clips/zvgs34j

Watch this video and jot down:

- Reasons for creation

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

- Opposition

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Britain in WWII

- Throughout WW2 Britain was run by a COALITION GOVERNMENT made up of Liberal, Labour, and Conservative politicians.
- This was to present a united front and encouraged the people AND politicians of Britain to work together to defeat Germany.
- It was very important because it allowed Labour to experience what it was like to be in power. It was the Labour Party that would establish the Welfare State when World War Two ended.

The Beveridge Report: 1942

- Post-War Labour Government supported the report;
- Pledge to provide British citizens with economic security from the "Cradle to the Grave";
- Freedom with security and responsibility;
- Improved pensions for all;
- Free secondary education for all;
- **Free National Health Service for all**;
- BUT problems following WW2 still existed, particularly regarding HOUSING conditions.

National Insurance inadequate

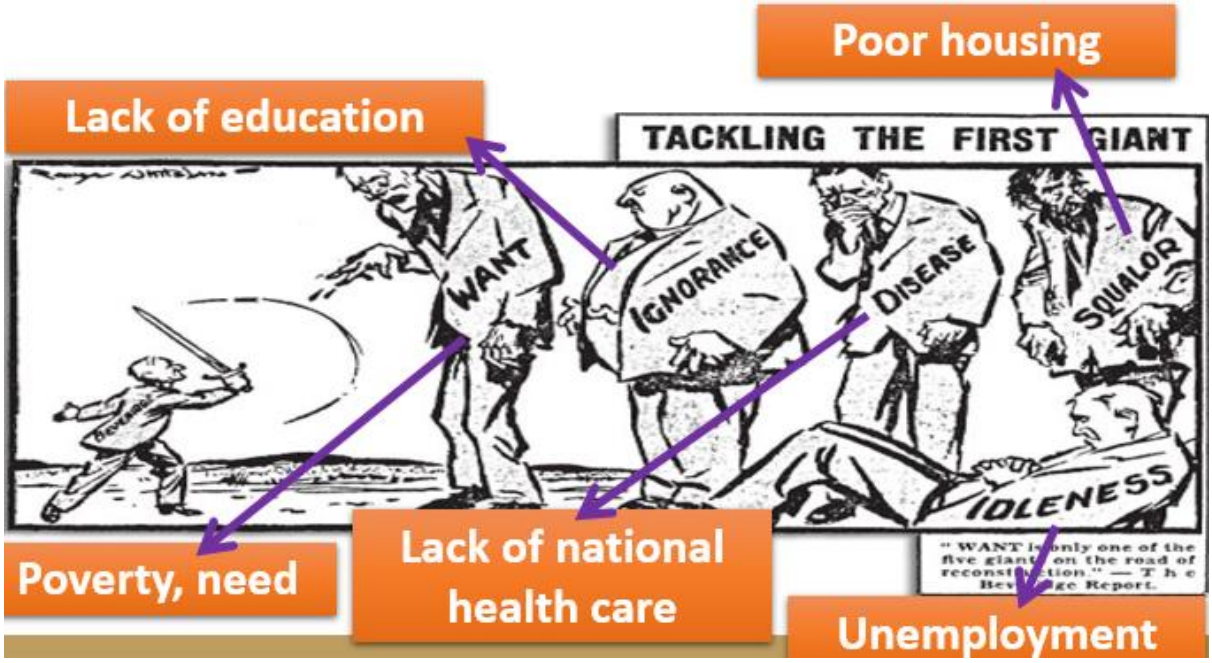
WW2 & attitudes

Why was the NHS introduced? (p.80-81)

The Beveridge Report 1942

The 1945 Election

The 5 Giants



How successfully has the NHS improved public health? (p. 82 and 83)

Achievements	Costs & Controversies

SCC- Why do you think the NHS is still such a controversial topic today?

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

OPEN YOUR EXAM BOOKS!

Have governments been the main factor in the development of public health? (16 marks) (SPaG 4 marks)

- Government (eg Chadwick, Bazalgette, New Libs, NHS)
- Another factor (eg scientific advance, war, role of individuals, religion, etc)
- SCC- Another factor
- Conclusion

<u>Summarise this topic in 5 bullet points:</u>

- _____
  _____
- _____
  _____
- _____
  _____
- _____
  _____
- _____
  _____