Introduction to Urban Planning
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Lecture - 24
Public Health and Urban Planning- II

Welcome to the course, introduction to urban planning. In this lecture today we will continue with our discussion on the most important issue of the time health in cities. In the previous lecture, we looked at the first report by WHO which was published in 1999, which interlinked health and urban planning, and we looked at how city environment impact on people's health. Then we looked at historic periods of public health and new public health paradigm.

We also looked at theories linking urban planning and public health. Today, we will look at the historic narratives and see how health and urban planning are interconnected. And we will try to understand the period and various theories linking with urban planning.

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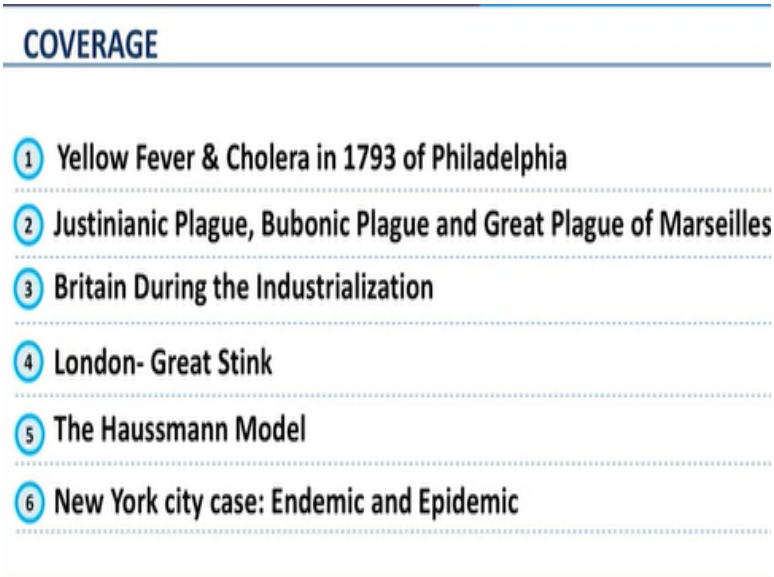

Therefore, the coverage in today's session will include, we will read through the narratives of the yellow fever and cholera in 1793 in Philadelphia. Pattern of spread of disease, Justinianic Plague, Bubonic plague and Great plague of Marseilles. Thereafter, we will read through narratives of Britain from perspective of health during industrialization period and key findings and reform in the period related to health.

Furthermore, we will look at the narratives from London at the time of the great stink. We will also look at Paris the Haussmann Model. We will also see New York City's case concerning Endemic and Epidemic.

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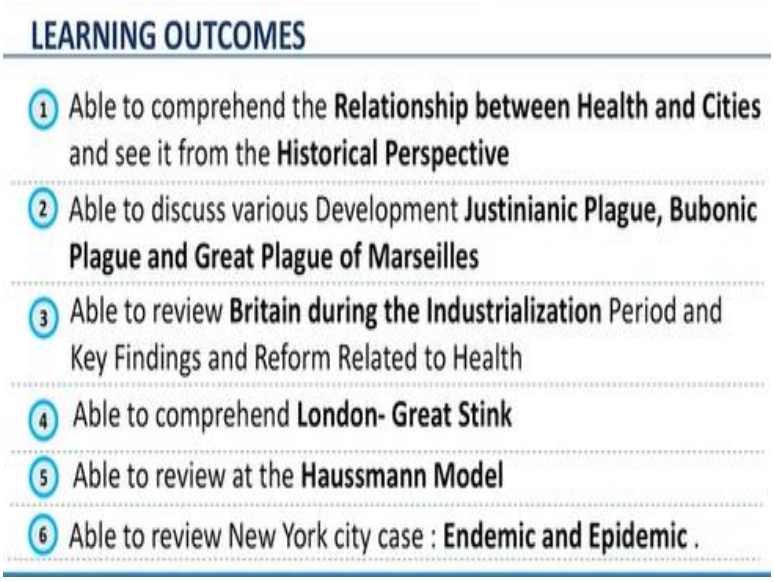

Accordingly, our learning outcomes would be that after completion of this particular session, you should be able to comprehend the relationship between health and cities and see it from the historical perspective. You should be able to relate various periods and theories and discuss various development related with Justinianic Plague, Bubonic plague and Great plague of Marseilles. You should be able to review Britain during the industrialization period.

And key findings and reform related to health. You should be able to comprehend London the great stink period, you should be able to review the Haussmann model in Paris, you should be able to review New York City case concerning and make an epidemic with respect to urban planning. If you may recollect that in our second lecture, we had seen that the urbanize characterized by its lower level of mortality and high quality of life.

However, it was not so in the early times in the city. Also, we are currently focused on the pandemic, but epidemic unimportantly and endemic has a significant role in influencing the death rate in the urban areas.

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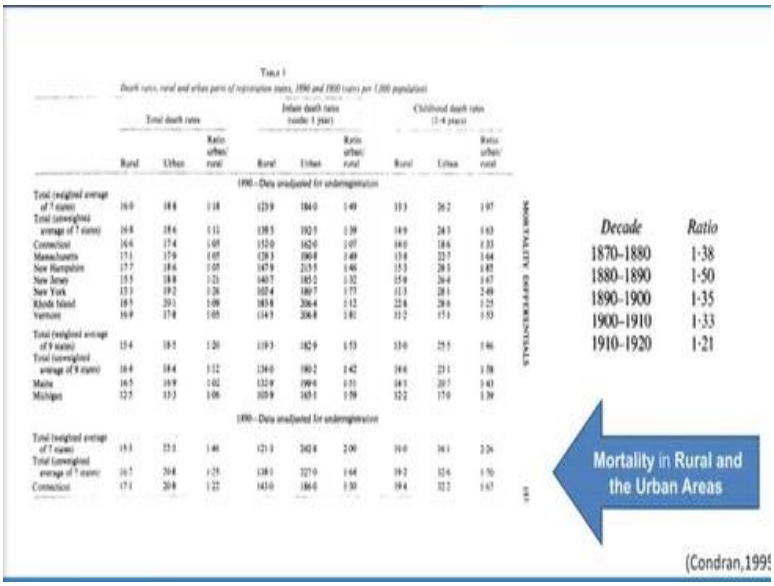

As per the conference writing in 1995, there was a sharp difference between mortality in the rural and urban areas. Rural mortality that is the death in the villagers was declining at the end of 18th century and beginning of 19th century. However, on the other hand, city posed new threats to health and longevity. People had endemic health problems and were dying at a very early age in cities.

If we align with the period as per WHO classification this narrative would fall under nonspecific immunization period from 1980 to till present. Public health practitioners began to look beyond specific immunization for two reasons. Firstly, data showed that people were dying from things other than infectious disease such as abuse, suicide and other violent acts. And secondly, the origins of public health are more closely aligned with nonspecific ideology.

Emphasizing broad community concerns as with many public health issues, several elements must be dealt with in order truly to solve the larger problem. Mortality rate was increasing with the growth of densely populated cities.

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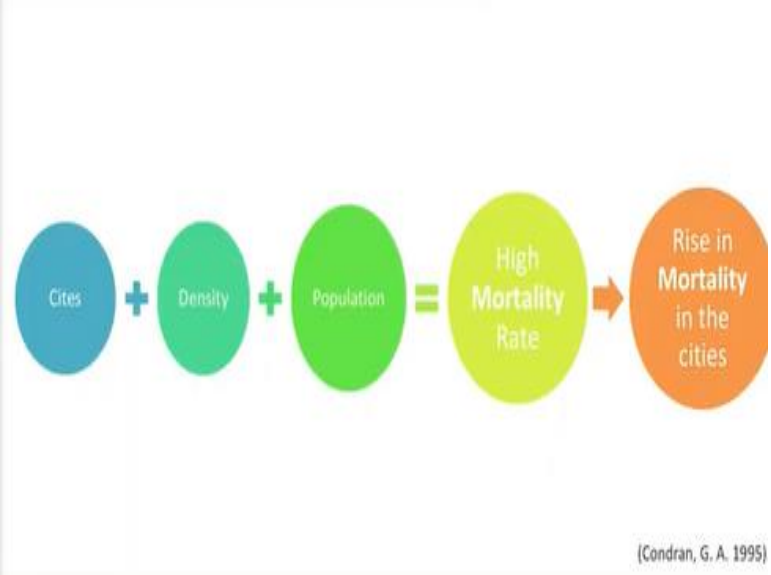

Cities which had large and dense population, the people were dying there more. Further, there were also cities where there was high mortality and an overall there was rise in mortality in the cities. The mortality rate was later controlled by the end of 19th century and by early 20th century. Condron writes that the life expectancy in the cities was comparable to the rural areas by the time and fell drastically in the first three decades and life expectancy was longer than their previous records of the city life.

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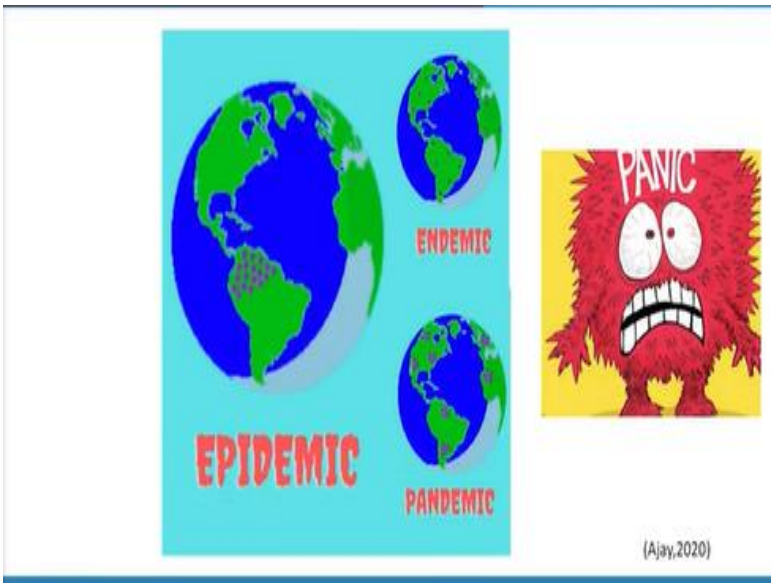

Epidemic, which are widely spread disease always evokes fear and panic. And how people reacted to them range widely according to the time, place and social condition of those who had to live through them. We may see and listen to this narrative through the lenses of social justice

theory, political economic theory and environmental theory you just read from WHO report. Narrative as documented and Condrance paper.

The well to do left the city of Philadelphia in 1793 are the first threat of yellow fever. The poor remained behind and warded off disease with camphor, vinegar or tobacco. On the other hand, universities, professors and doctors argued over what course to take, and finally included in its list of recommendation that citizens should avoid infected persons in temperance draft and so on.

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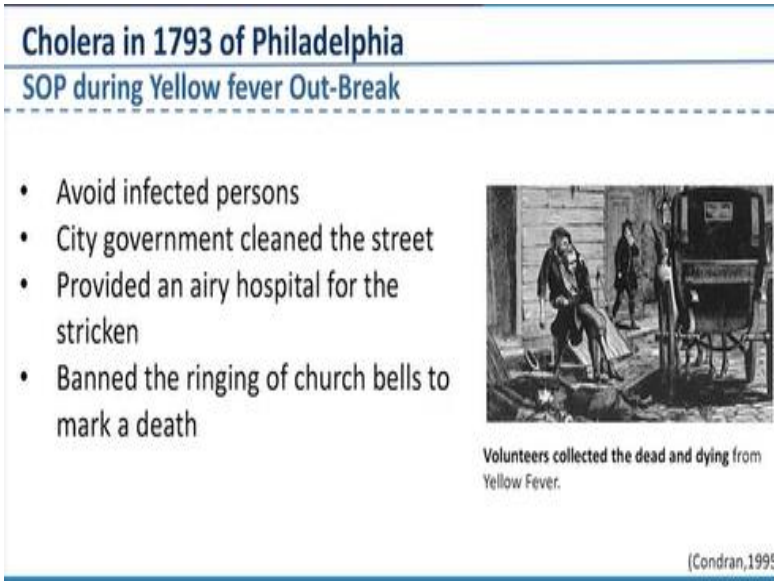

Whereas the city government cleaned the street and provided an airy hospital for the stricken and banned the ringing of church bells to mark a death. Because the; sound was thought to lower the spirit of both sick and the well.

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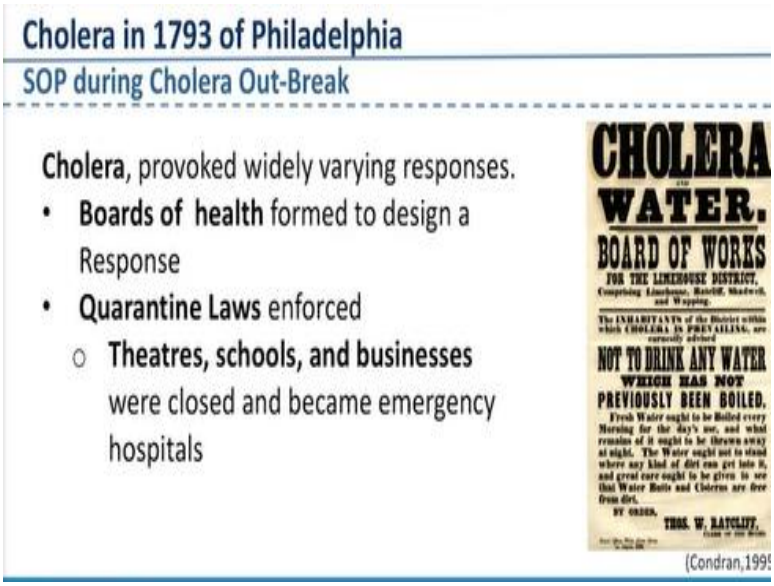

Cholera also provoked widely varying responses. Boards of health were quickly formed to design a response in many cities and quarantined laws that had been largely neglected verse speedily if informally enforced. Theatres, schools and businesses were closed and, in some cases, became emergency hospitals to accommodate the sick poor people. In at least one example, in Chester, Pennsylvania in 1832 infected persons were reported to have been murdered.

We also see that beyond immediate measures to fight the spread of illness and death, the orphaned, the widows and those thrust into poverty by an epidemics effect on business demanded municipal support. Condrance narrated of this period would align specific sanitization period of WHO, were the study of public health change from a more general engineering based effort to one that was highly specialized focusing on combating specific environmental elements. Throughout this period, much public health and city planning were of the same entity.

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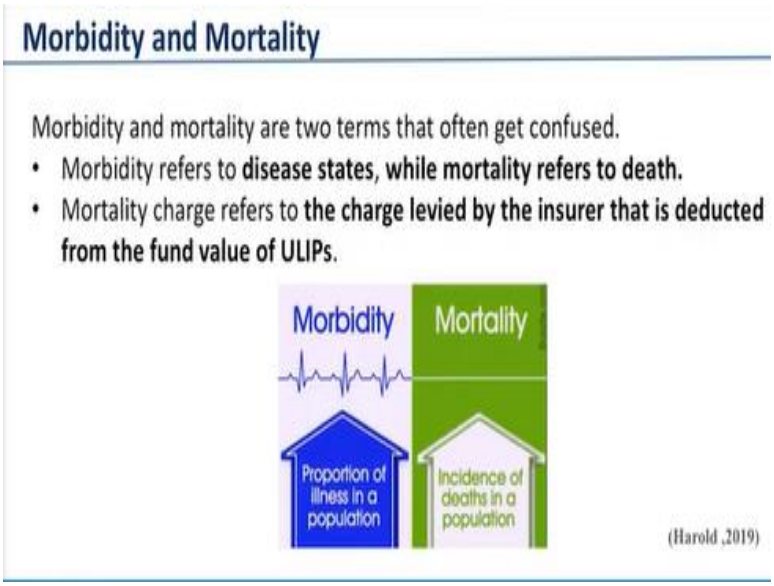

If we try to understand what mortality and mortality change in the urban areas, historians and demographers who are expert in the study of statistics related to changing structure of human population have explanation for high and rising urban mortality rates. In the first half of the 19th century and the presence of frequent and massive epidemics and for the subsequent dramatic decline in both.

As written by Condron, they explained that in 19th century, the way cities were growing the way density was increasing in cities and the way population composition was changing were causing or worsening series of problems affecting the health of the city dwellers.

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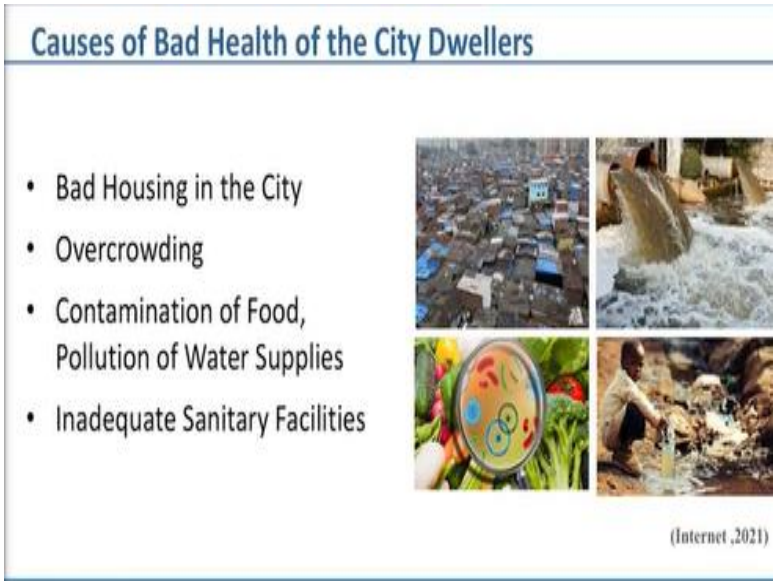

We see that they explain the bad housing in the city at the same time and the overcrowding, the contamination of food, pollution of water supplies and inadequate sanitary facilities combined, contributed to shorten the lives of children and adults in the same way. We can also try to understand the Epidemics in the city, because the urban areas particularly large cities are crowded. And therefore, the population became susceptible in large cities.

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Moreover, the flows of new inhabitants as you see more and more people travel the city and also migrate to the cities. These all create a necessary condition for the spread of epidemic disease, through contaminated water or food, close personal contact or insect paths.

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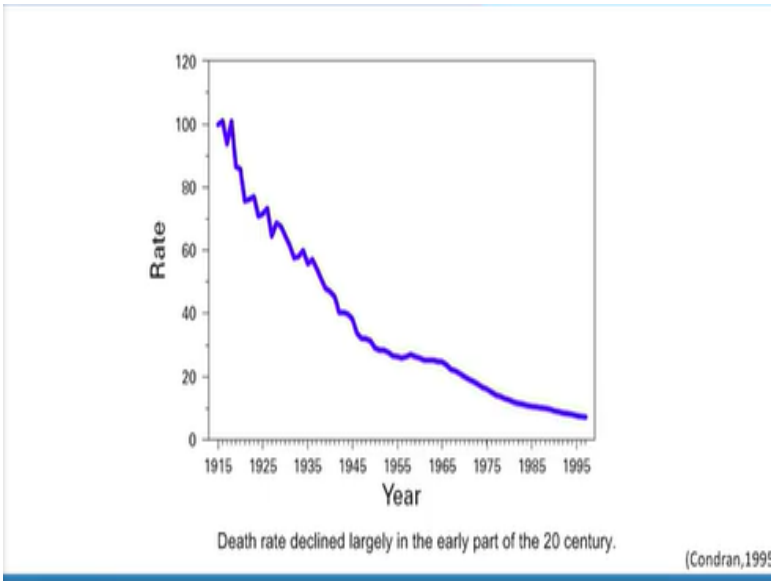

We see that death rate declined largely in the early part of the 20th century. One of the reason identified is that it happened because of the economic growth.

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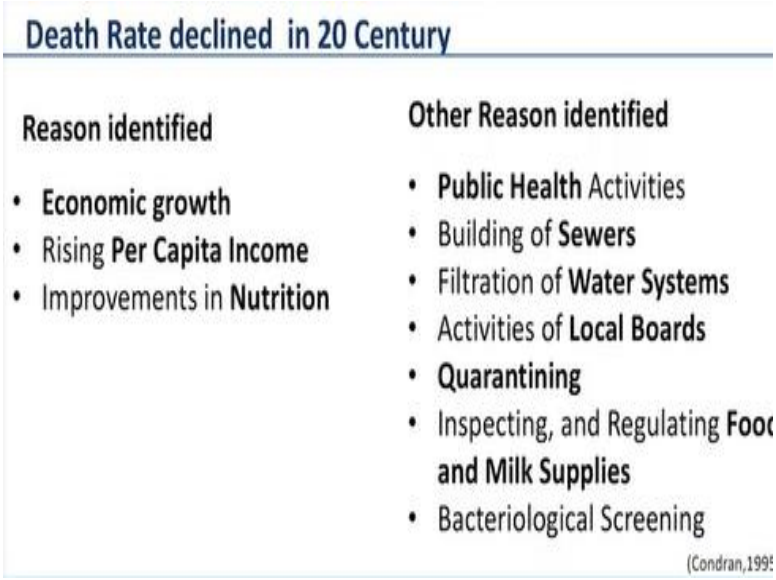

Rising per capita income, as people started to earn more due to industrialization and the improvement in literation that happened along with it. The other reasons influencing factors include a series of public health activities. The building of Sewers, filtration of water systems, activities of local boards of health in cleaning city streets, quarantining, inspecting and regulating food and milk supplies.

Bacteriological screening of health carriers and more. So, you see in this period, we were focusing on specific environmental elements.

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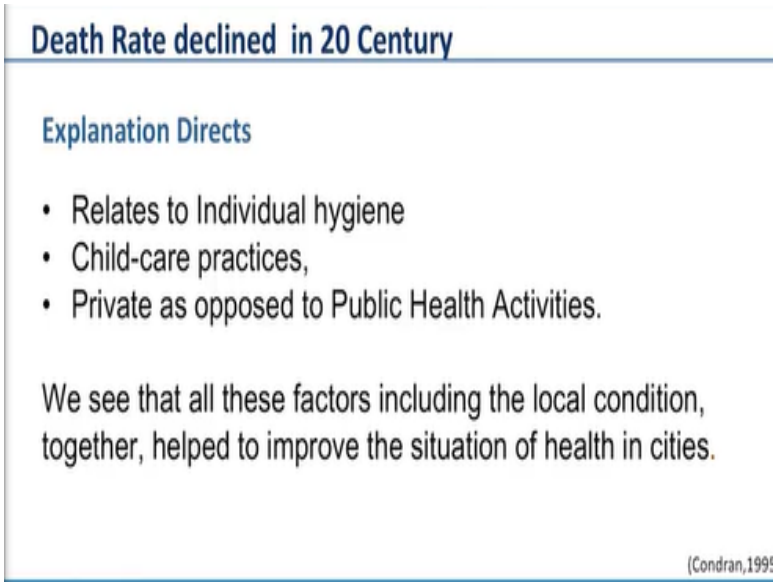

We also see that explanation directs to the reasons like relates to individual hygiene and child care practices, private as opposed to public health activities. We see that all these factors, including the local condition together helped improve the situation of health in cities. So, we also see the social theory playing a part here.

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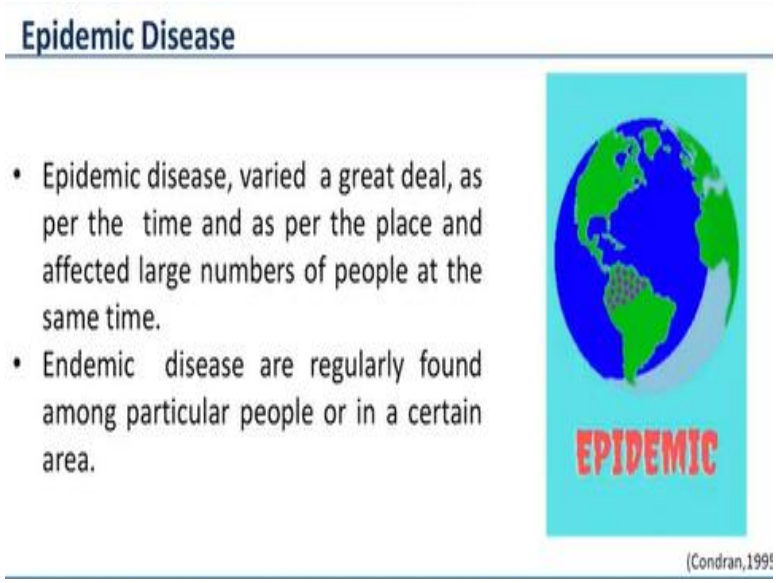

Epidemic disease varied a great deal as for the time and as per the place and affected large numbers of people at the same time. We see that we have different explanations and responses compared to endemic diseases. Endemic diseases are regularly found among particular people or in a certain area. We see that public related interventions had great role to play then the private activities. We also see the role of urban governance.

The city government responses to the epidemic disease, through a series of activities change the course of 19th century.

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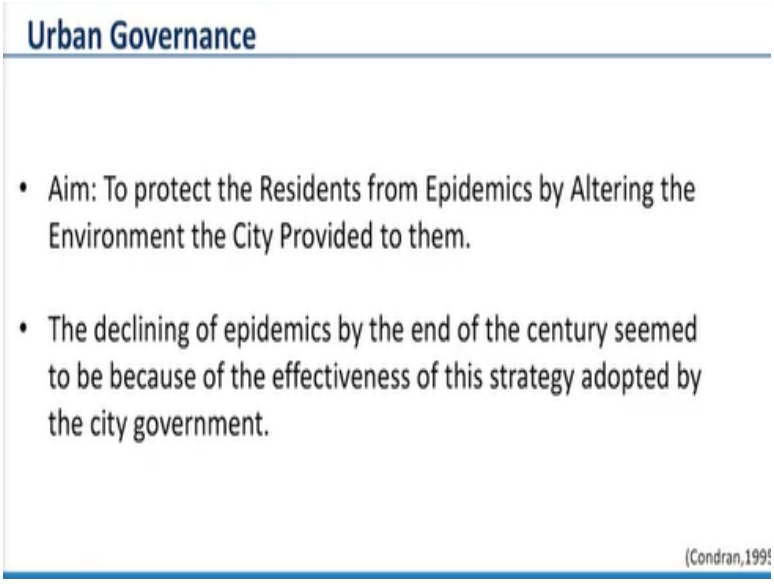

It aimed to protect the residents from the Epidemics by altering the environment, the city provided to them. The declining of epidemic by the end of the century seemed to be because of the effectiveness of this strategy adopted by the city government. So, here we see the role of political and economic theory and also see how the governance urban governance can improve the environmental situation related with health. We also see the shift in the way city approached the diseases.

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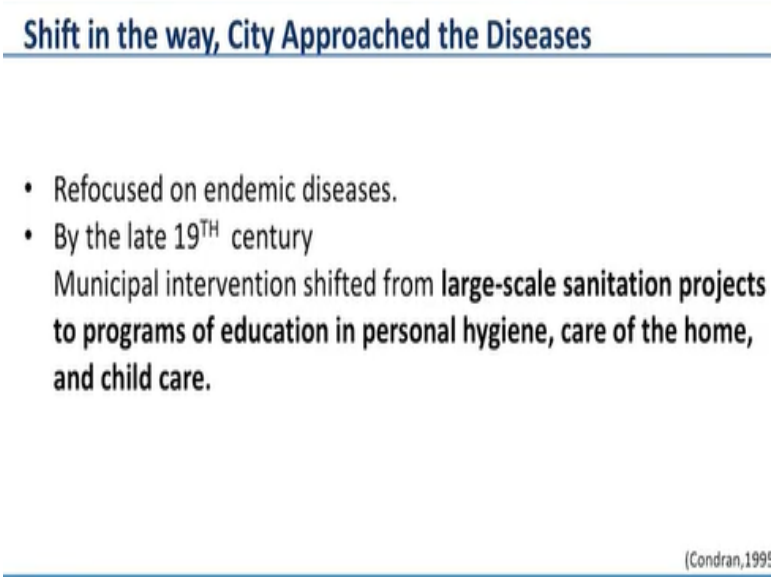

They refocused on endemic diseases by the late 19th century municipal intervention has shifted from large scale sanitation projects to program of education and personal hygiene, care of the home and childcare. So, we see that it led to integration of programs with the other discipline. The shift in program put up new etiologic ideas, meaning what was causing or contributing to the development of a disease or condition and the rise of scientific medicine.

So, we see specific humanization period coming in here. This also overlapped with the end of large scale epidemics and later stress or endemic disease undertook in terms of change in individual lifestyle or structure.

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Now, let us look at a pattern of spread of diseases. The patterns of disease transmission we may see here always aligned with the wars, how people travel, aligned with the trade and the migration routes.

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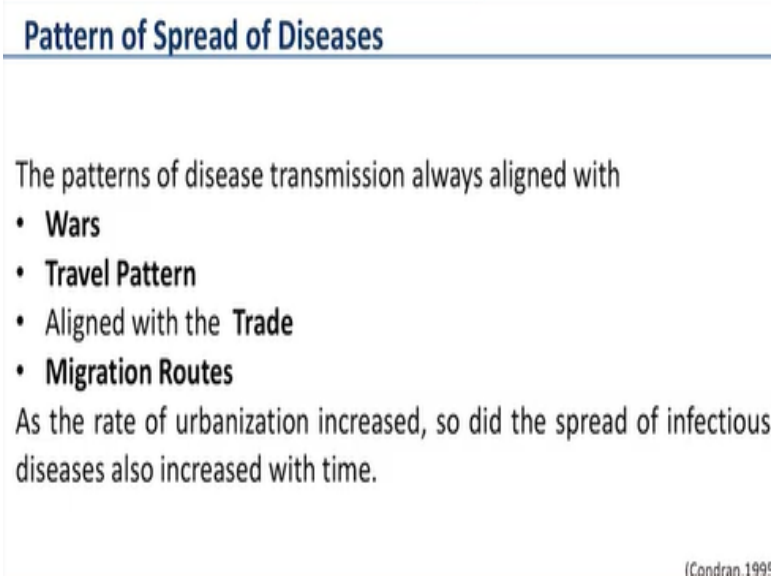

As the rate of urbanization increased, so did the spread of infectious diseases also increased with the time, this again indicates the prevalence of the political and economic theory. Looking at the historic public health crisis and related urban reforms, we find that prime focus was held and accordingly we reorganize the way we planned our cities. There are numerous timelines available related with epidemic and pandemic you may see the timeline given in the suggested readings.

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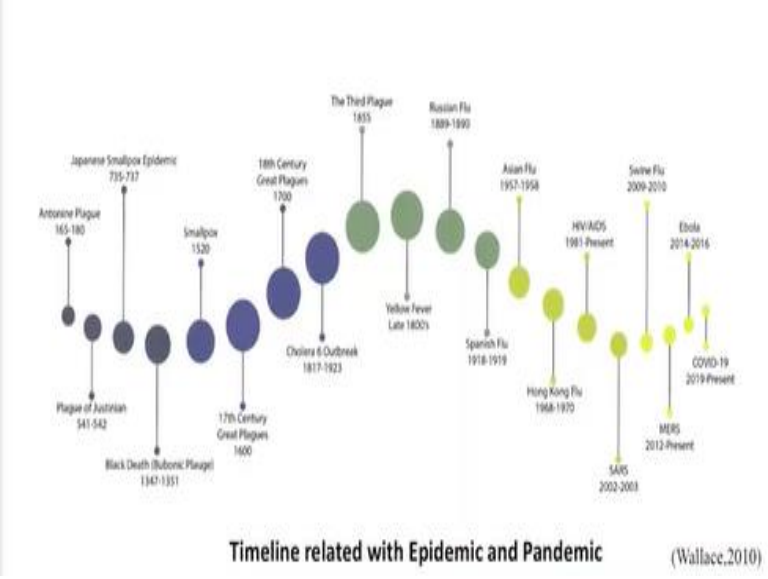

Timeline related with Epidemic and Pandemic (Wallace,2010)

We pick up few examples to have a comprehensive understanding to recognize the health and urban planning interventions. We also see why urban population is more vulnerable to disease and there is need to address it more. You will see all; the social model, political economic model and the environmental model playing its role in health in the city.

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First, we look at the Justinianic plague.

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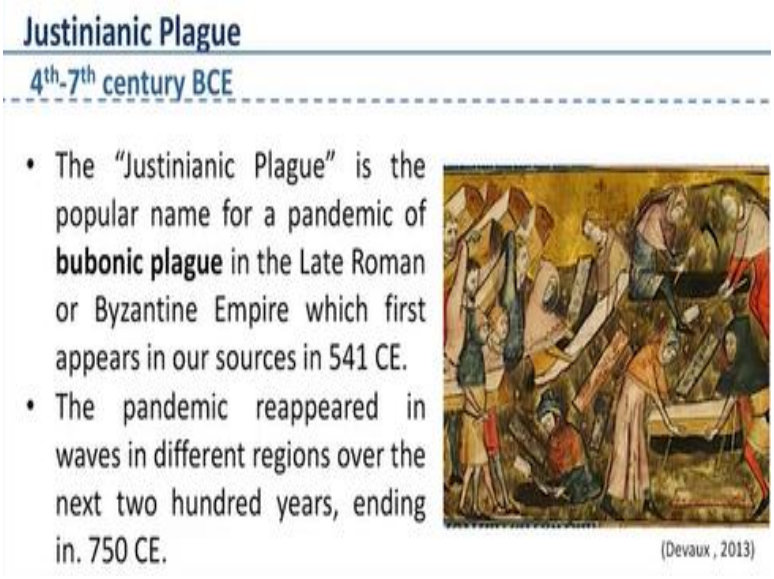

The Justinianic plague is the popular name for a pandemic bubonic plague in the late Roman or Byzantine Empire, which first appear in our source in 541 CE. The pandemic reappeared in waves in different regions over the next 200 years and then 750 CE. The first and the most dreadful episode of plague of Athens, Greece during the tie Greek Roman period that killed 70,000 citizens between 430 and 426 BC, is known as Justinian plague.

This was the first and deadliest that people have experienced in the past 1500 years as taken from the publication by Diocesan in 2013, in an infection genetics and evolution journal.

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Plague originated from Egypt, which had one Antioch, Carthage and Constantinople in 542 AD and Rome, Italy and Marcel is in France, and 543 AD. And recreant outbreak observed throughout Europe in the 6th and 7th century AD. We know that the plague first hit cities in south eastern Mediterranean and moved swiftly through the leavened to the imperial capital of Constantinople, where it was first reported in 541 CE.

From there it spread westward through region of former Roman Empire, reaching as far north as Germany and Britain. Record also show more than 10 million deaths because of this pandemic. We see its influence later in India as well it will be covered in the next lecture. You see how historically our larger economic pattern exposes us to the health risk.

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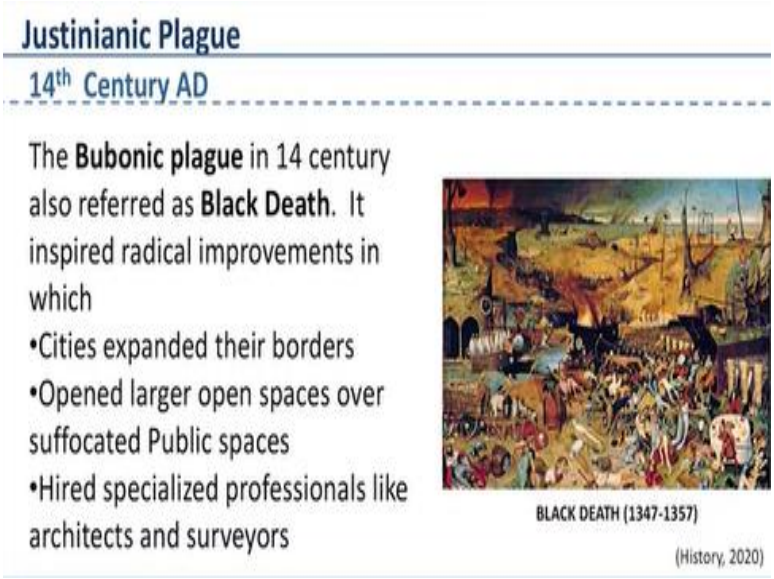

Later we see bubonic plague in 14th century also referred as Black Death. It inspired radical movement in which cities expanded their borders, open larger open spaces, over suffocated public spaces and hired specialized professionals like architects and surveyors following this Black Death.

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BLACK DEATH (1347-1357) (History, 2020)

As per the history the Black Death was a devastating global epidemic of bubonic plague that struck Europe and Asia in the mid 1300s.

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BLACK DEATH (1347-1357)

(History, 2020)

The plague arrived in Europe in October 1347, when 12 ships from the Black Sea docked at the silicon port of Messina. People gathered on the docks were met with horrifying surprise. Most sailors aboard the ships were dead and those still alive were gravely ill and covered in black boils that oozed blood and pus.

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BLACK DEATH (1347-1357) (History Today, 2005

Sicilian authorities hastily ordered the fleet of death ship out of the harbour, but it was too late. Over the next five years, the Black Death would kill more than 20 million people in Europe, almost one third of the continents population. Reflecting we see that all our cities grow one because of its connectivity. However, that also makes the cities vulnerable and exposed to such epidemic. Further, once again, our economic pattern also makes us vulnerable.

We also saw in the history how we found part solution for our health problems in the urban planning interventions.

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Then we also see the Great Plague of Marseilles in 1720. This is an example of medieval and industrial cities implementing urban planning practices to aid disease control and how management of water waste helped remake cities post pandemic.

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Now, let us look at Britain. Earlier in the lecture when we covered the history part. We had seen Industrial Revolution where the cities were growing and wealth was accumulating and also looked at living conditions of the people in the cities. And also hinted at the health and life expectancy of working class and in general in that time, because of that, we find the diplomat identified the two ever present sides of industrial revolution.

On the one hand, it permitted the production of greater wealth than previously possible in history and it allowed that wealth to be spread to a large number of people. On the other hand, it brought about a radical transformation in the domestic and work lives of men and women of the working classes. The thoughtless abuse of millions of men, women and children and the headless destruction of the environment.

Along with the political changes initiated by the French Revolution, the Industrial Revolution shaped European history during the 19th and early 20th century. The immediate social consequences of the Industrial Revolution were increased hardship for the working classes most

of whom lived and worked under terrible conditions. Not only dating lands, population increased between 1750 which was 140 million.

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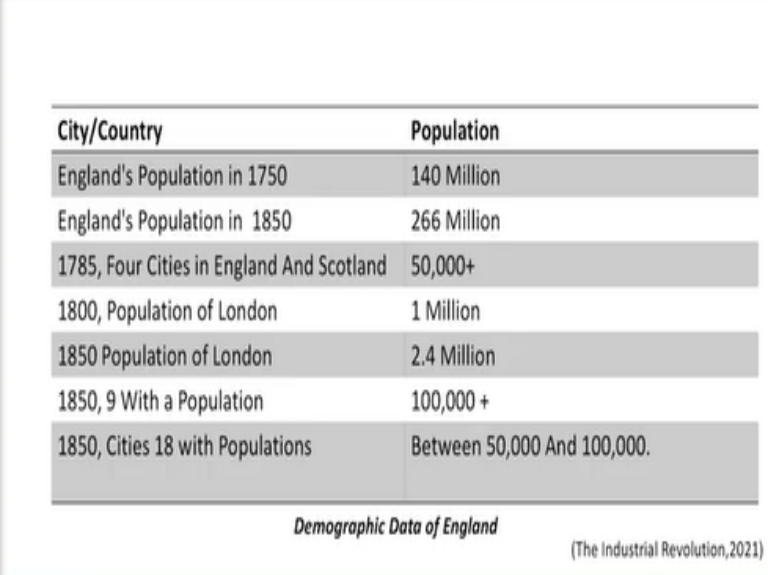

City/Country	Population
England's Population in 1750	140 Million
England's Population in 1850	266 Million
1785, Four Cities in England And Scotland	50,000+
1800, Population of London	1 Million
1850 Population of London	2.4 Million
1850, 9 With a Population	100,000 +
1850, Cities 18 with Populations	Between 50,000 And 100,000.

Demographic Data of England

(The Industrial Revolution,2021)

And 1850 which was 266 million. The location of that population changed significantly. In 1785 four cities in England and Scotland had population of more than 50,000 and the population of London in 1800 was about 1 million. By 1850 London's population had raised almost 2.4 million, and there were 9 cities with a population and access of 1 lakh and 18 with population between 50,000 to 1 lakh.

If inhabitants of the towns and the 50,000s are counted as urban dwellers than 50% of the British population lived in towns and cities by mid-century. So, we see how numbers of cities were growing and also the cities were getting denser. And as these new cities grew, inhabitants had to face tremendous political and social problems. The latter because living conditions in the working class.

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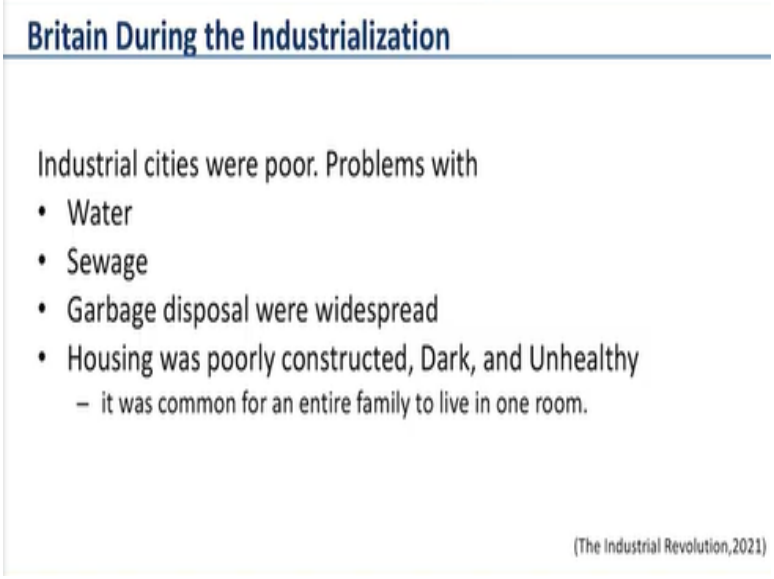

Industrial cities were poor. Problems with water, sewage and garbage disposal were widespread while housing was poorly constructed, dark and unhealthy it was common for an entire family to live in one room.

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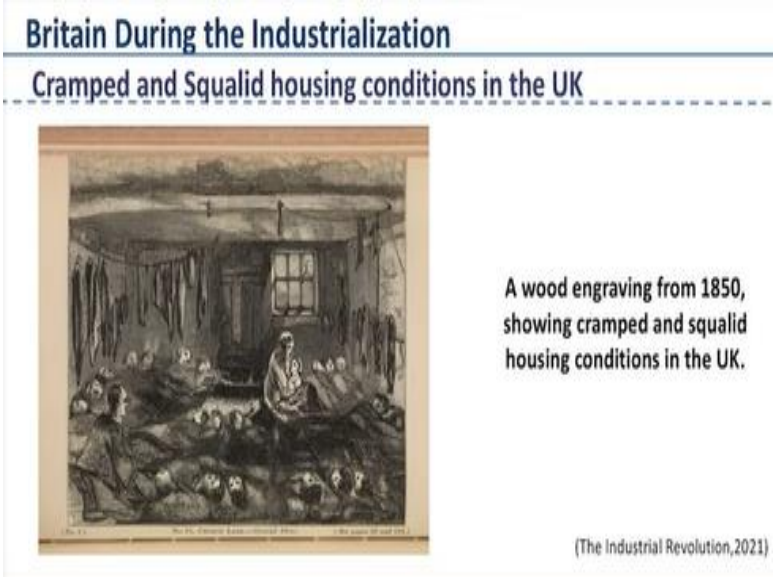

As you can see in the image depicting of wooden engraving from 1850; showing cramped and filthy housing condition in the UK. There was no fresh air, there was stink of gas, it was hot, there was steam, dust and cotton in the environment. Well structured men turned old and were unable to work at 40 years of age. Children were unhealthy and deformed and 1000s upon 1000s of them abused for production, even before 16 years of age.

The middle and upper classes, needless to say, moved out of the city centres. Working conditions were likewise poor and what one contemporary called the Dark Satanic Mills of the industrial Britain.

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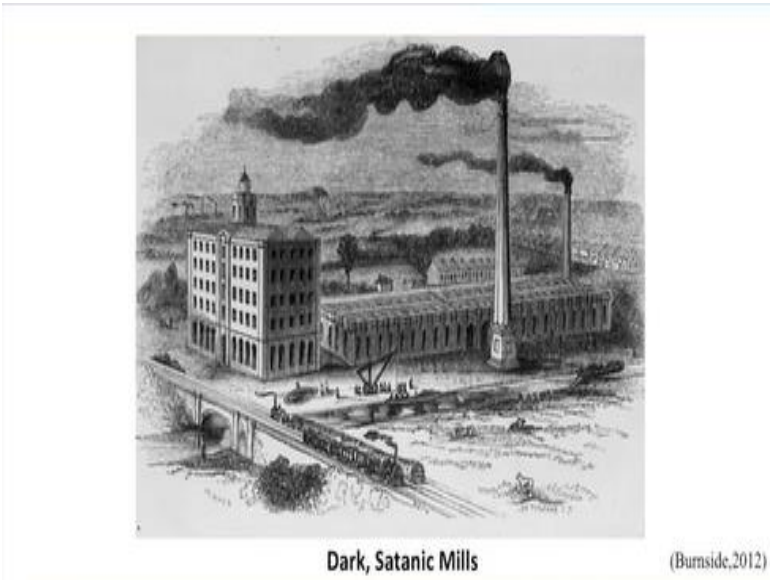

Dark, Satanic Mills (Burnside,2012)

Because wages were so low that a man could not support a family, women and children also worked in the factories. Workers worked six days a week and the working days was often 14 hours in length and there were virtually no holidays and no benefits of any sort. According to the contemporary parliamentary report of that time, which describe the condition in words. In the centre of the street, there is a gutter into which potato pairing and refuse of vegetables.

Animals matter of all kinds, the dirty water from the washing of clothes, and of the houses all poured and where they stagnate and putrefy.

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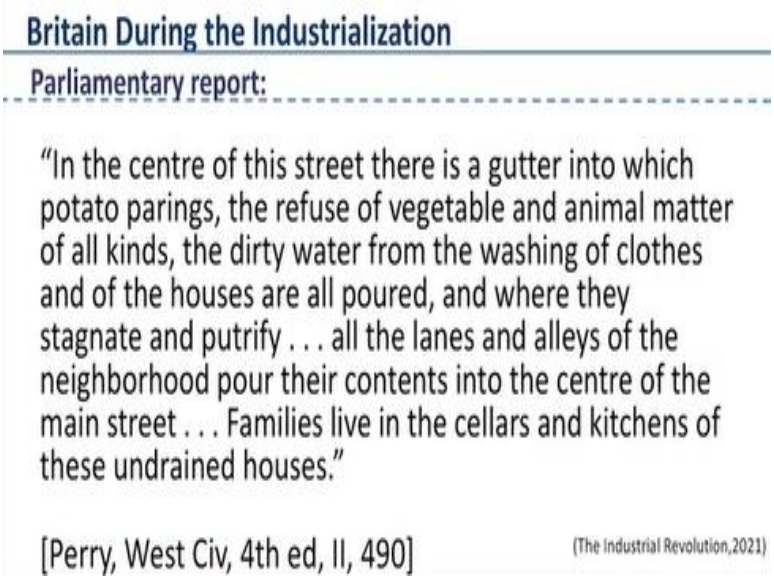

All the lanes and alleys of the neighbourhood pour their contents into the centre of the main Street, families live in cell hours and kitchens of these undrained houses. We can visualize the condition. We also find saddling description of this situation in the 1854 novel of Charles Dickens Hard Times.

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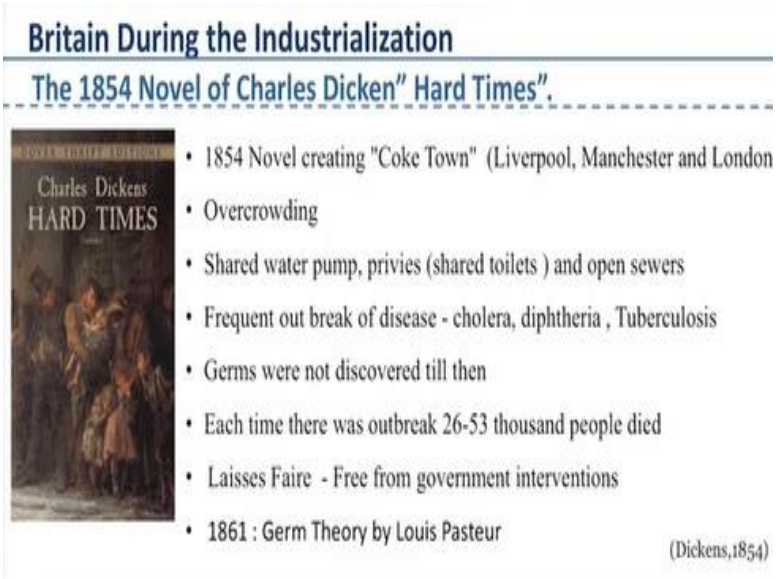

He was an English writer and social critic where he created Coke Town said to be based on his travel and observation of Manchester, Liverpool and London. You may read that novel to understand the situation better. Cities were overcrowded they had shared water pumps, privies, shared toilets and open sewers. Frequent outbreak of disease like cholera, diphtheria, tuberculosis happened and each time there was outbreak 26 to 53,000 people died.

Germs were not discovered till then in 1861 Germ Theory was given by Louis Pasteur and was the time of Laisses Faire meaning the economic activities were free from the government interventions. So, we see how cities became the subject and interest of writers social and economic concern. Keep thinking of the period we are in and the socio political, economic and environmental theory of public health while you listen to this.

We further see that in 1842 Adventure advic report on sanitary condition of the labouring population, save money by improving health, Sewer, water supply and public health board. We had surveyed different areas around the country and calculated the average life expectancy of people from different classes and areas. The results were astonishing. Chadwick claimed that people living in the countryside lived far longer than people in towns.

He compared Rutland a rural country with a number of large towns with new industrial cities of the north.

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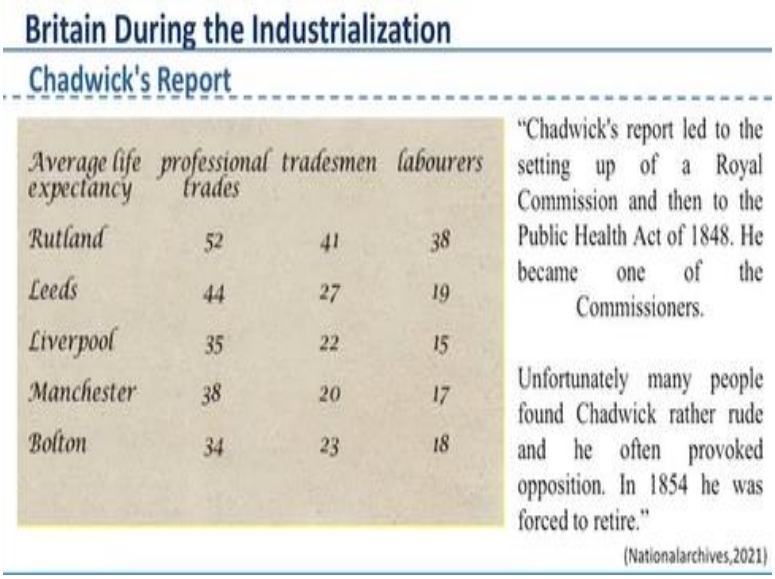

In the image you can see how as per the profession and city one lives, how many years the person would on an average live. You can see in Liverpool, the average life of the labour was 17 years, probably died when younger than you. This was just not because of the one element but all social, political, economic and environmental factors were influencing the positivity of a person.

This was also the period when the very first step in form of Public Health Act of 1848 was taken to improve the public health. We will learn about it more in the planning legislation section. Edwin Chadwick, a social reformer had a key role in this development.

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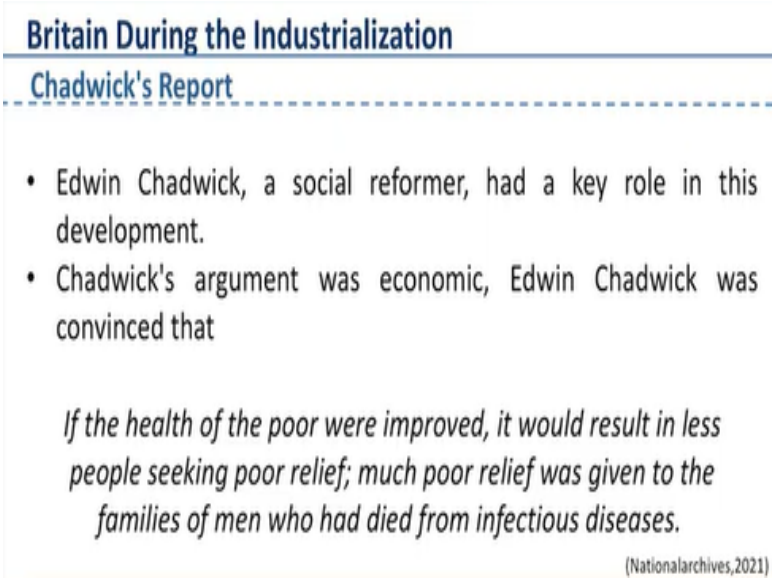

Chadwick argument was economic as he convinced that if the health of the poor were improved. It would result in less people seeking poor relief, much poor relief was given to the families of men who had died from infectious diseases. Money spent on improving public health was therefore cost effective, as it would save money in the long run. He considered that the most important steps to improve the health of the public world improve drainage and provision of sewers.

The removal of all refuse, from houses, streets and roads, the provision of clean drinking water, the appointment of medical officer for each town. After much campaigning by the health of the town's association and another severe outbreak of cholera in 1848 the government also forced to act and the Public Health Act of 1848 was passed. The act as it was passed was not perfect, but was an important step forward.

So, we see here Central Board of Health was established, but this had limited powers and no money. As we talked about institution power and finances in our third lecture. It also initiated

loans that could be made for public health infrastructure, which were paid back from the rates, for places where the death rate was about 23 per 1000 local boards of health had to be set up. The Act included the organization of public health and all major issues at the time.

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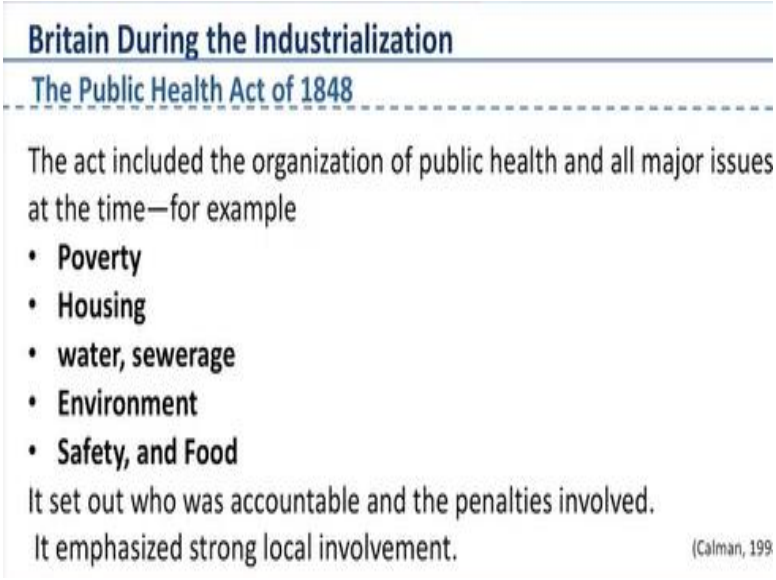

For example, poverty, housing, water, sewage, the environment, safety, the food. It sets out who was accountable and penalties involved it emphasizes strong local involvement.

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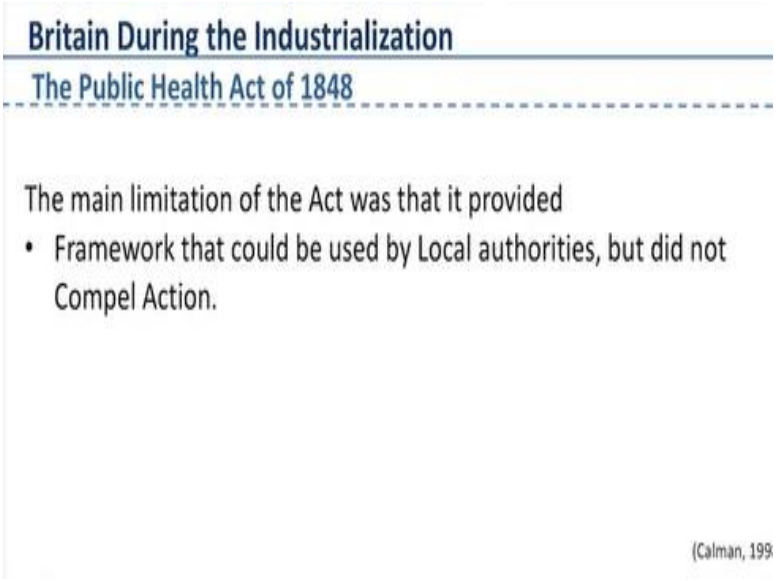

The main limitation of the Act was that it provided a framework that could be used by local authorities. But did not compel action nevertheless, was great step in the domain of health and cities. Now let us look at London City. London's population grew and it was more than doubled

between 1800 and 1850, making it by far the largest in the world. The build up of waste itself became a spectacle, no one wanted to see or smell.

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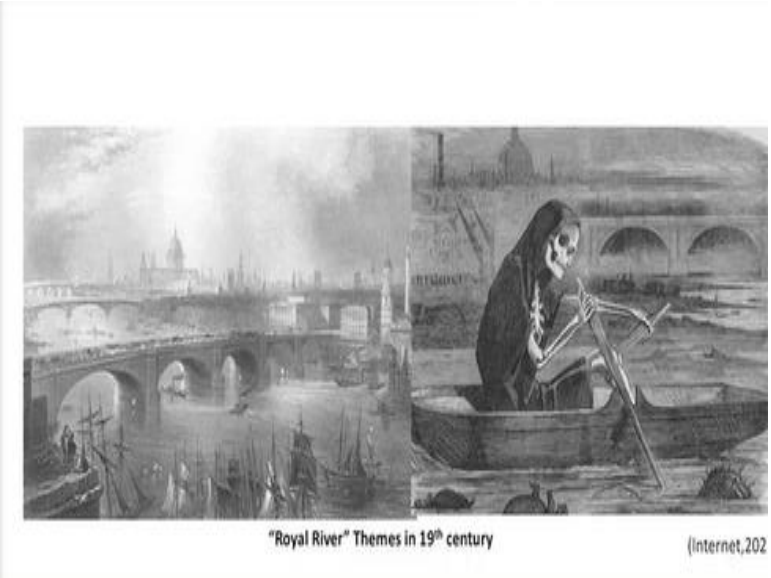

For centuries, the Royal River themes was element of display, was city's main thoroughfare had doubled as a dumping ground for human animal and industrial waste. In 1834, the humoristic clerk Sydney Smith brilliantly described the unpleasant truth.

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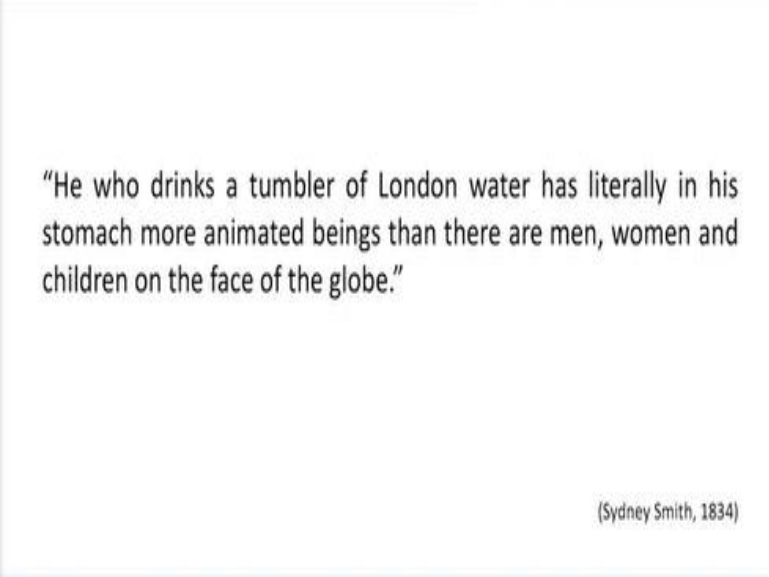

He who drinks a tumbler of London water has literally in his stomach more animated beings than there are men, women and children on the face of the globe.

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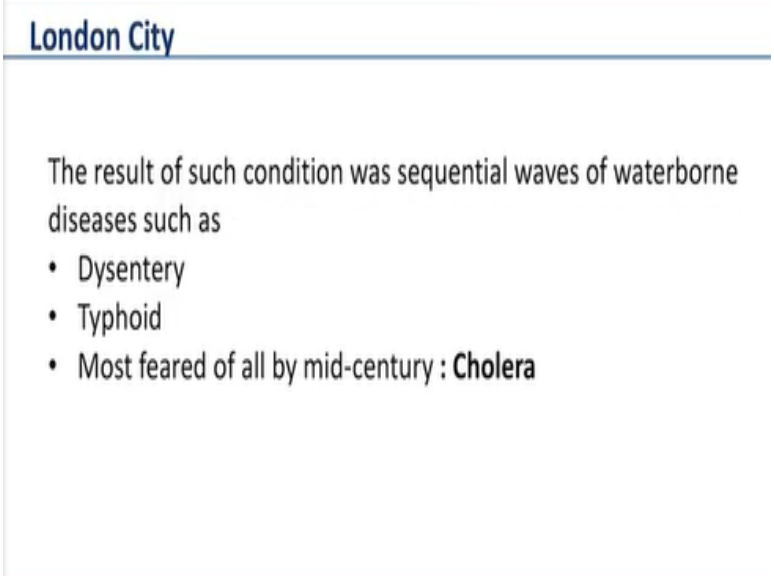

The result of such condition was sequential waves of waterborne diseases such as dysentery, typhoid, and most feared of all by mid century cholera. For this Victorian plague, as the historian Amanda J. Thomas characterizes it.

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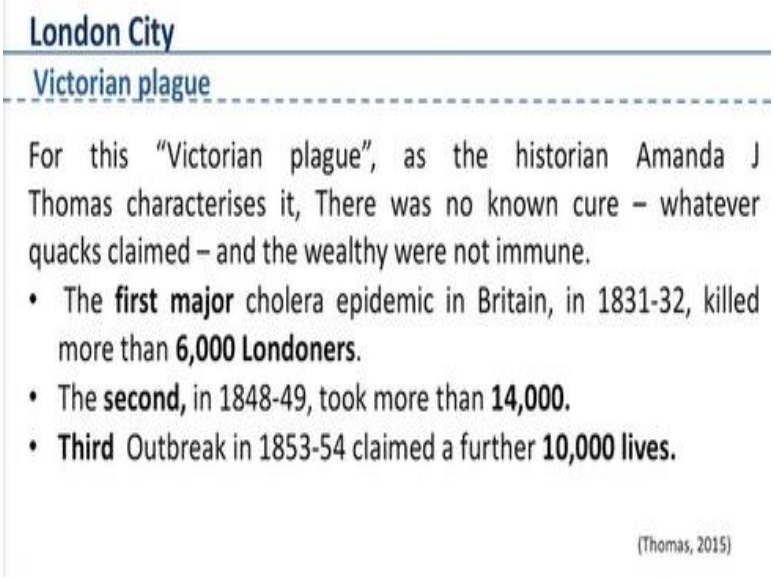

There was no known cure, whatever quacks claimed and the wealthy were not immune. The first major cholera epidemic in Britain in 1831-32, killed more than 6000 Londoners. The second in 1848-49 took more than 14,000, under the outbreak in 1853-54, claimed a further 10,000 lives.

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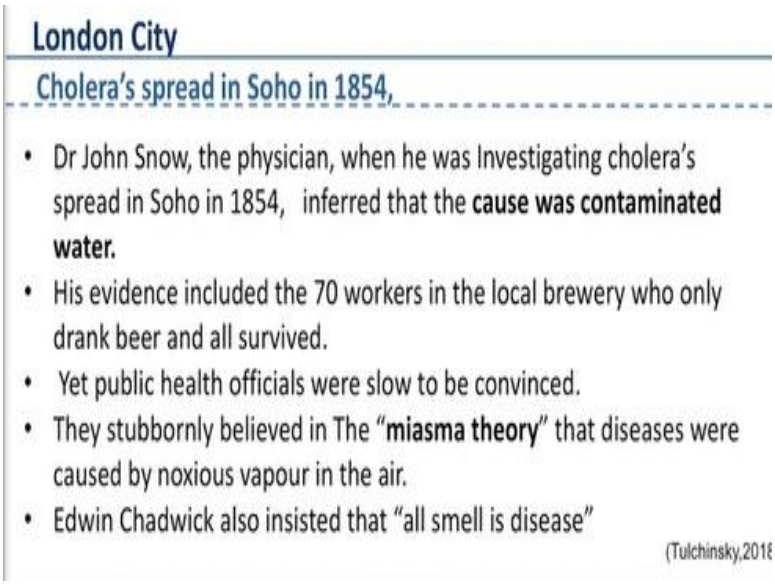

Dr John Snow the physician, when he was investigating cholera spread in Soho in 1854, inferred that the cause was contaminated water. His evidence included 70 workers in the local brewery, who only drank beer and all survived. Yet public health officials were slow to be convinced.

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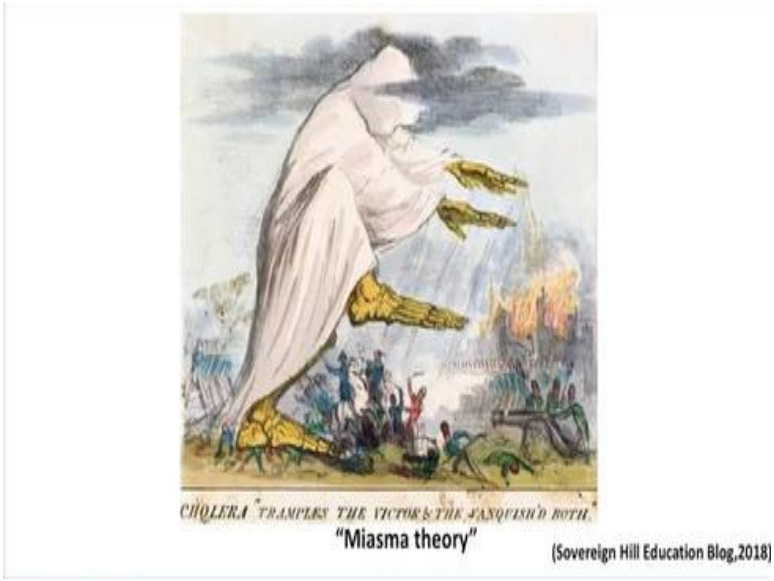

They stubbornly believed in the Miasma Theory that diseases were caused by noxious vapour in the air.

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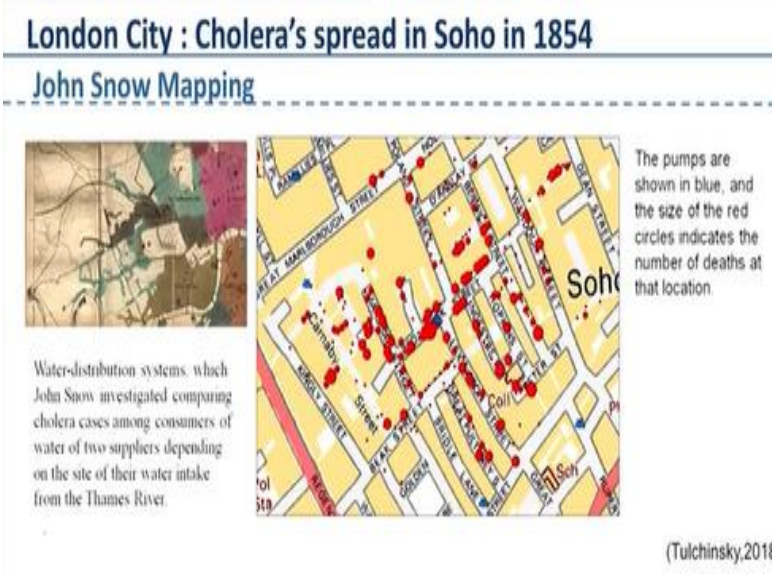

In the image, you can see the Dr John Snow thematic mapping to indicate the established relationship between contaminated water and cholera. Edwin Chadwick also insisted that all smell is disease. Benjamin, the Tory leader in the commons and Chancellor of exchequer grieved how that noble river had become a styrene pool meaning very dark, reeking with ineffable and unbearable horror.

And introduced legislation for the purification of the themes and the main drainage of Metropolis. After this point London had lacked a unified authority with the money required to address such an extensive problem of sanitation on an effective scale. You may also recollect from our initial discussion and planning objectives how financial resources are also important to address concern on ground.

Now the recently formed Metropolitan Board of works was empowered to raise 3 million pounds and instructed to start work without further delay. The board's chief engineer Joseph Bezel gate, who was frustrated as he had done several plants, but nothing was done with it was finally given responsibility to take this out. You may again reflect on the need for train human resources and use of technology for the tasks we discussed in our previous lecture.

(Refer Slide Time: 30:48)

Ford Madox Brown's Work, 1852-1863, was inspired by the construction of the sewer system.

(The Guardian, 2016)

In this image, you can see the intensive undergoing for the construction of sewage system along the River Themes. You may also see documentaries on great sting given in the suggested list. To see the condition and technology intervention incorporates to manage the cities in this time. The heavy investment they made in city was proved to be of great worth. In 1866, most of London was saved from a cholera outbreak which hit part of the East End.

And the only section which was not yet connected to the new system. So, we see how different scholars from different sphere were coming together to look at and solve the problems of cities including social scientists, architects, engineers, industrialists, economist, physicians, scientists and politicians. And how urban planning and governance intervention helped to cope with the situation not only at the time but also curtail future loss of lives and resources.

We also see the health crisis are not curtailed to the number, but also indicate the socio economic, environmental and political layer of the urban life. We further see Paris and understanding the connection.

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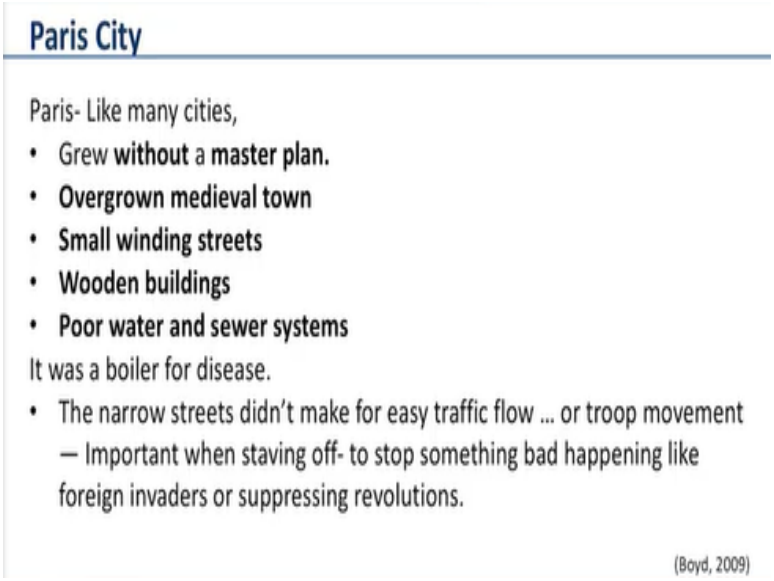

Paris like many cities grew without a masterplan, overgrown medieval town, small winding street wooden buildings poor water and sewer system. It was a boiler for disease and the narrow strait did not make for easy traffic flow or troop movement, important when staving off to stop something bad happening like foreign invaders or suppressing revolutions.

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And this picture of Paris you can see the narrow lanes of the time 1853-70 period of nonspecific sanitation. Clogged narrow lanes of the medieval city also played partial role in leading success of several revolution of the time. During times of conflict, urban mobs would blockade the maze that was the streets of Paris. Such barricade makeshift barrier erected across streets to prevent the

movement of opposing forces proved very effective and made Paris all but uncontrollable at times.

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Look at the painting of the revolution of 1830, Liberty Leading the people look at the painting here of the revolution and how the narrow lanes are used. You may notice the narrow street here. There was a terrible need of cleanliness and advanced infrastructure between 1853 and 1870 nearing to specific sanitation period. Throughout this period, much public health and city planning were of the same entity.

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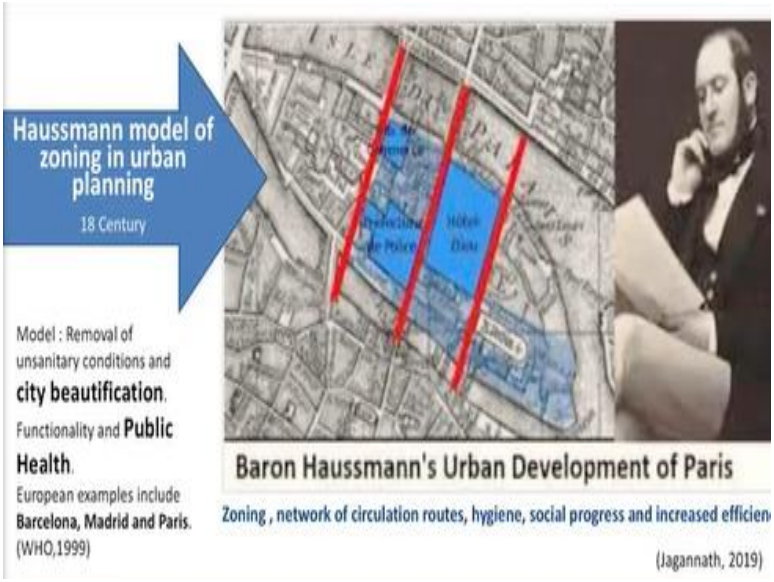

Then Napoleon third trusted horseman as the central architect and administrator to change Paris and reinvented as one of the central economic hub of the world.

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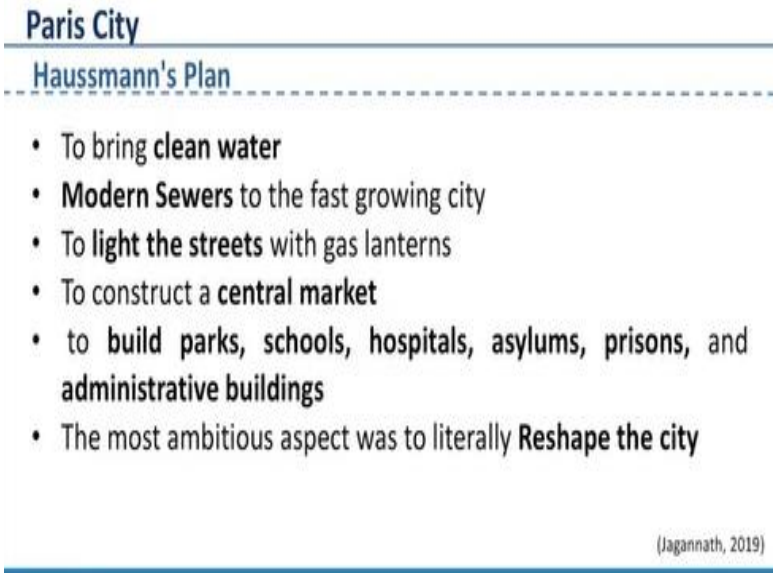

We had, he asked him to modernize Paris to bring clean water and modern sewers to the fast growing city. To light the streets with gas lanterns to construct a central market and to build parks, schools, hospitals, asylums, prisons and administrative buildings. But the most ambitious aspect of Haussmann's plan was to literally reshape the city. Sewers were built, the fresh water system was improved, rigid architectural standards were brought about pleasingly uniform urban landscape.

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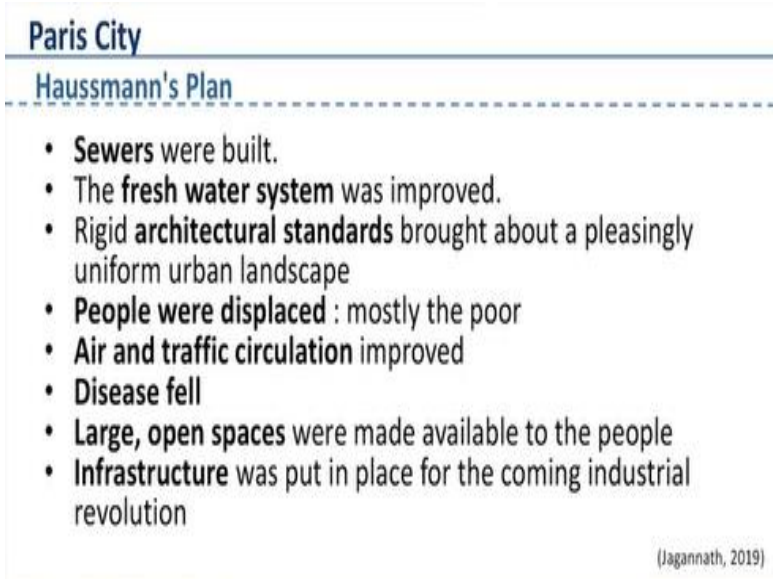

Many, many people were displaced, mostly the poor who were forced to move to the cities outskirt as property value shot up. Air and traffic circulation improved, disease fell large open spaces were made available to people and infrastructure was put in place for the coming Industrial Revolution. Haussmann's model of zoning and urban planning emphasizes functionality and public health or hierarchical order of land use.

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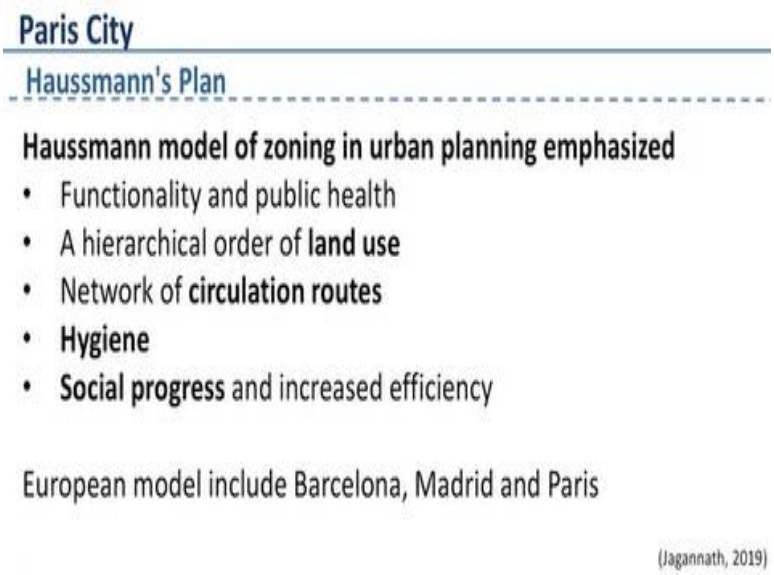

That zoning which separated residential areas from the other land uses specially the industrial land use, network of circulation, routes, hygiene, social progress and increased efficiency, European model influence Barcelona, Madrid and Paris. Looking at the Haussmann's reconstruction of Paris, for his role in changing the Paris city scape Haussmann would acquire the nickname the Demolisher.

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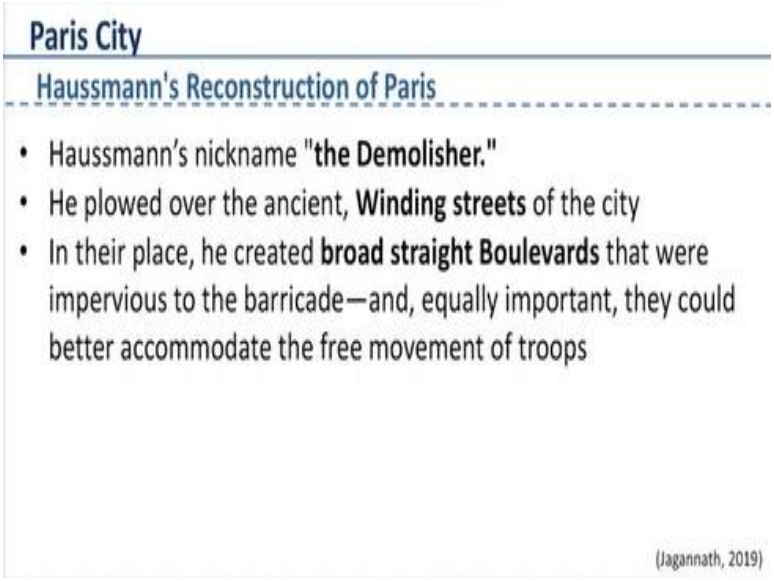

He plowed over the ancient winding street of the city, others, the same narrow street that had proved so useful to revolutionary. In their place, he created broad straight boulevards that were impervious to the barricade, and equally important, they could better accommodate free movement of troops. The avenues also allowed for easy flow of commerce and so we were boon for business. Napoleon three had dreams of new imperial city, who is very straight spoke of the glory of the French Empire that Hussmann (())(35:48)).

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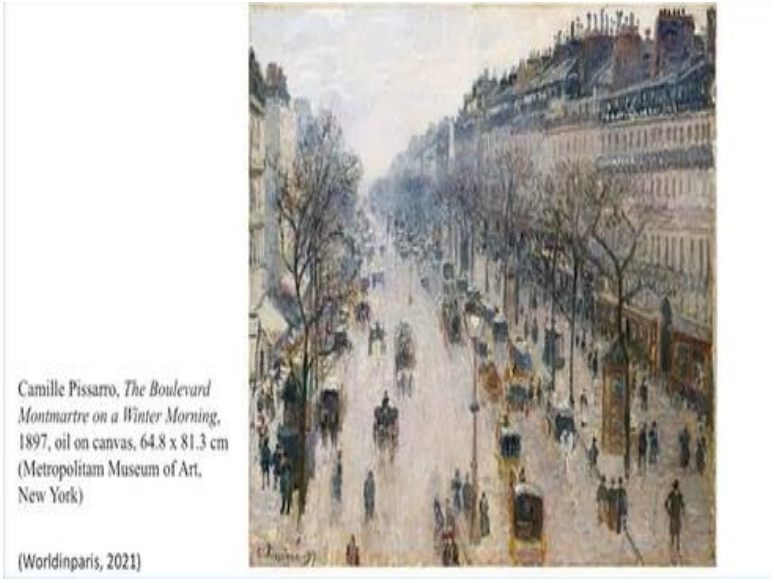

You can see the paintings of the boulevard created in Paris.

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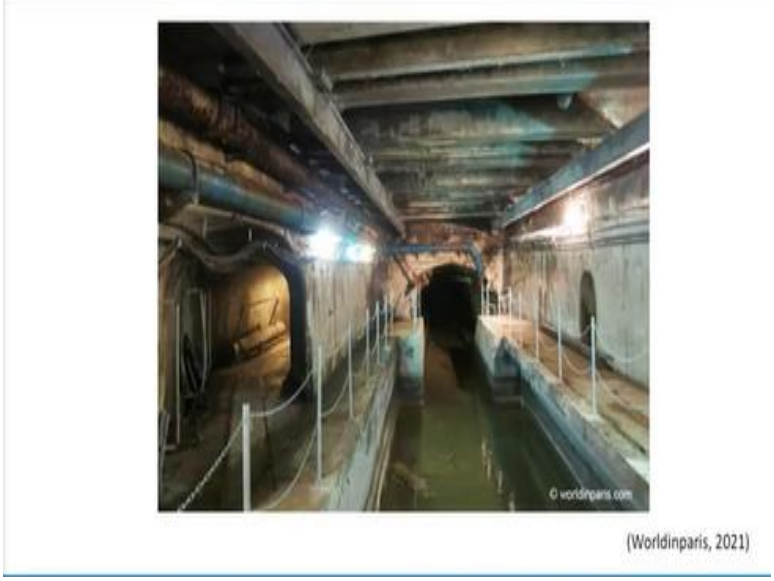

You can see the underground sewage design in the city was undertaken in the time.

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You can see the rearranging of builds form streets and green areas in the pictures. As with nearly every urban renovation, a percentage of population was displaced Haussmann for citizens from their homes, as these buildings were torn down to make way for clean lines of the New City. The well he will quickly accommodated, the new boulevards were lined with fashionable apartment houses. It was as usual the poor that really suffered.

We see through the example of Paris that how laws had to change hard actions like demolishing of buildings, creation of Sewer system, water system, aqueduct and zoning helped in improving

the situation. However, we also see how these interventions also caused negative impact to the poor. Then we see Cholera and Malaria outbreak in New York City in 1860. This led to establishment of Metropolitan Board of Health.

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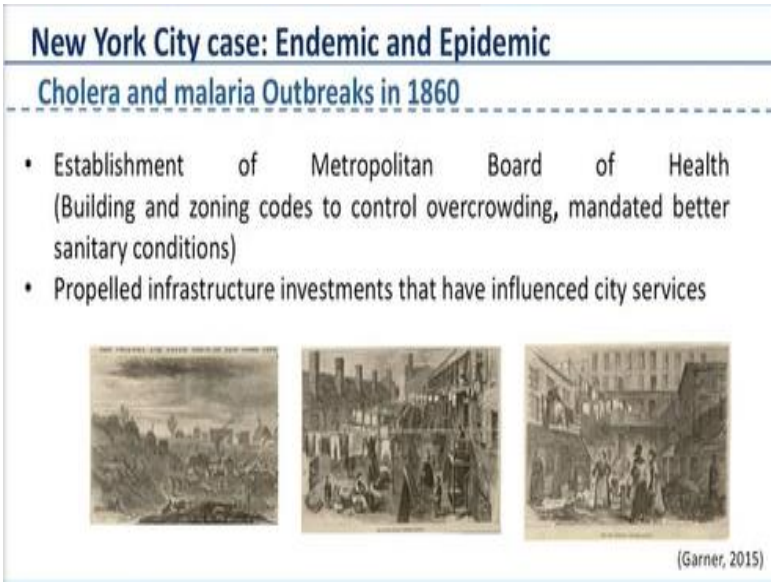

It comprises of building and zoning codes to control crowding, mandated better sanitary conditions and propelled infrastructure investments that had influenced city services. The accumulation of the population in large cities in the United States showed most dramatically in its largest city, New York, drastically altered disease pattern. Like we mentioned before the; last cities were the sights for first of the rising in extremely high mortality levels and major epidemics and then of declines in death rate.

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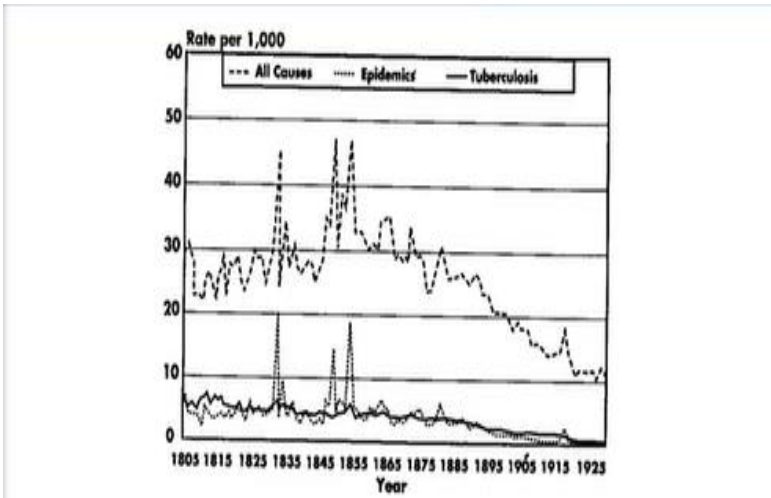

Figure 1. Death Rates, New York City, 1804 to 1930
All Causes, Epidemic Diseases, and Tuberculosis

(Condran,199

In the graph, you can see the death rate per 1000 in the New York City from 1804 to 1930. By 19th century, most of the New Yorkers had a clear understanding of the world epidemic. It was ugly and frightening situation. In 1798, nearly 800 deaths from yellow fever increased the death toll for the year by nearly 50%. More than 5000 residents of New York died of Cholera in 1849. Smallpox killed only 26 of the city's inhabitants in 1868, but cause 1920 deaths four years later.

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Years of unusually large no if death from selective disaster

(Condran,199

Table published contains a list of major outbreaks of epidemic disease in the New York City from 1798 to 1918. Cholera dominated the first half century while smallpox added to epidemic death toll. The list includes yellow fever, typhus, typhoid, influenza and cerebral spinal meningitis.

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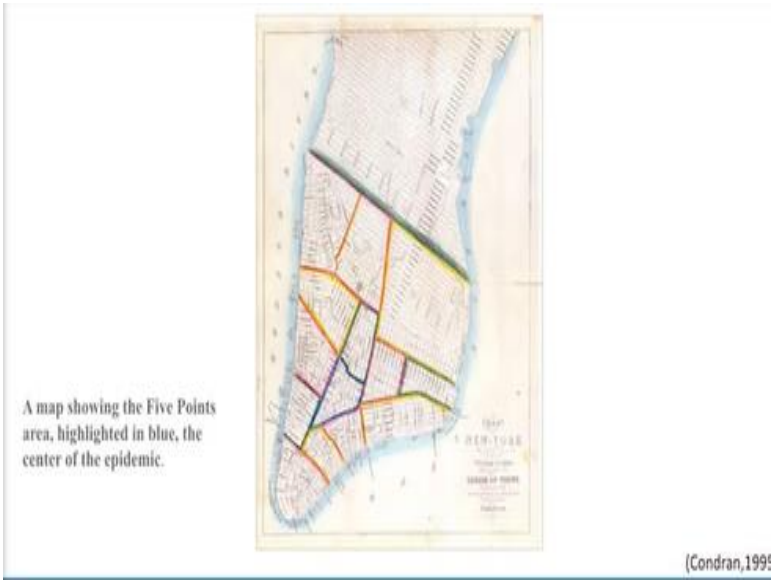

A map shows the five point area highlighted in blue, the centre of epidemic in the city. The epidemic left more than 3000 dead out of a population of 2,50,000. Cholera spot dread in 19th century cities, not just because of how many victims it claimed. Mortality rate from the typical losses and other diseases greatly exceeded those from cholera but because of the violence and surprise with which it attacked.

In a matter of hours, ripples of cramps, vomiting and diarrhea would transform an apparently healthy person into a pinched and a darkened cop.

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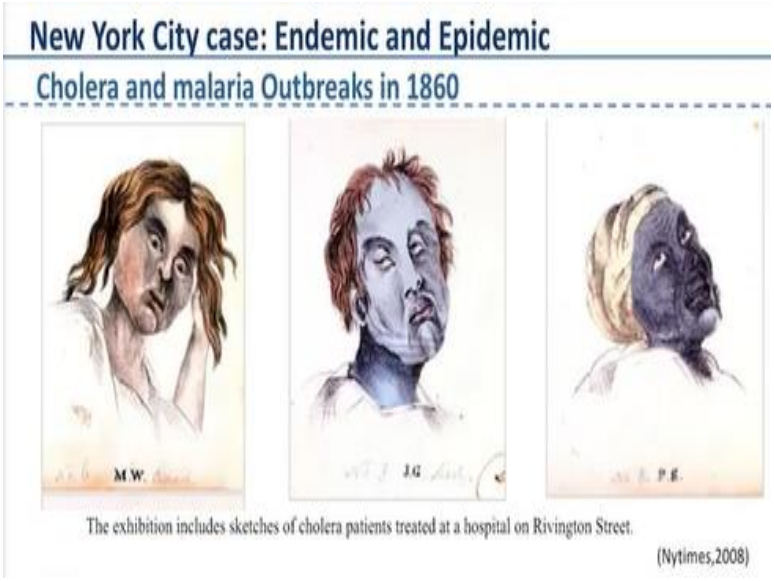

You can see these sketches of the time showing how healthy people transform to darkened cops. A journalist nick named the New York City got him as an English village provide a bill for the foolishness of its inhabitants. And as publication plague in good time, cholera in 19th century New York. Like so before people of means were escaping to the country.

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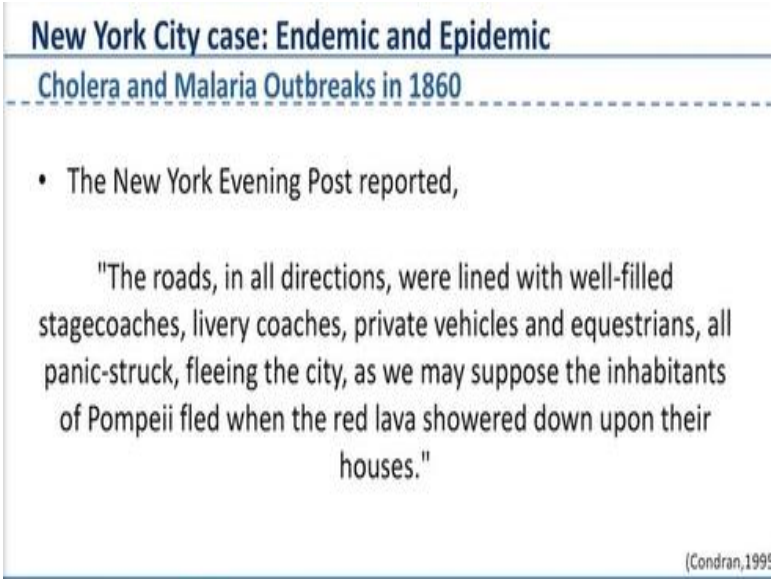

The New York Evening Post reported the roads in all directions, were lined with well filled stage coaches, livery coaches, private vehicles, and equestrians all panic struck fleeing the city. As we may suppose the inhabitants of palm pay fled when the red lava showered down upon their houses. There was nexus between cholera and the quality of city's water supply. Similarly, there was suggested association between yellow fever and the extent.

And subsequent drainage of marshland with accompanying effect on the local mosquito population. Because general changes in living standards the interconnection between causes of death and the changes in disease themselves probably played a role in the rise and fall of each of these diseases. It was impossible to assess the importance of any particular factor.

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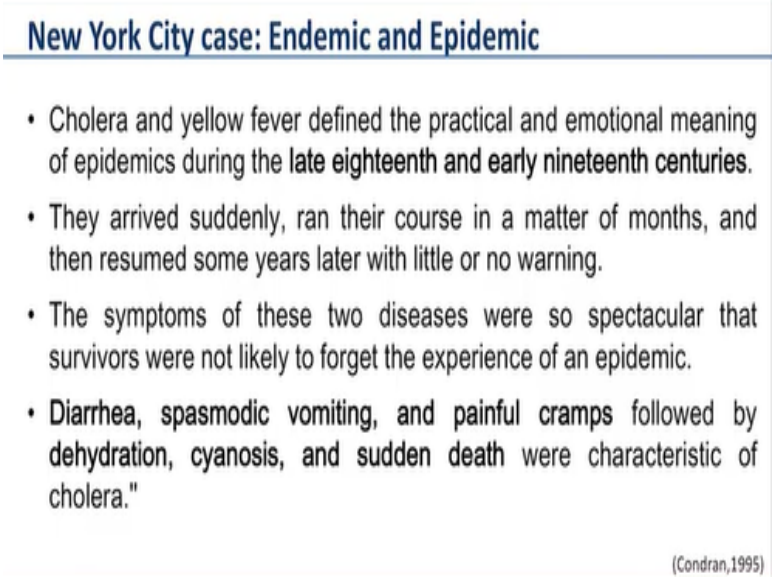

Cholera and yellow fever define the practical and emotional meaning of epidemic during the late 18th and early 19th century. They arrived certainly ran the courses in a matter of months and then resumed some years later with little or no warning. The symptoms of these two diseases were so spectacular that survivors were not likely to forget the experience of an epidemic. Diarrhea, spasmodic vomiting, and painful cramps followed by dehydration, cyanosis and sudden death were characteristic of cholera.

Those affected with yellow fever suffered from fever and associated headache, nausea, clamminess, weak pulse and identifying yellowish cast to the complexion. With cholera that often ensued within the day or even within hours of onset of symptoms that a person could be well in the morning and dead before nightfall, a stark contrast to the lingering illness associated with many endemic diseases like tuberculosis added to the fear and panic that accompany these epidemic diseases.

The prevalence of both; Cholera, yellow fever varied across the city. The New York City Board of Health noted that the Cholera of fields delegated in certain areas of the city were invariably characterized by crowded and filthy dwellings, mostly tenant housing of the poor classes. Filthy streets, gutters and courts obstructed and faulty houses and privies bridges and a foul condition of previous back street with overlapped with those in the earlier cholera epidemic and also, although not perfectly with farmers swamplands stream beds.

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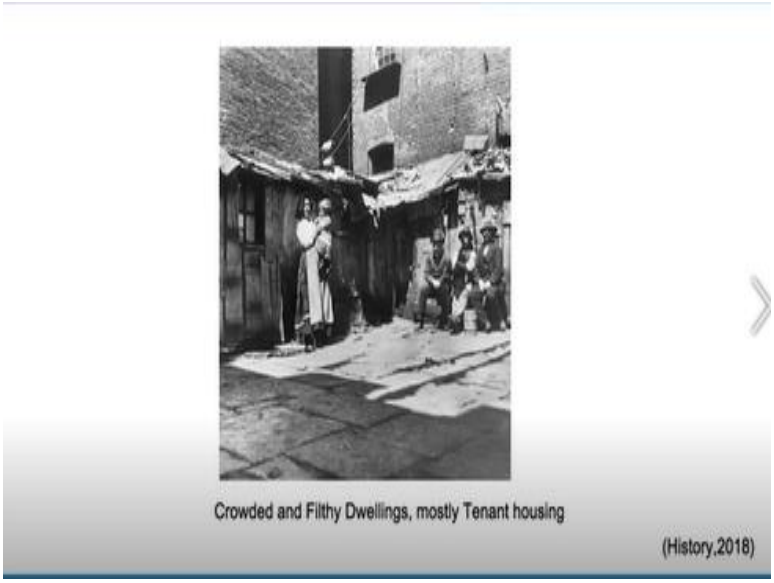

And basin that were drained by surface. Factors and circumstances were interrelated and varied from city to city and from diseased to diseased. The geographic distribution of epidemics was fairly consistent associated with poverty. Condran also writes the demographic effect of aids on mortality conditions of New York City from 1983 to 1988 as shown in the table.

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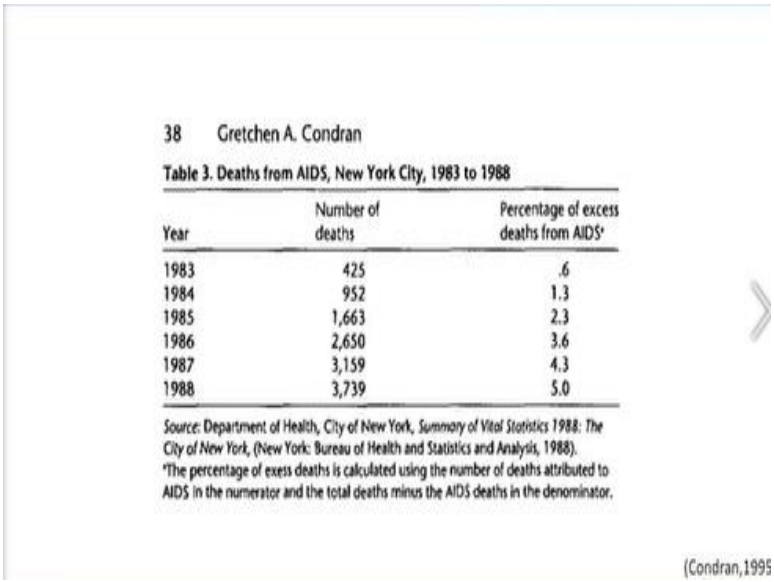

38 Gretchen A. Condran

Table 3. Deaths from AIDS, New York City, 1983 to 1988

Year	Number of deaths	Percentage of excess deaths from AIDS*
1983	425	.6
1984	952	1.3
1985	1,663	2.3
1986	2,650	3.6
1987	3,159	4.3
1988	3,739	5.0

Source: Department of Health, City of New York, *Summary of Vital Statistics 1988: The City of New York,* (New York: Bureau of Health and Statistics and Analysis, 1988).
*The percentage of exess deaths is calculated using the number of deaths attributed to AIDS in the numerator and the total deaths minus the AIDS deaths in the denominator.

(Condran,1995

The numbered presented is the percentage added by AIDS to the total number of deaths in New York City from 1983 to 1988. It is directly comparable to the figures for epidemic disease by 1988s had a 5% to the total number of death in the city. The figure from some age groups are extremely grim in 1988 is raised the number of deaths in the male population age 25 to 44 by 50% and added nearly 40% more deaths to women aged 25 to 34.

The demographic analysis by counter indicates that epidemic disease were never as important as endemic diseases and explaining the level of mortality. That is from tuberculosis among the adults and diarrheal diseases among young children were always more important source of mortality even in most epidemic years. In addition, although epidemic disease declined quickly after 1870, they were not the leading source of mortality decline.

That role was played by major endemic diseases. So, we saw selective cases from these periods through different cases how different committees and stakeholder responses varied. We saw how we understood problems and tried to solve it through multiple perspectives and through infrastructure development urban planning, legislation, integration and governance. We saw how cities have been vulnerable to endemic, epidemic and pandemic.

And how health; was a problem of social economic and political environment. We will stop here in the session.

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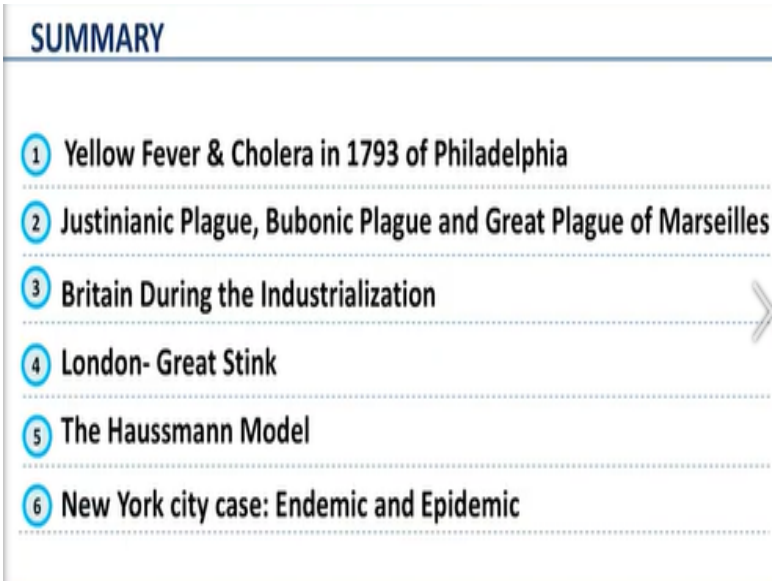

So, summarizing in today's session we covered we read through the narrators of yellow fever and cholera from Philadelphia. We looked at the pattern of disease Justinianic plague, Bubonic plague and Great plague of Marseilles. Thereafter we read through the narrators of Britain from the perspective of health during the industrialization period. Furthermore, we looked at the narrators from London at time of Great stink.

We looked at the Paris Haussmann model we also saw New York city case concerning endemic and epidemic. So, you saw all the theories and the new understanding we have about public health. Reflect will be further advance in listening to more narratives and try to compare and understand all phases and theories and current situation around you.

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These are the references used.

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We have also added further suggested reading for you.

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Our coverage was limited with the scope to make you aware of the topic there are enormous readings and movies available to explore. Few are suggested here, this is not an extensive list. You may feel free suggest more from your experience.

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Please feel free to ask questions. Let us know about your concerns. You have to share your opinion experiences and suggestions looking forward to interacting and cool learning with you while exploring cities and urban planning. Thank you.