The impetus for public health reforms

INTRODUCTION
Poverty and pauperism affected the most vulnerable members of society: those who had few saleable skills and less education, who were at the mercy of market forces and the vagaries of employers. Disease, on the other hand, was no respecter of persons. Maria Woolf, wife of a struggling law clerk, died from cholera in 1849 when she was 32 years old and eight months pregnant; her unborn child died too. Her husband George survived the cholera only to die from tuberculosis two years later. Prince Albert, husband to Queen Victoria, died from typhoid on 14 December 1861 aged 42. Their daughter Alice died from diphtheria in 1878, when she was 35 years old; she was buried with her four-year-old daughter, Marie, who had died from the same disease a few weeks before her mother. All of these diseases were related to poor public health. If the prevalence and spread of such diseases was to be controlled, effective public health was essential.

Improving the health of the community has always posed problems for those intent on developing public health provision. There has to be appropriate technical skill and knowledge of sanitary engineering; there has to be appropriate medical knowledge about the cause and prevention of disease; and there has to be willingness on the part of the public, local authorities and parliament to legislate and carry through and uphold that legislation.

WHY DID REFORMS TO PUBLIC HEALTH BECOME SUCH A PRESSING ISSUE FROM C1780?
In pre-industrial Britain, there were few pressing public health problems. True, there were no drains or sewerage systems, no clean piped water and no effective measures to prevent the spread of disease. From time to time, edicts and directives were issued by government and town councils regarding, for example, the removal of waste from the streets and the emptying of privies. There were periodic outbreaks, too, of bubonic plague. While there was some concentration of people in fairly crowded conditions in London and some provincial towns, the vast majority of people lived, thinly spread, in rural areas. There was certainly no perceived need for anything like a national public health system.
Public health problems caused by the Industrial Revolution

Enormous, cataclysmic change was to come with industrialisation that began in England in the late 18th century. Between 1781 and 1871, the population of Britain grew from approximately 13 million to over 31 million, and by 1939 to nearly 48 million, with the most rapid period of growth being between 1811 and 1841. It was a population that was not only growing, but was on the move. Industrialisation had created work in factories, mills and foundries and people flocked into the rapidly growing towns and cities to take advantage of the new job opportunities. The sudden influx of people forced many to crowd together, living in substandard housing with little by way of clean water or adequate sanitation. This had the potential to become a public health catastrophe.

The impact of a rising, mobile population

The overall population increase in Britain was most rapid in the years between 1811 and 1841. This was due almost entirely to the consequences of industrialisation.

The death rate fell due to:

- the medical industry producing the vaccine that prevented smallpox killing so many people
- the agricultural industry producing food that was better in quantity and quality
- the chemical industry producing soap that was cheap and readily available, enabling people to keep themselves and their clothes cleaner than before
- the textile industry producing cotton cloth that was cheap to buy and easy to wash and so help people to keep clean.

The birth rate rose because:

- fewer people dying when young meant that more people survived into their twenties and thirties to have babies
- more babies living to adulthood meant that their generation, too, would have more children, and so on through following generations.

The marriage rate rose because:

- in rural areas, farmers employed fewer live-in servants. It was therefore easier for men and women agricultural labourers to begin life together on their own and so they married earlier
- in industrial areas, unskilled workers were replacing skilled craftsmen who had to work a seven-year apprenticeship. Therefore, industrial workers could marry as soon as they had a job or even if they didn’t have one
- earlier marriages, in the days before contraception, meant more babies.
It was not just the size of the population that changed; the distribution changed, too. In 1801, around 33 percent of the population lived in towns. This had increased to 50 percent in 1851 and 72 percent in 1891. By 1900, four out of every five British citizens were urban dwellers. The steady and relentless growth conceals the even more dramatic, and differential, growth of individual towns, as is shown in Figure 1.1. Official national censuses were held every ten years from 1841, and were estimated, sometimes by contemporaries and later by historical statisticians, for earlier years. It was not uncommon, in the 19th century, for industrial centres to show an increase in their population of one-third at each count.

Civil registration of births, deaths and marriages – introduced in 1837 – revealed a young, fertile and actively reproducing population in most urban centres. Urban birth rates were continually above death rates and so natural increase, from the 1840s, added to the increase from internal migration. However, these global rates, too, conceal as much as they inform. In Manchester in the 1840s, for example, 57 percent of babies died before their fifth birthday. Epidemics of cholera, smallpox and scarlet fever, for example, were recorded and their rate and geographical distribution were analysed by statisticians and used by those pushing for reform in public health.

Before 1837, vicars were required to keep registers of baptisms, marriages and burials that had occurred in their parishes. A mobile population and the growth of nonconformity meant that these registers became increasingly unreliable. In recognition of the need for accurate records for voting and taxation purposes, for example, parliament legislated for compulsory civil registration that was administered by the Poor Law unions. This began on 1 July 1837, and certificates of births, marriages and deaths were issued as legal documents.

It was not so much the fact of urban growth that created public health problems, but the rate of urban growth. The fast pace of this growth created almost insuperable problems and daunting challenges insofar as public health was concerned.

### KEY TERM

**Civil registration**

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### EXTEND YOUR KNOWLEDGE

**William Farr (1807–83)**

A qualified doctor, William Farr, started a medical practice in Fitzroy Square, London, in 1833. Farr was fascinated by medical statistics, and was appointed chief statistician to the newly set up Office of the Registrar General, a post he held until 1879. From 1 July 1837, all births, deaths and marriages in England and Wales had to be registered there. By insisting that doctors registered the cause, and not simply the fact, of the death, Farr was able to produce statistics that were invaluable to public health reformers. He used his position to advocate public health reform, drawing attention to the wide variations in mortality between different areas of the country. Farr had been a supporter of the miasma theory of disease (see page 17), but the 1866 cholera outbreak finally convinced him that cholera had to be water-borne.

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**SOURCE**

The death certificate of Maria Woolf, dated 18 June 1849.
### The impetus for public health reforms

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**Figure 1.1** The population of some British towns and cities (in thousands).

### Population growth and distribution

**1.** Look at Source 1. What questions would you need to ask of the source that would lead you to an understanding of the state of public health in the City of London at that time?

**2.** How far did the civil registration of births, marriages and deaths help to drive public health reforms?

**3.** Look at Figure 1.1.

   **a)** Which towns would you expect to experience the greatest challenges with regard to public health problems?

   **b)** How would you explain the differences in growth rates shown here?

**4. a)** Look back to the section: ‘The impact of a rising, mobile population’. Use the Information to construct a spider diagram or flow chart to show how changes in death, marriage and birth rates were linked.

   **b)** What, in your view, was the most important factor that brought about change? Explain your answer.

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### The impact on people’s living conditions

Public health is closely connected to people’s living conditions. The influx of thousands and thousands of people into small market towns and cathedral cities that had the fortune, or misfortune, to have one or more industries located there had a catastrophic effect on the existing housing and sanitation provision. This, in turn, led to the explosion of what the Victorians called ‘filth diseases’, such as typhoid, diphtheria, tuberculosis, scarlet fever and, most dreaded of all, cholera. Other 19th-century killers, such as measles and whooping cough, became endemic.

### Housing

Bad housing was nothing new and it certainly was not a product uniquely of the Industrial Revolution. There had been slums in medieval London and, throughout the centuries, agricultural labourers had lived in conditions that were frequently no better than those of the animals they tended. What was unique about the Industrial Revolution was that it resulted in widespread, dense overcrowding. Urban communities responded, first, by using up and adapting existing ‘vacant’ living space and, second, by building new dwellings. Cellars and attics were filled with working people and their families, and were also used as workplaces.
First, there is the old town of Manchester. Here the streets, even the better ones, are narrow and winding, as Todd Street, Long Millgate, Withy Grove and Shude Hill, the houses dirty, old and tumble-down, and the construction of the side streets utterly horrible. Going from the Old Church to Long Millgate, there is a row of old-fashioned houses at the right, of which not one has kept its original level; these are remnants of the old pre-manufacturing Manchester, whose former inhabitants have moved with their descendants into better-built districts. Here, [back in the old town] one is in a working-men’s quarter for even the shops and beer houses hardly take the trouble to exhibit a trifling degree of cleanliness. But all this is as nothing compared to the courts and lanes that lie behind, to which access can be gained only through covered passages, in which no two human beings can pass at the same time. Every scrap of space left by the old way of building has been filled up and patched over until not a foot of land is left further to be occupied.

Engels not only created a vivid impression of housing in industrial Manchester, but also revealed a new development. Prior to the Industrial Revolution, rich, poor and those in-between lived in close proximity to each other in Britain’s towns and cities. In industrialising Britain, the absence of affordable public transport meant that industrial workers had to be housed close to the mills and factories in which they worked. The middle classes moved out, beyond the pollution and smut-laden pall that covered the industrialising cities.
Most of the housing for those moving to live and work in the fast-growing cities had to be newly built. These new homes varied wildly in style: rows of industrial cottages were common in the North, back-to-back houses in parts of industrial Lancashire and Yorkshire, enclosed courtyards in Birmingham and vast tenements in Glasgow. They varied also in standard. Many were poorly built, with floors being nothing more than bare boards over beaten earth. Others were planned carefully, but the most careful planner could not legislate for the number of families that would occupy a house designed for one.

Sanitation
It was the lack of services to a house rather than the house itself that caused problems, no matter how overcrowded it was with occupants. Most housing in the first half of the 19th century lacked drainage, sewerage and a regular water supply.

Lavatories (or privies) were usually outside, in the courtyards and alleys, and emptied into cesspits. Human waste collected in these cesspits that were, from time to time, cleaned out by ‘night-soil men’. They piled what they had collected in huge dunghills and then sold it on to local farmers at a price per tonne. Some houses (as in Source 3) had their own privies. These were ash privies where, instead of flushing, the users covered the contents with ash. Some middle-class houses had flushing lavatories, but these flushed either into a cesspit in the cellar or into a closed sewer. These, as with the ash privies, had to be physically emptied.

Water was needed for washing, cooking and drinking; not only was water in short supply but it was expensive. Its supply, too, was controlled by vested interests in the form of private water companies. Water companies sometimes took their water from deep, natural underground reservoirs and springs, but more usually from local rivers. The middle classes had water piped to their houses and, because the supply was frequently irregular and uncertain, stored it in huge cisterns so that they could, quite literally, have water on tap. The poorer areas of towns and cities had to make do with standpipes, and the inhabitants queued with buckets and saucepans to buy what they could afford when the water company turned on the supply. People too poor to buy water, or to buy enough water for their needs, either didn’t bother or took what they could from local wells and streams.

SOURCE 4
Jacob’s Island, Bermondsey, on the south side of the River Thames, London, drawn in 1810. It illustrates the nub of the problem: the wooden shacks are privies emptying into the stream. The stream provides water for those living in the houses.

KEY TERM
Night-soil men
People who collected human waste, usually at night.
The new urban environment, affecting a steadily rising proportion of the nation, brought problems of discipline in living, of social controls, just as much as factory employment brought the problem of discipline and regularity in work. Industrialists solved their problems – often harshly – more efficiently than local government, police and public administration solved theirs.

Some attributes of rural life proved lethal when translated into high-density urban housing in the absence of strict local government regulations – sanitation being a clear example. The context of urban life proved socially more lethal than the context of work. Environmental decline was, and remains, the most intense social problem resulting from industrialisation. Not until the second half of the nineteenth century was the general administrative basis for effective social controls in towns successfully evolved. With lagging public provision and public initiative, encouraged by the anti-interventionist philosophy prevailing at Westminster – even the absence of a national education system – great scope remained for the spontaneous evolution of appropriate social values by social elites.

**ACTIVITY**

**KNOWLEDGE CHECK**

**Housing and sanitation**

1. What public health problems would arise because of the rapid growth of towns?
2. In your group, discuss which problems would be the easiest to solve.
3. Consider Sources 3 and 4. How far would the public health problems illustrated by Source 4 have been solved by the houses illustrated in Source 3?
4. Read Extract 1. What point is the author making about public health?

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**The impact of epidemics on the health of the nation**

The connection between dirt and disease had been appreciated for hundreds of years, but what was not known was just what that connection was. That had to wait until 1867, when Louis Pasteur developed his germ theory of disease. In the first half of the 19th century, overcrowding and lack of sanitation and clean water meant that disease was rampant and life expectancy of the working classes was low for the following reasons.

- People living in overcrowded, unsanitary conditions and without easy access to a supply of clean water housed body lice, which spread typhus fever, from which many died. There were typhus epidemics in 1837 and 1839; an outbreak in 1847 killed 10,000 people in north-west England alone.
- Influenza, scarlet fever, tuberculosis (often called the white plague) and measles were endemic and were often killers.
- Typhoid and diarrhoea were common.
- Cholera hit Britain in four massive epidemics: 1831–32, 1848–49, 1853–54 and 1866. The first epidemic killed 31,000 and the second 62,000.

**EXTEND YOUR KNOWLEDGE**

**Typhus**

Typhus is caused by the rickettsia bacteria and it cannot live for long outside living cells. The bacterium is transmitted to humans by parasites such as ticks and fleas.

The first stage of typhus consists of ‘flu-like symptoms’: fever, headaches and chills lasting about two weeks. Five to nine days after having been infected, a rash develops on the body that spreads to the arms and legs and will eventually cover the whole body. The brain may become inflamed and, if this happens, coma and death will probably follow.
Increasing understanding about the causes of disease

Public health is about the prevention of disease and about the spread of disease in the community. It is not about curing disease, which is the function of medicine. Nevertheless, the two are connected. The causes of disease have to be understood before effective cures can be developed. If the causes of specific diseases (especially those diseases the Victorians regarded as ‘dirty’) are understood, then the spread of those diseases within a community can be reduced to a minimum or eliminated altogether. In the 19th century, there were two main theories about what caused disease. The first was the miasma theory; this was replaced, though not at once and not by everyone, by the germ theory of disease. These two theories had a profound effect on public health in the years 1830–75.

The miasma theory of disease

People had understood for hundreds of years that there was a link between dirt and disease, but they were unsure as to just what that link was. In the 19th century, the most popular explanation was ‘miasma’, or bad air. This was an old theory, developed first in the Middle Ages. Diseases, it was believed, were caused by the presence, in the air, of a miasma. A miasma was a kind of poisonous gas in which, so it was said, were suspended minute particles of decaying matter that couldn’t be seen by the naked eye. It was characterised by a foul smell. So, the theory went, if you were breathing in a miasma, you were going to get ill because the miasma carried disease. Diseases were spread because the poisonous gases were carried from person to person and place to place on the air.

It was a neat theory, and made a lot of sense to people who were trying to improve public health in the 19th century. Industrialisation and the rapid growth of towns had created many filthy, foul-smelling areas in most cities. It was these areas in which disease was rampant, epidemics common and death rates high. So the answer was clear: clean them up, improve housing and sanitation, and public health would automatically improve.

The germ theory of disease

Scientists became very interested in decaying matter and in the maggots and flies that lived on and in it. The development of microscopes (principally by Joseph Lister, who in 1830 built a microscope that could magnify 1,000 times without distortion) enabled them to observe micro-organisms in rotting material that were much, much smaller than the flies and maggots. Where did these micro-organisms come from? There were two ideas: that the decaying material created the micro-organisms, and that micro-organisms in the air were attracted to the decaying material.

Which theory was correct?

In 1860, a French scientist, Louis Pasteur, conducted a series of experiments proving that micro-organisms existed in the air and were not created by the decaying material. It was a small step from this to his germ theory. He discovered that a disease in silkworms was caused by a particular micro-organism. If micro-organisms could cause a disease in silkworms, surely different micro-organisms could cause diseases in people? And he was right. Germs could, and did, cause disease in humans. Not everyone believed him and many influential people were slow to let go of the miasma theory. It was left to a German doctor, Robert Koch, to prove this once and for all, and in the 1880s and 1890s he and his team identified the germs that caused most of the killer diseases of the 19th century.

The cholera epidemic, 1832

The cholera epidemics, more than endemic diseases like typhoid and tuberculosis, had a profound effect upon the public and the legislators that was out of all proportion to their statistical importance. This was for two main reasons:

- the high percentage of fatalities (40–60 percent) among those contracting the disease
- the speed with which cholera could strike.

Cholera-phobia riots

The fear that cholera engendered was palpable. There were 30 recorded ‘cholera-phobia’ riots in towns and cities throughout Britain. Principally affected were Birmingham, Bristol, Edinburgh, Exeter, Glasgow, Leeds, Liverpool, London, Manchester and Sheffield.
The Liverpool riots were worse than those that happened anywhere else in Britain, and some of those were pretty bad. Between 29 May and 8 June 1832, eight major street riots occurred, with minor disturbances as well. The rioters were not protesting against the disease (which would not have been too sensible), rather, they were rioting against the local medical men. It was a generally held belief that cholera victims were being taken to the local hospital where they died, doubtless murdered by the doctors in order to provide bodies for dissection. There was some basis for this belief. In 1826, 33 bodies had been found on the Liverpool docks, ready to be shipped to Scotland for dissection. Two years later, a local surgeon, William Gill, was tried and found guilty of running a grave-robbing system in order to provide bodies for dissection. The riots ended abruptly, largely because of pleas from the local Catholic clergy and a well-respected local doctor, James Collins.

In Exeter, the authorities had instituted regulations for the disposal of cholera-infected corpses and their clothing and bedding. People rioted, and even attacked gravediggers, because they objected to the burial of cholera victims in local graveyards.

It seems clear that cholera riots were not directed at the authorities for failing to contain the epidemic, but arose because of specific fears that medical students were stealing bodies for their anatomy classes; doctors were murdering cholera victims; victims were being buried in unconsecrated ground and that victims were being buried hastily, possibly before they were dead and without proper religious ceremony.

The rioting should be seen in the context of the general political and social unrest prevalent at the time. In the years 1831–32, pressure amongst people and politicians for the reform of parliament was intense. Meetings urging reform were held in all major towns and cities, accompanied by marches and frequently, rioting. Parliament was reformed, governments were not overturned and the fabric of society held firm.

**How did the government react to the cholera outbreak?**

Central government had done nothing about the endemic fevers and ‘dirty’ diseases that were common among all classes in all large towns, and which claimed the lives of thousands more people than cholera. Cholera, however, was different. It was deadly, it was swift – and it was capable of engendering fear in a way that typhoid and tuberculosis could not. The government had to take action.

In 1831, realising that cholera was fast approaching the shores of Britain, the government sent two medical commissioners to St Petersburg in Russia to assess the situation. Their report, coupled with general alarm among government officials, resulted in a temporary **Board of Health** being quickly set up. It consisted of the president and four fellows of the Royal College of Physicians, the superintendent-general of quarantine, the director-general of the Army Medical Department, the medical commissioner of the Victualling Office and two civil servants.

The Board of Health advised local government areas to set up their own boards of health, which would be in a position to deal with problems at grass-roots level. It suggested that these local boards of health should include one or more magistrates, a clergyman, some ‘substantial householders’ and one or more medical men. These local boards of health appointed district inspectors to report on the food, clothing and bedding of the poor, the ventilation of their dwellings, the number of people per room, the ways in which they kept clean and their behaviour. It also issued advice.

- Houses were to be whitewashed and limed and all infected furniture and clothing was to be fumigated.
- People with cholera were to be put into strict quarantine.
- Food and flannel clothing were to be distributed to the poor.
- Temporary fever hospitals were to be set up.

In the absence of any knowledge about the causes of cholera, the Board of Health was understandably a trifle hazy about what people should do once they had caught the disease. It suggested a variety of remedies, amongst them rubs of castor oil and laudanum, plasters of mustard, peppermint and hot turpentine, bleeding by leeches and warm baths. This sort of advice could do no harm and maybe would do some good. What was important is that here central government was, for the first time, officially recognising that cleanliness, adequate clothing and food are necessary factors in public health. Later, Edwin Chadwick was to change the emphasis to water supply and sewerage.

A number of cities were sufficiently frightened by the advance of cholera to set up their own boards of health, as suggested by the central board. There were inspectors who did submit reports to their local board, and local boards sent returns to the central board noting the cases of cholera in their area and deaths from the disease. However, this tended to be information gathering, not disease prevention or cure. Some areas set up cholera hospitals and other areas tried to institute a quarantine regime, but in the absence of firm knowledge and understanding as to what caused cholera, any measures tended to be rather hit or miss affairs.

Almost immediately, legality became a problem. What legal right did the boards have to insist that people co-operate with them? Could individuals be compelled to have their houses limed? Could children be separated from parents and sent to fever hospitals? In 1832, temporary ‘Cholera Acts’ were passed to allow local authorities to enforce some measures and to finance them from the poor rates. Even so, and despite people’s fear of cholera, local action was haphazard. Local boards were only temporary, and, once the first cholera epidemic had died down, they were disbanded.

**KEY TERM**

**Board of Health**

A central, London-based organisation set up in 1831 as a temporary measure to collate information and disseminate advice in relation to the cholera epidemic. It was made permanent by the Public Health Act 1848 (see page 30) and merged into the Local Government Board in 1871 (see page 115).
On 26th [May 1832] the first case of CHOLERA occurred in the Blue Bell Fold, a small, dirty cul-de-sac containing about 20 houses inhabited by poor families on the North side of the river in an angle between it and an offensive beck or streamlet which conveys the refuse water from numerous mills and dye-houses. The income of one family of eight persons, of whom four died in succession at the very start of the disease, had not averaged more than twelve shillings per week for the four preceding months.

The disease ran through Blue Bell Fold, spread with considerable rapidity, became general in the beginning of July, was at its height in August and the Board of Health ceased to have reports from its district surgeons on 12 November.

Amid a population of 76,000 persons, not more than 14 streets have sewers. Most [of the streets] are unsewered, undrained, unpaved, built on clayey soil and broken up by vehicles of every description. The only wonder is that diseases of this pestilential nature do not oftener and more fatally prevail. The disease has prevailed in those parts of the town where there is a deficiency, and often an entire lack, of sewerage, draining and paving. In three parallel streets, for a population of 386 persons, there are but two single privies.

From the privies in the Boot and Shoe yard, which do not appear to have been thoroughly cleansed for the last thirty years, 70 carts of manure were removed by order of the commissioners.

In a town like Leeds where in so many parts it teems with human life and where the operatives are congregated together in small and narrow streets, little attention is paid by the owners of cottage property to their cleanliness and ventilation. With broken panes in every window frame, and filth and vermin in every nook. With broken chimneys, without water, with sacking for bed clothing, with floors unwashed from year to year, while without, there are streets elevated a foot, sometimes two, above the level of the causeway, by the accumulation of years, and stagnant puddles here and there, with their fetid exhalations, causeways broken and dangerous.

Can we wonder that such places are hotbeds of disease, or that it obtains, upon constitutions thus liberally disposed to receive it, and forms the mortality which Leeds exhibits. Adult life exposed to such miasmata, gives way. How much more then infant life, when ushered into, and attempted to be reared in, such obnoxious atmospheres. On the moral habits similar effects are produced. An inattention on the part of the local authorities to the state of the streets diminishes year by year the respectability of their occupiers. None dwell in such localities but those to whom nearness to employment is absolutely essential.

A cure for cholera?

The problem with cholera was that it was silent, deadly and had no known cause or cure. Thousands of people tried avoidance rather than attempt prevention or a cure, although plenty of ‘cures’ were on offer. For those unwilling – or unable – to flee there was a host of remedies and preventative from which to choose.

- The contagionist theory suggested that cholera was spread by contact with cholera victims. Eminently sensible, it met with considerable opposition. If true, it meant that houses, streets or even whole cities had to be put into quarantine. Opponents pointed to the potential loss of trade and consequent increase in poverty and unemployment. They argued that not everyone in the same household fell ill with cholera and so the theory could not be true.

- The miasmatic theory (see page 17) suggested that cholera was spread by a ‘miasma of filth’ that was breathed in from infected air. At least the actions based on this theory – the removal of heaps of excrement, for example – were steps in the right direction. The connecting of sewers to rivers and other water courses, however, was not.

- In 1831, The Lancet, a journal written by doctors for doctors, reported that a community of Jews in Wiesniz had kept themselves free from cholera by rubbing themselves with an ointment made from wine, vinegar, camphor, mustard, pepper, garlic and the crushed bodies of beetles.

- Patent medicines grew and multiplied in number, as did their claims. The most well known were Moxon’s Effervescent Universal Mixture, Daffey’s Elixir and Morrison the Hygienist’s Genuine Vegetable Universal Mixture. All claimed to cure cholera, and, because many who took them undoubtedly did survive, they had a great following of those who believed in their curative properties.

- Prayer was recommended by all the main Christian churches. Cholera, many believed, was God’s punishment for lax and immoral behaviour. Repent and all would be well. As with patent medicines, many of those who prayed for themselves survived, as did those for whom they prayed: prayer, the arguments went, was proven to be efficacious.

Until there was acceptable scientific proof that cholera was a water-borne disease, and preventative measures could be taken, survival was very much a hit or miss affair. Some 15 years after the 1832 epidemic, cholera again swept the country with the same effect: local boards of health were set up, and then disbanded once the danger was deemed to have passed. It was the third visitation of cholera in the early 1850s that was to become a turning point in understanding the disease. This is explored in Chapter 2.
3.1 Poverty, public health and the state in Britain, c1780–1939

The 1832 cholera epidemic
1. Cholera was just one of the many epidemics that hit 19th-century England. Why did it generate more fear than any of the other epidemics?
2. Were the cholera riots in Liverpool and Exeter in 1832 the result of ignorance or fear?
3. Read Source 5.
   a) What does Dr Baker imply about the causes of cholera?
   b) What evidence does he cite to support his opinion?
   c) Why was this not enough to stop further epidemics breaking out?
4. a) How did central government react to the outbreak of cholera?
   b) Which of their actions were likely to prove effective?

Reports on the state of towns
The 19th century was a time of investigating and reporting, of collecting and collating information. Many reports were local and went no further than the local town hall; others found their way to central organisations, such as the Board of Health. Some reports were the result of the enquiries of select commissions, set up for specific enquiries by parliament; others were generated by bodies such as the Poor Law Commission (see page 90).

The moral and physical condition of the working classes of Manchester, 1832
It was the 1832 cholera epidemic (see page 17) that brought Manchester’s Dr James Kay to the attention of those in authority. Cholera hit the city on 17 May 1832, and a board of health was set up, with Kay as its secretary, to co-ordinate the work of the city’s 14 district boards. Kay personally visited each area to investigate conditions there, and what he found formed the basis of his report.

Source 6
Part of the report The Moral and Physical Condition of the Working Classes Employed in the Cotton Manufacture in Manchester compiled by Dr James Kay in 1832.

The state of the streets powerfully affects the health of their inhabitants. Sporadic cases of typhus chiefly appear in those which are narrow, ill-ventilated, unpaved, or which contain heaps of refuse, or stagnant pools. The confined air and noxious exhalations, which abound in such places, depress the health of the people, and on this account contagious diseases are also most rapidly propagated there. The houses are unclean and ill provided with furniture. An air of discomfort, if not of squalid and loathsome wretchedness pervades them. They are often dilapidated, badly drained, damp; and the habits of their tenants are gross – they are ill fed, ill-clothed, and uneconomical – at once both spendthrifts and destitute – denying themselves the comforts of life in order that they may wallow in the unrestrained licence of animal appetites. An intimate connection subsists, among the poor, between the cleanliness of the street and that of the house and the person. Uneconomical habits, and dissipation are almost inseparably allied; and they are so frequently connected with uncleanness, that we cannot consider their concomitance as altogether accidental. When the health is depressed by the concurrence of these causes, contagious diseases spread with a fatal malignancy among the population subjected to their influence. The records of the Fever Hospital of Manchester prove that typhus prevails almost exclusively in such areas.

Kay’s report was one of the first detailed reports on the condition of a specific group of working people. He was one of the first people to demonstrate the connection between dirt and disease and, as well as demonstrating that dirty and diet affected the health of working people, James Kay threw into the equation (as did most 19th-century writers) the moral condition of the poor. The implication here, of course, was that ‘dirty’ living led to ‘dirty’ habits, and this proved to be a powerful motivational force for would-be reformers. This report was important, not simply for the information it contained, but because it set the scene for later investigations.
The impetus for public health reforms

3.1 James Kay-Shuttleworth (1804–77)

James Kay qualified in medicine in 1827 and rapidly developed a reputation as a well-respected doctor in Manchester. He became aware of the suffering of the poor and as a consequence became involved in sanitary and educational reform. As a result of treating people who lived in the slum areas of the city during the cholera outbreak of 1832, he wrote *The Moral and Physical Condition of the Working Classes Employed in the Cotton Manufacture in Manchester*. In 1835, he was appointed Poor Law Commissioner for the eastern counties and London. Four years later, he was appointed secretary to the Privy Council’s Committee on Education, where he worked hard to establish a public system of elementary education, supervised by a national body of inspectors. In 1840, Kay founded England’s first teacher-training college in Battersea. His wife was Janet Shuttleworth, daughter and heiress to the wealthy Robert Shuttleworth of Gawthorpe Hall, near Burnley in Lancashire. Because of this Kay added ‘Shuttleworth’ to his name. He died in 1877, having been a leading member of the Lancashire Liberal Party, but failing in his attempt to become a Liberal PM.


This report started as a smaller piece of work, focused on London, requested by the Poor Law commissioners and carried out under the direction of the commission’s secretary, Edwin Chadwick (see Chapter 4). In 1839, Sir James Graham, the home secretary, prompted by the bishop of London in the House of Lords, asked that the enquiry be extended to cover the prevalence of disease among the labouring classes throughout the whole country, and not just London. The complete report was to be submitted by the beginning of the 1842 session of parliament. Chadwick’s report was in three volumes: two volumes of local reports from all over Britain, based on questionnaires sent to all local boards of guardians, and a third volume containing his own conclusions and proposals for the way forward. Almost immediately he hit a problem. The Poor Law commissioners refused to allow it to be published in its original form because it criticised the water companies, the medical profession and local administration. It named names, too. Eventually, in July 1842, Chadwick had the whole report published under his own name and at his own expense.

The annual loss of life from filth and bad ventilation are greater than the loss from death or wounds in any wars in which the country has been engaged in modern times.

The various forms of epidemic, endemic and other diseases caused, or aggravated, or propagated chiefly amongst the labouring classes by atmospheric impurities produced by decomposing animal and vegetable substances, by damp and filth, and close and overcrowded dwellings prevail amongst the population in every part of the kingdom. That such disease, wherever its attacks are frequent, is always found in connection with the physical circumstances above specified, and that where those circumstances are removed by drainage, proper cleansing, better ventilation, and other means of diminishing atmospheric impurity, the frequency and intensity of such disease is abated; and where the removal of the noxious agencies appears to be complete, such disease almost entirely disappears...

Of the 43,000 cases of widowhood, and the 112,000 cases of destitute orphans relieved by the poor rates in England and Wales alone, it appears that the greatest proportion of deaths of the heads of families occurred as a result of the above specified and other remediable causes.

The primary and most important measures, and at the same time, the most practicable, and within the recognised province of public administration, are drainage, the removal of all refuse from habitations, streets and roads.

The chief obstacles to the immediate removal of decomposing refuse in towns and habitations have been the expense and annoyance of the labour and cartage required.

This expense may be reduced to one-twentieth or to one-thirtieth, by the use of water and removal by improved and cheaper sewers and drains.

For all these purposes, as well as for domestic use, better supplies of water are absolutely necessary.

Source

Chadwick’s report was a significant document. In it, he:

- attacked the inadequacy of existing water supplies, drainage and sewerage systems
- linked public health and the Poor Law
- pointed the finger at vested interests that stood in the way of improvement
- stressed the connection between these vested interests, overcrowding, epidemics and death.

It was the latter point that had the greatest impact. Chadwick had demonstrated, beyond reasonable doubt, that there was a connection between disease and the environment.

**What was the reaction to Chadwick’s report?**

The reaction to Chadwick’s report ranged from anger to wholehearted acceptance, passing through disbelief and derision on the way. The home secretary, Sir James Graham, was reluctant to act on the findings and conclusions of what was, officially at least, a purely private and largely personal report. He set up a Royal Commission on the Health of Towns with the purpose, not of questioning Chadwick’s findings or even his conclusions, but to investigate more fully the legislative and financial side of his recommendations. Chadwick, meanwhile, busied himself, at Graham’s request, with a report on burial practices and with giving official and unofficial briefings to the members of the Royal Commission.

**Extract from Anthony Wohl “Endangered Lives” published in 1983.**

Public opinion was first widely awakened to the need for remedial measures in 1842, when Chadwick published his remarkable, one is tempted to say epic Report on the Sanitary Condition of the Labouring Population of Great Britain. Drawing upon the evidence gathered by approximately 1,000 Poor Law Medical Officers of Health, Chadwick skilfully wove the most lurid details and evocative descriptions, damning statistics and damaging examples into a masterpiece of protest literature. The Report, which covered 372 pages of text and another 65 of appendices, powerfully portrayed the inadequacy of existing systems of sewerage, water supply and drainage, and stressed the connection between these and overcrowding on the one hand, and epidemic diseases on the other. Playing down the broader underlying issue of poverty as a root cause of much ill-health, Chadwick stressed the environmental, miasmic causes of disease and resultant pauperism, and maintained that these causes could be removed.

**Report of the Royal Commission into the Sanitary Condition of Large Towns and Populous Districts, 1844**

This report was generated as a result of Chadwick’s Report on the Sanitary Condition of the Labouring Population of Great Britain. Members of the Royal Commission into the Health of Towns were drawn from those who could be expected to know something about the subject they were investigating. Led by the Duke of Buccleuch, they included a geologist, a chemist, an expert on land drainage who was also a cotton mill manager and at least two engineers. Questionnaires were sent to the 50 towns with the highest annual death rates, and the returns studied by the commissioners themselves who also made official visits to the worst areas.

When the first report was published in 1844, it upheld Chadwick’s findings. Of the 50 towns investigated, 42 were found to have bad drainage and 30 poor water supplies. The second report in 1845 contained proposals for future legislation, and included a long memorandum from Chadwick explaining the recommendations on sewerage, drainage and water supply. It recommended that:

- central government be given extensive powers to inspect and supervise local sanitary work
- local sanitary districts be set up, with authority over drainage, sewerage, paving and water supplies
- local sanitary districts be given powers to raise money for sanitary schemes through local rates.

**Report of the Bradford Woolcombers Sanatory Committee, 1845**

Urban communities responded to the pressures of increasing populations as a result of the Industrial Revolution, first, by using up and adapting existing ‘vacant’ living space, and, second, by building new dwellings. Cellars and attics were filled with working people and their families, and were also
used as workplaces. An example of this can be found in the West Yorkshire town of Bradford, which was dominated by the production of woollen cloth. In the 1840s, there were more than 10,000 woolcombers living and working in their own dwellings. Conditions were appalling; the average age of death of a woolcomber was 14 years, two months. In 1845, the Bradford woolcombers formed a Protective Society and appointed their own ‘Sanatory Committee’ to report on their living conditions.

**SOURCE 8**

From the *Report of the Bradford Woolcombers Sanatory Committee*, published in 1845.

**NELSON COURT**

A great many woolcombers reside in this court. It is a perfect nuisance. There are a number of cellars in it utterly unfit for human dwellings. No drainage whatever. The Visitors [those compiling the Report] cannot find words to express their horror of the filth, stench and misery which abounds in this locality, and were unable to bear the overpowering effluvia [smell] which emanates from a common sewer which runs beneath the houses. Were this to be fully described, the Committee might subject themselves to the charge of exaggeration. We trust that some of those in affluent circumstances will visit these abodes of misery and disease.

**HOLGATE SQUARE**

A miserable hole, surrounded by buildings on all sides. This place resembles a deep pit – no chance of ventilation; a number of men and women work in the cellars near charcoal fires, seven feet below the surface.

**BACK ADELAIDE STREET**

The visitors give a heart-rending description of this neighbourhood – extreme destitution and suffering appears to be the result of their crowded and unhealthy dwellings. Very damp – no ventilation – privy ten feet three inches from the door – three persons work and sleep in this filthy yard and confined cellar; five feet three inches below the surface.

**MARY GATE**

Upper apartment contains three charcoal stoves, at which six persons work – there are two beds in the same room in which four persons sleep – bad smell – very hot.

The way was open for the government to act. It did so, tentatively, in 1848 (see page 30).

**ACTIVITY**

**KNOWLEDGE CHECK**

Reports on the state of towns

1. Read Source 6. How does James Kay make the connection between dirt and disease?

2. James Kay’s *Report on the Moral and Physical Condition of the Working Classes Employed in the Cotton Manufacture in Manchester* (Source 6) was written in 1832; Friedrich Engels’ description of Manchester (Source 2) was written 12 years later. How far are the findings of Source 6 supported by Source 2?

3. Read Source 7. What connection does Chadwick make between dirt and disease? Is it the same connection as that made by James Kay?

4. Why was Chadwick’s report so controversial?

5. Using your knowledge of the period, explain what obstacles might prevent the implementation of Chadwick’s recommendations?

6. We now know that the miasma theory of disease, in which Chadwick believed, was wrong. Does this mean that his report was unimportant?

7. Anthony Wohl (Extract 2) describes Chadwick’s report as ‘protest literature’. Do you agree?

8. Does the fact that the Bradford woolcombers commissioned their own report (Source 8) invalidate the report?
Drainage systems and water supplies: technological advance

It was gradually becoming clear, by the mid-19th century, that public health reform was needed, and that this was dependent on the effective removal of sewage and the supply of clean water to people’s houses. Investigations, reports and recommendations were one thing; undertaking the change was quite another. This was dependent, not only on the will of parliament and the acceptance of the public, but on the technological knowledge and practical ability to undertake such reforms.

Flushing toilets

Water to flush away human waste, usually into rivers and waterways, had been in intermittent use since Neolithic times. However, it was not until the Industrial Revolution, and the advances in technology that came with it, that the flushing toilet became a feature of many people’s lives. An important breakthrough came in 1775, with the invention of the S-trap by Alexander Cummings. This sealed the toilet bowl, preventing foul air coming up from the sewer. It was Joseph Bramah who combined this invention with a float valve system for a cistern to build the first practical, workable, flush toilet.

Growing urbanisation and the growth of a sewerage system, especially in London, enabled George Jennings to establish a business manufacturing toilets (known as water closets) and accompanying sanitary ware. His South-Western Pottery was opened outside Bournemouth in 1856 and, by 1861, was employing 97 men and 18 boys, indicative of the immense popularity of these new water closets, particularly among the middle classes. Jennings was granted a patent in 1852 for his invention of an improved water closet, whereby the pan and water trap were constructed in one piece so that a small amount of water was retained in the pan. Additionally, he improved the construction of valves and drain traps. By the end of the 1850s, building codes required all new-build homes (predominantly for the middle class) to be equipped with a water closet.

It was Thomas William Twyford who, in 1875, developed and sold the first ‘wash out’ trap water closet that proved immensely popular. Throughout the 1880s, Twyford was granted further patents for his inventions that improved the flushing rim and the outlet. In 1888, he applied for, and was granted, a patent whereby the toilet pan was refilled with a small quantity of clean water. This remained the standard water closet throughout the late 19th and early 20th centuries.

SOURCE

An advertisement for sanitary ware, produced in 1884 by the Thomas Twyford company.
Sewerage

Human and industrial waste piled up on land, and rivers offered an easy and cheap solution to the problem of disposal. Rivers moved without the need for the expense of installing and maintaining pumps, and they eventually emptied into the sea; in this sense, they could be seen to be self-cleansing. Faced with public health requirements not to allow piles of filth to accumulate, local authorities were reluctant to move away from the traditional method of disposal. Given the prevalence of the belief in the miasma theory of the spread of disease throughout most of the 19th century, a quick and apparently efficient removal of waste into the river system seemed ideal.

Before the development of a sewer system in the latter part of the 19th century, such sewerage as existed did not carry away waste matter in an effective way. Rough walls, inadequate connections between sewers of different sizes, intermittent volumes of water and inadequate slopes meant solids accumulated and only a heavy storm would flush the sewers clean. A system of flushing gates to control the flow of liquids through the sewers was invented by the engineer John Roe in 1842, whereby cast iron gates were fixed in the sewers and only opened when there was a sufficient accumulation of water-borne sewage behind them to enable the force of water to clear off any deposits. However, it was not until the 1870s and 1880s that these were combined with hydraulic pumps to ensure a constant flow of water through the sewers and make them virtually self-flushing. Construction of an effective sewerage system involved, too, the production of millions of bricks and tonnes of cement, as well as a transport infrastructure to deliver them to where they were needed.

There remained, though, the perennial problem of into what the sewers were to be flushed. Discharging untreated sewage into the natural water system became a problem as more was understood about the transmission of disease, and Chadwick’s idea of spraying it onto fields as a fertiliser was not well received. Some cities attempted to treat the sewage before discharge by adding sedimentation systems to their sewers. However, the breakthrough came in 1912 when scientists at Manchester University developed the sewage treatment system of activated sludge, whereby the sewage was biologically treated to make it safe.

Water supply

The provision of water was, like the provision of sewerage, in the hands of private companies for most of the 19th century. Whether or not individual companies took advantage of new technology was very much up to shareholders who, in turn, were guided by the need to make a good profit on their investment. Some companies did invest in modernising, using the latest equipment and taking up-to-date advice. The following examples are taken from the London area.

- In 1802, the Lambeth Waterworks expanded its operations to supply Kennington and replaced its wooden pipes with cast iron ones. Six years later, the West Middlesex Waterworks Company also installed cast iron pipes.
- In 1822, the Southwark Water Company extracted water from the River Thames using steam engines to pump it to a cistern at the top of an 18-metre-high tower. It was collected there before being piped to customers.
- In 1829, the Chelsea Waterworks Company became the first in the country to install a sand filtration system to purify the water taken from the River Thames.
- In 1838, the Grand Junction Waterworks Company built a pumping station near Kew Bridge at Brentford on the River Thames to house three steam pumps. The water was taken from the middle of the river and pumped into filtering reservoirs and a 61-metre-high water tower that used gravity feed to supply the area.

As the century progressed, more and more water companies built reservoirs to enable a reliable supply of water to be pumped to houses. A major problem, insofar as public health was concerned, was that water companies in London and elsewhere extracted drinking water from rivers that were themselves polluted by industrial and faecal waste. Further change had to wait until the knowledge that disease could be water-borne was combined with the science of removing impurities and the will of the people and the government that this should be done.
TO WHAT EXTENT DID ATTITUDES TO PUBLIC HEALTH REFORMS CHANGE IN THE YEARS 1780–1939?

Rarely do attitudes change as the result of a single, cataclysmic event. More often, change in attitudes is the result of a gradual erosion of previously held views. This usually happens because of a growing awareness of the nature of a situation combined with the impact of new discoveries or inventions and the increasing readiness of the authorities to intervene. This was, and is, an organic process. In the years 1780–1939, a growing awareness of the nature of the problems created by poor living conditions, combined with an understanding of the implications of various medical and scientific discoveries, pressurised local and national authorities to intervene. This intervention resulted in a deeper awareness of the need for reform amongst the public, press and parliament, and generated a desire for further change. Throughout, it was a combination of knowledge, understanding and the determination of dedicated individuals that changed attitudes and reformed public health for millions.

Why did attitudes to public health reforms change?

Raising social concerns

Public concern about the health of the working class was raised in a number of ways.

• Housing conditions were reported by writers and journalists. Contemporary novels written by, for example, Charles Dickens (see page 125) and Elizabeth Gaskell, created vivid pen-pictures of working-class living conditions in mid-Victorian Britain. Dickens focused on London, where he had first-hand experience of poverty. His books were enormously successful, reaching a wide readership partly because they were serialised and so more readily accessible than if they had been published in single volumes. Elizabeth Gaskell, married to a Unitarian minister, lived in Manchester and, although not poor herself, witnessed desperate poverty all around her. She wrote movingly of the impact of poor living conditions in her novel *Mary Barton* that was published in 1848. The conditions described by such authors chimed with the findings of the investigative journalist Henry Mayhew (see page 124). Throughout the period, there were novelists who focused on living conditions. For example, Arnold Bennett, at the beginning of the 20th century, wrote a series of novels that had the housing and health of the Staffordshire pottery towns as their backdrop. George Orwell, in his 1937 novel *The Road to Wigan Pier*, documented the bleak living conditions of many working-class people in Yorkshire and Lancashire.

• National and local newspapers reported public health matters, and commented on them, not always favourably (See Source 11 on page 31). Local outbreaks of scarlet fever and typhoid, for example, were reported in local newspapers such as the *Leeds Mercury*, and occasionally connections were made between poor living conditions and disease. It was the national newspapers that had the greatest impact on changing the attitudes of those with the power to bring about change. *The Times* newspaper, for example, headed a campaign for effective sewerage of London as a result of the ‘Great Stink’ of 1858 (see page 58).

• Artists created paintings and engravings of the rural and urban poor, usually incorporating street scenes and interiors. Whilst some were bought and hung on middle-class walls for their sentimental value — the rural poor usually presented as romantic idylls — those of the urban poor were more disturbing. They attracted the attention of those writing novels about the urban poor and destitute. Dickens, for example, was a great admirer of the work of Sir Luke Fildes, one of whose paintings you can see on page 8.

Water and sanitation

1. The connection between dirt and disease had been well known since medieval times. Why, then, was the supply of clean water and effective sanitation in towns and cities so slow to be realised?

2. ‘The development and marketing of flush toilets solved the sanitation problems of the growing towns.’ Explain how far you agree with this statement.
The impetus for public health reforms

3.1

- Doctors, parishes and county councils improved their record-keeping facilities. This enabled the production of statistical evidence to illustrate, for example, the connection between population density and overcrowding on the one hand, and death and disease on the other.

<table>
<thead>
<tr>
<th>Percentage of total population overcrowded</th>
<th>Death rates, all causes, per 1,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>17.51</td>
</tr>
<tr>
<td>15-20</td>
<td>19.51</td>
</tr>
<tr>
<td>20-25</td>
<td>20.27</td>
</tr>
<tr>
<td>25-30</td>
<td>21.75</td>
</tr>
<tr>
<td>30-35</td>
<td>23.92</td>
</tr>
<tr>
<td>Over 35</td>
<td>25.07</td>
</tr>
</tbody>
</table>

Figure 1.2 From the report by the Medical Officer for Health, London, in 1892.
<table>
<thead>
<tr>
<th>Type of accommodation</th>
<th>Death rate per 1,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>One room</td>
<td>32.7</td>
</tr>
<tr>
<td>Two rooms</td>
<td>21.3</td>
</tr>
<tr>
<td>Three rooms</td>
<td>13.7</td>
</tr>
<tr>
<td>Four rooms</td>
<td>11.2</td>
</tr>
</tbody>
</table>

Figure 1.3 Death rates in Glasgow, 1901.

<table>
<thead>
<tr>
<th>Persons per square mile</th>
<th>Mean death rate, per 1,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>27 districts with an average density of 136</td>
<td>11.63</td>
</tr>
<tr>
<td>40 districts with an average density of 1,303</td>
<td>18.53</td>
</tr>
<tr>
<td>18 districts with an average density of 4,424</td>
<td>21.56</td>
</tr>
<tr>
<td>5 districts with an average density of 7,480</td>
<td>26.54</td>
</tr>
<tr>
<td>4 districts with an average density of 55,563</td>
<td>34.82</td>
</tr>
</tbody>
</table>

Figure 1.4 Statistics released by the Registrar-General’s Office, 1907.

- There was increasing scientific knowledge and understanding about the causes of water-borne and sanitation-related diseases. This led to increased public awareness about the need for clean water, sewerage and drainage in general and encouraged the emergence of Health and Sanitation Committees to pressurise councils and the government to take action. For example, in 1844 the Health of Towns Association was established. It had a central committee based in London and branches in most provincial towns. Its aim was simple: to carry out a propaganda campaign for public health legislation. Members gave public lectures, published and distributed informative pamphlets and produced a weekly sheet of facts and figures.

- Governments set up Royal Commissions to investigate the living conditions of the poor and authorised a range of investigations during the period. A Royal Commission for Enquiry into the State of Large Towns and Populous Districts, for example, was set up in 1843 and reported in 1844. Knowledge and understanding of public health issues grew and developed throughout the period as a result of these developments and changing attitudes to the need for public health reform.

**ACTIVITY**

**KNOWLEDGE CHECK**

Raising social concerns
1. How reliable is the evidence provided by Charles Dickens, Elizabeth Gaskell and Gustav Doré about the state of public health in 19th-century Britain?
2. What conclusions can be drawn from the statistical tables in Figures 1.2–1.4?
3. Discuss in your group which was the more effective way of raising public concern about public health: novels, illustrations or statistics.

**Economic imperatives**

Economic imperatives often play a large part in changing people’s attitudes. It was the same with regard to public health reform. Factory managers, mill owners, bankers, treasury officials and all those affected by public health issues gradually became aware, not only of the cost of the reforms themselves, but of the cost of not undertaking reform.

- The cost of public health reforms could be calculated against the cost of losing a productive worker to one of the so-called ‘dirty’ diseases.

- The cost to the nation of the Poor Law, when looked at in terms of maintaining workhouses and paying for relief, was escalating (see Chapter 4, page 106). When local officials set this against the cost of public health reform, many could see a reduction in the poor rate occurring as a result of providing good drains and clean water. Any reduction in rates and taxes would resonate well with voters.
A major consideration in persuading people of the need for public health reform had to be, not only the overall cost, but also which sections of society would be paying for clean water and drains for all. Inevitably, the initial costs of connecting a house to a water supply and to sewerage systems fell upon the householder. Whilst the informed middle class, generally, paid out for their own comfort and health, it was by no means clear that they should pay for the poor to have similar facilities. Indeed, the landlords of the tenements and lodgings, should they be persuaded to link the properties they were letting out to the new drains and water supplies, would inevitably increase rents to cover costs — and the very poor could not pay. This, in turn, would throw more of the poor into pauperism. There was a way out of this seemingly vicious circle, and that was for local authorities to step in and take over responsibility for the public health of those living within their catchment area. This did happen but it happened slowly as economic and political imperatives altered the minds and attitudes of those in a position to bring about change.

Ultimately, the economic imperative was central to changing attitudes to the provision of public health. The economic benefit derived from a fit workforce was more persuasive than any moral imperative. If the initial investment produced an improved workforce, then, so the persuasive argument went, it was worth the initial outlay. The second Boer War (1899–1902) had a specific impact (see Chapter 6, page 139), as army recruitment showed up the poor physical condition of working men in industrial towns. Gradually, attitudes were changing and this impacted on the role of central government.

### A Level Exam-Style Question

**Section C**

**How far do you agree that the key factor in changing attitudes to public health reform in the years 1780–1939 was the work of novelists and artists?**

(20 marks)

**Tip**

As well as addressing the work of novelists and artists, you will need to identify other factors, such as official reports, that could be seen to change attitudes, and then reach a balanced conclusion as to which of the factors you have identified was the key one.

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**How far did the role of government grow in the 19th and early 20th centuries?**

At the start of the period, in 1780, government involvement in social policy was minimal. Taxes were raised mainly to finance foreign wars and to keep the borders of the country secure. There was a generally held belief that social policy, and this included public health, was the business of parishes. This view was strongly supported by the prevailing ideology of laissez-faire. However, the election of a Whig government in 1830 ended 23 years of Tory government, and raised the hope of many that reforms in different areas of government would be possible. This would involve a move away from laissez-faire.

- **The Representation of the People Act 1832** did make some important adjustments to the franchise and to the distribution of seats, allowing for greater representation from the growing industrial towns of the Midlands and the North. It might have been expected that some attention would be paid, after 1832, to the much-needed public health reforms in the areas they represented. However, middle-class representation with a desire to keep rates low meant that sanitary reform was low on MPs’ agendas, and there was still the general feeling that public health reforms were the business of local authorities, not parliament.

- **The Municipal Corporations Act 1835** ended the system of ‘closed’ corporations, whereby the same councillors reappointed themselves, year-on-year. Borough councils were to be elected by male ratepayers for a three-year term of office. Councillors elected a mayor and chose aldermen. Furthermore, the Act stated that councils could, if they wished, assume control of paving, sewerage, street cleaning and drainage in their areas. Even so, they still needed a private Act of Parliament to enable them to do so and this was by no means a cheap undertaking. What is important to recognise here is that central government showed little interest in public health. If town councils wanted to tackle the problem, then that was their affair. However, the very fact that councils were to be elected by ratepayers raised the possibility that the more progressive councils would want to focus on public health reforms.
Central government begins to get involved

By the 1840s, it was becoming clear to all but a handful of people that something had to be done to improve public health. One of the main problems lay in who was to do it: national or local government? Should the aim be to set up a national system of public health, or should public health reform be left to local initiatives? A further, but important, problem was whether people could, or should, be compelled to follow directives that were intended to be for their own good. To do this would be to move a very long way from the laissez-faire attitudes that dominated domestic politics in the earlier years of the century.

The 1844 Report of the Royal Commission into the Sanitary Condition of Large Towns and Populous Districts (see page 22) marked a mid-century appraisal of the sanitary condition of Britain. Almost immediately it was followed by some minor legislation designed to hold the situation until a main Public Health Act could be prepared.

- 1846 saw the first of a series of Nuisance Removal Acts. These were designed to enable justices in petty session courts to prosecute those responsible for ‘nuisances’. Nuisances were generally defined as being unwholesome houses, accumulations of filth, foul drains and cesspools.
- The Baths and Washhouses Act 1846 enabled local authorities to provide baths and washhouses out of public money.
- In 1847, the Towns Improvement Clauses Act defined the rights of towns to lay water supplies and drainage schemes and to control nuisances. It also legalised the discharge of sewage into rivers and the sea, and allowed its sale for agricultural purposes.

These Acts shared a common characteristic: they only applied if the authorities wanted them to. They were there if any local authority wanted to take advantage of them. Was this to be the shape of things to come? Health of Towns bills were introduced in 1845 and 1847 but were withdrawn; an attempt to introduce a Public Health bill in 1847 was defeated by MPs who became known as the ‘Dirty Party’. However, the onset of the 1848 cholera epidemic provided the necessary impetus for a further public health bill to be successful.

The Public Health Act 1848

- A General Board of Health was set up, which reported to parliament. It was based in London. The three original members of the Board were Lord Morpeth (who was behind the unsuccessful 1847 bill and the successful 1848 Act), Lord Shaftesbury and Edwin Chadwick.
- Local authorities were empowered to set up local boards of health. These could be set up where:
  - ten percent of the ratepayers asked for one
  - the death rate was greater than 23 per 1,000.
- Local boards of health were permitted to appoint a medical officer of health and pay his wages out of the rates.
- Local boards of health were to manage sewers and drains, wells and slaughterhouses, refuse and sewerage systems, burial grounds and public baths, recreation areas and public parks.
- Local boards of health could finance projects by levying local rates and buying land.

This Act, however, was permissive: it did not apply everywhere to all local authorities throughout the country. This was at once a great strength and a great weakness. It could be argued that its strengths were that, because it applied where local people wanted it, there was little or no opposition to it and so implementation would be relatively smooth. Because it had to apply where conditions were very poor, people were desperate for any remedy and were unlikely to put up any serious opposition, and piecemeal implementation meant that those who were suspicious or wary could see for themselves how the Act worked to improve public health and would push for its introduction in their own towns and cities. If these were the Act’s strengths, then its weaknesses could be seen in its lack of universality. It did not, for example, apply to London — which had its own Act in 1848 to establish the Metropolitan Commissioners of Sewers — or the City of London with its own City Sewers Act. Neither did it apply to Scotland; the Act was only enforced where the death rate in a district was more than 23 per 1,000 living (the national average was 21 per 1,000), and only then could the General Board of Health force a local authority to set up a local board of health. Furthermore, although
local boards of health set up compulsorily were to have considerable powers over basic public health requirements – drainage, building regulation, nuisance removal and water supply – they were not required to take on wider public health considerations that included such things as parks and baths.

Despite all of its failings, however, the 1848 Public Health Act does demonstrate that the government was prepared to do something. It was prepared to provide a solution for towns and cities trying to fight their way through the morass of private and local legislation to achieve some sort of standard of public health. It was prepared, too, to intervene on behalf of the most vulnerable members of society to nudge their local authorities in the general direction of providing for their care. This first, national public health Act generated both pressure from the public for further reform and confidence in the legislators that they could deliver it.

Why was there continued opposition to public health provision in the 1850s and 1860s?
Opposition to public health reforms was not so much opposition to the reforms themselves as to a variety of issues that were highlighted by the pressure for reform. These issues varied in their importance from place to place and local priorities changed over time. This is why some areas embraced reform wholeheartedly, others dragged their feet and some refused point-blank to have anything to do with it.

- Improvement schemes of any kind cost money. Property owners spent money to have clean water piped to large cisterns in their own houses, and for sewers or cesspits to hold waste from their inside lavatories. They were loath to pay out again, via local taxes, to have similar facilities provided for their neighbours when, they argued, there would be no benefit to themselves.

- Many people felt that government was encroaching on their individual liberties by requiring them to, for example, remove dung heaps from their properties or whitewash a slaughterhouse.

- Vested interests – for example, directors of local water companies – were usually represented in local government and often on local boards of health. They were unlikely to vote for measures that would reduce their company profits.

- The civil engineering problems posed by sewerage and water supply schemes were barely understood by lay people on local boards of health; this caused delay and, occasionally, the implementation of inappropriate systems.

- Chadwick himself – one of the three commissioners on the General Board of Health set up by the Public Health Act 1848 – irritated, annoyed and angered many because of his bullying tactics.

**SOURCE**

From *The Times* newspaper, July 1854.

We prefer to take our chance with cholera and the rest than to be bullied into health. There is nothing a man hates so much as being cleaned against his will, or having his floors swept, his walls whitewashed, his dung heaps cleared away, or his thatch forced to give way to slate, all at the command of a sort of sanitary bombaliff [official]. It is a positive fact that many have died of a good washing. All this shows the extreme tenderness with which the work of purification should advance. Not so, thought Mr Chadwick. New mops wash clean, thought he, and he set to work, everywhere washing and splashing, and twirling and rinsing, and sponging and sopping, and soaping and mopping, till mankind began to fear a deluge of soap and water. Mr Chadwick has very great powers, but it is not so easy to say what they can be applied to. Perhaps a retiring pension, with nothing to do.

**ACTIVITY**

**KNOWLEDGE CHECK**

Towards compulsion

1. In your judgement, was the Representation of the People Act 1832 or the Municipal Corporations Act 1835 the more likely to lead to the introduction of public health reform?

2. How far does Source 11 explain why the Public Health Act 1848 was permissive?

3. How convincing do you find the continuing objections, in the 1850s and 1860s, to public health reforms?
The Local Government Act 1858 and the Public Health Act 1858

These two Acts brought about the following changes.

- The General Board of Health was abolished.
- The powers of the General Board of Health were given to a new Local Government Act office.
- A medical department of the Privy Council was set up.
- Local boards of health were given powers to take preventative action and appoint officials.

Why were these two linked Acts of Parliament needed so soon after the Public Health Act 1848? The ten years in-between had shown a gradual acceptance by local authorities of the need for more powerful local public health bodies, but there was considerable hostility towards the General Board of Health and its commissioner Edwin Chadwick. He had to go, and a more acceptable way of centralising and controlling public health provision had to be found. Splitting the powers and functions of the old General Board of Health between the Local Government Act Office and the Privy Council medical department was the solution. It was a clever one, too. One of the main functions of the old General Board of Health had been to approve loans to local authorities for public health projects. This function was continued, although slightly differently. The permission of the Local Government Act Office was needed for all loans that local authorities wanted to raise in order to carry out public works. It was just a short step for the Privy Council medical department to carry out the relevant inspections where public health projects were involved. In other words, it was central government direct (as in the Privy Council) that for the first time became involved in the administration of public health in the localities. In the ten years up to 1868, 568 towns set up boards of health and began implementing public health reforms.

The Sanitary Act 1866

A key mover behind this new Sanitary Act was John Simon. He had been London’s first medical officer of health in 1848 and medical officer to the General Board of Health in 1855. In 1858, when the General Board of Health was wound up, he became the first medical officer to the medical department of the Privy Council. Simon worked within the permissive framework set up by the 1848 Act, seeking to persuade local authorities to accept public health systems. As a direct consequence of the sort of advice given by John Simon in his 1865 annual report, in 1866 parliament passed a new Sanitary Act, which brought about the following changes.

- Sanitary powers that had been granted to individual local boards of health under the 1848 Act were made available to all local boards.
- Local authorities were made responsible for the removal of ‘nuisances’ to public health. If local authorities failed to act, central government could do the work of improvement and charge the local authorities.
- The definition of ‘nuisance’ was extended to domestic properties and included overcrowding.
- Local authorities were given the power to improve or demolish slum dwellings.

For the first time, compulsion was a significant element of an Act of Parliament dealing with public health. No longer did the state direct and advise local authorities: it could now compel them to act. In this sense, the state was, from this point on, directing public health reform.

**EXTEND YOUR KNOWLEDGE**

Sir John Simon (1816–1904)

Born in London, John Simon received his medical training by first being apprenticed to a surgeon at St Thomas’ Hospital, and then completed his formal medical studies at King’s College, London. Between 1840 and 1847, he worked as a surgeon at King’s College Hospital, and later lectured in pathology. A founder member of the Health of Towns Association in 1844, in 1848 Simon became medical officer of health for the City of London and Chief Medical Officer for Health to the Privy Council in 1858. Like Chadwick, he was initially a firm supporter of the miasma theory of the spread of disease but, unlike Chadwick, he changed his mind as evidence supporting the germ theory gradually became available. Simon helped transform the issue of public health from a political matter to one founded in scientific investigation and analysis, and his detailed reports helped bring about both the Sanitary Act 1866 and the Public Health Act 1875. He stepped down from office in 1876, and in 1887 received a knighthood for his contribution to public health.
What were the pressures for further change?

- In 1867, the Parliamentary Reform Act effectively gave the vote to working men in towns. Politicians had to pay attention to their problems, which included public health issues.

- There was a third cholera epidemic in 1865–66, in which 20,000 people died.

- In 1865, Louis Pasteur (1822–95) proved conclusively that germs caused disease and were not caused by it.

- In 1869, a Royal Commission on public health was set up, which revealed that conditions in towns were little better than when Chadwick had been masterminding investigations some 30 years earlier.

- In 1871, a Local Government Board was set up. This consolidated the functions of the Local Government Act Office, the Registrar-General’s Office, the medical department of the Privy Council and the Poor Law Board. The president was usually a member of the Cabinet.

The Public Health Act 1875

The Public Health Act 1875 was the most comprehensive legislation to date, codifying and consolidating previous laws. It was to remain the foundation of all public health work until 1936. It established the following:

- Every part of the country had to have a public health authority.
- Every public health authority had to have at least one medical officer and one sanitary inspector to ensure that the laws on food adulteration, housing, water supplies and cleansing were enforced.
- Local authorities were given wide powers to lay sewers and drains, build reservoirs, parks, public baths and public conveniences.

The government was now completely committed to the provision of public health for the people it governed. Additionally, the Act was the turning point in the regulation of house building in British cities. By permitting sanitary authorities to make by-laws that controlled building standards and plans, they were able to lay down such things as street widths and the provision of open space.

The Public Health Act 1936

A further Public Health Act in 1936 consolidated a range of previous legislation, and addressed such matters as sanitation, nuisances and offensive trades, baths and washhouses and the prevention and notification of diseases, over all of which local authorities had immediate responsibility. Extended by the Food and Drugs Act 1938, control over slaughterhouses and food adulteration was added to their responsibilities.

Local authorities continued with their essential public health work of ensuring an adequate water supply and efficient sewerage and sanitation. The years 1919–39 saw the virtual completion of the process whereby local authorities took over control of water supplies with all the complex systems of reservoirs, pipelines and treatment centres that this involved. By 1935, 80 percent of the population of England and Wales were supplied with water by the local authorities. This water was, generally, safe, although typhoid epidemics in Bournemouth, Poole and Christchurch in Dorset in 1936 and Croydon in 1937 caused by sewage contamination demonstrated that there was still work to do in this area. However, generally speaking, the provision of a clean water supply with the combination of an efficient sewerage system represented a major, though unspectacular, advance in public health.

Excerpt


Despite the tremendous expansion in the scope of public health activity, [throughout the nineteenth century] the vast majority of these measures were really concerned with the protection of the community as a whole, rather than the individuals who comprised it. However, during the late-nineteenth and early-twentieth centuries, public health officials became increasingly concerned with what they regarded as the ‘personal factors’ associated with the spread of disease. This emphasis on the role of personal factors led in the first instance to a growing concentration on the need for health education, particularly in the areas of infant management, food preparation and personal hygiene, but it soon spilled over into a more general campaign for the provision of health services which were aimed directly at particular groups of individuals.
Conclusion

The early approach of governments to public health was fundamentally negative. Central government was not proactive: it simply provided the powers for others to use, if they so wished. The whole laissez-faire attitude of government was against positive interference. They had plenty of information in the form of reports on the state of towns and, in particular, about the horrendous conditions in which thousands of the poor were living. But action was slow as long as there was a property-owning electorate in control. Improvement only came slowly partly because the growth of towns was not accompanied by a similarly radical change to local government.

There were, however, other concerns involved in the solution of public health problems. Scientific understanding about public health problems was far from clear or accurate. Civil engineering was in its infancy and new techniques had to be invented and trialled. This was particularly the case where the provision of clean water and water-driven sewage were concerned. As public expectations changed from supporting the least government intervention possible to wanting positive government interference in public health matters, the role of central government reflected this and became more and more directive so that public health reforms moved from the permissive to the compulsory. At the same time, the onus for the actual provision of public health shifted to local government, with central government providing the broad framework within which reforms were instigated. The impact of central government on the localities and on individuals is explored in Chapter 2.

The move of central government from a laissez-faire approach to social policy, especially where it was concerned with public health, to one of direction can be seen as a move from an individualist approach to one of collectivism. No longer, by the early years of the 20th century, were public health matters the province of the whim or the philanthropy of individuals; by 1939, collectivism – the belief that the state was responsible for public health provision – had replaced laissez-faire. This had happened because, despite a strong belief in the primacy of laissez-faire in a free society, legislators had to accept that the problems posed by an urban, industrialised society had to involve an extension of the activities of the state. This move from laissez-faire to state intervention was gradual, as has been shown in this chapter. There was not a moment in time when one theory of legislation took over from another. Rather, the move to collectivism was a pragmatic one, a long-drawn-out evolution of a new legislative and administrative practice.
The impetus for public health reforms

1. How far did industrialisation create public health problems?
2. How far do you agree that the 1832 cholera epidemic was the key impetus behind public health reforms in the years 1780–1939?
3. ‘The significance of discrediting the miasma cause of disease had a minimal impact on public health reform.’ How far do you agree with this statement?

**WIDER READING**


Hill, C.P. British Economic and Social History 1700–1975, Edward Arnold (1975)

Mathias, P. The First Industrial Nation, Methuen (1969)
