

The Victorian Slaughter of the Innocents

Why did infant mortality rates remain so high in the last quarter of the 19th century, when general death rates experienced a steady decline? Phil Chapple investigates.



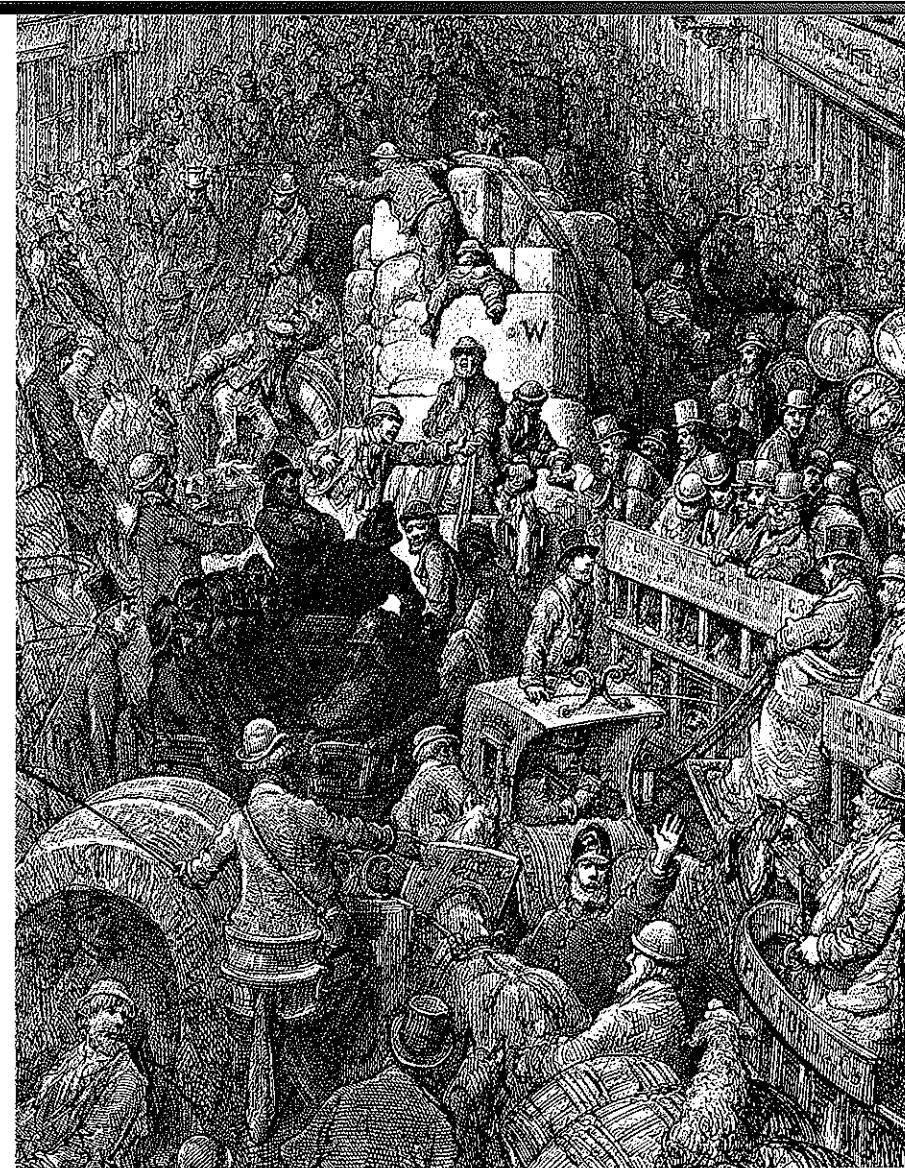
A visitor entering Queen Street, finds himself facing a row of privies of more than 100 yards long. The doors of the privies are about 6 feet from the house doors opposite and the space between one privy and another is filled up with all imaginable and unimaginable filth; so that the street consists of passages little more than 6 feet wide, with dwelling houses on one side and a continuous

range of necessaries, pigsties and middens on the other, with a filthy surface drain running along one side ... 12 houses have their only outlets upon this disgusting and pestiferous passage.'

The working-class slums of the mid-nineteenth century English industrial town have fascinated and horrified social historians for decades. The example above, from the Reverend J. Clay's report on Preston in 1844, presented a vision of

The laying of a water-main in Tottenham Court Road in London in 1834. The provision of clean water and of sewage pipes made a tremendous difference to public health, though local authorities were often slow to take action.

squalor repeated many times over across industrial urban England. In such environments children were born, lived, played and worked, and for hundreds of thousands life was short and brutal. At



This engraving by Gustave Doré, of 'A City Thoroughfare', illustrates the congestion seen in the largest British cities. Death rates here were far higher than in the countryside.

to 30 per 1,000 in 1841. In the worst towns, such as Liverpool and Manchester, rates were as high as 35 per 1,000. Inevitably, in the districts with the worst housing and poorest residents, localised rates could be higher still.

The consequences were most severe for the poor. As Edwin Chadwick's Report on the Sanitary Conditions of the Labouring Classes had demonstrated, average life expectancy for the lower classes was significantly lower than for their social superiors. A labourer in Manchester, for example, had an average life expectancy of 17 years. (Note that these figures take into account the much higher infant mortality rate - IMR - experienced amongst the labouring classes.) For a member of the professional, upper-middle classes, in contrast, the corresponding figure was 38 years. For the less industrialised market town of Kendal the figures were 34 and 45 years respectively, and for rural Rutland 38 and 52. Thus environment and income are identified clearly as key determinants of health.

Inevitably, infant mortality rates too were affected by the same factors. In view of an increasing public concern and a realisation that exposure to deadly disease was not the preserve of the lower orders, the second half of the 19th century witnessed an attack on the perceived causes of low public health standards. The visitation of cholera, first witnessed in 1831-2, followed by further outbreaks in 1848-9, 1853-4 and 1866 (which killed approximately 170,000 Britons), together with regular epidemics of typhoid, typhus and influenza, acted as constant reminders to the law-makers of the need for action. Endemic diseases, especially bronchial problems such as tuberculosis, killed hundreds of thousands, and though they lacked the immediate psychological shock of the cholera epidemic, endemic illness killed many more. Undoubtedly endemic and epidemic disease were reflections upon the state of urban Britain, where filth, overcrowding, poor housing, ignorance and poverty provided a climate where premature death was a feature of everyday life.

experienced all the classic symptoms of insanitary living conditions. While industrialisation and urbanisation undoubtedly brought about great national wealth, they also produced misery, with the greatest burden falling upon the most vulnerable of Victorian society, the very young. In Preston, in 1844, almost 45 per cent of total deaths were of children below the age of five. This 'massacre of the innocents' was perhaps the darkest chapter in an age celebrated for great economic achievement. Given the concern expressed by Victorian society over this public health scandal, it is perhaps surprising that in 1888, despite significant legislative action over the previous 40 years, Dr Henry Pilkington, the Medical Officer of Health (MOH) for Preston, was able to report a typical scene in the lower-class areas of the borough. Here, there still existed districts where 'As many houses as possible have been crowded together on a given space of ground ... [with backyards] containing a deep pit filled with foul decaying matter'.

Though Preston may be seen as an extreme case, consistently topping the league table of unhealthiest towns in

1850-1900, it was not unique. By using Preston as a case study, we can identify almost all the factors that caused the high levels of infant mortality (i.e. deaths of infants between birth and their first birthday) in urban Britain as a whole. We can also see the value of Medical Officer of Health reports in identifying both general public health issues and specific local factors. In particular, we can identify how the middle-class urban society of Victorian Britain viewed the problem of infant mortality, which, unlike general death rates for the population as a whole, failed to show a marked decline in the last quarter of the century.

General Death Rates

The worsening urban health situation of the mid 19th century was by no means confined to the major industrial cities. Unregulated development and the consequent absence of sewerage and clean water systems had left most towns, and all industrial towns, open to the worst ravages of both endemic and epidemic disease. General death rates had actually increased in England and Wales from 20.5 per 1,000 of the population in 1831

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Remedial action

Preventative measures, enshrined in the central government actions (see chart on page 47), together with a host of local improvement acts, increasingly made inroads into low health standards, most notably in the last quarter of the century. The first significant cut in general death rates occurred from the 1870s, with national rates falling to 19 per thousand in 1881 and to 17 per thousand in 1901. Even in the major conurbations, significant improvements were made, with cities such as Bradford cutting general death rates by a third in the last three decades of the century. Preventative medicine, improved administrative machinery, and, crucially, rapidly rising real wages, which helped improve diet, combined to produce real health improvements.

In order to understand fully the effects of legislation, we need to consider the role of local authorities. They undertook practical measures, especially the provision of sewerage systems and clean water to individual dwellings, while their slum-clearance programmes removed some of the worst breeding grounds for disease. The unprecedented investment in a better urban environment is reflected in the loans sanctioned by the Local Government Board for public health purposes. In 1871, £267,000 was borrowed for such work; in 1897, local authorities borrowed £5.8 million.

Medical Officers of Health occupied a position at the very heart of the campaign to improve the environment. Their reports demonstrate a 'hands-on' approach to preventative medicine, as well as the investigative, scientific and statistical nature of their work. In his report to the Sanitary Purposes Committee of the town council in 1878, Dr Pilkington recounted that he and his assistants had, that year, ordered the emptying of 13,692 ashpits, together with the removal of 79 pigsties and 103 accumulations of manure. Notices had been served for 112 cases of limewashing, 530 defective drains, 307 defective spouts and 318 defective water closets. Notices for ten cases of overcrowding of dwellings had been served and for 287 cases of 'general nuisances'. 234 houses had been fumi-

gated by order of his department and 109 parcels of bedding disinfected. A total of 2,900 lbs of meat and 152lbs of fish had been seized and destroyed as unfit for human consumption, and eight unregistered slaughter-houses were closed. This pattern of work was, of course, repeated by hundreds of MOHs across the nation as real problems were being addressed by concrete action.

For those who survived the first year of life, then, the prognosis for a longer, healthier life was improving. Yet for the new-born, especially of the lower classes, infancy remained an exceptionally hazardous time as mortality rates remained stubbornly high.

Infant Mortality

The greatest social and medical challenge of the late Victorian era was to reduce the loss of life which accounted for almost 100,000 infant deaths each year in the 1870s. There had been notable success in lowering the death rate amongst 1-5 year olds, such as that achieved in Bradford, where the death rate for that age group fell by 48 per cent from 1871 to 1901. However, there was a corresponding fall of only 18 per cent in the same city for those under 12 months of age. Nationally, the figures were much bleaker. Infant mortality rates today stand at around 12 per 1000, a figure that puts into perspective the data on infant mortality rates in the column opposite.

Annual averages, of course, do not show the huge disparities that existed across the nation. In 1904 rates varied from 87 per thousand live births in Hornsey, in the outer districts north of London, to 229 per thousand in Burnley, Lancashire. However, it would be wrong to assume that all industrial towns inevitably experienced the same high mortality rates for infants as Burnley. There were significant disparities between industrial towns which might on the surface appear to have much in common. The industrial towns of Huddersfield and Halifax in the West Riding reported IMRs of 136 and 130 per thousand respectively, which compared favourably with Stockport's 201 and Wigan's 188. The moral to draw is that

local considerations must be taken into account in any assessment of infant mortality.

The causes of death

Contemporary opinion was divided over what factors were principally responsible for the continuation of high IMRs, and more recently historians too have suggested a wide range of factors to explain this phenomenon. However, we can be more sure of the actual causes of death. The annual Medical Officer of Health reports furnish a vital source of evidence. They allow us to pinpoint the precise causes of deaths and, as most reports included a breakdown by age group, they are vital for our understanding of the extent and impact of specific diseases. For those infants below the age of one, resistance was considerably lower than for the 1-5 age group. Perhaps the most shocking revelations contained in the reports is the incidence of deaths of infants, as the table opposite, for Preston in 1889, illustrates, from complaints which today seem innocuous, such as diarrhoea and measles.

The seeming inability of parents and health professionals to combat gastrointestinal disease, usually associated with insanitary conditions, is clearly shown by the deaths of 205 infants from diarrhoea. Such fly-borne disease was more prevalent in the summer months as filth provided the perfect breeding ground.

There can be no doubt that children born into the urban working classes faced bleaker prospects than those born to more affluent parents. Even in towns which had relatively little industry, there persisted higher death rates than in rural Britain for children of all ages, though especially for infants. In the market town of Kendal, in the largely rural county of Westmorland, MOH Dr Page noted in 1874 that infant deaths accounted for 21.8 per cent of total deaths in the town for that year. In the surrounding rural parishes, however, the figure was 17 per cent of the total. Yet it was in the overcrowded industrial towns and in major ports such as Liverpool and the docklands of east London, containing the densest concentrations of poor housing, where,

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unsurprisingly, IMRs were at their highest.

Parental neglect of infants

Any rational explanation of death rates among infants must take account of the immediate environment in which they lived, though to many contemporary observers this problem of environment was compounded by the inadequate parenting skills of the lower classes. The combination of the two was a favoured explanation of the medical fraternity. As Dr Page of Kendal noted in 1874: 'The essential causes of the excessive waste of infant life are beyond question, exposure, improper feeding, and the unwholesome dwellings of the poor.' Stressing that neglect of infants was rarely deliberate, he goes on to say that though the death of an infant 'may be the outcome of parental ignorance ... the real source of evil lies deeper rooted in the miserable dwellings in which they are compelled ... to live'.

The theme of parental neglect through ignorance is common in such reports. Pilkington's reports on Preston reflect an intense frustration at the apparent ignorance of the poorest classes and their unwillingness to reform unhygienic domestic habits. In one of his earliest reports, in 1878, he lamented 'the singular apathy and carelessness shown by parents'. In that year, he claimed, 162 infant

Number and Causes of Death at Different Ages for year ending December 31 1889

AGE	0-1	1-2	2-5	5-10
Fever	0	1	4	3
Scarlet fever	2	3	8	3
Measles	61	81	78	13
Whooping cough	79	48	52	3
Diphtheria	0	8	12	7
Consumption	2	6	3	2
Bronchitis	74	27	20	2
Inflammation of Lungs	57	42	30	30
Teething, Convulsions & Premature Births	548	102	14	2
Violence (including accidents)	3	4	4	4
Diarrhoea	205	30	9	0
Other Diseases	14	11	39	32
Croup	5	7	5	3
TOTALS	1050	370	278	83

deaths from diarrhoea were 'in too many instances occasioned ... by the insanitary homes in which these children live and the dirty condition in which they are kept and the improper substances upon which they are fed'. In 1897 the message was a familiar one: 'it is with the parents ... that the fault mainly lies'.

His concern over the prevalence of infantile diarrhoea was well founded, as the illness claimed its annual toll. Twenty miles away, in Lancaster, Dr GR Parker, MOH, reinforced the point that the lower classes had the power themselves to cut death rates, appealing to mothers especially to 'do all in their power to check this great waste of life which amounts to a national calamity'.

Whilst parents were criticised for their dirty houses and their failure to clothe their children appropriately, it was the issue of inappropriate feeding which aroused perhaps the greatest indignation. The practice of feeding infants the same food as older children, or even adults, was roundly condemned. So too was the practice of dosing teething or sick infants with dubious, opium-based compounds, which quietened infants and provided relief for desperate parents. 'Godfrey's Cordial', 'Infants Preservative' and 'Soothing Syrup', amongst others, had sedated infants for many years. Ignorant of the true effects of these apparently tried and tested remedies, parents, by administering such sedatives, were actu-

ally suppressing infant appetites and inducing sleep when the child ought to be feeding. When used over an extended period, the resulting malnutrition could prove a factor in premature death.

A greater problem associated with feeding remained the bottle-fed child. Such children, to contemporary critics, were victims of neglect by women who, in denying their babies the benefits of breast milk, were failing to fulfil a maternal duty. The dangers of bottle feeding prompted Pilkington and the Preston Sanitary Committee to issue 5,000 handbills in 1889, alerting mothers to the desirability of breast feeding and the attendant problems of bottle feeding. Infected cow's milk, the result of poor hygiene practices from dairy to customer and of an absence of refrigeration, was a prime cause of infantile diarrhoea. Similarly, the bottle with which the child was fed was usually inadequately cleansed.

Is it appropriate to hold mothers to account if they did not breast feed? Such criticism may seem harsh since so many mothers were themselves so malnourished that breast-feeding was not always an option. Others were not available to feed the child during working hours, as economic necessity meant a return to work which separated them from their infants within a few weeks - and sometimes even days - of birth.

There may indeed be a case for suggesting that, in reality, the poor health of the mother was a major cause of infant mortality. There can be no doubt that 40,000 still births per year and an equal number of deaths caused by premature birth were, at least in part, due to the poor health of the mother before and during pregnancy. The death of almost 4,000 women per year in childbirth at the end of the Victorian era suggests that maternal care had not improved, with the inevitable consequences for infant mortality. As poverty compounded the dangers of pregnancy, denying mothers either an adequate diet or access to a doctor, middle-class criticisms of working-class mothers - however well meant - suggest a lack of understanding of the realities of life in the poorest parts of urban Britain.

Institutional failure

The continued existence of high infant mortality rates undoubtedly detracted from the much-vaunted improvement programmes undertaken by local authorities. The so-called 'gas and water socialism' of the late 19th century, whereby councils invested heavily in the provision of water, sewerage, gas, lighting and even tramways, has been heralded as a revolution in municipal affairs. Seen in perspective, it becomes clear that the enthusiasm for sanitary reform was not always uniform across the nation. Since many local authorities resisted central government 'diktats' for as long as possible, the removal of slum housing, middens and privies was in some districts unnecessarily slow. Many councils delayed for as long as possible the appointment of the MOH, a post made compulsory for all sanitary districts in 1872, seeing him as an expensive example of unwelcome centralised interference in local affairs. Worryingly for many councillors, the MOH might recommend actions that went against their vested business interests as builders, grocers, landlords and manufacturers. Public health reforms were therefore not as welcome in some quarters as in others. As one MOH was firmly informed upon appointment: 'Now, Doctor, I wish you to understand that the less you do the better we shall like you'. This attitude helps explain why it took over two years for most councils to appoint a MOH.

Are local authorities, though, too soft a target? In most towns, the shame of high infant mortality was not seen as less of a priority than the reduction in general death rates. On the contrary, the problem was a source of immense concern. Whilst unprecedented investment in improvements to the environment provided clean water and better houses, the continued existence of conditions in which flies could breed, feed and infect remained a major obstacle to infant health. Here, too, the issue of ignorance cannot be ignored. As infants were more prone to die from the infections flies carried, the slow removal of the privies, dung-heaps and other breeding grounds should be seen as an explanation of the failure to bring rates

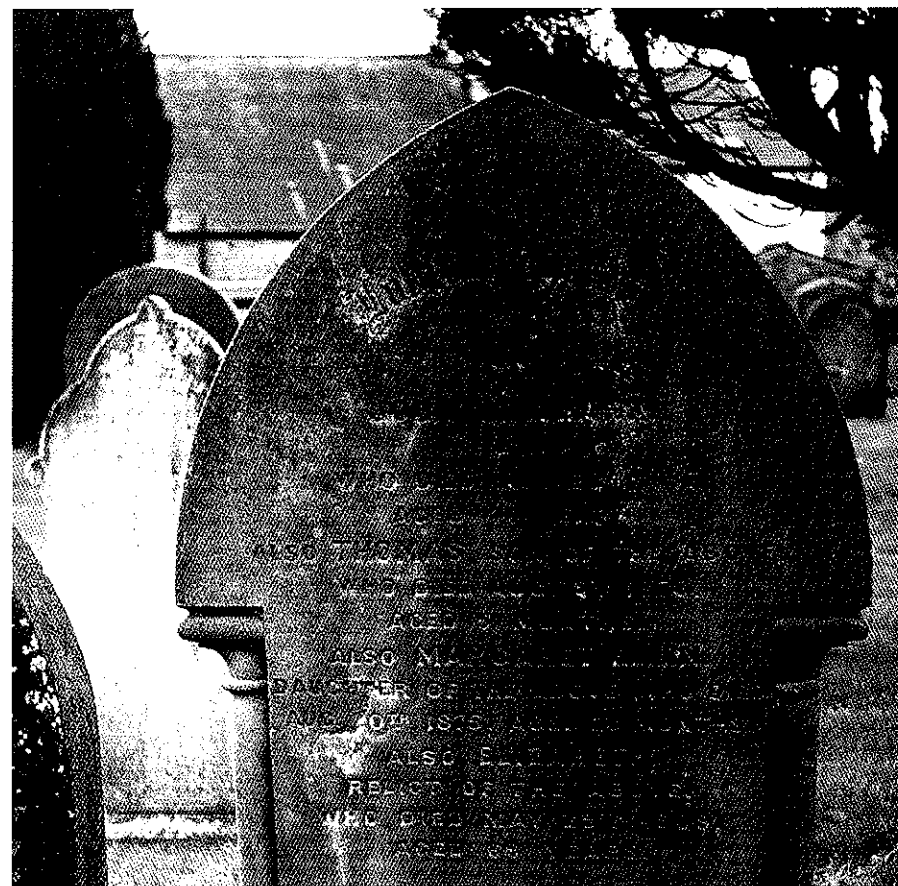
down. If councillors, MOHs and the medical and scientific fraternities had made the link earlier, the problem might have been more successfully confronted.

Despite the resistance of some councils to central government directives, there can be no doubt that by the end of the century compulsory legislation had provided direct benefits to the general health of the population. Yet the effect on infant mortality had, as we have seen, been altogether less impressive. Until all the worst evils of insanitary conditions had been removed from Britain's towns and cities, infants would remain vulnerable. The sheer scale of the problem, especially in Britain's industrial areas, should not be underestimated. Until the problems of filthy environments were removed, Edwin Chadwick's observation in 1842 - that the poor could not develop clean habits without the provision of basic utilities - still held true in many towns. By 1900, most of these facilities had been provided, though the process had taken the best part of three decades. In the meantime, infants had continued to die; and in the worst areas, the insanitary lifestyle of a sizeable minority continued as it always had. As Pilkington reported, as late as 1896:

'Here dirt reigns supreme. The food to be consumed is left lying about in contact with dirty clothes and unwashed cooking utensils. In the bedrooms the windows are left unopened; the slops unemptied ... until the chamber pot is again required for the night. Pigeons create dirt and breed vermin ... while wretched fowls scratch amongst the refuse and excrement ... and afterwards come indoors ... The children are unwashed and ... in a dirty cradle there may be seen a sour smelling baby sucking at a still more evil smelling feeding bottle.'

Salvation of the Innocents

Poor maternal health, parental ignorance and the slow pace at which the environment improved might, together, provide some answers to the question why infant mortality rates failed to keep pace with declining general death rates. All the more surprising, then, is the rate at which they fell from the turn of the century. The continuation of local authority



improvements in housing and in the general urban environment was finally removing the greatest evils. By 1914 the national rate of infant mortality had fallen to 110 per thousand; and even in Preston the sanitary authorities were at last able to

This tombstone, from a churchyard in Chipping near Preston, records the deaths of John Wallbank, who died in 1888 at the age of 45, and of two of his children, who died aged 5 months and 20 months. The first year of life was especially hazardous at this time.

Infant Mortality Rates for England and Wales, 1877-1901

Year	IMR per 1,000 live births
1877	136
1879	135
1881	130
1883	137
1885	138
1887	145
1889	144
1891	149
1893	159
1895	161
1897	156
1889	163
1901	151

Figures taken from N. Morgan, *Deadly Dwellings* (Mullion Books, 1993), p. 108.

see a noticeable decline. Whilst the fall was certainly subject to significant fluctuations on an annual basis, the overall trend was undoubtedly downward, averaging 109.8 per 1,000 for the five years preceding World War One. This compared with 141.6 for the first half of the 1880s.

In the absence of any great reduction in poverty or the defeat of parental ignorance in the Edwardian era, a logical conclusion must be that improvements in environment finally impacted upon pregnant women and infants. By the removal of the last middens, privies, and the like, the prognosis for Britain's infants was at last improving. After World War One the benefits of central government legislation, local authority action and living standard improvements combined to produce a healthier generation. Healthier generations produced healthier infants and - at last - the inherent dangers of infancy were massively reduced.

The Central Government and Public Health

- 1842 Edwin Chadwick's *Report on the Sanitary Conditions of the Labouring Classes* highlighted the problems of public health.
- 1848 The Public Health Act set up the Central Board of Health (abolished in 1854) and compelled local authorities to set up local boards of health where the general death rate exceeded 23 per thousand of the population or where 10 per cent of ratepayers requested it.
- 1866 The Sanitary Act provided for the compulsory appointment of inspectors to investigate water supplies and sewerage systems.
- 1871 The Local Government Board was set up, on the recommendation of the Royal Sanitary Commission, to oversee local authority health policies.
- 1872 The Public Health Act divided the country into sanitary districts and made the appointment of a Medical Officer of Health compulsory for each district.
- 1875 Another Public Health Act rationalised previous public health legislation and defined the specific responsibilities of local authorities. The Artisans' and Labourers' Dwellings Improvement Act allowed local councils to demolish slum dwellings.

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Further Reading on infant mortality and public health

- Anthony S. Wohl, *Endangered Lives: Public Health in Victorian Britain* (Methuen, 1984)
- Keith Laybourn, *The Evolution of British Social Policy and the Welfare State* (Keele University Press, 1995)
- Kathleen Jones, *The Making of Social Policy in Britain, 1830-1990* (Athlone Press, 1995)
- F.B. Smith, *The People's Health 1830-1910* (Croom Helm, 1979)