Chapter 1: The growth of health inequalities in Britain

It is now firmly established that there are social and spatial inequalities in health in Britain and that these have been widening since the late 1970s/early 1980s. Since the publication of the hugely influential Black Report (DHSS, 1980), a substantial body of research, deriving both from academic researchers and from official government sources, has documented the growth of health inequalities in Britain. These increasing inequalities in health have been observed, in socio-economic terms, using a variety of indicators and, in spatial terms, at various geographical levels.

Widening inequalities have occurred against a background of general improvements in life expectancy which have been observed since records were first reliably collected. Table 1.1 shows, in concise form, the general improvements in overall life expectancy that have been enjoyed, since the 1840s, in England and Wales. Increases have been fairly steady over the time period and show no sign of dwindling. Interestingly, the life expectancy gap between men and women has grown from two to five years (thought to be at least partly due to improvements in maternal mortality) and has, recently, narrowed very slightly. Figure 1.1 shows the data from Table 1.1 in graphic form.

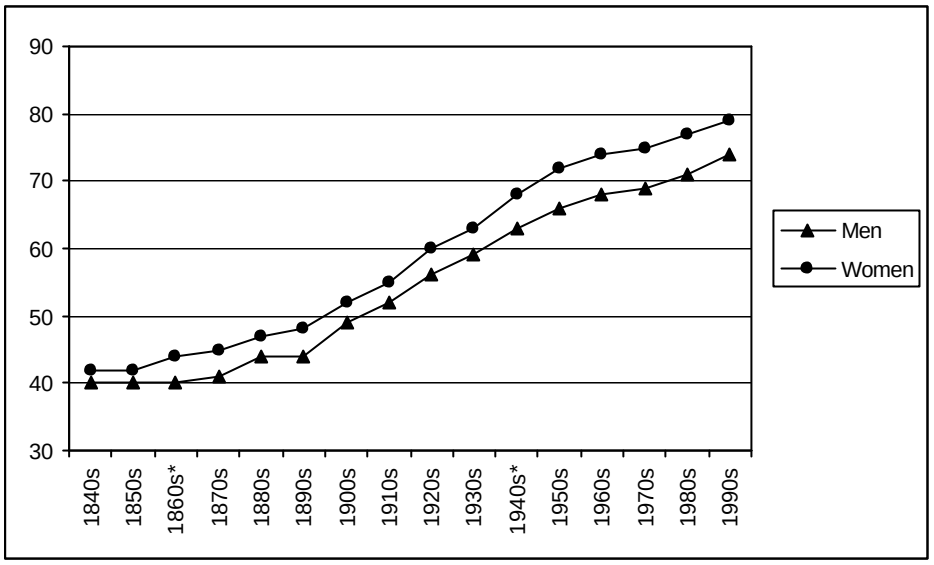
In a recent paper considering this phenomenon of improving life expectancy, Dunnell and Dix (2000) note that, over the most recent decade, it is in the age-group 55-64 (approximately 10% of the population) that death rates have fallen most markedly. However, despite increasingly life expectancy, the *healthy* life expectancy of this group has increased at a slower pace and socio-economic inequalities in health outcomes persist. Kelly *et al* (2000) also note that, while life expectancy is improving, healthy life expectancy (*ie* free from long-standing illness) is not improving at the same pace. As well as these general trends, however, we need to be aware of how mortality and morbidity are distributed throughout the population.

Table 1.1: Expectation of years of life, at birth (rounded to whole years)

Decade	Men	Women	Female advantage
1840s	40	42	2
1850s	40	42	2
1860s*	40	44	4
1870s	41	45	4
1880s	44	47	3
1890s	44	48	4
1900s	49	52	3
1910s	52	55	3
1920s	56	60	4
1930s	59	63	4
1940s*	63	68	5
1950s	66	72	6
1960s	68	74	6
1970s	69	75	6
1980s	71	77	6
1990s	74	79	5

*estimated due to missing data. Note: rounded to whole numbers. Source: ONS, 1997.

Figure 1.1: Expectation of years of life, at birth (rounded to whole years)



Socio-economic inequalities in health

Whether we consider socio-economic patterns in health in terms of occupational social class, housing tenure, car access or by indices of deprivation, widening inequalities emerge.

Table 1.2 shows inequalities in mortality by social class from the 1920s to the 1990s (for men only), using Standard Mortality Ratios (SMRs). SMRs which are greater than 100 indicate higher chances of mortality and those less than 100 indicate lower chances of mortality, all relative to the national average, which is set at 100. Class inequalities were high in the 1920s but only reached this extreme again in the period 1959-1963. Inequalities then declined during the 1960s and 1970s but rose to their highest levels in the early 1980s and have since continued to rise.

Table 1.2: SMRs - From the 1920s to the 1990s, men aged 20-64, England and Wales

Year	SMR by Social Class					
	I	II	III	IV	V	Ratio V:I
1921-23	82	94	95	101	125	1.52
1930-32	90	94	97	102	111	1.23
1942	88	93	99	103	115	1.30
1949-1953	86	92	101	104	118	1.37
1959-1963	76	81	100	103	143	1.91
1970-1972	77	81	103	114	137	1.78
1981-1983	66	76	100	116	165	2.50
1991-1993	66	72	113*	116	189	2.86

Sources: 1921-23, 1930-32, 1949-53, 1959-63, 1970-72: Lawton (1982); 1981-83: Blaxter (1991); 1991-93: Drever (1997). Note*: SMRs for Social Classes IIIN and IIIM in 1991-93 have been amalgamated for comparability with the earlier series.

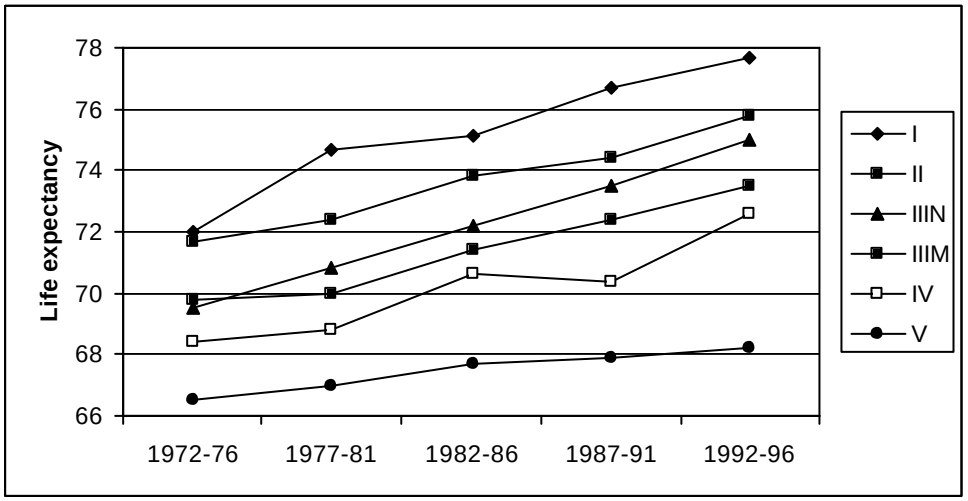
Also using this traditional measure of the Registrar General's occupational social class and data from the ONS Longitudinal Study, Hattersley (1999) reports that, while life expectancy has increased for all social classes since 1972, this increase disguises an underlying trend of growing inequality. For men, the difference in life expectancy at birth between Social Classes I and V had risen from 5.5 years in 1972-76 to 9.5 years by 1996. For women, this difference had risen less dramatically, from 5.3 to 6.4 years (see Table 1.3 and Figures 1.2 and 1.3).

Table 1.3: Life expectancy by social class, men and women, England and Wales, 1972-96

			Men		
Social Class	*1972-76*	*1977-81*	*1982-86*	*1987-91*	*1992-96*
I	72.0	74.7	75.1	76.7	77.7
II	71.7	72.4	73.8	74.4	75.8
IIIN	69.5	70.8	72.2	73.5	75.0
IIIM	69.8	70.0	71.4	72.4	73.5
IV	68.4	68.8	70.6	70.4	72.6
V	66.5	67.0	67.7	67.9	68.2
All men	**69.2**	**70.0**	**71.4**	**72.3**	**73.9**
			Women		
Social Class	*1972-76*	*1977-81*	*1982-86*	*1987-91*	*1992-96*
I	79.2	79.9	80.4	80.9	83.4
II	77.0	78.1	78.5	80.0	81.1
IIIN	78.0	78.1	78.6	79.4	80.4
IIIM	75.1	76.1	77.1	77.6	78.8
IV	75.0	76.1	77.3	77.0	77.7
V	73.9	74.9	75.3	76.2	77.0
All women	**75.1**	**76.3**	**77.1**	**77.9**	**79.3**

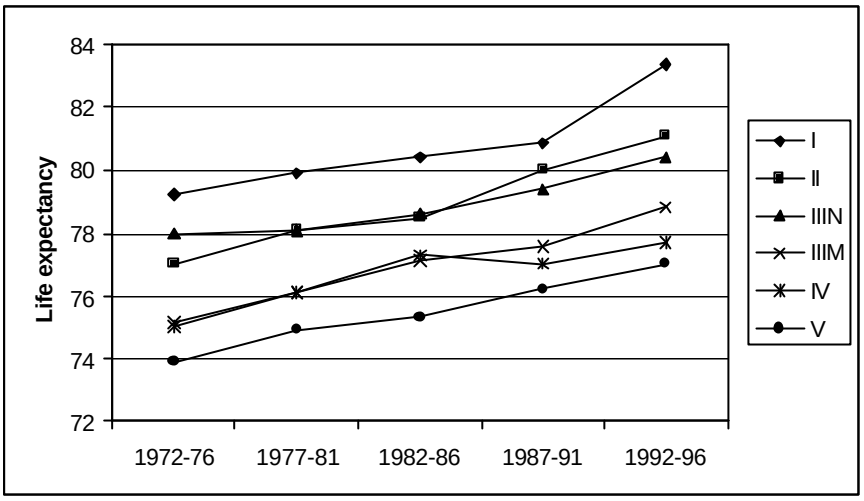
Source: Hattersley (1999)

Figure 1.2: Life expectancy by social class, men, England and Wales, 1972-96



Source: Hattersley (1999)

Figure 1.3: Life expectancy by social class, women, England and Wales, 1972-96



Source: Hattersley (1999)

Using the alternative indicators of housing tenure and car access, the work of Filakti and Fox (1995) has shown that owner occupiers have the best life chances, followed by private renters, with Local Authority tenants having the worst life chances (see Table 1.4). Moreover, the differences between these groups have widened. This was updated by Smith and Harding (1997) who reported mortality data up to 1992. Again, whilst the death rates of all groups had fallen, the owner occupiers had enjoyed the greatest fall and the Local Authority tenants the least.

Table 1.4: Direct age standardised rate ratios for deaths under 65 by housing tenure and car access: England and Wales, 1971 and 1981 Census cohorts (Longitudinal Study data)

Tenure	Men		Women	
	1971-81	1981-89	1971-81	1981-89
Owner occupiers	1.0	1.0	1.0	1.0
Private renters	1.32	1.38	1.32	1.38
LA tenants	1.35	1.62	1.42	1.44
1+cars	1.0	1.0	1.0	1.0
No cars	1.44	1.57	1.40	1.56

Source: adapted from Filakti and Fox (1995).

A number of studies have shown that unemployment is associated with increased morbidity and mortality risks. In the Government publication, *Health Inequalities* (Drever and Whitehead, 1997), Bethune reports mortality differences between the unemployed and employed (figures are only available for men). Although the absolute rates for both groups have been falling, the death rate ratio has increased (see Table 1.5).

Table 1.5: Mortality rates of men of working ages by economic activity at the 1971 and 1981 Censuses (1971 and 1981 LS Cohorts), England and Wales

Economic activity:	Rates per 100,000 people	
	1971-79	*1981-89*
Employed	302	227
Unemployed*	410	319
Death rate ratio	1.36	1.41

Note*: For both these time periods, unemployment was defined as seeking work or waiting to take up a job in the week preceding the Census. Source: Bethune (1997)

Another way of looking at this phenomenon is to consider years of life lost. This is higher among those working in unskilled occupations (Acheson Report, 1998). Table 1.6 shows that, if all men in the age group 20-64 had the same death rates as those in Classes I and II, then it is estimated that there would have been more than 17,000 fewer deaths each year from 1991 to 1993. While deaths from accidents and suicide are smaller in number compared to coronary heart disease, because they tend to occur at relatively young ages, they account for almost as many years of working life lost.

Table 1.6: Estimates of the numbers of lives and working man-years lost per year, selected causes, men aged 20-64, England and Wales, 1991-93

Cause of death	Number of lives lost	Working man-years lost	Proportion of deaths from these diseases
Coronary heart disease	5,000	47,000	28%
Accidents, etc	1,500	41,000	43%
Suicide, etc	1,300	39,000	40%
Lung cancer	2,300	16,500	42%
Other neoplasms	1,700	21,000	13%
Respiratory disease	1,500	12,500	47%
Stroke	900	9,000	32%
All diseases	17,200	240,000	29%

Source: Acheson Report (1998)

Thus, using a range of indicators of socio-economic position and different measures of health, widening inequalities in health in Britain are apparent, especially for men.

Spatial inequalities in health in Britain

Britain has long been scarred by geographical inequalities in health. Differences in mortality rates between rural and urban areas have been reported, with the latter usually experiencing higher rates (Bentham, 1984; Britton, 1990; Watt *et al*, 1994).

Recent research shows that spatial inequalities in mortality persist at the level of country, Government Office Region (GOR) and Local Authority (LA) (Fitzpatrick and Kelleher, 2000). Table 1.7 shows that, for both males and females, there is

substantial geographical variation in mortality, both between countries of the UK and between regions of England.

At the country level, mortality rates at all ages, and for both males and females, are lowest in England. Wales ranks 2nd, followed by Northern Ireland. Scotland has the highest mortality rates in the UK.

At the regional level within England, there is evidence of a clear north-south divide. For deaths at all ages, the north east and north west have the highest mortality, and the south east, south west and east of England have the lowest mortality rates. This regional inequality is less marked for deaths occurring at younger ages.

Table 1.7: Age-standardised mortality rates for all causes of death by country and GOR, males and females, United Kingdom, 1991-97 (rates per 100,000)

	Males					Females				
	All ages[1]	**1-14**	**15-44**	**45-64[1]**	**65 and over**	**All ages[1]**	**1-14**	**15-44**	**45-64[1]**	**65 and over**
United Kingdom	980	23	113	810	6500	620	17	60	490	4200
Great Britain	980	22	112	800	6500	620	17	60	490	4200
England and Wales	960~	22	109~	780~	6400~	610~	17	59~	480~	4200~
England	960~	22	109~	780~	6400~	610~	17	59~	470~	4100~
North East	1100*	24	108~	950*	7300*	700*	18	58	580*	4700*
North West	1060*	25*	124*	920*	7000*	680*	18	66*	550*	4600*
Yorks and the Humber	1000*	25*	105~	820*	6600*	640*	20*	60	500	4300*
East Midlands	950~	22	103~	750~	6400	620~	17	59	480~	4200~
West Midlands	1000*	23	105~	810	6700*	630*	17	60	490	4300*
East	870~	20~	93~	650~	6000~	570~	16	53~	420~	3900~
London	970~	22	129*	830*	6300~	600~	17	61	480~	4000~
South East	870~	19~	97~	670~	5900~	570~	14~	54~	410~	3900~
South West	870~	20	103~	670~	5800~	550~	16	56~	420~	3800~
Wales	1000*	24	117*	830*	6600*	630*	17	63	510*	4300*
Scotland	1140*	25	144*	1050*	7300*	730*	19*	74*	620*	4900*
Northern Ireland	1070*	26*	125*	870*	7100*	660*	20	59	520*	4500*
Country inequality+	**1.19**	**1.16**	**1.33**	**1.35**	**1.14**	**1.20**	**1.19**	**1.25**	**1.32**	**1.20**
Region inequality+	**1.26**	**1.31**	**1.38**	**1.46**	**1.26**	**1.27**	**1.38**	**1.24**	**1.41**	**1.24**

1 rounded to the nearest 10.
2 rounded to the nearest 100.
* 95% confidence interval excludes and is higher than the UK rate.
~ 95% confidence interval excludes and is lower than the UK rate.
+ ratio between the rate in the country of the UK or the region of England with the highest rate and that with the lowest rate.
Source: Fitzpatrick and Kelleher (2000)

A recent paper also highlights the geographical differences in life chances in Britain – by country, region and local authority - in terms of life expectancy (Griffiths and Fitzpatrick, 2001). This is an accessible summary measure of mortality at every age

that allows comparisons to be made between areas and time periods. For the time period 1995-97, life expectancy in the UK as a whole was 74.4 years for males and 79.6 years for females. For Wales, these figures were: males = 74.0, females = 79.2; for England: males = 74.7, females = 79.8; for Scotland: males = 72.3, females = 77.8; and for Northern Ireland: males = 73.9 and females = 79.3 (Griffiths and Fitzpatrick, 2001). Life expectancies for regions and local authorities are also given. The size of the life expectancy gap by local authority for men is similar to that between Social Classes I and V, as cited above (Hattersley, 1999) – there is a 10.0 year life expectancy gap between Chiltern (78.4 years) and Glasgow City (68.4 years). In comparison within Wales, life expectancy for males ranges by five years from 71.1 years in Merthyr Tydfil to 76.1 in Ceredigion. For women in the UK, life expectancy by Local Authority varies by 8.1 years, from 83.5 in East Dorset to 75.4 in Glasgow City. Within Wales life expectancy varies by from 3.9 years, 80.6 in Ceredigion and Monmouthshire to 76.7 in Merthyr Tydfil. The extent of this gap means that there are Local Authorities in Wales where life expectancy in 1995-97 had not yet reached the 1986 UK national levels (Merthyr Tydfil for men; Merthyr Tydfil, Blaenau Gwent and Caerphilly for women).

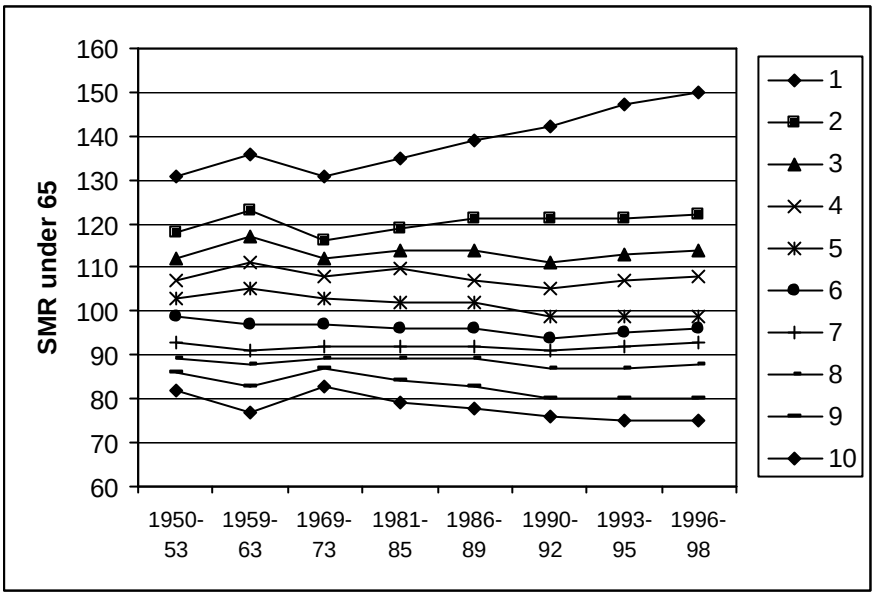
A recent study by Mitchell *et al* (2000) considers the geography of mortality in Britain at a smaller geographical scale and, over time, from the 1950s to the late 1990s. In order to look at the geographical health gap over time in the context of changing administrative boundaries, 'frozen' boundaries are employed. This allows trends since the 1950s to be observed (see Dorling, 1997, for more details). The geographical units used are the old County Boroughs and, for each time period for which data are available, Britain is divided into ten equal-sized groups of areas in terms of population (deciles). The age-sex standardised mortality ratio (SMR) for deaths under 65 is then calculated for each decile. Table 1.8 (and Figure 1.4) present these SMRs for the 1950s through to the late 1990s.

Table 1.8: Standardised mortality ratios for deaths under 65 in Britain by deciles of population (grouped by old County Borough and ordered by SMR), Britain 1950-1998, men and women

Decile	1950-53	1959-63	1969-73	1981-85	1986-89	1990-92	1993-95	1996-98
1	131	136	131	135	139	142	147	150
2	118	123	116	119	121	121	121	122
3	112	117	112	114	114	111	113	114
4	107	111	108	110	107	105	107	108
5	103	105	103	102	102	99	99	99
6	99	97	97	96	96	94	95	96
7	93	91	92	92	92	91	92	93
8	89	88	89	89	89	87	87	88
9	86	83	87	84	83	80	80	80
10	82	77	83	79	78	76	75	75
Ratio 10:1	**1.60**	**1.75**	**1.58**	**1.70**	**1.78**	**1.87**	**1.98**	**2.01**

Source: Mitchell *et al* (2000)

Figure 1.4: Standardised mortality ratios for deaths under 65 in Britain by deciles of population (grouped by old County Borough and ordered by SMR), Britain 1950-1998, men and women



Source: Mitchell *et al* (2000)

The table and figure show that inequalities in health narrowed between the late 1950s/early 1960s and early 1970s but that, since the early 1980s, they have been steadily widening. The gap between the highest and lowest mortality deciles is such that, in the period 1996-98, those living in the highest mortality areas are now over two times as likely to die before the age of 65. The relative mortality ratios have also risen for the second, third and fourth deciles which illustrates that the polarisation of life chances has not only affected the most extreme group. This is clear evidence of increasing *geographical* health inequalities in Britain.

Using the smaller geographical units of British parliamentary constituencies, Shaw *et al*, (1999) demonstrated not only how social and spatial inequalities in health have been widening but how they coincide and interact. To illustrate the size of the health gap between constituencies and the other socio-economic gaps that cause and are a consequence of poor health, the 'extremes' of Britain are compared. The one million people with the 'best health' are compared with the one million people with the 'worst health'; each group contains enough people to ensure that the statistics shown are not the product of random events. The measure of health used is mortality before the age of 65, as this is the most robust and most direct measure of the health gap. Mortality over the period 1991 to 1995 is considered, using the latest data available, and a range of other socio-economic variables are also included. Box 1 provides a summary of the method employed.

Box 1: Method: Comparing the extreme health areas of Britain

Source of data:	*ONS & GRO(S) digital mortality records*
Geographical units:	Constituencies, using 1997 boundaries
Population included:	All those under 65 using mid-year estimates
Years covered:	1991-95 to show the extent of the current gap Comparing 1981-95 to 1991-1995 to show the widening gap
Health measure:	*Standardised mortality ratios (SMRs) for deaths under 65*
'Worst health million':	The 15 constituencies, with the population under 65 totalling approximately one million, with the highest SMRs
'Best health million':	The 13 constituencies, with the population under 65 totalling approximately one million, with the lowest SMRs
Other sources of data:	The Population Censuses of Britain carried out in 1981 and 1991 The *Breadline Britain* survey of 1,831 adults carried out in 1990 School exam performance data from DFEE, and the Welsh and Scottish Offices

Table 1.9 lists the 15 Parliamentary Constituencies which contain the million people aged under 65 with the highest, and the 13 Parliamentary Constituencies with the lowest, age-sex standardised mortality ratios in Britain between 1991 and 1995. The 'worst health' areas of Britain are to be found in Glasgow, the northern conurbations and in the centre of London. Conversely, the 'best health' areas are mostly in the south of England. Table 1.9 also shows the percentage of households with children living in poverty (using the *Breadline Britain* index), the percentage of men aged 16-64 who were unemployed and the number of households with 3+ cars, for these extreme areas. The stark differences between these areas in socio-economic terms is clear.

Table 1.9: Constituencies where people are most at risk of premature death (mortality rates under 65) in Britain, 1991-95, and other socio-economic indicators

Rank	Name	SMR<65	% with children in poverty	Unemployed	Households with 3+cars
	Ratio of 'worst health' to 'best health'	**2.6**	**4.2**	**3.9**	**9.1**
1	Glasgow Shettleston	234	59	22.9	92
2	Glasgow Springburn	217	60	25.0	63
3	Glasgow Maryhill	196	63	21.6	116
4	Glasgow Pollok	187	52	19.8	181
5	Glasgow Anniesland	181	51	18.5	224
6	Glasgow Baillieston	180	54	21.0	254
7	Manchester Central	173	59	23.6	345
8	Glasgow Govan	172	46	16.1	317
9	Liverpool Riverside	172	57	26.3	275

10	Manchester Blackley	169	49	18.8	336
11	Greenock and Inverclyde	164	43	14.9	363
12	Salford	163	48	18.5	371
13	Tyne Bridge	158	55	22.2	208
14	Glasgow Kelvin	158	38	14.0	199
15	Southwark North and Bermondsey	156	57	18.5	352
	'Worst health' million	*178*	*53*	*20.3*	*3696*
Rank	**Name**				
1	Wokingham	65	9	4.4	2,709
2	Woodspring	65	12	5.5	2,378
3	Romsey	65	12	5.7	2,617
4	Sheffield Hallam	66	9	6.1	1,246
5	South Cambridgeshire	66	13	4.4	2,474
6	Chesham and Amersham	67	11	4.7	3,546
7	South Norfolk	69	15	5.2	2,407
8	West Chelmsford	69	16	6.1	2,152
9	South Suffolk	69	17	6.1	2,227
10	Witney	69	17	5.0	2,602
11	Esher and Walton	69	12	5.4	3,261
12	Northavon	70	11	5.3	3,045
13	Buckingham	71	11	4.8	2,837
	'Best health' million	*68*	*13*	*5.3*	*33,501*
	Britain	**100**	**27**	**9.8**	**873,053**

Note: SMR<65 = Standardised mortality ratio for deaths under 65, men and women.
Source: Shaw *et al* (1999)

Summary

There is a great deal of evidence to show that, over the past two decades in Britain, inequalities in health have been widening, in both social and spatial terms. However, the fact that inequalities in health have narrowed in the past shows that this polarisation is not inevitable, nor immovable. Inequalities in health **can** be reduced.