

Mortality

General details	Data are collected from registrations of deaths
Area output	ONS provide data for Local Authority Areas, postcoded data is available to health researchers
Time period	Annual
Source	Office for National Statistics with some analysis taken from the Locality Based Health Needs Assessment 2003/2004 by The Calderdale and Huddersfield Health Informatics Team
Provider	ONS
Comments	

1 Introduction

1.1 When a person dies, the attending doctor completes the medical certificate of cause of death (MCCD) for the local registrar of births and deaths. The MCCD is in a form prescribed by law, and should be completed by a doctor who has been in attendance during the deceased's last illness. Where a death is sudden or unexpected or a doctor was not in attendance at the deceased's last illness, the death is certified by a coroner who may order a post mortem examination.

1.2 Mortality statistics are usually based on a single cause per death. This is the 'underlying cause of death', defined by the World Health Organisation (WHO) as

- (a) the disease or injury which initiated the train of events directly leading to death, or*
- (b) the circumstances of the accident or violence which produced the fatal injury.*

1.3 This is generally the most useful single cause for public health purposes.

1.4 Errors can occur in attributing deaths to a particular cause usually as a result of inadequate or unrecorded information. Not surprisingly, GPs and pathologists have been shown to make fewer errors than hospital clinicians.

1.5 The categories of causes of death are taken from the International Classification of Disease (ICD), a list that is periodically updated. The current version from 2001 is ICD 10.

1.6 The Standard Mortality Rate is the ratio of the observed number of deaths in a local population to the expected number of deaths expressed as a percentage. The number of expected deaths is calculated using the death rate in the reference population factored to the age structure of the local population. An SMR of 100 has the same mortality as the reference population, an SMR below 100 indicates a lower mortality and an SMR above 100 indicates a higher mortality.

1.7 The ONS advises that SMRs cannot be compared over time. The SMR compares the local mortality rate to the national rate and the national rate is recalculated each year.

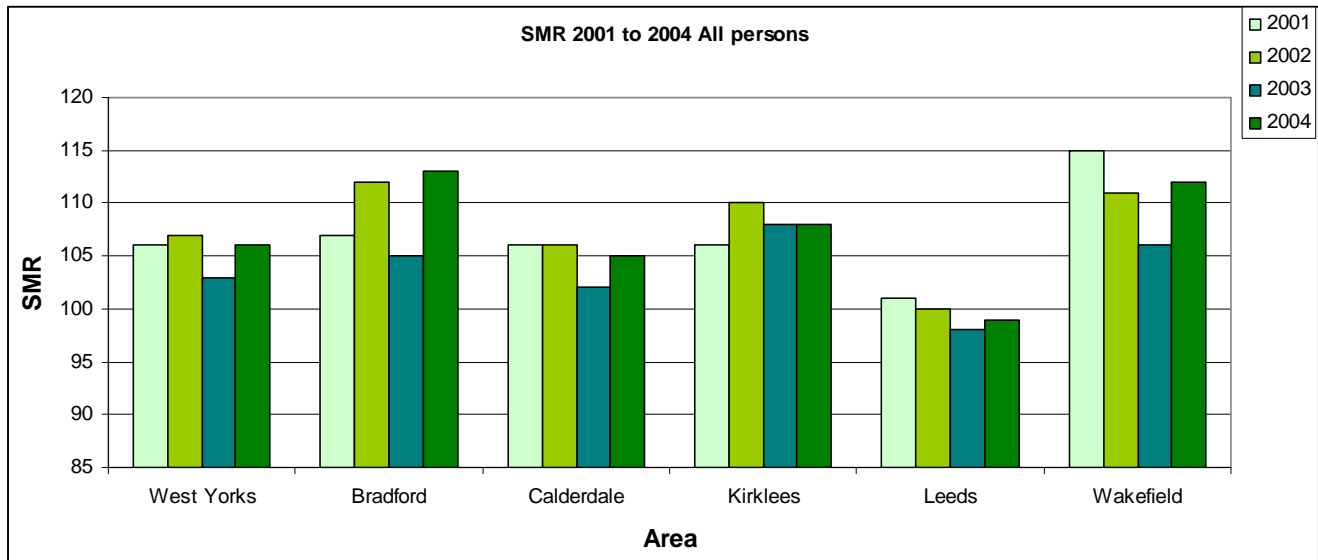
2 National and Regional Figures

2.1 SMRs vary quite widely between different areas. Of the Government Office Regions, the SMR for all causes of death is highest in the North East (114) and lowest in the South West (91) for the year 2004.

2.2 Among the local authorities, the highest SMRs (all causes of death) for 2004 were in Liverpool (129) and Merthyr Tydfil (128), followed by Hartlepool UA and Halton UA (both 127). The lowest occurred in Kensington and Chelsea (67), East Dorset (72) and Christchurch (75).

2.3 Figures 1 to 3 show the last four years' Standard Mortality Rate for all causes of death. Of the five districts in West Yorkshire, Leeds has the lowest SMRs and Wakefield and Bradford have the highest SMRs. For Kirklees the SMR has fluctuated between 106 and 110.

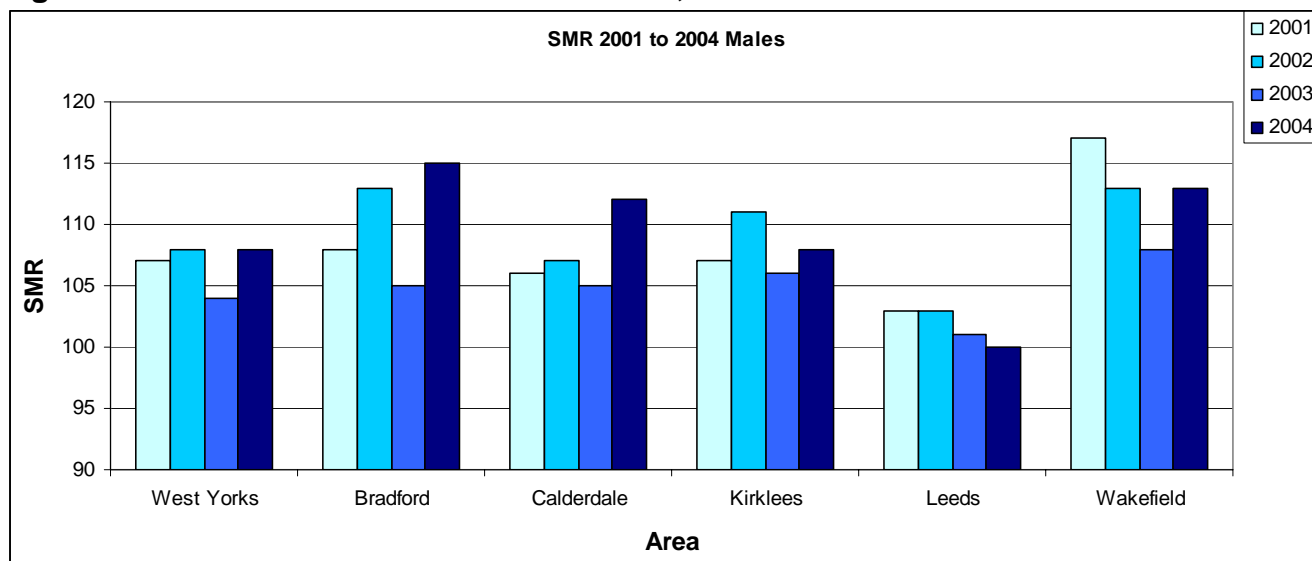
Figure 1: West Yorkshire SMRs 2001 to 2004, all persons



Source: ONS

2.4 Male SMRs for the last four years have been slightly worse than those for all of West Yorkshire.

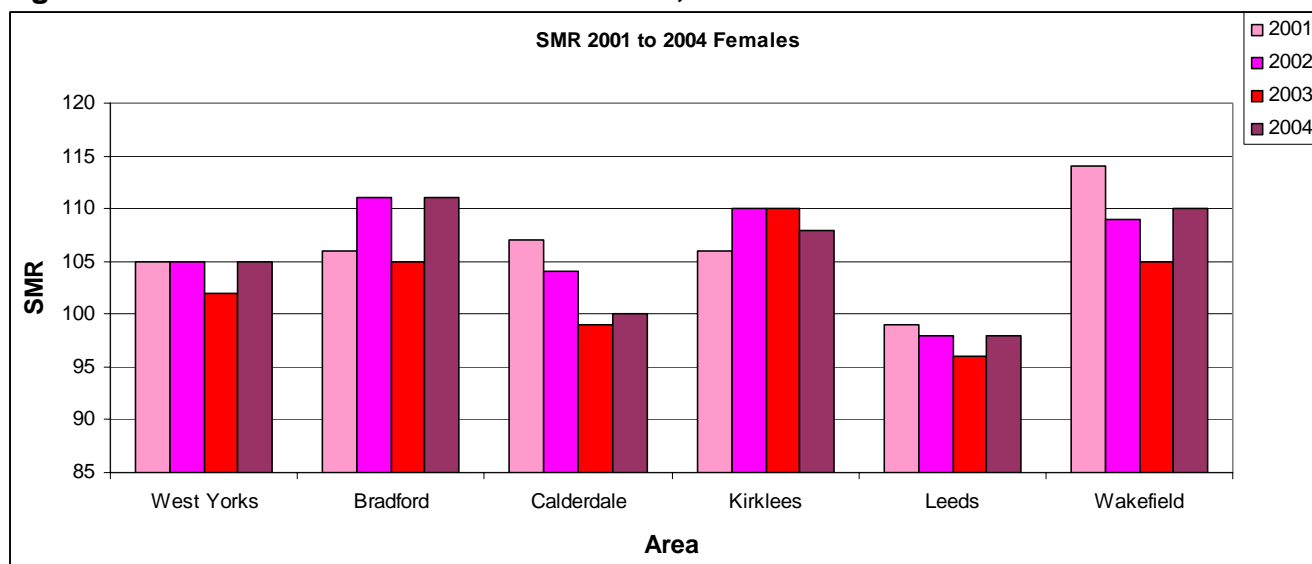
Figure 2: West Yorkshire SMRs 2001 to 2004, males



Source: ONS

2.5 Females in West Yorkshire have slightly lower SMRs than males, which means that females are slightly healthier compared with other females in all of England and Wales than are men in West Yorkshire compared with all males. The Leeds SMR for females is consistently below 100 and the Kirklees rates are consistently above those for West Yorkshire.

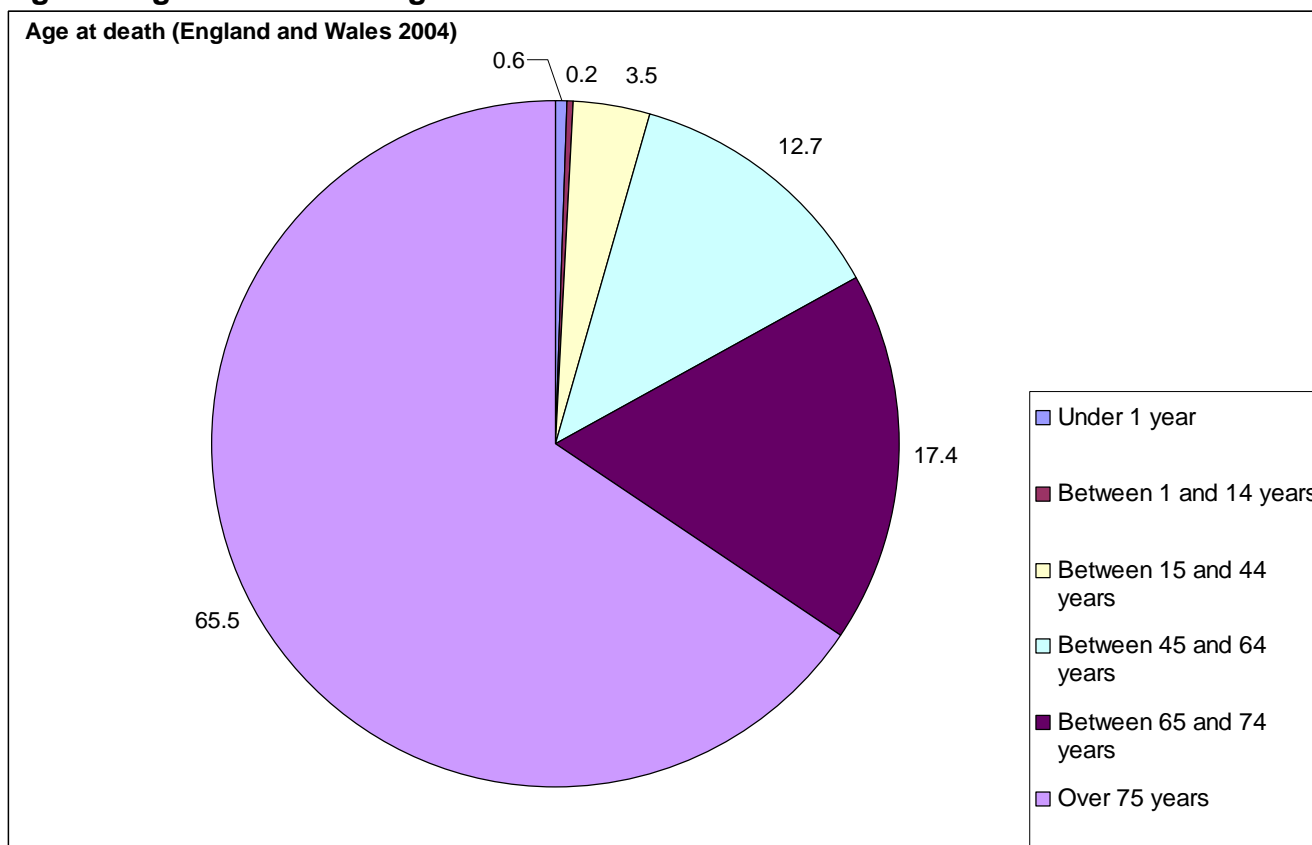
Figure 3: West Yorkshire SMRs 2001 to 2004, females



Source: ONS

2.6 Nationally and locally, about two thirds of deaths occur to people over the age of 75 years and about 83% to people over 65 years, which means that one sixth of deaths in 2004 were to people below retirement age.

Figure : Age at death in England and Wales 2004



Source: ONS

2.7 Just under two thirds of deaths occur within ICD codes for neoplasms and diseases of the circulatory system.

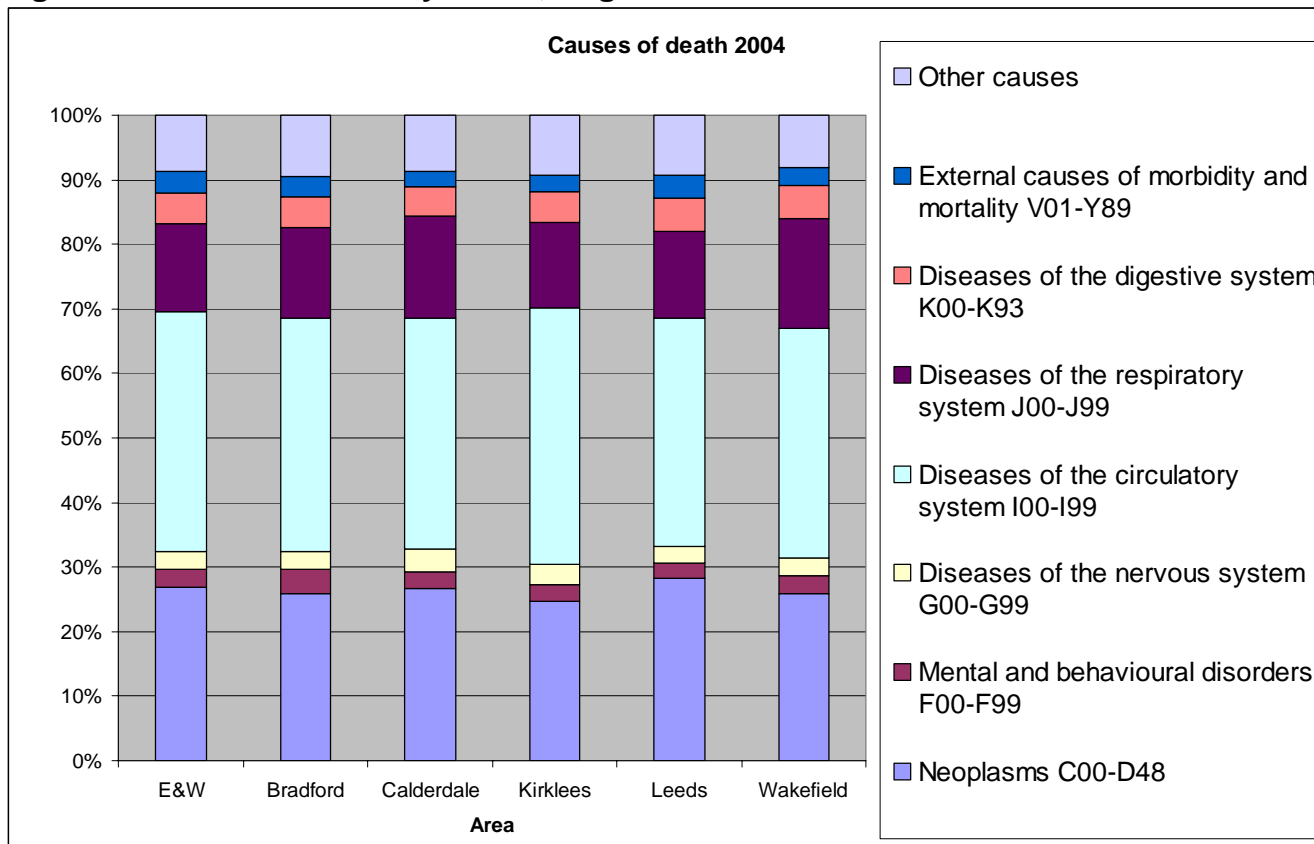
Table 1: ICD10 major causes of death

ICD Description	ICD codes	Comment
Neoplasms	C00-D48	Cancers
Mental and behavioural disorders	F00-F99	Dementia and disorders due to psychoactive substance use
Diseases of the nervous system	G00-G99	e.g. Meningitis, Parkinson's disease
Diseases of the circulatory system	I00-I99	e.g. Heart disease and strokes
Diseases of the respiratory system	J00-J99	e.g. Asthma, Pneumonia, Influenza
Diseases of the digestive system	K00-K93	e.g. Ulcers and liver diseases
External causes of morbidity and mortality	V01-Y89	Accidents, assaults and intentional self-harm.
Other causes	All other	Including other infectious diseases, diseases of the blood, skin, metabolism and genitourinary system.

Source: edited from the ONS short list of death codes using ICD10

2.8 Overall the proportion of deaths attributed to the different higher level ICD10 codes does not vary greatly between West Yorkshire districts and England and Wales. Figure 5 shows that Kirklees had slightly fewer deaths attributed to neoplasms and slightly more deaths attributed to circulatory disease than its neighbouring districts and England and Wales in 2004.

Figure 5: Causes of death by ICD10, England and Wales and West Yorkshire districts



Source: ONS

3 Kirklees Figures

3.1 Approximately 4000 people die in Kirklees every year.

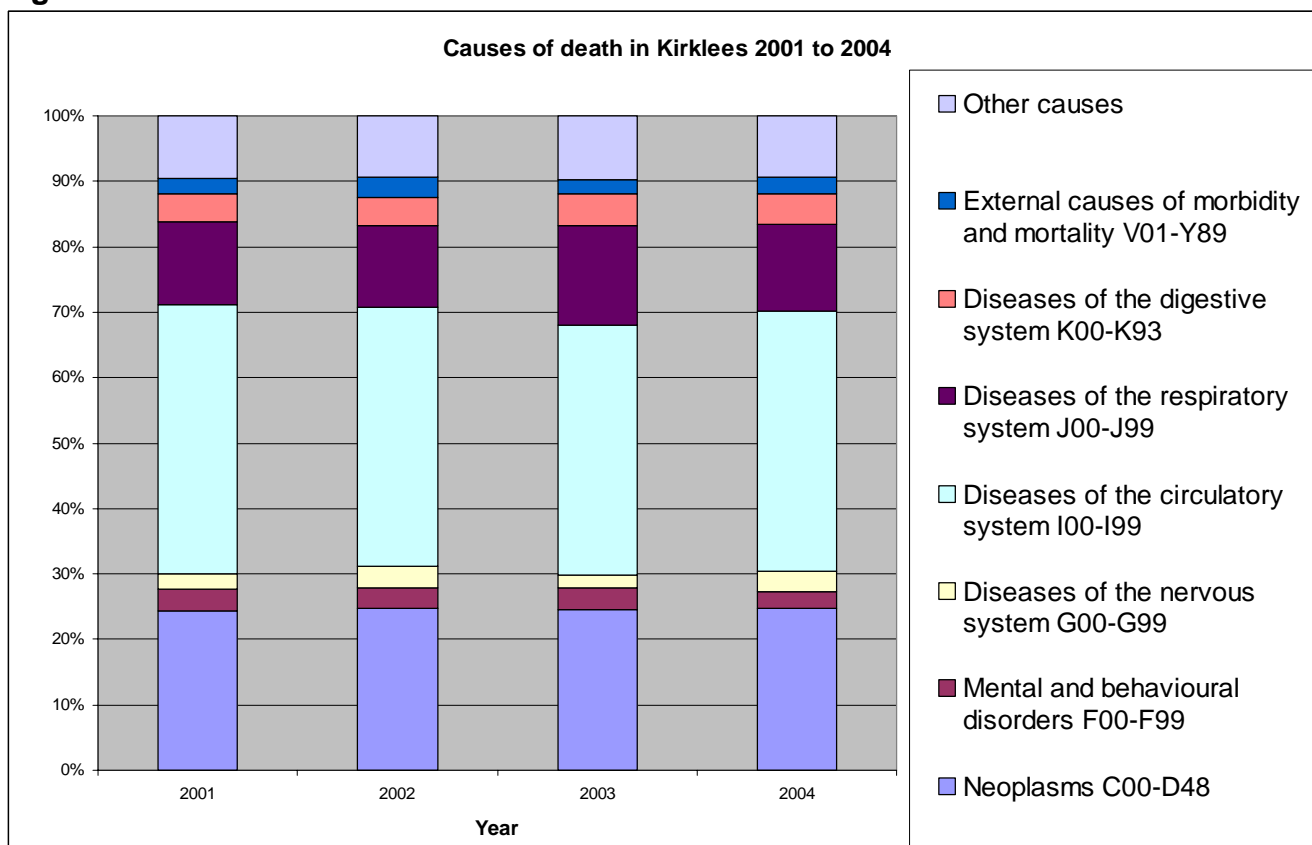
Table 1: Deaths registered by ONS to people living in Kirklees 2001 - 2004

	2001	2002	2003	2004
Kirklees	3979	4074	3995	3787

Source: ONS

3.2 Over the last four years, deaths by ICD10 code have been relatively stable. The slight increase in the proportion of deaths attributed to respiratory diseases in 2003 coincides with an increase nationally in poor air quality indicators.

Figure 6: Causes of death in Kirklees 2001 to 2004



3.3 In the Locality Based Health Needs Assessment, the Calderdale and Huddersfield Health Informatics Team has aggregated 5 years of mortality data for Kirklees by major causes of death.

3.4 With an SMR below 100, the Kirklees rate of deaths from cancer is below expected, whilst SMRS in excess of 100 for cerebrovascular and ischaemic heart diseases are above those that are expected for its population.

Table 2: Major causes of death in Kirklees (deaths and SMRs)

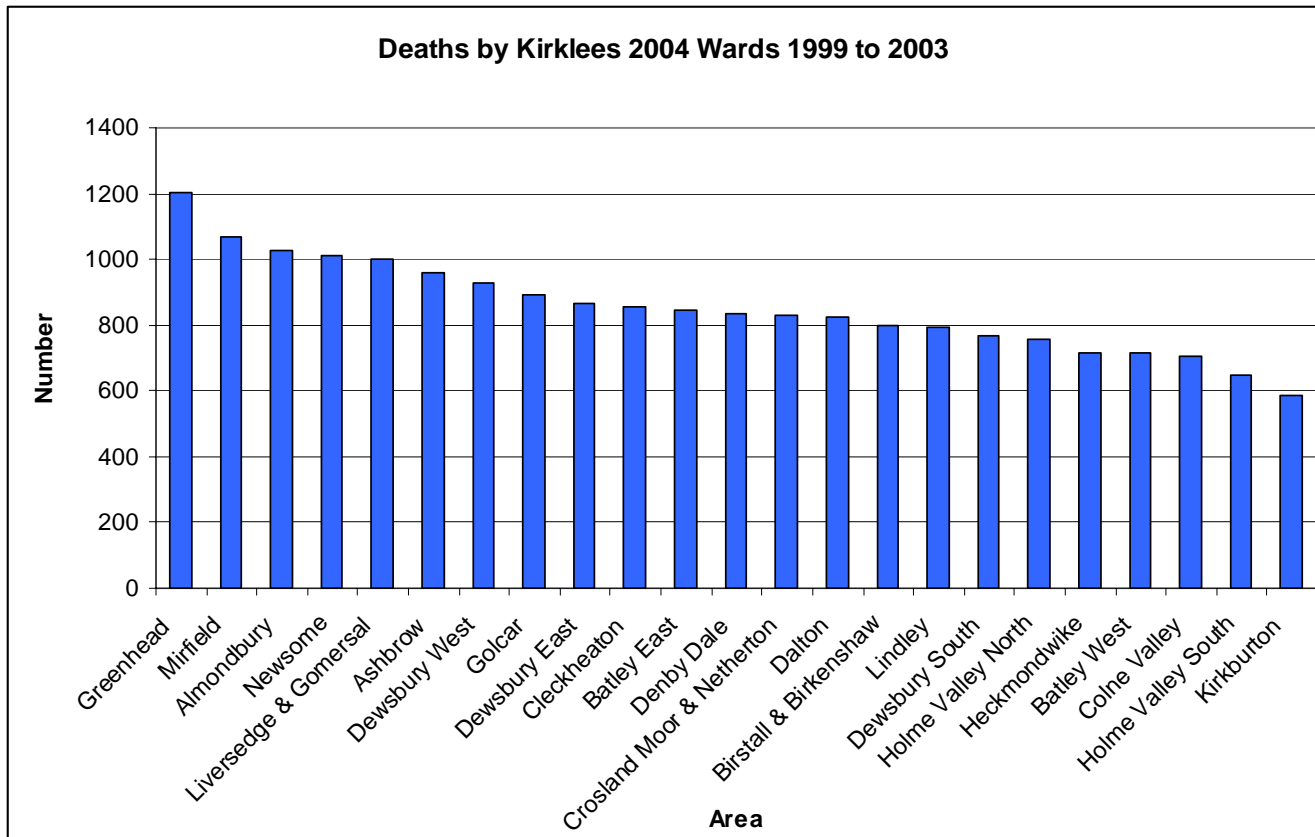
Cause of death	Number of deaths	Percent of all Kirklees deaths	SMR	SMR (5% confidence limits)
Cancer (ICD10 C00 - C97)	4686	24%	97.4	96.6 - 100.2
Ischaemic heart disease (ICD10 I20 - I25)	4029	21%	107.4	104.1 - 110.7
Cerebrovascular disease (e.g. strokes) (ICD10 I60 - I69)	2330	12%	116.3	111.6 - 121.1

Source: Locality-based Health Needs Assessment 2003/2004

3.5 In the Locality Based Health Needs Assessment, the Calderdale and Huddersfield Health Informatics Team has aggregated 5 years of mortality data and aggregated it by Kirklees wards.

3.6 In Greenhead, Mirfield, Almondbury and Newsome wards, there were more than 1000 deaths registered between 1999 and 2003, whilst fewer than 600 deaths were registered for people living in Kirkburton.

Figure 4: Deaths to Kirklees residents 1999 to 2003 by 2004 wards

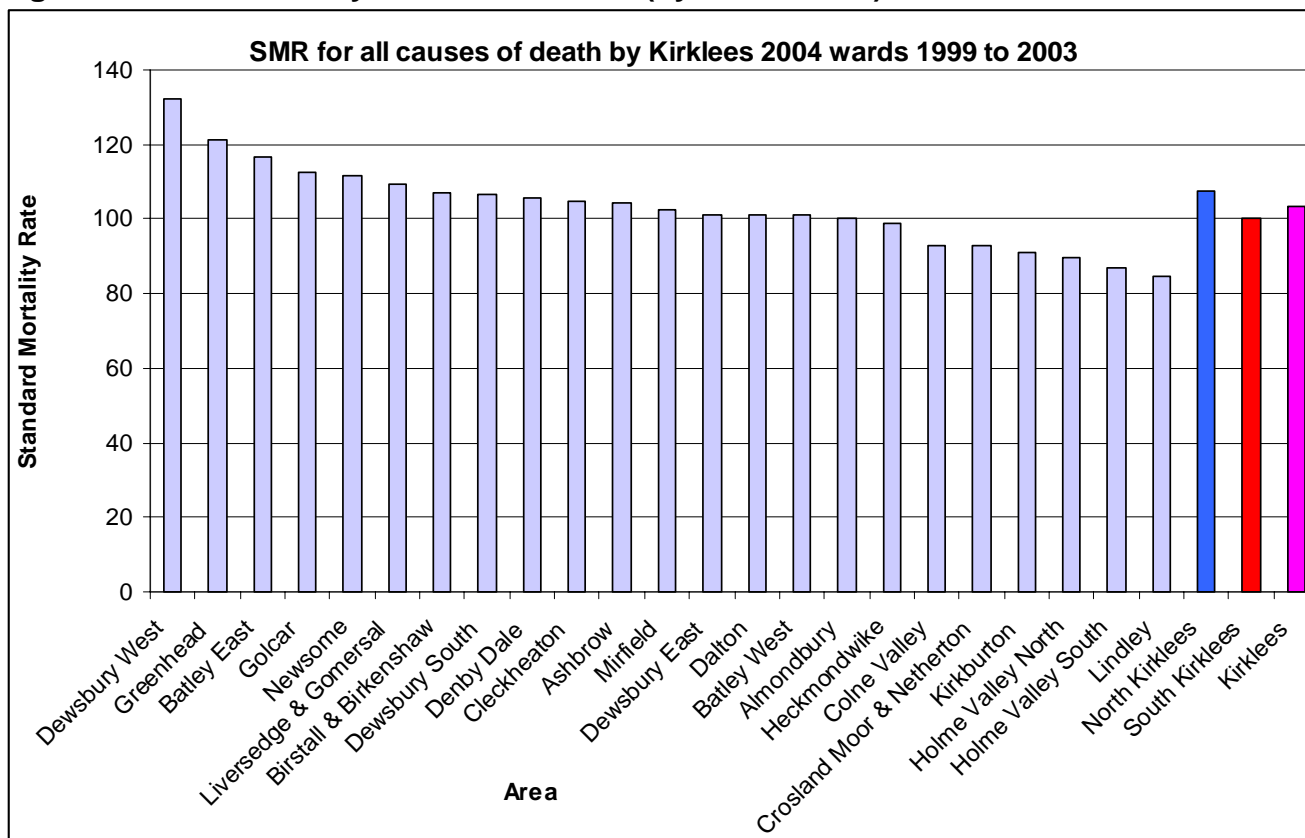


Note: All non-neonatal deaths

3.7 Figure 5 shows the SMR for all causes of death by Kirklees wards, aggregated for 5 years to 2003. Wards with a high SMR include Dewsbury West, Greenhead and Batley East and wards with a low SMR include Holme Valley North and South and Lindley.

Note: By aggregating data for five years, the random fluctuation inherent in using small numbers is reduced. However, it means that we cannot compare these data with national figures.

Figure 5: Ward mortality rate 1999 to 2003 (by 2004 wards)



Note: All non-neonatal deaths

3.8 Cerebrovascular disease (CVD) accounted for 165 deaths in the five years to 2003 in Greenhead ward, which had the highest SMR of **153** (95% confidence limits: 131 - 178). Other wards with high SMRs for CVD included Batley East **151** (95% confidence limits: 124 - 181) and Dewsbury West **146** (95% confidence limits: 120 - 177).

3.9 The SMR for ischaemic heart disease is much higher in North Kirklees at **120** (95% confidence limits: 114 - 125) than South Kirklees **99** (95% confidence limits: 95 - 103). The highest ward SMRs were for Dewsbury West, **139** (95% confidence limits: 119 - 160), Batley East, **132** (95% confidence limits: 115 - 153), and Liversedge and Gomersal, **132** (95% confidence limits: 115 - 150).

3.10 The North Kirklees SMR for cancers (**102** (95% confidence limits: 91 - 98)) is also higher than South Kirklees (**94** (95% confidence limits: 98 - 106)). The ward with the highest SMR is Heckmondwike with an SMR of **116** (95% confidence limits: 101 - 132).

4 Links and further information

Office for National Statistics

<http://www.statistics.gov.uk/default.asp>

Population Trends, (SMRS by Local Authority Area in Summer Edition each year)

<http://www.nationalstatistics.gov.uk/STATBASE/Product.asp?vInk=6303>

5 Indicator archive

Date of the original document	February 2005
Author	Steve Jones: KMC CDU
Details of consultation	John Varlow, Calderdale and Huddersfield Health Informatics Team; December 2005
Document update date	
Update author	
Details of update consultation	