Health Statistics Quarterly

In this issue

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Health Statistics Quarterly and *Population Trends* are journals of the Office for National Statistics. Each is published four times a year in February, May, August and November and March, June, September and December, respectively. In addition to bringing together articles on a wide range of population and health topics, *Health Statistics Quarterly* and *Population Trends* contain regular series of tables on a wide range of subjects for which ONS is responsible, including the most recently available statistics.

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Articles: 5,000 words max.

Dates for submissions

Title / Issue	Spring	Summer	Autumn	Winter
Health Statistics Quarterly	by 11 Sept	by 11 Dec	by 22 Mar	by 21 June
Population Trends	by 23 Oct	by 2 Feb	by 4 May	by 26 July

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in brief

Trends in life expectancy by social class, 1972–2005

The series on life expectancy by social class derived using the Office for National Statistics (ONS) Longitudinal Study has been updated on the National Statistics website to give data for the period 2002–05 for the first time. It is available at: www.statistics.gov.uk/statbase/Product. asp?vlnk=8460

The main points were:

- males in the professional class had a life expectancy at birth of 80.0 in the period 2002–05, compared with 72.7 years for those in the manual unskilled class
- females in the professional class had a life expectancy at birth of 85.1 years compared with 78.1 years for the unskilled manual class

Between 1972–76 and 2002–05, both males and females classified to non-manual occupations had a greater increase in life expectancy at birth and at age 65 than those classified to manual occupations.

In contrast, between 1997–2001 and 2002–05:

- life expectancy for males at birth and at age 65 increased more for those classified to manual occupations (1.8 and 1.2 years respectively), than to non-manual occupations (1.3 and 0.8 years respectively)
- for females, estimates of life expectancy increased by a similar amount for those classified to non-manual and manual occupations

Healthy and disability-free life expectancy for local authorities in England and Wales, 2001

ONS has published estimates of healthy life expectancy (HLE) and disability-free life expectancy (DFLE) at birth and at age 65 for local authorities in England and Wales for the year 2001 on the Neighbourhood Statistics website, www. neighbourhood.statistics.gov.uk. Data are presented at national and Government Office Region (GOR) levels, in addition to local authority, and the data and meta data can be downloaded in a number of different formats. The healthy and disability-free life expectancy at birth and at age 65 figures are produced seperately for males and females.

The HLE estimates were calculated by combining:

- age and sex specific mortality rates (life tables), with
- age and sex specific rates of good/fairly good general health from the 2001 Census

The DFLE estimates were calculated by combining:

- age and sex specific mortality rates (life tables), with
- age and sex specific health rates of people reporting no limiting long-term illness, also from the 2001 Census

HLE and DFLE at birth and at age 65, calculated using the Sullivan method, are examples of summary measures of health known as health expectancies (such as expected years in good health or without a disability), which are commonly used for measuring and monitoring population health at national and international level. They are used as an indicator of progress in government strategies for tackling poverty and social inclusion, for sustainable development, and on public health. The provision of these estimates at local authority level extends their utility for use in local planning.

Population estimates: mid-2006 and revised mid-2002 to mid-2005

England and Wales/United Kingdom
On 23 August 2007 ONS published the mid-2006 population estimates and the revised mid-2002 to mid-2005 population estimates. These give estimates of the population for the United Kingdom; constituent countries; Government Office Regions; local authorities in England and Wales; Council Areas within Scotland; District Council Areas in Northern Ireland and Health Authorities/Boards. Full information on these mid-year population estimates are available on the National Statistics website at: www.statistics.gov.uk/popest

The revised 2002 to 2005 mid-year population estimates shown in this volume have been updated to include the latest revised estimates that take into account improved international migration estimates. Further details on the revisions are available at: www.statistics.gov.uk/imps under 'Updates'.

Scotland

Mid-2006 population estimates for Scotland were released by the General Register Office for Scotland on 27 July 2007. Information on these estimates are available at: www.gro-scotland.gov.uk/statistics/population.html

Northern Ireland

Mid-2006 population estimates for Northern Ireland were released by the Northern Ireland Statistics and Research Agency on 31 July 2007. Information on these estimates are available at: www.nisra.gov.uk/demography/default.asp?cmsid=20_21_24&cms=demography_population%20statistics_Mid%2Dyear+population+estimates&release=

Consultation on restructuring ONS mortality statistics – update

Following the recent consultation on mortality statistics, (which is available at: www.statistics.gov.uk/about/consultations/mortality_outputs.asp), ONS received ten responses from a variety of data users including the Department of Health, the Welsh Assembly Government and local authorities. Responses supported the proposal to change the reporting basis for mortality statistics from deaths occurring, to deaths registered, in a calendar year, as well as a move towards new themed packages of mortality outputs.

ONS intends to publish a report outlining the responses to the consultation before the end of the year on the National Statistics website. This will include more information on the future content of mortality outputs.

Delay in publication of unexplained deaths in infancy report for 2006

The above report was due for publication in the autumn 2007 edition of *Health Statistics Quarterly*. The unexplained deaths report was first published in 2005 using 2004 data and we have since found that it is too early to publish provisional figures in the autumn as most of these deaths have not been registered by then.

The majority of the unexplained deaths are certified by a coroner either with or without an inquest and it takes much longer for these deaths to be registered. Hence the provisional figure for unexplained deaths is much lower when compared to the final figure. For example, provisional figures for 2004 showed there were 261 unexplained deaths and the rate was 0.41 per 1,000 live births while the final figures showed there were 309 deaths with a rate of 0.48 per 1,000 live births (17 per cent higher than the provisional rate). There was however a 12 month interval between the publication of these provisional and final figures. In order to publish meaningful, provisional figures for 2006, the number of unexplained deaths registered each month is currently being monitored. Figures will be published as soon as we are confident that most deaths have been registered.

Effects of problems with birth and death registration systems on ONS statistical outputs

As described in the previous edition of *Health Statistics Quarterly*, problems with the introduction of the new registration on line system (RON) at register offices in England and Wales have led to the temporary suspension of some ONS outputs that rely on the completeness of births and deaths registered between the end of March and the beginning of May 2007. Births and deaths records for this period, which were held only on paper at register offices, have now been entered onto the RON system. Statistical quality assurance and compilation processes are now being completed.

How this affects reference tables in *Health Statistics Quarterly*

Provisional conceptions figures for June quarter 2006 (which rely on March quarter 2007 and June quarter 2007 birth registrations), due to be published in the August edition of *Health Statistics Quarterly*, have been quality assured and are released in this edition. Provisional births, deaths and childhood mortality figures for the quarter ending March 2007 for England and Wales, also due to have been published in the August edition, are also included in this edition.

Excess winter mortality

Unlike the winter edition of *Health Statistics Quarterly* in 2006, this edition does not contain a report on excess winter mortality. Provisional figures for winter 2006/07 have however been calculated and are available on the National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=10805&More=n

These figures are available by age group, for England and Wales, English Government Office Regions, and Wales. Comparable trend data for winters from 1990/91 onwards are also available.

Health at a Glance – OECD Indicators 2007

The Organisation for Economic Co-operation and Development (OECD) publishes a biennial summary of health and healthcare comparisons across its 30 member countries. *Health at a Glance – OECD Indicators 2007* is due to be published during November and will be available at: www.oecd.org/health/healthataglance. The content of *Health at a Glance* is based on the annual OECD health data collection, which ONS co-ordinates for the UK. *OECD Health Data 2007: Statistics and Indicators for 30 Countries* is available at: www.oecd.org/health/healthdata.

'Recent publications' are listed on page 96

Health indicators

England and Wales

Figure A	Population change (mid-year to mid-year)

Thousands

Legend: Natural change, Total change

Mid-year
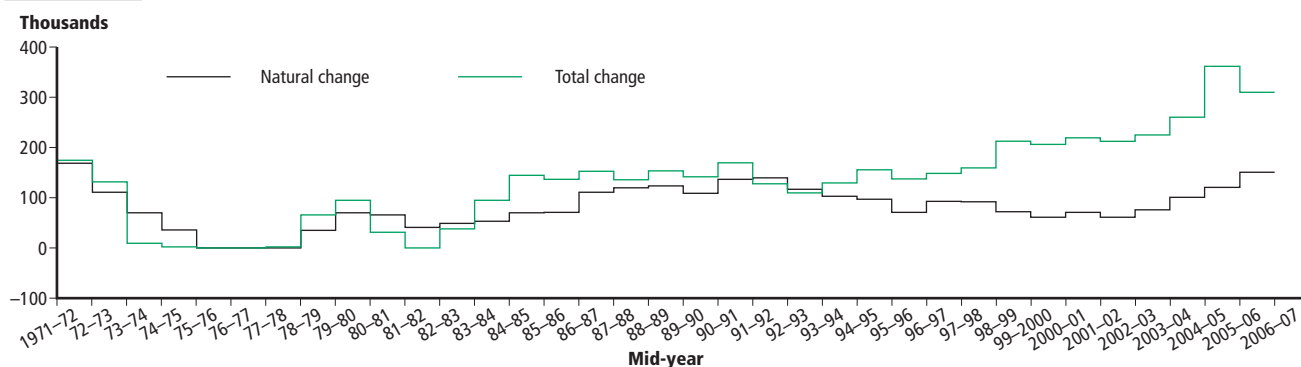
Figure B	Age-standardised mortality rate[1]

Rate per million population
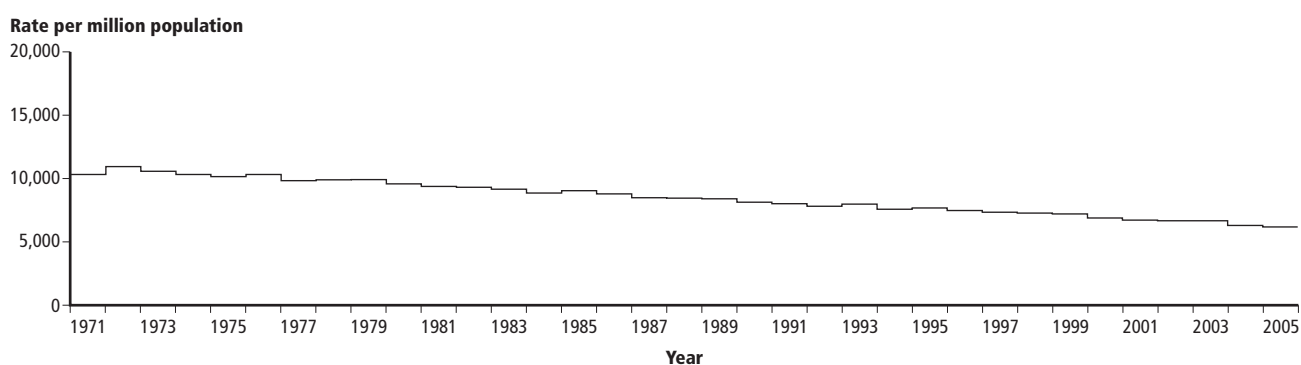
Year

Figure C	Infant mortality (under 1 year)

Rate per thousand live births

Year
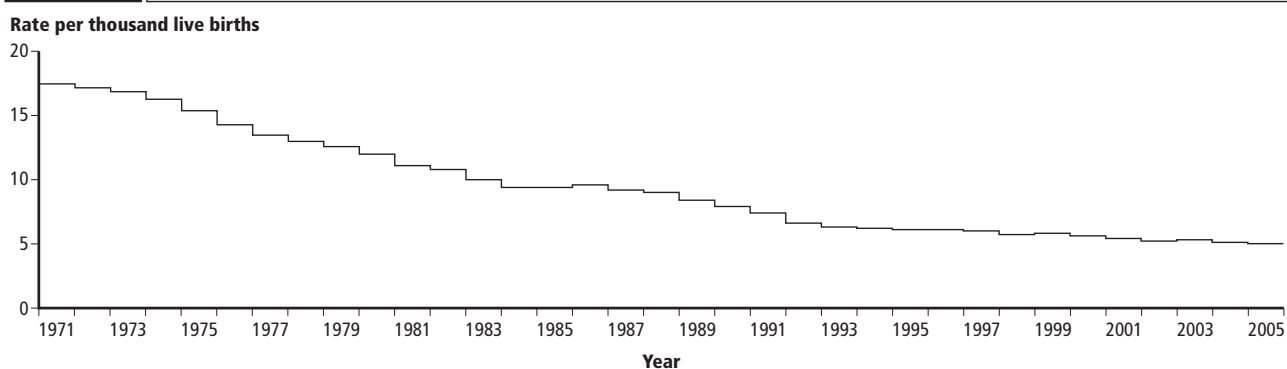
Figure D	Age-standardised quarterly abortion rates – residents[2]

Age standardised rate per thousand women 15–44

Legend: ASR abortion rate, Provisional rate, Moving average rate

Year
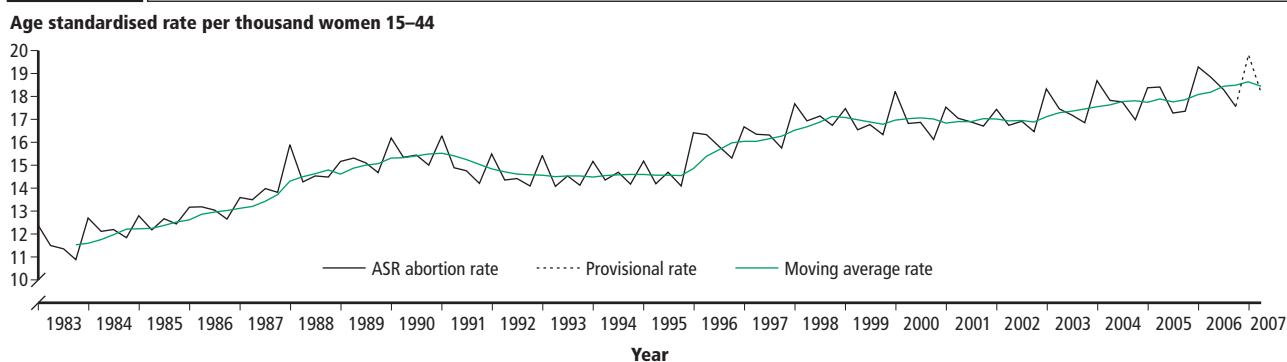
[1] The age-standardised mortality rate for 2004 is based on mid-2004 population estimates published on 25 August 2005.

[2] Rates for 2006 and March quarter 2007 are based on 2004 projected projections.

Social inequalities in adult male mortality by the National Statistics Socio-Economic Classification, England and Wales, 2001–03

Chris White, Myer Glickman, Brian Johnson and Tania Corbin
Office for National Statistics

This article reports social inequalities in mortality in men aged 25–64 years in England and Wales, in the period 2001–03 using unlinked data sources and 2001–04 using linked data sources. It represents the first official analysis of premature mortality by the final version of the National Statistics Socio-economic Classification introduced in 2001, and updates the tradition of decennial reporting of mortality by socio-economic status.

These results set a benchmark for inequalities in mortality in men of this age, providing insights into the impacts of different social and occupational circumstances in the early 21st Century and enabling future monitoring. The Office for National Statistics intends to extend this work to examine inequalities to mortality in females of the same age, in causes of death and by Government Office Region.

Introduction

This article describes social inequalities in the all-cause mortality of men aged 25–64 years, in England and Wales, in the period 2001 to 2003. It is the first analysis of adult mortality using the final version of the National Statistics Socio-Economic Classification (NS-SEC), which was introduced in 2001; although previous analyses of male mortality for the period 1991–93 have been published, using an interim version of NS-SEC.[1,2,3] This current analysis establishes an essential benchmark for the measurement of health inequalities in the early 21st century, and it will inform the development of methods for future research, including options for an inter-censal time series. Further planned analyses of mortality by NS-SEC will report on females of working age, life expectancy, causes of death, and differences between Government Office Regions.

The analysis presented here uses four data sources: the 2001 Census, the mid-year population estimates for 2001–03, deaths of men aged 25–64 occurring in 2001–03, and the Office for National Statistics (ONS) Longitudinal Study (LS). The LS is a sample of around one per cent of the population of England and Wales, which links census and vital events data from 1971 onwards.[4] This analysis departs from previous decennial analyses of mortality by socio-economic status through explicit use of linked records from the LS to quantify and correct for the potential for previously reported biases in unlinked data,[5,6] allowing a more valid and reliable set of estimates with which to establish trends in the future.

Background

Social inequalities in mortality in the UK are well-established, particularly among men of working age, and their study has a history

dating back to the Registrar General's reports of the mid-nineteenth century.[7,8,9,10,11,12] The large body of evidence assembled since the publication of the influential Black Report in 1980 shows that such inequalities are a feature of many industrialised societies,[13, 14,15] and that a gradient in mortality risk can generally be observed across the range of socio-economic groups in society, however those groups are categorised.[16,17]

Since 1911, the principal social classification used in UK official statistics has been the Registrar General's Social Classification (RGSC) based on occupation and employment status. Significant inequalities in mortality by RGSC have been reported in the literature throughout the 20th century. While mortality rates overall declined during the 20th century, the gap in mortality across the social spectrum has persisted or widened.[9,18,19] In 1931, the mortality rate among unskilled male workers was 1.2 times the rate among professionals; this difference had increased to 2.9 times in 1991–93.[20,21] The marked contrast between professionals and unskilled manual workers in the rate at which mortality fell between 1970–72 and 1991–93 was responsible for the widening of the social class gradient among men of working age during this period. The scale of inequality in mortality can be illustrated with reference to age-specific rates of death: in 1991–93, men in unskilled occupations aged 20–24 had a higher rate of death than professional men aged 40–44.[21] This increasing inequality in mortality risk by socio-economic status led the UK government to commission a second independent inquiry into inequalities in health[22] in 1997, which led to the funding of a number of national initiatives designed to tackle the poorer life chances of the socially disadvantaged.[23,24,25]

The RGSC has provided a relatively consistent basis for the monitoring of health inequalities over time, but has been criticised for lacking a coherent theoretical basis and insensitivity to the changing patterns of industry and employment in modern economies.[26] The diminishing number of men in unskilled manual occupations (social class V) since 1970 has led to criticism of RGSC from both statistical[27,28] and sociological perspectives;[29,30] the health status of this social group can be seen as of decreasing relevance to the population as a whole,[31] and increasingly difficult to measure with statistical reliability. At the same time, the expansion of managerial, technical and routine non-manual occupations during the 1980s and 1990s reflects the impact of a growing service-based economy, and casts increasing doubt on the hierarchical social distinctions implicit in the RGSC.[32]

The NS-SEC, like the RGSC, is based on occupation and employment status (and for some occupations, number of employees in the workplace) but was developed on the basis of a classification of employment relations, and aims to reflect the socio-economic structure of 21st century societies and the major shift in the UK economy from manufacturing to service industries.[33] Important distinguishing features include the separation of small employers and own-account workers into a discrete class, the removal of the historical distinction between manual occupations and other occupations of a routine or semi-routine nature and an increase in the size of the class populations at the extremes of the scale. Another difference between the classifications is that RGSC is an assumed hierarchy of occupational skill and social standing, whereas NS-SEC is an explicit measure of employment relations characteristics[34] that aims to minimise within-class and maximise between-class heterogeneity.[33] The capture of qualitative differences in employment relations inherent in the NS-SEC schema counters the assumption of a hierarchy of classes, but establishes distinct occupational groupings, which provide greater scope for explaining statistical relationships. Specifically, the relationship between mortality and NS-SEC can suggest how different types of employment relations and conditions may impact on health, and, consequently, the role of social organisation in the formation and persistence of health inequalities.

Previous analysis of mortality in males of working age by an interim version of NS-SEC examined deaths in the period 1991–93 by major cause. For all causes of death, although statistically significant differences were found between classes, the mortality pattern departed from the familiar linear relationship characteristic of analyses by social class in one important respect; the **Small employers, own account workers** had lower mortality than men working in **Intermediate and Lower supervisory and technical** occupations.[2] Another relevant distinction between analyses by RGSC and NS-SEC in the period 1991–93 was the lower rate of death found among men working as **Large employers, higher managers** compared with men in RGSC social class I, and the lower rate in men working in **Routine** occupations compared with men in RGSC social class V. The lower mortality rate at each end of the NS-SEC scale maintained consistency with the gradient found in analysis by RGSC for the same period.

Further information about NS-SEC, its rationale, development, and application is available on the National Statistics website.[35]

Analytical approach

Examinations of social inequalities in mortality have generally used one of two approaches, the cross-sectional approach using unlinked records, or the follow-up approach, using linked records. The decennial analyses published by ONS and its predecessors have used unlinked records, in which mortality rates are calculated using the population recorded at a census as the denominator and the number of deaths registered in a period around the census as the numerator. Since the inception of the LS, many important analyses have used the linked records approach, which tracks a defined sample of individuals over time.[6, 7, 11, 12, 17, 21, 36, 39, 56, 66] Mortality rates calculated from linked records use the time members accrue in the sample (person years at risk, PYRs) as the denominator and deaths to sample members as the numerator.

Both approaches have strengths and weaknesses. The unlinked approach is subject to numerator-denominator biases, in particular, but, as the figures are based on the entire population, the data allow analyses into detailed breakdowns and the results have a high level of stability. Numerator-denominator biases can arise from differences in the reporting of occupation and employment status, and hence NS-SEC, at death registration and census.[5,36,37] One difference is that reporting at census is generally by the individual concerned, whereas at death it is by the person registering the death, and may therefore be less accurate. Another is that the information provided at census relates to current or most recent occupation and economic position, while at death what is recorded is usually the main lifetime occupation or career.

The potential for numerator-denominator biases is particularly relevant for analyses using the 2001 Census; a rule applied by ONS in the processing of records coded men and women under the age of 65 reporting an occupation to the residual NS-SEC category **Not classifiable for other reasons** if they had not worked since 1995 and were not classified as 'never worked' or 'long-term unemployed'.[38] This rule (known as Filter X) has the potential to distort mortality estimates by socio-economic status through the artificial reduction of occupied NS-SEC populations at census and differential occupational propensities for not having worked since 1995. This coding rule was not applied to 2001 Census records in the LS, enabling the use of linked records to correct for numerator-denominator biases resulting from Filter X, described below.

Another weakness of analyses using unlinked records is the inability to detect and account for the possible presence of health selection, which also has potential to distort inequalities in mortality by socio-economic status. The operation of health selection is complex, and has received substantial examination in the literature.[7, 15, 21, 39, 40, 41, 42, 66] The

principal tenet of the selection explanation for inequalities in mortality by socio-economic status relevant to this analysis is the direction of the relationship between health and social position: that is, that health status influences social position rather than vice versa, leading to a concentration of people at higher risk of premature death in low status occupations or unemployed or permanently sick or disabled. If the propensity for an individual to retire early or leave the labour market on grounds of ill-health varies between occupations, this is likely to affect the comparison of mortality rates by NS-SEC, since such individuals are at increased risk of subsequent death. The linked records approach using data from the LS can adjust for health selection out of the labour market by allocating an occupied NS-SEC from the LS member's 1991 Census record if available.

While the linked records contained within the LS provide a number of methodological advantages described above, estimates of mortality based on the LS alone are subject to sampling variation, which limits the scope for detailed analysis by socio-economic status and cause of death. Furthermore, the potential for underestimation of loss to follow-up brought about by an unknown rate of unobserved embarkation can result in sample members continuing to accrue person years at risk when they are no longer resident in England and Wales, thereby reducing estimates of mortality.

To provide the most reliable comparison of mortality by NS-SEC for adult males, this article draws on both unlinked and linked records, explained in the Methods section below. Mortality rates are calculated using a combination of both approaches, including adjustments applied in each set of calculations to compensate for known biases specific to the data sources. In particular, the analysis draws on linked records in two ways to improve the unlinked records analysis.

Firstly, it takes advantage of the fact that the LS is a representative sample; this means that results calculated from the LS should be broadly similar to those calculated from unlinked records, subject to sampling error and known differences in method of NS-SEC assignment.[1] Significant differences between the two sets of results are therefore suggestive of systematic bias in one or the other and can be investigated to improve the overall robustness of the findings. Secondly, the LS contains data on the same individuals collected at successive censuses and at death registration. This means that the relationships between (for example) the NS-SEC class allocated at the 2001 Census and that allocated to the same person at death can be compared and used to refine the methods for unlinked analysis.

Details of the adjustments made and the calculations at each intermediate stage in the process will be provided in a subsequent technical paper. Some additional tables and background material have been provided in a separate Appendix to this article; tables and boxes referred to below by an alphanumeric character (for example, Box A1) can be found in the Appendix.

Methods

National Statistics Socio-Economic Classification (NS-SEC)

Box One shows the analysis according to the nine class breakdown of NS-SEC and provides examples of the occupations included in each class. These analytical classes are based on a larger number of operational categories (and sub-categories) and can be further aggregated into broader divisions (5 and 3 analytic class versions), shown in Box A3 in the Appendix.

There are three principal methods of deriving NS-SEC, depending on the data available.[43] The **full** method requires occupational information

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Box one
National Statistics Socio-Economic Classification – Analytic classes

Analytic class	Examples of occupations included
1.1 Large employers, higher managers	Senior officials in national and local government, directors and chief executives of major organisations, officers in the armed forces
1.2 Higher professionals	Civil engineers, medical practitioners, physicists, geologists, IT strategy and planning professionals, legal professionals, architects
2 Lower managerial, professional	Teachers in primary and secondary schools, quantity surveyors, public service administrative professionals, social workers, nurses, IT technicians
3 Intermediate	NCOs and other ranks in the Armed Forces, graphic designers, medical and dental technicians, Civil Service administrative officers and local government clerical officers, counter clerks, school and company secretaries
4 Small employers and own account workers	Hairdressing and beauty salon proprietors, shopkeepers, dispensing opticians in private practice, farmers, self-employed taxi drivers
5 Lower supervisory and technical occupations	Bakers and flour confectioners, screen-printers, plumbers, electricians and motor mechanics employed by others, gardeners, rail transport operatives
6 Semi-routine occupations	Pest control officers, clothing cutters, traffic wardens, scaffolders, assemblers of vehicles, farm workers, veterinary nurses and assistants, shelf fillers
7 Routine occupations	Hairdressing employees, floral arrangers, roundsmen and women, sewing machinists, van, bus and coach drivers, labourers, hotel porters, bar staff, cleaners and domestics, road sweepers, car park attendants
8 Never Worked, long-term unemployed	Defined at census as a person aged 16-74 who had never engaged in paid employment or had not worked since 1999

Source: NS-SEC User Manual

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coded to the Standard Occupational Classification 2000 (SOC 2000), details of employment status (for example supervisor, other employee, or self-employed) and the size of the organisation for which the individual works. The **reduced** method dispenses with organisational size and derives NS-SEC from the SOC 2000 code and employment status, while the **simplified** method derives NS-SEC from the SOC 2000 code only.

A study using the Labour Force Survey in 2000 found that compared with the full method, the reduced method allocated 98 per cent of individuals to the correct NS-SEC analytic class.[33] The main effect of using the reduced method was to increase the proportion of the study population working as **Large employers, higher managers** from 4.4 per cent to 5.9 per cent, and reduce the proportion working in **Lower managerial, professional** occupations from 25.0 per cent to 23.3 per cent. A comparison of the allocations to the NS-SEC analytic classes using the full and reduced methods of derivation, based on that study, is shown in Table A1 in the Appendix.

Full NS-SEC can be derived from the 2001 Census data, but not from death registrations, because size of organisation is not among the occupational details recorded on the death certificate. For consistency, therefore, reduced NS-SEC was used throughout this analysis. The census questions on occupation and employment status are shown in Box A1 and the rules for recording of the relevant information at death registration are set out in Box A2.

During the development of the NS-SEC, a version for use with data coded to the Standard Occupational Classification 1990 (SOC 90) was made available (referred to as NS-SEC90).[44] Although the categories and analytic classes of NS-SEC90 are identical to those of NS-SEC,

differences between the SOC 90 and SOC 2000 classifications mean that the two are not directly equivalent. A previous analysis of deaths registered in 2001, which were coded using both SOC 90 and SOC 2000, found that allocation to NS-SEC and NS-SEC90 classes agreed in 90 per cent of cases overall.[45]

Analysis period and study populations

Death registrations record information on the occupation and employment status of the deceased for men between the ages of 16 and 74. However, the completeness of these data deteriorates after the state retirement age of 65, reducing the reliability of analysis by NS-SEC from this source beyond the age of 64. The trend for an increasing proportion of young men to delay entry into the labour market, usually because of their continuation in full-time education beyond the age of 16, also reduces the proportion of men aged 16–24 who can be allocated an NS-SEC class based on their occupation. Consequently, this analysis focuses on men aged 25–64, to ensure the most complete and reliable allocation to NS-SEC classes.

Deriving population denominators by NS-SEC

Mid-year population estimates 2001–03 by NS-SEC
It is customary for a decennial analysis of mortality to focus on deaths in a period evenly spread before and after the census year. However, the introduction of NS-SEC for death registrations from January 2001 makes that impossible in this case. Consequently, deaths of men resident in England and Wales registered in the calendar years 2001 to 2003 were used. Because this means that the census-based population counts are not centrally positioned in the analysis period, and to allow for revisions to the 2001 Census populations which have subsequently been published by ONS, adjusted denominators were derived for use in the decennial analysis of unlinked records by applying the proportions of the male population in each NS-SEC class and five-year age group to the ONS revised mid-year population estimates for each of the three years. The adjusted total population denominator was 41,507,100 PYRs for 2001–03 combined, representing an increase of 1.7 per cent in the denominator compared to the census counts. Population numbers (rounded to thousands) by age group and NS-SEC class from the 2001 Census are shown in Table A2 in the Appendix, and the equivalent numbers using ONS mid-year population estimates are shown in Table A3.

Using linked data to refine population estimates
The analysis of linked records concentrated on male members of the LS, included if they were enumerated in England and Wales at the 2001 Census, were aged 25–64 years on the census date, and were traced at NHS Central Register (this ensures the inclusion of death records where appropriate). A total of 139,760 LS members were included in this sample. Person years at risk were calculated for the period 29 April 2001 (census day) to 31 December 2004, taking account of emigrations from and re-entries to England and Wales and ageing-out of the population at risk. These linked records were used to (a) reduce the proportion classified to the residual category **Not classifiable for other reasons** (artificially inflated by the application of the Filter X rule in the 2001 Census), (b) minimise the potential for health selection out of the labour market to disproportionately diminish occupied NS-SEC analytic class denominators. The age and NS-SEC class-specific proportions of PYRs were applied to the pooled mid-year population estimates for England and Wales for the years 2001–03 to produce synthetic unlinked records denominators optimised for mortality analysis. The rounded denominators by NS-SEC class and age group are presented in Table 1. The unrounded version of this table will be available on the National Statistics website.

The Longitudinal Study sample members were allocated to an NS-SEC class based on their 2001 Census record. To maximise the number of individuals available for analysis and to reduce the possible effect of health selection out of the labour market, those who had no occupied NS-SEC class in 2001, but were present and had an occupation coded to SOC90 at the 1991 Census, were then allocated to an NS-SEC class on the basis of their NS-SEC90 code. In linked records 95.9 per cent of the LS sample was allocated to an occupied NS-SEC class using NS-SEC in 2001 only, and 97.9 per cent using NS-SEC90 in addition. The PYRs providing the denominators for the linked records analysis are shown (by NS-SEC class, all ages combined) in Table 2.

Adjustments to the assignment of deaths (numerator) to NS-SEC

A total of 150,201 deaths were included in the unlinked records analysis; 89.3 per cent of these could be allocated to an occupied NS-SEC class. Preliminary investigation of linked records using the LS revealed a systematic bias in the unlinked records analysis caused by an apparent misallocation of one NS-SEC operational category at death registration. Certain occupations are assigned to NS-SEC operational category L6 (Higher Supervisory occupations), which is part of the analytic class **Lower professional, managerial**, if they supervise other employees and have an employment status of supervisor, and operational category L7 (Intermediate occupations), which is part of the **Intermediate**

Table 1	Optimised population estimates[1] (person years at risk) by NS-SEC[2] and age, males aged 25–64, 2001–03

England and Wales — Thousands

| Age (years) | NS-SEC analytic class | | | | | | | | | |
	1.1	1.2	2	3	4	5	6	7	FTS[3]	Other[4]
25–29	249	575	1,185	439	336	691	645	720	34	193
30–34	412	649	1,385	431	567	882	655	829	15	161
35–39	536	588	1,377	351	829	857	639	846	6	139
40–44	508	495	1,263	299	861	769	579	753	3	109
45–49	462	444	1,116	251	792	668	500	676	5	84
50–54	427	446	1,153	261	863	654	504	717	3	73
55–59	374	407	1,012	230	853	612	491	743	1	54
60–64	210	297	722	177	682	528	431	682	1	46
Total[5]	3,178	3,901	9,213	2,439	5,783	5,661	4,444	5,966	68	859
Percentages	*7.7*	*9.4*	*22.2*	*5.9*	*13.9*	*13.6*	*10.7*	*14.4*	*0.2*	*2.1*

1 Adjusted for 2001 Census 'Filter X' rule and health selection.
2 Reduced derivation.
3 Full-time students.
4 Other (including never worked and long-term unemployed, inadequately described, not classifiable for other reasons).
5 Totals in thousands rounded so do not sum to 41,507,100 reported in text.

Source: Office for National Statistics, 2001 Census (custom table provided by ONS Census Division); mid-year population estimates for 2001, 2002 and 2003; ONS Longitudinal Study

Table 2	Populations (person years at risk) by NS-SEC,[1] males aged 25–64 in the Office for National Statistics Longitudinal study sample, 2001–04[2]

England and Wales

NS-SEC analytic class	Based on NS-SEC in 2001 only		Based on NS-SEC in 2001 and NS-SEC90 in 1991	
	PYRs	Percentages	PYRs	Percentages
1.1 Large employers, higher managers	38,150	7.8	38,348	7.8
1.2 Higher professionals	44,567	9.1	45,251	9.2
2 Lower managerial, professional	106,673	21.8	108,224	22.1
3 Intermediate	26,940	5.5	27,747	5.7
4 Small employers, own account workers	70,254	14.3	71,258	14.5
5 Lower supervisory and technical	65,683	13.4	66,710	13.6
6 Semi-routine	49,794	10.2	51,854	10.6
7 Routine	68,063	13.9	70,711	14.4
Never worked, long-term unemployed	14,483	3.0	9,113	1.9
Full-time students	4,640	1.0	628	0.1
Inadequately described	115	0.0	52	0.0
Not classifiable for other reasons	863	0.2	330	0.1
Total[3]	490,226	100	490,226	100

1 Reduced derivation.
2 29 April 2001 to 31 December 2004.
3 Totals vary slightly due to rounding.

Source: Office for National Statistics Longitudinal Study

analytic class, if not; however their job titles typically make no mention of management or supervisory responsibilities in either case. Examples include draughtsmen, various categories of clerical workers, photographers, and electrical technicians. For those men assigned to NS-SEC operational category L6 at census and L7 at death in the LS sample, equivalence was found in the occupation reported in their linked census and death record, and differed only in regard to the employment status reported. While this issue has no effect on the linked records analysis, which is based on NS-SEC allocated at census for both deaths and PYRs, it distorts the mortality rates produced from unlinked records for these analytic classes. The rule for coding employment status, a fundamental factor in the decision to allocate to either L6 or L7, in death registrations, when employment status information is missing or insufficiently detailed, is to default to the **employee** category. This rule increases the likelihood

for deaths in these occupations to be classified to the operational category Intermediate occupations (L7) and hence the **Intermediate** analytic class.

To adjust for this bias, while ensuring that the total number of deaths remains consistent, age-specific adjustment factors were calculated from the LS sample and applied to the numbers of deaths in the **Lower professional, managerial** and **Intermediate** analytic classes in the deaths registrations data. The resulting per cent change in deaths in each class and the adjustment factors are shown in Table A4 in the Appendix. This reduced the number of deaths allocated to the **Intermediate** analytic class by 23 per cent and increased the number of deaths allocated to the **Lower managerial, professional** analytic class by 9 per cent in death registration records.

The information collected at death registration does not allow reliable identification of men who had **Never worked** or were **Long-term unemployed**, or differentiation between those categories and men who could not be allocated to an NS-SEC class due to inadequate information or for other reasons. Full-time students are identified, but deaths in this group are uncommon. Consequently, mortality rates based on the unlinked records approach are presented for occupied NS-SEC analytic classes only.

A total of 1,678 deaths occurring between census day 29 April 2001 and 31 December 2004 were included in the analysis of linked records using the LS. The NS-SEC distribution of deaths found in the LS sample enumerated in 2001 takes account of potential health selection bias by allocating the sample member's NS-SEC90 class from their 1991 Census record, if available, to assign NS-SEC in 2001. Linked records include the reliable capture of the NS-SEC operational category **Never worked, long-term unemployed**, enabling the calculation of mortality estimates for this group, in addition to occupied NS-SEC analytic classes.

Outcome measures

To compare the mortality experience of NS-SEC analytic classes, two measures of mortality were calculated: firstly, age-specific mortality rates for five-year age groups and secondly, directly age-standardised mortality rates for all men aged 25–64 standardised to the European standard population (see Table A5). Age-standardised rates are a summary measure allowing populations with differing age structures to be reliably compared.

Table 3	Number and percentage distribution of deaths by NS-SEC, males aged 25–64, death registrations 2001–03 and LS sample 2001–04

England and Wales

NS-SEC analytic class	Death registrations				LS sample			
	Unadjusted		Adjusted[1]		Unadjusted		Adjusted[2]	
	Number	Percentages	Number	Percentages	Number	Percentages	Number	Percentages
1.1 Large employers, higher managers	5,304	3.5	5,304	3.5	85	5.1[3]	85	5.1[3]
1.2 Higher professionals	7,153	4.8	7,153	4.8	92	5.5	94	5.6
2 Lower managerial, professional	20,334	13.5	22,116	14.7	268	15.9[3]	275	16.5
3 Intermediate	7,711	5.1	5,929	4.0	64	3.8[4]	66	3.9
4 Small employers, own account workers	20,493	13.6	20,493	13.6	242	14.4	249	14.8
5 Lower supervisory and technical	20,377	13.6	20,377	13.6	241	14.4	246	14.7
6 Semi-routine	20,442	13.6	20,442	13.6	215	12.8	225	13.4
7 Routine	32,347	21.5	32,347	21.5	345	20.6	362	21.6
Never worked, long-term unemployed	646	0.4	646	0.4	116	6.9[3]	>70	—
Full-time students	419	0.3	419	0.3	< 5	—	< 5	—
Inadequately described	14,672	9.8	14,672	9.8	< 5	—	< 5	—
Not classifiable for other reasons	303	0.2	303	0.2	< 5	—	< 5	—
Total	150,201	100	150,201	100	1,678	100	1,678	100

1 Applies adjustment factors to classes 2 and 3.
2 Adjusts for health selection out of the labour market for unoccupied LS sample enumerated in 2001.
3 Significantly higher proportion in LS sample than in death registrations (p<0.05).
4 Significantly lower proportion in LS sample than in death registrations (p<0.05).

— Cell per cent suppressed due to disclosure control.

Source: Death registrations 2001-03 and Office for National Statistics Longitudinal Study

Table 4	Comparison of NS-SEC[1] allocation at 2001 Census and death registration: LS sample members who died 2001–04[2]

England and Wales

NS-SEC at Census	NS-SEC at death registration								NWLTU, FTS, NC	Total at census	Percentages at census
	1.1	1.2	2	3	4	5	6	7			
1.1	**33**	5	23	4	—	4	5	—	4	85	*5.1*
1.2	3	**47**	14	8	3	4	7	3	5	94	*5.6*
2	17	11	**125**	32	25	19	11	19	16	275	*16.4*
3	—	—	16	**25**	—	3	9	—	7	66	*3.9*
4	4	7	23	7	**137**	18	17	22	14	249	*14.8*
5	5	4	13	4	12	**110**	41	42	15	246	*14.7*
6	—	—	11	6	8	28	**104**	49	16	225	*13.4*
7	—	—	12	4	31	29	34	**214**	33	362	*21.6*
NWLTU, FTS, NC	—	—	3	3	3	4	8	13	**39**	76	*4.5*
Total at death registration	67	82	240	93	226	219	236	366	149	1,678	*100*
Percentages at death registration	*4.0*	*4.9*	*14.3*	*5.5*	*13.5*	*13.1*	*14.1*	*21.8*	*8.9*	*100*	

1 Reduced derivation.

2 29 April 2001 to 31 December 2004.

— Cell per cent suppressed due to disclosure control.

Source: Office for National Statistics Longitudinal Study

Results

Distribution of deaths by NS-SEC and data source

Table 3 shows the number and per cent of deaths by NS-SEC class, by data source and method of assignment. The class distribution of deaths from death registrations takes account of the application of age-specific adjustment factors to the NS-SEC analytic classes **Lower managerial, professional** and **Intermediate**, explained earlier. The largest number of deaths was allocated to men working in **Routine** occupations, who made up 21.5 per cent of all deaths in the unlinked data and 21.6 per cent in the LS sample after adjustment for health selection.

The unlinked and linked records differed noticeably in the proportions of deaths assigned to the **Lower managerial, professional** and **Intermediate** analytic classes before the adjustment for misallocation described earlier. Specifically, the **Intermediate** analytic class had a statistically significant lower proportion of deaths and the **Lower managerial, professional** analytic class a significantly higher proportion in linked records compared with death registrations. This significant difference disappeared following adjustment for misallocation of certain occupations in death registrations.

The proportion of deaths allocated to the **Large employers, higher managers** analytic class was significantly higher in the LS at 5.1 per cent after adjustment for health selection, compared with 3.5 per cent of death registrations, but in other occupied classes differences were within the range of sampling variation.

Table 4 compares the NS-SEC assignment at census and death registration of the members of the LS sample who died in the study period. Overall, 53.3 per cent of those in occupied NS-SEC analytic classes were allocated to the same class at death as was reported in the census (range 40.7 per cent in the **Large employers, higher managers** analytic class to 65.0 per cent in the **Routine** analytic class), while 20.0 per cent were reported at death in a more advantaged class than at census, and 26.7 per cent in a less advantaged class.

The discrepancy in designation to NS-SEC **Large employers, higher managers** analytic class at census and death registration is apparent in Table 4. Only two-fifths of deaths assigned to the **Large employers, higher managers** analytic class at census were also assigned at death registration, with the majority not assigned, allocated to the **Lower managerial, professional** analytic class. A similar, although smaller,

discrepancy was found in assignment to **Large employers, higher managers** at death registration compared with assignment at census. The greater likelihood for **Large employers, higher managers** to be allocated to the **Lower managerial, professional** analytic class at death registration partly explains the higher proportion of deaths found in assignment to **Large employers, higher managers** in linked records compared with unlinked death registrations.

The inadequacy of allocations to the NS-SEC operational category **Never worked, long-term unemployed** at death registration is verified in the examination of linked records. While more than 70 deaths were allocated to this NS-SEC operational category on LS members' census records, fewer than five were allocated at death registration. This finding shows that valid estimates of mortality for the **Never worked, long-term unemployed** cannot be calculated from the unlinked records.

Age-specific mortality rates by NS-SEC

Age-specific mortality rates by NS-SEC, calculated using the unlinked records approach, are presented in Table 5. The well-established increase in risk of death with increasing age is illustrated for each class separately in Figure 1. The class-specific relative increase with age is greatest in the **Higher professional** analytic class with a 33-fold increase in rate of death in 60–64 year olds compared to ages 25–29, while the men working as **Small employers, own account workers** had only an 11-fold increase between these ages. The inequality in relative risk of death between men working in **Routine** occupations and men working as **Large employers, higher managers** falls with increasing age. At ages 25–29, men in **Routine** occupations are more than four times more likely to die than men working as **Large employers, higher managers**, while at ages 60–64 the disparity in the rate of death falls to two and a quarter times greater. The contrast in mortality is further emphasised when comparing the mortality rate of the **Routine** analytic class at ages 25–29 with the mortality rate among men working as **Large employers, higher managers** fifteen years their senior. At ages 40–44 and 45–49, **Large employers, higher managers** have a lower rate than men working in **Routine** occupations fifteen years their junior.

The relative ranking of analytic classes in the mortality of men at the youngest ages (see Figure 2), shows men working as **Small employers, own account workers** had a raised rate of death compared with men working in **Lower supervisory and technical** occupations at ages 25–29, and a similar rate to men working in **Semi-routine** occupations. The **Lower supervisory and technical** analytic class experience lower

Table 5	Age-specific mortality rates[1] by NS-SEC:[2] men aged 25–64, 2001–03, death registrations[3]

England and Wales   Rate per 100,000

NS-SEC analytic class	Age (years)							
	25–29	30–34	35–39	40–44	45–49	50–54	55–59	60–64
1.1 Large employers, higher managers	26.9	31.3	44.0	71.3	127.8	237.7	360.2	742.7
1.2 Higher professionals	21.7	38.5	53.6	105.8	177.6	267.4	442.6	726.6
2 Lower managerial, professional	34.1	45.1	70.2	128.1	200.2	323.7	566.6	942.4
3 Intermediate	60.1	79.6	89.3	98.5	242.4	396.3	564.3	1,006.2
4 Small employers, own account workers	85.9	97.8	103.8	137.7	251.9	387.2	633.7	1,005.6
5 Lower supervisory and technical	55.4	64.6	94.0	155.1	280.1	473.4	823.4	1,405.8
6 Semi-routine	85.5	124.6	166.6	257.1	383.4	602.6	964.6	1,585.4
7 Routine	110.2	140.2	181.1	265.8	439.4	676.2	1,004.0	1,699.2

1 Age-specific rate per 100,000.

2 Reduced derivation.

3 Incorporating adjustment to death counts in classes 2 and 3 for misallocation of certain occupations.

Source: Death occurrences 2001–03; Census 2001, Mid-year population estimates 2001–03; Office for National Statistics Longitudinal Study

Figure 1	Age-specific mortality rates by five year age group and NS-SEC:[1,2] men aged 25–64, 2001–03: death registrations

England and Wales

1 Reduced derivation; occupied NS-SEC classes only.
2 Incorporating adjustment to death counts in classes 2 and 3 for misallocation of certain occupations.

Source: Death registrations 2001-03 and optimised population estimates (see Methods)

mortality than **Small employers, own account workers** at ages 30–39, but this pattern reverses at ages 45–64 (see Figure 3), demonstrating that the lower age-standardised rate of death to men working as **Small employers, own account workers** compared with men in the **Lower supervisory and technical** analytic class is predominantly a function of their lower mortality risk at older ages.

Age-standardised mortality rates by NS-SEC and data source

Table 6 presents age-standardised mortality rates per 100,000 PYRs, with 95 per cent confidence intervals, by NS-SEC using the unlinked and linked approaches.

In the analysis of unlinked records, the mortality rate of men working in **Routine** occupations was 513 per 100,000 PYRs, nearly three times the rate of 182 per 100,000 in men working as **Large employers, higher managers**. Mortality rates differed significantly between each NS-SEC analytic class, with the gap between NS-SEC-specific rates most pronounced between men working as **Small employers, own account workers** and men working in **Lower supervisory and technical** occupations, and between men in **Lower supervisory and technical** occupations and **Semi-routine** occupations.

Table 6	Age-standardised mortality rates[1] by NS-SEC,[2] men aged 25–64, death registrations 2001–03[3] and LS sample 2001–04[4]

England and Wales   Rate per 100,000

NS-SEC analytic class	Death registrations			LS sample		
	Mortality rate	Lower 95 per cent confidence limit	Higher 95 per cent confidence limit	Mortality rate	Lower 95 per cent confidence limit	Higher 95 per cent confidence limit
1.1 Large employers, higher managers	182	177	187	219	176	272
1.2 Higher professionals	206	202	211	210	171	257
2 Lower managerial, professional	259	256	262	249	221	280
3 Intermediate	286	279	294	251	197	320
4 Small employers, own account workers	307	303	312	285	250	324
5 Lower supervisory and technical	374	369	379	348	307	395
6 Semi-routine	473	466	479	409	359	467
7 Routine	513	508	519	443	399	492
Never worked, long-term unemployed				989	784	1,248
Inadequately described and not classified for other reasons				442	62	3,134
England and Wales	369	367	371	320	305	336
Ratio 7:1.1	2.8			2.0		
Ratio 7:1.2	2.5			2.1		

1 Directly age-standardised rate using the European standard population.
2 Reduced derivation.
3 Incorporating adjustment to death counts in classes 2 and 3 for misallocation of certain occupations.
4 29 April 2001 to 31 December 2004.

Source: Death registrations 2001–03; optimised population estimates (see Methods); Office for National Statistics Longitudinal Study

Figure 2	Age-specific mortality rates by NS-SEC[1,2] and five year age group, men aged 25–44, 2001–03: death registrations

England and Wales

1 Reduced derivation; occupied NS-SEC classes only.
2 Incorporating adjustment to death counts in classes 2 and 3 for misallocation of certain occupations.
Source: Death registrations 2001–03 and optimised population estimates (see Methods)

Figure 3	Age-specific mortality rates by NS-SEC[1,2] and five year age group, men aged 45–64, 2001–03: death registrations

England and Wales

1 Reduced derivation; occupied NS-SEC classes only.
2 Incorporating adjustment to death counts in classes 2 and 3 for misallocation of certain occupations.
Source: Death registrations 2001–03 and optimised population estimates (see Methods)

Figure 4	Age-standardised mortality rate[1] by NS-SEC[2], men aged 25–64: death registrations 2001–03[3] and LS sample 2001–04[4]

England and Wales

1 Directly age-standardised rate using the European standard population.
2 Reduced derivation.
3 Incorporating adjustment to death counts in classes 2 and 3 for misallocation of certain occupations.
4 29 April 2001 to 31 December 2004.Source: Death registrations 2001–03 and optimised population estimates (see Methods).
Source: Death registrations 2001–03; optimised population estimates (see Methods); ONS Longitudinal Study

Table 7	Age-standardised mortality rates[1] by five class NS-SEC,[2] men aged 25–64, death registrations 2001–03[3]

England and Wales   Rate per 100,000

NS-SEC five class schema[4]	Mortality rate	Lower 95 per cent confidence limit	Higher 95 per cent confidence limit
1 Managerial and Professional (1.1, 1.2 & 2)	231	229	234
2 Intermediate (3)	286	279	294
3 Small employers and own account workers (4)	307	303	312
4 Lower supervisory and technical (5)	374	369	379
5 Semi-Routine and Routine (6, 7)	497	492	501

1 Directly age-standardised rate using the European standard population.

2 Reduced derivation.

3 Incorporating adjustment to death counts in classes 2 and 3 for misallocation of certain occupations.

4 Encompassed nine class schema included in parenthesis.

Source: Death registrations 2001-03; optimised population estimates (see Methods)

In the linked records analysis, age-standardised mortality rates were lower than or the same as the unlinked records rates in all analytic classes except the **Large employers, higher managers** analytic class (see Figure 4). However, only the difference for the **Routine** analytic class lay outside the 95 per cent confidence interval. A weaker gradient between **Large employers, higher managers** and men working in **Routine** occupations is found for the linked compared to the unlinked analysis, partly as a result of a higher rate of death in the **Large employers, higher managers** and partly due to a lower rate in the **Routine** analytic class.

The three NS-SEC analytic classes with a predominant service relationship form of employment regulation (that is, analytic classes 1.1, 1.2 and 2) have statistically significant lower rates of death compared with the three classes regulated by a labour contract (that is, classes 5, 6 and 7).

Men in the LS sample classified as **Never worked, long-term unemployed** had a rate of death of 989 per 100,000 PYRs, four and a half times higher than that of men working as **Large employers, higher**

managers, and two and a quarter times higher than men working in **Routine** occupations.

For comparison, the rates of death from the unlinked records analysis with and without the adjustment to operational categories L6-**Higher supervisory occupations** and L7-**Intermediate** occupations described earlier are shown in Figure A1 in the Appendix.

Mortality in condensed versions of NS-SEC

Table 7 presents age-standardised mortality rates per 100,000 PYRs, with 95 per cent confidence intervals, by NS-SEC analytic five class breakdown using the unlinked records method. The rate of death among men in the **Semi-routine and Routine** class is 2.2 times greater than that observed among men in the **Managerial and Professional** class, and a progressive, statistically significant pattern of increasing mortality with more disadvantaged socio-economic status is discernable between the intervening adjacent classes.

The corresponding mortality rates for the three class NS-SEC scale are presented in Table 8. The rate of death in men working in **Routine and Manual** occupations is twice as high as that in the **Managerial and Professional** analytic class, demonstrating the capability of the NS-SEC to discriminate mortality risk in its most condensed form.

Table 8	Age-standardised mortality rates[1] by three class NS-SEC,[2] men aged 25–64, death registrations 2001–03[3]		
England and Wales			Rate per 100,000
NS-SEC three class schema[4]	Mortality rate	Lower 95 per cent confidence limit	Higher 95 per cent confidence limit
1 Managerial and Professional (1.1, 1.2 & 2)	231	229	234
2 Intermediate (3, 4)	301	297	304
3 Routine and Manual (5, 6 & 7)	454	451	457

1 Directly age-standardised rate using the European standard population.
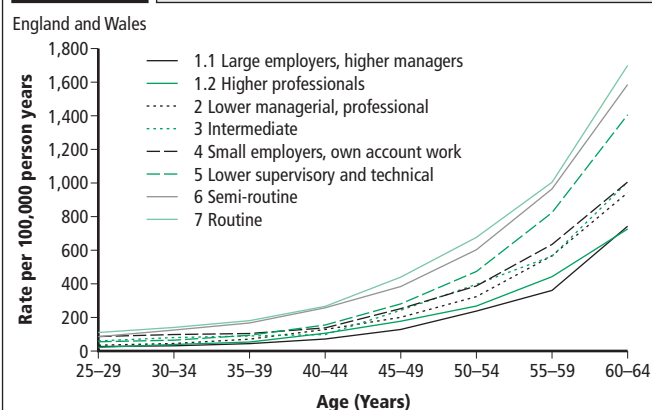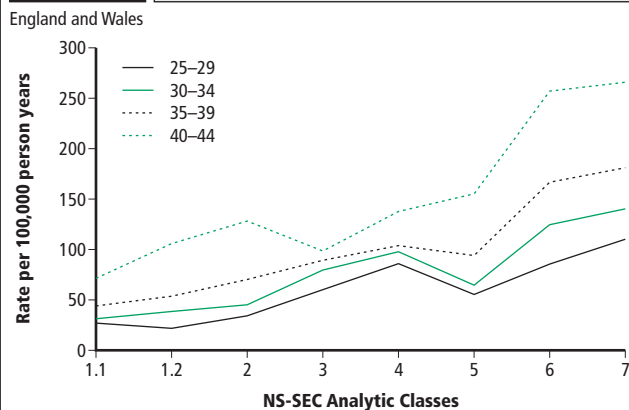2 Reduced derivation.
3 Incorporating adjustment to death counts in classes 2 and 3 for misallocation of certain occupations.
4 Encompassed nine class schema included in parenthesis.

Source: Death registrations 2001–03; optimised population estimates (see Methods)

Comparison with previous time periods

While direct comparison with earlier decennial analyses is difficult because of the change in socio-economic classifications, an indication of the scale of social inequalities over a thirty year period is presented in Table 9, based on a comparison of rates for the extremes of the RGSC and NS-SEC. Rates of death among men working in the most advantaged occupational group have fallen by more than 60 per cent since 1970–72, compared with only 40 per cent for those in the least advantaged group.

Table 9	Comparison of age-standardised mortality rates in men aged 20-64 by RGSC for 1970–72, 1979–83 and 1991–93 and men aged 25–64 by NS-SEC for 2001–03			
England and Wales				Rate per 100,000
Socio-economic classification	1970–72	1979–83	1991–93	2001–03
RGSC class I	500	373	280	—
RGSC class V	897	910	806	—
Ratio class V to class I	1.8	2.4	2.9	
NS-SEC class 1.1				182
NS SEC class 7				513
Ratio class 7 to class 1.1				2.8

Source: Health Inequalities Decennial Supplement, Series DS No. 15, TSO: London for RGSC; death registrations for 2001-03 and optimised population estimates (see Methods)

The lower rate of death found in men working as **Large employers, higher managers** in 2001–03 compared with men working as professionals in 1991–93 is of a similar order of magnitude to the lower rate of death in men working in **Routine** occupations compared with men working in unskilled manual occupations. Consequently, the gradient in mortality persists despite the lower rates of death reported for NS-SEC analytic classes 1.1 and 7 compared with RGSC I and V.

Discussion

The age-standardised mortality rates by NS-SEC, calculated from death registrations and optimised class denominators and reported in Table 6, set a benchmark against which future analyses of mortality in men of working age can be compared. These rates represent the most valid and

reliable estimates achievable from the design limitations imposed by the use of unlinked data sources. The concurrent use of the LS in this decennial analysis has shown its value by uncovering the presence of occupational data weaknesses in unlinked deaths and population records, which are capable of producing distortions in mortality estimates by NS-SEC.

This analysis shows a clear social gradient in mortality for men of working age in the early years of the 21st century. Although NS-SEC was not designed as a hierarchy of occupations,[33] each analytic class has a distinct and (in the unlinked records analysis) significantly different age-standardised all-cause mortality rate, showing a clear gradient from low mortality among men working as **Large employers, higher managers** or as **Higher professionals** through to high mortality in men working in **Routine** occupations. This suggests that the NS-SEC, which is based on employment relations, discriminates well between social groups with differing opportunities and experiences. The overall pattern between classes and the magnitude of the difference in mortality risk between the most advantaged and least advantaged occupational groups is similar to that found in previous analyses using RGSC.[3,7,9] The broad equivalence of most of the NS-SEC analytic classes to the RGSC classes occupying similar positions in the scale is apparent.

Even within the larger confidence intervals in the analysis using linked records, NS-SEC classes encompassing large employers, managers and professionals showed significantly lower mortality rates than the **Lower supervisory and technical, Semi-routine** and **Routine** analytic classes. The former three analytic classes are characterised by a service relationship and the latter three by a labour contract relationship, with the **Intermediate** and **Small employers, own account workers** having an intermediate employment relations position.[33] The division into **Professional and Managerial, Intermediate** and **Routine and Manual** classes in the most condensed version of the NS-SEC analytic classification[35] is thus a potentially useful one for the summary description of inequalities in mortality, while recognising that this will conceal important differences within the broader groupings.

The gradients in mortality by RGSC have been explained in the literature in terms of a clustering of attributes of advantage among professionals and disadvantage among unskilled manual workers,[46] and their accumulation and intensity over the life course.[47] Circumstances of disadvantage such as poor quality housing, exposure to environmental pollution in area of residence, occupational hazards, poor diet, smoking, risk of unemployment, and low income[48] were found to be finely graded between the social classes, most concentrated in social class V with diminishing levels of exposure for each step up the social hierarchy. The presence of a gradation of mortality risk across the hierarchy rather than coherence in mortality risk beyond a specific threshold has been used to justify the relevance of the materialist explanation for inequalities in health.[37] The mortality pattern by NS-SEC is also graded and may indicate a similar analytic class relationship to these domains of material disadvantage.

Explanations for inequalities in mortality related to employment relations concepts inherent to the NS-SEC such as work control and job strain (high demands in the presence of low control) have been addressed in previous research. The Whitehall II study showed an association between low job control, low employment grade and future development of heart disease,[49] while other studies have demonstrated a connection between high job strain and hypertension.[50,51] In addition to job strain, psycho-social work hazards such as effort-reward imbalance[52] (high effort and low rewards in terms of pay, security, recognition and career progression opportunities) and its influence on cardiovascular health has been investigated. The link between high blood pressure, harmful levels of blood lipids, and future development of cardiovascular disease was found in people experiencing effort-reward imbalance.[53,54,55] Further analyses reporting mortality patterns by NS-SEC in major causes of death will

provide more relevant evidence of the impact of employment relations on premature mortality from specific causes of death. Generally, the literature suggests that occupations with greater autonomy and control experience better health,[3,56] and the differences in mortality rates reported here support this conclusion.

The higher rate of premature death found among the **Never worked, long-term unemployed** compared to all men aged 25–64 in 2001 in the Longitudinal Study is consistent with previous analyses and demonstrates the persistent mortality disadvantage associated with this economic position.[7, 9, 17, 57, 58, 59, 60, 61] Men of working age found to be seeking work at both the 1971 and 1981 censuses had rates of death twice the average for England and Wales during the period 1981–92, while the current analysis reports a three-fold raised rate compared to all men aged 25–64 enumerated in 2001. The larger excess mortality found may be partly explained by the different definitions of unemployed in the censuses of 1971 and 1981 and at 2001. The latter indicates a period of unemployment lasting more than a year and encompasses the never worked, whereas the former is defined by an economic position of seeking work in the past week. The 2001 Census definition of long-term unemployed, used in the NS-SEC schema, represents a more marginalised population with apparent difficulty in securing a place in the labour market.

Previous research has challenged the confounding influence of pre-existing ill-health,[32, 57, 59] educational attainment,[60] housing tenure,[17] occupational class,[17, 57] or health-damaging behaviour[61] as adequate explanations for the higher rate of mortality found among those exposed to unemployment, suggesting a distinct, independent influence. The importance of unemployment for future mortality risk necessitates regular monitoring. We emphasise that mortality rates for the **Never worked, long-term unemployed** can only be reliably estimated using the linked records approach. The contrast between proportions of deaths classified to the **Never worked, long-term unemployed** at census and at death registration is marked, confirming death registrations do not capture the true population of unemployed individuals.

The age-specific mortality rates reported show that, with some exceptions, the patterns of mortality by NS-SEC class are consistent throughout the age range examined. Relative differences between classes are greater at younger ages, while absolute differences are greater at older ages. The pattern of age-specific rates among **Small employers, own-account workers** is unusual. Men in this analytic class had higher mortality than men in the **Lower supervisory and technical** analytic class at ages 25–34, but lower mortality than the **Intermediate** analytic class at ages 50–54. These findings merit further investigation, and the reasons may become clearer when the data are analysed by cause of death.

Differences between linked and unlinked results

Although the pattern of age-standardised mortality rates by NS-SEC is broadly similar whether the unlinked or linked record approach is used, there are three main differences, which are distinct but connected. The first difference relates to source of assignment of NS-SEC. The linked records approach allocates deaths to the NS-SEC class from the 2001 Census record, while the unlinked records approach allocates deaths from the death registrations records. The large discrepancy found between the death registrations and the LS sample in allocation to the 'inadequately described' suggests that the occupational information elicited at census is substantially more detailed and complete than that recorded at death registration. This is likely to reflect both the specific questions and coding rules, and the fact that reporting at death relies on the knowledge the informant has about the deceased.

A second difference between the census and death registrations in the designation of NS-SEC is particularly relevant for the capture of the **Long-term unemployed**. The 2001 Census defines the NS-SEC

category of **Long-term unemployed** as having not worked since 1999 and seeking work, enabling derivation of this class from the last year worked indicator and economic activity. Consequently, the probability of recording completely and accurately this NS-SEC class is greater at census than at death registration. Death registration data for the period 2001–03 indicate some (0.4 per cent) men were designated to an NS-SEC of **Long-term unemployed**, but the rules for recording of occupation at death registration state the last gainful occupation should take precedence for persons currently unemployed (see Box A2).

The influence of differential capture of the **Long-term unemployed** on the resultant occupied class gradient in each approach may function through disproportionate risk of exposure to unemployment in some social groups more than others in the study period. A key component of employment relations, entrenched in the NS-SEC, is security of employment, with greater security in occupations regulated by a service relationship and less security in occupations regulated by a labour contract, with the strongest form of the labour contract found in the **Routine** analytic class.[33] It is plausible that the mortality rate in occupations regulated by a labour contract could be reduced in the linked records analysis by the exclusion of the **Long-term unemployed** from the relevant occupied NS-SEC classes.

The differences in both the rules of assignment of NS-SEC by source and the capture of the **Long-term unemployed** are possible explanations for the somewhat higher mortality rate found among **Large employers, higher managers** and the lower rates for all other analytic classes in the linked records analysis. However, the difference between the class-specific rates produced by the two approaches is statistically significantly lower only for the **Routine** analytic class. The narrower gradient found in this analysis of linked records compared with that found using unlinked records is consistent with previous analysis of linked records in the four years immediately following the assignment of RGSC at the 1971 Census.[6]

Increasing the length of follow-up of men in the LS has been the traditional approach to mitigating the distorting impact of health selection out of the labour market, producing social gradients of mortality similar to decennial analyses.[36, 62, 66] The approach adopted here of assigning the NS-SEC class from census records in 1991 for men allocated to an unoccupied NS-SEC in 2001 leaves a 40 per cent narrower gradient than that found in unlinked records. Comparison of allocations to the **Routine** analytic class at death showed 38 per cent were assigned to a higher NS-SEC at census, while allocations at census showed 32 per cent were assigned to a higher class at death. Consequently, there is a 20 per cent greater likelihood of demotion to the **Routine** analytic class at death than promotion from it, which may partly explain the lower rate found when assigning the death to the **Routine** analytic class at census, and hence the lower gradient.

Thirdly, the all-class mortality rate produced by the linked records analysis is lower than the unlinked records all-class mortality rate. Since the latter is based on all deaths registered to residents of England and Wales, it is assumed to be accurate. The observed difference does not appear to be due to sample variation, but may be influenced by loss to follow-up due to an unknown rate of unobserved emigration out of England and Wales, and the known under-enumeration at the 2001 Census.[63] Because of the greater concentration of that under-enumeration in disadvantaged sections of the population, it is possible that the effect would again be to reduce the mortality gradient found across NS-SEC classes.

Comparison with previous findings

The results reported here are largely consistent with an unlinked records analysis of mortality in 1991–93,[3] which used an early version of NS-SEC90 (not identical to the version of NS-SEC90 used above to adjust for health selection). However, that analysis found a lower standardised mortality ratio among **Small employers, own-account**

workers compared with men working in **Intermediate** occupations. A separate analysis of mortality in 1991–95 of men in the LS who were present at the 1991 Census (not reported here) shows a similar though non-significant pattern. Neither of these analyses was able to make any allowance for health selection. This difference may therefore be due to the limited comparability of the classifications used, health selection effects, and/or changes over the intervening decade in the age and class distribution of the population. The latter possibility is supported by the fact that the proportion of men aged 60–64 in the LS sample who were allocated to the **Small employers, own account workers** analytic class increased from 11 per cent in 1991–95 to 18 per cent in 2001–04, while the proportion allocated to the **Intermediate** analytic class fell from 7 per cent to 5 per cent in the same period.

A reliable comparison with findings on social inequalities in mortality for previous time periods is difficult because of the change in socio-economic classification. The ratio of the mortality rates of the most advantaged and least advantaged NS-SEC analytic classes is of a similar magnitude to that found between the broadly equivalent RGSC classes in the preceding decade. The similarity of the ratio of 2.8 in 2001–03 to that of 2.9 in 1991–93 reinforces the strength of each classification to discriminate mortality risk by socio-economic status. The measurement of inequalities in mortality by RGSC was criticised for comparing the relatively small populations at each end of the socio-economic spectrum, which had limited relevance to the vast majority of the population assigned to the intervening classes. This NS-SEC analysis has demonstrated that the scale of inequality holds when comparison is extended to a larger group of occupations designated to the **Routine** analytic class, and suggests the gradient by RGSC found earlier is not simply an artefact of an ever diminishing, more disadvantaged population of men concentrated in social class V. The restriction of the study population to men aged 25–64 in 2001–03 together with the larger populations of men within the **Large employers, higher managers** and **Routine** analytic classes may be consistent with increasing social inequalities in adult male mortality; however, further analysis is needed to produce reliable comparisons over time between figures based on RGSC and those using NS-SEC.

Limitations of the analysis

The age range of the study population ensured that the majority of men included would be in permanent employment in 2001, and could therefore be assigned to an occupied NS-SEC class. Because some of the steepest socio-economic gradients in adult mortality are those from accidents and violence in younger men,[64,65] the lower age limit of 25 years may lead these results to understate the extent of inequalities in the adult male population as a whole.

The methods used were designed to reduce the artefactual effect of health selection out of the labour market. The possible substantive impact of health-related social mobility on social inequalities in mortality is a separate though related question, and can only be addressed through longitudinal analysis. Previous research using the LS data has indicated that selection in the latter sense was not a major cause of the well-established patterns in mortality by RGSC, but is likely to be a constraining factor.[39, 40, 66] There is no apparent reason why such effects should have greater influence in analysis by NS-SEC, but future research will address this possibility.

This analysis has not addressed trends over time, except through the comparison of overall mortality gradient. Further analysis is required to provide a reliable basis for the comparison of mortality before and after the introduction of NS-SEC in 2001. Reporting of trends in life expectancy from the 1970s to date using RGSC, based on the LS only, will therefore continue to be of key importance for some time. The most recent update of the time series in life expectancy by RGSC covers the period 2002–05.[67] Future research will also test the feasibility of

producing an inter-censal time series of mortality estimates by NS-SEC, using denominators based on national survey data.

Conclusions

This analysis of adult male mortality by NS-SEC provides an indication of the health impact of different social and occupational circumstances in England and Wales during the early 21st century. The age-standardised mortality rate among men aged 25–64 in routine occupations in 2001–03 was found to be 2.8 times the rate among men working as **Large employers, higher managers**. While direct comparisons cannot be made with previous time periods because of the change in socio-economic classification, it is clear from these results that a substantial and consistent social gradient in mortality continues to be in evidence.

The methods used in this analysis involved detailed consideration of the sources of bias and other weaknesses in the individual data sources, and their likely impact on the calculation of mortality rates by socio-economic status. The methodological advantages of record linkage in the LS were used to adjust the unlinked records measurement, allowing greater confidence in the validity of the resulting estimates. The combination of unlinked and linked records approaches provides robust, statistically significant estimates of mortality for men in occupied NS-SEC classes.

The figures presented here based on the unlinked records approach are recommended for overall description of social inequalities in mortality in England and Wales and further disaggregation by cause of death and geographical area. The linked records approach, drawing on more complete and accurate assignment of individuals to NS-SEC classes, allows mortality in non-occupied groups to be estimated but is likely to underestimate the mortality of the least advantaged occupied men.

This analysis confirms the value of NS-SEC for the examination of mortality inequalities in men of working age. A clear social gradient in mortality can be distinguished whether using the nine, five, or three analytic class version of NS-SEC. Each class had a significantly different age-standardised mortality rate from the others within each version. The more condensed versions give a smaller, but still substantial, difference between the most advantaged and least advantaged groups.

Key findings

- In 2001–03, the age-standardised mortality rate of men aged 25–64 in routine occupations was 513 per 100,000 population, 2.8 times the rate of 182 per 100,000 among men in higher managerial occupations
- The National Statistics Socio-Economic Classification (NS-SEC), which was introduced in 2001 to replace Registrar General's Social Classification (RGSC), provides a clear and consistent basis for the analysis of mortality in adult men
- There were statistically significant differences in mortality rates between all NS-SEC classes in a clear socio-economic gradient, whether using the full (nine class) or condensed (five or three class) version
- The mortality gradient found in this analysis is similar to the ratio of 2.9 times reported between men in unskilled manual occupations and professional men in 1991–93, based on RGSC
- Cross-sectional (unlinked records) analysis using death registrations and synthetic populations based on the 2001 Census and ONS annual population estimates, adjusted for biases identified in linked records in the ONS Longitudinal Study, can provide precise and robust estimates of mortality

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Box A1 Questions on occupation and employment in the 2001 Census

Answer the remaining questions for the *main* job you were doing last week, or if not working last week, your last *main* job.

- Your *main* job is the job in which you usually work the most hours

25 Do (did) you work as an employee or are (were) you self-employed?

☐ Employee

☐ Self-employed with employees

☐ Self-employed/freelance without employees

26 How many people work (worked) for your employer at the place where you work (worked)?

- If you are (were) *self-employed*, tick to show how many people you employ (employed)

☐ 1 - 9

☐ 10 - 24

☐ 25 - 499

☐ 500 or more

27 What is (was) the full title of your *main* job?

- For example, PRIMARY SCHOOL TEACHER, STATE REGISTERED NURSE, CAR MECHANIC, TELEVISION SERVICE ENGINEER, BENEFITS ASSISTANT
- Civil Servants, Local Government Officers - give job title not grade or pay band

[   ]

28 Describe what you do (did) in your *main* job.

[   ]

29 Do (did) you supervise any other employees?

- A supervisor or foreman is responsible for overseeing the work of other employees on a day-to-day basis

☐ Yes

☐ No

30 What is (was) the business of your employer at the place where you work (worked)?

- For example, MAKING SHOES, REPAIRING CARS, SECONDARY EDUCATION, FOOD WHOLESALE, CLOTHING RETAIL, DOCTOR'S SURGERY.
- If you are (were) self-employed/freelance or have (had) your own business, what is (was) the nature of your business?
- Civil Servants, Local Government Officers - please specify your Department

[   ]

Box A2 Recording of occupation and employment status at death registration

Occupation refers to the latest gainful employment followed by the person concerned up to the date of the birth, still-birth, death or marriage. This includes any job regularly engaged in, for whatever hours are regarded as normal, permanent or temporary in the particular occupation. Regular paid employment for a few hours a day is thus included. Unemployed persons should have their last gainful occupation recorded. If they have never worked, a line should be drawn through the space or column. Where the informant or person(s) to be married have a non-gainful occupation (e.g. Home duties) this may be recorded if requested. Retired persons should be described by reference to their last full-time occupation followed by the word 'retired' in brackets, e.g. 'Railway engine driver (retired)', 'Staff nurse (retired)'. Persons unable to work through ill-health or disability, should be described by their last gainful occupation; it is immaterial how long ago this was or whether incapacity is temporary or permanent. Where an informant to a death entry wishes an occupation to be recorded as 'Housewife/Househusband', 'Home Duties' or similar, this may be recorded. However, where the person in question was previously in gainful occupation, details of that occupation, with the informant's agreement, should be recorded.

Employment status is also elicited from the informant. Registrars ask whether the deceased was:

1. Employee not supervising others
2. Employee supervising others
3. Self-employed without employees
4. Self-employed with employees
5. No gainful occupation

These categories are then used to determine employment status in combination with the occupational details provided, in the following categories:

A. Employers (derived from occupation and category 4 above)
B. Self-employed, no employees (derived from category 3 above)
C. Manager (derived from occupation if SOC2000 code has prefix of 1 and category 2 reported above)
D. Supervisor (derived from occupation if SOC2000 code has prefix other than 1 and category 2 reported above)
E. Other employees (if category 1 reported above)
F. Pseudo-employment status code (if no gainful employment reported)

Categories 1 and 2 include directors, managers, foremen, gaffers, family workers, apprentices, trainees, etc, as well as all other persons employed by any person or company.

With regard to the identification of categories 1 and 2 as described above, descriptions such as manager, foreman, etc, may already be included in the occupation details supplied by the informant. There may be instances however where this will not be the case and in addition it will not be possible to deduce the applicable category from the stated occupation. In such circumstances an enquiry of the informant as to whether the occupation also carried responsibility for overseeing the work of other employees on a day-to-day basis, may enable the appropriate category to be established. Where information is not available and therefore the precise category cannot be determined, category 1 should be used.

Category 3 includes out-workers (persons working in their own homes for an employer), members of a partnership without paid employees, all parochial clergy, and all other self-employed persons, without paid employees.

Category 4 includes proprietors of businesses, medical and dental practitioners in general practice, and other self-employed persons provided they have paid employees or paid assistants.

Category 5 includes persons who have never had any occupations and are without private means.

Where 'housewife', 'househusband' or similar has been recorded in the register, completed with details of the person's last gainful occupation, the employment status applicable should reflect the last gainful occupation. The same applies where the person is unemployed or retired and the last gainful occupation is recorded in the register.

Box A3 National Statistics Socio-Economic Classification – Operational categories and analytic classes

Operational categories	Analytic classes			
	Nine class version	**Eight class version**	**Five class version**	**Three class version**
L1 Employers in large organisations	1.1 Large employers and higher managerial occupations	1 Higher managerial and professional occupations	1 Professional and managerial occupations	1 Professional and managerial occupations
L2 Higher managerial occupations				
L3 Higher professional occupations	1.2 Higher professional occupations			
L4 Lower professional and higher technical occupations	2 Lower managerial and professional occupations	2 Lower managerial and professional occupations		
L5 Lower managerial occupations				
L6 Higher supervisory occupations				
L7 Intermediate occupations	3 Intermediate occupations	3 Intermediate occupations	2 Intermediate occupations	2 Intermediate occupations
L8 Employers in small establishments	4 Small employers and own account workers	4 Small employers and own account workers	3 Small employers and own account workers	
L9 Own account workers				
L10 Lower supervisory occupations	5 Lower supervisory and technical occupations	5 Lower supervisory and technical occupations	4 Lower supervisory and technical occupations	3 Routine and manual occupations
L11 Lower technical occupations				
L12 Semi-routine occupations	6 Semi-routine occupations	6 Semi-routine occupations	5 Semi-routine and Routine occupations	
L13 Routine occupations	7 Routine occupations	7 Routine occupations		
L14 Never worked and Long-term unemployed	8 Never worked and Long-term unemployed	8 Never worked and Long term unemployed	6 Never worked and long-term unemployed	4 Never worked and Long-term unemployed

Source: NS-SEC User Manual

| Table A1 | **Comparison of allocation to NS-SEC analytic classes using the reduced and full methods of derivation, Labour Force Survey, 2000 (summer quarter)** |

England and Wales   Persons

	Class	1.1	1.2	2	3	4	5	6	7	Total	Percentages
					Reduced derivation						
Full derivation	1.1	2,877		25		84				2,986	*4.4*
	1.2		5,028							5,028	*7.4*
	2	1,164		15,896						17,060	*25*
	3				9,227					9,227	*13.5*
	4					6,013				6,013	*8.8*
	5						6,925			6,925	*10.1*
	6							12,195		12,195	*17.9*
	7								8,804	8,804	*12.9*
	Total	4,041	5,028	15,921	9,227	6,097	6,925	12,195	8,804	68,238	*100*
	Percentages	*5.9*	*7.4*	*23.3*	*13.5*	*8.9*	*10.1*	*17.9*	*12.9*	*100*	

Source: Rose D, Pevalin D with O'Reilly K (2005) The NS-SEC: Origins, development and use, Palgrave Macmillan: Basingstoke

| Table A2 | **2001 Census Populations by NS-SEC[1] and age, males aged 25-64** |

England and Wales   Thousands

Age (years)	NS-SEC analytic class									
	1.1	1.2	2	3	4	5	6	7	FTS[2]	NC[3]
25-29	92	195	391	138	120	221	177	203	65	82
30-34	152	207	447	119	212	256	187	235	32	105
35-39	182	191	453	106	269	260	182	236	20	121
40-44	167	165	398	90	263	230	158	208	14	122
45-49	144	146	359	78	245	200	138	185	9	129
50-54	143	149	378	79	287	207	154	213	5	166
55-59	94	111	266	60	241	160	134	189	3	208
60-64	51	75	176	42	179	124	115	160	3	323
Total	1,025	1,239	2,868	712	1,816	1,658	1,245	1,629	151	1,256
Percentages	*7.5*	*9.1*	*21.1*	*5.2*	*13.4*	*12.2*	*9.2*	*12.0*	*1.1*	*9.2*

1 Reduced derivation.
2 Full-time students.
3 Not classified (including never worked and long-term unemployed, inadequately described, not classifiable for other reasons).

Source: Office for National Statistics, 2001 Census (custom table provided by ONS Census Division)

| Table A3 | **Population estimates (person years at risk) by NS-SEC[1] and age, males aged 25–64, 2001–03** |

England and Wales   Thousands

Age (years)	NS-SEC analytic class									
	1.1	1.2	2	3	4	5	6	7	FTS[2]	NC[3]
25-29	277	586	1,175	416	362	664	533	612	197	247
30-34	465	635	1,372	366	650	784	575	721	99	321
35-39	555	582	1,384	324	823	794	556	721	61	369
40-44	520	512	1,237	280	817	714	491	646	43	379
45-49	442	448	1,097	238	750	612	423	565	26	395
50-54	410	428	1,083	226	820	592	440	611	13	476
55-59	307	360	867	194	785	521	437	616	11	678
60-64	157	227	530	126	542	374	349	485	10	977
Total	3,133	3,778	8,745	2,170	5,549	5,055	3,804	4,977	460	3,842
Percentages	*7.5*	*9.1*	*21.1*	*5.2*	*13.4*	*12.2*	*9.2*	*12*	*1.1*	*9.3*

1 Reduced derivation.
2 Full-time students.
3 Not classified (including never worked and long-term unemployed, inadequately described, not classifiable for other reasons).

Source: Office for National Statistics, 2001 Census (custom table provided by ONS Census Division) and mid-year population estimates for 2001, 2002 and 2003

Table A4	Change in deaths between NS-SEC analytic classes 2 and 3 following adjustment for misallocation of certain occupations, males aged 25–64, 2001–03

England and Wales

Age (years)	Percentage change		Adjustment factor	
	Lower managerial, professional	Intermediate	Lower managerial, professional	Intermediate
25–29	*0*	*0*	1.0000	1.0000
30–34	*0*	*0*	1.0000	1.0000
35–39	*11*	*−24*	1.1141	0.7597
40–44	*23*	*−50*	1.2248	0.4983
45–49	*10*	*−25*	1.0973	0.7534
50–54	*6*	*−16*	1.0560	0.8392
55–59	*9*	*−28*	1.0944	0.7236
60–64	*8*	*−22*	1.0785	0.7825
Total	*9*	*−23*		

Source: Death registrations 2001–03 and Office for National Statistics Longitudinal Study

Table A5	European Standard Population Weights for age range 25–64 used in the calculation of age-standardised mortality rates

England and Wales

Age (years)	European Standard Population weight
25-29	7,000
30-34	7,000
35-39	7,000
40-44	7,000
45-49	7,000
50-54	7,000
55-59	6,000
60-64	5,000

Table A6	Age-standardised mortality rate[1] by NS-SEC[2], men aged 25–64, 2001–03: before adjustment for misallocation of certain occupations

England and Wales

NS-SEC analytic class		Mortality rate	Lower 95 per cent confidence limit	Higher 95 per cent confidence limit
1.1	Large employers, higher managers	182	177	187
1.2	Higher professionals	206	202	211
2	Lower managerial, professional	238	235	242
3	Intermediate	375	366	383
4	Small employers, own account workers	307	303	312
5	Lower supervisory and technical	374	369	379
6	Semi-routine	473	466	479
7	Routine	513	508	519
Ratio 7:1.1		2.8		
Ratio 7:1.2		2.5		

1. Directly age-standardised rate using the European standard population.
2. Reduced derivation; occupied NS-SEC classes only.

Source: Death registrations 2001–03 and optimised population estimates (see Methods)

Figure A1	Age-standardised mortality rate[1] by NS-SEC,[2] men aged 25–64, 2001–03: before and after adjustment for misallocation of certain occupations
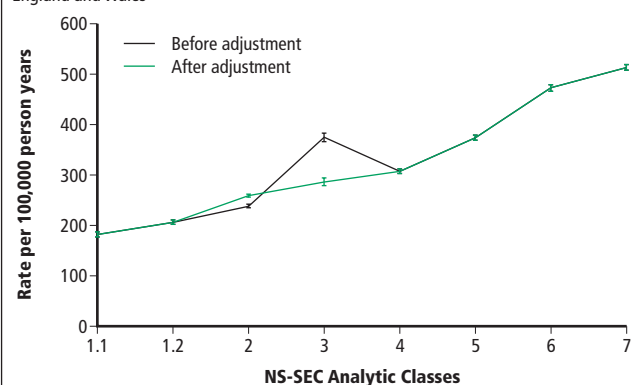
England and Wales

1 Directly age-standardised rate using the European standard population.
2 Reduced derivation; occupied NS-SEC classes only.

Source: Death registrations 2001-03 and optimised population estimates (see Methods)

Trends in cancer incidence by deprivation, England and Wales, 1990–2002

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This article examines trends in cancer incidence by deprivation in England and Wales, and at the Government Office Region (GOR) and Wales level over the period 1990–2002.

The aim is to show whether the deprivation gap in cancer incidence between patients living in the least deprived areas and those in the most deprived has widened or narrowed over time for the three main cancers, breast (female), prostate and lung cancer.

The results show that the deprivation gap in lung cancer incidence has widened in the majority of GORs and Wales, particularly in males. For prostate cancer, where incidence was generally higher among those living in the least deprived areas, the deprivation gap has also widened in the majority of GORs and Wales.

Introduction

Cancer is a major cause of morbidity in England and Wales. One in three people are diagnosed with cancer during their lifetime.[1] However, cancer is predominantly a disease of the elderly, with only 0.5 per cent of all cancer cases diagnosed occurring in children aged 0–14 and a peak in the age distribution occurring in the 70–79 age range.[1] In 2004, in terms of both numbers and incidence rates, the most common cancers were prostate, breast (females), lung and colorectal (bowel) cancer. Together these cancers accounted for 50 per cent of all cases.[2]

Since 1971, England and Wales has had a population-based cancer registration system with 100 per cent geographical coverage and mechanisms in place to follow up cases. Hence more is known about the incidence of, and survival from, cancer than for most other diseases. In England, cancer registration is carried out by eight regional cancer registries who submit notifications to the Office for National Statistics (ONS). In Wales, cancer registration is carried out by the Welsh Cancer Intelligence and Surveillance Unit.

This is the first time trend analysis of cancer incidence by deprivation has been carried out by ONS. Analysis by area deprivation was last carried out for the years 1992–93 (combined), which only provided a snap shot of deprivation.[1] At that time there was an inverse relationship between breast cancer and deprivation, with incidence rates for patients living in the least deprived areas being 30 per cent higher than in the most deprived areas. Similarly, prostate cancer incidence was around 45 per cent higher in the least deprived areas compared with the most deprived. In contrast, lung cancer was strongly associated with deprivation with incidence rates in the most deprived areas more than double those in the least deprived. There was no obvious association between incidence of colorectal cancer and deprivation.

This article analyses trends in cancer incidence for the three most common cancers – breast, prostate and lung – for which a relationship between incidence and deprivation had previously been observed in 1992–93. A question of interest is whether the gap in incidence for these cancers for patients living in the least deprived and the most deprived areas is widening or narrowing over time within the Government Office Regions of England (GOR), and Wales.

Breast cancer

Breast cancer has always been the most common cancer in females. Since the 1970s there has been a gradual increase in incidence, which became more rapid from the late 1980s following the introduction of the NHS breast screening programme in 1988 (with full population coverage from around 1994).[3]

Lung cancer

Lung cancer is more common in males than females. From a peak in the mid-1970s, incidence rates of lung cancer in men fell steadily. For women, however, the pattern of incidence is quite different, with changes in incidence lagging behind men by about 20 years and reaching a peak in the mid-1990s.[3] The greatest risk factor for lung cancer is tobacco smoking, accounting for 90 per cent of cases in men and 80 per cent in women.[4,5] The difference in patterns of incidence between men and women reflect historical differences between the two in terms of smoking habits.[6]

Prostate cancer

Prostate cancer became the most common cancer in men in 1999. Incidence rates increased gradually from 1971, with a rapid increase between 1991 and 1994 and again from 1997. The latter is due to the increasingly widespread use of the prostate-specific antigen (PSA) test.[3]

Data and methods

Cancer incidence

Newly diagnosed cases of the three selected cancers for the period 1990–2004 were extracted from the National Cancer Registry database held at ONS on 26–27 February 2007. Variables required for analysis – age at diagnosis, year of diagnosis and sex – were extracted along with others such as postcode, which were used to link to other datasets to obtain further variables.

Population estimates

Population estimates were required for calculating cancer incidence rates. These were needed initially at ward level to enable linkage with deprivation scores. However, such population estimates were not available from official sources at ONS between censuses, that is, between 1991 and 2001, although 'experimental' population estimates at ward level had been produced for the years 2002–03. Since a population dataset over a longer time period was required, annual population estimates by five-year age-groups and sex at ward level for the years 1990–2002, fixed to the 2001 Census ward boundaries, were provided by Dr Paul Norman at the University of Leeds.

Subnational variation by deprivation

It was decided to analyse at the GOR level of England, and Wales. At this level, it was envisaged that the datasets would contain sufficient numbers to enable analysis by deprivation level within region. The postcode subdirectory holds all postcodes in England and Wales linked to 2001 Census wards and GOR. This dataset was linked to the cancer dataset via the postcode variable.

Deprivation scores

Area-based deprivation indices, such as the one devised by Carstairs and Morris in the 1980s, measure material deprivation in small areas.[7] The first two sets of Carstairs scores were based on the results from the 1981 and 1991 Censuses respectively, and were calculated at Census ward level. Other deprivation indices, such as the Townsend Index and Indices of Multiple Deprivation (IMD), are also available. Carstairs scores were chosen for this analysis as they have been used widely in health research in ONS[8,9,10] and elsewhere.[11,12,13,14]

Carstairs scores for the Census Area Statistics (CAS) wards in England and Wales have been used. The 2001 Carstairs scores for 8,844 wards – each of which contain over 100 residents – out of the total of 8,850 wards were provided by Dr Paul Norman.

Carstairs scores are an un-weighted combination of four Census variables; namely, unemployment, overcrowding, car ownership and low social class (Social Class IV and V). In the 2001 Census, the National Statistics Socio-Economic Classification (NS-SEC) replaced Social Class. Therefore, Social Classes IV and V had to be approximated in order to derive the Carstairs scores. Each of the four component variables are first transformed or 'standardised' to a common scale (that is, with a mean of zero and standard deviation of one) so that the value of no one variable dominates the overall score. The scores range from positive (more deprived) to negative (less deprived) with the England and Wales average score set to zero.[15]

Deprivation quintiles

On receipt of the 2001 Carstairs scores by Census wards, the corresponding 2001 population estimates (male and female combined) were attached via ward codes. The wards were sorted by score and divided into five groups (quintiles) according to equal fifths of the total population for England and Wales in 2001. Therefore, one fifth of the population was allocated to each deprivation category. Deprivation quintile 1 (Q1) represents the fifth of the population living in the least deprived wards and deprivation quintile 5 (Q5) represents the fifth living in the most deprived wards.

Methods

The analysis was carried out for three cancers, lung (male and female separately), breast (female) and prostate. The appropriate deprivation quintile was added to each individual cancer record (via the ward code) under the assumption that the deprivation quintile groups based on the deprivation scores as at 2001 had remained unchanged over the period 1990–2002.

Directly age-standardised incidence rates (ASRs) were used in the analysis to control for differences in the age structure of populations between geographical areas or over time. These were calculated for each GOR, and Wales, year of diagnosis and deprivation quintile using the European standard population together with 95 per cent confidence intervals. The age-groups 15–19, 20–24, …, 80–84, 85+ were used.

By dividing the ASR in the most deprived quintile by that in the least deprived (Q5/Q1), a rate ratio was obtained. For cancers of the breast and prostate – where incidence is higher in the least deprived, the ASR for Q1 was divided by that for Q5. This ratio was used to monitor whether a gap in incidence between the least deprived and most deprived was widening or narrowing over time. Confidence intervals[16] (CI) at the 95 per cent level for the rate ratio of ASRs were also calculated (see Box One).

Analyses were originally carried out by single year of diagnosis, but results showed large random variation over time due to the relatively small number of cases used to derive some of the ASRs. This was particularly the case in GORs which had small proportions of the

Box one
Confidence Interval for rate ratio

$$CI = R \pm \left(1.96 \times \sqrt{\frac{1}{n_1} + \frac{1}{n_5}}\right)$$

Where R = the ASR ratio Q5/Q1 (or Q1/Q5)
n_1 = the total number of cases of cancer in Q1
n_5 = the total number of cases of cancer in Q5

population classified as being in deprivation quintiles Q1 or Q5. This resulted in the rate ratios also showing random variation. Therefore, it was decided to use three-year moving averages whereby ASRs were calculated using incidence and population numbers for 1990–92, 1991–93, …, 2000–02. This had the effect of smoothing out the variation, without removing the essential patterns in the trends.

Because of clear deprivation gradients for all the cancers analysed, results presented here focus on comparing incidence rates for patients living in the least deprived and most deprived areas defined by deprivation quintiles Q1 and Q5, respectively. Confidence intervals at the 95 per cent level were produced to determine whether the differences between the ASR trend lines representing Q1 and Q5 were significant. If the CIs of two ASRs (at the same moment in time) do not overlap, then these two rates are significantly different at the 5 per cent level of significance. For the rate ratio trend line, if the CIs of two ratios (at two different time points on the line) do not overlap, then these two ratios are significantly different from each other.

Presentation of results

For each cancer in turn, results are presented first to look at the overall pattern of geographical variation between and within GORs and Wales by combining data for all years from 1990–2002. This is followed by trend analysis, nationally and within each GOR and Wales, focusing on change over time in incidence rates in patients living in the least deprived (Q1) and most deprived (Q5) areas. This analysis informs the discussion on change in the deprivation gap over time for the three selected cancers.

Results

Breast cancer

The overall geographical pattern using 1990–2002 combined data showed that ASRs by deprivation quintile varied little between GORs. Within each GOR, ASRs were lowest for Q5 and highest for Q1, but the range of variation between quintiles was small (Figure 1).

Figure 1 | **Breast cancer: age-standardised incidence rates by deprivation quintile 1990–2002, females**
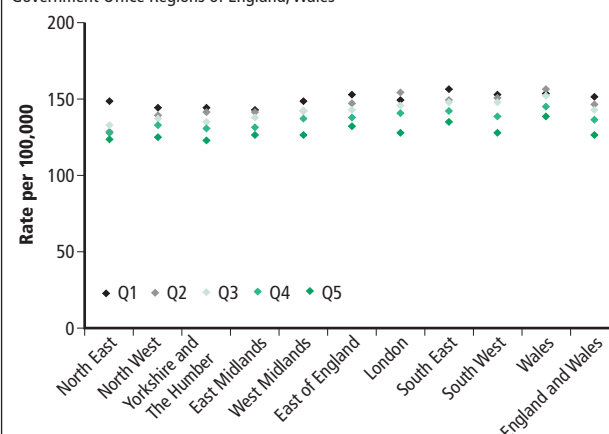
In England and Wales, ASRs increased over the period 1990–2002 in both Q1 and Q5 although they were consistently higher in the least deprived compared to the most deprived quintile. This was broadly true at GOR level with the exception of East Midlands and Wales where there was no significant difference between Q1 and Q5 for the majority of the period (Figure 2).

In Q1, ASRs increased from the first half of the 1990s in all GORs except East of England and North East. In Wales, the incidence rates fell initially, but rose again from the mid-1990s to a level in 2000–02 similar to that found in 1990–92. In Q5, rates rose in North East, North West, Yorkshire and The Humber, East Midlands and West Midlands over the decade with no change in the remainder including Wales.

The ratio of ASRs (Q1/Q5), showed there was a significant increase over time only in London and South East GORs indicating the deprivation gap widened in just these two GORs and remained unchanged elsewhere (Figure A1).

Lung cancer

Males
The overall geographical pattern using 1990–2002 combined data showed that ASRs for Q1 varied very little between GORs. However, for Q5, there was much more variation, with the highest incidence rate in North East and the lowest in East of England. As a consequence, the spread of ASRs by deprivation quintiles was wider than the England and Wales average in GORs in the north of England (North East and North West) and narrower in the south and east of England (East of England, London and South East) (Figure 3).

In England and Wales overall, over the period 1990–2002, ASRs decreased in both Q1 and Q5 although the rate in Q5 was around double that in Q1. This pattern is shared by all GORs and Wales, with the exception of East of England where there was no change in rates in Q5 over time (Figure 4).

The ratio of ASRs (Q5/Q1) increased between the early 1990s and 2000–02 in all GORs and Wales (from the mid-1990s in London) – except for North West, Yorkshire and The Humber and West Midlands – indicating that the deprivation gap has widened over time. This is because the rate of decrease in ASRs was greater in Q1 than in Q5 (Figure A2).

Females
The overall geographical pattern using 1990–2002 combined data showed that ASRs for Q1 varied more between GORs than for males. For

Figure 2 Breast cancer: age-standardised incidence rates by deprivation quintile, females, 1990–2002
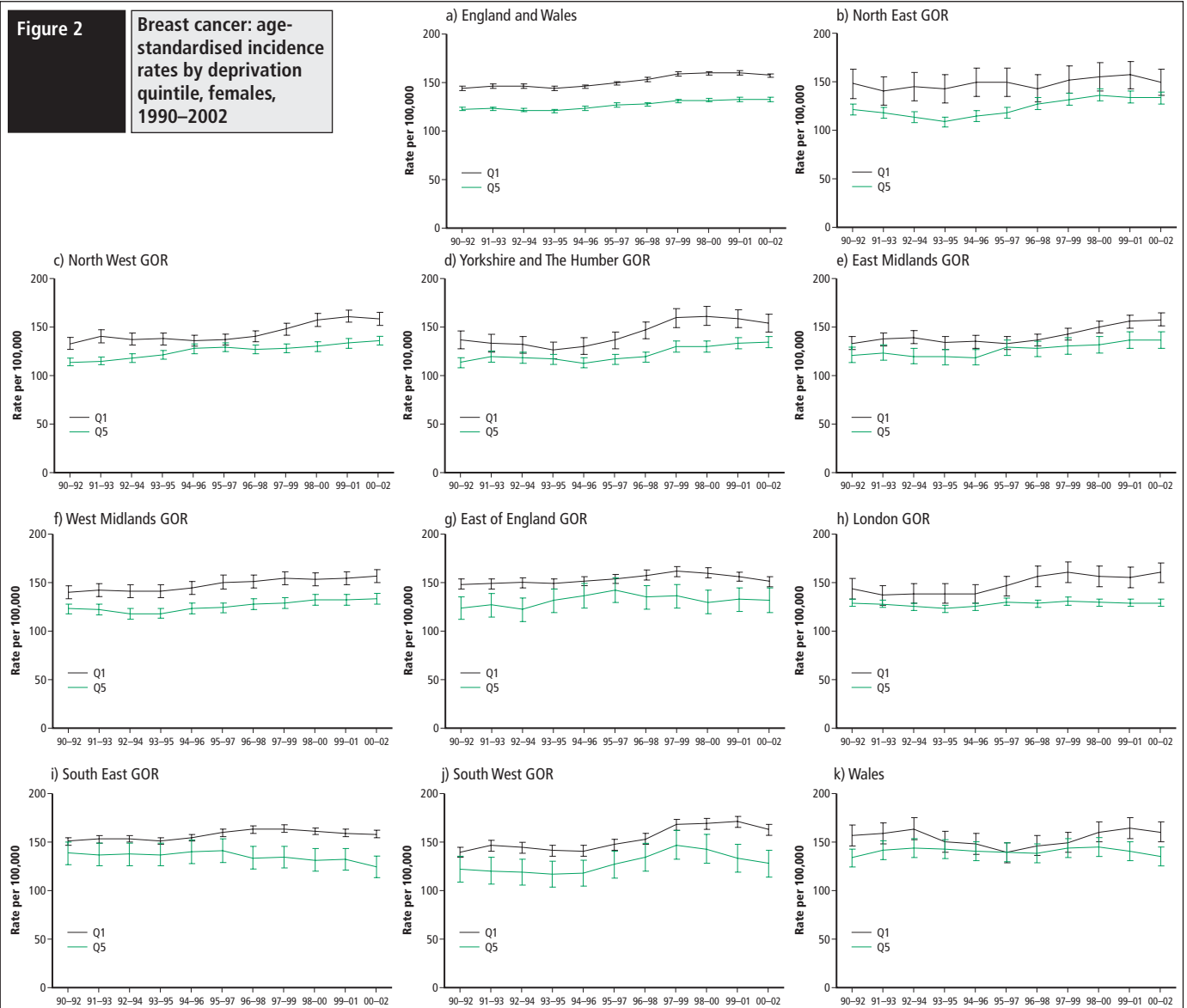
Figure 3 Lung cancer: age-standardised incidence rates by deprivation quintile, 1990–2002, males
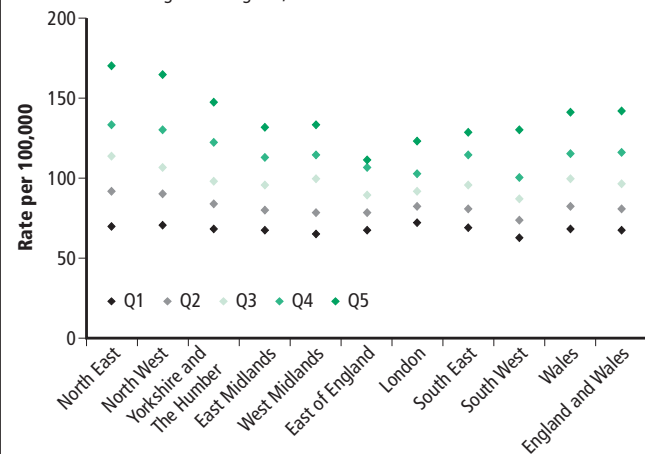
Q5, the variation was similar to that for males, with the highest incidence rates in North East and lowest in East of England (Figure 5).

In England and Wales, ASRs decreased over the period in Q1, but increased in Q5. At GOR level, trends for females differed markedly from males with no change over time in the ASRs in Q1 - with the exception of South East where rates fell. In Q5, ASRs increased significantly in North West, Yorkshire and The Humber and East Midlands and decreased in London (Figure 6).

Between the early 1990s and 2000–02, the ratio of ASRs (Q5/Q1), increased for North West, East Midlands, West Midlands, South East and Wales, indicating the deprivation gap has widened over time in these areas (Figure A3).

Prostate cancer

The overall geographical pattern using 1990–2002 combined data showed that ASRs varied little between GORs. The variation between deprivation quintiles was broadly similar across GORs, with higher rates in the less deprived. The exception to this is London where there was no variation in rates between deprivation quintiles (Figure 7).

Like breast cancer incidence rates in England and Wales over time, ASRs were consistently higher in the least deprived compared to the most deprived areas. However, at GOR level, ASRs for Q1 and Q5 were only

Figure 4 Lung cancer: age-standardised incidence rates by deprivation quintile, males, 1990–2002

a) England and Wales

b) North East GOR

c) North West GOR

d) Yorkshire and The Humber GOR

e) East Midlands GOR

f) West Midlands GOR

g) East of England GOR

h) London GOR

i) South East GOR

j) South West GOR
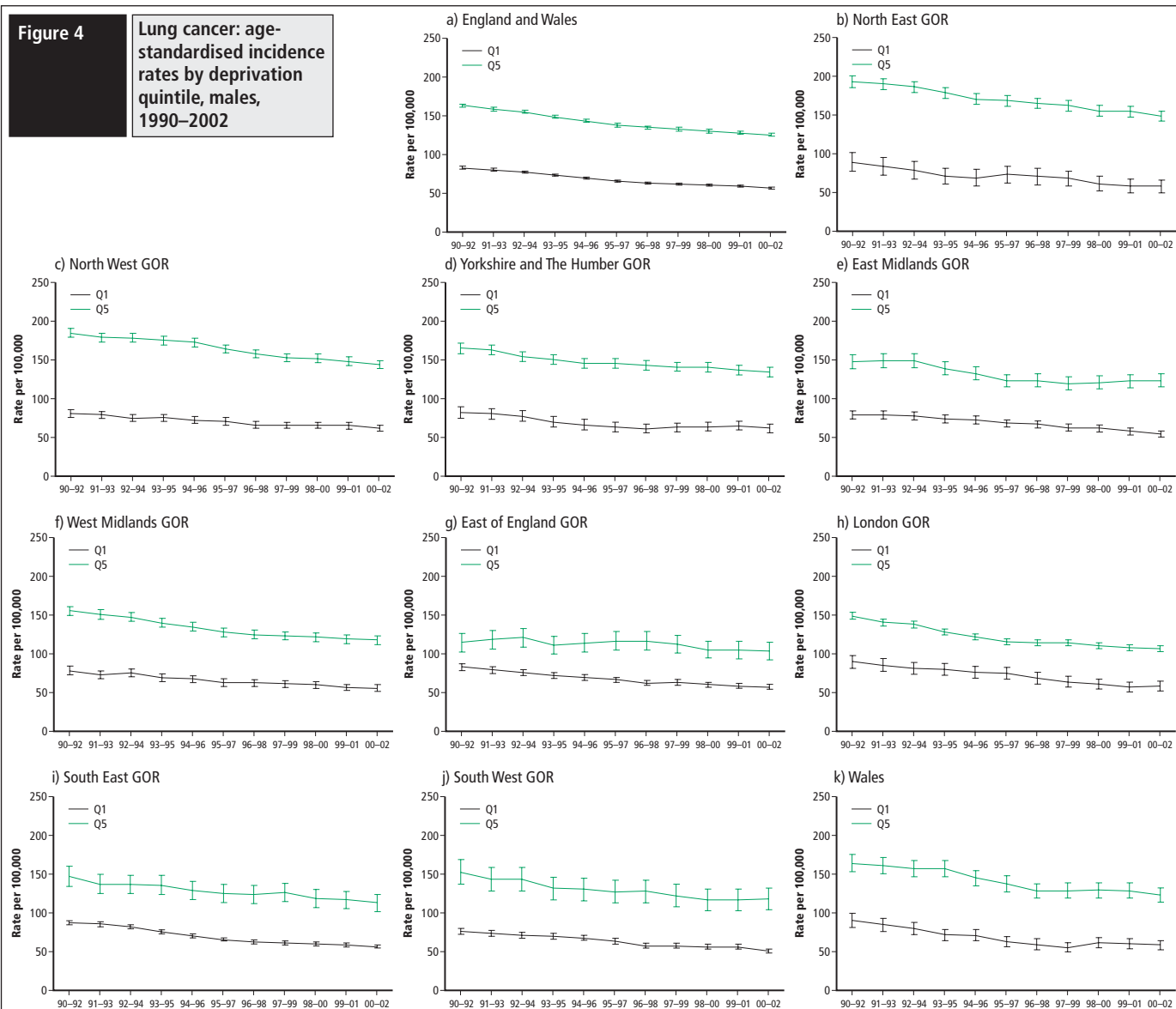
k) Wales

Figure 5 Lung cancer: age-standardised incidence rates by deprivation quintile, 1990–2002, females

Government Office Regions of England, Wales
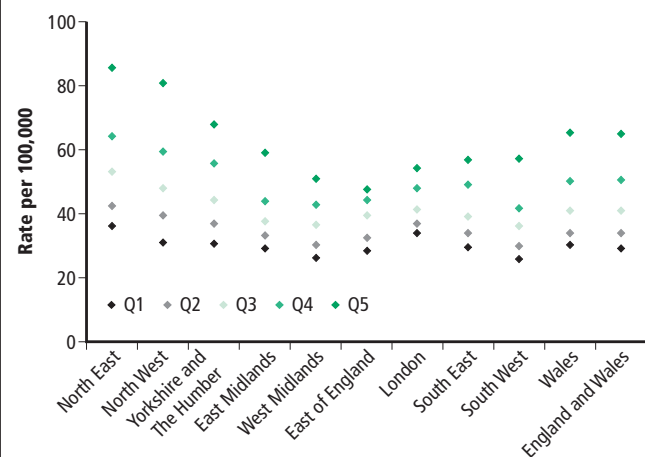
significantly different from each other over the whole period in North West and West Midlands and, with the exception of London (where there was no difference), significantly different in the remaining GORs and Wales from the late 1990s (Figure 8).

For Q1 the ASRs increased in all GORs and Wales over the period although the rate of increase was more pronounced from the mid-1990s when PSA testing was more widely used. The increase in rates in Q5 was more gradual with the exception of South West where there was no rise and West Midlands where the rise was similar to that for Q1 and London where the increase in the rate in Q5 was greater than the increase in Q1. The ratio of ASRs (Q1/Q5) – and thus the deprivation gap – increased between the early 1990s and 2000–02 in all GORs and Wales except West Midlands, London and East of England. This was because the rate of increase in incidence in Q1 was greater than in Q5 (Figure A4).

Discussion

For investigations of the aetiology (causes and risk factors) of cancer and for health care planning, incidence is the measure of primary interest, whereas mortality data are useful in planning resources for palliative care and hospices.

For breast cancer, the deprivation gap is not widening (or narrowing) in the majority of GORs and Wales. Most risk factors relate to a woman's

Figure 6 | Lung cancer: age-standardised incidence rates by deprivation quintile, females, 1990–2002

a) England and Wales

b) North East GOR

c) North West GOR

d) Yorkshire and The Humber GOR

e) East Midlands GOR

f) West Midlands GOR

g) East of England GOR

h) London GOR

i) South East GOR

j) South West GOR
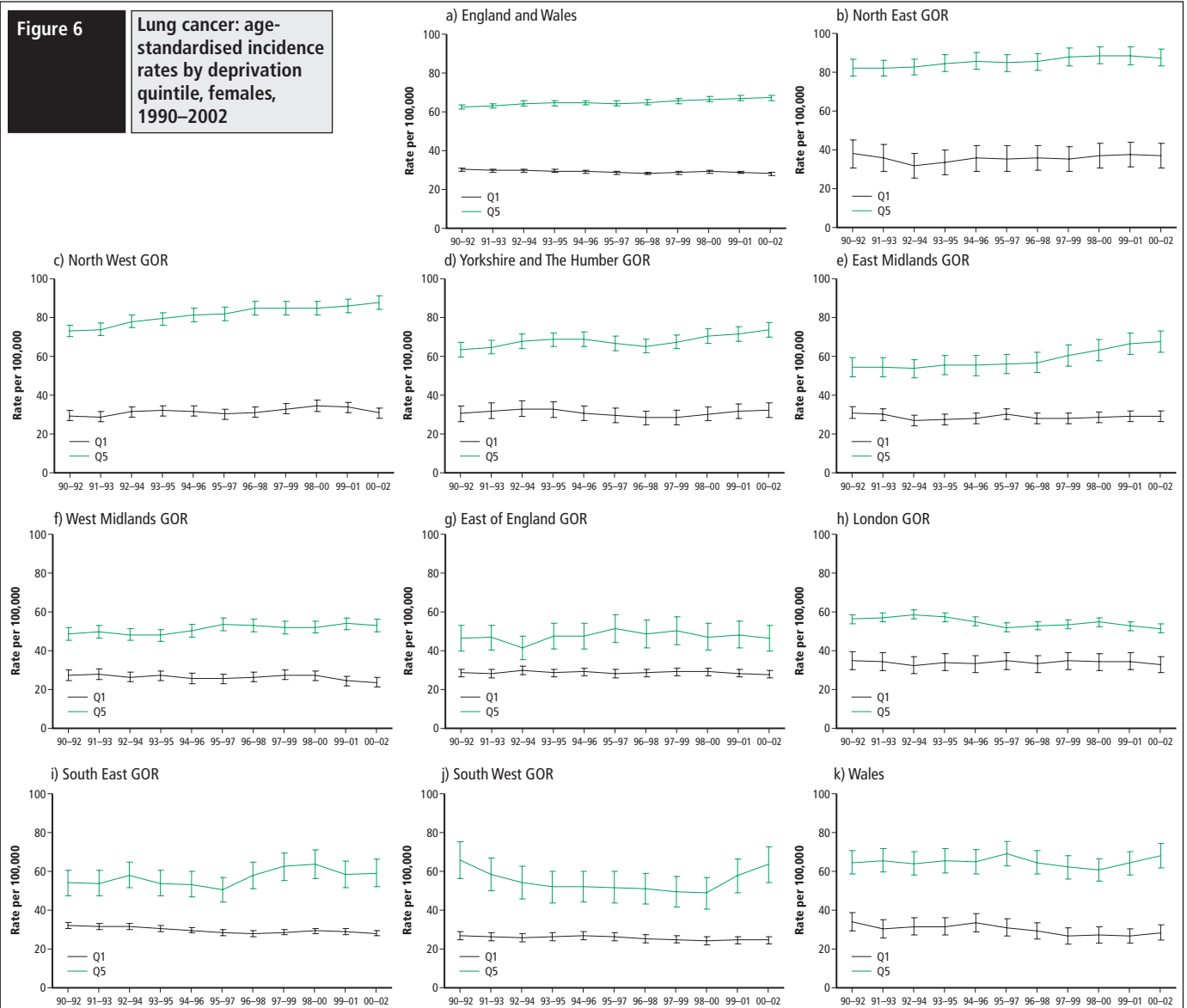
k) Wales

Figure 7 | Prostate cancer: age-standardised incidence rates by deprivation quintile, 1990–2002

Government Office Regions of England, Wales
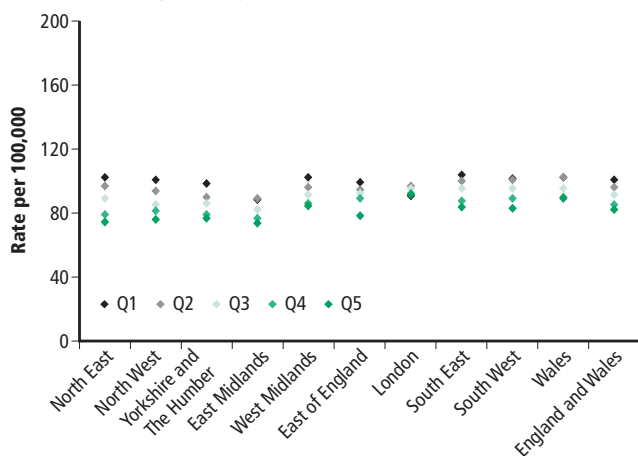
reproductive history such as early onset of menstrual periods, late first pregnancy and late menopause.[6]

The widening of the deprivation gap in lung cancer for males can be attributed to a greater decline in incidence in the least deprived areas compared to the most deprived. For lung cancer in females, however, the widening of the gap (where it occurs) is generally the result of an increase in incidence amongst the most deprived compared to no significant change over time in the least deprived. Since the latency period for lung cancers attributable to smoking is at least 20 years, any intervention programmes leading to a decrease in smoking prevalence would not have an immediate impact on lung cancer incidence rates. Also, the prevalence of smoking varied little across socio-economic groups before the dangers of smoking were recognised; currently, there are differences in the decline of smoking by social class.[17]

For prostate cancer the increase in incidence, particularly in the late 1990s, reflects the increasingly widespread use of the PSA test. The widening of the deprivation gap is the result of a greater increase in incidence amongst the least deprived and suggests the test is being utilised more by those living in these areas. However, the test detects asymptomatic prostate cancers in older men which would have gone undetected otherwise in their lifetime. The causes of prostate cancer are essentially unknown. Studies focusing on reproductive characteristics and

Figure 8 Prostate cancer: age-standardised incidence rates by deprivation quintile, 1990–2002
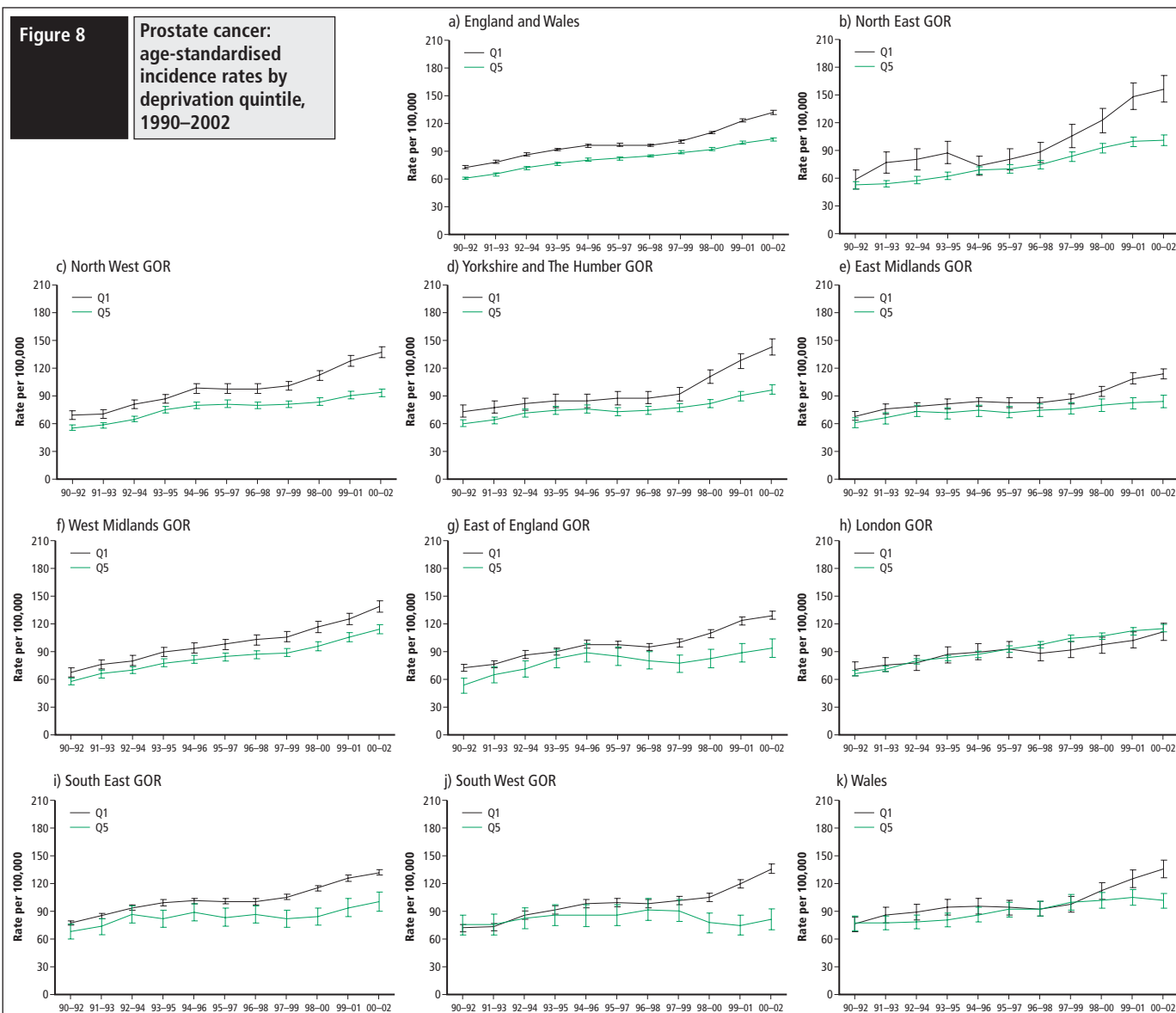
Table 1 Percentage distribution of 2001 population by deprivation quintiles

Government Office Regions of England, Wales

Quintiles	England and Wales	North East	North West	Yorkshire and The Humber	East Midlands	West Midlands	East of England	London	South East	South West	Wales
Q1	20	8	15	9	22	17	32	5	40	27	12
Q2	20	8	16	20	21	18	27	13	24	30	17
Q3	20	17	20	21	21	16	21	16	18	27	23
Q4	20	26	23	24	21	23	15	20	13	13	34
Q5	20	40	26	25	14	26	5	45	4	4	14
Total[1]	100	99	100	99	99	100	100	99	99	101	100

1 Numbers may not add up due to rounding.

sexual habits have had inconsistent results. However, despite international differences in incidence, no specific causal factors such as environmental, lifestyle, diet or occupation have been conclusively identified.[6]

Many deprivation indices have been devised since the 1980s and some of the associated advantages and disadvantages have been discussed elsewhere.[15] However, the choice of deprivation index for this article was governed by practical considerations. Since population estimates were required to calculate cancer incidence rates, it was decided to use a census-based deprivation index at ward level where population estimates on historically consistent boundaries were available.

In 2001, in South West, South East and East of England GORs, only 4 to 5 per cent of the population lived in the most deprived wards. London GOR only had 5 per cent of the population living in the least deprived wards. It has been suggested that deprivation indices tend to overestimate disadvantage in London. For example, car ownership is included in the Carstairs measure of deprivation, yet it could be argued that it is less likely to be an indicator of low income in central London (where transport links are plentiful) compared to rural areas[18] (Table 1) (Figure A5).

As stated earlier, there was an assumption that the deprivation quintiles based on the deprivation scores as at 2001 remained unchanged over the

Table 2	Comparison of deprivation quintile assignments at ward level between 1991 and 2001 populations, percentages

Government Office Regions of England, Wales

Area	Allocated to the same quintile in 1991 and 2001	Allocated to a quintile +/– 1	Allocated to a quintile +/– 2+
England and Wales	67	31	2
North East	67	30	2
North West	72	26	2
Yorkshire and The Humber	74	25	1
East Midlands	68	30	2
West Midlands	67	30	3
East of England	64	34	2
London	72	26	1
South East	68	30	1
South West	61	37	2
Wales	62	36	2

whole period 1990–2002. In reality, wards allocated to a particular quintile in 1991 (using 1991 Carstairs scores also obtained from Dr Paul Norman) could be allocated to a different quintile in 2001 (using 2001 Carstairs scores). The extent to which wards are allocated to the same or different quintiles between censuses is given in Table 2. It shows that around two-thirds of wards would be allocated to the same quintile at both censuses and one-third to a quintile either immediately above or below. However, the net error is likely to be small when the wards are aggregated to GOR level as they were in these analyses (Table 2).

When looking at deprivation, it should be noted that not everyone living in a deprived ward is socio-economically disadvantaged or that all those that are disadvantaged necessarily live in deprived wards. Factors such as this tend to dilute the underlying relationships at the individual level between the cancer incidence and socio-economic deprivation or any risk factors, such as smoking, for which deprivation is a marker.

Key findings

- Over the period 1990–2002, the gap in incidence rates for breast cancer between those living in the least deprived areas (where incidence was generally higher) and those in the most deprived areas, widened in just London and South East GORs and remained unchanged elsewhere

- Over the same period, rates of lung cancer incidence decreased for males living in both the least and most deprived areas, but more rapidly in the former leading to a widening of the deprivation gap in the majority of GORs and Wales

- For lung cancer in females, the widening of the gap occurred in the North West, East Midlands, West Midlands, South East GORs and Wales and is generally the result of an increase in incidence amongst the most deprived compared to no significant change over time in the least deprived

- For prostate cancer, where incidence was generally higher in the least deprived areas, the deprivation gap widened in all GORs and Wales – except West Midlands, London and the East of England – as the result of a greater relative increase in incidence rates among men living in the least deprived areas

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APPENDIX

Figure A1	Breast cancer: ratio of age-standardised incidence rates (Q1/Q5), females, 1990–2002

a) England and Wales

b) North East GOR

c) North West GOR

d) Yorkshire and The Humber GOR

e) East Midlands GOR

f) West Midlands GOR

g) East of England GOR

h) London GOR

i) South East GOR

j) South West GOR

k) Wales
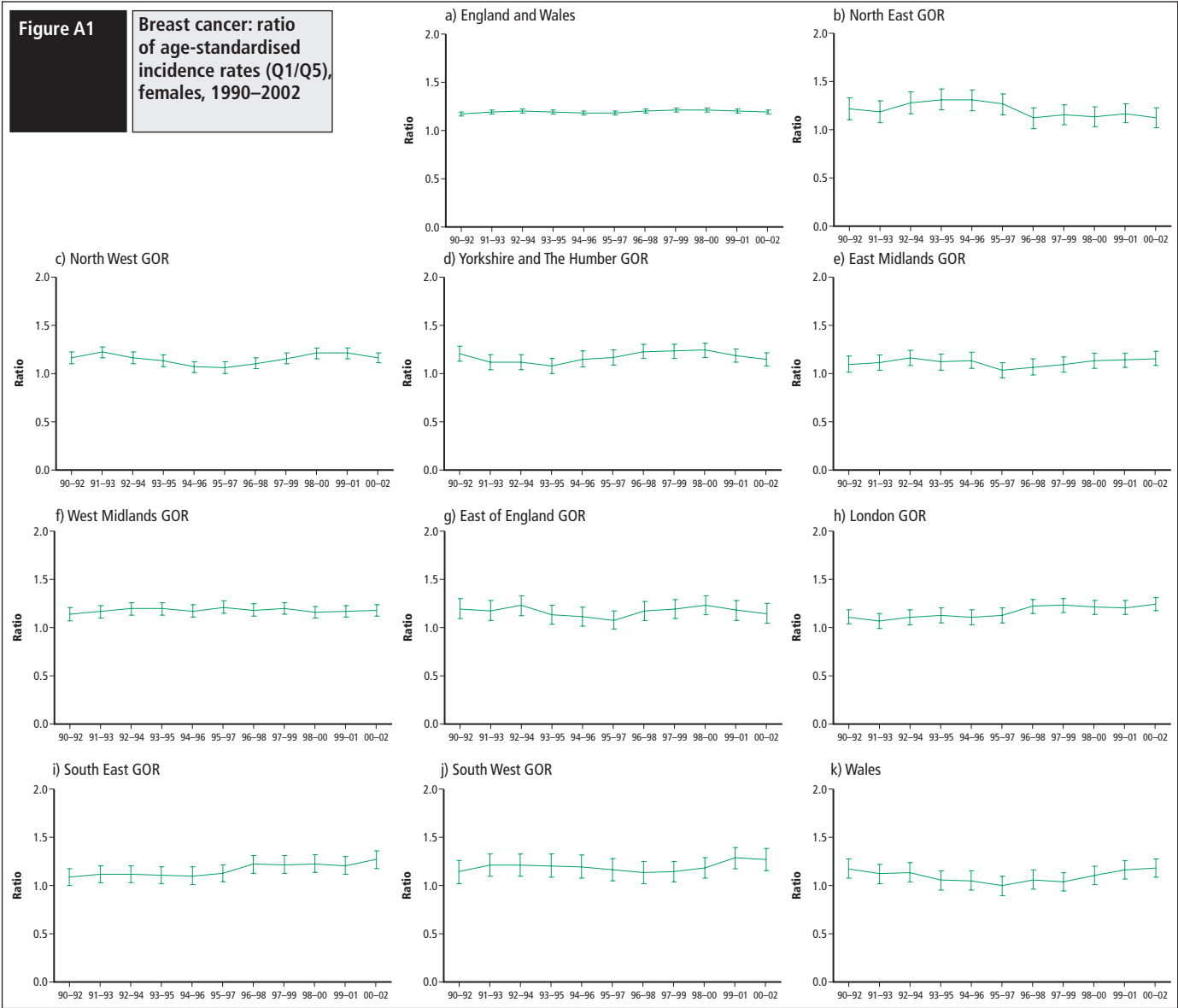
Figure A2 | **Lung cancer: ratio of age-standardised incidence rates (Q5/Q1), males, 1990–2002**

a) England and Wales

b) North East GOR

c) North West GOR

d) Yorkshire and The Humber GOR

e) East Midlands GOR

f) West Midlands GOR

g) East of England GOR

h) London GOR

i) South East GOR

j) South West GOR

k) Wales
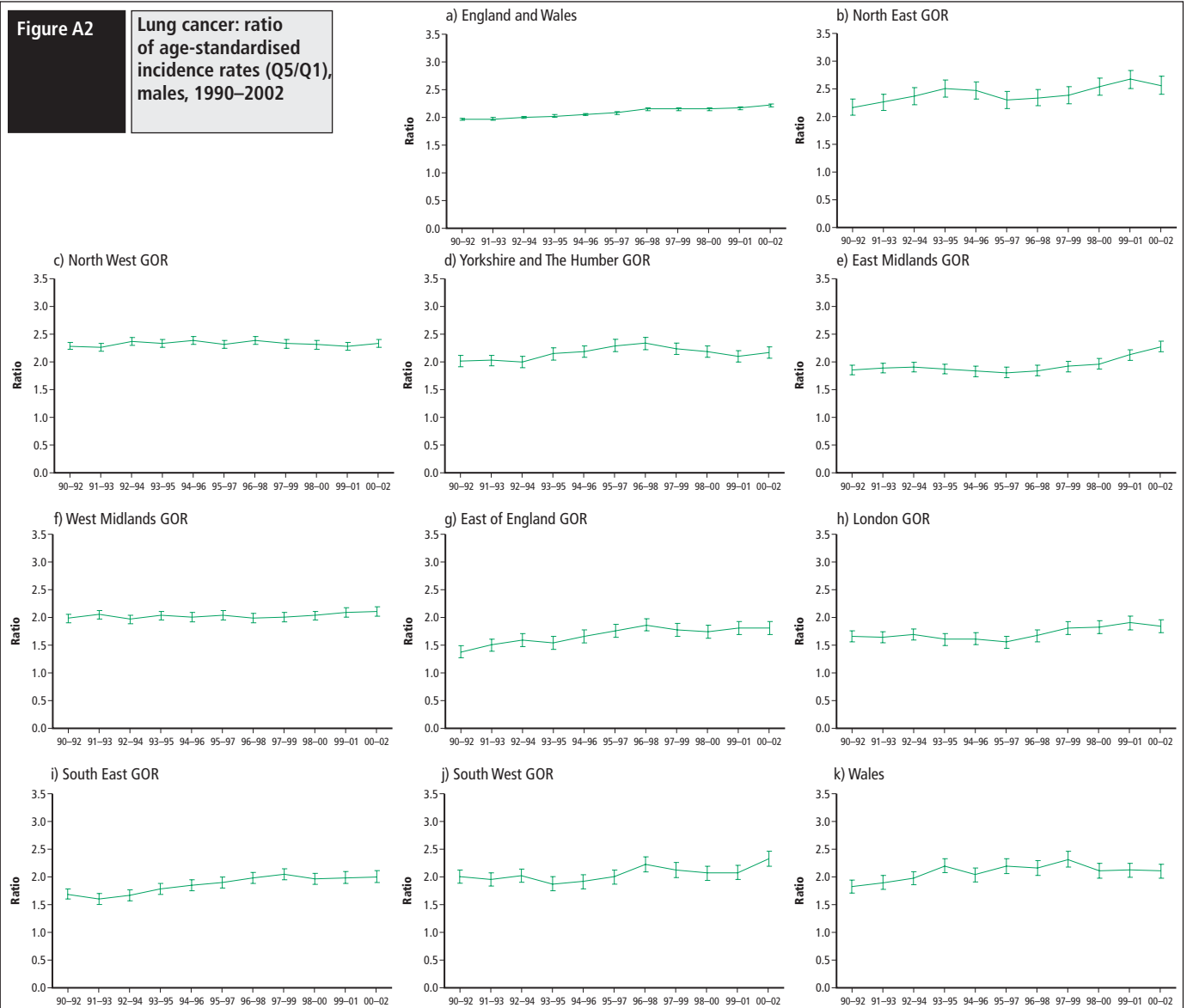
Figure A3 | **Lung cancer: ratio of age-standardised incidence rates (Q5/Q1), females, 1990–2002**
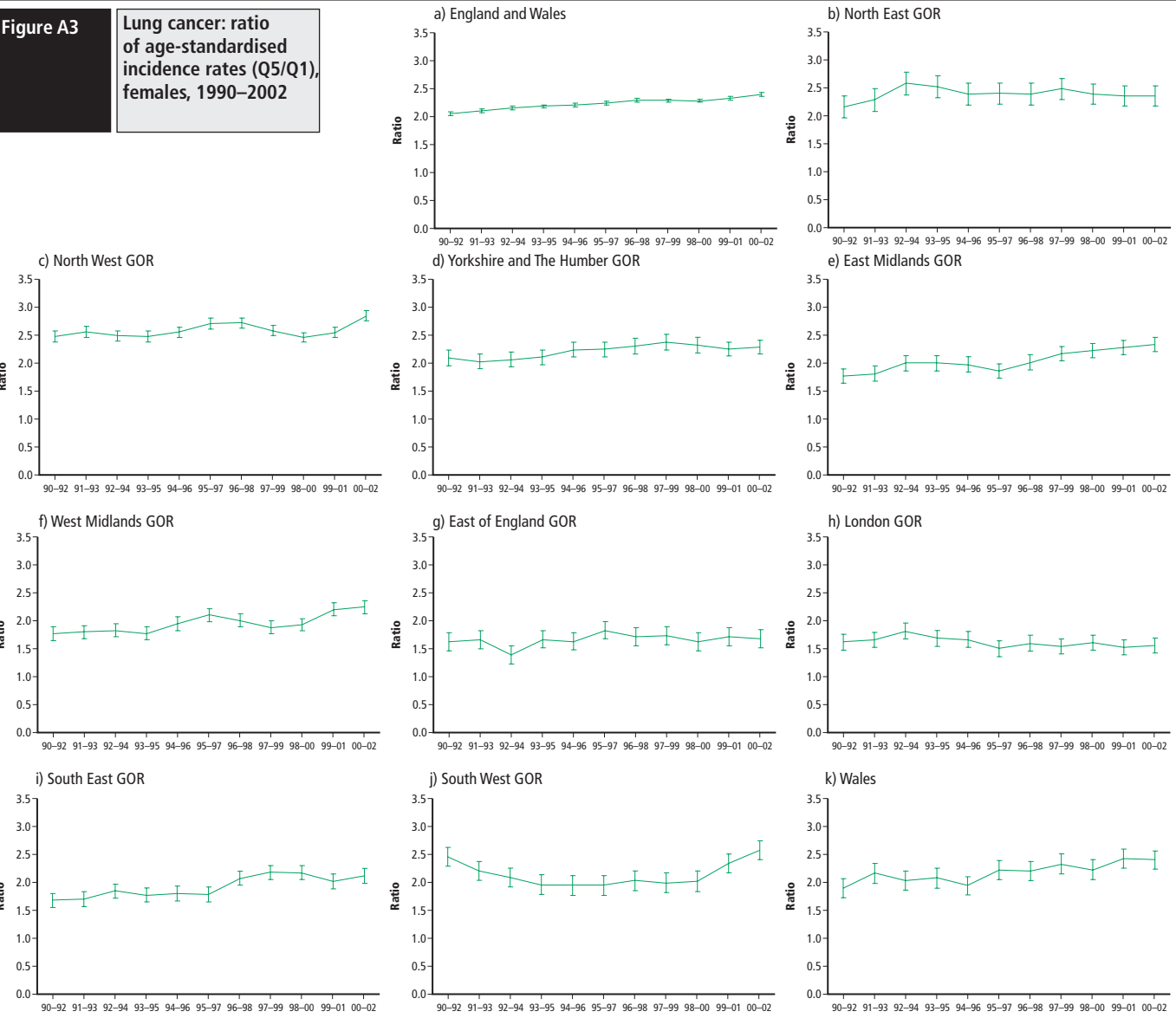
Figure A4

Prostate cancer: ratio of age-standardised incidence rates (Q1/Q5), 1990–2002

a) England and Wales

b) North East GOR

c) North West GOR

d) Yorkshire and The Humber GOR

e) East Midlands GOR

f) West Midlands GOR

g) East of England GOR

h) London GOR

i) South East GOR

j) South West GOR

k) Wales
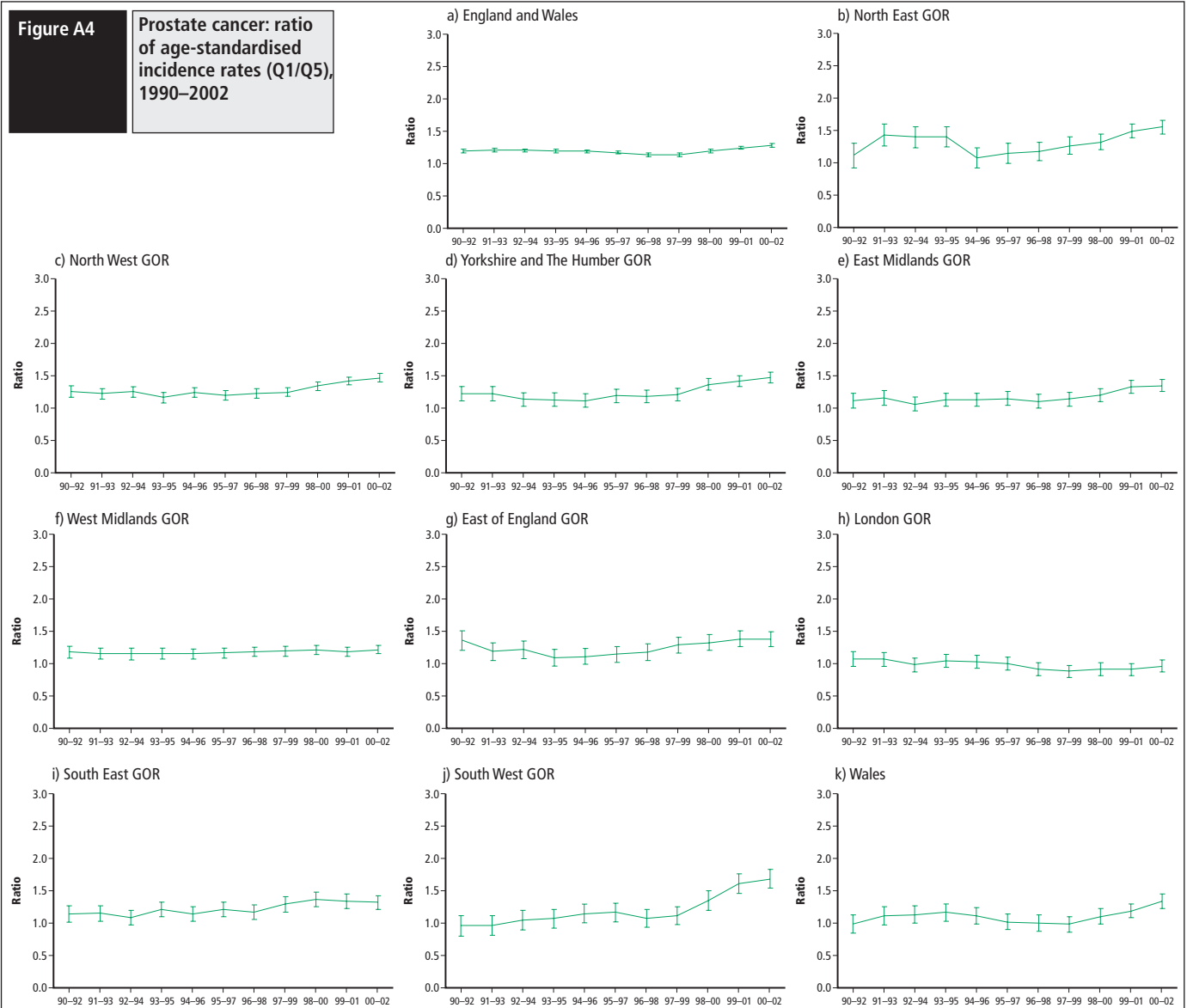
Figure A5

Percentage distribution of 2001 population by deprivation quintiles
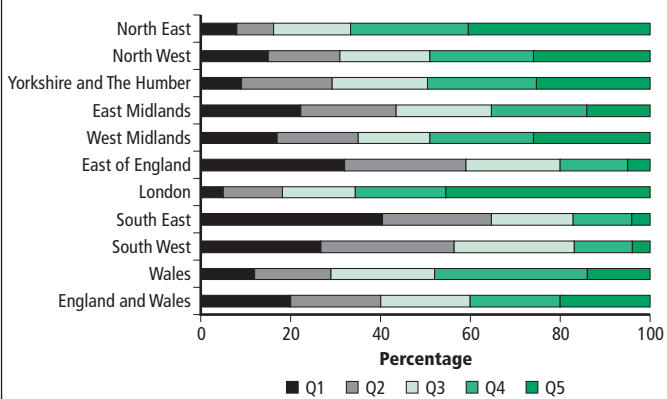
Cancer survival indicators by Cancer Network: a methodological perspective

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Cancer Networks are responsible for the management of cancer services in England. They are, in principle, logical units for the analysis of cancer survival, since for most patients, the entire pathway of referral, diagnosis and treatment is likely to be contained within the territory of a Cancer Network.

This study investigates the implications of using each patient's Cancer Network of residence as the geographic basis of cancer survival indicators for the Department of Health and the National Health Service. Incidence data from the National Cancer Registry were used to estimate survival from cancers of the breast and colon diagnosed in adults during 1996–98.

Survival estimates varied little between Cancer Networks. They were generally stable over time. We conclude that Cancer Networks are suitable geographic units for the analysis of cancer survival as a NHS performance indicator.

Introduction

Cancer survival statistics provide useful information about the local performance of the National Health Service (NHS) for the resident populations of the various health and administrative geographies in England. In the last few years, Government Office Regions (GOR) and Strategic Health Authorities (SHA) have been the main geographic basis for cancer survival indicators requested by the Department of Health and the National Health Service.

Until the most recent changes to NHS boundaries in April 2006, the 28 SHAs had overall strategic responsibility for the delivery of health care to their resident populations, averaging around two million. From April 2006, the 28 SHAs merged to form ten new SHAs, which resemble, at least in terms of size and boundary, the nine Government Office Regions.

The ten much larger SHAs that arose from these boundary changes are too large to demonstrate geographical variations in cancer survival to the requisite level of detail. The resident populations of the new SHAs range from about 2.5 to 7.5 million.[1] The 152 newly configured Primary Care Trusts (PCTs), although much larger than the previous 302, are still too small to be used as geographic units for monitoring cancer survival. The smallest PCT has a resident population of just 90,000, and the statistical stability of survival estimates for such small areas is not adequate for reliable monitoring of performance.[2]

As a consequence of this re-organisation, Cancer Networks have been proposed as an alternative geographic unit for the comparison of cancer survival statistics.

In principle, Cancer Networks are more logical units of analysis for cancer survival than SHAs, since for the vast majority of cancer patients,

the entire patient pathway[3] of referral, diagnosis and treatment will be contained within the territory of the Cancer Network in which they reside. There are currently 34 Cancer Networks, each serving a population of around one to two million people. Cancer Networks were established in 2001 under the NHS Cancer Plan.[4] They bring together health service commissioners and providers, the voluntary sector and local authorities in a defined territory, and they are responsible for the entire range of cancer management services for the population of that territory.

Despite reconfiguration of a few boundaries in October 2002, Cancer Networks have been more or less stable since their creation in 2001. In a climate of frequently changing NHS administrative geography, comparison of cancer survival estimates with previous years can become meaningless when the geographical units of analysis no longer refer to the same population. The recent and likely future stability of the Cancer Networks should permit more reliable and more useful monitoring of geographical comparisons and temporal trends in cancer survival. (Note: a few mergers have in fact occurred among the 34 Cancer Networks in existence when this article was written.) In contrast to SHAs however, Cancer Network boundaries are not always coterminous with GORs and do not easily aggregate to them, or indeed to any other health or administrative geography.

The populations covered by Cancer Networks are large (1–2 million people), and comparable with those covered by population-based cancer registries in many other countries. Statistical stability of cancer survival indicators will be greater than for smaller geographic units, such as PCTs.

Although the number of Cancer Networks in England today (34) is similar to the number of SHAs up to 2006 (28), the range of resident population sizes differs significantly. The smallest SHA had a resident population of approximately 1.15 million, but seven of the 34 Cancer Networks have a resident population of fewer than one million (Table 1). Cancer Networks have a five-fold range in population size.

Given the comparatively small population in some Cancer Networks, this article explores the stability of one- and five-year survival estimates for two common cancers, and examines the extent to which the Cancer Network of residence can be reliably used as the geographic basis for NHS cancer survival indicators.

Methods and data

The incidence data used in this article are taken from the National Cancer Registry at the Office for National Statistics (the National Cancer Intelligence Centre). The analysis included adults (15–99 years) resident in each of the 34 Cancer Networks in England who were diagnosed with cancer of the breast (women only, ICD-10 code C50) or colon (men and women, ICD-10 code C18) during 1996–98, and were followed up until 31 December 2003. Data on at least five years of follow-up were available for all patients included in the analyses.

Cancer registration in England is conducted by eight regional registries which collect and collate data on cancers resident in their area, and submit a standard dataset on these registrations to the National Cancer Intelligence Centre. All adults resident in England who were diagnosed during 1996–98 with breast or colon cancer as a first, primary, invasive, malignant neoplasm were eligible for inclusion in the analysis. Records of benign and *in situ* tumours, and those of uncertain behaviour, were considered ineligible. Patients known to have had a previous invasive primary malignancy at any site (except non-melanoma skin cancer) at any time since 1971 were excluded.

Relative survival

One- and five-year relative survival estimates for England by age and calendar year of diagnosis were estimated. Relative survival is the ratio of the observed (absolute) survival of the cancer patients and the survival that would have been expected if those patients had experienced only the same age- and sex-specific mortality rates (background mortality) as the general population from which they are drawn. It provides a measure of patient survival corrected for the effect of independent causes of death, other than the cancer of interest. The background mortality is derived from life tables. Since background mortality varies substantially between regions of the country, and in certain age ranges such variations are wide, we used separate life tables for each region in our survival analysis. Complete life tables by single year of age (up to 99 years), sex and region (GOR) were derived from the numbers of deaths in England during the period 1997–99 and from mid-year population estimates for 1998.[5] These life tables were used to represent background mortality in England during the period 1996–2003.

The maximum likelihood approach for individual records was applied to estimate both observed and relative survival,[6,7] using an algorithm

Table 1	Largest and smallest Cancer Networks (n=34) and Strategic Health Authorities (n=28),[1] by resident population				
England					Millions
Rank	Cancer Network	Population[2]	Rank	Strategic Health Authority	Population[3]
Largest populations			**Largest populations**		
1	Greater Manchester & Cheshire	3.0	1	Trent	2.7
2	Mount Vernon	2.8	2	Greater Manchester	2.5
3	Pan Birmingham	2.5	3	Surrey & Sussex	2.5
4	Yorkshire	2.5	4	Cheshire & Merseyside	2.3
5	Northern	2.2	5	Birmingham & the Black Country	2.3
Smallest populations			**Smallest populations**		
30	Mid Anglia	0.9	24	South West London	1.3
31	Norfolk & Waveney	0.7	25	South Yorkshire	1.3
32	Derby & Burton	0.6	26	North Central London	1.2
33	Dorset	0.6	27	Dorset & Somerset	1.2
34	South Essex	0.6	28	County Durham & Tees Valley	1.1

1 SHA boundaries before the reconfiguration in 2006.
2 2002.
3 2001.

Sources: Cancer Services Catchment Population Data, National Cancer Services Analysis Team; Office for National Statistics mid-year population estimates

Box one

Relative survival is the ratio of the survival actually observed in the cancer patients, and the survival that would have been expected if they had only experienced the same mortality rates, in the calendar period in question, at each age and for each sex, as those observed in the general population from which they are drawn.[6,7,9,10] It is usually expressed as a percentage (For example, 0.6/0.8=75 per cent). It can be interpreted as the proportion of survivors after correction for other causes of death. The general population (background) mortality rates are taken from life tables. *Cancer Survival Trends*[11] should be consulted for further details of the methods. The proportion of survivors who have a normal life expectancy (the proportion 'cured') would be the ideal outcome measure, but methods remain under development, and relative survival estimates at one and five years have become the conventional measures of short- and medium-term outcome of cancer treatment.

developed for previous analyses.[8] Survival was estimated within three-month intervals for the first six months, then the second six-month period, separately for the second and third years, and for the fourth and fifth years combined. We report relative survival at one and five years after diagnosis.

Statistical reliability

The statistical precision of survival estimates depends on the number of events (deaths) that contribute to the estimate. This depends in turn both on the number of patients diagnosed (which depends on the incidence rate and the size and age-sex structure of the underlying population) and on the lethality of the tumour, which changes with time since diagnosis, but also varies with age and sex, and over calendar time, as well as between geographic areas. We explored the range and variability between Cancer Networks in the number of deaths for each cancer included in the analysis (those occurring within five years of diagnosis) as a guide to the reliability of the survival estimates.

We estimated the relative survival for each calendar year as well as for the three-year period 1996–98 for each cancer. The stability of the survival estimates across the three years of incidence was assessed as a measure of 'external' reliability. We used the median value as a measure of central tendency among the 34 estimates of survival, and the interquartile range or IQR (which includes 50 per cent of observed values between the 25 and 75 centiles of the distribution) to reflect variation.

We used two measures to explore the 'internal' reliability of the survival estimates: the distribution of their standard errors and the coefficient of variation. The coefficient of variation (CV) expresses the standard deviation of the survival estimates for the set of Cancer Networks as a percentage of the overall mean value, and is a measure of their dispersion.

We also estimated the temporal reliability of time trends in survival by examining year-to-year fluctuation in the survival estimates. This fluctuation in survival for each Cancer Network is quantified as the average of the two successive absolute differences between the survival estimates for patients diagnosed in 1996 and 1997, and those diagnosed in 1997 and 1998. For example, for three successive estimates of 61.0 per cent, 62.0 per cent and 60.2 per cent, the value would be 1.4 percentage points (the mean of 1 percentage point and 1.8 percentage points, ignoring the sign of the difference). We present the mean and interquartile range of year-to-year fluctuations for the 34 Cancer Networks.

Results

Number of deaths

The median number of deaths within five years of diagnosis among patients diagnosed with breast or colon cancer during the period 1996–98 that could be included in the analysis was roughly one-third smaller for Cancer Networks than for (pre-2006) SHAs. There were approximately 90 fewer deaths per year from breast cancer, and 35 fewer deaths per year from colon cancer in each Cancer Network compared with the SHAs (Table 2). The interquartile ranges were slightly narrower for Cancer Networks compared to SHAs.

The difference in the number of deaths within five years of diagnosis between Cancer Networks (n=34) and Strategic Health Authorities (n=28) is a consequence of the different resident population sizes.

Table 2 — Number of deaths within five years of diagnosis, by sex and year of diagnosis: adults (15–99 years) diagnosed 1996–98: median and interquartile range

England — Numbers

Year	Cancer Network Median	Cancer Network Interquartile range		Strategic Health Authority Median	Strategic Health Authority Interquartile range	
Breast cancer (women)						
1996	239	196	333	302	246	382
1997	252	196	335	324	261	404
1998	238	186	333	285	250	390
1996–98	725	574	976	989	751	1,183
Colon cancer (men)						
1996	128	96	175	165	121	217
1997	127	98	174	163	126	220
1998	120	95	175	150	128	186
1996–98	369	293	515	472	380	620
Colon cancer (women)						
1996	113	94	178	165	120	214
1997	120	102	172	170	125	206
1998	125	96	166	158	126	209
1996–98	364	294	517	477	393	623

Box two

To summarise the variability of a set of survival estimates, we divide the entire range of values, from highest to lowest, into centiles (one-hundredths). The **median** is the value at the middle of the distribution (the **central tendency**) and is thus the 50 centile value. The **interquartile range** is one measure of the **dispersion** of the estimates (how widely they range around the median), and is the range between the 25 and 75 centiles of the distribution. The **standard error** is another measure of the dispersion of the observed values around the central value (mean, or average). The **coefficient of variation** is a standardised measure of this dispersion, expressed as a percentage, which does not depend on the actual value of the average.

'External reliability'

For breast cancer in women, the median one- and five-year relative survival estimates among the 34 Cancer Networks improved steadily by approximately 1.0–1.5 percentage points between successive years of incidence 1996, 1997 and 1998. Median one-year survival estimates increased by 0.7 percentage point (from 93.8 per cent to 94.5 per cent) between 1996 and 1997, and by 0.6 percentage point (from 94.5 per cent to 95.1 per cent) between 1997 and 1998. For five-year survival, estimates increased by 1.6 percentage points (from 78.8 per cent to 80.4 per cent) between 1996 and 1997, and by 1.0 percentage point (from 80.4 per cent to 81.4 per cent) between 1997 and 1998 (Table 3). This steady pattern of improvement of survival estimates is consistent with the national picture.

Table 3	Relative survival estimates (%) in 34 Cancer Networks, by sex and year of diagnosis: adults (15–99 years) diagnosed 1996–98: median and interquartile range

England   Percentages

Year	One-year			Five-year		
	Median	Interquartile range		Median	Interquartile range	
Breast cancer (women)						
1996	*93.8*	*92.5*	*95.4*	*78.8*	*76.6*	*80.6*
1997	*94.5*	*93.7*	*95.6*	*80.4*	*78.3*	*81.8*
1998	*95.1*	*94.6*	*95.9*	*81.4*	*79.9*	*83.3*
1996–98	*94.3*	*93.6*	*95.6*	*80.0*	*78.8*	*81.6*
Colon cancer (men)						
1996	*68.5*	*65.5*	*70.5*	*46.1*	*43.5*	*49.7*
1997	*67.5*	*63.9*	*70.3*	*46.0*	*44.0*	*48.9*
1998	*70.2*	*67.5*	*74.9*	*50.9*	*46.8*	*52.7*
1996–98	*69.0*	*67.9*	*71.0*	*47.9*	*44.7*	*49.8*
Colon cancer (women)						
1996	*66.1*	*62.1*	*70.1*	*46.2*	*42.5*	*49.8*
1997	*64.9*	*62.3*	*69.4*	*46.5*	*43.0*	*48.4*
1998	*66.7*	*63.8*	*69.9*	*48.1*	*44.3*	*51.7*
1996–98	*66.6*	*63.4*	*68.8*	*47.0*	*43.6*	*48.6*

Note: Relative survival is the ratio of the survival actually observed in the cancer patients and the survival of the general population, expressed as a percentage.

For colon cancer in each sex, the year-on-year survival estimates were slightly more variable. For example, median one-year survival estimates in men decreased by 1 percentage point (from 68.5 per cent to 67.5 per cent) between 1996 and 1997, and then increased by 2.7 percentage points (from 67.5 per cent to 70.2 per cent) between 1997 and 1998. The interquartile ranges also reflect this variability: they were wider for colon cancer than for breast cancer (Table 3).

'Internal reliability'

For survival estimates based on a single year of diagnosis, the median standard error of the estimates among the 34 Cancer Networks for one-year survival for women with breast cancer was around 0.9, with very little variation (IQR 0.8–1.1). For colon cancer, median standard errors of the annual estimates were around 3.5 in each sex, again with little variation (IQR 2.9–4.1). For five-year survival, the median standard error was about 1.7 (IQR 1.4–2.0) for breast cancer in each of the three years, and about 4.2 (IQR 3.5–5.0) for colon cancer in each sex (Table 4).

Table 4	Distribution of the standard error of relative survival estimates in 34 Cancer Networks, by sex and year of diagnosis: adults (15–99 years) diagnosed 1996–98

England

Year	One-year				Five-year			
	Median	Interquartile range		CV (%)	Median	Interquartile range		CV (%)
Breast cancer (women)								
1996	1.0	0.8	1.1	*1.1*	1.8	1.6	2.0	*2.2*
1997	0.9	0.8	1.0	*1.0*	1.7	1.5	1.9	*2.1*
1998	0.9	0.8	1.0	*0.9*	1.7	1.4	1.9	*2.0*
1996-98	0.6	0.5	0.6	*0.6*	1.0	0.9	1.1	*1.2*
Colon cancer (men)								
1996	3.6	3.0	4.0	*5.2*	4.3	3.6	5.0	*9.3*
1997	3.6	3.0	4.0	*5.2*	4.2	3.6	4.8	*9.2*
1998	3.4	2.9	3.9	*4.9*	4.3	3.6	4.8	*8.5*
1996-98	2.0	1.8	2.3	*2.9*	2.5	2.1	2.8	*5.2*
Colon cancer (women)								
1996	3.6	3.1	4.1	*5.4*	4.3	3.6	4.8	*9.1*
1997	3.6	3.1	4.0	*5.5*	4.2	3.5	4.6	*9.1*
1998	3.4	3.0	4.0	*5.2*	4.0	3.5	4.6	*8.7*
1996-98	2.0	1.8	2.3	*3.1*	2.4	2.1	2.6	*5.1*

Note: The standard error is a measure of the dispersion of the observed values around the central value (mean, or average).

Survival estimates based on a three-year period (1996–98) were more precise than the annual estimates, with median standard errors of 0.6 and 1.0 for women with breast cancer (for one- and five-year survival respectively), and of 2.0 and 2.5 for colon cancer in each sex. Variability between Cancer Networks was about half that observed for annual estimates, with very narrow interquartile ranges (Table 4).

Variability in the annual estimates of one- and five-year survival in the 34 Cancer Networks was small, with a coefficient of variation of 1 per cent and 2 per cent for breast cancer, and of 5 per cent and 9 per cent for colon cancer. The use of three years of data reduces this variability still further. For breast cancer, the coefficient of variation falls from 1 per cent to 0.6 per cent for one-year survival and from 2 per cent to 1 per cent for five-year survival. For colon cancer, the coefficient of variation falls from 5 per cent to 3 per cent for one-year survival and from 9 per cent to 5 per cent for five-year survival (Table 4).

'Temporal reliability'

Table 5 shows the year-to-year fluctuation (percentage) in one- and five-year relative survival estimates in the 34 Cancer Networks. This is estimated as the average of the absolute difference (whether positive or negative) in the survival estimates for successive years for a given Cancer Network. For example, a change from 61.0 per cent (1996) to 62.0 per cent (1997) to 60.2 per cent (1998) would imply a change of +1 percentage point and then –1.8 percentage points, for which the mean annual change would be 1.4 percentage points.

The average year-to-year fluctuation in one- and five-year relative survival was around 2 per cent for breast cancer in women and around

| Table 5 | Mean annual fluctuation (%) in one- and five-year relative survival estimates in 34 Cancer Networks: adults (15–99 years) diagnosed 1996–98 |

England   Percentages

Time since diagnosis	Breast cancer (women)		Colon cancer (men)		Colon cancer (women)	
	Mean	Interquartile range	Mean	Interquartile range	Mean	Interquartile range
One year	1.4	0.7 1.8	5.5	2.9 7.1	4.7	3.1 6.5
Five years	2.6	1.1 3.3	5.9	3.4 7.9	5.3	3.0 7.5

Note: Estimated as the average of the absolute difference (whether positive or negative) in the survival estimates for successive years for a given Cancer Network. For example, a change from 61.0 per cent (1996) to 62.0 per cent (1997) to 60.2 per cent (1998) would imply a change of +1 per cent and then −1.8 per cent, for which the mean annual change would be 1.4 per cent. The table shows the mean and interquartile range among the 34 estimates of this annual fluctuation, for both one- and five-year survival estimates.

5 per cent for colon cancer in both men and women (Table 5). Annual survival estimates for individual Cancer Networks, based on single years of diagnosis, fluctuate much more for colon cancer than for breast cancer. This instability of time trends in survival has implications for the use of annual survival estimates as performance indicators.

The national rankings of individual Cancer Networks on the basis of survival estimates derived from single years of diagnosis were not stable. Rankings fluctuate widely for a small year-on-year change in survival. For example, the annual change in rank for one-year breast cancer survival was dramatic (Figure 1), despite the fact that the example concerns the most steady trend. One Cancer Network, which had the lowest survival for breast cancer in 1996, was ranked second highest in 1998.

Discussion

As previously discussed, Cancer Networks are similar in number to the 'old' SHAs, and the survival estimates presented here, for patients diagnosed during 1996–98, are comparable to those published for the 28 Strategic Health Authorities for the same period.[12]

The range of survival estimates for breast and colon cancer in the 34 Cancer Networks in existence at the time of these analyses is fairly narrow, but year-to-year fluctuation in survival estimates occurs within individual Cancer Networks for colon cancer, much more than for breast cancer. Since the annual number of new breast cancer cases is approximately twice that of colon cancer, it will be necessary to aggregate at least two years of colon cancer incidence data to obtain statistically stable results for individual Cancer Networks. Although annual indicators derived from data aggregated over two or more years will overlap in time coverage, which could mask recent changes in survival, it is far more important to ensure that reliable estimates of survival are used in the assessment of trends. This has important implications for the interpretation of time trends, especially as it is intended that cancer survival indicators will be updated annually.

This approach can be used with other common cancers but cannot be extended to every cancer, no matter how rare. It is not possible to give explicit guidance for every cancer. This is because the statistical robustness of cancer survival depends on the number of deaths included in the estimate, which depends in turn both on the number of cases (incidence) and the lethality of the tumour (survival), and both of those quantities are subject to geographic variation and to change over time. We chose to examine survival from breast and colon cancer in part because they are common, but also in part because they may be considered as 'sentinel' cancers from the perspective of performance management, since the efficiency of the entire patient pathway from early diagnosis to

| Figure 1 | Fluctuations in the national ranking of 34 Cancer Networks by one-year relative survival, breast cancer (women), by year of diagnosis 1996-98 |

England

National ranking of Cancer Networks by survival estimates for 1996
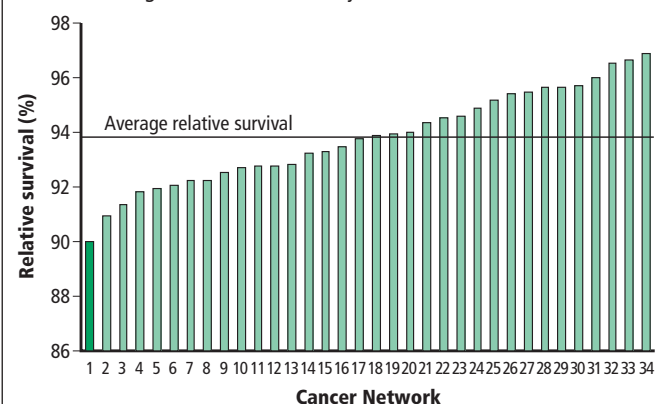
National ranking of Cancer Networks by survival estimates for 1997
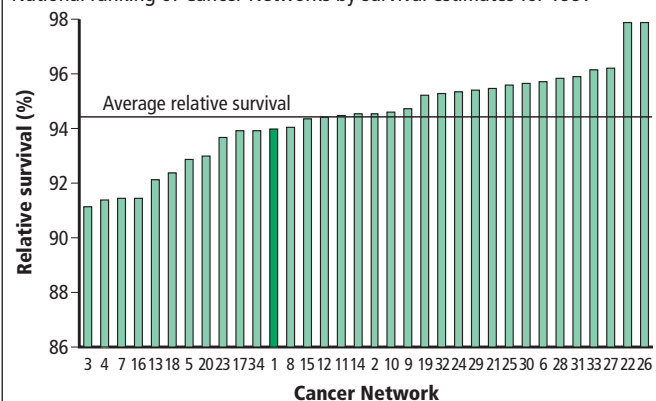
National ranking of Cancer Networks by survival estimates for 1998
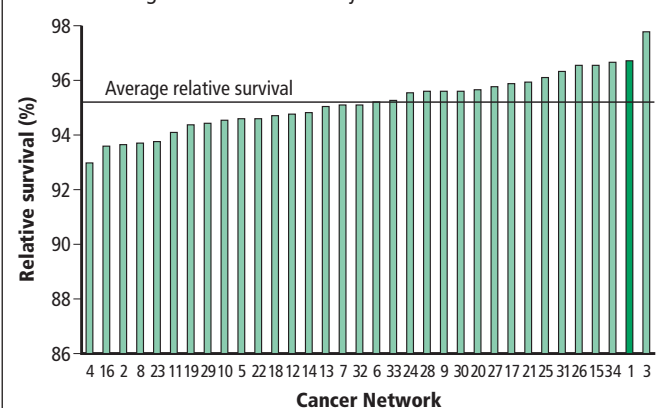
Note: Cancer Networks are labelled (numerically) according to their rank in 1996. The Cancer Network highlighted was ranked 1 (lowest) in 1996, 12 in 1997, and 33 (second highest) in 1998.

prompt referral and rapid access to optimal treatment are all known to be of signal importance in achieving optimal outcomes.

The national rankings of individual Cancer Networks on the basis of survival estimates derived from single years of diagnosis were not stable. Rankings can fluctuate widely for a small year-on-year change in survival, because the range of survival estimates between the 34 Cancer Networks is relatively narrow.

Ranking of the Cancer Networks within each of the nine GORs would be even more problematic. There are only a few Cancer Networks in any GOR, and their boundaries are not always coterminous. Ranking of Cancer Networks within a Government Office Region is not advisable.

Previous recommendations that cancer survival indicators for NHS geographies should be ranked within their NHS region (or current equivalent), rather than on a national scale, were based on data for Health Authorities in the 1990s, when there were around 100 such areas.[13] The instability of ranking the 34 Cancer Networks by survival estimates on a national scale is likely to be alleviated by the aggregation of several years of incidence data, because of improved statistical stability. The disadvantage is the interpretation of time trends in the indicator values.

Because survival may differ by age, and the age distribution of cancer patients may be dependant on both time and geography, the age-standardisation of cancer survival estimates is often necessary to enable comparisons to be made between different geographical areas (that is, Cancer Networks and SHAs), and over time. However, given the comparatively small population of some Cancer Networks, it was not possible to use conventional age standardisation as this requires an estimate of survival for each defined age group. Further work is in progress to explore the feasibility of age-adjusting relative survival estimates for Cancer Networks using Hermann Brenner's alternative approach for less common cancers, or common cancers in small areas.[14]

It should be clear from this discussion that the level and/or the ranking of cancer survival estimates for a given geographic area is not interpretable as a measure of performance in isolation. Persistently low ranking for survival from one cancer, or low ranking for several different cancers, should be used as a warning to seek explanations, and complementary information from other sources.

Conclusion

Cancer Networks are suitable as the geographic basis for cancer survival indicators to be used in NHS performance management.

Key findings

- Cancer Networks are logical units for the analysis of cancer survival. Survival estimates varied little between Cancer Networks and were stable over time. Cancer Networks should become the preferred geographic unit for the analysis of cancer survival as a NHS performance indicator
- Within individual Cancer Networks, the year-to-year fluctuation in estimates of cancer survival requires aggregation of at least two years of incidence data to obtain statistically stable results. Such estimates can be used as a performance indicator to show improvement over time within a given Cancer Network
- The national rankings of individual Cancer Networks on the basis of survival estimates using single years of diagnosis were not stable. For the purpose of bench-marking indicators, that is, to show the position of a given Cancer Network relative to other Cancer Networks, survival estimates should be based on at least three years of diagnosis, even for common cancers
- Cancer Networks should not be identified as 'poor performers' solely on the basis of a low national rank in survival for one particular type of cancer in a given year or period

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Tables

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Symbols
     ..   not available
     :   not applicable
     -      nil or less than half the final digit shown
     blank not yet available

Notes to tables

Time series
For most tables, years start at 1971 and then continue at five-year intervals until 1991. Individual years are shown thereafter. If a year is not present the data are not available.

United Kingdom
The United Kingdom comprises England, Wales, Scotland and Northern Ireland. The Channel Islands and the Isle of Man are not part of the United Kingdom.

Population
The estimated resident population of an area includes all people who usually live there, whatever their nationality. Members of HM and US Armed Forces in England and Wales are included on residential basis wherever possible. HM Forces stationed outside England and Wales are not included. Students are taken to be resident at their term time addresses.

Further information on population estimates can be found on the National Statistics website at www.statistics.gov.uk/popest

Live births
For England and Wales, figures relate to the number of births occurring in a period; for Scotland and Northern Ireland, figures relate to births registered in a period. By law, births must be registered within 42 days in England and Wales, within 21 days in Scotland, and within 42 days in Northern Ireland. In England and Wales, where a birth is registered later than the legal time period, and too late to be included in the count for the year of occurrence, it will be included in the count for the following year.

Perinatal mortality
In October 1992 the legal definition of a stillbirth was changed, from a baby born dead after 28 completed weeks of gestation or more, to one born dead after 24 completed weeks of gestation or more.

Period expectation of life
The life tables on which these expectations are based use death rates for the given period to describe mortality levels for each year. Each individual year shown is based on a three-year period, so that for instance 1986 represents 1985–87. More details can be found at www.gad.gov.uk/life_tables/interim_life_tables.htm

Deaths
Figures for England and Wales relate to the number of deaths registered in each year up to 1992, and the number occurring in each year from 1993, though provisional figures are registrations. Figures for both Scotland and Northern Ireland relate to the number of deaths registered in each year.

Coding cause of death
Between 1 January 1984 and 31 December 1992, ONS applied its own interpretation of the International Classification of Diseases Section Rule 3 in the coding of deaths where terminal events and other 'modes of dying' such as cardiac arrest, cardiac failure, certain thrombembolic disorders, and unspecified pneumonia and bronchopneumonia, were stated by the certifier to be the underlying cause of death and other major pathology appeared on the certificate. In these cases ONS Rule 3 allowed the terminal event to be considered a direct sequel to the major pathology and that primary condition was selected as the underlying cause of death. Prior to 1984 and between 1 January 1993 and 31 December 2000, such certificates were coded to the terminal event. National Statistics also introduced automated coding of cause of death in 1993, which may also affect comparisons of deaths by cause from 1993. Further details can be found in the annual volumes Mortality statistics: Cause 1984, Series DH2 no. 11, and Mortality statistics: Cause 1993 (revised) and 1994, Series DH2 no. 21.

From 1 January 2001, under ICD-10, Rule 3 has again been changed – for details see the article in Health Statistics Quarterly no. 13. This has resulted in a fall in the death rates from respiratory diseases, notably pneumonia, and consequently slight rises in the rates for other causes eg. strokes. For details of the major changes between ICD-9 and ICD-10, see the articles in Health Statistics Quarterly 08, 13 and 14.

Age-standardised mortality rates
Directly age-standardised rates make allowances for changes in the age structure of the population. The age-standardised rate for a particular condition is that which would have occurred if the observed age-specific rates for the condition had applied in a given standard population. Tables 2.2 and 6.3 use the European Standard Population. This is a hypothetical population standard which is the same for both males and females allowing standardised rates to be compared for each sex, and between males and females.

Abortions
Figures relate to numbers occurring in a period.

Calculating quarterly rates
The denominators used for calculating quarterly rates for births, conceptions and abortions have been produced from mid-year population estimates and projections by linear interpolation.

Marriages and divorces
Marriages are tabulated according to date of solemnisation. Divorces are tabulated according to date of decree absolute. In Scotland a small number of late divorces from previous years are added to the current year. The term 'divorces' includes decrees of nullity. The fact that a marriage or divorce has taken place in England, Wales, Scotland or Northern Ireland does not necessarily mean that either of the parties is resident there.

Civil Partnerships
The Civil Partnership Act 2004 came into force on 5 December 2005 in the UK, the first day couples could give notice of their intention to form a civil partnership. The first day that couples could normally form a partnership was 19 December 2005 in Northern Ireland, 20 December 2005 in Scotland and 21 December 2005 in England and Wales.

Civil partnerships are tabulated according to date of formation and area of occurrence. The fact that a civil partnership has taken place in England, Wales, Scotland or Northern Ireland does not necessarily mean either of the parties is resident there.

Sources
Figures for Scotland and Northern Ireland have been provided by the General Register Office for Scotland and the Northern Ireland Statistics and Research Agency respectively.

Rounding
All figures are rounded independently; constituent parts may not add to totals. Generally numbers and rates per 1,000 population are rounded to one decimal place (eg 123.4); where appropriate, for small figures (below 10.0), two decimal places are given (eg 7.62). Figures which are provisional or estimated are given in less detail (eg 123 or 7.6 respectively) if their reliability does not justify giving the standard amount of detail. Where figures need to be treated with particular caution, an explanation is given as a footnote.

Latest figures
Figures for the latest quarters and years may be provisional and will be updated in future issues when later information becomes available. Where figures are not yet available, cells are left blank.

Table 1.1	Population and vital rates: international

Selected countries   Numbers (thousands)/Rates per thousand

Year	United Kingdom	Austria	Belgium	Cyprus[1]	Czech Republic	Denmark	Estonia	Finland	France	Germany[2]	Greece[3]	Hungary	Irish Republic
Population (thousands)													
1971	55,928	7,501	9,673	..	9,810	4,963	1,369	4,612	51,251	78,313	8,831	10,370	2,992
1976	56,216	7,566	9,818	498	10,094	5,073	1,435	4,726	52,909	78,337	9,167	10,590	3,238
1981	56,357	7,569	9,859	515	10,293	5,121	1,482	4,800	54,182	78,408	9,729	10,712	3,443
1986	56,684	7,588	9,862	545	10,340	5,120	1,534	4,918	55,547	77,720	9,967	10,631	3,543
1991	57,439	7,813	9,979	587	10,309	5,154	1,566	5,014	57,055	79,984	10,247	10,346	3,526
1996	58,164	7,959	10,137	661 [13]	10,315	5,262	1,416	5,125	58,026	81,896	10,709	10,193	3,626 [19]
2001	59,113	8,043	10,287	701 [13]	10,224	5,359	1,364	5,188	59,322	82,340	10,950	10,188	3,839 [19]
2002	59,323 [12]	8,084	10,333	710 [13]	10,201	5,374	1,359	5,201	59,678	82,482	10,988	10,159	3,917 [19]
2003	59,557 [12]	8,118	10,376	721 [13]	10,202	5,387	1,354	5,213	60,028	82,520	11,024	10,130	3,996 [19]
2004	59,846 [12]	8,175	10,421	737 [13]	10,207	5,401	1,349	5,228	60,381	82,501	11,062	10,107	4,044 [19]
2005	60,238 [12]	8,230	10,480	760 [13]	10,230	5,411 [P]	1,350	5,250	60,870	82,470	11,083 [18,P]	10,090	4,130 [19]
2006	60,587	8,266 [18,P]	10,511 [18,P]	766 [13]	10,280 [P]	5,427 [18,P]	1,345 [18,P]	5,270 [P]	61,350 [P]	82,370 [P]	11,125 [18,P]	10,077 [18,P]	4,240 [19]
Population changes (per 1,000 per annum)													
1971–76	1.0	1.7	3.0	..	5.8	4.4	9.6	4.9	6.5	0.1	7.6	4.2	16.4
1976–81	0.5	0.1	0.8	6.8	3.9	1.9	6.6	3.1	4.8	0.2	12.3	2.3	12.7
1981–86	1.2	0.5	0.1	11.7	0.9	0.0	7.0	4.9	5.0	−1.8	4.9	−1.5	5.8
1986–91	2.7	5.9	2.4	15.4	−0.6	1.3	4.2	3.9	5.4	5.8	5.6	−5.4	−1.0
1991–96	2.5	3.7	3.6	25.2	0.1	4.2	−12.4	3.8	3.4	4.8	9.0	−3.0	4.3
1996–01	3.3	2.1	2.6	12.1	−1.8	3.7	−7.3	2.5	4.5	1.1	4.5	−0.1	11.7
2001–02	3.5	5.1	4.5	12.8	−2.2	2.8	−3.7	2.5	6.0	1.7	4.4	−2.8	20.3
2002–03	3.9	4.2	4.2	15.5	0.1	2.4	−3.7	2.3	5.9	0.5	2.4	−2.9	20.2
2003–04	4.8	7.0	4.3	22.2	0.5	2.6	−3.7	2.9	5.9	−0.2	3.4	−2.3	12.0
2004–05	6.6	6.7	5.7	31.2	2.3	1.9	0.7	4.2	8.1	−0.4	1.9	−1.7	21.3
2005–06	5.8	4.4	3.0	7.9	4.9	3.0	−3.7	3.8	7.9	−1.2	3.8	−1.3	..
Live birth rate (per 1,000 population per annum)													
1971–75	14.1	13.3	13.4	17.7	17.8	14.6	15.4	13.1	16.0	10.5	15.8	16.1	22.2
1976–80	12.5	11.5	12.5	19.0	17.1	12.0	15.0	13.6	14.1	10.5	15.6	15.8	21.3
1981–85	12.9	12.0	12.0	20.2	13.5	10.2	15.6	13.4	14.2	10.7	13.3	12.3	19.2
1986–90	13.7	11.6	12.1	18.8	12.7	11.5	15.5	12.7	13.8	9.8	10.6	11.8	15.8
1991–95	13.2	11.8	12.0	16.9	11.1	13.1	10.7	12.9	12.7	10.9	9.9	11.7	14.0
1996–00	12.0	10.2	11.2	13.2	8.8	12.6	8.9	11.3	12.7	9.6	10.2	9.8	14.2
2001	11.3	9.4	11.1	11.6	8.9	12.2	9.3	10.8	13.0	8.9	10.2	9.5	15.1
2002	11.3	9.7	10.8	11.1	9.6	11.9	9.6	10.7	12.8	8.7	9.5	9.5	15.5
2003	11.7	9.5	10.9	11.2	9.2	12.0	9.6	10.9	12.7	8.6	9.5	9.3	15.4
2004	12.1	9.7	11.1	11.3	9.6	11.9	10.4	11.4	12.7	8.6	9.5	9.4	15.3
2005	12.0	9.5	11.2	10.9	10.0	11.9	10.7	11.0	12.7	8.3	9.7	9.7	14.8
2006	12.4 [P]	9.3	..	11.4	10.3	..	..	11.2	13.0	8.2	..	..	..
Death rate (per 1,000 population per annum)													
1971–75	11.8	12.6	12.1	9.9	12.4	10.1	11.1	9.5	10.7	12.3	8.6	11.9	11.0
1976–80	11.9	12.3	11.6	10.4	12.5	10.5	12.1	9.3	10.2	12.2	8.8	12.9	10.2
1981–85	11.7	12.0	11.4	10.0	12.8	11.1	12.3	9.3	10.1	12.0	9.0	13.7	9.4
1986–90	11.4	11.1	10.8	10.2	12.4	11.5	11.9	9.8	9.5	11.6	9.3	13.5	9.1
1991–95	11.1	10.4	10.4	9.0	11.6	11.9	13.9	9.8	9.1	10.8	9.5	14.3	8.8
1996–00	10.6	9.7	10.3	7.7	10.8	11.2	13.1	9.6	9.2	10.4	9.7	13.9	8.5
2001	10.2	9.3	10.1	6.9	10.5	10.9	13.6	9.4	9.0	10.1	9.4	13.0	7.9
2002	10.2	9.4	10.2	7.3	10.6	10.9	13.5	9.5	9.2	10.2	9.5	13.1	7.5
2003	10.3	9.5	10.4	7.2	10.9	10.7	13.4	9.4	9.4	10.3	9.6	13.4	7.2
2004	9.7	9.1	9.8	7.1	10.5	10.3	13.2	9.1	8.4	10.0	9.5	13.1	7.0
2005	9.7	9.1	..	7.2	10.6	10.2	12.9	9.1	8.6	10.1	9.5	13.5	6.6
2006	9.5 [P]	8.9	..	..	10.2	..	..	9.1	..	9.9	..	..	..

Note:
Estimated population (mid-year), live birth and death rates up to the latest available data, as given in the *United Nations Monthly Bulletin of Statistics (May 2007), the United Nations Demographic Yearbook system*, and the *Eurostat Yearbook 2006 (May 2007).*

1   Republic of Cyprus - Greek Cypriot controlled area only
2   Including former GDR throughout.
3   Greece - mid-year population excludes armed forces stationed outside the country but includes alien forces stationed in the area.
4   Malta - including work and resident permit holders and foreigners residing in Malta.
5   Poland - excluding civilian aliens within the country but including civilian nationals temporarily outside the country. Average year data for 2000 and 2001 contain revised data according to the final results of the population census 2002.
6   Portugal - including the Azores and Madeira islands.
7   Spain - including the Balearic and Canary Islands.
8   The European Union consists of 25 member countries (EU25) - 1 May 2004 (10 new member countries).
9   Including the Indian held part of Jammu and Kashmir, the final status of which has not yet been determined.
10 Japan - excluding diplomatic personnel outside the country and foreign military and civilian personnel and their dependants stationed in the area. Rates are based on births to or deaths of Japanese nationals only.

11 USA - excluding armed forces overseas and civilian citizens absent from the country for extended periods.
12 2002 to 2005 mid-year population estimates for the United Kingdom have been updated to include the latest revised estimates that take into account improved estimates of international migration.
13 Indicates population estimates of uncertain reliability.
14 Figures were updated taking into account the results of the 2002 All Russian Population Census.
15 Mid-year estimates have been adjusted for under-enumeration.
16 For statistical purposes the data for China do not include those for the Hong Kong SAR, Macao SAR and Taiwan province of China. Data for the period 1996 to 2000 have been adjusted on the basis of the Population Census of 2000. Data from 2001 to 2004 have been estimated on the basis of the annual national sample surveys of Population Changes. Estimate of uncertain reliability. Death rates for 1999–2003 and birth rates for 2000–2003 were obtained by the Sample Survey of Population Change 2003 in China.
17 Rate is for 1990–1995.
18 As at 1 January - Eurostat Yearbook 2006 (May 2007).
19 Data refer to 15 April.
p   provisional.

Table 1.1 continued	Population and vital rates: international

Selected countries   Numbers (thousands)/Rates per thousand

Year	United Kingdom	Italy	Latvia	Lithuania	Luxem– bourg	Malta[4]	Nether– lands	Poland[5]	Portugal[6]	Slovakia	Slovenia	Spain[7]	Sweden	EU–25[8]
Population (thousands)														
1971	55,928	54,073	2,366	3,160	342	330	13,194	32,800	8,644	4,540	1,732	34,216	8,098	..
1976	56,216	55,718	2,465	3,315	361	330	13,774	34,360	9,356	4,764	1,809	36,118	8,222	420,258
1981	56,357	56,502	2,515	3,422	365	322	14,247	35,902	9,851	4,996	1,910	37,741	8,320	428,563
1986	56,684	56,596	2,588	3,560	368	344	14,572	37,456	10,011	5,179	1,975	38,536	8,370	433,555
1991	57,439	56,751	2,662	3,742	387	358	15,070	38,245	9,871	5,283	2,002	38,920	8,617	440,927
1996	58,164	56,860	2,457	3,602	414	380	15,530	38,618	10,058	5,374	1,991	39,479	8,841	447,113
2001	59,113	56,978	2,355	3,481	442	393	16,046	38,251	10,293	5,380	1,992	40,721	8,896	452,146
2002	59,323 [12]	57,157	2,339	3,469	446	396	16,149	38,232	10,368	5,379	1,996	41,314	8,925	453,989
2003	59,557 [12]	57,605	2,325	3,454	450	399	16,225	38,195	10,441	5,379	1,997	42,005	8,958	456,059
2004	59,846 [12]	58,175	2,313	3,436	453	401	16,282	38,180	10,502	5,382	1,997	42,692	8,994	458,266
2005	60,238 [12]	58,610	2,306 [18,P]	3,410 [P]	460	403 [18,P]	16,320	38,174[18,P]	10,550	5,390	2,000	43,400 [P]	9,030	460,645[P]
2006	60,587	58,880 [P]	2,295 [18,P]	3,390 [P]	460 [18,P]	404 [18,P]	16,340 [P]	38,157[18,P]	10,570 [18,P]	5,400 [P]	2,010 [P]	44,100 [P]	9,030 [P]	462,650[P]
Population changes (per 1,000 per annum)														
1971–76	1.0	6.1	8.4	9.8	10.7	0.0	8.8	9.5	16.5	9.9	8.9	11.1	3.1	..
1976–81	0.5	2.8	4.1	6.5	2.5	– 4.8	6.9	9.0	10.6	9.7	11.2	9.0	2.4	4.0
1981–86	1.2	0.3	5.8	8.1	1.8	13.7	4.6	8.7	3.2	7.3	6.8	4.2	1.2	2.3
1986–91	2.7	0.5	5.7	10.2	10.2	8.1	6.8	4.2	–2.8	4.0	2.7	2.0	5.9	3.4
1991–96	2.5	0.4	–12.8	– 1.7	13.9	8.4	6.1	2.0	3.8	3.4	–1.1	2.9	5.1	2.7
1996–01	3.3	0.4	– 8.3	– 6.7	13.5	6.8	6.6	– 1.9	4.7	0.2	0.1	6.3	1.2	2.3
2001–02	3.5	3.1	– 6.8	– 3.4	9.0	7.6	6.4	– 0.5	7.3	–0.2	2.0	14.6	3.3	4.1
2002–03	3.9	7.8	– 6.0	– 4.3	9.0	7.6	4.7	– 1.0	7.0	0.0	0.5	16.7	3.7	4.6
2003–04	4.8	9.9	– 5.2	– 5.2	6.7	5.0	3.5	– 0.4	5.8	0.6	0.0	16.4	4.0	4.8
2004–05	6.6	7.5	– 3.0	– 7.6	15.5	5.0	2.3	– 0.2	4.6	1.5	1.5	16.6	4.0	5.2
2005–06	5.8	4.6	– 4.8	– 5.9	0.0	2.5	1.2	– 0.4	1.9	1.9	5.0	16.1	0.0	4.4
Live birth rate (per 1,000 population per annum)														
1971–75	14.1	16.0	14.4	16.4	11.6	17.5	14.9	17.9	20.3	19.7	16.4	19.2	13.5	..
1976–80	12.5	12.6	13.9	15.4	11.2	17.0	12.6	19.3	17.9	20.3	16.3	17.1	11.6	..
1981–85	12.9	10.6	15.2	16.0	11.6	15.3	12.2	19.0	14.5	18.0	14.2	12.8	11.3	..
1986–90	13.7	9.8	15.3	15.8	12.2	16.0	12.8	15.5	11.9	15.8	12.3	10.8	13.2	..
1991–95	13.2	9.6	10.8	13.1	13.3	14.0	12.8	12.9	11.4	13.3	10.0	9.8	13.3	..
1996–00	12.0	9.2	8.0	10.4	13.1	12.0	12.6	10.4	11.3	10.7	9.1	9.5	10.2	10.6
2001	11.3	9.2	8.3	9.1	12.4	9.8	12.6	9.6	11.0	9.5	8.8	10.0	10.3	10.4
2002	11.3	9.4	8.6	8.7	12.0	9.6	12.5	9.3	11.0	9.5	8.8	.10.2	10.7	10.3
2003	11.7	9.4	9.0	8.9	11.8	9.8	12.3	9.2	10.8	9.6	8.7	10.5	11.1	..
2004	12.1	9.7	8.8	8.9	11.8	9.7	11.9	9.3	10.4	10.0	9.0	10.6	11.2	..
2005	12.0	9.5	9.4	9.0	11.8	9.6	11.5	9.6	10.4	9.3	9.1	10.7	11.2	..
2006	12.4 [P]	..	..	9.2	..	..	11.3	..	10.0	..	..	..	11.7	..
Death rate (per 1,000 population per annum)														
1971–75	11.8	9.8	11.6	9.0	12.2	9.0	8.3	8.4	11.0	9.4	10.0	8.5	10.5	..
1976–80	11.9	9.7	12.6	10.1	11.5	9.0	8.1	9.2	10.1	9.8	9.8	8.0	10.9	..
1981–85	11.7	9.5	12.8	10.6	11.2	8.2	8.3	9.6	9.6	10.1	10.3	7.7	11.0	..
1986–90	11.4	9.4	12.4	10.3	10.5	7.4	8.5	10.0	9.6	10.1	9.6	8.2	11.1	..
1991–95	11.1	9.7	14.8	12.0	9.8	7.6	8.8	10.2	10.4	9.9	9.7	8.7	10.9	..
1996–00	10.6	9.8	13.9	11.5	9.0	7.7	8.8	9.8	10.5	9.7	9.5	9.1	10.6	10.0
2001	10.2	9.6	14.0	11.6	8.4	7.6	8.7	9.5	10.2	9.7	9.3	8.9	10.5	9.7
2002	10.2	9.8	13.9	11.8	8.4	7.8	8.8	9.4	10.2	9.6	9.4	8.9	10.6	9.8
2003	10.3	10.2	13.9	11.9	9.0	7.7	8.7	9.6	10.4	9.7	9.7	9.2	10.4	..
2004	9.7	9.4	13.9	12.0	7.6	7.2	8.4	9.5	9.7	9.6	9.3	8.2	10.1	..
2005	9.7	9.7	14.2	12.8	8.0	..	8.4	9.7	..	9.9	9.4	8.9	10.2	..
2006	9.5 [P]	..	..	13.2	..	..	8.3	..	9.7	..	..	..	10.0	..

See notes on first page of table.

Table 1.1 continued	Population and vital rates: international

Selected countries   Numbers (thousands)/Rates per thousand

Year	United Kingdom	EU–25[8]	Russian Federation	Australia	Canada	New Zealand	China	India[9]	Japan[10]	USA[11]
Population (thousands)										
1971	55,928	..	130,934	13,067	22,026	2,899	852,290 [16]	551,311	105,145	207,661
1976	56,216	420,258	135,027	14,033	23,517	3,163	937,170 [16]	617,248	113,094	218,035
1981	56,357	428,563	139,225	14,923	24,900	3,195	1,008,460 [16]	675,185	117,902	229,958
1986	56,684	433,555	144,154	16,018	26,204	3,317	1,086,733 [16]	767,199	121,672	240,680
1991	57,439	440,927	148,245	17,284	28,031	3,477	1,170,100 [16]	851,897	123,964	252,639
1996	58,164	447,113	148,160[14]	18,311[15]	29,611[15]	3,732	1,217,550 [16]	942,157 [13]	125,757	269,394
2001	59,113	452,146	145,976[14]	19,413[15]	31,021[15]	3,880	1,271,850 [16]	1,035,066 [13]	127,130	285,108
2002	59,323 [12]	453,989	145,306 [14]	19,641[15]	31,373[15]	3,939	1,280,400 [16]	1,050,640 [13]	127,400	287,985
2003	59,557 [12]	456,059	144,566 [14]	19,873[15]	31,669[15]	4,009	1,288,400 [16]	1,068,214 [13]	127,650	290,850
2004	59,846 [12]	458,266	143,821 [14]	20,111[15]	32,974[15]	4,061	1,296,075 [16]	1,085,600 [13]	127,670	293,623
2005	60,238 [12]	460,645[P]	143,500 [14]	20,330[15,P]	32,270[15,P]	4,100	1,303,720 [16]	1,097,000 [13]	127,770	296,410
2006	60,587	462,650[P]	..	20,610[15,P]	32,620[15,P]	4,140 [P]	..	..	127,760	..
Population changes (per 1,000 per annum)										
1971–76	1.0	..	6.3	14.8	13.5	18.2	19.9	23.9	15.1	10.0
1976–81	0.5	4.0	6.2	12.7	11.8	2.0	15.2	18.8	8.5	10.9
1981–86	1.2	2.3	7.1	14.7	10.5	7.6	15.5	27.3	6.4	9.3
1986–91	2.7	3.4	5.7	15.8	13.9	9.6	15.3	22.1	3.8	9.9
1991–96	2.5	2.7	−1.7	11.9	11.3	14.7	10.3	21.1	2.9	12.1
1996–01	3.3	2.3	−2.9	12.0	9.5	7.9	8.9	19.7	2.2	11.7
2001–02	3.5	4.1	− 4.6	11.7	11.3	15.2	6.7	15.0	2.1	10.1
2002–03	3.9	4.6	− 5.1	11.8	9.4	17.8	6.2	16.7	2.0	9.9
2003–04	4.8	4.8	− 5.2	12.0	9.6	13.0	6.0	16.3	0.2	9.5
2004–05	6.6	5.2	− 2.2	10.9	9.3	9.6	5.9	10.5	0.8	9.5
2005–06	5.8	4.4	..	13.8	10.8	9.8	..	..	−0.1	..
Live birth rate (per 1,000 population per annum)										
1971–75	14.1	..	..	18.8	15.9	20.4	27.2	35.6	18.6	15.3
1976–80	12.5	..	..	15.7	15.5	16.8	18.6	33.4	14.9	15.2
1981–85	12.9	..	..	15.6	15.1	15.8	19.2	..	12.6	15.7
1986–90	13.7	..	..	15.1	14.8	17.1	..	..	10.6	16.0
1991–95	13.2	..	10.2	..	..	..	18.5 [17]	..	..	..
1996–00	12.0	10.6	8.6	13.4	11.4	14.9	..	..	9.5	14.3
2001	11.3	10.4	9.0	12.7	10.8	14.4	13.4 [16]	25.4	9.2	14.1
2002	11.3	10.3	9.6	12.8	10.5	13.7	12.9 [16]	25.0	9.1	13.9
2003	11.7	..	10.2	12.6	10.6	14.0	12.4 [16]	24.8	8.8	14.1
2004	12.1	..	10.5	12.7	10.5	14.3	12.3 [16]	24.1	8.7	14.0
2005	12.0	..	..	12.9	..	..	..	..	..	..
2006	12.4 [P]	..	..	12.9	..	..	..	..	..	..
Death rate (per 1,000 population per annum)										
1971–75	11.8	..	..	8.2	7.4	8.4	7.3	15.5	6.4	9.1
1976–80	11.9	..	..	7.6	7.2	8.2	6.6	13.8	6.1	8.7
1981–85	11.7	..	..	7.3	7.0	8.1	6.7	..	6.1	8.6
1986–90	11.4	..	..	7.2	7.3	8.2	..	..	6.4	8.7
1991–95	11.1	..	13.7	..	..	..	..	..	..	..
1996–00	10.6	10.0	14.3	6.9	7.2	7.2	..	..	7.4	8.5
2001	10.2	9.7	15.4	6.6	7.1	7.2	6.4 [16]	8.4	7.6	8.5
2002	10.2	9.8	16.1	6.8	7.1	7.1	6.4 [16]	8.1	7.7	8.5
2003	10.3	..	16.4	6.7	7.1	7.0	6.4 [16]	8.0	8.0	8.4
2004	9.7	..	16.0	6.6	7.3	7.0	6.4 [16]	7.5	8.1	8.2
2005	9.7	..	..	6.4	..	..	..	..	..	..
2006	9.5 [P]	..	..	6.5	..	..	..	..	..	..

See notes on first page of table.

Table 1.2	**Population: national**

Constituent countries of the United Kingdom

Numbers (thousands) and percentage age distribution

Mid-year	United Kingdom	Great Britain	England and Wales	England	Wales	Scotland	Northern Ireland
Estimates							
1971	55,928	54,388	49,152	46,412	2,740	5,236	1,540
1976	56,216	54,693	49,459	46,660	2,799	5,233	1,524
1981	56,357	54,815	49,634	46,821	2,813	5,180	1,543
1986	56,684	55,110	49,999	47,188	2,811	5,112	1,574
1991	57,439	55,831	50,748	47,875	2,873	5,083	1,607
1993	57,714	56,078	50,986	48,102	2,884	5,092	1,636
1994	57,862	56,218	51,116	48,229	2,887	5,102	1,644
1995	58,025	56,376	51,272	48,383	2,889	5,104	1,649
1996	58,164	56,503	51,410	48,519	2,891	5,092	1,662
1997	58,314	56,643	51,560	48,665	2,895	5,083	1,671
1998	58,475	56,797	51,720	48,821	2,900	5,077	1,678
1999	58,684	57,005	51,933	49,033	2,901	5,072	1,679
2000	58,886	57,203	52,140	49,233	2,907	5,063	1,683
2001	59,113	57,424	52,360	49,450	2,910	5,064	1,689
2002 [1]	59,323	57,627	52,572	49,652	2,920	5,055	1,697
2003 [1]	59,557	57,855	52,797	49,866	2,931	5,057	1,703
2004 [1]	59,846	58,136	53,057	50,111	2,946	5,078	1,710
2005 [1]	60,238	58,514	53,419	50,466	2,954	5,095	1,724
2006	60,587	58,846	53,729	50,763	2,966	5,117	1,742
2005 by age group **(percentages)**							
0–4	*5.8*	*5.8*	*5.8*	*5.8*	*5.4*	*5.2*	*6.4*
5–15	*13.3*	*13.2*	*13.3*	*13.2*	*13.5*	*12.8*	*15.4*
16–44	*40.2*	*40.2*	*40.3*	*40.4*	*37.5*	*39.5*	*41.3*
45–64M/59F	*22.0*	*22.0*	*21.9*	*21.9*	*22.9*	*23.3*	*20.6*
65M/60F–74	*11.0*	*11.1*	*11.0*	*10.9*	*12.2*	*11.7*	*10.0*
75 and over	*7.7*	*7.7*	*7.8*	*7.7*	*8.5*	*7.5*	*6.3*
Projections[2]							
2006	60,587	58,846	53,729	50,763	2,966	5,117	1,742
2011	62,761	60,950	55,744	52,706	3,038	5,206	1,812
2016	64,975	63,107	57,837	54,724	3,113	5,270	1,868
2021	67,191	65,269	59,943	56,757	3,186	5,326	1,922
2026	69,260	67,294	61,931	58,682	3,248	5,363	1,966
2031	71,100	69,101	63,727	60,432	3,296	5,374	1,999
2031 by age group **(percentages)**							
0–4	*5.5*	*5.5*	*5.6*	*5.6*	*5.1*	*4.7*	*5.7*
5–15	*12.4*	*12.4*	*12.5*	*12.5*	*12.1*	*11.2*	*13.4*
16–44	*36.4*	*36.4*	*36.6*	*36.8*	*33.7*	*34.3*	*35.5*
45–64[3]	*23.4*	*23.4*	*23.3*	*23.3*	*23.5*	*24.4*	*23.9*
65–74[3]	*10.6*	*10.6*	*10.5*	*10.4*	*12.0*	*12.4*	*10.7*
75 and over	*11.6*	*11.6*	*11.5*	*11.4*	*13.7*	*12.9*	*10.9*

Note: Figures may not add exactly due to rounding.

1 2002 to 2005 mid-year population estimates for England and Wales and the United Kingdom have been updated to include the latest revised estimates that take into account improved estimates of international migration.

2 National projections based on mid-2006 population estimates.

3 Between 2010 and 2020, state retirement age will change from 65 years for men and 60 years for women to 65 years for both sexes.
   Between 2024 and 2026, state pension age will increase from 65 years to 66 years for both men and women.

Table 1.3	Population: subnational

Government Office Regions of England — Numbers (thousands) and percentage age distribution

Mid-year	North East	North West	Yorkshire and The Humber	East Midlands	West Midlands	East	London	South East	South West
Estimates									
1971	2,679	7,108	4,902	3,652	5,146	4,454	7,529	6,830	4,112
1976	2,671	7,043	4,924	3,774	5,178	4,672	7,089	7,029	4,280
1981	2,636	6,940	4,918	3,853	5,187	4,854	6,806	7,245	4,381
1986	2,594	6,833	4,884	3,908	5,180	4,999	6,774	7,468	4,548
1991	2,587	6,843	4,936	4,011	5,230	5,121	6,829	7,629	4,688
1993	2,594	6,847	4,954	4,056	5,246	5,154	6,844	7,673	4,734
1994	2,589	6,839	4,960	4,072	5,249	5,178	6,874	7,712	4,757
1995	2,583	6,828	4,961	4,092	5,257	5,206	6,913	7,763	4,782
1996	2,576	6,810	4,961	4,108	5,263	5,233	6,974	7,800	4,793
1997	2,568	6,794	4,958	4,120	5,262	5,267	7,015	7,853	4,827
1998	2,561	6,792	4,958	4,133	5,271	5,302	7,065	7,889	4,849
1999	2,550	6,773	4,956	4,152	5,272	5,339	7,154	7,955	4,881
2000	2,543	6,774	4,959	4,168	5,270	5,375	7,237	7,991	4,917
2001	2,540	6,773	4,977	4,190	5,281	5,400	7,322	8,023	4,943
2002 [1]	2,541	6,778	5,002	4,222	5,295	5,433	7,362	8,047	4,973
2003 [1]	2,541	6,800	5,028	4,254	5,312	5,475	7,364	8,087	5,005
2004 [1]	2,542	6,820	5,064	4,291	5,327	5,511	7,389	8,125	5,042
2005 [1]	2,550	6,840	5,108	4,328	5,351	5,563	7,456	8,185	5,087
2006	2,556	6,853	5,142	4,364	5,367	5,607	7,512	8,238	5,124
2005 by age group **(percentages)**									
0–4	5.4	5.7	5.7	5.5	6.0	5.8	6.8	5.7	5.2
5–15	13.0	13.6	13.3	13.3	13.7	13.5	12.4	13.5	12.8
16–44	39.0	39.5	40.2	39.5	39.2	38.7	48.5	39.0	37.1
45–64M/59F	23.0	22.3	22.0	22.6	21.9	22.5	18.5	22.5	23.0
65M/60F–74	11.7	11.3	11.1	11.3	11.4	11.4	8.1	11.1	12.4
75 and over	7.9	7.6	7.6	7.8	7.8	8.1	5.7	8.2	9.4
Projections[2]									
2006	2,543	6,863	5,125	4,355	5,362	5,604	7,512	8,228	5,122
2011	2,544	6,959	5,259	4,496	5,438	5,808	7,723	8,440	5,302
2016	2,549	7,066	5,398	4,637	5,522	6,014	7,946	8,661	5,484
2021	2,557	7,178	5,536	4,779	5,612	6,221	8,160	8,891	5,672
2026	2,562	7,276	5,664	4,910	5,692	6,412	8,344	9,111	5,851
2029	2,562	7,323	5,730	4,977	5,732	6,515	8,443	9,229	5,947
2029 by age group **(percentages)**									
0–4	4.9	5.3	5.3	5.1	5.6	5.3	6.4	5.3	4.7
5–15	11.6	12.1	12.1	11.8	12.6	12.1	12.0	12.1	11.2
16–44	34.7	35.9	36.5	34.5	35.3	34.3	44.3	35.2	33.0
45–64[3]	24.3	24.5	24.2	25.0	24.1	24.9	23.5	24.7	25.0
65–74[3]	12.2	11.0	10.8	11.5	10.7	11.1	7.3	10.8	12.2
75 and over	12.3	11.2	11.1	12.2	11.7	12.3	6.5	11.9	13.8

Note: Figures may not add exactly due to rounding.

1   2002 to 2005 mid-year population estimates for England and Wales and the United Kingdom have been updated to include the latest revised estimates that take into account improved estimates of international migration.

2   These projections are based on the revised mid-2004 population estimates and are consistent with the 2004-based national projections produced by the Government Actuary's Department.

3   Between 2010 and 2020, state retirement age will change from 65 years for men and 60 years for women to 65 years for both sexes.
    Between 2024 and 2026, state pension age will increase from 65 years to 66 years for both men and women.

Table 1.4	Population: age and sex

Constituent countries of the United Kingdom   Numbers (thousands)

Mid-year	All ages	Age group												Under 16	16–64M/59F[1]	65M/60F[1] and over
		Under 1	1–4	5–14	15–24	25–34	35–44	45–59	60–64	65–74	75–84	85–89	90 and over			
United Kingdom																
Persons																
1981	56,357	730	2,726	8,147	9,019	8,010	6,774	9,540	2,935	5,195	2,677	..	..	12,543	33,780	10,035
1986	56,684	748	2,886	7,143	9,200	8,007	7,711	9,212	3,069	5,020	2,971	716	..	11,645	34,725	10,313
1991	57,439	790	3,077	7,141	8,168	7,918	7,918	9,500	2,888	5,067	3,119	626	248	11,685	35,197	10,557
1996	58,164	719	3,019	7,544	7,231	9,131	7,958	10,553	2,785	5,066	3,129	711	317	12,018	35,498	10,649
2000	58,886	682	2,869	7,652	7,139	8,646	8,678	11,011	2,900	4,940	3,249	755	364	11,959	36,138	10,788
2001	59,113	663	2,819	7,624	7,261	8,475	8,846	11,168	2,884	4,947	3,296	753	377	11,863	36,406	10,845
2002 [2]	59,323	661	2,753	7,603	7,400	8,264	9,004	11,307	2,892	4,967	3,344	738	388	11,785	36,622	10,916
2003 [2]	59,557	680	2,706	7,546	7,573	8,084	9,105	11,412	2,949	5,001	3,398	706	399	11,720	36,826	11,012
2004 [2]	59,846	705	2,686	7,475	7,739	7,954	9,185	11,507	3,027	5,028	3,431	702	409	11,645	37,083	11,117
2005 [2]	60,238	716	2,713	7,373	7,886	7,935	9,245	11,616	3,114	5,046	3,420	755	419	11,589	37,418	11,232
2006	60,587	732	2,765	7,241	8,020	7,896	9,262	11,744	3,240	5,029	3,416	820	423	11,537	37,707	11,344
Males																
1981	27,412	374	1,400	4,184	4,596	4,035	3,409	4,711	1,376	2,264	922	..	..	6,439	17,646	3,327
1986	27,542	384	1,478	3,664	4,663	4,022	3,864	4,572	1,463	2,206	1,060	166	..	5,968	18,142	3,432
1991	27,909	403	1,572	3,655	4,146	4,432	3,949	4,732	1,390	2,272	1,146	166	46	5,976	18,303	3,630
1996	28,287	369	1,547	3,857	3,652	4,540	3,954	5,244	1,360	2,311	1,187	201	65	6,148	18,375	3,764
2000	28,690	350	1,469	3,920	3,606	4,292	4,298	5,457	1,420	2,294	1,278	225	81	6,128	18,685	3,878
2001	28,832	338	1,445	3,906	3,672	4,215	4,382	5,534	1,412	2,308	1,308	227	85	6,077	18,827	3,928
2002 [2]	28,964	338	1,408	3,897	3,758	4,114	4,462	5,594	1,414	2,325	1,338	226	89	6,037	18,949	3,978
2003 [2]	29,109	349	1,384	3,868	3,855	4,024	4,514	5,646	1,440	2,347	1,369	219	94	6,006	19,075	4,028
2004 [2]	29,278	362	1,376	3,832	3,953	3,960	4,546	5,691	1,479	2,365	1,392	223	98	5,971	19,229	4,078
2005 [2]	29,497	367	1,389	3,781	4,030	3,952	4,581	5,745	1,522	2,380	1,400	247	103	5,941	19,426	4,130
2006	29,694	374	1,416	3,709	4,108	3,940	4,586	5,804	1,584	2,379	1,413	273	106	5,912	19,611	4,171
Females																
1981	28,946	356	1,327	3,963	4,423	3,975	3,365	4,829	1,559	2,931	1,756	..	..	6,104	16,134	6,708
1986	29,142	364	1,408	3,480	4,538	3,985	3,847	4,639	1,606	2,814	1,911	550	..	5,678	16,583	6,881
1991	29,530	387	1,505	3,487	4,021	4,466	3,968	4,769	1,498	2,795	1,972	460	202	5,709	16,894	6,927
1996	29,877	350	1,472	3,687	3,579	4,591	4,005	5,309	1,426	2,755	1,942	509	252	5,870	17,123	6,885
2000	30,196	333	1,399	3,732	3,533	4,353	4,380	5,554	1,481	2,646	1,971	530	283	5,832	17,453	6,911
2001	30,281	324	1,375	3,718	3,589	4,260	4,465	5,634	1,473	2,640	1,987	526	292	5,786	17,579	6,917
2002 [2]	30,359	323	1,346	3,706	3,642	4,150	4,542	5,713	1,478	2,642	2,006	513	299	5,748	17,673	6,938
2003 [2]	30,449	331	1,322	3,678	3,718	4,060	4,590	5,766	1,509	2,654	2,029	487	305	5,714	17,751	6,984
2004 [2]	30,568	343	1,310	3,642	3,785	3,993	4,639	5,816	1,548	2,662	2,040	479	310	5,674	17,854	7,039
2005 [2]	30,741	349	1,324	3,592	3,856	3,983	4,663	5,871	1,591	2,666	2,020	509	316	5,647	17,992	7,102
2006	30,893	357	1,349	3,532	3,912	3,956	4,675	5,940	1,656	2,650	2,002	547	317	5,625	18,096	7,172
England and Wales																
Persons																
1981	49,634	634	2,372	7,085	7,873	7,086	5,996	8,433	2,607	4,619	2,388	383	157	10,910	29,796	8,928
1986	49,999	654	2,522	6,226	8,061	7,052	6,856	8,136	2,725	4,470	2,655	461	182	10,161	30,647	9,190
1991	50,748	698	2,713	6,248	7,165	7,862	7,022	8,407	2,553	4,506	2,790	561	223	10,247	31,100	9,400
1996	51,410	637	2,668	6,636	6,336	8,076	7,017	9,363	2,457	4,496	2,801	639	285	10,584	31,353	9,474
2000	52,140	607	2,544	6,757	6,275	7,682	7,661	9,764	2,564	4,372	2,907	680	328	10,572	31,977	9,591
2001	52,360	589	2,502	6,740	6,387	7,536	7,816	9,898	2,549	4,377	2,947	677	340	10,495	32,226	9,639
2002 [2]	52,572	589	2,445	6,728	6,518	7,357	7,964	10,018	2,555	4,394	2,989	664	351	10,437	32,435	9,700
2003 [2]	52,797	607	2,404	6,682	6,679	7,203	8,058	10,104	2,606	4,422	3,037	634	360	10,388	32,626	9,783
2004 [2]	53,057	629	2,390	6,618	6,836	7,090	8,133	10,177	2,675	4,445	3,063	632	370	10,326	32,856	9,875
2005 [2]	53,419	639	2,415	6,528	6,974	7,078	8,194	10,264	2,757	4,461	3,052	680	379	10,278	33,164	9,977
2006	53,729	653	2,462	6,412	7,095	7,040	8,213	10,369	2,874	4,444	3,045	740	382	10,235	33,417	10,077
Males																
1981	24,160	324	1,218	3,639	4,011	3,569	3,024	4,178	1,227	2,020	825	94	32	5,601	15,589	2,970
1986	24,311	335	1,292	3,194	4,083	3,542	3,438	4,053	1,302	1,972	951	115	35	5,208	16,031	3,072
1991	24,681	356	1,385	3,198	3,638	3,920	3,504	4,199	1,234	2,027	1,029	150	42	5,240	16,193	3,248
1996	25,030	327	1,368	3,393	3,202	4,020	3,489	4,659	1,205	2,059	1,067	182	59	5,416	16,247	3,367
2000	25,438	311	1,303	3,462	3,172	3,823	3,802	4,842	1,259	2,040	1,148	204	73	5,416	16,556	3,466
2001	25,574	301	1,281	3,453	3,231	3,758	3,881	4,907	1,252	2,052	1,175	206	77	5,376	16,688	3,510
2002 [2]	25,704	301	1,249	3,448	3,311	3,672	3,957	4,958	1,253	2,067	1,202	204	81	5,346	16,804	3,554
2003 [2]	25,841	312	1,230	3,425	3,399	3,594	4,007	5,002	1,276	2,085	1,229	198	85	5,324	16,920	3,597
2004 [2]	25,995	323	1,225	3,394	3,493	3,538	4,036	5,037	1,310	2,100	1,248	202	89	5,295	17,060	3,640
2005 [2]	26,197	327	1,237	3,348	3,565	3,530	4,073	5,080	1,351	2,113	1,256	224	94	5,270	17,241	3,685
2006	26,371	334	1,261	3,284	3,636	3,517	4,080	5,130	1,407	2,111	1,267	248	96	5,245	17,405	3,722
Females																
1981	25,474	310	1,154	3,446	3,863	3,517	2,972	4,255	1,380	2,599	1,564	289	126	5,309	14,207	5,958
1986	25,687	319	1,231	3,032	3,978	3,509	3,418	4,083	1,422	2,498	1,704	346	148	4,953	14,616	6,118
1991	26,067	342	1,328	3,050	3,527	3,943	3,517	4,208	1,319	2,479	1,761	411	181	5,007	14,908	6,152
1996	26,381	310	1,300	3,243	3,134	4,056	3,528	4,704	1,252	2,437	1,734	457	227	5,168	15,106	6,107
2000	26,702	296	1,241	3,296	3,103	3,859	3,859	4,923	1,304	2,332	1,758	476	255	5,155	15,421	6,126
2001	26,786	288	1,220	3,287	3,156	3,778	3,935	4,992	1,297	2,326	1,771	471	263	5,119	15,538	6,129
2002 [2]	26,868	287	1,195	3,280	3,207	3,685	4,007	5,060	1,302	2,328	1,787	460	270	5,091	15,631	6,146
2003 [2]	26,956	295	1,175	3,256	3,280	3,610	4,051	5,103	1,329	2,338	1,807	436	275	5,064	15,705	6,186
2004 [2]	27,062	306	1,165	3,224	3,342	3,552	4,097	5,141	1,365	2,345	1,815	430	280	5,031	15,796	6,235
2005 [2]	27,223	312	1,178	3,180	3,409	3,548	4,121	5,183	1,406	2,348	1,796	456	285	5,008	15,922	6,292
2006	27,358	319	1,201	3,127	3,458	3,523	4,134	5,239	1,466	2,333	1,778	492	286	4,990	16,012	6,355

Note: Figures may not add exactly due to rounding.
1 Between 2010 and 2020, state retirement age will change from 65 years for men and 60 years for women to 65 years for both sexes.
2 2002 to 2005 mid-year population estimates for England and Wales and the United Kingdom have been updated to include the latest revised estimates that take into account improved estimates of international migration.
Tel no. for all enquiries relating to population estimates:- 01329 813318

Table 1.4 continued	Population: age and sex

Constituent countries of the United Kingdom　　　　　　　　　　　　　　　　　　Numbers (thousands)

Mid-year	All ages	Under 1	1–4	5–14	15–24	25–34	35–44	45–59	60–64	65–74	75–84	85–89	90 and over	Under 16	16–64M/59F[1]	65M/65F[1] and over
England																
Persons																
1981	46,821	598	2,235	6,678	7,440	6,703	5,663	7,948	2,449	4,347	2,249	362	149	10,285	28,133	8,403
1986	47,188	618	2,380	5,869	7,623	6,682	6,478	7,672	2,559	4,199	2,501	435	172	9,583	28,962	8,643
1991	47,875	660	2,560	5,885	6,772	7,460	6,633	7,920	2,399	4,222	2,626	529	210	9,658	29,390	8,827
1996	48,519	603	2,523	6,255	5,985	7,667	6,638	8,822	2,310	4,217	2,631	602	269	9,985	29,639	8,895
2000	49,233	575	2,406	6,375	5,923	7,304	7,257	9,199	2,411	4,107	2,727	641	309	9,980	30,243	9,010
2001	49,450	558	2,366	6,359	6,032	7,171	7,407	9,327	2,395	4,113	2,764	638	321	9,908	30,487	9,055
2002 [2]	49,652	559	2,313	6,348	6,153	7,003	7,550	9,439	2,399	4,129	2,803	625	331	9,855	30,686	9,111
2003 [2]	49,866	576	2,275	6,305	6,304	6,859	7,641	9,522	2,445	4,155	2,850	596	340	9,812	30,867	9,188
2004 [2]	50,111	597	2,262	6,245	6,450	6,751	7,712	9,591	2,509	4,175	2,875	593	349	9,755	31,083	9,273
2005 [2]	50,466	606	2,289	6,161	6,583	6,742	7,772	9,675	2,586	4,189	2,865	638	357	9,713	31,384	9,370
2006	50,763	620	2,335	6,051	6,696	6,708	7,793	9,777	2,697	4,171	2,860	695	360	9,674	31,627	9,462
Males																
1981	22,795	306	1,147	3,430	3,790	3,377	2,856	3,938	1,154	1,902	777	89	30	5,280	14,717	2,798
1986	22,949	317	1,219	3,010	3,862	3,357	3,249	3,822	1,224	1,853	897	108	33	4,911	15,147	2,891
1991	23,291	336	1,307	3,011	3,439	3,721	3,311	3,957	1,159	1,900	970	141	39	4,938	15,302	3,050
1996	23,629	309	1,294	3,198	3,023	3,818	3,302	4,390	1,133	1,932	1,003	172	55	5,110	15,358	3,161
2000	24,030	294	1,232	3,266	2,995	3,638	3,604	4,562	1,184	1,917	1,078	192	69	5,113	15,661	3,256
2001	24,166	285	1,212	3,257	3,053	3,580	3,681	4,624	1,176	1,928	1,103	194	73	5,075	15,793	3,298
2002 [2]	24,290	286	1,182	3,253	3,127	3,500	3,755	4,673	1,176	1,942	1,128	193	77	5,047	15,904	3,339
2003 [2]	24,419	296	1,163	3,232	3,209	3,425	3,803	4,715	1,197	1,958	1,154	186	80	5,028	16,012	3,379
2004 [2]	24,563	306	1,159	3,202	3,297	3,371	3,831	4,748	1,228	1,972	1,172	190	84	5,001	16,143	3,419
2005 [2]	24,758	310	1,172	3,160	3,365	3,365	3,868	4,791	1,267	1,984	1,179	210	88	4,979	16,317	3,461
2006	24,926	317	1,196	3,100	3,432	3,353	3,875	4,839	1,320	1,981	1,190	233	91	4,957	16,475	3,494
Females																
1981	24,026	292	1,088	3,248	3,650	3,327	2,807	4,009	1,295	2,445	1,472	273	119	5,004	13,416	5,605
1986	24,239	301	1,161	2,859	3,761	3,325	3,229	3,850	1,335	2,346	1,604	326	140	4,672	13,815	5,752
1991	24,584	324	1,253	2,873	3,333	3,739	3,322	3,964	1,239	2,323	1,656	388	171	4,720	14,088	5,777
1996	24,890	293	1,229	3,056	2,961	3,849	3,336	4,432	1,177	2,286	1,628	430	214	4,876	14,281	5,734
2000	25,203	281	1,174	3,109	2,928	3,667	3,653	4,637	1,227	2,190	1,649	448	240	4,867	14,582	5,755
2001	25,284	273	1,154	3,102	2,979	3,591	3,726	4,702	1,219	2,185	1,661	444	248	4,834	14,694	5,757
2002 [2]	25,362	273	1,131	3,095	3,026	3,503	3,795	4,767	1,223	2,187	1,676	433	254	4,808	14,782	5,772
2003 [2]	25,448	280	1,112	3,073	3,095	3,433	3,838	4,808	1,248	2,197	1,696	410	260	4,784	14,854	5,809
2004 [2]	25,548	291	1,103	3,043	3,153	3,380	3,881	4,843	1,280	2,203	1,703	403	264	4,753	14,940	5,854
2005 [2]	25,708	296	1,117	3,001	3,218	3,378	3,905	4,885	1,319	2,206	1,686	428	269	4,733	15,066	5,908
2006	25,837	303	1,139	2,952	3,264	3,355	3,918	4,938	1,377	2,190	1,670	461	270	4,717	15,152	5,968
Wales																
Persons																
1981	2,813	36	136	407	434	383	333	485	158	272	139	21	8	626	1,663	525
1986	2,811	37	143	357	438	369	378	464	166	271	154	26	10	578	1,686	547
1991	2,873	38	153	363	393	402	389	486	154	284	164	32	13	589	1,711	573
1996	2,891	34	146	381	352	409	379	541	147	279	170	37	17	598	1,714	578
2000	2,907	32	138	383	352	378	403	565	152	265	180	39	19	591	1,734	581
2001	2,910	32	136	382	356	365	409	572	154	264	183	39	20	587	1,739	584
2002 [2]	2,920	30	132	380	365	354	414	578	156	265	185	39	20	582	1,749	589
2003 [2]	2,931	31	129	377	376	345	417	582	161	268	187	38	21	577	1,759	595
2004 [2]	2,946	32	127	373	385	339	421	586	166	270	188	39	21	572	1,773	602
2005 [2]	2,954	32	126	367	390	335	421	589	171	271	186	42	21	566	1,780	608
2006	2,966	33	127	361	399	332	421	592	177	273	186	45	22	561	1,790	615
Males																
1981	1,365	18	70	209	221	193	168	240	73	118	48	5	2	321	871	173
1986	1,362	19	73	184	221	186	190	231	79	119	54	7	2	297	885	181
1991	1,391	20	78	186	199	199	194	242	74	128	60	8	2	302	891	198
1996	1,401	17	74	195	179	203	187	269	72	128	64	10	3	306	890	206
2000	1,408	16	71	196	177	185	198	280	75	124	71	12	4	303	895	210
2001	1,409	16	69	196	179	178	200	283	75	124	73	12	4	301	895	212
2002 [2]	1,414	16	68	195	184	172	202	285	77	125	74	12	5	299	900	215
2003 [2]	1,423	16	66	194	190	168	204	287	79	127	75	11	5	296	908	218
2004 [2]	1,432	16	65	192	196	166	205	288	82	128	76	12	5	294	917	221
2005 [2]	1,439	17	65	189	200	166	205	290	84	129	77	13	5	291	924	224
2006	1,445	17	65	185	204	164	205	291	87	130	77	15	5	288	929	227
Females																
1981	1,448	18	66	199	213	190	165	246	85	154	91	16	6	305	791	352
1986	1,449	18	70	173	217	184	188	233	87	152	100	20	8	282	801	366
1991	1,482	19	75	177	194	203	195	244	80	156	104	24	10	288	820	375
1996	1,490	16	71	186	173	206	192	272	75	151	106	27	13	293	825	373
2000	1,499	15	67	186	175	192	206	285	77	142	109	28	15	288	840	371
2001	1,502	15	66	186	177	187	209	289	78	141	110	27	15	286	844	372
2002 [2]	1,506	15	65	185	181	182	212	293	80	140	111	27	16	283	849	374
2003 [2]	1,508	15	63	183	185	176	214	295	82	141	112	27	16	280	851	377
2004 [2]	1,514	15	62	182	189	172	216	298	84	142	112	26	16	278	856	380
2005 [2]	1,515	16	61	179	191	170	216	299	87	142	110	28	16	275	856	383
2006	1,521	16	62	176	195	168	216	301	90	143	108	30	16	273	861	387

See notes on first page of table.

Table 1.4 continued	Population: age and sex

Constituent countries of the United Kingdom   Numbers (thousands)

Mid-year	All ages	Under 1	1–4	5–14	15–24	25–34	35–44	45–59	60–64	65–74	75–84	85–89	90 and over	Under 16	16–64M/59F[1]	65M/60F[1] and over
Scotland																
Persons																
1981	5,180	69	249	780	875	724	603	880	260	460	232	35	14	1,188	3,110	882
1986	5,112	66	257	656	863	739	665	849	273	435	252	42	15	1,061	3,161	890
1991	5,083	66	258	634	746	795	696	853	265	441	259	51	19	1,021	3,151	912
1996	5,092	59	252	643	651	798	722	925	259	448	256	57	24	1,019	3,151	922
2000	5,063	53	230	636	628	717	774	962	263	445	267	59	28	985	3,141	937
2001	5,064	52	224	629	633	696	782	979	262	447	272	59	29	970	3,150	944
2002	5,055	51	217	622	639	669	788	993	262	449	276	58	30	955	3,150	950
2003	5,057	52	212	614	648	648	793	1,008	265	452	281	55	31	943	3,156	958
2004	5,078	54	210	609	653	635	796	1,025	270	455	286	54	31	935	3,175	968
2005	5,095	54	211	600	659	629	794	1,042	273	457	286	59	32	929	3,191	975
2006	5,117	55	213	588	668	627	790	1,058	280	456	287	63	32	922	3,213	983
Males																
1981	2,495	35	128	400	445	364	298	424	118	194	77	8	3	610	1,603	282
1986	2,462	34	131	336	438	371	331	410	127	184	86	10	3	543	1,636	283
1991	2,445	34	132	324	377	394	345	415	124	192	91	13	3	522	1,623	299
1996	2,447	30	128	328	327	392	355	454	122	198	93	15	5	521	1,616	310
2000	2,432	28	118	326	315	347	377	474	125	199	100	17	6	505	1,606	322
2001	2,434	26	115	322	319	337	379	483	125	200	103	17	6	497	1,610	327
2002	2,432	26	111	319	324	325	382	490	125	202	106	17	7	489	1,612	331
2003	2,435	26	108	314	329	315	383	496	126	204	108	16	7	483	1,616	336
2004	2,446	28	107	312	332	310	384	503	129	207	111	16	7	479	1,627	341
2005	2,456	28	107	307	335	309	382	511	131	208	112	18	7	476	1,635	345
2006	2,469	28	109	301	340	310	380	517	135	208	113	20	8	472	1,649	349
Females																
1981	2,685	33	121	380	430	359	305	456	142	265	155	27	11	579	1,506	600
1986	2,649	32	126	320	424	368	334	439	146	250	166	32	12	518	1,525	606
1991	2,639	32	126	309	369	402	351	437	141	249	168	38	16	499	1,528	612
1996	2,645	28	123	315	324	406	367	470	137	250	164	42	20	498	1,535	612
2000	2,631	26	112	310	313	369	397	488	138	246	166	43	22	480	1,535	616
2001	2,630	26	109	307	314	359	403	496	137	246	169	43	23	473	1,540	617
2002	2,623	25	106	303	315	344	406	504	137	247	171	41	23	466	1,538	619
2003	2,623	25	104	300	318	332	410	512	139	248	173	39	24	460	1,540	622
2004	2,632	26	103	297	321	325	412	521	141	248	175	38	24	457	1,549	627
2005	2,639	26	103	293	324	320	411	531	142	249	174	41	25	453	1,556	630
2006	2,647	27	104	287	328	317	410	541	145	247	174	43	25	450	1,564	634
Northern Ireland																
Persons																
1981	1,543	27	106	282	271	200	175	227	68	116	57	..	..	444	874	224
1986	1,574	28	107	261	277	217	190	227	71	115	64	16	..	423	917	234
1991	1,607	26	106	260	256	240	200	241	70	121	69	14	6	417	945	246
1996	1,662	24	99	266	244	257	220	266	70	123	72	15	7	415	993	253
2000	1,683	22	95	259	237	247	243	284	73	123	75	16	7	403	1,020	259
2001	1,689	22	93	255	240	243	248	290	74	123	77	16	7	397	1,030	262
2002	1,697	22	91	253	243	238	251	296	75	125	79	16	7	393	1,037	266
2003	1,703	21	89	251	246	233	254	301	78	126	81	16	8	388	1,044	271
2004	1,710	22	87	248	250	229	256	305	81	127	82	16	8	383	1,052	275
2005	1,724	23	88	245	253	228	257	310	84	128	83	17	8	381	1,064	280
2006	1,742	23	89	242	258	229	259	316	87	130	83	18	8	380	1,077	284
Males																
1981	757	14	54	145	140	102	87	109	32	50	21	..	..	228	454	75
1986	768	14	55	134	142	109	95	110	33	50	23	4	..	217	474	77
1991	783	13	54	133	131	119	100	118	32	53	26	4	1	213	487	83
1996	810	12	51	136	124	128	109	131	33	54	27	4	1	212	511	87
2000	820	11	49	133	120	122	119	141	35	55	29	5	2	207	524	90
2001	824	11	48	131	122	120	122	144	35	56	30	5	2	204	529	92
2002	829	11	47	130	124	117	123	147	36	56	31	5	2	202	534	94
2003	833	11	46	129	126	115	124	149	38	57	31	5	2	199	538	95
2004	836	11	45	127	128	113	125	151	39	58	32	5	2	197	542	97
2005	844	12	45	126	130	113	126	153	41	59	32	5	2	196	550	99
2006	853	12	46	124	132	113	127	156	42	60	33	6	2	195	558	101
Females																
1981	786	13	52	137	130	98	88	118	37	66	37	..	..	216	420	150
1986	805	13	52	127	135	107	96	118	38	65	41	12	..	206	442	157
1991	824	13	52	127	125	121	100	123	38	67	44	10	4	203	458	163
1996	851	11	49	130	120	129	110	135	37	69	45	11	6	203	482	167
2000	862	11	46	126	118	125	124	143	38	68	46	11	6	196	497	169
2001	865	10	45	124	119	123	126	146	38	68	47	11	6	193	501	170
2002	868	11	44	123	119	120	128	149	39	68	48	11	6	191	504	173
2003	870	10	43	122	120	118	129	152	40	68	49	11	6	189	506	175
2004	874	11	42	121	122	116	130	154	42	69	50	11	6	187	509	178
2005	880	11	43	119	123	115	131	157	43	69	50	11	6	186	514	181
2006	888	11	43	118	126	115	132	160	45	69	51	12	6	185	520	183

See notes on first page of table.

Table 1.5	Population: age, sex and legal marital status

England and Wales   Numbers (thousands)

Mid-year	Total population	Males					Females				
		Single	Married	Divorced	Widowed	Total	Single	Married	Divorced	Widowed	Total
Aged											
16 and over											
1971	36,818	4,173	12,522	187	682	17,563	3,583	12,566	296	2,810	19,255
1976	37,486	4,369	12,511	376	686	17,941	3,597	12,538	533	2,877	19,545
1981	38,724	5,013	12,238	611	698	18,559	4,114	12,284	828	2,939	20,165
1986[1]	39,837	5,625	11,867	917	695	19,103	4,617	12,000	1,165	2,953	20,734
1991	40,501	5,891	11,636	1,187	727	19,441	4,817	11,833	1,459	2,951	21,060
1996	40,827	6,225	11,310	1,346	733	19,614	5,168	11,433	1,730	2,881	21,212
1997	40,966	6,337	11,240	1,379	734	19,690	5,288	11,353	1,781	2,855	21,276
1998	41,121	6,450	11,183	1,405	735	19,773	5,406	11,284	1,827	2,832	21,349
1999	41,325	6,582	11,143	1,433	732	19,890	5,526	11,235	1,875	2,800	21,435
2000	41,569	6,721	11,113	1,456	731	20,022	5,650	11,199	1,927	2,772	21,547
2001	41,865	6,894	11,090	1,482	733	20,198	5,798	11,150	1,975	2,745	21,667
2002	42,135	7,076	11,015	1,535	731	20,357	5,961	11,073	2,035	2,709	21,778
2003	42,413	7,261	10,940	1,590	728	20,520	6,128	11,000	2,096	2,668	21,892
2004	42,719	7,461	10,863	1,644	726	20,694	6,306	10,935	2,156	2,628	22,025
2005	43,103	7,685	10,800	1,695	723	20,904	6,515	10,880	2,215	2,588	22,199
16–19											
1971	2,666	1,327	34	0	0	1,362	1,163	142	0	0	1,305
1976	2,901	1,454	28	0	0	1,482	1,289	129	0	0	1,419
1981	3,310	1,675	20	0	0	1,694	1,523	93	0	0	1,616
1986[1]	3,131	1,587	10	0	0	1,596	1,484	49	1	0	1,535
1991	2,665	1,358	8	0	0	1,366	1,267	32	0	0	1,300
1996	2,402	1,209	6	0	0	1,216	1,164	21	0	0	1,186
1997	2,478	1,246	6	0	0	1,253	1,203	20	1	1	1,225
1998	2,532	1,274	6	1	0	1,281	1,230	20	1	1	1,251
1999	2,543	1,280	6	1	1	1,288	1,234	20	1	1	1,255
2000	2,523	1,276	6	1	1	1,283	1,221	18	1	1	1,240
2001	2,567	1,304	5	1	1	1,312	1,237	16	1	1	1,255
2002	2,633	1,347	4	1	1	1,353	1,266	13	1	1	1,280
2003	2,702	1,386	4	1	1	1,391	1,299	12	0	1	1,311
2004	2,770	1,423	3	0	0	1,427	1,332	11	0	0	1,343
2005	2,807	1,441	2	0	0	1,443	1,355	9	0	0	1,364
20–24											
1971	3,773	1,211	689	3	0	1,904	745	1,113	9	2	1,869
1976	3,395	1,167	557	4	0	1,728	725	925	16	2	1,667
1981	3,744	1,420	466	10	1	1,896	1,007	811	27	2	1,847
1986[1]	4,171	1,768	317	14	0	2,099	1,383	657	32	1	2,072
1991	3,911	1,717	242	12	0	1,971	1,421	490	29	1	1,941
1996	3,291	1,538	117	3	0	1,658	1,361	260	11	1	1,633
1997	3,141	1,479	99	3	0	1,580	1,325	225	9	1	1,561
1998	3,047	1,442	86	2	0	1,530	1,306	201	8	1	1,517
1999	3,047	1,449	78	2	0	1,530	1,320	188	8	1	1,517
2000	3,088	1,470	74	3	0	1,548	1,352	180	8	1	1,540
2001	3,157	1,501	74	3	1	1,579	1,390	178	8	1	1,578
2002	3,211	1,534	69	3	1	1,607	1,428	166	8	1	1,604
2003	3,283	1,573	69	3	1	1,646	1,466	161	8	1	1,637
2004	3,358	1,621	67	3	1	1,692	1,499	156	8	2	1,665
2005	3,454	1,682	65	3	1	1,751	1,545	149	8	2	1,703
25–29											
1971	3,267	431	1,206	16	1	1,654	215	1,367	29	4	1,614
1976	3,758	533	1,326	39	2	1,900	267	1,522	65	5	1,859
1981	3,372	588	1,057	54	1	1,700	331	1,247	89	4	1,671
1986[1]	3,713	835	949	79	1	1,863	527	1,207	113	4	1,850
1991	4,154	1,132	856	82	1	2,071	800	1,158	123	2	2,083
1996	3,950	1,273	650	46	1	1,970	977	906	93	3	1,980
1997	3,877	1,294	595	42	1	1,932	1,012	844	85	3	1,945
1998	3,789	1,304	544	38	1	1,887	1,039	783	77	3	1,902
1999	3,687	1,304	497	34	1	1,836	1,051	725	72	3	1,851
2000	3,605	1,305	459	31	1	1,796	1,065	677	65	3	1,810
2001	3,487	1,293	420	28	1	1,742	1,059	625	58	3	1,745
2002	3,348	1,276	371	26	1	1,674	1,052	567	52	3	1,674
2003	3,262	1,271	337	25	1	1,634	1,053	524	49	2	1,628
2004	3,260	1,292	318	24	1	1,635	1,080	497	47	2	1,625
2005	3,327	1,335	305	23	1	1,664	1,132	483	46	2	1,663

1   The estimates by marital status for 1986 are based on the original mid-2001 population estimates, and are subject to further revision.

Table 1.5 continued	Population: age, sex and legal marital status									

England and Wales
Numbers (thousands)

Mid-year	Total population	Males					Females				
		Single	Married	Divorced	Widowed	Total	Single	Married	Divorced	Widowed	Total
30–34											
1971	2,897	206	1,244	23	3	1,475	111	1,269	34	8	1,422
1976	3,220	236	1,338	55	3	1,632	118	1,388	75	8	1,588
1981	3,715	318	1,451	97	3	1,869	165	1,544	129	9	1,846
1986[1]	3,338	355	1,197	124	2	1,679	206	1,293	154	6	1,660
1991	3,708	520	1,172	155	2	1,849	335	1,330	189	5	1,859
1996	4,126	776	1,135	138	2	2,050	551	1,316	201	7	2,076
1997	4,151	817	1,111	133	2	2,064	589	1,293	198	7	2,088
1998	4,136	848	1,078	127	3	2,056	621	1,259	193	7	2,081
1999	4,113	877	1,043	121	3	2,044	651	1,223	188	7	2,069
2000	4,076	904	1,007	114	2	2,027	679	1,182	181	7	2,049
2001	4,050	934	971	108	2	2,016	711	1,142	174	7	2,033
2002	4,000	961	921	105	2	1,990	743	1,094	167	6	2,010
2003	3,928	981	868	102	2	1,954	767	1,043	159	6	1,974
2004	3,813	987	811	97	2	1,897	777	985	149	5	1,916
2005	3,712	996	758	91	2	1,848	789	932	139	5	1,864
35–44											
1971	5,736	317	2,513	48	13	2,891	201	2,529	66	48	2,845
1976	5,608	286	2,442	104	12	2,843	167	2,427	129	42	2,765
1981	5,996	316	2,519	178	12	3,024	170	2,540	222	41	2,972
1986[1]	6,856	396	2,738	293	12	3,438	213	2,815	350	39	3,418
1991	7,022	477	2,632	384	11	3,504	280	2,760	444	34	3,517
1996	7,017	653	2,426	398	12	3,489	427	2,568	497	36	3,528
1997	7,155	708	2,433	403	12	3,556	472	2,580	511	36	3,599
1998	7,304	768	2,442	405	13	3,627	522	2,596	523	36	3,677
1999	7,475	832	2,459	408	13	3,711	577	2,617	533	37	3,763
2000	7,661	899	2,481	410	12	3,802	635	2,640	547	37	3,859
2001	7,816	963	2,494	411	12	3,881	692	2,649	558	36	3,935
2002	7,962	1,031	2,489	424	12	3,955	751	2,650	571	35	4,007
2003	8,062	1,089	2,471	435	12	4,006	805	2,634	583	34	4,056
2004	8,140	1,142	2,445	444	11	4,043	858	2,614	593	32	4,098
2005	8,195	1,195	2,415	449	11	4,070	911	2,584	597	31	4,124
45–64											
1971	11,887	502	4,995	81	173	5,751	569	4,709	125	733	6,136
1976	11,484	496	4,787	141	160	5,583	462	4,568	188	683	5,901
1981	11,040	480	4,560	218	147	5,405	386	4,358	271	620	5,635
1986[1]	10,860	461	4,422	331	141	5,355	327	4,220	388	570	5,505
1991	10,960	456	4,394	456	127	5,433	292	4,211	521	503	5,527
1996	11,820	528	4,587	628	121	5,864	318	4,466	732	440	5,956
1997	11,927	545	4,593	656	120	5,914	328	4,486	770	430	6,014
1998	12,055	565	4,608	681	121	5,974	340	4,512	807	422	6,080
1999	12,198	589	4,627	706	121	6,043	355	4,541	844	415	6,155
2000	12,328	615	4,638	727	121	6,101	372	4,564	881	410	6,227
2001	12,447	644	4,647	747	121	6,159	391	4,578	918	401	6,289
2002	12,580	671	4,649	780	120	6,220	413	4,596	960	391	6,359
2003	12,715	702	4,647	815	118	6,283	437	4,613	1,002	380	6,433
2004	12,857	736	4,644	850	117	6,347	465	4,628	1,045	371	6,510
2005	13,029	774	4,651	888	116	6,429	498	4,649	1,091	362	6,600
65 and over											
1971	6,592	179	1,840	17	492	2,527	580	1,437	32	2,016	4,065
1976	7,119	197	2,033	33	510	2,773	569	1,579	60	2,138	4,347
1981	7,548	216	2,167	54	534	2,971	533	1,692	90	2,263	4,578
1986[1]	7,768	223	2,234	76	539	3,072	477	1,759	127	2,333	4,696
1991	8,080	231	2,332	99	586	3,248	422	1,853	152	2,405	4,832
1996	8,221	247	2,390	134	597	3,367	369	1,897	196	2,393	4,854
1997	8,237	248	2,404	143	597	3,391	358	1,904	207	2,377	4,845
1998	8,258	250	2,418	152	597	3,417	348	1,913	218	2,362	4,841
1999	8,262	251	2,431	161	594	3,437	338	1,922	230	2,336	4,825
2000	8,287	252	2,449	171	593	3,466	327	1,938	243	2,313	4,821
2001	8,342	254	2,478	183	595	3,510	318	1,960	259	2,295	4,832
2002	8,400	256	2,511	197	595	3,557	308	1,987	276	2,272	4,843
2003	8,461	258	2,544	211	594	3,607	301	2,015	294	2,244	4,854
2004	8,520	259	2,575	225	593	3,653	293	2,044	314	2,216	4,867
2005	8,579	261	2,605	241	592	3,699	286	2,074	334	2,186	4,880

See notes on first page of table.

Table 2.1	Vital statistics summary

Constituent countries of the United Kingdom   Numbers (thousands) and rates

Year and quarter	All live births		Live births outside marriage		Marriages		Civil Partnerships		Divorces		Deaths		Infant mortality[6]		Neonatal mortality[7]		Perinatal mortality[8]	
	Number	Rate[1]	Number	Rate[2]	Number	Rate[3]	Number	Rate[4]	Number	Rate[5]	Number	Rate[1]	Number	Rate[2]	Number	Rate[2]	Number	Rate[9]
United Kingdom																		
1976	675.5	12.0	61.1	90	406.0	..	:	:	135.4	..	680.8	12.1	9.79	14.5	6.68	9.9	12.25	18.0
1981	730.7	13.0	91.3	125	397.8	49.4	:	:	156.4	11.3	658.0	11.7	8.16	11.2	4.93	6.7	8.79	12.0
1986	754.8	13.3	154.3	204	393.9	..	:	:	168.2	..	660.7	11.7	7.18	9.5	4.00	5.3	7.31	9.6
1991	792.3	13.8	236.1	298	349.7	..	:	:	173.5	..	646.2	11.2	5.82	7.4	3.46	4.4	6.45	8.1
1996	733.2	12.6	260.4	355	317.5	..	:	:	171.7	..	636.0	10.9	4.50	6.1	3.00	4.1	6.41	8.7
1999	700.0	11.9	271.6	388	301.1	..	:	:	158.7	..	632.1	10.8	4.05	5.8	2.73	3.9	5.79	8.2
2000	679.0	11.5	268.1	395	305.9	..	:	:	154.6	..	608.4	10.3	3.79	5.6	2.63	3.9	5.56	8.1
2001	669.1	11.3	268.0	401	286.1	..	:	:	156.8	..	602.3	10.2	3.66	5.5	2.43	3.6	5.39	8.0
2002	668.8	11.3	271.7	406	293.0	..	:	:	160.5	..	606.2	10.2	3.50	5.2	2.36	3.5	5.57	8.3
2003	695.6	11.7	288.5	415	308.6	..	:	:	166.7	..	612.0	10.3	3.69	5.3	2.53	3.6	5.96	8.5
2004	716.0	12.0	302.6	423	313.6	..	:	:	167.1	..	583.1	9.7	3.61	5.0	2.46	3.4	6.00	8.3
2005	722.5	12.0	310.2	429	285.0P	..	1.95[10]	..	155.1	..	582.7	9.7	3.68	5.1	2.53	3.5	5.82	8.0
2006	748.6P	12.4P	326.8P	437P	..	..	16.11 P	..	148.1P	..	572.2P	9.4P	3.74P	5.0P	2.61P	3.5P	5.94P	7.9P
2005 March	173.2	11.7	74.5	430	35.0P	..	:	:	39.4	..	165.1	11.1	0.95	5.5	0.64	3.7	1.39	8.0
June	179.0	11.9	75.0	419	78.9P	..	:	:	40.0	..	141.1	9.5	0.93	5.2	0.64	3.6	1.53	8.5
Sept	190.3	12.5	82.5	434	120.7P	..	:	:	38.9	..	130.9	8.7	0.91	4.8	0.66	3.5	1.49	7.8
Dec	180.1	11.9	78.2	434	50.5P	..	1.95[10]	..	36.7	..	145.5	9.7	0.90	5.0	0.59	3.3	1.42	7.8
2006 March	178.9P	12.0P	77.5P	433P	..	..	4.87P	..	37.7P	..	159.9P	10.7P	0.90P	5.1P	0.61P	3.4P	1.45P	8.1P
June	186.0P	12.3P	80.2P	431P	..	..	4.36P	..	36.7P	..	141.4P	9.4P	0.94P	5.0P	0.65P	3.5P	1.50P	8.0P
Sept	195.2P	12.8P	85.8P	439P	..	..	4.49P	..	37.0P	..	130.7P	8.6P	0.93P	4.8P	0.67P	3.4P	1.54P	7.8P
Dec	188.5P	12.3P	83.3P	442P	..	..	2.38P	..	36.7P	..	140.2P	9.2P	0.97P	5.1P	0.68P	3.6P	1.45P	7.7P
2007 March	183.6P	12.2P	81.6P	444P	..	..	1.69P	..	..	..	159.2P	10.6P	0.88P	4.8P	0.61P	3.3P	1.25P	6.8P
England and Wales																		
1976	584.3	11.8	53.8	92	358.6	57.7	:	:	126.7	10.1	598.5	12.1	8.34	14.3	5.66	9.7	10.45	17.7
1981	634.5	12.8	81.0	128	352.0	49.6	:	:	145.7	11.9	577.9	11.6	7.02	11.1	4.23	6.7	7.56	11.8
1986	661.0	13.2	141.3	214	347.9	43.6	:	:	153.9	12.9	581.2	11.6	6.31	9.6	3.49	5.3	6.37	9.6
1991	699.2	13.8	211.3	302	306.8	36.0	:	:	158.7	13.5	570.0	11.2	5.16	7.4	3.05	4.4	5.65	8.0
1996	649.5	12.6	232.7	358	279.0	30.9	:	:	157.1	13.8	560.1	10.9	3.99	6.1	2.68	4.1	5.62	8.6
1999	621.9	12.0	241.9	389	263.5	27.8	:	:	144.6	12.9	556.1	10.7	3.62	5.8	2.44	3.9	5.14	8.2
2000	604.4	11.6	238.6	395	268.0	27.8	:	:	141.1	12.7	535.7	10.3	3.38	5.6	2.34	3.9	4.96	8.2
2001	594.6	11.4	238.1	400	249.2	25.4	:	:	143.8	12.9	530.4	10.1	3.24	5.4	2.14	3.6	4.76	8.0
2002	596.1	11.3	242.0	406	255.6	25.6	:	:	147.7	13.4	533.5	10.1	3.13	5.2	2.13	3.6	4.99	8.3
2003	621.5	11.8	257.2	414	270.1	26.4	:	:	153.5	14.0	538.3	10.2	3.31	5.3	2.26	3.6	5.36	8.6
2004	639.7	12.1	269.7	422	273.1	26.1	:	:	153.4	14.1	512.5	9.7	3.22	5.0	2.21	3.5	5.39	8.4
2005	645.8	12.1	276.5	428	246.0P	22.8P	1.86[10]	5.8[10]	141.8	13.1	512.7	9.7	3.26	5.0	2.23	3.4	5.21	8.0
2006	669.6	12.5	291.4	435	..	..	14.94	1.4	132.6P	12.2P	502.6P	9.4P	3.37P	5.0P	2.35P	3.5P	5.36P	8.0P
2005 March	154.3	11.7	66.3	430	30.2P	11.4P	:	:	36.2	13.6	145.7	11.0	0.85	5.5	0.57	3.7	1.25	8.0
June	159.8	12.0	66.6	417	68.1P	25.5P	:	:	36.5	13.5	123.8	9.4	0.82	5.2	0.56	3.5	1.35	8.4
Sept	170.2	12.6	73.7	433	104.8P	38.8P	:	:	35.6	13.0	114.7	8.6	0.79	4.6	0.57	3.4	1.34	7.8
Dec	161.7	12.0	69.9	433	42.9P	15.9P	1.86[10]	5.8[10]	33.4	12.2	128.5	9.6	0.80	4.9	0.52	3.2	1.28	7.9
2006 March	159.5	12.0	68.7	431	..	..	4.58	1.7P	34.3P	12.8P	141.0P	10.6P	0.82P	5.2P	0.56P	3.5P	1.32P	8.2P
June	166.2	12.4	71.4	430	..	..	4.01	1.5P	33.0P	12.2P	123.9P	9.2P	0.84P	5.1P	0.58P	3.5P	1.37P	8.2P
Sept	174.9	12.9	76.8	439	..	..	4.18	1.5P	32.9P	12.0P	114.6P	8.5P	0.85P	4.8P	0.60P	3.4P	1.38P	7.9P
Dec	169.0	12.5	74.5	441	..	..	2.18	0.8P	32.4P	11.8P	123.1P	9.1P	0.86P	5.1P	0.60P	3.6P	1.30P	7.6P
2007 March	163.3P	12.2P	72.1P	442P	..	..	1.56P	0.6P	..	..	139.2P	10.4P	0.80P	4.9P	0.55P	3.4P	1.23P	7.5P
England																		
1976	550.4	11.8	50.8	92	339.0	..	:	:	..	..	560.3	12.0	7.83	14.2	5.32	9.7	9.81	17.6
1981	598.2	12.8	76.9	129	332.2	..	:	:	..	..	541.0	11.6	6.50	10.9	3.93	6.6	7.04	11.7
1986	623.6	13.2	133.5	214	328.4	..	:	:	146.0	..	544.5	11.6	5.92	9.5	3.27	5.2	5.98	9.5
1991	660.8	13.8	198.9	301	290.1	..	:	:	150.1	..	534.0	11.2	4.86	7.3	2.87	4.3	5.33	8.0
1996	614.2	12.7	218.2	355	264.2	..	:	:	148.7	..	524.0	10.8	3.74	6.1	2.53	4.1	5.36	8.7
1999	589.5	12.0	226.7	385	249.5	..	:	:	137.0	..	519.6	10.8	3.38	5.7	2.29	3.9	4.86	8.2
2000	572.8	11.7	223.8	391	253.8	..	:	:	133.9	..	501.0	10.2	3.18	5.6	2.21	3.9	4.69	8.2
2001	563.7	11.4	223.3	396	236.2	..	:	:	136.4	..	496.1	10.0	3.04	5.4	2.02	3.6	4.51	8.0
2002	565.7	11.4	227.0	401	242.1	..	:	:	140.2	..	499.1	10.1	2.97	5.2	2.02	3.6	4.75	8.3
2003	589.9	11.8	241.4	409	255.6	..	:	:	145.8	..	503.4	10.1	3.14	5.3	2.15	3.7	5.09	8.6
2004	607.2	12.1	253.1	417	258.2	..	:	:	145.5	..	479.2	9.6	3.03	5.0	2.09	3.4	5.10	8.4
2005	613.0	12.1	259.4	423	231.1P	..	1.79[10]	..	134.6	..	479.4	9.6	3.10	5.0	2.12	3.5	4.92	8.0
2006	635.7	12.5	273.5	430	..	..	14.38	..	125.6P	..	470.3P	9.3P	3.19P	5.0P	2.24P	3.5P	5.11P	8.0P
2005 March	146.4	11.8	62.1	424	28.6P	..	:	:	34.4	..	136.2	10.9	0.81	5.6	0.54	3.7	1.18	8.0
June	151.8	12.1	62.5	412	64.2P	..	:	:	34.7	..	115.7	9.3	0.78	5.1	0.53	3.5	1.28	8.4
Sept	161.4	12.7	69.1	428	98.9P	..	:	:	33.8	..	107.3	8.5	0.75	4.7	0.55	3.4	1.27	7.8
Dec	153.4	12.1	65.6	428	40.4P	..	1.79[10]	..	31.7	..	120.3	9.6	0.75	4.9	0.50	3.3	1.18	7.7
2006 March	151.4	12.1	64.5	426	..	..	4.42	..	32.5P	..	132.0P	10.5P	0.79P	5.2P	0.54P	3.6P	1.26P	8.3P
June	157.8	12.5	67.0	425	..	..	3.86	..	31.2P	..	115.9P	9.2P	0.80P	5.1P	0.56P	3.5P	1.31P	8.2P
Sept	166.0	13.0	72.0	434	..	..	4.02	..	31.2P	..	107.1P	8.4P	0.80P	4.8P	0.57P	3.4P	1.31P	7.8P
Dec	160.5	12.5	70.0	436	..	..	2.09	..	30.7P	..	115.3P	9.0P	0.81P	5.0P	0.57P	3.6P	1.24P	7.7P
2007 March	155.1P	12.3P	67.8P	437P	..	..	1.50P	..	..	..	130.2P	10.3P	0.74P	4.8P	0.52P	3.3P	1.16P	7.4P

Note: Death figures for England and Wales represent the number of deaths registered in each year up to 1992, and the number of deaths occurring in each year from 1993 to 2005. Provisional death figures for 2006 and 2007 relate to registrations.
Birth and death figures for England and also for Wales each exclude events for persons usually resident outside England and Wales. These events are, however, included in the totals for England and Wales combined, and for the United Kingdom.
From 1981 births to non-resident mothers in Northern Ireland are excluded from the figures for Northern Ireland, and for the United Kingdom.

Birth and death rates from 2002 to 2005 have been updated to include the latest revised mid-year population estimates that take into account improved estimates of international migration. Birth and death rates for 2007 are based on the 2006-based population projections for 2007. Marriage and divorce rates in England and Wales for 1986 have been calculated using the interim revised marital status estimates (based on the original mid-2001 estimates) and are subject to further revision.
Marriage, civil partnership and divorce rates in England and Wales for 2006 and 2007 are based on 2005 marital status estimates. Rates for Scotland for 2007 are based on 2006 marital status estimates.

Table 2.1 continued	Vital statistics summary

Constituent countries of the United Kingdom
Numbers (thousands) and rates

Year and quarter	All live births		Live births outside marriage		Marriages		Civil Partnerships		Divorces		Deaths		Infant mortality[6]		Neonatal mortality[7]		Perinatal mortality[8]	
	Number	Rate[1]	Number	Rate[2]	Number	Rate[3]	Number	Rate[4]	Number	Rate[5]	Number	Rate[1]	Number	Rate[2]	Number	Rate[2]	Number	Rate[9]
Wales																		
1976	33.4	11.9	2.9	86	19.5	..	:	:	..	..	36.3	13.0	0.46	13.7	0.32	9.6	0.64	19.0
1981	35.8	12.7	4.0	112	19.8	..	:	:	7.8	..	35.0	12.4	0.45	12.6	0.29	8.1	0.51	14.1
1986	37.0	13.1	7.8	211	19.5	..	:	:	7.8	..	34.7	12.3	0.35	9.5	0.21	5.6	0.38	10.3
1991	38.1	13.3	12.3	323	16.6	..	:	:	8.4	..	34.1	11.9	0.25	6.6	0.16	4.1	0.30	7.9
1996	34.9	12.1	14.4	412	14.8	..	:	:	8.4	..	34.6	12.0	0.20	5.6	0.13	3.6	0.26	7.5
1999	32.1	11.1	14.8	461	14.0	..	:	:	7.5	..	35.0	12.1	0.20	6.1	0.13	4.0	0.25	7.7
2000	31.3	10.8	14.8	472	14.1	..	:	:	7.2	..	33.3	11.5	0.17	5.3	0.11	3.5	0.23	7.2
2001	30.6	10.5	14.8	483	13.0	..	:	:	7.4	..	33.0	11.3	0.16	5.4	0.11	3.5	0.23	7.5
2002	30.2	10.3	15.0	497	13.5	..	:	:	7.6	..	33.2	11.4	0.14	4.5	0.10	3.2	0.24	7.7
2003	31.4	10.7	15.8	503	14.5	..	:	:	7.7	..	33.7	11.5	0.13	4.3	0.10	3.1	0.24	7.6
2004	32.3	11.0	16.6	513	14.9	..	:	:	7.9	..	32.1	10.9	0.16	4.9	0.10	3.1	0.26	8.0
2005	32.6	11.0	17.1	524	13.9P	..	0.07[10]	..	7.2	..	32.1	10.9	0.13	4.1	0.09	2.9	0.24	7.4
2006	33.6	11.3	17.8	530	..	..	0.56	..	6.9P	..	31.1P	10.5P	0.14P	4.1P	0.09P	2.8P	0.23P	6.9P
2005 March	7.8	10.8	4.1	529	1.6P	..	:	:	1.8	..	9.3	12.6	0.03	4.2	0.02	3.1	0.06	7.7
June	7.9	10.7	4.0	510	3.9P	..	:	:	1.8	..	7.8	10.6	0.03	4.2	0.03	3.2	0.06	7.9
Sept	8.7	11.6	4.6	530	6.0P	..	:	:	1.8	..	7.1	9.6	0.03	3.3	0.02	2.8	0.06	7.0
Dec	8.2	11.0	4.3	527	2.5P	..	0.07[10]	..	1.8	..	7.9	10.7	0.04	4.6	0.02	2.6	0.06	6.8
2006 March	8.1	11.1	4.2	520	..	..	0.16	..	1.8P	..	8.7P	11.9P	0.03P	3.1P	0.02P	2.0P	0.06P	7.0P
June	8.3	11.2	4.3	523	..	..	0.15	..	1.7P	..	7.6P	10.3P	0.03P	4.1P	0.02P	2.4P	0.05P	6.3P
Sept	8.8	11.8	4.8	543	..	..	0.16	..	1.7P	..	7.2P	9.7P	0.04P	4.0P	0.03P	3.1P	0.07P	7.7P
Dec	8.4	11.2	4.5	535	..	..	0.09	..	1.7P	..	7.5P	10.1P	0.04P	5.1P	0.03P	3.6P	0.06P	6.6P
2007 March	8.1P	11.0P	4.3P	535P	..	..	0.06P	..	..	..	8.8P	11.9P	0.05P	6.3P	0.03P	3.7P	0.07P	8.4P
Scotland																		
1976	64.9	12.5	6.0	93	37.5	53.8	:	:	8.1	6.5	65.3	12.5	0.96	14.8	0.67	10.3	1.20	18.3
1981	69.1	13.4	8.5	122	36.2	47.5	:	:	9.9	8.0	63.8	12.3	0.78	11.3	0.47	6.9	0.81	11.6
1986	65.8	12.9	13.6	206	35.8	42.9	:	:	12.8	10.7	63.5	12.4	0.58	8.8	0.34	5.2	0.67	10.2
1991	67.0	13.2	19.5	291	33.8	39.0	:	:	12.4	10.6	61.0	12.0	0.47	7.1	0.29	4.6	0.58	8.6
1996	59.3	11.6	21.4	360	30.2	33.2	:	:	12.3	10.9	60.7	11.9	0.37	6.2	0.23	3.9	0.55	9.2
1999	55.1	10.9	22.7	412	29.9	31.5	:	:	11.9	10.9	60.3	11.9	0.28	5.0	0.18	3.3	0.42	7.6
2000	53.1	10.5	22.6	426	30.4	31.6	:	:	11.1	10.3	57.8	11.4	0.31	5.7	0.21	4.0	0.45	8.4
2001	52.5	10.4	22.8	433	29.6	31.0	:	:	10.6	9.7	57.4	11.3	0.29	5.5	0.20	3.8	0.45	8.5
2002	51.3	10.1	22.5	440	29.8	30.8	:	:	10.8	10.0	58.1	11.5	0.27	5.3	0.16	3.2	0.39	7.6
2003	52.4	10.4	23.9	455	30.8	31.3	:	:	10.1	10.2	58.5	11.6	0.27	5.1	0.18	3.4	0.42	8.0
2004	54.0	10.6	25.2	467	32.2	32.2	:	:	11.2	10.5	56.2	11.1	0.27	4.9	0.17	3.1	0.44	8.1
2005	54.4	10.7	25.6	471	30.9	30.3	0.08[10]	2.5[10]	10.9	10.3	55.7	11.0	0.28	5.2	0.19	3.5	0.42	7.7
2006	55.7	10.9P	26.6	477	29.9	28.7	1.05	1.0	13.0	12.3	55.1P	10.8P	0.25P	4.5P	0.17P	3.1P	0.42P	7.4P
2005 March	13.4	10.6	6.2	464	3.8	15.3	:	:	2.6	10.0	15.6	12.4	0.07	5.0	0.04	3.3	0.09	7.0
June	13.6	10.7	6.4	472	8.6	34.0	:	:	2.8	10.7	13.7	10.8	0.07	5.1	0.05	3.4	0.13	9.2
Sept	14.2	11.1	6.7	471	12.3	48.0	:	:	2.7	10.1	12.8	10.0	0.08	5.6	0.06	3.9	0.11	7.6
Dec	13.2	10.3	6.3	477	6.1	23.7	0.08[10]	2.5[10]	2.8	10.3	13.6	10.7	0.07	5.2	0.05	3.4	0.10	7.1
2006 March	13.6	10.8	6.6	487	3.5	13.6	0.26	1.0	2.6	10.1	14.9P	11.8P	0.05P	3.7P	0.03P	2.4P	0.09P	6.7P
June	14.0	11.0	6.7	475	8.3	32.1	0.32	1.2	3.1	11.7	13.9P	10.9P	0.07P	5.0P	0.05P	3.3P	0.09P	6.4P
Sept	14.2	11.0	6.7	471	12.2	46.4	0.28	1.1	3.6	13.4	12.7P	9.8P	0.05P	3.8P	0.04P	2.9P	0.11P	7.8P
Dec	13.9	10.8	6.6	477	5.9	22.4	0.19	0.7	3.7	14.1	13.6P	10.6P	0.07P	5.3P	0.04P	3.7P	0.12P	8.7P
2007 March	14.2P	11.3P	7.1P	501P	3.3P	13.0P	0.11P	0.4P	3.1P	11.9P	15.8P	12.5P	0.07P	4.9P	0.05P	3.6P	0.12P	8.1P
June	14.3P	11.3P	6.9P	482P	..	..	0.18P	0.7P	..	..	13.4P	10.5P	0.08P	5.3P	0.05P	3.4P	0.12P	8.6P
Northern Ireland																		
1976	26.4	17.3	1.3	50	9.9	..	:	:	0.6	..	17.0	11.2	0.48	18.3	0.35	13.3	0.59	22.3
1981	27.2	17.6	1.9	70	9.6	45.4	:	:	1.4	4.2	16.3	10.6	0.36	13.2	0.23	8.3	0.42	15.3
1986	28.0	17.8	3.6	128	10.2	..	:	:	1.5	..	16.1	10.3	0.36	13.2	0.23	8.3	0.42	15.3
1991	26.0	16.2	5.3	203	9.2	..	:	:	2.3	..	15.1	9.4	0.19	7.4	0.12	4.6	0.22	8.4
1996	24.4	14.7	6.3	260	8.3	..	:	:	2.3	..	15.2	9.2	0.14	5.8	0.09	3.7	0.23	9.4
1999	23.0	13.7	7.0	303	7.6	..	:	:	2.3	..	15.7	9.3	0.15	6.4	0.11	4.8	0.23	10.0
2000	21.5	12.8	6.8	318	7.6	..	:	:	2.4	..	14.9	8.9	0.11	5.1	0.08	3.8	0.15	7.3
2001	22.0	13.0	7.1	325	7.3	..	:	:	2.4	..	14.5	8.6	0.13	6.1	0.10	4.5	0.19	8.5
2002	21.4	12.6	7.2	335	7.6	..	:	:	2.2	..	14.6	8.6	0.10	4.7	0.07	3.5	0.19	8.9
2003	21.6	12.7	7.4	344	7.8	..	:	:	2.3	..	14.5	8.5	0.11	5.3	0.09	4.0	0.18	8.1
2004	22.3	13.0	7.7	345	8.3	..	:	:	2.5	..	14.4	8.4	0.12	5.5	0.08	3.7	0.18	8.2
2005	22.3	12.9	8.1	363	8.1	..	0.01[10]	..	2.4	..	14.2	8.3	0.14	6.3	0.11	5.1	0.18	8.1
2006	23.3P	13.4P	8.8P	380P	8.3P	..	0.12P	..	2.6P	..	14.5P	8.4P	0.12P	5.2P	0.09P	3.9P	0.17P	7.1P
2005 March	5.5	13.0	2.0	363	0.9	..	:	:	0.6	..	3.8	8.9	0.03	5.2	0.02	4.3	0.05	8.8
June	5.7	13.3	2.0	359	2.2	..	:	:	0.7	..	3.7	8.6	0.04	7.2	0.03	5.6	0.04	8.4
Sept	5.9	13.7	2.0	358	3.5	..	:	:	0.5	..	3.4	7.8	0.04	6.6	0.03	5.6	0.04	7.2
Dec	5.2	11.9	1.9	373	1.4	..	0.01[10]	..	0.5	..	3.4	7.9	0.03	6.0	0.02	4.6	0.04	7.9
2006 March	5.8P	13.6P	2.2P	370P	0.9P	..	0.03P	..	0.7P	..	4.0P	9.4P	0.03P	5.3P	0.02P	3.3P	0.04P	6.8P
June	5.8P	13.3P	2.2P	381P	2.3P	..	0.04P	..	0.7P	..	3.6P	8.4P	0.03P	4.7P	0.02P	3.6P	0.04P	7.4P
Sept	6.1P	13.9P	2.3P	358P	3.5P	..	0.03P	..	0.5P	..	3.4P	7.8P	0.03P	4.9P	0.02P	3.6P	0.05P	7.5P
Dec	5.6P	12.8P	2.2P	393P	1.5P	..	0.02P	..	0.6P	..	3.5P	7.9P	0.03P	5.9P	0.03P	5.0P	0.04P	6.4P
2007 March	6.1P	14.2P	2.4P	383P	1.0P	..	0.02P	..	..	..	4.2P	9.6P	0.04P	6.8P	0.03P	4.7P	0.05P	7.8P
2007 June	6.9P	13.3P	2.2P	317P	2.4P	..	0.03P	..	..	..	3.6P	8.2P	0.03P	5.2P	0.02P	3.0P	0.04P	6.8P

1 Per 1,000 population of all ages.
2 Per 1,000 live births.
3 Persons marrying per 1,000 unmarried population aged 16 and over.
4 Persons forming a civil partnership per 1,000 unmarried population aged 16 and over.
5 Persons divorcing per 1,000 married population.
6 Deaths under 1 year.

7 Deaths under 4 weeks.
8 Stillbirths and deaths under 1 week.
9 Per 1,000 live births and stillbirths.
10 The Civil Partnership Act 2004 came into force on 5 December 2005 in the UK - see Notes to tables.
p provisional

Table 2.2	Key demographic and health indicators

Constituent countries of the United Kingdom

Numbers (thousands), rates, percentages, mean age

| | Population | Live births | Deaths | Dependency ratio | | Live births | | | | Period expectation of life (in years) at birth | | | |
				Children[1]	Elderly[2]	TFR[3]	Standardised mean age of mother at birth (years)[4]	Unstand-ardised mean age of mother at birth (years)[5]	Outside marriage as percentage of total live births	Age-standardised mortality rate[6]	Males	Females	Infant mortality rate[7]
United Kingdom													
1976	56,216.1	675.5	680.8	42.1	29.5	1.74	..	26.4	9.0	10,486	..	..	14.5
1981	56,357.5	730.7	658.0	37.1	29.7	1.82	27.0	26.8	12.5	9,506	70.8	76.8	11.2
1986	56,683.8	754.8	660.7	33.5	29.7	1.78	27.4	27.0	20.4	8,914	71.9	77.7	9.5
1991	57,438.7	792.3	646.2	33.2	30.0	1.82	27.7	27.7	29.8	8,168	73.2	78.7	7.4
1996	58,164.4	733.2	636.0	33.9	30.0	1.73	28.2	28.6	35.5	7,584	74.3	79.4	6.1
2001	59,113.5	669.1	602.3	32.6	29.8	1.63	28.6	29.2	40.1	6,807	75.6	80.4	5.5
2002[8]	59,323.5	668.8	606.2	32.2	29.8	1.64	28.7	29.3	40.6	6,765	75.9	80.5	5.2
2003[8]	59,557.3	695.6	612.0	31.8	29.9	1.71	28.8	29.4	41.5	6,758	76.2	80.7	5.3
2004[8]	59,845.8	716.0	583.1	31.4	30.0	1.77	28.9	29.4	42.3	6,394	76.5	80.9	5.0
2005[8]	60,238.4	722.5	582.7	31.0	30.0	1.78	29.1	29.5	42.9	6,268	76.9	81.3	5.1
2006	60,587.3	748.6 ᵖ	572.2ᵖ	30.6	30.1	1.84ᵖ	29.1	29.5	43.7	6,067ᵖ	..	..	5.0ᵖ
England													
1976	46,659.9	550.4	560.3	41.4	29.7	1.70	..	26.4	9.2	10,271	..	..	14.2
1981	46,820.8	598.2	541.0	36.4	29.9	1.79	..	26.8	12.9	9,298	71.1	77.0	10.9
1986	47,187.6	623.6	544.5	33.1	29.8	1.76	27.4	27.0	21.4	8,725	72.2	77.9	9.5
1991	47,875.0	660.8	534.0	32.9	30.0	1.81	27.7	27.7	30.1	8,017	73.4	78.9	7.3
1996	48,519.1	614.2	524.0	33.7	30.0	1.73	28.2	28.7	35.5	7,414	74.5	79.6	6.1
2001	49,449.7	563.7	496.1	32.5	29.7	1.63	28.6	29.3	39.6	6,650	75.9	80.6	5.4
2002[8]	49,652.3	565.7	499.1	32.1	29.7	1.65	28.7	29.4	40.1	6,603	76.1	80.7	5.2
2003[8]	49,866.2	589.9	503.4	31.8	29.8	1.73	28.9	29.4	40.9	6,602	76.5	80.9	5.3
2004[8]	50,110.7	607.2	479.2	31.4	29.8	1.78	29.0	29.5	41.7	6,232	76.8	81.1	5.0
2005[8]	50,465.6	613.0	479.4	30.9	29.9	1.79	29.1	29.5	42.3	6,110	77.2	81.5	5.0
2006	50,762.9	635.7	470.3ᵖ	30.6	29.9	1.86	29.2	29.5	43.0	5,916ᵖ	..	..	5.0ᵖ
Wales													
1976	2,799.3	33.4	36.3	42.0	30.9	1.78	..	26.0	8.6	10,858	..	..	13.7
1981	2,813.5	35.8	35.0	37.6	31.6	1.87	..	26.6	11.2	9,846	70.4	76.4	12.6
1986	2,810.9	37.0	34.7	34.3	32.5	1.86	26.9	26.5	21.1	9,043	71.6	77.5	9.5
1991	2,873.0	38.1	34.1	34.4	33.5	1.88	27.1	27.0	32.3	8,149	73.1	78.8	6.6
1996	2,891.3	34.9	34.6	34.9	33.7	1.81	27.5	27.8	41.2	7,758	73.9	79.1	5.6
2001	2,910.2	30.6	33.0	33.7	33.6	1.66	27.8	28.3	48.3	7,017	75.3	80.0	5.4
2002[8]	2,919.8	30.2	33.2	33.3	33.7	1.64	28.0	28.4	49.7	6,953	75.5	80.1	4.5
2003[8]	2,931.1	31.4	33.7	32.8	33.8	1.73	28.1	28.5	50.3	6,984	75.8	80.3	4.3
2004[8]	2,946.4	32.3	32.1	32.3	33.9	1.78	28.2	28.5	51.3	6,588	76.1	80.6	4.9
2005[8]	2,953.6	32.6	32.1	31.8	34.1	1.81	28.4	28.5	52.4	6,442	76.6	80.9	4.1
2006	2,965.9	33.6	31.1ᵖ	31.4	34.3	1.86	28.5	28.6	53.0	6,190ᵖ	..	..	4.1ᵖ
Scotland													
1976	5,233.4	64.9	65.3	44.7	28.4	1.79	..	26.0	9.3	11,675	..	..	14.8
1981	5,180.2	69.1	63.8	38.2	28.4	1.84	..	26.3	12.2	10,849	69.1	75.3	11.3
1986	5,111.8	65.8	63.5	33.6	28.1	1.67	27.1	26.6	20.6	10,120	70.2	76.2	8.8
1991	5,083.3	67.0	61.0	32.4	28.9	1.69	27.5	27.4	29.1	9,216	71.4	77.1	7.1
1996	5,092.2	59.3	60.7	32.3	29.2	1.56	28.0	28.5	36.0	8,791	72.2	77.9	6.2
2001	5,064.2	52.5	57.4	30.8	30.0	1.49	28.5	29.2	43.3	7,930	73.3	78.8	5.5
2002	5,054.8	51.3	58.1	30.3	30.2	1.48	28.6	29.2	44.0	7,955	73.5	78.9	5.3
2003	5,057.4	52.4	58.5	29.9	30.3	1.54	28.7	29.3	45.5	7,921	73.8	79.1	5.1
2004	5,078.4	54.0	56.2	29.5	30.5	1.60	28.9	29.4	46.7	7,536	74.2	79.3	4.9
2005	5,094.8	54.4	55.7	29.1	30.6	1.62	29.0	29.5	47.1	7,349	74.6ᵖ	79.6ᵖ	5.2
2006	5,116.9	55.7	55.1ᵖ	28.7	30.6	1.67	29.1	29.5	47.7	7,161ᵖ	..	..	4.5ᵖ
Northern Ireland													
1976	1,523.5	26.4	17.0	56.1	25.3	2.68	..	27.4	5.0	11,746	..	..	18.3
1981	1,543.0	27.2	16.3	50.6	25.3	2.59	28.1	27.5	7.0	10,567	69.2	75.5	13.2
1986	1,573.5	28.0	16.1	46.1	25.5	2.45	28.1	27.5	12.8	10,071	70.9	77.1	13.2
1991	1,607.3	26.0	15.1	44.1	26.1	2.16	28.3	28.0	20.3	8,303	72.6	78.4	7.4
1996	1,661.8	24.4	15.2	41.8	25.5	1.95	28.7	28.8	26.0	7,742	73.8	79.2	5.8
2001	1,689.3	22.0	14.5	38.6	25.5	1.80	29.1	29.4	32.5	6,976	75.2	80.1	6.1
2002	1,696.6	21.4	14.6	37.9	25.7	1.77	29.2	29.5	33.5	6,930	75.6	80.4	4.7
2003	1,702.6	21.6	14.5	37.2	25.9	1.81	29.2	29.5	34.4	6,743	75.8	80.6	5.3
2004	1,710.3	22.3	14.4	36.4	26.2	1.87	29.4	29.7	34.5	6,609	76.0	80.8	5.5
2005	1,724.4	22.3	14.2	35.8	26.3	1.87	29.5	29.7	36.3	6,418	76.1	81.0	6.3
2006	1,741.6	23.3ᵖ	14.5ᵖ	35.3	26.4	1.94ᵖ	29.6ᵖ	29.7ᵖ	38.0ᵖ	6,397ᵖ	..	..	5.2ᵖ

Note: Death figures for England and Wales represent the number of deaths registered in each year up to 1992, and the number of deaths occurring in each year from 1993 to 2005. Provisional death figures for 2006 relate to registrations.
Birth and death figures for England and also for Wales each exclude events for persons usually resident outside England and Wales. These events are, however, included in the total for the United Kingdom. From 1981 births to non-resident mothers in Northern Ireland are excluded from the figures for Northern Ireland, and for the United Kingdom. Period expectation of life data for the United Kingdom, England and for Wales for 2001 to 2005 is based on death registrations and revised population estimates for 2002 to 2005.

1   Percentage of children under 16 to working-age population (males 16–64 and females 16–59).
2   Percentage of males 65 and over and females 60 and over to working-age population (males 16–64 and females 16–59).

3   TFR (total fertility rate) is the number of children that would be born to a woman if current patterns of fertility persisted throughout her childbearing life. It is sometimes called the TPFR (total period fertility rate).
4   Standardised to take account of the age structure of the population.
5   Unstandardised and therefore takes no account of the age structure of the population.
6   Per million population. The age-standardised mortality rate makes allowances for changes in the age structure of the population. See Notes to tables.
7   Deaths at age under one year per 1,000 live births.
8   2002 to 2005 mid-year population estimates for England and Wales and the United Kingdom have been updated to include the latest revised estimates that take into account improved estimates of international migration.
p   provisional

Table 3.1	Live births: age of mother

England and Wales | Numbers (thousands), rates, mean age and TFRs

Year and quarter	Age of mother at birth							Mean age[1] (years)	Age of mother at birth							Mean age[2] (years)	TFR[3]
	All ages	Under 20	20–24	25–29	30–34	35–39	40 and over		All ages	Under 20	20–24	25–29	30–34	35–39	40 and over		
	Total live births (numbers)								Age-specific fertility rates[4]								
1961	811.3	59.8	249.8	248.5	152.3	77.5	23.3	27.6	89.2	37.3	172.6	176.9	103.1	48.1	15.0	27.4	2.77
1964(max)	876.0	76.7	276.1	270.7	153.5	75.4	23.6	27.2	92.9	42.5	181.6	187.3	107.7	49.8	13.7	27.3	2.93
1966	849.8	86.7	285.8	253.7	136.4	67.0	20.1	26.8	90.5	47.7	176.0	174.0	97.3	45.3	12.5	27.1	2.75
1971	783.2	82.6	285.7	247.2	109.6	45.2	12.7	26.2	83.5	50.6	152.9	153.2	77.1	32.8	8.7	26.6	2.37
1976	584.3	57.9	182.2	220.7	90.8	26.1	6.5	26.4	60.4	32.2	109.3	118.7	57.2	18.6	4.8	26.5	1.71
1977(min)	569.3	54.5	174.5	207.9	100.8	25.5	6.0	26.5	58.1	29.4	103.7	117.5	58.6	18.2	4.4	26.6	1.66
1981	634.5	56.6	194.5	215.8	126.6	34.2	6.9	26.8	61.3	28.1	105.3	129.1	68.6	21.7	4.9	27.0	1.79
1986	661.0	57.4	192.1	229.0	129.5	45.5	7.6	27.0	60.6	30.1	92.7	123.8	78.0	24.6	4.8	27.4	1.77
1991	699.2	52.4	173.4	248.7	161.3	53.6	9.8	27.7	63.6	33.0	89.3	119.4	86.7	32.1	5.3	27.7	1.82
1992	689.7	47.9	163.3	244.8	166.8	56.7	10.2	27.9	63.6	31.7	86.1	117.6	87.4	33.4	5.8	27.8	1.80
1993	673.5	45.1	152.0	236.0	171.1	58.8	10.5	28.1	62.7	30.9	82.5	114.4	87.4	34.1	6.2	27.9	1.76
1994	664.7	42.0	140.2	229.1	179.6	63.1	10.7	28.4	62.0	28.9	79.0	112.2	89.4	35.8	6.4	28.1	1.75
1995	648.1	41.9	130.7	217.4	181.2	65.5	11.3	28.5	60.5	28.5	76.4	108.4	88.3	36.3	6.8	28.2	1.72
1996	649.5	44.7	125.7	211.1	186.4	69.5	12.1	28.6	60.6	29.7	77.0	106.6	89.8	37.5	7.2	28.2	1.74
1997	643.1	46.4	118.6	202.8	187.5	74.9	12.9	28.8	60.0	30.2	76.0	104.3	89.8	39.4	7.6	28.3	1.73
1998	635.9	48.3	113.5	193.1	188.5	78.9	13.6	28.9	59.2	30.9	74.9	101.5	90.6	40.4	7.9	28.3	1.72
1999	621.9	48.4	110.7	181.9	185.3	81.3	14.3	29.0	57.8	30.9	73.0	98.3	89.6	40.6	8.1	28.4	1.70
2000	604.4	45.8	107.7	170.7	180.1	85.0	15.1	29.1	55.9	29.3	70.0	94.3	87.9	41.4	8.3	28.5	1.65
2001	594.6	44.2	108.8	159.9	178.9	86.5	16.3	29.2	54.7	28.0	69.0	91.7	88.0	41.5	8.8	28.6	1.63
2002[5]	596.1	43.5	110.9	153.4	180.5	90.5	17.3	29.3	54.7	27.1	69.1	91.5	89.9	43.0	9.1	28.7	1.65
2003[5]	621.5	44.2	116.6	156.9	187.2	97.4	19.1	29.4	56.8	26.9	71.3	95.8	94.9	46.4	9.8	28.8	1.73
2004[5]	639.7	45.1	121.1	160.0	190.6	102.2	20.8	29.4	58.2	26.9	72.8	97.6	99.6	48.8	10.4	28.9	1.78
2005[5]	645.8	44.8	122.1	164.3	188.2	104.1	22.2	29.5	58.3	26.3	71.6	97.9	100.7	50.3	10.8	29.1	1.79
2006	669.6	45.5	127.8	172.6	189.4	110.5	23.7	29.5	60.2	26.6	73.2	100.6	104.8	53.8	11.4	29.1	1.86
2002 March	143.3	10.5	26.5	37.4	43.2	21.6	4.1	29.3	53.3	26.5	67.0	90.4	87.1	41.7	8.7	28.7	1.61
June	147.2	10.4	26.7	37.9	45.5	22.4	4.3	29.4	54.2	26.2	66.8	90.6	90.9	42.6	9.0	28.8	1.63
Sept	155.0	11.4	28.9	39.9	46.9	23.4	4.5	29.3	56.4	28.2	71.4	94.5	92.6	44.2	9.4	28.7	1.70
Dec	150.6	11.2	28.8	38.2	45.0	23.0	4.5	29.3	54.8	27.7	71.0	90.4	88.8	43.5	9.3	28.7	1.65
2003 March	147.4	10.9	27.9	37.5	44.0	22.6	4.6	29.3	54.7	26.8	69.1	92.8	90.5	43.7	9.6	28.8	1.66
June	155.1	10.7	28.5	39.3	47.4	24.5	4.7	29.5	56.9	26.0	70.0	96.4	96.4	46.9	9.6	28.9	1.73
Sept	162.8	11.5	30.5	41.0	49.3	25.6	5.0	29.4	59.1	27.7	74.0	99.4	99.2	48.3	10.1	28.9	1.79
Dec	156.0	11.2	29.7	39.1	46.5	24.6	4.8	29.4	56.6	27.1	72.1	94.6	93.3	46.5	9.8	28.8	1.72
2004 March	155.2	11.0	29.3	38.7	46.6	24.7	4.9	29.4	56.8	26.5	70.8	95.0	97.9	47.4	9.8	28.9	1.74
June	157.4	10.7	29.3	39.4	47.7	25.2	5.0	29.5	57.6	25.7	70.9	96.6	100.4	48.5	10.1	29.0	1.76
Sept	165.4	11.7	31.4	41.6	49.0	26.3	5.4	29.4	59.9	27.7	75.0	101.0	102.0	50.1	10.7	28.9	1.83
Dec	161.7	11.6	31.1	40.3	47.2	26.0	5.5	29.4	58.5	27.6	74.3	97.7	98.2	49.4	10.9	28.9	1.79
2005 March	154.3	10.9	29.3	38.9	45.0	24.7	5.4	29.4	56.5	26.0	69.6	94.0	97.6	48.5	10.7	29.0	1.74
June	159.8	10.7	29.6	40.3	47.5	26.2	5.4	29.5	57.8	25.3	69.7	96.2	101.9	50.8	10.6	29.1	1.78
Sept	170.2	11.9	32.5	43.7	49.4	26.9	5.7	29.4	60.9	27.6	75.7	103.2	104.9	51.6	11.1	29.0	1.88
Dec	161.7	11.3	30.7	41.4	46.3	26.3	5.7	29.4	57.9	26.3	71.3	97.9	98.3	50.4	11.0	29.0	1.78
2006 March	159.5	11.1	30.5	40.7	45.3	26.3	5.6	29.5	58.2	26.3	70.9	96.1	101.6	52.0	11.0	29.1	1.79
June	166.2	11.4	31.2	42.9	47.6	27.1	5.9	29.5	60.0	26.6	71.8	100.4	105.7	53.0	11.3	29.1	1.85
Sept	174.9	12.0	33.5	45.6	49.0	28.9	6.0	29.4	62.4	27.7	76.1	105.4	107.5	55.9	11.4	29.1	1.93
Dec	169.0	11.1	32.6	43.5	47.5	28.1	6.2	29.5	60.3	25.7	74.0	100.5	104.3	54.4	11.8	29.2	1.86
2007[6] March	163.3P	10.8P	30.8P	42.5P	45.5P	27.4P	6.3P	29.6P	59.4P	25.4P	70.1P	97.6P	105.8P	54.8P	12.1P	29.3P	1.83P

Note: The rates for women of all ages, under 20, and 40 and over are based upon the populations of women aged 15–44, 15–19, and 40–44 respectively.
1 Unstandardised and therefore takes no account of the age structure of the population.
2 Standardised to take account of the age structure of the population. This measure is more appropriate for use when analysing trends or making comparisons between different geographies.
3 TFR (total fertility rate) is the number of children that would be born to a woman if current patterns of fertility persisted throughout her childbearing life. It is sometimes called the TPFR (total period fertility rate).
4 Births per 1,000 women in the age-group; all quarterly age-specific fertility rates are adjusted for days in the quarter. They are not adjusted for seasonality.
5 Birth and rates from 2002 to 2005 have been updated to include the latest revised mid-year population estimates that take into account improved estimates of international migration.
6 Birth rates for 2007 are based on the 2006-based population projections for 2007.
p provisional.

Table 3.2	Live births outside marriage: age of mother and type of registration

England and Wales　　　　　　　　　　　　　　　　　　　　　　　　　　　　Numbers (thousands), mean age and percentages

Year and quarter	Age of mother at birth							Mean age[1] (years)	Age of mother at birth							Registration[2]		
	All ages	Under 20	20–24	25–29	30–34	35–39	40 and over		All ages	Under 20	20–24	25–29	30–34	35–39	40 and over	Joint		Sole
																Same[3] address	Different[3] addresses	
	Live births outside marriage (numbers)								Percentage of total live births in age group							As a percentage of all births outside marriage		
1971	65.7	21.6	22.0	11.5	6.2	3.2	1.1	23.7	8.4	26.1	7.7	4.7	5.7	7.0	9.0	45.5		54.5
1976	53.8	19.8	16.6	9.7	4.7	2.3	0.7	23.3	9.2	34.2	9.1	4.4	5.2	8.6	10.1	51.0		49.0
1981	81.0	26.4	28.8	14.3	7.9	1.3	0.9	23.4	12.8	46.7	14.8	6.6	6.2	3.9	12.5	58.2		41.8
1986	141.3	39.6	54.1	27.7	13.1	5.7	1.1	23.8	21.4	69.0	28.2	12.1	10.1	12.6	14.7	46.6	19.6	33.8
1991	211.3	43.4	77.8	52.4	25.7	9.8	2.1	24.8	30.2	82.9	44.9	21.1	16.0	18.3	21.3	54.6	19.8	25.6
1992	215.2	40.1	77.1	55.9	28.9	10.9	2.3	25.2	31.2	83.7	47.2	22.8	17.3	19.3	22.9	55.4	20.7	23.9
1993	216.5	38.2	75.0	57.5	31.4	11.9	2.5	25.5	32.2	84.8	49.4	24.4	18.4	20.2	23.5	54.8	22.0	23.2
1994	215.5	35.9	71.0	58.5	34.0	13.4	2.7	25.8	32.4	85.5	50.6	25.5	18.9	21.2	25.2	57.5	19.8	22.7
1995	219.9	36.3	69.7	59.6	37.0	14.4	3.0	26.0	33.9	86.6	53.3	27.4	20.4	22.0	26.2	58.1	20.1	21.8
1996	232.7	39.3	71.1	62.3	40.5	16.2	3.2	26.1	35.8	88.0	56.5	29.5	21.7	23.4	26.7	58.1	19.9	21.9
1997	238.2	41.1	69.5	63.4	42.2	18.2	3.7	26.2	37.0	88.7	58.6	31.3	22.5	24.3	28.6	59.5	19.3	21.2
1998	240.6	43.0	67.8	62.4	43.9	19.6	3.9	26.3	37.8	89.1	59.7	32.3	23.3	24.8	29.0	60.9	18.3	20.8
1999	241.9	43.0	67.5	61.2	45.0	20.8	4.3	26.4	38.9	89.0	61.0	33.6	24.3	25.6	30.2	61.8	18.2	19.9
2000	238.6	41.1	67.5	59.1	43.9	22.3	4.7	26.5	39.5	89.7	62.6	34.6	24.4	26.2	31.0	62.7	18.2	19.2
2001	238.1	39.5	68.1	56.8	45.2	23.3	5.1	26.7	40.0	89.5	62.6	35.5	25.3	26.9	31.6	63.2	18.4	18.4
2002	242.0	38.9	70.2	55.8	46.4	25.1	5.6	26.8	40.6	89.5	63.3	36.4	25.7	27.7	32.2	63.7	18.5	17.8
2003	257.2	39.9	75.7	58.2	49.2	27.8	6.4	26.9	41.4	90.2	64.9	37.1	26.3	28.5	33.3	63.5	19.0	17.4
2004	269.7	41.0	79.8	61.4	50.7	29.7	7.1	27.0	42.2	91.0	65.9	38.4	26.6	29.0	34.0	63.6	19.6	16.8
2005	276.5	41.2	82.1	64.4	50.8	30.3	7.7	27.0	42.8	91.8	67.2	39.2	27.0	29.1	34.8	63.5	20.2	16.3
2006	291.4	42.3	87.7	69.3	51.4	32.2	8.4	27.0	43.5	93.0	68.6	40.1	27.1	29.2	35.5	63.7	20.8	15.6
2002 March	58.0	9.4	16.7	13.6	10.9	6.0	1.3	26.8	40.5	89.4	63.0	36.4	25.4	27.7	31.5	63.2	18.5	18.3
June	58.3	9.3	16.6	13.5	11.4	6.1	1.4	26.8	39.6	89.4	62.2	35.6	25.0	27.2	31.7	64.2	18.2	17.7
Sept	63.4	10.2	18.4	14.6	12.3	6.5	1.5	26.8	40.9	89.3	63.8	36.6	26.1	27.9	32.7	63.9	18.5	17.5
Dec	62.3	10.0	18.4	14.1	11.9	6.5	1.5	26.8	41.4	89.7	64.1	36.9	26.4	28.0	32.8	63.3	18.9	17.8
2003 March	61.0	9.8	18.0	13.9	11.6	6.3	1.5	26.8	41.4	90.1	64.5	37.0	26.9	29.1	33.3	63.0	18.9	18.1
June	62.8	9.6	18.3	14.2	12.2	6.9	1.6	27.0	40.5	90.0	64.0	36.2	25.7	28.3	33.7	64.0	18.5	17.4
Sept	67.6	10.3	20.0	15.3	13.0	7.3	1.7	26.9	41.5	90.2	65.6	38.3	26.4	28.6	33.3	63.7	19.3	18.0
Dec	65.8	10.2	19.5	14.9	12.5	7.3	1.6	26.9	42.2	90.4	65.6	38.0	27.7	29.5	32.9	63.3	19.4	17.4
2004 March	65.2	10.1	19.3	14.8	12.5	7.0	1.7	26.9	42.0	91.2	65.8	38.2	26.8	28.2	34.3	63.1	19.4	17.4
June	65.2	9.8	19.1	14.9	12.5	7.3	1.7	27.0	41.4	91.0	65.1	37.7	26.2	28.8	34.5	63.9	19.5	16.6
Sept	70.2	10.7	20.7	16.1	13.0	7.9	1.8	27.0	42.4	91.2	66.1	38.6	26.5	30.0	33.5	63.7	19.7	16.6
Dec	69.1	10.6	20.7	15.7	12.7	7.5	1.9	26.9	42.7	90.6	66.6	39.0	27.0	29.0	33.9	63.6	19.8	16.6
2005 March	66.3	10.1	19.6	15.2	12.2	7.3	1.9	27.0	43.0	92.0	67.0	39.0	27.1	29.6	35.2	63.1	20.3	16.6
June	66.6	9.8	19.7	15.4	12.5	7.4	1.8	27.0	41.7	91.2	66.5	38.2	26.4	28.1	33.5	63.7	19.8	16.5
Sept	73.7	10.9	22.1	17.3	13.4	7.9	2.1	26.9	43.3	92.0	68.0	39.6	27.2	29.3	35.7	63.7	20.3	16.0
Dec	69.9	10.4	20.7	16.5	12.6	7.7	2.0	27.0	43.2	92.1	67.4	39.8	27.3	29.5	34.8	63.5	20.3	16.2
2006 March	68.7	10.3	20.8	16.0	12.0	7.6	1.9	26.9	43.1	93.1	68.1	39.4	26.5	28.9	34.4	63.1	20.9	16.0
June	71.4	10.5	21.2	16.9	12.8	7.8	2.1	27.0	43.0	92.6	68.0	39.4	26.9	28.8	35.0	63.7	20.6	15.6
Sept	76.8	11.1	23.1	18.6	13.4	8.4	2.2	27.0	43.9	92.8	69.0	40.7	27.3	29.2	36.9	64.1	20.5	15.4
Dec	74.5	10.3	22.6	17.8	13.2	8.4	2.2	27.1	44.1	93.3	69.2	40.9	27.8	29.8	35.7	63.6	21.0	15.4
2007 March	72.1ᴾ	10.1ᴾ	21.6ᴾ	17.6ᴾ	12.6ᴾ	8.2ᴾ	2.2ᴾ	27.1ᴾ	44.2ᴾ	93.4ᴾ	69.9ᴾ	41.4ᴾ	27.6ᴾ	29.8ᴾ	35.4ᴾ	64.1ᴾ	20.5ᴾ	15.4ᴾ

1 Unstandardised and therefore takes no account of the age structure of the population.
2 Births outside marriage can be registered by both the mother and father (joint) or by the mother alone (sole).
3 Usual address(es) of parents.
p provisional

Table 4.1	Conceptions: age of woman at conception

England and Wales (residents)   Numbers (thousands) and rates; and percentage terminated by abortion

Year and quarter		Age of woman at conception							
	All ages	Under 16	Under 18	Under 20	20–24	25–29	30–34	35–39	40 and over
(a) numbers (thousands)									
1991	853.7	7.5	40.1	101.6	233.3	281.5	167.5	57.6	12.1
1996	816.9	8.9	43.5	94.9	179.8	252.6	200.0	75.5	14.1
1999	774.0	7.9	42.0	98.8	157.6	218.5	197.1	86.0	16.0
2000	767.0	8.1	41.3	97.7	159.0	209.3	195.3	88.7	17.0
2001	763.7	7.9	41.0	96.0	161.6	199.3	196.7	92.2	17.8
2002	787.0	7.9	42.0	97.1	167.8	199.4	204.3	98.9	19.6
2003	806.8	8.0	42.2	98.6	175.3	199.8	209.0	103.1	20.9
2004	826.8	7.6	42.2	101.3	181.3	205.1	209.6	106.8	22.8
2005	841.8	7.9	42.3	102.3	185.5	211.3	209.2	110.0	23.6
2003 March	198.2	1.9	10.5	24.5	42.9	49.4	51.2	25.2	4.9
June	198.5	2.1	10.8	24.7	43.2	49.1	51.1	25.2	5.2
Sept	200.1	2.0	10.2	23.7	43.1	49.3	52.8	26.1	5.2
Dec	210.0	2.0	10.7	25.7	46.1	52.0	54.0	26.7	5.6
2004 March	207.9	2.0	10.9	26.2	45.9	51.1	52.6	26.6	5.6
June	200.1	1.9	10.6	25.0	43.7	49.3	50.4	25.9	5.7
Sept	203.6	1.8	10.0	24.0	44.1	50.7	52.7	26.6	5.6
Dec	215.2	1.9	10.8	26.1	47.7	54.0	54.0	27.6	5.8
2005 March	204.6	1.9	10.4	25.1	45.4	50.8	51.0	26.6	5.7
June	204.7	2.0	10.5	25.1	45.2	51.0	50.7	26.9	5.8
Sept	210.9	2.0	10.4	25.3	45.6	53.3	53.1	27.5	6.0
Dec	221.7	2.0	11.0	26.8	49.3	56.2	54.3	29.1	6.0
2006 March[1,p]	213.6	1.8	10.1	25.1	46.7	53.3	51.7	27.9	6.1
June[1,p]	212.3	2.0	10.4	25.3	45.9	52.4	50.1	27.6	6.3
(b) rates (conceptions per thousand women in age group)[2]									
1991	77.7	8.9	44.6	64.1	120.2	135.1	90.1	34.4	6.6
1996	76.2	9.5	46.3	63.2	110.1	127.6	96.3	40.7	8.4
1999	71.9	8.3	45.1	63.1	103.9	118.0	95.3	42.9	9.1
2000	70.9	8.3	43.9	62.5	103.2	115.7	95.3	43.2	9.4
2001	70.3	8.0	42.7	60.8	102.5	114.2	96.7	44.3	9.6
2002	72.2	7.9	42.9	60.6	104.4	119.0	101.7	47.0	10.3
2003	73.7	7.9	42.4	60.0	107.2	122.0	106.0	49.1	10.7
2004	75.2	7.5	41.8	60.3	109.0	125.1	109.6	51.0	11.4
2005	76.0	7.8	41.4	60.1	108.7	125.8	112.0	53.2	11.5
2003 March	73.6	7.8	42.9	61.1	107.2	121.3	104.6	48.6	10.4
June	72.8	8.3	43.5	60.5	106.2	120.0	103.6	48.0	10.8
Sept	72.5	7.9	40.6	57.0	104.3	119.4	106.6	49.3	10.5
Dec	76.0	7.8	42.6	61.5	111.0	126.9	109.8	50.5	11.2
2004 March	76.2	7.8	43.5	63.2	111.5	125.4	109.3	51.1	11.4
June	73.2	7.7	42.2	60.1	105.9	121.1	105.5	49.7	11.5
Sept	73.6	7.1	39.2	56.8	105.0	122.6	109.9	50.6	11.1
Dec	77.7	7.4	42.4	61.5	112.9	129.9	113.2	52.8	11.4
2005 March	75.1	7.6	41.5	60.0	108.9	123.8	109.8	51.8	11.4
June	74.2	8.0	41.1	59.1	106.7	122.1	108.5	52.0	11.4
Sept	75.5	7.8	40.5	59.0	105.7	125.6	113.3	52.8	11.7
Dec	79.3	7.9	42.8	62.4	113.6	131.7	116.7	55.9	11.5
2006 March[1,p]	78.2	7.1	40.0	59.5	109.3	126.9	114.5	55.0	12.0
June[1,p]	76.6	8.1	40.9	59.3	105.7	122.9	110.6	53.9	12.2
(c) percentage terminated by abortion									
1991	19.4	51.1	39.9	34.5	22.2	13.4	13.7	22.0	41.6
1996	20.8	49.2	40.0	36.2	25.7	15.6	14.1	21.2	37.6
1999	22.6	52.6	43.0	38.6	28.5	17.5	14.7	21.2	37.0
2000	22.7	54.0	44.2	39.3	29.2	17.7	14.5	20.5	35.4
2001	23.2	55.8	45.7	40.4	29.7	18.4	14.6	20.4	34.6
2002	22.5	55.6	45.3	39.9	28.8	17.9	13.9	19.5	34.6
2003	22.5	57.4	45.7	40.2	29.0	17.9	13.6	18.9	34.7
2004	22.4	57.2	45.6	40.1	28.9	18.2	13.2	18.3	33.0
2005	22.2	57.1	46.3	40.3	28.6	18.0	13.2	17.7	32.8
2003 March	22.8	58.9	46.1	40.2	29.5	17.9	13.8	19.7	34.5
June	23.1	58.3	46.2	40.9	29.3	18.4	14.2	19.2	36.1
Sept	21.6	56.9	45.3	39.5	28.0	17.1	13.0	18.0	33.8
Dec	22.5	55.7	45.0	40.3	29.0	18.1	13.5	18.5	34.5
2004 March	22.7	58.2	45.7	40.2	29.4	18.5	13.4	18.2	32.9
June	23.0	57.2	46.3	40.8	29.2	18.6	13.7	19.2	33.5
Sept	21.9	56.8	45.8	40.0	28.4	17.9	12.8	17.8	33.0
Dec	22.0	56.3	44.5	39.3	28.6	17.8	13.0	18.2	32.5
2005 March	22.5	57.5	47.3	41.1	29.2	18.1	13.1	18.0	32.6
June	22.7	57.0	45.8	40.3	28.9	18.6	13.9	17.8	33.8
Sept	21.4	56.2	45.3	39.0	27.5	17.5	12.6	17.2	32.1
Dec	22.2	57.5	46.9	40.6	28.7	17.8	13.1	17.7	32.7
2006 March[1,p]	22.4	59.2	48.0	41.9	29.5	18.6	13.1	17.6	31.4
June[1,p]	23.2	59.7	49.5	43.2	30.3	19.3	14.3	18.2	32.3

Note: Conception figures are estimates derived from birth registrations and abortion notifications.
Rates for women of all ages, under 16, under 18, under 20 and 40 and over are based on the population of women aged 15–44, 13–15, 15–17, 15–19 and 40–44 respectively.
For a quarterly analysis of conceptions to women under 18 for local authority areas see the National Statistics website, www.statistics.gov.uk
1   Figures for conceptions by age for the March and June quarters for 2006 exclude maternities where the mother's age was not recorded.
2   Conception rates from 2002 to 2005 have been updated to include the latest revised mid-year population estimates that take into account improved estimates of international migration.
p   provisional

Table 4.2	Abortions: residents and non-residents; age and gestation (residents only)

England and Wales Numbers (thousands) and rates; and percentages for gestation weeks

Numbers (thousands)

Year and quarter	All[1] women	Residents[1]	Non-[1] residents	Under 16	16–19	20–24	25–29	30–34	35–44	45 and over	Under 9	9–12	13–19	20 and over
1971	126.8	94.6	32.2	2.3	18.2	24.5	17.3	14.2	15.9	0.5	16.6	57.9	21.8	1.0
1976	129.7	101.9	27.8	3.4	24.0	23.6	19.3	14.6	14.7	0.5	24.8	55.8	15.0	1.1
1981	162.5	128.6	33.9	3.5	31.4	34.3	21.9	18.7	17.6	0.6	31.0	53.4	13.5	1.3
1986	172.3	147.6	24.7	3.9	33.8	45.3	28.7	18.0	17.5	0.4	33.4	53.8	11.5	1.4
1991	179.5	167.4	12.1	3.2	31.1	52.7	38.6	23.4	17.9	0.4	35.2	52.9	10.6	1.2
1996	177.5	167.9	9.6	3.6	28.8	46.4	39.3	28.2	21.1	0.4	40.0	48.7	10.1	1.3
1997	179.7	170.1	9.6	3.4	29.9	45.0	40.2	28.9	22.3	0.5	41.2	47.9	9.6	1.2
1998	187.4	177.9	9.5	3.8	33.2	45.8	40.4	30.4	23.8	0.5	41.4	47.6	9.7	1.3
1999	183.2	173.7	9.5	3.6	32.8	45.0	38.5	29.1	24.1	0.5	42.5	46.5	9.5	1.4
2000	185.4	175.5	9.8	3.7	33.2	47.1	37.9	28.7	24.4	0.5	43.3	45.0	10.3	1.5
2001	186.3	176.4	9.9	3.7	33.4	48.3	36.5	28.8	25.2	0.5	42.8	45.0	10.6	1.6
2002	185.4	175.9	9.5	3.7	33.0	48.4	35.8	28.5	26.0	0.5	42.2	45.2	11.0	1.6
2003	190.7	181.6	9.1	4.0	34.2	51.1	36.0	28.7	26.9	0.5	43.6	43.7	11.1	1.6
2004	194.5	185.7	8.8	3.8	35.5	52.8	37.8	28.1	27.3	0.5	46.2	41.5	10.8	1.6
2005	194.4	186.4	7.9	3.8	35.3	53.3	38.3	27.8	27.2	0.6	53.6	35.7	9.3	1.4
2006	201.2	193.7	7.4	4.0	37.3	55.3	40.4	28.2	27.9	0.7	54.9	34.3	9.2	1.5
2003 March	50.0	47.6	2.4	1.0	9.1	13.4	9.4	7.5	7.0	0.1	40.9	45.3	12.2	1.6
June	47.7	45.4	2.3	1.0	8.5	12.7	9.1	7.2	6.7	0.1	42.5	44.4	11.4	1.6
Sept	47.7	44.8	2.3	1.0	8.3	12.5	8.9	7.2	6.7	0.1	43.3	43.9	11.2	1.5
Dec	46.0	43.9	2.1	0.9	8.3	12.5	8.6	6.9	6.5	0.1	47.7	41.0	9.6	1.7
2004 March	51.1	48.7	2.4	1.0	9.4	13.9	9.8	7.5	7.0	0.1	41.7	44.5	12.1	1.7
June	48.9	46.6	2.3	1.0	8.9	13.3	9.5	6.9	6.9	0.1	43.6	43.3	11.2	1.8
Sept	48.4	46.3	2.1	1.0	8.9	13.0	9.4	7.0	6.9	0.1	47.8	40.5	10.3	1.4
Dec	46.1	44.2	1.9	1.0	8.4	12.6	9.1	6.6	6.5	0.1	52.0	37.2	9.5	1.3
2005 March	50.1	47.9	2.1	0.9	9.1	13.9	9.7	7.2	7.0	0.1	47.2	40.4	11.0	1.4
June	50.1	48.0	2.1	1.0	9.2	13.9	9.9	7.1	6.9	0.1	53.8	35.6	9.2	1.4
Sept	47.0	45.1	1.9	1.0	8.5	12.7	9.3	6.9	6.7	0.1	56.5	33.6	8.5	1.3
Dec	47.2	45.3	1.8	0.9	8.6	12.9	9.5	6.7	6.7	0.1	57.2	32.9	8.3	1.5
2006 March	52.4	50.4	2.0	1.0	9.8	14.6	10.4	7.2	7.3	0.2	50.6	37.3	10.5	1.6
June	51.3	49.3	2.0	1.0	9.4	14.2	10.3	7.2	7.1	0.2	53.6	35.3	9.4	1.7
Sept	49.8	47.9	1.8	1.0	9.2	13.6	10.0	7.0	6.9	0.2	56.5	33.0	9.0	1.5
December	47.7	46.0	1.6	1.0	8.8	13.0	9.6	6.7	6.7	0.1	59.5	31.3	7.9	1.3
2007 March[p]	54.8	52.9	1.9	1.1	10.6	15.2	11.0	7.3	7.3	0.2	54.1	35.0	9.4	1.5
June[p]	50.0	48.2	1.8	1.1	9.7	14.0	10.1	6.6	6.7	0.2	56.4	32.8	9.2	1.5

Rates (per thousand women residents)

Year and quarter	ASR[2] (women 15–44)	Crude rate[3] (women 15–44)		Under 16	16–19	20–24	25–29	30–34	35–44	45 and over
1971	9.9	10.1	:	2.3	13.9	13.1	10.7	10.0	5.6	0.3
1976	10.2	10.5	:	2.9	16.9	14.2	10.4	9.2	5.3	0.3
1981	11.9	12.4	:	3.0	19.4	18.6	13.1	10.1	5.9	0.4
1986	13.0	13.5	:	3.7	22.0	21.9	15.5	10.8	5.1	0.3
1991	15.0	15.2	:	3.8	24.0	27.1	18.5	12.6	5.1	0.3
1996	16.0	15.7	:	3.9	24.2	28.4	19.9	13.6	6.0	0.2
1997	16.3	15.9	:	3.7	24.4	28.8	20.7	13.8	6.2	0.3
1998	17.1	16.6	:	4.0	26.8	30.2	21.2	14.6	6.5	0.3
1999	16.8	16.2	:	3.8	26.3	29.7	20.8	14.1	6.4	0.3
2000	17.0	16.3	:	3.9	26.9	30.7	20.9	14.1	6.3	0.3
2001	17.0	16.2	:	3.7	26.6	30.6	20.9	14.2	6.4	0.3
2002	17.0	16.1	:	3.7	25.8	30.1	21.4	14.2	6.5	0.3
2003	17.5	16.6	:	3.9	26.1	31.2	22.1	14.6	6.6	0.3
2004	17.8	16.9	:	3.7	26.5	31.9	23.3	14.7	6.7	0.3
2005	17.8	17.0	:	3.7	26.3	32.0	23.6	14.5	6.6	0.3
2006	18.3	17.5	:	3.9	27.3	32.5	24.3	15.1	6.8	0.4
2003 March	18.3	17.4	:	4.0	28.0	33.0	22.9	15.1	6.9	0.3
June	17.4	16.6	:	4.0	26.1	31.1	22.3	14.5	6.6	0.3
Sept	17.2	16.4	:	4.0	25.3	30.6	21.8	14.6	6.6	0.3
Dec	16.8	16.0	:	3.7	25.2	30.4	21.1	14.2	6.4	0.3
2004 March	18.7	17.8	:	3.9	28.3	33.8	24.1	15.4	6.9	0.3
June	17.9	17.0	:	3.8	26.7	32.3	23.3	14.4	6.7	0.3
Sept	17.8	16.9	:	3.7	26.6	31.5	23.0	14.8	6.8	0.3
Dec	17.0	16.2	:	3.5	25.0	30.4	22.3	14.2	6.3	0.3
2005 March	18.4	17.5	:	3.7	27.0	33.5	23.8	15.2	6.8	0.3
June	18.4	17.5	:	3.8	27.2	33.3	24.1	15.3	6.7	0.3
Sept	17.3	16.4	:	3.8	25.2	30.5	22.6	14.8	6.5	0.3
Dec	17.4	16.5	:	3.6	25.4	30.9	23.0	14.4	6.5	0.3
2006 March	19.3	18.4	:	3.9	29.0	34.8	25.0	15.9	7.0	0.3
June	18.9	18.0	:	3.9	27.8	33.8	24.7	16.0	6.8	0.4
Sept	18.3	17.5	:	4.0	27.0	32.2	23.9	15.9	6.7	0.4
Dec	17.5	16.8	:	4.0	25.9	30.8	22.8	15.3	6.5	0.3
2007 March[p]	19.9	19.1	:	4.6	30.9	35.0	25.4	16.6	7.1	0.4
June[p]	18.1	17.4	:	4.3	28.2	31.9	23.1	15.1	6.5	0.4

Notes: Rates for under 16 and 45 and over are based on female populations aged 13–15 and 45–49 respectively.
1 Includes cases with not stated age and/or gestation week.
2 Rates for all women residents age-standardised to the European population for ages 15–44.
3 Includes incomplete forms that have been returned to practitioners.
p provisional

Table 5.1	Period expectation of life at birth and selected age

Constituent countries of the United Kingdom   Years

	Males								Year	Females							
Year	At birth	At age									At birth	At age						
		5	20	30	50	60	70	80			5	20	30	50	60	70	80
United Kingdom																	
1981	70.8	66.9	52.3	42.7	24.1	16.3	10.1	5.8	1981	76.8	72.7	57.9	48.2	29.2	20.8	13.3	7.5
1986	71.9	67.8	53.2	43.6	24.9	16.8	10.5	6.0	1986	77.7	73.4	58.6	48.8	29.8	21.2	13.8	7.8
1991	73.2	68.9	54.2	44.7	26.0	17.7	11.1	6.4	1991	78.7	74.3	59.5	49.7	30.6	21.9	14.3	8.2
1996	74.3	69.8	55.1	45.6	26.9	18.5	11.6	6.6	1996	79.4	74.9	60.1	50.3	31.2	22.3	14.5	8.3
2000	75.4	70.9	56.2	46.6	28.0	19.5	12.3	7.0	2000	80.2	75.6	60.8	51.0	31.9	23.0	15.0	8.6
2001[1]	75.6	71.2	56.4	46.9	28.2	19.7	12.5	7.1	2001[1]	80.4	75.8	61.0	51.2	32.1	23.2	15.1	8.7
2002[1]	75.9	71.4	56.6	47.1	28.5	19.9	12.6	7.1	2002[1]	80.5	75.9	61.1	51.3	32.2	23.3	15.2	8.7
2003[1]	76.2	71.7	56.9	47.4	28.7	20.2	12.8	7.3	2003[1]	80.7	76.1	61.3	51.5	32.4	23.4	15.3	8.7
2004[1]	76.5	72.0	57.3	47.7	29.0	20.5	13.1	7.4	2004[1]	80.9	76.4	61.5	51.7	32.6	23.6	15.5	8.8
2005[1]	76.9	72.4	57.6	48.0	29.4	20.8	13.4	7.6	2005[1]	81.3	76.7	61.9	52.0	32.9	23.9	15.8	9.0
England and Wales																	
1981	71.0	67.1	52.5	42.9	24.3	16.4	10.1	5.8	1981	77.0	72.9	58.1	48.3	29.4	20.9	13.4	7.5
1986	72.1	68.0	53.4	43.8	25.0	16.9	10.5	6.1	1986	77.9	73.6	58.8	49.0	30.0	21.4	13.9	7.9
1991	73.4	69.1	54.4	44.8	26.1	17.8	11.2	6.4	1991	78.9	74.5	59.7	49.9	30.8	22.0	14.4	8.3
1996	74.5	70.1	55.4	45.8	27.1	18.7	11.6	6.6	1996	79.6	75.1	60.2	50.4	31.3	22.5	14.6	8.4
2000	75.6	71.2	56.4	46.9	28.1	19.6	12.3	7.0	2000	80.3	75.8	61.0	51.1	32.0	23.1	15.1	8.6
2001[1]	75.9	71.4	56.7	47.1	28.4	19.9	12.5	7.1	2001[1]	80.5	76.0	61.2	51.3	32.2	23.3	15.2	8.7
2002[1]	76.1	71.6	56.9	47.3	28.6	20.1	12.7	7.2	2002[1]	80.7	76.1	61.3	51.5	32.3	23.4	15.3	8.7
2003[1]	76.4	71.9	57.2	47.6	28.9	20.3	12.9	7.3	2003[1]	80.9	76.3	61.5	51.7	32.5	23.6	15.4	8.8
2004[1]	76.8	72.3	57.5	47.9	29.2	20.6	13.2	7.4	2004[1]	81.1	76.6	61.7	51.9	32.7	23.8	15.6	8.9
2005[1]	77.2	72.7	57.9	48.3	29.6	21.0	13.5	7.6	2005[1]	81.5	76.9	62.0	52.2	33.1	24.1	15.9	9.1
England																	
1981	71.1	67.1	52.5	42.9	24.3	16.4	10.1	5.8	1981	77.0	72.9	58.2	48.4	29.4	20.9	13.4	7.5
1986	72.2	68.1	53.4	43.8	25.1	17.0	10.6	6.1	1986	77.9	73.6	58.8	49.0	30.0	21.4	13.9	7.9
1991	73.4	69.1	54.4	44.9	26.2	17.8	11.2	6.4	1991	78.9	74.5	59.7	49.9	30.8	22.0	14.4	8.3
1996	74.5	70.1	55.4	45.9	27.1	18.7	11.7	6.6	1996	79.6	75.1	60.3	50.5	31.3	22.5	14.6	8.4
2000	75.7	71.2	56.5	46.9	28.2	19.6	12.4	7.0	2000	80.4	75.8	61.0	51.2	32.0	23.1	15.1	8.6
2001[1]	75.9	71.4	56.7	47.1	28.5	19.9	12.6	7.1	2001[1]	80.6	76.0	61.2	51.4	32.2	23.3	15.2	8.7
2002[1]	76.1	71.7	56.9	47.4	28.7	20.1	12.7	7.2	2002[1]	80.7	76.1	61.3	51.5	32.4	23.4	15.3	8.7
2003[1]	76.5	72.0	57.2	47.6	28.9	20.4	12.9	7.3	2003[1]	80.9	76.4	61.5	51.7	32.6	23.6	15.4	8.8
2004[1]	76.8	72.3	57.6	48.0	29.2	20.7	13.2	7.4	2004[1]	81.1	76.6	61.7	51.9	32.8	23.8	15.6	8.9
2005[1]	77.2	72.7	57.9	48.3	29.6	21.0	13.5	7.6	2005[1]	81.5	76.9	62.1	52.3	33.1	24.1	15.9	9.1
Wales																	
1981	70.4	66.5	51.9	42.2	23.6	15.8	9.7	5.6	1981	76.4	72.3	57.5	47.7	28.9	20.5	13.1	7.4
1986	71.6	67.5	52.8	43.2	24.6	16.6	10.3	6.0	1986	77.5	73.3	58.5	48.7	29.7	21.1	13.7	7.8
1991	73.1	68.8	54.1	44.6	25.8	17.6	11.0	6.4	1991	78.8	74.3	59.5	49.7	30.6	21.8	14.3	8.3
1996	73.9	69.4	54.7	45.3	26.6	18.2	11.3	6.4	1996	79.1	74.6	59.7	49.9	30.9	22.1	14.4	8.3
2000	74.9	70.5	55.8	46.3	27.6	19.1	12.0	6.8	2000	79.8	75.3	60.4	50.6	31.5	22.6	14.7	8.4
2001[1]	75.3	70.8	56.0	46.6	28.0	19.5	12.3	7.0	2001[1]	80.0	75.4	60.6	50.8	31.7	22.8	14.9	8.5
2002[1]	75.5	70.9	56.2	46.8	28.2	19.7	12.4	7.1	2002[1]	80.1	75.5	60.7	50.9	31.8	22.9	15.0	8.6
2003[1]	75.8	71.2	56.5	47.0	28.4	19.9	12.6	7.2	2003[1]	80.3	75.7	60.9	51.1	32.0	23.1	15.1	8.6
2004[1]	76.1	71.6	56.8	47.3	28.7	20.2	12.8	7.3	2004[1]	80.6	76.0	61.1	51.3	32.2	23.3	15.2	8.7
2005[1]	76.6	72.0	57.3	47.7	29.2	20.6	13.2	7.6	2005[1]	80.9	76.3	61.5	51.6	32.6	23.7	15.5	8.9
Scotland																	
1981	69.1	65.2	50.6	41.1	22.9	15.4	9.6	5.5	1981	75.3	71.2	56.4	46.7	27.9	19.7	12.7	7.2
1986	70.2	66.0	51.4	41.9	23.5	15.8	9.9	5.7	1986	76.2	71.9	57.1	47.3	28.4	20.1	13.0	7.5
1991	71.4	67.1	52.5	43.0	24.6	16.6	10.4	6.1	1991	77.1	72.7	57.9	48.1	29.2	20.7	13.5	7.9
1996	72.2	67.8	53.1	43.7	25.3	17.3	10.9	6.3	1996	77.9	73.3	58.5	48.8	29.8	21.2	13.8	8.0
2000	73.1	68.6	53.9	44.6	26.3	18.2	11.5	6.6	2000	78.6	74.0	59.2	49.4	30.5	21.8	14.1	8.1
2001	73.3	68.8	54.2	44.8	26.6	18.4	11.7	6.8	2001	78.8	74.2	59.4	49.6	30.7	22.0	14.3	8.2
2002	73.5	69.0	54.3	45.0	26.7	18.6	11.8	6.8	2002	78.9	74.3	59.5	49.7	30.8	22.1	14.4	8.2
2003	73.8	69.3	54.6	45.2	27.0	18.8	12.0	6.9	2003	79.1	74.5	59.7	49.9	30.9	22.2	14.5	8.3
2004	74.2	69.7	55.0	45.6	27.3	19.1	12.2	7.0	2004	79.3	74.7	59.9	50.1	31.1	22.4	14.7	8.4
2005	74.6	70.1	55.4	45.9	27.7	19.4	12.5	7.2	2005	79.6	75.0	60.2	50.4	31.4	22.7	14.9	8.5
Northern Ireland																	
1981	69.2	65.4	50.9	41.5	23.2	15.6	9.7	5.8	1981	75.5	71.6	56.8	47.1	28.3	20.0	12.8	7.3
1986	70.9	66.8	52.2	42.7	24.2	16.4	10.4	6.2	1986	77.1	72.9	58.1	48.3	29.3	20.8	13.4	7.8
1991	72.6	68.2	53.6	44.1	25.5	17.3	11.0	6.4	1991	78.4	74.0	59.2	49.4	30.3	21.6	14.2	8.3
1996	73.8	69.4	54.7	45.3	26.6	18.2	11.4	6.6	1996	79.2	74.7	59.9	50.0	30.9	22.1	14.4	8.4
2000	74.8	70.4	55.7	46.2	27.6	19.1	11.9	6.6	2000	79.8	75.2	60.4	50.6	31.5	22.6	14.6	8.2
2001	75.2	70.7	56.1	46.6	27.9	19.4	12.3	6.9	2001	80.1	75.6	60.7	50.9	31.8	22.9	14.9	8.4
2002	75.6	71.1	56.4	46.9	28.2	19.7	12.4	7.0	2002	80.4	75.9	61.0	51.2	32.0	23.1	15.1	8.5
2003	75.8	71.4	56.7	47.1	28.4	19.9	12.6	7.2	2003	80.6	76.0	61.1	51.3	32.2	23.3	15.2	8.6
2004	76.0	71.6	56.9	47.4	28.7	20.2	12.8	7.3	2004	80.8	76.3	61.4	51.6	32.5	23.5	15.4	8.7
2005	76.1	71.6	57.0	47.5	28.9	20.4	13.0	7.3	2005	81.0	76.4	61.6	51.8	32.7	23.7	15.6	8.8

Note: Figures from 1981 are calculated from the population estimates revised in the light of the 2001 Census. All figures are based on a three-year period.
1 Figures for 2001 to 2005 for the United Kingdom, England and Wales, England and for Wales are based on revised population estimates for 2002-2005 and death registrations.
p provisional

Table 6.1 — Deaths: age and sex

England and Wales — Numbers (thousands) and rates

Year and quarter		All ages	Under 1[1]	1–4	5–9	10–14	15–19	20–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and over
Numbers (thousands)															
Males															
1976		300.1	4.88	0.88	0.68	0.64	1.66	1.66	3.24	5.93	20.4	52.0	98.7	80.3	29.0
1981		289.0	4.12	0.65	0.45	0.57	1.73	1.58	3.18	5.54	16.9	46.9	92.2	86.8	28.5
1986		287.9	3.72	0.57	0.33	0.38	1.43	1.75	3.10	5.77	14.4	43.6	84.4	96.2	32.2
1991		277.6	2.97	0.55	0.34	0.35	1.21	1.76	3.69	6.16	13.3	34.9	77.2	95.8	39.3
1996		268.7	2.27	0.44	0.24	0.29	0.93	1.41	4.06	5.84	13.6	30.1	71.0	90.7	47.8
1999		264.3	2.08	0.41	0.22	0.28	0.90	1.27	3.85	5.93	13.6	28.7	64.3	90.4	52.3
2000		255.5	1.89	0.34	0.22	0.28	0.87	1.22	3.76	6.05	13.4	27.9	60.6	87.1	51.9
2001		252.4	1.81	0.32	0.19	0.28	0.88	1.27	3.63	6.07	13.3	27.5	57.5	87.0	52.7
2002		253.1	1.81	0.32	0.20	0.28	0.83	1.24	3.47	6.20	12.9	27.7	56.3	88.3	53.6
2003		253.9	1.81	0.31	0.19	0.24	0.81	1.23	3.26	6.32	12.7	28.2	55.1	89.6	54.0
2004		244.1	1.79	0.29	0.17	0.26	0.78	1.15	3.10	6.19	12.2	27.0	52.5	87.3	51.3
2005		243.3	1.87	0.28	0.16	0.25	0.75	1.11	2.89	6.14	12.1	27.3	51.0	84.8	54.7
2006[p]		240.9	1.86	0.29	0.19	0.26	0.84	1.21	3.13	6.32	12.3	27.6	48.9	81.9	56.2
Females															
1976		298.5	3.46	0.59	0.45	0.42	0.62	0.67	1.94	4.04	12.8	29.6	67.1	104.7	72.1
1981		288.9	2.90	0.53	0.30	0.37	0.65	0.64	1.82	3.74	10.5	27.2	62.8	103.6	73.9
1986		293.3	2.59	0.49	0.25	0.27	0.56	0.67	1.65	3.83	8.8	25.8	58.4	106.5	83.6
1991		292.5	2.19	0.44	0.25	0.22	0.46	0.64	1.73	3.70	8.4	21.3	54.2	103.3	95.7
1996		291.5	1.69	0.32	0.18	0.20	0.43	0.51	1.85	3.66	8.9	18.2	50.2	96.7	108.7
1999		291.8	1.55	0.30	0.17	0.22	0.39	0.47	1.67	3.79	9.0	18.0	45.1	93.9	117.2
2000		280.1	1.49	0.25	0.16	0.18	0.38	0.47	1.69	3.87	9.1	17.6	42.2	89.3	113.4
2001		277.9	1.43	0.27	0.19	0.18	0.38	0.47	1.59	3.77	8.9	17.6	40.5	88.8	113.9
2002		280.4	1.31	0.24	0.16	0.19	0.38	0.43	1.61	3.77	8.7	17.7	39.6	90.0	116.3
2003		284.4	1.50	0.28	0.15	0.19	0.35	0.46	1.57	3.86	8.5	18.0	39.0	92.7	117.9
2004		268.4	1.43	0.23	0.13	0.16	0.38	0.46	1.49	3.80	8.1	17.6	36.9	88.3	109.4
2005		269.1	1.37	0.22	0.13	0.18	0.38	0.48	1.48	3.81	8.2	17.8	36.0	86.4	113.1
2006[p]		261.7	1.51	0.27	0.14	0.17	0.38	0.44	1.38	3.80	8.1	17.9	34.5	81.2	111.9
Rates (deaths per 1,000 population in each age group)															
Males															
1976		12.5	16.2	0.65	0.34	0.31	0.88	0.96	0.92	2.09	6.97	19.6	50.3	116.4	243.2
1981		12.0	12.6	0.53	0.27	0.29	0.82	0.83	0.89	1.83	6.11	17.7	45.6	105.2	226.5
1986		11.8	11.0	0.44	0.21	0.23	0.72	0.83	0.88	1.68	5.27	16.6	42.8	101.2	215.4
1991		11.2	8.3	0.40	0.21	0.23	0.72	0.89	0.94	1.76	4.56	13.9	38.1	93.1	205.6
1996		10.7	6.8	0.32	0.14	0.18	0.60	0.85	1.01	1.67	4.06	11.9	34.5	85.0	198.8
1999		10.4	6.5	0.31	0.12	0.16	0.56	0.83	0.99	1.60	3.99	10.9	31.6	79.9	194.4
2000		10.0	6.1	0.26	0.13	0.16	0.54	0.79	0.98	1.59	3.92	10.4	29.7	75.9	187.5
2001		9.9	5.9	0.25	0.11	0.16	0.53	0.80	0.97	1.56	3.89	10.0	28.0	74.0	186.4
2002		9.8	5.9	0.25	0.12	0.16	0.49	0.77	0.94	1.57	3.86	9.7	27.2	73.5	187.7
2003		9.8	5.7	0.25	0.11	0.14	0.46	0.75	0.91	1.58	3.81	9.6	26.4	72.9	191.0
2004		9.4	5.5	0.23	0.10	0.15	0.44	0.67	0.87	1.53	3.67	9.0	25.0	69.9	176.0
2005		9.3	5.7	0.24	0.10	0.16	0.48	0.69	0.89	1.56	3.61	8.9	24.1	67.4	172.1
2006[2,p]		9.1	5.4	0.23	0.12	0.15	0.46	0.67	0.89	1.55	3.58	8.8	23.2	64.7	163.4
2004	March	10.2	5.9	0.25	0.12	0.15	0.46	0.67	0.92	1.59	3.81	9.4	26.6	76.9	199.3
	June	9.1	5.2	0.23	0.12	0.14	0.39	0.74	0.94	1.58	3.72	8.8	24.5	66.9	164.0
	Sept	8.7	5.3	0.23	0.10	0.18	0.46	0.71	0.86	1.47	3.58	8.5	23.2	64.5	154.8
	Dec	9.5	5.5	0.23	0.08	0.11	0.43	0.58	0.78	1.49	3.58	9.2	25.4	70.8	183.0
2005	March	10.5	6.2	0.26	0.09	0.17	0.46	0.71	0.88	1.56	3.83	9.7	26.6	77.3	201.2
	June	9.1	5.5	0.25	0.10	0.18	0.42	0.59	0.83	1.57	3.53	8.8	23.4	65.8	162.9
	Sept	8.3	5.3	0.20	0.09	0.12	0.40	0.63	0.85	1.44	3.46	8.3	22.2	59.6	146.0
	Dec	9.3	5.6	0.21	0.11	0.11	0.39	0.62	0.73	1.46	3.54	8.8	24.0	66.9	176.9
2006[2]	March[p]	10.2	5.3	0.29	0.14	0.16	0.46	0.72	0.95	1.59	3.82	9.5	25.4	73.7	189.6
	June[p]	9.0	5.5	0.24	0.10	0.15	0.45	0.69	0.89	1.57	3.60	8.8	23.3	63.7	158.5
	Sept[p]	8.4	5.4	0.14	0.11	0.15	0.51	0.58	0.83	1.49	3.43	8.3	21.5	58.7	143.8
	Dec[p]	8.9	5.6	0.26	0.13	0.15	0.43	0.69	0.90	1.54	3.50	8.7	22.5	62.7	162.1
2007[3]	March[p]	9.9	5.3	0.29	0.12	0.14	0.48	0.65	0.91	1.55	3.66	9.2	24.3	70.0	185.3
Females															
1976		11.8	12.2	0.46	0.24	0.21	0.35	0.40	0.56	1.46	4.30	10.1	26.0	74.6	196.6
1981		11.3	9.4	0.46	0.19	0.19	0.32	0.35	0.52	1.26	3.80	9.5	24.1	66.2	178.2
1986		11.4	8.0	0.40	0.17	0.17	0.29	0.33	0.47	1.12	3.24	9.2	23.4	62.5	169.4
1991		11.2	6.4	0.33	0.16	0.15	0.29	0.33	0.44	1.05	2.87	8.2	21.8	58.7	161.6
1996		11.0	5.3	0.25	0.10	0.12	0.29	0.31	0.46	1.04	2.63	7.1	20.6	55.8	158.9
1999		11.0	5.1	0.24	0.10	0.13	0.25	0.31	0.43	1.01	2.61	6.7	19.2	53.4	162.6
2000		10.5	5.1	0.20	0.10	0.11	0.25	0.30	0.44	1.00	2.62	6.4	18.1	50.8	155.2
2001		10.4	4.9	0.22	0.12	0.11	0.24	0.30	0.42	0.96	2.57	6.3	17.4	50.1	155.0
2002		10.4	4.5	0.20	0.10	0.11	0.24	0.27	0.44	0.94	2.54	6.0	17.0	50.4	159.4
2003		10.6	4.9	0.24	0.10	0.12	0.21	0.28	0.43	0.95	2.51	5.9	16.7	51.3	165.6
2004		9.9	4.6	0.20	0.09	0.10	0.22	0.27	0.42	0.93	2.39	5.7	15.8	48.6	154.3
2005		9.9	4.4	0.19	0.09	0.11	0.22	0.27	0.40	0.90	2.38	5.6	15.4	48.1	152.7
2006[2,p]		9.6	4.6	0.22	0.09	0.10	0.22	0.26	0.39	0.92	2.33	5.6	14.8	45.7	143.8
2004	March	11.1	5.3	0.23	0.09	0.10	0.27	0.32	0.43	0.95	2.52	6.0	17.2	54.3	178.4
	June	9.4	4.1	0.17	0.08	0.11	0.26	0.27	0.42	0.94	2.41	5.4	14.9	46.4	143.8
	Sept	9.1	4.3	0.20	0.06	0.09	0.20	0.24	0.42	0.88	2.27	5.4	14.8	44.5	137.0
	Dec	10.1	4.6	0.19	0.11	0.09	0.17	0.27	0.40	0.93	2.36	5.8	16.0	49.4	157.9
2005	March	11.6	4.8	0.22	0.09	0.13	0.20	0.32	0.46	0.95	2.57	6.0	17.3	57.0	184.7
	June	9.5	4.7	0.20	0.10	0.10	0.25	0.27	0.37	0.97	2.31	5.5	15.0	46.6	144.2
	Sept	8.7	3.9	0.14	0.06	0.09	0.20	0.24	0.36	0.86	2.32	5.4	13.8	42.0	129.7
	Dec	9.8	4.2	0.19	0.08	0.11	0.22	0.24	0.41	0.84	2.31	5.6	15.3	46.8	152.7
2006[2]	March[p]	11.0	5.0	0.25	0.07	0.08	0.24	0.30	0.39	1.01	2.42	6.1	16.4	52.5	172.0
	June[p]	9.4	4.6	0.22	0.10	0.14	0.19	0.24	0.42	0.88	2.35	5.5	14.7	45.4	140.9
	Sept[p]	8.6	4.3	0.19	0.10	0.08	0.23	0.22	0.36	0.91	2.27	5.3	13.7	41.1	124.3
	Dec[p]	9.2	4.5	0.24	0.09	0.12	0.23	0.25	0.41	0.89	2.27	5.5	14.3	43.7	138.7
2007[3]	March[p]	10.9	4.5	0.24	0.07	0.12	0.27	0.27	0.38	0.97	2.30	5.9	16.3	51.6	167.7

Note: Figures represent the numbers of deaths registered in each year up to 1992 and the numbers of deaths occurring in each year from 1993 to 2005. Provisional figures for 2006 and 2007 relate to registrations.

Death rates from 2002 to 2005 have been updated to include the latest revised mid-year population estimates that take into account improved estimates of international migration.

1 Rates per 1,000 live births.
2 Death rates for 2006 have been calculated using the mid 2006 population estimates published on 22 August 2007.
3 Death rates for 2007 are based on the 2006-based population projections for 2007.
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Table 6.2	Deaths: subnational

Government Office Regions of England — Rates

Year and quarter	North East	North West	Yorkshire and The Humber	East Midlands	West Midlands	East	London	South East	South West
Total deaths (deaths per 1,000 population of all ages)									
1996	11.7	11.7	11.2	10.7	10.7	10.3	9.4	10.7	11.7
1997	11.6	11.6	11.1	10.5	10.6	10.2	9.0	10.6	11.7
1998	11.9	11.7	11.2	10.8	10.6	10.2	8.8	10.4	11.4
1999	11.6	11.5	10.9	10.7	10.7	10.3	8.7	10.5	11.6
2000	10.8	10.7	10.3	10.0	10.3	9.9	8.2	9.8	11.3
2001	11.1	11.0	10.4	10.1	10.2	9.9	7.9	9.9	11.0
2002	11.2	11.0	10.5	10.2	10.3	10.0	7.8	10.0	11.1
2003	11.3	11.0	10.5	10.3	10.5	9.9	7.9	9.9	11.2
2004	11.0	10.5	10.1	9.7	9.9	9.5	7.3	9.4	10.4
2005	10.8	10.4	9.9	9.7	9.9	9.4	7.1	9.4	10.4
2006[1,p]	10.5	10.2	9.8	9.7	9.7	9.4	6.8	9.2	10.2
2005 March	12.1	12.0	11.4	11.1	11.5	10.9	8.2	10.9	12.1
June	10.6	10.0	9.6	9.5	9.5	9.2	6.8	9.1	10.2
Sept	9.5	9.2	8.8	8.6	8.8	8.4	6.3	8.3	9.3
Dec	10.7	10.3	9.9	9.9	9.8	9.5	6.9	9.4	10.4
2006[1] March[p]	11.5	11.4	10.8	10.9	11.1	10.8	7.8	10.9	11.7
June[p]	10.6	10.2	9.7	9.6	9.6	9.3	6.7	9.0	10.0
Sept[p]	9.4	9.3	8.9	8.8	8.8	8.3	6.2	8.2	9.2
Dec[p]	10.6	9.9	9.7	9.6	9.4	9.1	6.5	8.9	10.0
2007[1] March[p]	11.9	11.7	11.0	10.7	11.0	10.3	7.4	10.1	11.6
Infant mortality (deaths under 1 year per 1,000 live births)									
1996	6.2	6.3	6.5	6.3	6.8	5.3	6.3	5.3	5.5
1997	5.8	6.7	6.5	5.7	7.0	4.8	5.8	5.0	5.8
1998	5.0	6.3	6.9	5.6	6.5	5.0	6.0	4.4	4.8
1999	5.6	6.5	6.3	6.0	6.9	4.6	6.0	4.8	4.7
2000	6.5	6.2	7.3	5.4	6.8	4.4	5.4	4.4	4.7
2001	5.4	5.8	5.5	4.9	6.4	4.5	6.1	4.2	5.4
2002	4.8	5.4	6.1	5.6	6.6	4.3	5.5	4.5	4.3
2003	4.9	5.9	5.7	5.9	7.4	4.5	5.4	4.2	4.1
2004	4.6	5.4	5.8	4.9	6.3	4.2	5.2	3.9	4.5
2005	4.7	5.6	6.0	4.8	6.6	4.0	5.2	3.9	4.5
2006[p]	5.4	5.6	5.7	5.4	6.4	4.1	4.9	4.1	4.0
2005 March	4.8	6.1	6.0	7.3	7.1	4.8	5.4	3.9	5.3
June	4.8	5.4	7.0	5.1	6.4	4.2	5.7	3.4	4.4
Sept	4.8	4.8	5.4	3.4	7.5	3.7	4.7	4.0	3.6
Dec	4.5	6.1	5.6	3.8	5.6	3.3	5.0	4.4	4.9
2006 March[p]	5.4	6.0	5.4	5.9	6.6	3.8	5.5	4.3	4.2
June[p]	6.4	5.5	6.1	5.0	7.0	4.3	4.6	4.2	3.7
Sept[p]	5.4	5.2	4.8	5.3	6.7	3.6	4.8	4.2	3.6
Dec[p]	4.5	5.7	6.6	5.5	5.3	4.6	4.7	3.9	4.7
2007 March[p]	5.2	5.1	4.5	5.3	6.4	4.3	4.5	3.9	4.5
Neonatal mortality (deaths under 4 weeks per 1,000 live births)									
1996	4.1	4.0	4.2	4.2	4.9	3.5	4.4	3.5	3.8
1997	3.7	4.3	4.4	3.7	5.0	3.3	3.7	3.4	3.9
1998	3.1	4.1	4.5	3.7	4.8	3.4	4.1	2.9	3.3
1999	4.1	4.4	4.1	4.3	4.8	3.0	4.1	3.2	3.2
2000	4.4	4.3	5.0	4.1	5.0	3.0	3.7	3.1	3.0
2001	3.5	3.8	3.2	3.4	4.4	2.9	4.1	2.9	3.7
2002	3.2	3.6	4.0	4.0	4.8	2.9	3.6	2.9	3.1
2003	3.2	4.1	4.0	4.2	5.1	3.0	3.7	2.8	2.9
2004	2.8	3.6	3.8	3.5	4.7	2.9	3.6	2.8	3.2
2005	2.9	3.8	4.0	3.5	4.9	2.6	3.4	2.7	3.2
2006[p]	3.8	3.8	4.0	4.0	4.6	2.9	3.4	2.8	2.9
2005 March	3.3	3.9	4.3	5.1	4.9	2.9	3.2	2.8	3.5
June	3.0	3.5	4.3	3.7	4.9	3.0	3.8	2.1	3.2
Sept	2.7	3.1	3.9	2.8	5.7	2.7	3.5	2.9	2.7
Dec	2.8	4.6	3.5	2.4	4.1	1.8	3.0	3.1	3.5
2006 March[p]	4.1	3.8	4.0	4.2	4.6	2.7	3.4	2.9	3.2
June[p]	4.0	3.8	4.2	3.9	5.1	3.2	3.3	2.7	2.4
Sept[p]	3.4	3.5	3.3	3.9	5.4	2.5	3.5	2.9	2.6
Dec[p]	3.7	4.1	4.7	4.0	3.2	3.1	3.6	2.5	3.6
2007 March[p]	4.0	3.7	5.2	3.4	4.8	2.9	3.1	2.6	3.1
Perinatal mortality (stillbirths and deaths under 1 week per 1,000 total births)									
1996	9.2	8.6	8.3	8.7	10.2	7.5	9.6	7.8	7.5
1997	8.0	8.9	8.3	7.7	9.6	7.3	9.0	7.3	8.7
1998	8.2	8.7	9.2	8.0	9.3	7.4	9.0	6.8	7.3
1999	8.2	8.7	8.3	7.8	9.9	7.0	9.0	6.9	7.8
2000	8.5	8.6	9.6	7.8	9.6	7.1	9.0	6.6	6.6
2001	7.8	8.7	7.5	7.9	9.1	7.1	8.9	6.9	7.2
2002	8.1	8.5	9.0	8.5	10.0	7.5	9.3	6.9	6.8
2003	7.8	9.0	9.1	9.5	10.2	7.3	9.6	7.0	7.0
2004	7.9	8.4	9.4	8.1	9.6	7.6	9.3	7.0	7.2
2005	7.8	8.2	9.4	7.6	9.9	6.4	8.5	6.8	6.8
2006[p]	8.0	8.3	8.5	8.4	9.2	6.7	8.8	7.0	6.6
2005 March	6.6	8.4	9.7	9.3	9.0	6.9	8.4	6.7	6.8
June	9.2	8.2	10.4	7.6	10.9	7.4	8.8	6.5	7.5
Sept	7.1	7.4	8.6	7.2	11.0	6.1	8.9	7.1	5.7
Dec	8.4	8.9	9.0	6.5	8.8	5.3	7.9	7.0	7.1
2006 March[p]	8.2	9.0	7.6	8.7	9.6	7.4	9.1	7.6	6.5
June[p]	8.7	8.3	9.2	9.1	10.1	7.0	8.7	6.8	6.8
Sept[p]	7.5	8.0	8.4	8.4	9.6	6.6	8.7	6.6	6.2
Dec[p]	7.8	7.8	8.7	7.6	7.4	6.0	8.9	7.0	7.0
2007 March[p]	7.3	8.1	7.5	6.4	8.8	7.4	7.9	6.4	6.6

Note: Figures represent the numbers of deaths occurring in each year with the exception of provisional figures for 2006 and 2007 which relate to registrations.

Death rates from 2002 to 2005 have been updated to include the latest revised mid-year population estimates that take into account improved estimates of international migration.

1 Total deaths rates for 2006 and 2007 have been calculated using the mid-2006 population estimates published on 22 August 2007.

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Table 6.3	Deaths: selected causes (International Classification)[1] and sex

England and Wales

Number (thousands) and rate for all deaths and age-standardised rates per million population for selected causes

								Malignant neoplasms						
Year and quarter	All deaths		All causes (age - standardised rates per million population[2])	Oesophagus	Stomach	Colon	Rectosigmoid junction, rectum, and anus	Trachea, bronchus and lung	Melanoma of skin	Other malignant neoplasms of skin	Breast	Cervix uteri	Ovary
	Number (thousands)	Crude rate per 100,000 population	A00–R99 V01–Y89	(C15)	(C16)	(C18)	(C19–C21)	(C33–C34)	(C43)	(C44)	(C50)	(C53)	(C56)
Males													
1971	288.4	1,207	13,466	76	317	187	144	1,066	10	12	4	:	:
1981	289.0	1,196	12,189	90	251	181	135	1,028	17	9	3	:	:
1991	277.6	1,125	10,291	117	185	194	117	842	23	10	3	:	:
1998	264.7	1,064	8,981	129	132	169	95	643	26	8	3	:	:
1999	264.3	1,044	8,862	127	127	161	90	611	27	7	2	:	:
2000	255.5	1,005	8,437	128	118	158	89	592	28	7	2	:	:
2001	252.4	987	8,188	129	111	155	89	570	26	7	3	:	:
2002	253.1	985	8,081	131	110	151	90	559	27	8	3	:	:
2003	253.9	982	8,000	135	102	145	90	539	28	8	2	:	:
2004	244.1	939	7,554	129	95	143	92	521	30	9	2	:	:
2005	243.3	929	7,356	132	93	137	92	515	28	8	2	:	:
2006[3,P]	240.9	913	7,123	131	83	132	90	509	31	7	2	:	:
2004 March	66.2	1,024	8,215	130	95	145	86	519	27	10	3	:	:
June	58.8	909	7,329	123	98	146	91	512	30	8	2	:	:
Sept	56.8	869	7,006	128	93	142	98	515	30	8	2	:	:
Dec	62.4	954	7,671	136	93	141	91	540	31	11	1	:	:
2005 March	67.8	1,050	8,273	134	92	139	91	529	29	7	3	:	:
June	59.1	905	7,077	135	95	131	94	490	27	7	2	:	:
Sept	55.1	834	6,641	130	95	134	89	500	27	8	3	:	:
Dec	61.3	928	7,353	130	88	145	94	540	29	9	2	:	:
2006[3] March[P]	66.5	1,023	7,931	131	82	134	98	522	32	7	2	:	:
June[P]	59.4	904	7,058	132	82	128	87	504	30	7	2	:	:
Sept[P]	55.5	835	6,536	128	81	133	85	497	29	7	1	:	:
Dec[P]	59.5	894	6,985	131	86	133	91	515	31	8	3	:	:
2007[4] March[P]	65.3	997	7,617	126	88	132	86	522	33	7	2	:	:
Females													
1971	278.9	1,104	8,189	40	149	176	79	183	14	6	379	83	126
1981	288.9	1,134	7,425	42	111	157	74	252	16	5	405	69	121
1991	292.5	1,122	6,410	50	74	146	61	300	18	4	401	54	118
1998	290.3	1,108	5,945	49	54	117	47	291	21	3	328	35	116
1999	291.8	1,097	5,929	52	51	115	46	289	20	3	319	33	111
2000	280.1	1,049	5,655	51	48	107	45	285	21	3	311	33	109
2001	277.9	1,038	5,543	48	46	103	45	283	20	3	308	31	112
2002	280.4	1,043	5,524	51	44	103	44	284	19	3	302	29	112
2003	284.4	1,055	5,575	50	42	98	46	285	20	3	293	27	108
2004	268.4	1,075	5,206	48	41	96	46	283	19	3	278	26	100
2005	269.4	990	5,188	48	39	96	46	290	21	3	284	26	102
2006[3,P]	261.7	956	4,989	48	35	93	46	300	19	4	277	24	99
2004 March	74.4	1,105	5,795	51	38	97	46	292	21	3	287	28	105
June	63.4	942	5,022	46	41	94	47	265	18	4	284	25	97
Sept	61.8	908	4,863	50	43	95	45	281	19	3	276	27	102
Dec	68.9	1,013	5,359	46	44	100	49	299	20	2	293	28	101
2005 March	77.9	1,162	5,974	50	41	92	47	290	20	4	292	26	101
June	64.7	953	5,033	45	36	96	47	288	22	4	281	27	105
Sept	59.6	868	4,629	50	40	102	43	283	20	3	281	26	99
Dec	67.2	979	5,133	47	39	95	45	300	20	3	281	24	104
2006[3] March[P]	74.5	1,104	5,658	48	40	90	45	309	16	4	296	26	105
June[P]	64.4	945	4,940	46	34	89	46	294	18	4	266	22	101
Sept[P]	59.1	856	4,540	47	33	99	44	289	19	3	272	23	96
Dec[P]	63.7	923	4,832	51	34	95	49	307	21	4	273	23	93
2007[4] March[P]	73.9	1,090	5,524	49	36	92	49	314	22	4	283	25	95

Note: Figures represent the number of deaths registered in each year up to 1992 and the number of deaths occurring in each year from 1993 to 2005. Provisional figures for 2006 and 2007 relate to registrations.
The rates by cause of death in this table are based on final underlying cause. For further details see the Explanatory Notes in the 'Report: Death registrations in England and Wales, 2004: causes' in HSQ26.
Death rates from 2002 to 2005 have been updated to include the latest revised mid-year population estimates that take into account improved estimates of international migration.
1 The Ninth Revision of the International Classification of Diseases, 1975, came into operation in England and Wales on 1 January 1979. The Tenth Revision of the International Classification of Diseases, 1992, came into operation in England and Wales on 1 January 2001. The cause descriptions and codes relate to ICD-10. For changes to this table see 'In Brief', Health Statistics Quarterly 14.
2 Directly age-standardised to the European Standard Population. See Notes to Tables.
3 Death rates for 2006 are based on the 2004-based population projections for 2006.
4 Death rates for 2007 are based on the 2006 based population projections for 2007.
p provisional

Table 6.3 continued **Deaths: selected causes (International Classification)[1] and sex**

England and Wales

Age-standardised rates[2] per million population for selected causes

| Malignant neoplasms | | | | | | | | | | | | | |
Prostate	Bladder	Leukaemia	Diabetes mellitus	Ischaemic heart disease	Cerebro vascular diseases	Pneumonia	Bronchitis, emphysema and other chronic obstructive pulmonary disease	Asthma	Gastric and duodenal ulcer	Diseases of the liver	Land transport accidents	Intentional self-harm and events of undetermined intent with inquest verdict 'Open'	Year and quarter
(C61)	(C67)	(C91–C95)	(E10–E14)	(I20–I25)	(I60–I69)	(J12–J18)	(J40–J44)	(J45–J46)	(K25–K27)	(K70–K76)	(V01–V89)	(X60–X84, Y10–Y34)	
													Males
198	124	74	82	3,801	1,541	920	944	21	107	41	209	124	1971
214	121	74	82	3,664	1,141	1,053	683	28	90	58	119	151	1981
304	121	77	131	2,984	940	391	606	31	73	76	125	160	1991
277	99	67	94	2,215	706	720	463	18	60	115	86	152	1998
272	93	67	94	2,095	673	770	474	18	64	119	86	151	1999
260	92	67	88	1,959	622	735	416	17	59	119	86	141	2000
274	93	70	94	1,872	690	388	403	16	55	139	86	134	2001
271	90	68	91	1,784	690	388	396	15	56	144	83	131	2002
273	87	71	91	1,703	662	408	411	14	53	157	84	129	2003
267	85	67	83	1,566	595	360	364	15	50	151	77	125	2004
256	80	67	79	1,470	555	353	368	12	46	156	75	118	2005
250	81	68	74	1,353	520	320	343	10	45	161	83	123	2006[3,P]
279	86	67	91	1,713	694	466	464	15	54	149	69	137	2004 March
259	82	63	80	1,542	572	333	339	13	49	145	89	133	June
260	88	70	74	1,422	521	279	294	17	45	145	78	127	Sept
268	81	66	85	1,589	596	362	361	14	52	166	71	103	Dec
265	85	67	93	1,678	647	500	491	14	55	167	74	132	2005 March
251	80	65	75	1,446	536	327	358	13	45	149	77	122	June
249	77	65	67	1,292	485	247	271	9	42	145	82	115	Sept
260	79	70	81	1,467	554	340	357	12	43	163	66	104	Dec
256	79	73	86	1,543	611	434	440	11	52	158	83	128	2006[3] March[P]
249	81	63	75	1,351	506	318	351	10	48	164	90	117	June[P]
241	83	67	66	1,210	454	242	271	11	41	158	77	112	Sept[P]
252	80	69	71	1,312	509	287	312	8	41	164	82	134	Dec[P]
253	83	66	77	1,441	542	396	434	11	44	178	83	115	2007[4] March[P]
													Females
:	32	47	89	1,668	1,352	624	193	25	44	31	82	84	1971
:	35	47	66	1,601	1,012	740	155	30	57	43	41	81	1981
:	34	44	95	1,407	812	325	211	30	46	49	45	51	1991
:	32	41	65	1,055	645	546	226	22	41	64	28	43	1998
:	30	45	65	986	629	591	241	22	39	67	28	45	1999
:	31	39	62	907	577	546	216	20	41	68	24	45	2000
:	29	41	62	878	620	307	220	19	39	77	23	40	2001
:	30	43	65	843	616	316	224	20	37	79	24	41	2002
:	30	39	66	811	606	337	244	20	36	81	24	41	2003
:	28	39	60	736	548	296	214	17	35	78	20	38	2004
:	28	39	57	686	519	298	224	17	32	81	22	38	2005
:	29	36	54	629	478	261	213	16	29	87	24	39	2006[3,P]
:	27	43	69	806	626	399	283	23	37	84	25	46	2004 March
:	30	39	54	720	530	254	184	16	33	80	21	42	June
:	28	39	55	674	496	227	167	14	32	80	19	42	Sept
:	28	39	63	750	550	307	221	18	37	86	20	36	Dec
:	30	43	65	806	605	453	320	24	36	88	26	40	2005 March
:	29	40	54	674	496	261	207	17	32	74	20	43	June
:	27	35	50	600	462	199	157	12	28	75	21	38	Sept
:	25	40	58	665	514	281	213	16	31	85	21	33	Dec
:	29	42	60	733	551	371	283	19	37	87	25	40	2006[3] March[P]
:	27	34	56	637	477	259	214	16	27	85	27	37	June[P]
:	29	35	51	562	427	186	163	13	27	86	21	41	Sept[P]
:	29	35	51	585	459	231	193	16	25	89	23	38	Dec[P]
:	29	40	58	689	518	354	299	18	28	96	22	33	2007[4] March[P]

See notes opposite.

Report:

Deaths related to drug poisoning in England and Wales, 2002–06

Introduction

This report presents the latest figures from the Office for National Statistics (ONS) database of deaths from drug-related poisoning in the period 2002 to 2006, and includes new data for 2006. The database contains information on deaths from 1993, and results based on registrations of deaths in each calendar year from 1993 to 2005 were published in a previous report in Health Statistics Quarterly.[1] Since the publication of that report, mid-year population estimates for 2002 to 2005 have been revised. Mortality rates for those years have therefore been calculated with the revised estimates in this report.

The database

The database of deaths related to drug poisoning has been developed to facilitate research into these deaths and to aid the identification of specific substances involved. The database is extracted from the national deaths database for England and Wales. Deaths are included if the underlying cause of death is regarded as resulting from drug-related poisoning, according to the current National Statistics definition.[2] These are deaths coded according to the International Classification of Diseases Tenth Revision (ICD-10) for 2001 onwards. The codes used are listed in Box One.

The database covers accidents and suicides involving drug poisoning, as well as poisonings due to drug abuse and drug dependence, but not other adverse effects of drugs. The range of substances it contains is wide, including legal and illegal drugs, prescription drugs and over-the-counter medications. It does not include poisoning with non-medicinal substances such as household, agricultural or industrial chemicals. For each death,

the database includes every mention of a substance recorded on the death certificate or mentioned by the coroner. Almost all deaths on the database had a coroner's inquest. The underlying cause of death is recorded in addition to other information about the deceased, as described in Box Two.

Results

Number of deaths from drug-related poisoning by underlying cause

Table 1 gives the total number of deaths registered in each year from 2002 to 2006, presented by their underlying cause. Each death is assigned an underlying cause of death which reflects the verdict of the coroner and the wording on the coroner's certificate. The number of deaths related to drug poisoning for males was 1,782 in 2006, a decrease of 6 per cent compared to 2005. The number of female deaths fell to 788 in 2006, a decrease of 10 per cent compared to 2005. This is also the lowest recorded annual number since 1993 (the first year held within the database). Among males in the period 2002–06, similar proportions of deaths were due to 'mental and behavioural disorders due to drug use' (36 per cent) and intentional self-poisoning/poisoning of undetermined intent (35 per cent). Over half of drug-related poisoning deaths among females in this period were intentional self-poisonings and poisonings of undetermined intent (59 per cent).

Number of deaths from drug-related poisoning where selected substances were mentioned on the death certificate

Table 2 gives numbers of deaths where specific substances were mentioned on the death certificate for 2002 to 2006. These figures need to

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Box one

ICD-10 Underlying cause code	Description
F11–F16, F18–F19	Mental and behavioural disorders due to drug use (excluding alcohol and tobacco)
X40–X44	Accidental poisoning by drugs, medicaments and biological substances
X60–X64	Intentional self-poisoning by drugs, medicaments and biological substances
Y10–Y14	Poisoning by drugs, medicaments and biological substances, undetermined intent
X85	Assault by drugs, medicaments and biological substances

Table 1	Number of deaths from drug-related poisoning by sex and underlying cause, 2002–06

England and Wales

Cause (ICD-10)[1]	Sex	2002	2003	2004	2005	2006	Total Number	Percentage of total
Total	Males	1,941	1,741	1,856	1,887	1,782	9,207	*100*
	Females	889	882	931	875	788	4,365	*100*
Mental and behavioural disorders due to drug use (excluding alcohol and tobacco) (F11-F16, F18-F19)	Males	711	642	648	700	639	3,340	*36.3*
	Females	120	134	124	127	100	605	*13.9*
Accidental poisoning by drugs, medicaments and biological substances (X40-X44)	Males	539	440	523	534	598	2,634	*28.6*
	Females	220	209	237	239	245	1,150	*26.3*
Intentional self-poisoning by drugs, medicaments and biological substances (X60-X64), and poisoning by drugs, medicaments and biological substances, undetermined intent (Y10-Y14)	Males	681	657	679	648	540	3,205	*34.8*
	Females	544	538	568	506	439	2,595	*59.5*
Assault by drugs, medicaments and biological substances (X85)	Males	10	2	6	5	5	28	*0.3*
	Females	5	1	2	3	4	15	*0.3*

1 International Classification of Diseases, Tenth Revision - used to code causes of death from 2001 onwards.

Box two

For each death the database of drug-related poisonings includes:

The underlying cause of death

Every mention of a substance recorded by the coroner in the cause of death section or elsewhere on the Coroner's certificate after inquest (Form 99(REV))

An indicator to show if alcohol is mentioned

Other information recorded at death registration such as age, sex, marital status, occupation and place of usual residence

be interpreted with some caution for the following reasons:

- in around 10 per cent of deaths on the database only a general description, such as 'drug overdose', is recorded on the coroner's certificate of death. These deaths do not contribute to the count of specific substances
- where more than one drug is mentioned on the death certificate, it is not always possible to tell which of them was primarily responsible for the death.
- some deaths may be counted in more than one category in these tables. For example, if heroin and cannabis are recorded on the death certificate, the death will be recorded once under heroin and once under cannabis. Therefore the numbers in each column cannot be added together to give a total number of deaths

As heroin (diamorphine) breaks down in the body into morphine, the latter may be detected at post mortem and recorded on the death certificate. Therefore a combined figure for deaths where heroin or morphine was mentioned on the death certificate is included in Table 2. The figure for cocaine in Table 2 includes deaths where cocaine was taken in the form of crack cocaine. It is not possible to separately identify crack cocaine from other forms of cocaine at post mortem.

Other evidence to distinguish the form of cocaine taken is rarely provided on death certificates.

In 2006, almost a third (31 per cent) of drug-related poisoning deaths mentioned more than one drug, or a 'multiple drug overdose' for example, and over a quarter (27 per cent) of deaths contained a mention of alcohol in addition to a drug.

There were 713 deaths involving heroin or morphine in 2006, a 15 per cent fall compared to 2005. The number of deaths involving methadone however rose throughout 2002–06 to 241 in the latest year. There were 190 deaths involving cocaine, continuing the long-term upward trend. This was the highest number of deaths involving cocaine since 1993, when it was mentioned in only 11 deaths on the database.

There were 92 deaths involving amphetamines in 2006, with more than half of these being accounted for by deaths mentioning ecstasy. A small number of deaths mentioned Gamma-hydroxybutyrate (GHB) or cannabis (7 and 17 respectively). The number of deaths which mentioned benzodiazepines fell to 177 in 2006. This continues a long-term decreasing trend and was the lowest recorded number since 1993. Deaths involving barbiturates increased slightly between 2005 and 2006, to 17, but remained at low levels throughout 2002–06.

There were 336 deaths involving antidepressants in 2006, the lowest annual number since 1993. Compared to 2005 there was a decrease in all of the main antidepressant types, but with a particularly big decrease in deaths involving tricyclic antidepressants. The number of deaths mentioning dothiepin, for example, fell by 31 per cent compared to 2005 (and by 56 per cent compared to 2002). Deaths involving selective serotonin re-uptake inhibitors (SSRIs) such as fluoxetine, paroxetine and citalopram reached a peak in 2004 (105) but have since declined to 76 in 2006.

Deaths involving paracetamol and its compounds declined in 2006 to 309 deaths, the lowest figure since 1993. Numbers of deaths fell by 40 per cent between 2002 and 2006. The overall figure for paracetamol includes those deaths where dextropropoxyphene was mentioned alone on the death certificate as, in England and Wales, this substance is very rarely ingested except in combination with paracetamol. The biggest impact on this decline was from deaths involving co-proxamol (paracetamol & dextropropoxyphene compound formulation), where the number more than halved between 2005 and 2006, from 202 to 97. There were 22 deaths involving aspirin in 2006, with similar low numbers throughout 2002–06. The number of deaths involving codeine (not from compound formulation)

Table 2	Numbers of deaths where selected substances were mentioned on the death certificate, 2002–06

England and Wales

	2002	2003	2004	2005	2006
a) Total mentions					
All deaths	2,830	2,623	2,787	2,762	2,570
Heroin and Morphine	865	696	751	842	713
Methadone	199	201	219	220	241
Cocaine	128	129	154	176	190
All amphetamines	94	81	80	103	92
MDMA/Ecstasy	56	50	43	58	48
Cannabis	13	11	19	19	17
Gamma-hydroxybutyrate (GHB)	5	6	1	4	7
All benzodiazepines	241	224	233	190	177
Temazepam	70	70	78	45	42
Diazepam	131	121	94	101	89
Nitrazepam	12	5	13	11	8
Zopiclone/Zolpidem	47	40	57	48	39
Barbiturates	22	20	16	14	17
All antidepressants	383	432	469	401	336
Tricyclic antidepressants (BNF 4.3.1)	293	310	313	272	212
Dothiepin	170	158	134	107	74
Amitriptyline	92	125	148	127	108
Monoamine-oxidase inhibitors (BNF 4.3.2)	3	4	3	2	0
Selective serotonin re-uptake inhibitors (BNF 4.3.3)	49	74	105	81	76
Other antidepressants (BNF 4.3.4)	43	56	65	56	46
Paracetamol (includes dextropropoxyphene mentioned without paracetamol)[1]	517	454	517	410	309
Paracetamol	443	395	448	362	287
Paracetamol & dextropropoxyphene compound formulation (includes dextropropoxyphene mentioned without paracetamol)[1]	312	264	287	202	97
Paracetamol & codeine compound formulation	29	30	52	42	42
Paracetamol & dihydrocodeine compound formulation	17	16	15	19	18
Paracetamol not from compound formulation	168	153	174	153	154
Codeine not from compound formulation	38	35	50	44	60
Dihydrocodeine not from compound formulation	116	100	82	106	96
Aspirin	27	19	27	19	22
Tramadol	36	36	43	53	81
b) Mentions without other drugs					
All deaths mentioning only one drug	1,975	1,743	1,783	1,834	1,778
Heroin and Morphine	621	481	491	558	496
Methadone	91	74	105	98	125
Cocaine	41	43	48	53	68
All amphetamines	41	45	45	59	47
MDMA/Ecstasy	24	29	24	33	27
Cannabis	0	1	1	2	2
Gamma-hydroxybutyrate (GHB)	2	2	0	2	4
All benzodiazepines	37	33	43	31	36
Temazepam	16	20	20	16	16
Diazepam	5	5	5	6	8
Nitrazepam	3	3	7	4	2
Zopiclone/Zolpidem	21	8	12	15	10
Barbiturates	17	15	13	11	10
All antidepressants	226	245	246	215	177
Tricyclic antidepressants (BNF 4.3.1)	192	203	186	167	129
Dothiepin	116	113	87	75	56
Amitriptyline	58	71	83	68	55
Monoamine-oxidase inhibitors (BNF 4.3.2)	0	2	1	1	0
Selective serotonin re-uptake inhibitors (BNF 4.3.3)	10	15	30	27	25
Other antidepressants (BNF 4.3.4)	21	22	24	19	18
Paracetamol	127	122	128	129	131
Codeine	16	12	17	19	22
Dihydrocodeine	50	49	31	43	46
Aspirin	12	11	9	6	8
Tramadol	17	23	21	26	42

Table 2 continued	**Numbers of deaths where selected substances were mentioned on the death certificate, 2002–06**				

England and Wales

	2002	2003	2004	2005	2006
c) Mentions with alcohol					
All deaths mentioning one or more drugs and alcohol	668	659	756	744	692
Heroin and Morphine	225	231	250	283	252
Methadone	59	71	70	87	78
Cocaine	38	30	38	37	50
All amphetamines	12	17	18	17	15
MDMA/Ecstasy	7	12	13	14	9
Cannabis	3	6	7	9	9
Gamma-hydroxybutyrate (GHB)	2	4	1	1	2
All benzodiazepines	91	96	93	88	71
Temazepam	16	21	32	20	9
Diazepam	58	55	36	50	41
Nitrazepam	4	0	4	5	0
Zopiclone/Zolpidem	17	11	24	18	13
Barbiturates	7	1	2	1	5
All antidepressants	88	106	129	100	99
Tricyclic antidepressants (BNF 4.3.1)	64	75	75	65	56
Dothiepin	39	42	24	32	16
Amitriptyline	17	29	40	25	32
Monoamine-oxidase inhibitors (BNF 4.3.2)	0	1	0	0	0
Selective serotonin re-uptake inhibitors (BNF 4.3.3)	13	19	40	30	24
Other antidepressants (BNF 4.3.4)	10	16	17	9	18
Paracetamol (includes dextropropoxyphene mentioned without paracetamol)[1]	129	117	135	92	70
Paracetamol	106	99	112	70	64
Paracetamol & dextropropoxyphene compound formulation (includes dextropropoxyphene mentioned without paracetamol)[1]	99	72	96	48	33
Paracetamol & codeine compound formulation	7	8	9	14	7
Paracetamol & dihydrocodeine compound formulation	5	6	3	5	1
Paracetamol not from compound formulation	22	33	28	26	29
Codeine not from compound formulation	14	11	21	14	22
Dihydrocodeine not from compound formulation	27	26	18	31	33
Aspirin	5	1	3	3	2
Tramadol	7	8	9	6	20

1 Dextropropoxyphene is very rarely ingested except in combination with paracetamol in England & Wales.

and tramadol increased to 60 and 81 respectively, which for both were the highest numbers since 1993.

Deaths related to drug misuse

In 2000 the Advisory Council on the Misuse of Drugs published a report, *Reducing Drug Related Deaths*.[3] In response to this report's recommendations on improving the present system for collecting data on drug-related deaths, a technical working group was set up. This group, consisting of experts across government, the devolved administrations, coroners, toxicologists and drugs agencies, proposed a headline indicator for drug-misuse-related deaths as part of the Government's Action Plan[4] to reduce the number of these deaths. This indicator also takes into account the information needs of the European Monitoring Centre for Drugs and Drug Addiction. The definition of the indicator is 'deaths where the underlying cause is poisoning, drug abuse or drug dependence and where any of the substances controlled under the Misuse of Drugs Act (1971) are involved'. This definition has been adopted across the United Kingdom. The baseline year for monitoring deaths related to drug misuse was set as 1999.

The definition of the headline indicator using ICD-10 is shown in Box Three. The definition using ICD-9 was published in a previous annual report.[1]

Table 3	**Number of deaths related to drug misuse[1] by sex and country,[2] 2002–06**				

England and Wales

	2002	2003	2004	2005	2006
England and Wales[2]	1,613	1,432	1,495	1,608	1,573
Males	1,269	1,118	1,177	1,260	1,250
Females	344	314	318	348	323
England	1,505	1,313	1,415	1,506	1,469
Males	1,182	1,018	1,110	1,182	1,161
Females	323	295	305	324	308
Wales	88	109	68	89	92
Males	71	92	55	70	78
Females	17	17	13	19	14
Drug misuse deaths as a percentage of all deaths on the database	*57*	*55*	*54*	*58*	*61*

1 As defined by the current headline indicator on drug misuse (see Box Three).
2 Figures for England and Wales include deaths to non-residents. The separate figures for England and for Wales include only deaths to residents of those countries.

Box three

Cause of death categories included in the headline indicator of drug misuse deaths (the relevant codes from ICD-10 are given in brackets):

a) deaths where the underlying cause of death has been coded to the following categories of mental and behavioural disorders due to psychoactive substance use (excluding alcohol, tobacco and volatile solvents):

(i) opioids (F11)
(ii) cannabinoids (F12)
(iii) sedatives or hypnotics (F13)
(iv) cocaine (F14)
(v) other stimulants, including caffeine (F15)
(vi) hallucinogens (F16) and
(vii) multiple drug use and use of other psychoactive substances (F19)

b) deaths coded to the following categories **and** where a drug controlled under the Misuse of Drugs Act 1971 was mentioned on the death record:

(i) Accidental poisoning by drugs, medicaments and biological
substances (X40-X44)
(ii) Intentional self-poisoning by drugs, medicaments and biological
substances (X60-X64)
(iii) Poisoning by drugs, medicaments and biological substances,
undetermined intent (Y10-Y14)
(iv) Assault by drugs, medicaments and biological substances (X85) and
(v) Mental and behavioural disorders due to use of volatile solvents (F18)

Notes
1. Deaths coded to opiate abuse which resulted from the injection of contaminated heroin have been **included** in the indicator. This differs from the approach taken in Scotland, where these deaths have been **excluded**. This is because the General Register Office for Scotland (GROS) is able to identify deaths which occurred as a result of the use of contaminated heroin, whereas in England and Wales, these deaths cannot be readily identified. In practice, in England and Wales, they will only be included where the drug was mentioned on the death record and the death was coded to one of the ICD codes on the ONS database of drug-related poisonings and not to an infection code.
2. Specific rules were adopted for dealing with compound analgesics which contain relatively small quantities of drugs listed under the Misuse of Drugs Act, the major ones being dextropropoxyphene, dihydrocodeine and codeine. Where these drugs are mentioned on a death record, they have been excluded if they are part of a compound analgesic (such as co-proxamol, co-dydramol or co-codamol) or cold remedy. Dextropropoxyphene has been excluded on all occasions, whether or not paracetamol or a compound analgesic was mentioned. This is because dextropropoxyphene is rarely, if ever, available other than as part of a paracetamol compound. However, codeine or dihydrocodeine mentioned **alone** were included in the indicator. This is because they are routinely available and known to be abused in this form. This approach is the same as that taken by GROS.
3. Drugs controlled under the Misuse of Drugs Act 1971 include class A, B and C drugs.
4. Information on the cause of death categories used to define the indicator in ICD-10 can be found in the report in *Health Statistics Quarterly* 33.[1]

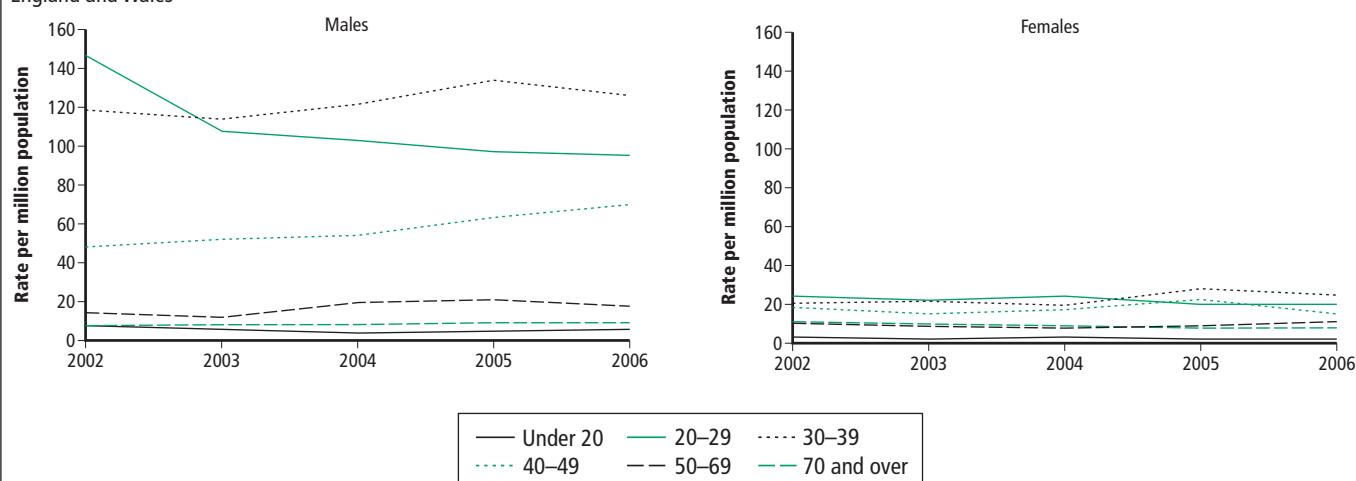| Figure 1	Age-specific mortality rates for deaths related to drug misuse: by sex, 2002–06

England and Wales

Table 4	Number of deaths related to drug misuse[1] by sex, underlying cause of death (ICD-10)[2] and age group, 2002–06

England and Wales

	Sex	2002	2003	2004	2005	2006
a) by sex and underlying cause of death (ICD-10)[2]						
All deaths related to drug misuse	Males	1,269	1,118	1,177	1,260	1,250
	Females	344	314	318	348	323
Mental and behavioural disorders due to drug use (excluding alcohol and tobacco) (F11-F16, F18-F19)	Males	685	629	631	682	639
	Females	109	126	117	122	100
Accidental poisoning by drugs, medicaments and biological substances (X40-X44)	Males	379	313	364	389	426
	Females	106	75	78	103	114
Intentional self-poisoning by drugs, medicaments and biological substances (X60-X64), and poisoning by drugs, medicaments and biological substances, undetermined intent (Y10-Y14)	Males	195	175	177	184	180
	Females	124	112	123	121	107
Assault by drugs, medicaments and biological substances (X85)	Males	10	1	5	5	5
	Females	5	1	0	2	2
b) by sex and age group						
All ages	Males	1,269	1,118	1,177	1,260	1,250
	Females	344	314	318	348	323
Under 20	Males	49	40	26	29	36
	Females	21	13	18	12	14
20-29	Males	482	353	346	336	338
	Females	81	72	80	66	70
30-39	Males	479	456	480	521	481
	Females	84	87	77	107	92
40-49	Males	167	187	197	239	270
	Females	63	55	64	83	56
50-69	Males	75	63	108	114	103
	Females	58	51	47	53	63
70 and over	Males	17	19	20	21	22
	Females	37	36	32	27	28

Table 3 shows numbers of deaths related to drug misuse, using this definition and the current list of drugs controlled under the Misuse of Drugs Act, for 2002 to 2006. Because the indicator is based on the current list of drugs controlled under the Misuse of Drugs Act, earlier years' data have been updated to reflect additional substances.

The total number of drug misuse deaths in 2006 was 1,573. This was lower than the 2002 total (1,613) but drug misuse deaths now form a larger percentage of the total deaths on the database. In 2006 they made up 61 per cent of the total, the highest proportion since 1993. In 2006, 70 per cent of male deaths on the database were related to drug misuse, a much higher proportion than for females (41 per cent).

Table 4a shows deaths involving drug misuse by underlying cause of death. In 2006, 'mental and behavioural disorders due to drug use' formed the largest proportion of deaths related to misuse in males (51 per cent). The distribution in females was more evenly divided between mental and behavioural disorders (31 per cent), accidental poisoning (35 per cent) and self-poisoning (33 per cent). Among males, the highest numbers of deaths occurred in the 30–39 and 20–29 age groups (Table 4b), whereas females deaths were more evenly distributed across these and older age groups.

Figure 1 shows the trend in mortality rates by age group for deaths related to drug misuse. From 1993 to 2002, the age group with the highest rate was men aged 20–29. The recent decline in rates in this age group, and an increase among men aged 30–39, means that the latter age

group has had the highest rate since 2003. Rates among men aged 40–49 increased by nearly half between 2002 and 2006 (48 per cent). In 2006, rates for females were lower than for males in every age group and, as with men, the highest rate was among those aged 30–39.

Figure 2	Mortality rates[1] for all drug related poisoning, and drug misuse, by sex, 2002–06

England and Wales
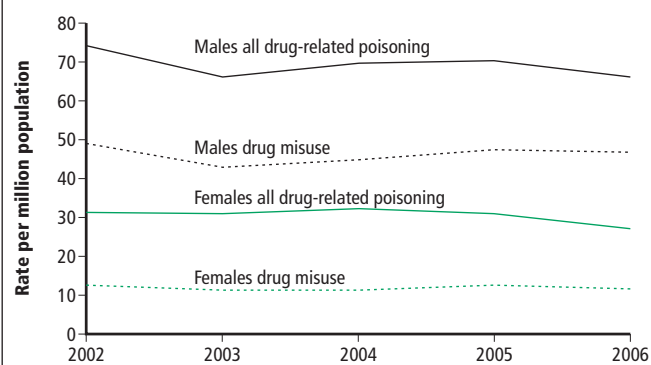
1 Directly age standardised using the European Standard Population.

Age-standardised death rates for all drug-related poisoning, and drug misuse

Figure 2 shows trends in mortality rates for both drug-related poisoning and deaths related to drug misuse from 2002 to 2006. Rates for males increased throughout the 1990s for both all drug-related poisonings and those involving drug misuse, but started to decline from 2001 onwards. Figure 2 shows that rates have been relatively stable since 2003 but with a small decrease in the rate for all drug-related poisoning in 2006 compared to 2005. Female rates for both drug misuse and all drug-related poisoning have remained stable since 1993, although Figure 2 shows there was a small decline in the latter in 2006 compared to the previous four years.

Age-standardised death rates for selected substances

Figure 3 shows the trend in mortality rates from drug-related poisoning for selected substances from 2002 to 2006. The death rate for heroin/morphine for males was higher than for other substances throughout this period. The rate for paracetamol and its compounds decreased in males by almost half (47 per cent) between 2002 and 2006. There was a similar decrease in the rate for female deaths involving paracetamol (40 per cent between 2002 and 2006). This means that although the rate for paracetamol was highest for females until 2004, in 2005 and 2006 the highest rate has been for deaths involving antidepressants. Paracetamol

and antidepressants are the substances most commonly used in suicides (which make up the majority of drug-related poisoning deaths among females).

Further information

For further information on the ONS database of drug-related poisoning deaths email mortality@ons.gsi.gov.uk

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3. The Advisory Council on the Misuse of Drugs (2000) *Reducing drug related death*, Home Office.

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Figure 3	Mortality rates[1] for selected substances: by sex, 2002–06

England and Wales
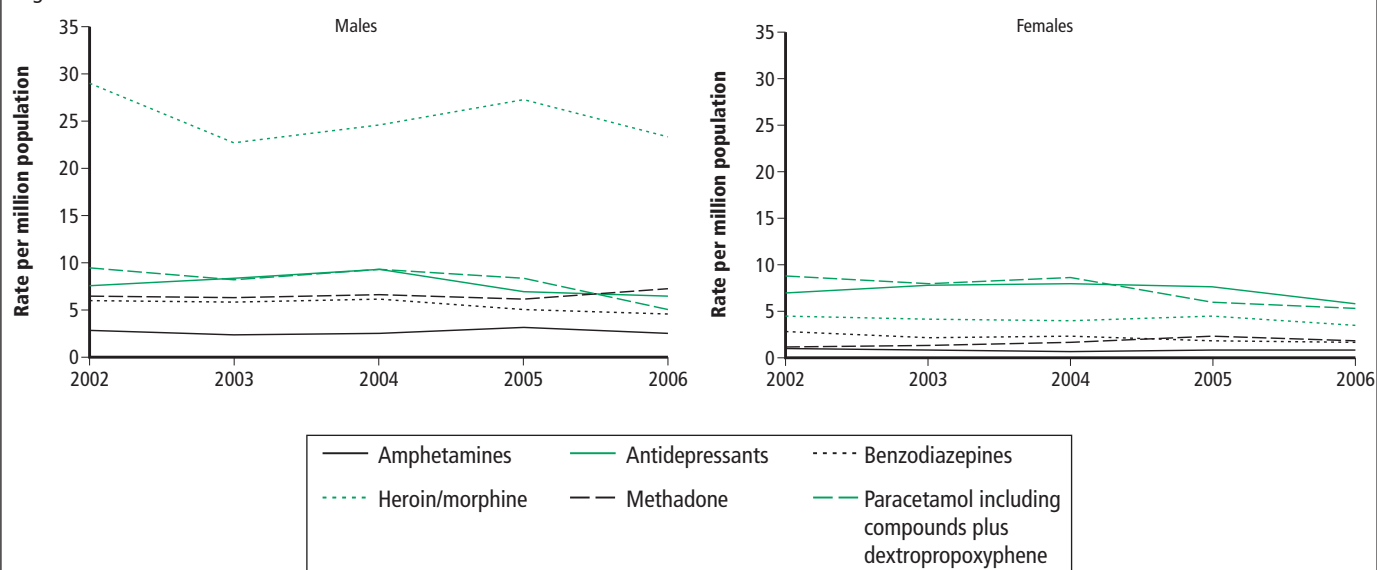
1 Directly age standardised using the European Standard Population.

Report:

Life expectancy at birth and at age 65 by local areas in the United Kingdom, 2004–06

Introduction

This report presents the latest figures on male and female period life expectancy at birth for local areas in the UK, constituent countries and English regions for 2004–06. For the first time male and female period life expectancy at age 65 for 2004–06 is also included. The term local area refers to Local and Unitary Authorities in England and Wales, Council areas in Scotland and Local Government District areas in Northern Ireland. These figures were calculated by the Office for National Statistics, except those for Scotland which were calculated by the General Register Office for Scotland (GROS) using the same methods.

Life expectancy results for local areas in Scotland for 2004–06 were first published in a report on 4 September 2007 on the GROS website at: www.gro-scotland.gov.uk/statistics/publications-and-data/life-expectancy/index.html

All figures are three-year averages, produced by aggregating deaths and population estimates across each three-year period, to provide large enough numbers to ensure that the figures presented are sufficiently robust. Two local authorities, City of London and Isles of Scilly, are excluded from the results because of the small populations and small numbers of deaths.

Previous life expectancy reports

All life expectancy results for English regions and local authorities in England and Wales from 2000–02 to 2003–05 have been revised. Life expectancies for local areas in Scotland have been revised by GROS for the periods 2002-04 and 2003-05. These revised local area life expectancies can be found on the National Statistics website at: www. statistics.gov.uk/statbase/Product.asp?vlnk=8841

Results for Scotland can also be found in reports released on the GROS website at: www.gro-scotland.gov.uk/statistics/publications-and-data/life-expectancy/index.html

The mortality data used to calculate the revised local area life expectancy figures are the same as those used in previously published figures. However, ONS published revised mid-year population estimates for England and Wales at local authority level on 22 August 2007 for all years between 2002 and 2005. This is due to improvements made to the methodology used to produce the mid-year population estimates, principally the distribution of the national population to local areas. More information about population statistics and the recent improvements to methodology can be found on the National Statistics website at: www. statistics.gov.uk/statbase/Product.asp?vlnk=601

The revisions to Scottish local area life expectancy figures followed on from revisions to Scottish mid-year population estimates after a review of methodology identified an error in the figures originally published for six local areas.

Interpretation of period life expectancy at birth and at age 65

Life expectancy at a given age for an area in a given time period is an estimate of the average number of years a person of that age would survive if he or she experienced the particular area's age-specific mortality rates for that time period throughout the rest of his or her life. The figure reflects mortality among those living in the area in each time period, rather than mortality among those born in each area. It is not therefore the number of years a person in the area in each time period could actually expect to live, both because the death rates of the area are likely to change in the future and because many of those in the area will live elsewhere for at least some part of their lives.

Life expectancy at birth is also not a guide to the remaining expectation of life at any given age. For example, if female life expectancy was 80 years for a particular area, life expectancy of women aged 65 years in that area would exceed 15 years. This reflects the fact that survival from a particular age depends only on the mortality rates beyond that age, whereas survival from birth is based on mortality rates at every age. Neither is life expectancy at age 65 the actual time a resident of a given area, aged 65 this year, can expect to live.

Summary of results

Life expectancy at birth

Results for 2004–06 show a familiar geographic pattern, with inequalities in life expectancy continuing to persist across the UK. The South West, South East and East of England continued to have the highest life expectancies at birth, while figures were lowest in Scotland and the North East and North West of England. For males there was a difference of 3.9 years between Scotland as a whole which had the lowest life expectancy (74.6 years) and the South East and South West of England, where life expectancy was highest (78.5 years). For females the gap between Scotland and the South West of England (79.6 and 82.7 years respectively) was 3.1 years.

In 2004–06 for the first time all local areas in the UK had a male life expectancy at birth of more than 70 years. As in 2003–05, the local area with lowest male life expectancy was Glasgow City (70.5 years). The local area with the highest life expectancy for males was Kensington and Chelsea (83.1 years), 12.6 years more than Glasgow City. Kensington and Chelsea also had the highest life expectancy for females (87.2 years), 10.2 years more than Glasgow City, the area with the lowest figure (77.0 years).

The local areas with the highest and lowest male and female life expectancy at birth in the UK in 2004–06 are presented in Boxes One and Two respectively.

Life expectancy at age 65

Life expectancies at age 65 for the constituent countries of the UK and English regions in 2004–06 show a similar geographical pattern to the results at birth. The lowest estimates were in Scotland and the North East and North West of England; the highest were in the South East and

Box one

Local areas with the highest and lowest male life expectancy at birth, 2004–06

United Kingdom

Rank	Local area	Country/English Government Office Region	Life expectancy at birth (years)
Highest Life expectancy at birth			
1	Kensington and Chelsea	London	83.1
2	East Dorset	South West	81.4
3	Hart	South East	80.7
4	Rutland	East Midlands	80.6
5	Elmbridge	South East	80.4
6	Christchurch	South West	80.3
7	Wokingham	South East	80.3
8	South Norfolk	East of England	80.2
9	Westminster	London	80.2
10	Guildford	South East	80.1
Lowest Life expectancy at birth			
432	Glasgow City	Scotland	70.5
431	West Dunbartonshire	Scotland	71.8
430	Inverclyde	Scotland	72.2
429	Eilean Siar	Scotland	73.0
428	Manchester	North West	73.0
427	North Lanarkshire	Scotland	73.0
426	Clackmannanshire	Scotland	73.2
425	Blackpool	North West	73.3
424	Renfrewshire	Scotland	73.4
423	Dundee City	Scotland	73.6

Box two

Local areas with the highest and lowest female life expectancy at birth, 2004–06

United Kingdom

Rank	Local area	Country/English Government Office Region	Life expectancy at birth (years)
Highest Life expectancy at birth			
1	Kensington and Chelsea	London	87.2
2	East Dorset	South West	84.7
3	Christchurch	South West	84.4
4	Rochford	East of England	84.3
5	South Cambridgeshire	East of England	84.2
6	Epsom and Ewell	South East	84.2
7	New Forest	South East	84.1
8	East Cambridgeshire	East of England	84.1
9	Rutland	East Midlands	84.0
10	Hart	South East	84.0
Lowest Life expectancy at birth			
432	Glasgow City	Scotland	77.0
431	West Dunbartonshire	Scotland	77.7
430	Inverclyde	Scotland	77.8
429	East Ayrshire	Scotland	78.2
428	North Lanarkshire	Scotland	78.2
427	Liverpool	North West	78.3
426	Hartlepool	North East	78.3
425	Halton	North West	78.4
424	Renfrewshire	Scotland	78.4
423	Manchester	North West	78.6

South West of England. The gap between the areas with the highest and lowest life expectancies at 65 for women was similar to the gap for men. Women in Scotland had a life expectancy at 65 of 18.6 years, 2.2 years lower than women in the South West of England (20.8 years). Men in Scotland had a life expectancy at 65 of 15.9 years, 2.1 years lower than the result for men in the South East and South West who could expect to live another 17.9 years.

At local area level in 2004–06, Glasgow City had the lowest male life expectancy at age 65 (13.8 years). This was the only area in the UK where the life expectancy at age 65 was less than 14 years. The local area with the highest male life expectancy at 65 was Kensington and Chelsea (22.0 years), 8.2 years more than Glasgow City. Kensington and Chelsea also had the highest life expectancy at 65 for women (24.8 years), 7.5 years more than Glasgow City, the area with the lowest figure (17.3 years).

The local areas with the highest and lowest life expectancy at age 65 for men and women in the UK in 2004–06 are presented in Boxes Three and Four respectively.

Table 1 includes results for all local areas in the UK for both life expectancy at birth and life expectancy at 65 for 2004–06, and their relative rank order. Results are presented alphabetically by local area name within each constituent country and English region.

Results on the National Statistics website

The results presented in this report can also be found presented with 95 per cent confidence intervals in a series of Excel workbooks on the National Statistics website at: www.statistics.gov.uk/statbase/Product. asp?vlnk=8841

Box three

Local areas with the highest and lowest male life expectancy at age 65, 2004–06

United Kingdom

Rank	Local area	Country/English Government Office Region	Life expectancy at age 65 (years)
Highest Life expectancy at age 65			
1	Kensington and Chelsea	London	22.0
2	Crawley	South East	20.3
3	Westminster	London	20.0
4	Rutland	East Midlands	19.9
5	East Dorset	South West	19.4
6	West Somerset	South West	19.3
7	Christchurch	South West	19.3
8	South Shropshire	West Midlands	19.2
9	Lewes	South East	19.1
10	Guildford	South East	18.9
Lowest Life expectancy at age 65			
432	Glasgow City	Scotland	13.8
431	Inverclyde	Scotland	14.9
430	North Lanarkshire	Scotland	14.9
429	West Dunbartonshire	Scotland	14.9
428	Renfrewshire	Scotland	15.0
427	Knowsley	North West	15.3
426	Manchester	North West	15.3
425	Liverpool	North West	15.3
424	Hartlepool	North East	15.4
423	Cannock Chase	West Midlands	15.4

Box four

Local areas with the highest and lowest female life expectancy at age 65, 2004–06

United Kingdom

Rank	Local area	Country/English Government Office Region	Life expectancy at age 65 (years)
Highest Life expectancy at age 65			
1	Kensington and Chelsea	London	24.8
2	East Dorset	South West	22.5
3	Christchurch	South West	22.4
4	Westminster	London	22.2
5	Rutland	East Midlands	22.0
6	West Somerset	South West	22.0
7	Lewes	South East	22.0
8	Hammersmith and Fulham	London	21.9
9	New Forest	South East	21.9
10	South Cambridgeshire	East of England	21.7
Lowest Life expectancy at age 65			
432	Glasgow City	Scotland	17.3
431	Renfrewshire	Scotland	17.5
430	West Lothian	Scotland	17.6
429	North Lanarkshire	Scotland	17.6
428	East Ayrshire	Scotland	17.7
427	Liverpool	North West	17.7
426	Hartlepool	North East	17.8
425	Burnley	North West	17.8
424	West Dunbartonshire	Scotland	17.8
423	Halton	North West	17.9

The four workbooks contain:

- **Results for the United Kingdom** – figures for 1991–93 to 2004–06 for the UK, England and Wales, England, Wales, Scotland and Northern Ireland. Tables are also included showing the rank order of local authorities in the UK in 2004–06

- **Results for England and Wales** – figures for 1991–93 to 2004–06 for local authorities in England and Wales, and Government Office Regions in England

- **Results for Scotland** – figures for 1991–93 to 2004–06 for Council areas and Health Boards in Scotland

- **Results for Northern Ireland** – figures for 1991–93 to 2004–06 for Local Government District areas and Health and Social Service Boards in Northern Ireland

Results for 1991–93 to 2004–06 are published on the National Statistics website as a set of animated maps to show the change in life expectancy at local area level over time, these are available at: www.statistics.gov.uk/CCI/nugget.asp?ID=1850&Pos=1&ColRank=1&Rank=374

Comparison with national results

Until 2005 the Government Actuary's Department (GAD) published national interim life tables for the UK and constituent countries. In January 2006 responsibility for this work passed to ONS. This year ONS has calculated revised interim life tables for 1990–92 to 2003–05 and new 2004–06 tables. The mortality data for England and Wales used in the revised national interim life tables are now based on all deaths registered in a year, rather than all deaths that occurred in a year as they were previously. The national interim life tables are the definitive life expectancy figures for the entire UK and constituent countries and are published on the National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=14459

To provide comparisons for local area and regional figures, ONS has also calculated national life expectancy results, which are included in Table 1. These were produced using the same methods as the subnational results, with abridged life tables in which deaths and populations are aggregated into age groups. The national interim life tables are calculated using complete life tables (based on single years of age), so the two sets of national figures may differ very slightly (normally by less than 0.1 years for England and Wales).

Figures for England will also differ slightly from the national interim life table results because of a difference in the handling of deaths of non-residents. For this report, the deaths of non-residents have been included in the mortality figures for England and Wales but are excluded from the data for England and Wales separately. However, for the national interim tables, the deaths of non-residents in England and Wales have been included in the mortality data for England (but not Wales).

Methods of calculation

Abridged life tables were constructed using standard methods.[1, 2] Separate tables were constructed for males and females. The tables were created using annual mid-year population estimates and deaths registered in each year. A detailed description of the standard methods and notation associated with the calculation of life expectancy can be found on the Government Actuary's Department website at:

Methods: www.gad.gov.uk/Demography_data/Life_Tables/methodology.asp
Notation: www.gad.gov.uk/Demography_data/Life_Tables/notation.asp

The calculation of confidence intervals (available on the National Statistics website) used the method developed by Chiang.[3] A report which details research undertaken by ONS to compare methodologies to allow the calculation of confidence intervals for life expectancy has been published as No. 33 in the National Statistics Methodology Series. The report, 'Life expectancy at birth: methodological options for small populations' also presents research carried out to establish if there is a minimum population size below which the calculation of life expectancy may not be considered feasible. It can be found on the National Statistics website at: www.statistics.gov.uk/methods_quality/publications.asp

Using the recommendations included in this report ONS has previously published experimental life expectancy at birth figures for wards in England and Wales based on deaths from 1999–2003. These are available at: www.statistics.gov.uk/statbase/Product.asp?vlnk=14466

An example of a life table constructed using the same method used to calculate life expectancy and confidence intervals in this report can be found at: www.statistics.gov.uk/statbase/Product.asp?vlnk=8841

Further information

If you require additional information on the data presented here please contact:

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| Table 1 | Life expectancy at birth and at age 65[1] (years) and relative position (rank order[2]) of local areas in the United Kingdom, 2004–06 |

United Kingdom

	Males				Females			
	Life expectancy at birth		Life expectancy at age 65		Life expectancy at birth		Life expectancy at age 65	
	Years	Rank order[2]	Years	Rank order[2]	Years	Rank order[2]	Years	Rank order[2]
United Kingdom	76.96		17.03		81.29		19.77	
England and Wales	77.22		17.15		81.48		19.90	
England	77.32		17.19		81.55		19.94	
Government Office Regions and local areas within England								
North East	75.8		16.2		80.1		18.8	
Alnwick	78.3	134	17.2	223	81.3	249	19.4	311
Berwick-upon-Tweed	79.8	24	18.5	31	83.7	17	21.2	33
Blyth Valley	75.5	367	15.9	388	80.1	362	18.4	400
Castle Morpeth	78.2	139	17.9	110	82.0	181	20.0	205
Chester-le-Street	75.9	342	15.7	399	80.4	345	18.6	383
Darlington	75.2	384	16.3	347	80.0	373	19.0	360
Derwentside	75.4	371	16.0	374	80.1	364	18.5	390
Durham	77.2	244	16.8	292	80.4	346	19.3	326
Easington	74.9	398	15.6	411	79.2	407	18.6	388
Gateshead	75.3	374	16.4	338	79.9	377	18.5	395
Hartlepool	74.5	409	15.4	424	78.3	426	17.8	426
Middlesbrough	74.5	410	15.6	414	79.2	411	18.6	385
Newcastle upon Tyne	75.2	387	16.2	364	80.3	349	19.0	355
North Tyneside	76.2	321	16.2	360	80.6	325	19.2	332
Redcar and Cleveland	76.0	331	16.4	335	80.5	338	19.4	307
Sedgefield	76.2	323	16.0	377	79.6	395	18.6	389
South Tyneside	75.2	382	15.8	396	80.1	367	18.6	381
Stockton-on-Tees	76.0	335	16.6	323	80.2	358	18.7	379
Sunderland	75.5	369	15.7	404	79.8	388	18.4	405
Teesdale	76.7	282	17.0	258	82.1	162	19.8	252
Tynedale	78.1	158	17.1	245	81.8	198	19.8	248
Wansbeck	76.2	319	16.4	341	79.5	397	17.9	421
Wear Valley	75.7	356	15.8	395	79.1	413	18.2	412
North West	75.7		16.3		80.3		19.1	
Allerdale	76.6	293	16.4	339	80.6	321	19.5	302
Barrow-in-Furness	75.4	372	16.3	346	80.7	316	19.9	234
Blackburn with Darwen	74.2	418	15.7	405	79.2	410	18.2	411
Blackpool	73.3	425	15.8	398	78.7	420	18.5	393
Bolton	75.2	385	16.1	371	79.5	400	18.5	392
Burnley	75.3	377	16.2	363	78.8	419	17.8	425
Bury	76.1	329	16.3	352	80.2	356	19.0	354
Carlisle	76.2	318	16.4	337	81.1	282	20.0	214
Chester	77.8	192	17.3	201	81.7	213	20.2	177
Chorley	76.7	287	16.2	358	80.8	310	19.1	343
Congleton	78.2	140	17.7	155	82.0	182	20.5	129
Copeland	76.5	303	16.0	376	80.6	327	19.3	322
Crewe and Nantwich	76.9	266	16.7	304	80.7	317	19.3	323
Eden	78.2	143	17.3	210	83.1	58	20.7	88
Ellesmere Port & Neston	76.8	271	17.4	196	81.7	210	20.0	210
Fylde	78.2	151	17.3	202	81.6	224	19.9	224
Halton	74.3	417	15.5	416	78.4	425	17.9	423
Hyndburn	75.3	380	16.4	334	79.5	396	18.7	378
Knowsley	74.4	414	15.3	427	79.0	415	18.2	413
Lancaster	76.4	306	17.0	256	81.2	268	19.8	246
Liverpool	73.8	421	15.3	425	78.3	427	17.7	427
Macclesfield	78.8	94	17.8	132	82.5	120	20.5	131
Manchester	73.0	428	15.3	426	78.6	423	18.4	399
Oldham	74.7	405	15.6	410	79.3	406	18.5	394
Pendle	75.6	359	16.4	340	80.5	343	19.8	249
Preston	75.1	390	16.1	372	79.5	399	18.6	386
Ribble Valley	77.6	206	17.2	221	82.8	87	20.2	174
Rochdale	74.9	397	15.6	413	79.2	409	18.5	398
Rossendale	75.7	354	15.8	390	79.9	379	18.2	415
Salford	74.2	419	15.5	417	78.7	421	18.2	414
Sefton	76.2	316	17.0	269	81.0	289	19.6	280
South Lakeland	78.8	92	18.3	51	82.9	76	20.7	94
South Ribble	77.5	212	17.6	168	81.9	188	20.1	195

| Table 1 continued | Life expectancy at birth and at age 65[1] (years) and relative position (rank order[2]) of local areas in the United Kingdom, 2004–06 |

United Kingdom

	Males				Females			
	Life expectancy at birth		Life expectancy at age 65		Life expectancy at birth		Life expectancy at age 65	
	Years	Rank order[2]	Years	Rank order[2]	Years	Rank order[2]	Years	Rank order[2]
St. Helens	75.3	373	15.8	392	80.2	359	19.0	359
Stockport	77.1	251	16.9	276	81.9	193	20.4	146
Tameside	74.9	396	15.6	407	79.8	387	18.4	407
Trafford	77.6	205	17.3	206	81.4	247	19.8	254
Vale Royal	77.3	236	16.9	273	81.5	240	19.6	279
Warrington	76.2	317	16.2	361	81.0	292	19.3	321
West Lancashire	76.4	307	16.6	317	80.6	324	18.9	367
Wigan	75.3	375	15.5	415	79.6	392	18.4	402
Wirral	75.7	357	16.5	331	80.8	311	19.7	268
Wyre	76.8	274	16.9	275	81.2	276	19.5	297
Yorkshire and The Humber	76.6		16.8		81.0		19.6	
Barnsley	75.3	376	15.7	401	79.5	398	18.3	408
Bradford	75.5	364	16.2	355	79.8	385	18.9	365
Calderdale	76.1	328	16.4	343	81.4	246	19.7	260
Craven	79.2	58	18.5	32	83.4	28	20.9	73
Doncaster	75.8	347	16.2	367	80.4	347	19.0	356
East Riding of Yorkshire	78.1	159	17.5	183	81.7	205	20.0	207
Hambleton	79.3	56	18.1	77	83.2	49	21.0	58
Harrogate	79.0	72	17.8	122	82.6	111	20.6	113
Kingston upon Hull, City of	74.7	404	15.8	389	79.0	417	18.3	410
Kirklees	76.2	320	16.6	324	80.5	336	19.1	344
Leeds	76.7	284	17.0	253	81.6	229	20.1	189
North East Lincolnshire	75.9	341	16.6	321	80.8	301	19.6	277
North Lincolnshire	76.8	272	16.9	283	80.9	293	19.8	253
Richmondshire	78.7	101	17.9	121	81.4	243	20.2	181
Rotherham	75.8	345	16.2	357	80.4	344	18.9	363
Ryedale	78.6	114	17.7	157	82.3	140	21.4	25
Scarborough	76.1	327	17.1	235	81.3	262	20.0	219
Selby	77.9	179	17.0	266	82.7	92	20.5	127
Sheffield	77.0	256	16.9	278	81.2	270	19.6	281
Wakefield	75.9	340	16.2	365	80.3	354	19.1	346
York	77.9	182	17.6	167	83.1	54	20.8	82
East Midlands	77.3		17.1		81.3		19.7	
Amber Valley	77.7	195	17.1	244	81.4	245	20.1	199
Ashfield	75.6	361	15.8	394	80.5	341	19.2	333
Bassetlaw	76.7	279	16.9	286	80.3	353	18.8	371
Blaby	79.4	44	18.5	30	83.3	43	21.2	43
Bolsover	75.9	337	15.9	386	80.1	372	18.4	404
Boston	75.9	338	17.1	251	81.1	280	19.7	261
Broxtowe	78.5	122	17.4	195	82.2	152	20.0	209
Charnwood	77.9	176	17.2	232	81.8	199	19.9	228
Chesterfield	76.7	285	16.7	296	80.6	322	19.0	351
Corby	74.5	411	16.4	342	79.9	381	18.6	387
Daventry	78.3	133	17.7	147	81.9	186	19.8	245
Derby	76.8	269	17.0	260	81.7	203	20.1	196
Derbyshire Dales	79.0	77	17.8	130	82.4	129	20.3	164
East Lindsey	77.3	234	17.5	185	81.5	238	19.7	259
East Northamptonshire	78.1	155	17.3	204	81.1	284	19.2	340
Erewash	77.4	228	16.6	322	81.2	271	19.7	272
Gedling	78.6	113	17.5	178	82.2	155	20.3	157
Harborough	79.8	25	18.1	74	82.3	147	20.4	148
High Peak	78.4	130	17.7	149	80.5	342	19.6	278
Hinckley and Bosworth	79.0	80	17.7	140	81.4	244	19.5	301
Kettering	77.3	233	17.1	249	81.2	274	19.7	267
Leicester	75.3	379	16.0	375	79.4	402	18.4	406
Lincoln	76.3	313	16.8	288	80.0	376	19.6	284
Mansfield	75.9	339	16.2	362	80.6	330	19.4	310
Melton	78.6	108	17.5	180	82.5	123	20.7	100
Newark and Sherwood	77.8	191	17.0	254	81.3	253	19.9	232
North East Derbyshire	77.5	214	17.0	255	80.8	302	19.3	318
North Kesteven	78.1	154	17.6	173	82.7	103	20.2	179
North West Leicestershire	77.3	242	16.9	279	81.3	250	19.4	308
Northampton	76.9	264	17.1	233	81.3	257	19.9	233
Nottingham	74.3	416	15.9	387	79.8	386	19.2	334
Oadby and Wigston	78.2	141	17.6	174	81.7	215	20.2	186
Rushcliffe	79.5	38	18.0	90	83.0	67	20.4	144
Rutland	80.6	4	19.9	4	84.0	9	22.0	5

Table 1 continued	Life expectancy at birth and at age 65[1] (years) and relative position (rank order[2]) of local areas in the United Kingdom, 2004–06

United Kingdom

	Males				Females			
	Life expectancy at birth		Life expectancy at age 65		Life expectancy at birth		Life expectancy at age 65	
	Years	Rank order[2]	Years	Rank order[2]	Years	Rank order[2]	Years	Rank order[2]
South Derbyshire	77.9	174	16.7	295	81.6	223	19.5	292
South Holland	77.7	199	17.5	177	81.8	195	20.4	143
South Kesteven	78.0	166	17.7	139	82.4	133	20.2	171
South Northamptonshire	79.8	21	18.4	40	82.6	110	20.7	90
Wellingborough	77.5	218	17.3	205	82.3	143	20.2	178
West Lindsey	77.4	225	17.2	226	80.8	303	19.9	237
West Midlands	76.6		16.8		81.1		19.7	
Birmingham	75.2	381	16.3	350	80.5	333	19.6	290
Bridgnorth	78.2	148	16.8	289	82.4	130	19.9	229
Bromsgrove	78.6	116	17.4	189	81.3	248	19.6	289
Cannock Chase	75.6	360	15.4	423	80.8	309	19.2	337
Coventry	75.7	353	16.6	326	80.7	319	19.9	231
Dudley	76.6	292	16.7	310	81.3	259	19.7	266
East Staffordshire	76.8	267	16.4	336	80.8	307	19.4	306
Herefordshire, County of	77.9	184	17.7	144	82.8	82	20.8	75
Lichfield	78.0	163	17.3	209	80.9	297	19.1	345
Malvern Hills	78.5	125	17.9	107	82.0	175	20.2	184
Newcastle-under-Lyme	76.9	265	16.6	315	81.5	234	20.0	220
North Shropshire	77.6	209	17.1	252	82.7	101	20.3	170
North Warwickshire	77.7	198	16.7	299	80.8	305	18.6	384
Nuneaton and Bedworth	76.2	322	15.9	384	80.1	370	18.5	397
Oswestry	77.7	197	17.6	169	82.9	79	20.2	176
Redditch	76.8	268	16.7	303	80.3	352	20.1	198
Rugby	77.4	223	17.3	219	80.8	299	19.6	287
Sandwell	74.4	415	15.8	393	79.7	389	18.7	375
Shrewsbury and Atcham	77.5	216	18.1	71	82.6	106	21.1	53
Solihull	78.3	131	17.9	120	83.3	41	21.4	28
South Shropshire	79.4	46	19.2	8	82.9	71	21.1	52
South Staffordshire	77.5	219	16.7	298	81.5	236	19.4	312
Stafford	77.5	213	17.1	247	82.2	156	20.0	206
Staffordshire Moorlands	77.5	221	17.0	265	81.3	260	19.5	304
Stoke-on-Trent	74.5	407	15.6	406	79.6	394	19.0	353
Stratford-on-Avon	78.6	105	17.6	160	82.0	180	20.3	153
Tamworth	78.1	152	17.3	200	80.5	340	19.3	330
Telford and Wrekin	77.0	257	16.7	308	80.8	300	19.6	275
Walsall	75.7	352	16.6	319	80.8	304	19.7	270
Warwick	78.2	144	18.0	87	83.2	48	20.8	79
Wolverhampton	75.4	370	16.5	332	80.1	371	19.2	338
Worcester	77.7	201	17.8	123	81.5	232	19.7	269
Wychavon	78.8	88	18.0	96	83.2	51	20.9	65
Wyre Forest	77.7	202	17.5	182	81.6	218	20.0	204
East of England	78.3		17.6		82.3		20.3	
Babergh	78.7	97	18.0	86	83.3	45	20.8	78
Basildon	77.5	217	17.0	267	81.1	279	19.5	300
Bedford	77.8	193	17.6	158	81.8	200	20.1	200
Braintree	78.5	124	17.3	218	82.4	128	20.2	173
Breckland	78.6	106	17.9	119	82.3	146	20.3	160
Brentwood	79.7	31	18.2	63	83.3	39	21.4	24
Broadland	78.9	84	17.7	142	82.5	118	20.3	161
Broxbourne	79.2	59	18.1	80	82.3	149	20.1	191
Cambridge	77.9	175	17.5	176	82.2	157	20.2	185
Castle Point	79.3	55	17.9	104	82.1	173	19.9	226
Chelmsford	79.6	34	18.4	39	83.5	24	21.0	62
Colchester	78.1	157	17.3	199	82.6	108	20.5	128
Dacorum	78.8	91	17.9	115	82.2	151	20.4	145
East Cambridgeshire	79.4	45	18.1	84	84.1	8	21.5	18
East Hertfordshire	79.8	23	18.2	65	82.5	117	20.5	135
Epping Forest	77.9	185	17.0	263	82.1	174	19.9	238
Fenland	77.4	229	17.2	225	80.6	320	19.4	317
Forest Heath	78.9	86	18.2	67	83.1	53	20.8	84
Great Yarmouth	76.7	281	17.0	268	81.3	251	19.7	264
Harlow	77.3	239	17.6	164	83.0	64	21.3	31
Hertsmere	77.9	183	17.7	154	82.0	183	19.6	283
Huntingdonshire	78.6	103	18.1	83	82.3	148	20.2	187
Ipswich	77.7	196	17.7	150	82.0	177	20.0	218
King's Lynn and West Norfolk	78.0	161	17.7	141	82.1	167	20.6	118
Luton	76.1	325	16.7	300	80.0	375	18.8	370

| Table 1 continued | Life expectancy at birth and at age 65[1] (years) and relative position (rank order[2]) of local areas in the United Kingdom, 2004–06 |

United Kingdom

	Males				Females			
	Life expectancy at birth		Life expectancy at age 65		Life expectancy at birth		Life expectancy at age 65	
	Years	Rank order[2]	Years	Rank order[2]	Years	Rank order[2]	Years	Rank order[2]
Maldon	77.4	227	17.2	228	82.0	179	20.3	154
Mid Bedfordshire	78.4	127	17.4	191	82.3	138	20.1	194
Mid Suffolk	79.9	18	18.3	45	83.3	40	21.0	56
North Hertfordshire	78.2	149	17.3	217	82.3	139	20.3	149
North Norfolk	78.0	170	18.3	55	83.7	18	21.4	22
Norwich	76.8	277	17.6	161	82.6	107	21.4	27
Peterborough	76.7	288	16.7	302	80.6	326	19.5	293
Rochford	79.3	57	17.9	105	84.3	4	21.4	26
South Bedfordshire	77.5	215	17.0	270	81.6	225	19.5	305
South Cambridgeshire	79.2	62	18.0	91	84.2	5	21.7	10
South Norfolk	80.2	8	18.8	16	83.2	46	21.2	44
Southend-on-Sea	77.3	241	17.2	231	80.9	298	19.5	298
St Albans	79.1	71	17.8	127	82.5	124	20.3	155
St Edmundsbury	78.6	104	17.6	172	82.7	100	20.4	142
Stevenage	77.6	203	17.1	234	82.1	163	20.4	136
Suffolk Coastal	79.8	26	18.3	47	82.9	69	20.9	68
Tendring	77.1	252	17.6	171	81.8	194	20.5	121
Three Rivers	79.9	19	18.4	43	82.9	68	20.4	140
Thurrock	77.6	204	17.1	237	81.5	233	19.8	250
Uttlesford	79.3	52	17.9	114	82.9	77	20.3	156
Watford	77.4	224	16.9	282	80.8	308	19.2	335
Waveney	78.6	111	18.0	93	82.4	127	20.7	93
Welwyn Hatfield	78.3	135	17.7	145	82.8	83	20.8	86
London	77.4		17.5		82.0		20.3	
Barking and Dagenham	75.9	336	15.9	383	79.8	384	18.8	372
Barnet	79.0	79	18.4	36	83.4	29	20.9	69
Bexley	78.5	123	17.8	134	82.5	114	20.5	132
Brent	78.2	147	18.7	25	83.4	30	21.7	11
Bromley	79.2	65	18.3	57	83.3	38	21.2	48
Camden	76.4	309	16.9	280	81.7	216	19.9	223
Croydon	77.8	188	18.1	78	81.2	263	19.9	239
Ealing	77.7	200	17.7	146	82.1	164	20.6	108
Enfield	77.9	173	17.8	129	81.9	187	20.3	166
Greenwich	75.0	395	15.6	409	80.7	314	19.9	225
Hackney	75.0	394	16.7	306	81.7	207	20.6	107
Hammersmith and Fulham	78.0	169	18.8	20	83.5	26	21.9	8
Haringey	76.0	332	17.1	250	82.1	168	20.8	80
Harrow	78.9	83	18.4	41	83.1	56	21.2	39
Havering	78.2	150	17.1	239	81.9	185	19.9	240
Hillingdon	77.3	237	17.0	264	82.2	153	20.6	106
Hounslow	76.7	286	16.6	325	80.6	329	19.0	350
Islington	74.9	399	16.2	356	80.0	374	19.0	357
Kensington and Chelsea	83.1	1	22.0	1	87.2	1	24.8	1
Kingston upon Thames	79.0	78	17.7	137	82.8	88	20.6	120
Lambeth	75.1	391	16.7	294	80.1	363	19.1	342
Lewisham	75.7	355	15.9	385	80.3	351	18.8	369
Merton	79.0	74	18.4	34	83.1	59	21.0	59
Newham	75.0	393	16.7	313	79.4	404	18.5	391
Redbridge	77.9	180	17.6	175	82.1	170	20.1	197
Richmond upon Thames	79.4	43	18.0	98	83.1	52	21.2	47
Southwark	76.6	291	17.5	186	81.6	217	20.6	109
Sutton	78.5	119	17.8	125	82.5	121	20.3	165
Tower Hamlets	75.2	383	16.1	369	80.2	361	19.0	352
Waltham Forest	75.3	378	15.9	381	80.7	315	19.4	315
Wandsworth	76.6	290	16.7	312	81.2	275	19.7	271
Westminster	80.2	9	20.0	3	84.0	12	22.2	4
South East	78.5		17.9		82.4		20.5	
Adur	78.3	136	17.5	187	81.3	252	20.3	151
Arun	78.0	164	17.8	133	82.2	159	20.6	112
Ashford	79.5	37	18.9	13	82.1	161	20.3	162
Aylesbury Vale	78.4	128	17.7	152	81.8	201	19.7	256
Basingstoke and Deane	79.1	69	17.6	166	82.6	113	20.4	138
Bracknell Forest	78.6	109	17.4	192	82.6	105	20.5	134
Brighton and Hove	76.3	315	17.2	222	81.8	197	20.6	114
Canterbury	77.9	187	17.6	170	81.6	227	20.0	215
Cherwell	78.6	115	17.7	156	82.7	99	21.2	36
Chichester	79.1	68	18.2	59	82.9	78	20.7	91

Table 1 continued	Life expectancy at birth and at age 65[1] (years) and relative position (rank order[2]) of local areas in the United Kingdom, 2004–06

United Kingdom

	Males				Females			
	Life expectancy at birth		Life expectancy at age 65		Life expectancy at birth		Life expectancy at age 65	
	Years	Rank order[2]	Years	Rank order[2]	Years	Rank order[2]	Years	Rank order[2]
Chiltern	79.4	51	18.6	27	83.4	27	21.2	35
Crawley	80.0	16	20.3	2	82.2	160	20.3	167
Dartford	77.6	207	16.6	316	81.2	264	18.8	374
Dover	77.6	208	17.3	203	81.7	209	20.1	188
East Hampshire	79.0	76	18.1	81	82.1	171	20.3	168
Eastbourne	77.2	248	18.0	88	81.6	221	20.6	111
Eastleigh	79.5	39	17.9	111	82.4	136	20.1	190
Elmbridge	80.4	5	18.9	15	83.6	22	21.1	50
Epsom and Ewell	79.7	28	18.2	68	84.2	6	21.6	14
Fareham	80.0	14	18.7	24	83.5	23	21.2	34
Gosport	77.2	243	17.0	272	81.3	254	19.8	242
Gravesham	78.3	137	17.6	165	81.6	220	20.0	212
Guildford	80.1	10	18.9	10	83.9	14	21.6	15
Hart	80.7	3	18.9	12	84.0	10	21.7	12
Hastings	75.5	363	16.8	290	80.1	365	19.4	313
Havant	78.8	93	17.9	102	82.4	137	20.5	126
Horsham	80.1	11	18.5	29	83.5	25	21.3	30
Isle of Wight	78.4	129	17.9	108	83.1	57	21.2	38
Lewes	78.9	82	19.1	9	83.8	15	22.0	7
Maidstone	78.1	156	17.5	181	82.1	166	19.6	276
Medway	76.4	305	16.4	345	80.8	306	19.2	339
Mid Sussex	79.6	35	18.1	70	82.1	169	20.2	175
Milton Keynes	77.4	232	16.9	284	80.9	295	19.3	329
Mole Valley	79.9	20	18.4	38	83.4	34	20.7	105
New Forest	80.0	15	18.9	11	84.1	7	21.9	9
Oxford	77.6	210	17.8	131	81.9	192	20.4	141
Portsmouth	76.4	310	16.7	307	81.6	228	20.0	213
Reading	77.0	255	17.3	212	81.7	206	20.2	182
Reigate and Banstead	78.7	96	17.3	198	81.7	208	19.7	258
Rother	78.2	145	17.9	118	82.5	115	20.9	66
Runnymede	78.8	90	18.1	72	82.5	116	20.7	98
Rushmoor	78.5	120	17.7	148	82.3	142	20.2	172
Sevenoaks	80.1	13	18.8	19	84.0	11	21.6	17
Shepway	77.2	246	17.6	163	81.3	261	19.9	241
Slough	77.5	222	17.9	103	81.6	231	19.7	257
South Bucks	79.7	29	18.1	73	82.5	122	20.5	124
South Oxfordshire	78.8	87	17.9	112	82.8	80	21.0	57
Southampton	76.8	273	17.2	230	81.7	204	20.3	169
Spelthorne	78.8	89	17.7	153	82.3	141	20.6	117
Surrey Heath	79.8	22	18.2	60	82.6	112	19.9	221
Swale	76.9	261	16.6	318	81.0	290	19.7	262
Tandridge	79.7	27	18.8	18	83.6	21	20.8	76
Test Valley	79.2	64	17.8	136	82.7	104	20.3	152
Thanet	75.8	349	16.6	327	80.5	335	19.3	324
Tonbridge and Malling	79.4	50	17.9	117	82.8	81	20.8	81
Tunbridge Wells	78.6	107	18.2	58	82.4	134	20.6	116
Vale of White Horse	79.1	66	18.2	69	83.4	31	20.9	72
Waverley	79.7	30	18.7	22	82.8	84	20.7	97
Wealden	79.6	33	18.3	49	83.4	33	21.0	54
West Berkshire	78.9	85	18.4	35	82.7	96	21.0	55
West Oxfordshire	79.5	42	18.0	94	82.7	102	20.4	139
Winchester	80.1	12	18.8	17	83.1	60	20.9	70
Windsor and Maidenhead	78.6	118	17.3	207	82.7	94	20.0	208
Woking	79.3	53	18.4	42	82.9	74	21.0	60
Wokingham	80.3	7	18.6	26	83.4	35	20.7	87
Worthing	77.1	254	17.1	242	81.2	266	19.9	235
Wycombe	79.2	60	18.3	53	83.4	37	21.5	20
South West	78.5		17.9		82.7		20.8	
Bath and North East Somerset	79.4	48	18.2	61	83.0	66	20.7	95
Bournemouth	77.9	181	18.1	79	81.9	189	20.5	133
Bristol, City of	76.9	259	16.9	285	81.2	278	19.8	251
Caradon	78.6	117	17.9	106	82.1	165	20.3	159
Carrick	78.7	99	18.1	76	82.6	109	21.4	23
Cheltenham	78.7	95	18.2	64	82.9	70	20.8	77
Christchurch	80.3	6	19.3	7	84.4	3	22.4	3
Cotswold	79.9	17	18.4	33	83.2	50	20.9	67
East Devon	79.4	49	18.3	48	83.2	47	21.2	37
East Dorset	81.4	2	19.4	5	84.7	2	22.5	2

| Table 1 continued | Life expectancy at birth and at age 65[1] (years) and relative position (rank order[2]) of local areas in the United Kingdom, 2004–06 |

United Kingdom

	Males				Females			
	Life expectancy at birth		Life expectancy at age 65		Life expectancy at birth		Life expectancy at age 65	
	Years	Rank order[2]	Years	Rank order[2]	Years	Rank order[2]	Years	Rank order[2]
Exeter	77.4	230	17.1	240	83.0	62	21.0	61
Forest of Dean	77.1	253	17.4	193	82.2	154	20.7	103
Gloucester	77.3	238	17.1	243	81.4	242	19.5	295
Kennet	78.5	121	17.4	194	82.8	91	20.8	83
Kerrier	78.0	171	17.7	138	82.4	135	20.7	92
Mendip	78.1	153	17.9	109	82.4	132	20.7	104
Mid Devon	79.1	67	18.2	62	82.8	85	21.3	29
North Cornwall	77.9	177	17.9	101	82.7	98	20.8	85
North Devon	77.9	178	17.8	128	82.2	150	20.5	125
North Dorset	79.4	47	18.9	14	83.9	13	21.5	19
North Somerset	79.0	81	18.1	82	82.7	95	20.6	119
North Wiltshire	78.7	100	17.8	135	82.3	145	20.3	163
Penwith	77.6	211	17.5	179	82.0	176	20.7	89
Plymouth	76.5	302	16.7	301	81.7	211	20.1	193
Poole	78.2	146	18.0	92	82.9	72	21.2	46
Purbeck	79.5	41	18.7	21	83.8	16	21.7	13
Restormel	78.3	138	18.0	100	82.5	119	20.3	150
Salisbury	79.0	75	18.3	50	82.9	73	20.9	71
Sedgemoor	78.1	160	18.0	97	82.7	97	20.5	123
South Gloucestershire	79.3	54	18.0	85	83.6	20	21.2	42
South Hams	79.0	73	18.6	28	83.3	42	21.1	49
South Somerset	79.1	70	18.4	44	82.8	90	20.7	99
Stroud	78.6	112	17.8	124	82.4	126	20.4	137
Swindon	77.4	231	16.8	291	81.2	273	19.4	314
Taunton Deane	78.2	142	18.0	99	82.9	75	21.0	64
Teignbridge	79.6	36	18.3	52	83.4	32	21.6	16
Tewkesbury	78.7	102	18.1	75	83.0	61	20.7	101
Torbay	76.9	260	17.6	159	82.8	86	21.0	63
Torridge	78.4	126	18.0	89	83.0	63	20.9	74
West Devon	79.2	61	18.3	56	82.7	93	21.5	21
West Dorset	79.5	40	18.7	23	83.1	55	21.2	41
West Somerset	79.2	63	19.3	6	83.7	19	22.0	6
West Wiltshire	79.6	32	18.3	54	83.4	36	21.1	51
Weymouth and Portland	77.9	186	18.4	37	82.2	158	20.6	110
Wales	76.64		16.83		80.98		19.54	
Local areas within Wales								
Blaenau Gwent	74.8	402	15.8	397	78.7	422	18.3	409
Bridgend	76.0	334	15.9	382	80.2	360	18.7	376
Caerphilly	75.6	362	16.1	373	79.9	378	18.6	380
Cardiff	76.6	294	16.8	293	81.3	255	20.0	216
Carmarthenshire	75.8	344	16.3	349	81.1	285	19.3	325
Ceredigion	78.6	110	18.3	46	83.0	65	21.3	32
Conwy	76.5	300	17.4	197	81.2	265	20.4	147
Denbighshire	76.7	278	17.1	246	80.9	294	19.9	227
Flintshire	76.7	283	17.1	236	81.2	269	19.3	331
Gwynedd	76.8	275	17.3	215	81.6	230	20.0	203
Isle of Anglesey	77.2	250	17.3	211	82.1	172	20.0	202
Merthyr Tydfil	75.5	368	15.8	391	79.1	412	18.0	419
Monmouthshire	78.7	98	17.9	113	83.3	44	21.2	40
Neath Port Talbot	76.0	333	16.7	314	80.2	357	19.0	358
Newport	76.7	280	16.9	277	80.7	318	19.8	247
Pembrokeshire	76.5	298	17.0	261	81.6	226	19.8	255
Powys	78.3	132	17.9	116	81.8	196	20.5	130
Rhondda, Cynon, Taff	75.6	358	15.7	400	80.1	369	18.8	373
Swansea	76.4	308	17.0	271	81.0	291	19.6	285
The Vale of Glamorgan	77.7	194	17.5	184	81.1	281	19.5	299
Torfaen	77.4	226	17.3	213	81.3	256	19.6	288
Wrexham	76.9	262	16.6	320	80.5	334	19.3	328
Scotland	74.64		15.87		79.57		18.62	
Local areas within Scotland								
Aberdeen City	74.9	400	16.1	368	80.1	368	19.1	348
Aberdeenshire	77.0	258	17.3	214	81.2	277	19.5	303
Angus	76.2	324	16.6	328	79.7	390	18.9	364
Argyll & Bute	75.8	348	16.7	297	80.6	328	19.4	316
City of Edinburgh	75.8	346	16.5	329	80.9	296	19.7	265
Clackmannanshire	73.2	426	15.6	408	78.8	418	17.9	422

Table 1 continued	Life expectancy at birth and at age 65[1] (years) and relative position (rank order[2]) of local areas in the United Kingdom, 2004–06

United Kingdom

	Males				Females			
	Life expectancy at birth		Life expectancy at age 65		Life expectancy at birth		Life expectancy at age 65	
	Years	Rank order[2]	Years	Rank order[2]	Years	Rank order[2]	Years	Rank order[2]
Dumfries & Galloway	76.1	326	16.5	333	80.4	348	18.8	368
Dundee City	73.6	423	16.2	354	79.2	408	18.9	366
East Ayrshire	74.5	412	15.5	421	78.2	429	17.7	428
East Dunbartonshire	78.0	165	17.4	190	81.7	214	20.0	217
East Lothian	76.3	314	16.2	366	80.7	313	19.3	320
East Renfrewshire	77.2	245	17.0	262	81.9	191	20.2	180
Eilean Siar	73.0	429	15.5	420	79.9	382	19.6	274
Falkirk	74.5	408	15.5	418	79.4	401	17.9	420
Fife	75.5	366	16.3	353	80.1	366	19.1	341
Glasgow City	70.5	432	13.8	432	77.0	432	17.3	432
Highland	75.2	386	16.3	348	80.6	331	19.5	294
Inverclyde	72.2	430	14.9	431	77.8	430	18.1	418
Midlothian	75.1	392	16.0	379	79.7	391	18.2	417
Moray	75.8	343	16.7	309	79.9	380	18.7	377
North Ayrshire	73.9	420	15.5	422	79.0	416	18.4	401
North Lanarkshire	73.0	427	14.9	430	78.2	428	17.6	429
Orkney Islands	76.0	330	16.5	330	81.0	287	19.9	230
Perth & Kinross	76.5	301	17.1	241	81.2	267	19.5	296
Renfrewshire	73.4	424	15.0	428	78.4	424	17.5	431
Scottish Borders	76.5	304	16.9	287	80.5	339	18.9	362
Shetland Islands	76.6	295	18.0	95	81.5	241	20.5	122
South Ayrshire	75.8	350	16.4	344	80.5	337	19.1	347
South Lanarkshire	74.4	413	15.5	419	79.3	405	18.2	416
Stirling	76.6	289	16.3	351	80.6	323	19.0	361
West Dunbartonshire	71.8	431	14.9	429	77.7	431	17.8	424
West Lothian	75.2	388	15.7	403	79.0	414	17.6	430
Northern Ireland	76.17		16.73		81.02		19.62	
Local areas within Northern Ireland								
Antrim	76.6	296	17.0	259	80.8	312	19.4	309
Ards	77.2	247	17.2	224	81.1	283	19.7	273
Armagh	76.4	311	16.9	274	81.3	258	19.3	327
Ballymena	77.5	220	17.6	162	82.3	144	20.3	158
Ballymoney	78.0	168	17.2	229	82.4	131	20.7	102
Banbridge	78.0	167	18.2	66	82.5	125	20.1	192
Belfast	73.7	422	15.6	412	79.6	393	19.1	349
Carrickfergus	77.2	249	16.7	305	81.2	272	19.3	319
Castlereagh	78.0	172	17.3	208	82.0	178	20.0	201
Coleraine	77.3	235	17.2	220	81.5	239	20.2	183
Cookstown	74.7	403	16.7	311	81.6	222	19.6	282
Craigavon	76.8	270	17.1	238	81.8	202	20.0	211
Derry	74.9	401	16.0	380	79.4	403	18.4	403
Down	77.8	190	17.7	143	81.0	288	19.7	263
Dungannon	74.6	406	16.1	370	80.6	332	19.9	236
Fermanagh	75.1	389	16.2	359	80.3	350	19.6	291
Larne	75.7	351	15.7	402	81.1	286	19.2	336
Limavady	76.9	263	17.1	248	80.3	355	18.5	396
Lisburn	76.3	312	16.9	281	81.5	235	19.8	243
Magherafelt	77.3	240	17.8	126	81.9	184	20.7	96
Moyle	76.8	276	17.4	188	81.7	212	19.8	244
Newry and Mourne	75.5	365	16.0	378	79.8	383	18.6	382
Newtownabbey	78.0	162	17.2	227	81.5	237	19.6	286
North Down	77.8	189	17.7	151	82.8	89	21.2	45
Omagh	76.5	297	17.0	257	81.9	190	20.6	115
Strabane	76.5	299	17.3	216	81.6	219	19.9	222

1 95 per cent confidence intervals for these results are available on the National Statistics website at:
   www.statistics.gov.uk/statbase/Product.asp?vlnk=8841
2 Life expectancy figures for local areas and regions are presented to one decimal place. The rankings in this table reflect differences in the unrounded numbers.
   1= Highest, 432 = Lowest

Report:

Infant and perinatal mortality by social and biological factors, 2006

This report presents statistics on stillbirths and infant deaths registered in England and Wales that occurred in 2006. Only infant deaths that have been linked to their corresponding birth records are included as linkage enables analysis of infant and perinatal deaths by risk factors collected at birth registration. These include birthweight, mother's age at birth of child, mother's country of birth, marital status, parity and father's socio-economic status based on his occupation.

In 2006, 3,292 infant deaths occurred in England and Wales of which 3,223 (98 per cent) were linked to their birth records. Of the 69 records that were not linked, 38 were born outside England and Wales (and therefore not registered in England and Wales) and 31 were not linked because no record of the birth could be found. The linkage rate for 2006 is comparable with that for previous years since linkage began in 1975.

In 2006, of all the linked infant deaths 1,729 (54 per cent) were early neonates (babies dying under 7 days), 2,289 (71 per cent) were neonatal deaths (babies dying under 28 days) and 934 (29 per cent) were postneonatal deaths (babies dying aged 28 days and over but under one year).

Key findings

- The infant mortality rates for very low birthweight babies (under 1,500 grams) and low birthweight babies (under 2,500 grams) were 195.6 and 41.3 deaths per 1,000 live births respectively compared with a rate of 1.7 among normal birthweight babies (2,500 grams and over). Fifty per cent of infant deaths occurred among very low birthweight babies

- There were 924 stillbirths weighing less than 1,500 grams delivered at 24–27 weeks gestation. This represented 96 per cent of all stillbirths delivered at 24–27 weeks and 56 per cent of all very low birthweight stillbirths

- The infant mortality rate was highest among babies of mothers aged under 20 (6.4 deaths per 1,000 live births) followed by babies

of mothers aged 40 and over (5.9 per 1,000 live births). The infant mortality rate was lowest among babies with mothers in the 30–34 age group (4.1 per 1,000 live births)

- Babies of mothers aged 40 and over had the highest stillbirth and perinatal mortality rates at 8.6 and 12.0 per 1,000 births respectively

- Babies of mothers born in Pakistan and the Caribbean had particularly high infant mortality rates (9.4 and 8.8 deaths per 1,000 live births respectively) compared with the overall infant mortality rate of 4.8 per 1,000 live births. The perinatal mortality rate was also particularly high in these two groups

- The registration type with the highest infant mortality rate was the sole registered births (6.3 deaths per 1,000 live births). This was followed by babies born outside marriage jointly registered by both parents giving different addresses (6.2 deaths per 1,000 live births)

- Babies born inside marriage to women with three or more previous children had high infant mortality at 6.9 deaths per 1,000 live births

- For births inside marriage combined with births outside marriage jointly registered by both parents, babies of fathers in 'routine occupations' had an infant mortality rate of 6.2 deaths per 1,000 live births compared with babies of fathers in the 'large employers and higher managerial occupations' who had an infant mortality rate of 2.6 per 1,000 live births

- Seventy-four per cent of all infant deaths were related to events occurring in pregnancy (that is, congenital anomalies, antepartum infections and immaturity related conditions) as were 87 per cent of all neonatal deaths. For postneonatal deaths, 31 per cent were related to congenital anomalies, 14 per cent were from infections, 13 per cent were sudden infant deaths and 10 per cent were from immaturity related conditions

Explanatory notes

Database changes

The figures presented in this report relate to live births, stillbirths and infant deaths that occurred in 2006 and were on our database at 17 September 2007. These figures are provisional.

Birthweight information was not available for 0.9 per cent of live births. Efforts are currently underway to obtain this information from the Registrars and Trusts.

National Statistics Socio-Economic Classification (NS-SEC)

In 2001, the National Statistics Socio-Economic Classification (NS-SEC) replaced the Registrar General's Social Class Classification. Although the eight-class version of NS-SEC is used here, the categories can be aggregated to produce five- and three-class versions of NS-SEC.

Mother's country of birth

These groupings differ slightly from those used up to 1997.
In addition, the countries included in 'Other European Union' changed in 2004 to reflect the EU enlargement that took place on 1 May 2004.

United Kingdom

England, Wales, Scotland, Northern Ireland

Elsewhere in United Kingdom

Channel Islands, Isle of Man, UK (part not stated)

Outside United Kingdom

Irish Republic
Irish Republic, Ireland (part not stated)

Other European Union

Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Faroe Islands, Finland, France, Germany, Greece, Greenland, Hungary, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden

Rest of Europe

All other European countries including Turkey, Russia and former Soviet republics

Commonwealth

Australia, Canada and New Zealand

New Commonwealth

Asia
Bangladesh, India, Pakistan
East Africa
Kenya, Malawi, Tanzania, Uganda, Zambia
Southern Africa
Botswana, Lesotho, Namibia, South Africa, Swaziland
Rest of Africa
Cameroon, The Gambia, Ghana, Mauritius, Mozambique, Nigeria, Seychelles, Sierra Leone, Zimbabwe
Far East
Brunei, Malaysia, Singapore
Caribbean
Anguilla, Antigua, Bahamas, Barbados, Belize, Bermuda, British Virgin Islands, Cayman Islands, Dominica, Grenada, Guyana, Jamaica, Montserrat, St Christopher and Nevis, St Lucia, St Vincent, Trinidad and Tobago, Turks and Caicos Islands
Rest of the New Commonwealth
Cook Islands, Falkland Islands, Fiji, Gibraltar, Kiribati, Maldives, Nauru, New Hebrides, Papua New Guinea, St Helena, Solomon Islands, Sri Lanka, Tonga, Tuvalu, Vanuatu, Western Samoa, British Indian Ocean Territory

Rest of the World and not stated

| Table 1 | Live births, stillbirths and infant deaths by birthweight, 2006 |

England and Wales | Numbers and rates

| Birthweight (grams) | Numbers | | | | | | Rates[1] | | | | |
| | Births | | Deaths | | | | | | | | |
	Live births	Stillbirths	Early neonatal	Neonatal	Postneonatal	Infants	Stillbirth	Perinatal	Neonatal	Postneonatal	Infant
All	669,514	3,603	1,729	2,289	934	3,223	5.4	7.9	3.4	1.4	4.8
Under 1,500	8,237	1,652	1,061	1,359	252	1,611	167.1	274.3	165.0	30.6	195.6
1,500–1,999	10,230	381	91	131	68	199	35.9	44.5	12.8	6.6	19.5
2,000–2,499	31,660	420	92	134	126	260	13.1	16.0	4.2	4.0	8.2
2,500–2,999	112,707	470	140	203	199	402	4.2	5.4	1.8	1.8	3.6
3,000–3,499	237,357	355	127	193	170	363	1.5	2.0	0.8	0.7	1.5
3,500 and over	263,331	261	111	147	110	257	1.0	1.4	0.6	0.4	1.0
Not stated	5,992	64	107	122	9	131	10.6	28.2	20.4	1.5	21.9

1 Stillbirths and perinatal deaths per 1,000 live births and stillbirths.
  Neonatal, postneonatal and infant deaths per 1,000 live births.

| Table 2 | Stillbirths: Gestation by birthweight, 2006 |

England and Wales | Numbers

| Birthweight (grams) | All | Gestation (weeks) | | | | | |
		24–27	28–31	32–35	36–39	40 and over	Not stated
All	3,603	963	625	665	867	466	17
Under 1,000	1,167	843	245	51	26	2	0
1,000–1,499	485	81	257	134	12	1	0
1,500–1,999	381	13	90	196	77	5	0
2,000–2,499	420	5	15	193	173	34	0
2,500–2,999	470	3	5	63	280	118	1
3,000–3,499	355	0	0	17	192	146	0
3,500 and over	261	1	2	5	96	156	1
Not stated	64	17	11	6	11	4	15

| Table 3 | Live births, stillbirths and infant deaths by mother's age, 2006 |

England and Wales | Numbers and rates

| Mother's age | Numbers | | | | | | Rates[1] | | | | |
| | Births | | Deaths | | | | | | | | |
	Live births	Stillbirths	Early neonatal	Neonatal	Postneonatal	Infant	Stillbirth	Perinatal	Neonatal	Postneonatal	Infant
All	669,514	3,603	1,729	2,289	934	3,223	5.4	7.9	3.4	1.4	4.8
Under 20	45,500	268	133	188	104	292	5.9	8.8	4.1	2.3	6.4
20-24	127,814	682	348	463	247	710	5.3	8.0	3.6	1.9	5.6
25-29	172,642	887	474	627	204	831	5.1	7.8	3.6	1.2	4.8
30-34	189,369	920	443	569	204	773	4.8	7.2	3.0	1.1	4.1
35-39	110,473	640	249	337	141	478	5.8	8.0	3.1	1.3	4.3
40 and over	23,716	206	82	105	34	139	8.6	12.0	4.4	1.4	5.9

1 Stillbirths and perinatal deaths per 1,000 live births and stillbirths.
  Neonatal, postneonatal and infant deaths per 1,000 live births.

Table 4	Live births, stillbirths and infant deaths by mother's country of birth, 2006

England and Wales   Numbers and rates

Country of birth	Numbers						Rates[1]				
	Births		Deaths								
	Live births	Stillbirths	Early neonatal	Neonatal	Postneonatal	Infants	Stillbirth	Perinatal	Neonatal	Postneonatal	Infant
All	669,514	3,603	1,729	2,289	934	3,223	5.4	7.9	3.4	1.4	4.8
United Kingdom	521,074	2,595	1,291	1,709	705	2,414	5.0	7.4	3.3	1.4	4.6
England and Wales	511,148	2,546	1,265	1,676	694	2,370	5.0	7.4	3.3	1.4	4.6
Scotland	7,371	38	19	23	7	30	5.1	7.7	3.1	0.9	4.1
Northern Ireland	2,202	9	4	7	4	11	4.1	5.9	3.2	1.8	5.0
Elsewhere	353	2	3	3	0	3	5.6	14.1	8.5	-	8.5
Outside the United Kingdom	148,440	1,008	438	580	229	809	6.7	9.7	3.9	1.5	5.5
Irish Republic	3,454	17	6	8	4	12	4.9	6.6	2.3	1.2	3.5
Other European Union	25,422	121	66	84	22	106	4.7	7.3	3.3	0.9	4.2
Rest of Europe	7,567	32	11	17	7	24	4.2	5.7	2.2	0.9	3.2
Commonwealth											
Australia, Canada and New Zealand	4,500	12	6	10	3	13	2.7	4.0	2.2	0.7	2.9
New Commonwealth	68,470	584	252	339	141	480	8.5	12.1	5.0	2.1	7.0
Asia											
Bangladesh	8,772	56	26	35	13	48	6.3	9.3	4.0	1.5	5.5
India	11,078	100	21	38	16	54	8.9	10.8	3.4	1.4	4.9
Pakistan	17,072	152	76	101	60	161	8.8	13.2	5.9	3.5	9.4
East Africa	3,971	37	11	14	8	22	9.2	12.0	3.5	2.0	5.5
Southern Africa	4,478	25	11	15	6	21	5.6	8.0	3.3	1.3	4.7
Rest of Africa	14,565	146	80	94	27	121	9.9	15.4	6.5	1.9	8.3
Far East	1,351	4	1	3	3	6	3.0	3.7	2.2	2.2	4.4
Caribbean	3,653	32	20	26	6	32	8.7	14.1	7.1	1.6	8.8
Rest of the New Commonwealth	3,530	32	6	13	2	15	9.0	10.7	3.7	0.6	4.2
Rest of World and not stated	39,027	242	97	122	52	174	6.2	8.6	3.1	1.3	4.5

1 Stillbirths and perinatal deaths per 1,000 live births and stillbirths.
  Neonatal, postneonatal and infant deaths per 1,000 live births.

Table 5	Live births, stillbirths and infant deaths by marital status, parity (within marriage) and type of registration, 2006

England and Wales   Numbers and rates

Marital status Parity/type of registration	Numbers						Rates[1]				
	Births		Deaths								
	Live births	Stillbirths	Early neonatal	Neonatal	Postneonatal	Infants	Stillbirth	Perinatal	Neonatal	Postneonatal	Infant
All	669,514	3,603	1,729	2,289	934	3,223	5.4	7.9	3.4	1.4	4.8
Inside marriage											
All	378,155	1,898	889	1,175	475	1,650	5.0	7.3	3.1	1.3	4.4
0	160,188	870	464	604	172	776	5.4	8.3	3.8	1.1	4.8
1	134,222	536	230	311	144	455	4.0	5.7	2.3	1.1	3.4
2	53,442	272	101	128	82	210	5.1	6.9	2.4	1.5	3.9
3 and over	30,303	220	94	132	77	209	7.2	10.3	4.4	2.5	6.9
Outside marriage											
All	291,359	1,705	840	1,114	459	1,573	5.8	8.7	3.8	1.6	5.4
Joint registration/same address	185,454	1,014	528	685	229	914	5.4	8.3	3.7	1.2	4.9
Joint registration/different address	60,451	358	183	246	127	373	5.9	8.9	4.1	2.1	6.2
Sole registration	45,454	333	129	183	103	286	7.3	10.1	4.0	2.3	6.3

1 Stillbirths and perinatal deaths per 1,000 live births and stillbirths.
  Neonatal, postneonatal and infant deaths per 1,000 live births.

Table 6	Live births,[1] stillbirths and infant deaths by NS-SEC (based on father's occupation at death registration), 2006[2]

England and Wales | | | | | | | | | | | Numbers and rates

| | Numbers | | | | | | Rates[3] | | | | |
| | Births | | Deaths | | | | | | | | |
NS-SEC	Live births	Stillbirths	Early neonatal	Neonatal	Post-neonatal	Infants	Stillbirth	Perinatal	Neonatal	Post-neonatal	Infant
All[4]	624,060	3,270	1,600	2,106	831	2,937	5.2	7.8	3.4	1.3	4.7
Inside marriage											
All[5]	378,155	1,898	889	1,175	475	1,650	5.0	7.3	3.1	1.3	4.4
1.1 Large employers and higher managerial	3,603	133	38	56	28	84	3.7	4.7	1.6	0.8	2.3
1.2 Higher professional	5,177	230	106	137	43	180	4.4	6.5	2.6	0.8	3.5
2 Lower managerial and professional	9,051	347	166	213	67	280	3.8	5.6	2.4	0.7	3.1
3 Intermediate	2,414	128	70	90	42	132	5.3	8.2	3.7	1.7	5.5
4 Small employers and own-account workers	4,756	193	113	139	56	195	4.0	6.4	2.9	1.2	4.1
5 Lower supervisory and technical	4,007	207	89	110	40	150	5.1	7.3	2.7	1.0	3.7
6 Semi-routine	3,547	291	129	184	73	257	8.1	11.7	5.2	2.1	7.2
7 Routine	3,354	212	116	158	72	230	6.3	9.7	4.7	2.1	6.9
Other[6]	1,836	149	60	83	45	128	8.1	11.3	4.5	2.5	7.0
Outside marriage joint registration											
All[5]	245,905	1,372	711	931	356	1,287	5.5	8.4	3.8	1.4	5.2
1.1 Large employers and higher managerial	850	43	20	29	2	31	5.0	7.4	3.4	0.2	3.6
1.2 Higher professional	1,135	48	21	25	8	33	4.2	6.1	2.2	0.7	2.9
2 Lower managerial and professional	3,760	183	80	100	35	135	4.8	7.0	2.7	0.9	3.6
3 Intermediate	1,265	75	41	51	17	68	5.9	9.1	4.0	1.3	5.4
4 Small employers and own-account workers	3,688	150	85	109	33	142	4.1	6.3	3.0	0.9	3.9
5 Lower supervisory and technical	3,871	178	106	132	37	169	4.6	7.3	3.4	1.0	4.4
6 Semi-routine	3,424	216	113	154	59	213	6.3	9.5	4.5	1.7	6.2
7 Routine	4,755	319	144	195	75	270	6.7	9.7	4.1	1.6	5.7
Other[6]	1,957	157	89	118	79	197	8.0	12.5	6.0	4.0	10.1

1 Figures for live births in NS-SEC groups are a 10 per cent sample coded for father's occupation.
2 Information on father's occupation is not collected for births outside marriage if the father does not attend the registration of the baby's birth.
3 Stillbirths and perinatal deaths per 1,000 live births and stillbirths.
   Neonatal, postneonatal and infant deaths per 1,000 live births.
4 Inside marriage and outside marriage/joint registration only, including cases where father's occupation was not stated.
5 Includes cases where father's occupation was not stated.
6 Students; occupations inadequately described; occupations not classifiable for other reasons; never worked and long-term unemployed.

Table 7	Live births, stillbirths and infant deaths by ONS cause groups, 2006

England and Wales | | | | | | | | | | | Numbers and rates

| | Numbers | | | | | | Rates[1] | | | | |
| | Births | | Deaths | | | | | | | | |
Cause group	Live births	Stillbirths	Early neonatal	Neonatal	Post-neonatal	Infants	Stillbirth	Perinatal	Neonatal	Post neonatal	Infant
All causes	669,514	3,603	1,729	2,289	934	3,223	5.4	7.9	3.4	1.4	4.8
Congenital anomalies		517	420	566	286	852	0.8	1.4	0.8	0.4	1.3
Antepartum infections		27	31	73	8	81	0.0	0.1	0.1	0.0	0.1
Immaturity related conditions		-	1,063	1,343	94	1,437	-	1.6	2.0	0.1	2.1
Asphyxia, anoxia or trauma (intrapartum)		119	166	191	18	209	0.2	0.4	0.3	0.0	0.3
External conditions		5	3	7	25	32	0.0	0.0	0.0	0.0	0.0
Infections		-	11	28	134	162	-	0.0	0.0	0.2	0.2
Other specific conditions		229	7	14	29	43	0.3	0.4	0.0	0.0	0.1
Asphyxia, anoxia or trauma (antepartum)		969	-	-	-	-	1.4	1.4	-	-	-
Remaining antepartum deaths		1,634	-	-	-	-	2.4	2.4	-	-	-
Sudden infant deaths		-	3	23	125	148	-	0.0	0.0	0.2	0.2
Other conditions		103	25	44	215	259	0.2	0.2	0.1	0.3	0.4

1 Stillbirths and perinatal deaths per 1,000 live births and stillbirths.
   Neonatal, postneonatal and infant deaths per 1,000 live births.

Report:

Infant and perinatal mortality 2006: health areas, England and Wales

Introduction

This report gives provisional statistics on infant deaths registered in 2006, and live births and stillbirths occurring in 2006, in England and Wales, for each Government Office Region and Strategic Health Authority in England and Local Health Board in Wales.

Perinatal and infant mortality

There were 3,602 stillbirths and 1,761 deaths at ages under seven days registered in England and Wales in 2006. The stillbirth rate remained at 5.4 per thousand live births, from 2005 to 2006. The perinatal rate also remained unchanged at 8.0 per thousand live births and stillbirths. (Table 1).

Table 1	Live births, stillbirths and infant deaths, 1976–2006

England and Wales

| Year | Live births | Stillbirths[1] | Number of deaths[2] | | | | Stillbirth[3] rate | Mortality rates | | | |
			Under 1 week	Under 4 weeks	4 weeks– 1 year	Under 1 year		Perinatal[3]	Neonatal[4]	Postneonatal[4]	Infant[4]
Numbers											
1976	584,270	5,709	4,761	5,663	2,671	8,334	9.7	17.7	9.7	4.6	14.3
1981	634,492	4,207	3,356	4,226	2,795	7,021	6.6	11.8	6.7	4.4	11.1
1986	661,018	3,549	2,823	3,489	2,824	6,313	5.3	9.6	5.3	4.3	9.6
1991	699,217	3,254	2,396	3,052	2,106	5,158	4.6	8.0	4.4	3.0	7.4
1993	673,467	3,855	2,178	2,796	1,446	4,242	5.7	8.9	4.2	2.1	6.3
1994	664,726	3,813	2,142	2,749	1,371	4,120	5.7	8.9	4.1	2.1	6.2
1995	648,138	3,600	2,104	2,698	1,284	3,982	5.5	8.7	4.2	2.0	6.1
1996	649,489	3,539	2,066	2,645	1,314	3,959	5.4	8.6	4.1	2.0	6.1
1997	643,095	3,439	1,941	2,517	1,282	3,799	5.3	8.3	3.9	2.0	5.9
1998	635,901	3,417	1,844	2,418	1,207	3,625	5.3	8.2	3.8	1.9	5.7
1999	621,872	3,305	1,833	2,435	1,186	3,621	5.3	8.2	3.9	1.9	5.8
2000	604,441	3,203	1,753	2,335	1,042	3,377	5.3	8.2	3.9	1.7	5.6
2001	594,634	3,159	1,598	2,137	1,103	3,240	5.3	8.0	3.6	1.9	5.4
2002	596,122	3,372	1,620	2,126	1,001	3,127	5.6	8.3	3.6	1.7	5.2
2003[5]	621,469	3,612	1,749	2,264	1,042	3,306	5.8	8.6	3.6	1.7	5.3
2004[5]	639,721	3,686	1,699	2,209	1,009	3,218	5.7	8.4	3.5	1.6	5.0
2005	645,835	3,483	1,697	2,227	1,032	3,259	5.4	8.0	3.4	1.6	5.0
2006[6]	669,601	3,602	1,761	2,345	1,023	3,368	5.4	8.0	3.5	1.5	5.0

1 See the background note 'Legal definition of stillbirths'.
2 Numbers of deaths shown are based on annual occurrences for years 1993 to 2005, and on annual registrations for all other years.
3 Per 1,000 live births and stillbirths.
4 Per 1,000 live births.
5 Stillbirth figures and rates for 2003 and 2004 are different from those released previously in DH3 - volumes 36 and 37, and in HSQ - editions 23 and 27. This is due to the late notification of an extra 27 stillbirths for 2003 and 154 stillbirths for 2004. This also affects perinatal rates for 2003 and 2004.
6 The live births figure differs from that released previously on 7 June 2007.

Figure 1   **Infant mortality rates, 1976–2006**

England and Wales
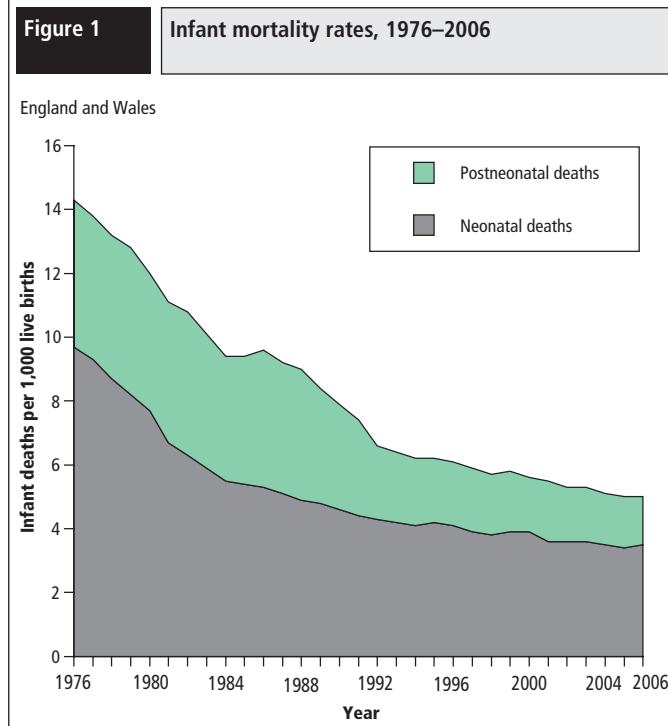
The neonatal mortality rate (deaths under 28 days) increased slightly to 3.5 per thousand live births in 2006, from 3.4 in 2005. The postneonatal mortality rate (deaths between 28 days and one year) fell to 1.5 per thousand live births, from 1.6 per thousand live births in 2005.

There were 3,368 infant deaths (at ages under one year) registered in England and Wales in 2006, giving an infant mortality rate of 5.0 deaths per thousand live births. This is the same rate as in 2005 and hence remains the lowest rate ever recorded in England and Wales.

The infant mortality rate over the period 1976 to 2006 by age at death in the neonatal and postneonatal period is shown in Figure 1. The infant mortality rate fell by 65 per cent over this period, while the neonatal and postneonatal rates all fell by 64 and 67 per cent respectively. However, these declines were not constant over the period, being mainly concentrated in the earlier years.

Geographical variation in infant mortality

There was considerable variation in the infant mortality rate across the health authorities. In 2006, West Midlands had the highest infant mortality rate among the Strategic Health Authorities in England at 6.4 deaths per thousand live births. South West had the lowest at 4.0 deaths per thousand live births (Table 2). Table 3 shows that the highest infant mortality rate among the Local Health Boards in Wales was 7.2 deaths per thousand live births in Anglesey.

Live Births and birthweight

There were 669,601 live births in England and Wales in 2006, compared with 645,835 in 2005. This is a rise of 3.7 per cent and the fifth successive increase in the annual number of live births.

Table 2 shows the number of births and the proportions of low and very low birthweight babies for England and Wales and Strategic Health Authorities in England in 2006. Of those live births with a stated birthweight in England and Wales, 7.6 per cent had a low birthweight (under 2,500 grams) and 1.2 per cent had a very low birthweight (under 1,500 grams). The corresponding percentages in 2005 were 7.6 and 1.3 respectively.

Low birthweight is one of the known risk factors for infant deaths[1]. Among the Strategic Health Authorities in England, West Midlands had the highest proportions of very low birthweight babies, 1.5 per cent, as well as having the highest infant mortality rate (see above). West Midlands also had the highest proportion of low birthweight babies with 8.4 per cent of babies weighing under 2500g. The Strategic Health Authority with the lowest proportion of low birthweight babies was South West with 6.5, whilst the lowest proportion of very low birthweight babies was in South East Coast with 1.0 per cent.

Among the Local Health Boards of Wales in 2006, the percentage of low birthweight babies was highest in Blaenau Gwent (8.7 per cent) and lowest in Ceredigion (4.8 per cent) (Table 3). The proportion of very low birthweight babies ranged from 0.5 per cent in Ceredigion to 1.9 per cent in Newport.

Revisions to live births

This report introduces the revised live births figures for 2006 in England and Wales. The revision was necessary due to the late receipt at ONS of seventy records relating to live births occurring in 2006. Therefore, the numbers of live births given here do not correspond with those published in the report on live births in Population Trends 128.[2]

Background Notes

Statistics in the Report

Although the live birth numbers are based on births occurring in 2006, the mortality data here are based on deaths registered in 2006. However, in line with ONS practice in publishing mortality data, final national mortality statistics (including rates) will be based on deaths occurring in the year. It is intended that these statistics will be available in late 2007.

Additionally, in Table 1 numbers of deaths for 1993 to 2005 are based on occurrences in these years, while numbers for years prior to 1993 are based on registrations in each year.

Stillbirth and perinatal mortality figures for 2003 and 2004 have been revised. This is because some register offices in England and Wales failed to notify ONS, in line with regulations, of some stillbirths that occurred in 2003 and 2004. These have now been received by ONS.

Mortality rates in Tables 2 and 3 that are calculated from fewer than 20 deaths are distinguished by italic type as a warning to the user that their reliability may be affected by the small number of events.

Areal statistics in this Report are derived from the usual residence at the time of birth or death. If the usual residence was outside England and Wales, these events are included in the aggregate for 'England and Wales', but excluded from the figures for individual health areas and Government Office Regions.

Recording of birthweight

Since 1975 ONS (formerly OPCS) has obtained the birthweight of a baby from information provided to the registrar of births and deaths by the local health services. In 2006, birthweight was recorded for 99.1 per cent of all live births.

Table 2	Births, perinatal and infant mortality statistics, 2006

England and Wales, and Government Office Regions and Strategic Health Authorities in England

Area	Numbers					Mortality rates				Percentage of live births with a stated birthweight	
	Births		Deaths								
	Live births	Still-births	Under 1 week	Under 4 weeks	Under 1 year	Perinatal[1]	Neonatal[2]	Post-neonatal[2]	Infant[2]	Under 1,500g	Under 2,500g
ENGLAND AND WALES[3]	**669,601**	**3,602**	**1,761**	**2,345**	**3,368**	**8.0**	**3.5**	**1.5**	**5.0**	**1.2**	**7.6**
ENGLAND	**635,748**	**3,418**	**1,689**	**2,238**	**3,192**	**8.0**	**3.5**	**1.5**	**5.0**	**1.2**	**7.6**
NORTH EAST	**29,184**	**156**	**79**	**111**	**158**	**8.0**	**3.8**	**1.6**	**5.4**	**1.4**	**8.1**
North East	29,184	156	79	111	158	8.0	3.8	1.6	5.4	1.4	8.1
NORTH WEST	**84,155**	**453**	**246**	**320**	**470**	**8.3**	**3.8**	**1.8**	**5.6**	**1.2**	**7.8**
North West	84,155	453	246	320	470	8.3	3.8	1.8	5.6	1.2	7.8
YORKSHIRE AND THE HUMBER	**62,955**	**343**	**193**	**254**	**360**	**8.5**	**4.0**	**1.7**	**5.7**	**1.2**	**8.0**
Yorkshire and The Humber	62,955	343	193	254	360	8.5	4.0	1.7	5.7	1.2	8.0
EAST MIDLANDS	**50,717**	**290**	**141**	**203**	**276**	**8.4**	**4.0**	**1.4**	**5.4**	**1.2**	**7.7**
East Midlands	50,717	290	141	203	276	8.4	4.0	1.4	5.4	1.2	7.7
WEST MIDLANDS	**67,688**	**379**	**244**	**311**	**432**	**9.2**	**4.6**	**1.8**	**6.4**	**1.5**	**8.4**
West Midlands	67,688	379	244	311	432	9.2	4.6	1.8	6.4	1.5	8.4
EAST	**66,870**	**307**	**146**	**191**	**273**	**6.7**	**2.9**	**1.2**	**4.1**	**1.2**	**6.9**
East of England	66,870	307	146	191	273	6.7	2.9	1.2	4.1	1.2	6.9
LONDON	**120,898**	**762**	**312**	**416**	**593**	**8.8**	**3.4**	**1.5**	**4.9**	**1.3**	**7.9**
London	120,898	762	312	416	593	8.8	3.4	1.5	4.9	1.3	7.9
SOUTH EAST	**98,566**	**479**	**213**	**272**	**409**	**7.0**	**2.8**	**1.4**	**4.1**	**1.1**	**6.9**
South East Coast	49,163	230	96	133	207	6.6	2.7	1.5	4.2	1.0	6.8
South Central	49,403	249	117	139	202	7.4	2.8	1.3	4.1	1.2	7.0
SOUTH WEST	**54,715**	**249**	**115**	**160**	**221**	**6.6**	**2.9**	**1.1**	**4.0**	**1.1**	**6.5**
South West	54,715	249	115	160	221	6.6	2.9	1.1	4.0	1.1	6.5
WALES	**33,628**	**172**	**61**	**93**	**137**	**6.9**	**2.8**	**1.3**	**4.1**	**1.1**	**7.3**
Normal residence outside England and Wales	225	12	11	14	39	97.0	*62.2*	111.1	173.3	9.5	21.3

1 Per 1,000 live and stillbirths.
2 Per 1,000 live births.
3 Including births and deaths to persons normally resident outside England and Wales.

| Table 3 | Live births, perinatal and infant mortality statistics, 2006 |

Local Health Boards in Wales

Area	Numbers				Mortality rates			Percentage of live births with a stated birthweight	
	Live births	Perinatal[1] deaths	Neonatal[2] deaths	Infant[3] deaths	Perinatal[4]	Neonatal[5]	Infant[5]	Under 1,500g	Under 2,500g
WALES	**33,628**	**233**	**93**	**137**	**6.9**	**2.8**	**4.1**	**1.1**	**7.3**
Anglesey	697	6	5	5	8.6	7.2	7.2	1.6	7.3
Gwynedd	1,331	*	3	5	*	2.3	3.8	0.8	5.7
Conwy	1,149	6	2	6	5.2	1.7	5.2	1.2	7.4
Denbighshire	989	*	2	3	*	2.0	3.0	1.8	7.5
Flintshire	1,719	11	8	12	6.4	4.7	7.0	1.0	8.0
Wrexham	1,597	12	1	3	7.5	0.6	1.9	0.9	7.0
Powys Teaching	1,222	10	3	5	8.1	2.5	4.1	0.8	6.1
Ceredigion	590	*	-	1	*	-	1.7	0.5	4.8
Pembrokeshire	1,278	13	7	8	10.1	5.5	6.3	0.6	7.6
Carmarthenshire	1,887	11	7	9	5.8	3.7	4.8	1.1	7.1
Swansea	2,543	20	8	11	7.8	3.1	4.3	1.3	7.7
Neath Port Talbot	1,515	16	5	7	10.5	3.3	4.6	0.8	6.1
Bridgend	1,526	11	4	8	7.2	2.6	5.2	1.0	8.1
Vale of Glamorgan	1,360	*	6	6	*	4.4	4.4	1.0	5.7
Cardiff	4,216	34	10	11	8.0	2.4	2.6	1.0	7.3
Rhondda Cynon Taff Teaching	2,778	17	6	13	6.1	2.2	4.7	1.0	7.6
Merthyr Tydfil	692	*	1	2	*	1.4	2.9	1.3	7.8
Caerphilly Teaching	2,167	20	6	8	9.2	2.8	3.7	1.5	7.1
Blaenau Gwent	770	*	2	3	*	2.6	3.9	0.8	8.7
Torfaen	1,069	11	1	2	10.2	0.9	1.9	1.6	8.1
Monmouthshire	854	*	2	3	*	2.3	3.5	0.9	7.6
Newport	1,679	14	4	6	8.3	2.4	3.6	1.9	8.6

* Note: To protect confidentiality all counts lower than 5, and all rates based on fewer than 5 events, have been suppressed.
1 Stillbirths and deaths at ages under 1 week.
2 Deaths at ages under 4 weeks.
3 Deaths at ages under 1 year.
4 Per 1,000 live and stillbirths.
5 Per 1,000 livebirths.

Legal definition of stillbirths

On 1 October 1992 the legal definition of a stillbirth was changed from a baby born dead after 28 or more weeks completed gestation to one born dead after 24 or more weeks completed gestation. This means that perinatal and stillbirth data for 2006 can be compared with data only from 1993 onwards.

General

More details on the above, and on other aspects of stillbirth and infant mortality data, can be found in the ONS annual reference volume Mortality statistics: childhood, infant and perinatal 2005, series DH3 no 38, published in March 2007.[3]

References

1. Office for National Statistics (2006). Report: Infant and perinatal mortality by social and biological factors, 2005. *Health Statistics Quarterly* **32**, 82–86.
2. Office for National Statistics (2007). Report: Live births in England and Wales, 2006: area of residence. *Population Trends* **128**, 71–78.
3. Office for National Statistics (2007). *Mortality statistics: childhood, infant and perinatal* 2005, series DH3 no 38.

Annual Update:

Mortality statistics 2005: general

Introduction

This update summarises some of the findings from the annual reference volume *Mortality statistics: general 2005* (series DH1 no. 38),[1] which was published in October 2007. It presents data and analysis on various measures of mortality and details recorded at death registration in England and Wales, including:

- mortality rates by single year of age
- years of life lost
- monthly variation in mortality
- place of occurrence of death
- country of birth of the deceased
- type of death certification
- geographical variation in mortality

The annual reference volume contains more detailed information on these, and other, themes. It contains long-term time series for crude death rates, standardised mortality ratios (SMRs) and age-specific mortality rates, some going back to 1841. Infant mortality rates are also given from the 19th century onwards, as well as stillbirth and perinatal mortality rates from 1931. The volume also presents mortality data by country of residence within the UK, and by region of residence. More detailed information for local and health authorities can be found in *Key Population and Vital Statistics*.[2]

Mortality rates in 2005

In 2005, there were 243,324 male deaths and 269,368 female deaths in England and Wales. Figure 1 contains age-specific mortality rates for single years of age for both males and females in 2005. This shows a typical age-specific pattern of mortality. Beyond the age of 1, mortality rates fall rapidly and are at their lowest among children under 12 years. During the teenage period, rates rise more rapidly for males than females. Male rates show the most rapid increase between the ages of 15 and 18, after which there is a levelling off in the male rate during the early adult years. Beyond the age of 30, the rate of increase in mortality for males and females is similar, although male rates continue to be higher than female rates at every age group.

Years of life lost

Analyses of the effects of premature death can be expressed by the number of years of life lost. In calculating this, it is assumed that

| Figure 1 | Age-specific mortality rates by sex, 2005 |

England and Wales

Source: DH1 no. 38, Table 8

everyone may live to some arbitrarily chosen age (65, 75 or 85 in the DH1 volume) and that death at a younger age means that some future years of life have been lost. Using age 65 for both males and females, it is also possible to estimate years of working life lost due to premature death. Comparisons can be made between selected causes with the aim of illustrating their relative effects.

A total of 758,000 years of working life (ages 15 to 64) were lost for males in 2005 compared with 470,000 for females. Of the selected causes in Table 25 of the annual reference volume, the cancers that are presented in total account for a large proportion of these: 111,000 years for men and 136,000 for women. However, when cancers are considered on a site-specific basis, the causes of death that contributed most to the total for men were ischaemic heart disease (83,000 years lost), suicide including open verdicts (65,000 years) and land transport accidents (54,000 years). For women, breast cancer caused the highest number of years of working life lost (45,000), followed by diseases of the liver (22,000 years), lung cancer (20,000 years) and suicide including open verdicts (19,000 years). Land transport accidents caused the loss of 14,000 years of working life for women; this is just over a quarter of the number lost for men due to such accidents.

| Figure 2 | Monthly variation in mortality, by sex, 2005 |

England and Wales
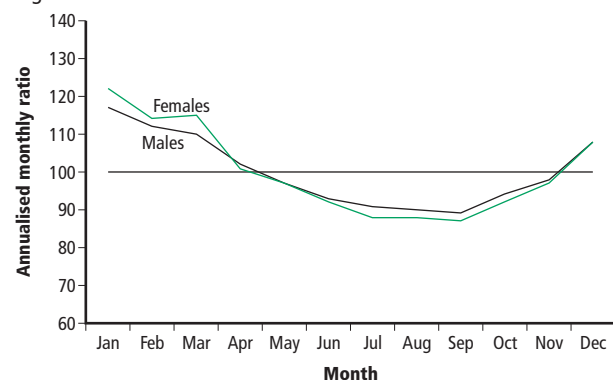
Source: DH1 no. 38, Table 12 and 13

| Table 1 | Place of occurrence of death by sex, 2005 |

England and Wales

Place of occurrence[1]		Males		Females	
		Number	Percentages	Number	Percentages
Total deaths		243,324	100.0	269,368	100.0
Psychiatric hospitals	NHS	531	0.2	651	0.2
	Non-NHS	680	0.3	1,133	0.4
Hospices		11,955	4.9	11,601	4.3
Other hospitals & communal establishments for care of the sick	NHS	145,947	60.0	153,746	57.1
	Non-NHS	15,844	6.5	32,514	12.1
Other communal establishments		8,816	3.6	24,837	9.2
At home		52,682	21.7	41,582	15.4
In other private houses & other places		6,869	2.8	3,304	1.2

1 The definition for groups of establishments can be found in DH1 no. 38 section 2.4.

Source: DH1 no. 38, Table 19

Monthly variation

Annualised monthly ratios show seasonal variation in mortality over the year. They allow for the variation in the number of days between months, and include all deaths where the date of occurrence was known. Figure 2 shows how these ratios change through the year for males and females. The patterns for males and females are very similar although the female ratios were higher than males in the winter months but lower for the remaining months. The ratios for each sex in 2005 were highest in January, while the lowest were in September. From the peak in January, the ratios decreased through the spring and summer months, and then increased again from September through to December. This pattern shows that higher mortality is experienced in the winter than in other months.[3] The seasonal pattern is found for most causes of death, particularly respiratory and circulatory diseases. Deaths from cancer, however, show little variation over the year.

Place of occurrence

More than half of all deaths in England and Wales occur in NHS hospitals or in other NHS communal establishments for the care of the sick: 60 per cent of male and 57 per cent of female deaths occurred in such places in 2005 (Table 1). Over a fifth (22 per cent) of male deaths occurred in the deceased's own home, while 15 per cent of female deaths occurred here. Conversely, a greater proportion of female deaths than male deaths occurred in other communal establishments such as residential homes for the elderly (9.2 per cent of female deaths compared with 3.6 per cent of male deaths). This most likely reflects women's longer life expectancy: at the same ages, more women will have been widowed than men and so are more likely to be living in residential or nursing care homes for the elderly at the time of death.

Around 5 per cent of all deaths occurred in hospices. However, this figure is an underestimate because hospice or palliative care wards that are situated within NHS hospitals may not be identified separately by the person registering the death. This means that ONS is unable to include these deaths with those in freestanding hospices.

Country of birth of deceased

Of those who died in 2005, 8.0 per cent had been born outside the UK, compared with 4.8 per cent in 1981 and 5.9 per cent in 1991. Just over a fifth (21 per cent) of those born outside the UK were born in another European Union country, excluding the Irish Republic.

Type of death certification

More than three-quarters (78 per cent) of deaths in 2005 were certified by a doctor. Twenty-three per cent of the deaths certified by a coroner (4.9

| Table 2 | Method of death certification by selected underlying cause, 2005 |

England and Wales

ICD-10 code	Cause	Total deaths	Certified by coroner				Certified by medical practitioner (with or without post-mortem)		Uncertified	
			Inquest held		Post-mortem without inquest					
			Number	Percentages	Number	Percentages	Number	Percentages	Number	Percentages
A00-R99, V01-Y89	All causes	512,692	25,161	4.9	86,525	16.9	400,034	78.0	972	0.2
C00-D48	Neoplasms	138,454	2,844	2.1	5,155	3.7	130,211	94.0	244	0.2
I00-I99	Diseases of the circulatory system	183,997	2,658	1.4	59,633	32.4	121,417	66.0	289	0.2
I20-I25	Ischaemic heart diseases	88,271	1,413	1.6	40,791	46.2	45,919	52.0	148	0.2
I60-I69	Cerebrovascular diseases	50,772	242	0.5	3,195	6.3	47,248	93.1	87	0.2
J00-J99	Diseases of the respiratory system	72,517	1,553	2.1	9,635	13.3	61,205	84.4	124	0.2
K00-K93	Diseases of the digestive system	25,213	959	3.8	7,116	28.2	17,125	67.9	13	0.1
V01-Y89	Injury and poisoning	16,412	13,061	79.6	479	2.9	2,863	17.4	9	0.1

Source: DH1 no. 38, Table 22

per cent of all deaths) were subject to an inquest, while the remaining 77 per cent were subject to a post-mortem only (Table 2).

The proportion of deaths certified by a coroner varied considerably by cause of death. Most injury and poisoning deaths (83 per cent) were certified by a coroner and nearly all of these (96 per cent) were subject to an inquest (with or without post mortem). Deaths due to ischaemic heart disease had a relatively high proportion certified by a coroner (48 per cent), which reflects the fact that deaths from this cause can be sudden and unexpected. Deaths from long-term illnesses such as cancer, however, have a far lower proportion (5.8 per cent in 2005) certified by a coroner.

Geographical variation

The annual reference volume presents standardised mortality ratios (SMRs) for the constituent countries of the United Kingdom. The SMRs are based on the standard of UK = 100 for each cause and sex. Scotland had the highest all causes SMR for both males and females in 2005, while England had the lowest. Looking at selected cause groups, Scotland had the highest SMRs for the majority of groups. However Northern Ireland had the highest SMRs for diseases of the nervous, respiratory and genito-urinary systems while England had highest SMRs for diseases of the musculoskeletal system. In 2005, among the government office regions, the North East had the highest SMRs for both males and females while the South West had the lowest. Further geographical analyses of mortality can be found in *Key Population and Vital Statistics*[2] and *Health Statistics Quarterly*.[4]

Background note

The mortality rates used in this update were calculated using population estimates for mid-2005 which were published on 24 August 2006. These estimates incorporate the findings of the Local Authority Population Studies, the results of which were published in July 2004. Further information on population estimates, and their methodology, can be found on the National Statistics website at: www.statistics.gov.uk/popest

References

1. Office for National Statistics (2007) *Mortality statistics: general 2005* (series DH1 no. **38**). Available on the National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=620
2. Office for National Statistics (2006) *Key Population and Vital Statistics 2005* (series VS no. **32**, PP1 no. **28**), TSO: London. Available on the National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=539
3. Johnson H and Griffiths C (2003) Estimating excess winter mortality in England and Wales, *Health Statistics Quarterly* **20**, 19–24. Available on the National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=6725
4. Office for National Statistics (2007) Report: Death registrations in England and Wales, 2006: area of residence, *Health Statistics Quarterly* **35**, 62–71. Available on the National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=6725

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