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The Director of ONS is also the National Statistician.

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Contacts

This publication

For information about this publication, contact the editors:
Aileen Simkins
Carol Summerfield
tel: 020 7014 2389, email: hsq@ons.gsi.gov.uk

Other customer and media enquiries

ONS Customer Contact Centre
Tel: 0845 601 3034
International: +44 (0)845 601 3034
Minicom: 01633 812399
Email: info@statistics.gsi.gov.uk
Fax: 01633 652747
Post: Room 1015, Government Buildings,
Cardiff Road, Newport, South Wales NP10 8XG
www.statistics.gov.uk

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Population Trends	by 23 Oct	by 2 Feb	by 4 May	by 26 July

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Health Statistics Quarterly
Office for National Statistics
FG149
1 Myddleton Street
London
EC1R 1UW

in brief

Children's mental health – results of a three year follow-up study

ONS published *Three years on: A survey of the emotional development and wellbeing of children and young people* on 21 October 2008. This report gives the results of a follow-up in 2007 to the study on *Mental health of children and young people in Great Britain, 2004*.

The 2007 study tracked the emotional well-being of a sample of children and young people between 2004 and 2007 and reviewed factors likely to be associated with the onset or persistence of disorders. Data were collected in 2004 on 7,977 children and young people aged five to 16 years. 7,329 children were selected to be followed up in 2007, and 5,364 interviews were achieved.

Clinical raters used a range of measures to assess if a child had a mental disorder. A child could be assessed as having more than one disorder. Four main groups were examined – emotional disorders, conduct disorders, hyperkinetic disorder and less common disorders.

Of those children and young people who had an emotional disorder in 2004, 30 per cent still had an emotional disorder in 2007. Factors associated with the persistence of emotional disorders included household tenure and mothers' mental health. For example, children who lived in rented accommodation compared to owner occupied accommodation were more likely to have a persistent emotional disorder.

Around 43 per cent of children and young people who had a conduct disorder in 2004 still had a conduct disorder three years on. Factors associated with persistence of conduct disorder include age, sex, Special Educational Needs, housing tenure, parent's educational qualifications and the number of children and young people in the household.

Of those children and young people who did not have a disorder in 2004, 3 per cent were assessed with a disorder in 2007. Factors associated with onset of emotional disorder included age, sex, presence of physical illness, family composition, socio-economic factors, and exposure to stressful life events. Onset of conduct disorder was also associated with these factors as well as with Special Educational Needs, change in family composition, and parent's educational qualifications. Children who had experienced three or more stressful life events, such as family bereavement, divorce or serious illness, were significantly more likely to develop emotional and conduct disorders.

The report is available free on the Office for National Statistics website at: www.statistics.gov.uk/cci/article.asp?id=2063

Population estimates for mid-2007

ONS published the mid-2007 annual population estimates on 21 August 2008. These give estimates of the resident population as of 30 June 2007 for the United Kingdom and its constituent countries, Government Office Regions in England, and local areas. Figures are available at national level by single year of age and sex and sub-nationally by five year age group and sex. Full information is available on the Office for National Statistics website at: www.statistics.gov.uk/popest

Mid-2007 population estimates for Scotland were released by the General Register Office for Scotland on 24 July 2008. Information is available at: www.gro-scotland.gov.uk/statistics/population/index.html

Mid-2007 population estimates for Northern Ireland were released by the Northern Ireland Statistics and Research Agency on 31 July 2008. Information is available at: www.nisra.gov.uk/demography/default.asp3.htm

Births and deaths 2008 – quarterly figures

Provisional quarterly figures for births, deaths and childhood mortality for the quarters ending March and June 2008 are available in this edition of *Health Statistics Quarterly*. The usual publication timetable

for these figures has now been resumed. This follows delays to the publication of births and deaths data in 2007 and early 2008 resulting from problems with the implementation of the registration online system (RON) at register offices in England and Wales during 2007.

Contraception and sexual behaviour – new results

On 28 October 2008 ONS released results from questions about contraception and sexual behaviour, which were included on the ONS Omnibus survey at the request of the NHS Information Centre for Health and Social Care. In the survey, about 1,200 adults were questioned on topics such as contraceptive use, sexual behaviour, and knowledge of sexually transmitted infections. The full report is available on the Office for National Statistics website at:
www.statistics.gov.uk/statbase/Product?vlnk=6988

Congenital anomaly statistics – change of classification

ONS is changing the way it groups different types of congenital anomalies in statistics derived from the National Congenital Anomaly System. The new classification has been developed in conjunction with the British Isles Network of Congenital Anomaly Registers (BINOCAR). It is based on the Eurocat guide to coding congenital anomalies, which is used by congenital anomaly registers across Europe.[1] As a result some anomalies (for example, pyloric stenosis, cystic fibrosis, minor skin defects) will no longer be included in ONS congenital anomaly statistics. This will have the effect of reducing the overall congenital anomaly notification rate, but there will be no impact on the rates published for specific anomalies. Further details will be included in the annual reference volume, 'Congenital Anomaly Statistics 2007: Notifications', to be published early in 2009.

Improving ONS reports

ONS is reviewing the regular (mostly annual) reports which appear in *Health Statistics Quarterly*, to ensure that they are presented as clearly as possible and take account of the needs and views of statistics users. The review process includes writing to a wide variety of identified stakeholders to invite comments. Two reports in this edition: 'Life expectancy at birth and at age 65 by local areas in the United Kingdom, 2005–07' and 'Health expectancies in the United Kingdom, 2004–06', have already been improved as a result of this process. Comments on any aspect of HSQ or other ONS publications are always welcome.

Contact us at: hsq@ons.gsi.gov.uk

References
1. Eurocat. Guide 1.3. Instructions for the Registration and Surveillance of Congenital Anomalies – available at: www.eurocat.ulster.ac.uk/pubdata/Guide–1.3-Cover-Page.html

Recent Publications

Annual Abstract of Statistics 2008 edition (Palgrave Macmillan, £49.50, July, ISBN 978–0–230–54560–1, available on the National Statistics website at:
www.statistics.gov.uk/statbase/Product.asp?vlnk=94)

Mortality statistics: childhood, infant and perinatal 2006 (DH3 no. 39) (July, available on the National Statistics website at:
www.statistics.gov.uk/statbase/Product.asp?vlnk=6305)

Population Trends 133 (Palgrave Macmillan, £32.50, Autumn, ISBN 978–0–230–21756–0, available on the National Statistics website at:
www.statistics.gov.uk/statbase/Product.asp?vlnk=6303)

UK Health Statistics 2008 edition (Palgrave Macmillan, £50, June, ISBN 978–0–230–21096–7, available on the National Statistics website at:
www.statistics.gov.uk/statbase/Product.asp?vlnk=6637)

All of the above Palgrave Macmillan-published titles can be ordered on 01256 302611 or online at: www.palgrave.com/ons. All publications listed can be downloaded free of charge from the National Statistics website.

Health indicators

England and Wales

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

Thousands

Legend: Natural change — Total change
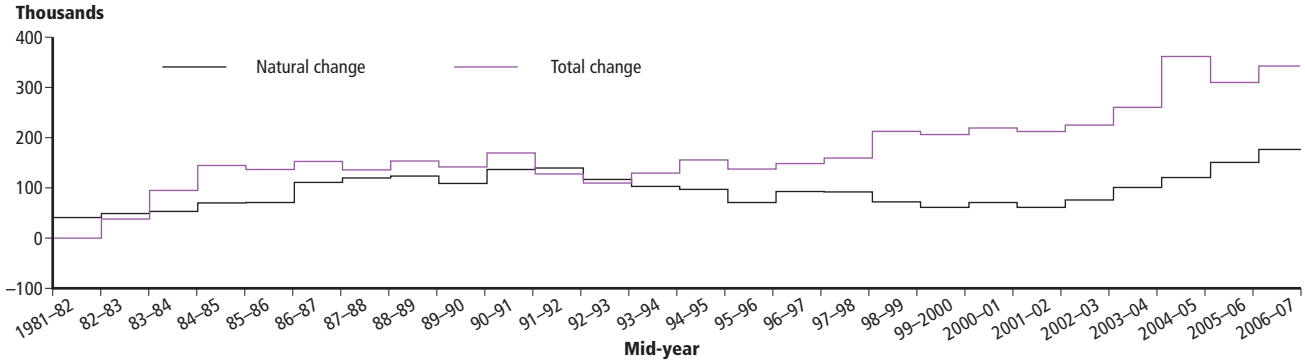
Figure B	Age-standardised mortality rate[1]

Rate per million population
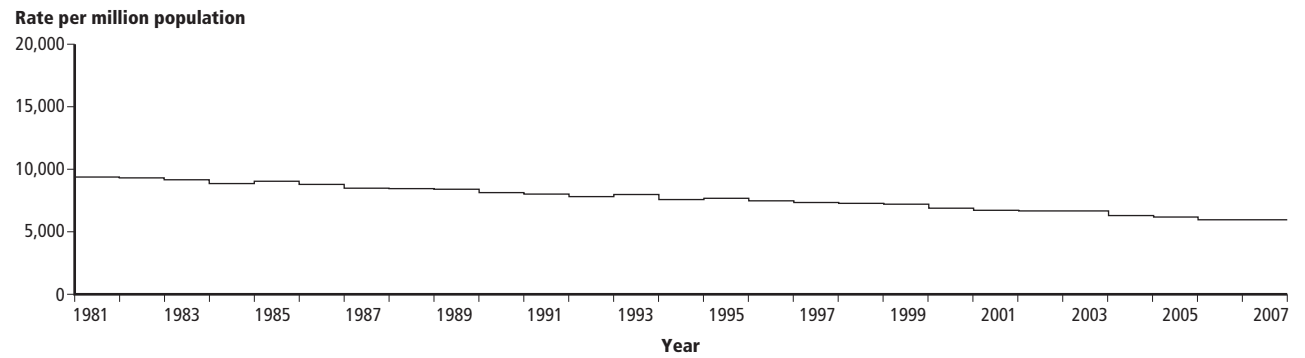
Figure C	Infant mortality (under 1 year)

Rate per thousand live births
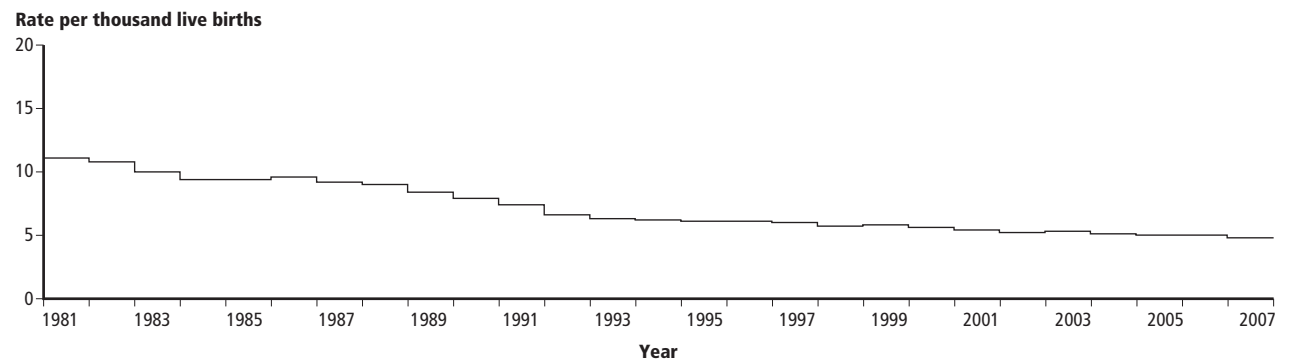
Figure D	Age-standardised quarterly abortion rates – residents[2]

Age-standardised rate per thousand women 15–44

Legend: ASR abortion rate .... Provisional rate — Moving average rate
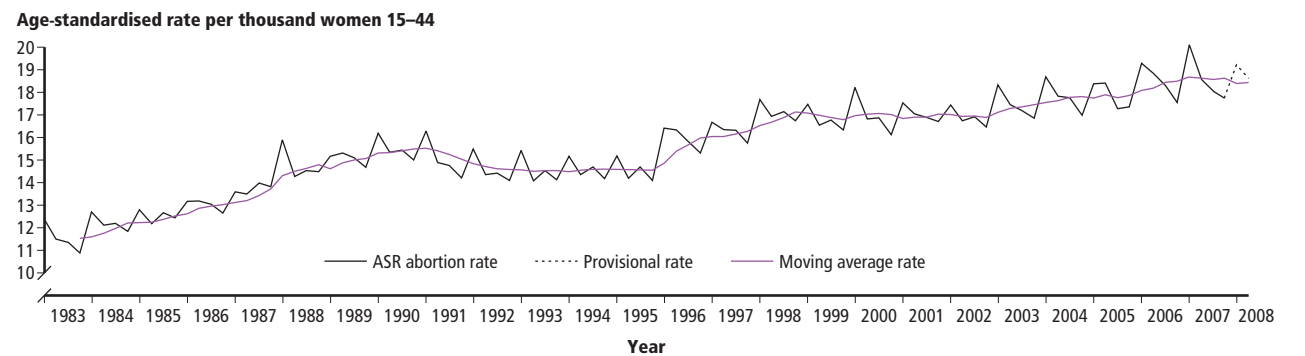
1 The age-standardised mortality rate for 2004 is based on mid-2004 population estimates published on 25 August 2005.
2 Rates for 2007 and March and June quarters 2008 are based on projected projections.

Regional differences in male mortality inequalities using the National Statistics Socio-economic Classification, England and Wales, 2001–03

Veronique Siegler, Ann Langford
and Brian Johnson
Office for National Statistics

This article represents the first use by the Office for National Statistics of the National Statistics Socio-economic Classification (NS-SEC) to analyse regional variations in inequalities in male mortality. It is part of a series of articles on social inequalities in mortality by NS-SEC. Deaths in the years 2001–03 among men aged 25–64, from all causes and selected major cause groups, are examined in each of the Government Office Regions of England and in Wales. The results provide insights into both social gradients in mortality within regions, and regional differences in mortality for each NS-SEC class. The socio-economic differences in mortality were more marked for men in Wales, the North East and the North West. The regional differences in mortality were small for the most advantaged classes and greatest for the least advantaged classes.

Introduction

This article describes social inequalities in mortality among men aged 25–64 years, by selected causes of death, across Wales and the Government Office Regions of England, in the period 2001–03. It is based on methods for the analysis of male mortality by the National Statistics Socio-Economic Classification (NS-SEC) which were reported in previous articles in *Health Statistics Quarterly*.[1,2] In addition to presenting findings on social inequalities in mortality by NS-SEC within each region, this article also reports on differences between regions in the patterns of socio-economic inequality in mortality, and the contribution of specific causes of death to those patterns.

Background

The Acheson Report in 1998[3] highlighted widening differences between the expectation of life of the most advantaged and most disadvantaged groups in society. The government strategy *Tackling Health Inequalities* aspired to 'address the inequalities that are found across different geographical areas … and between different social and economic groups'.[4] The subsequent *2007 Status Report on the Programme for Action* reported a 'very welcome improvement in life expectancy for all social groups but no narrowing of the gap' since the mid 1990s.[5] Many aspects of health have been found to vary according to both socio-economic position and geography.[6,7,8,9,10,11] Differences in mortality have been consistently observed at regional level[9,12,13] and between smaller areas with different levels of deprivation.[8]

Until recently the social classification routinely used to measure socio-economic differences in mortality was the Registrar General's Social Class (RGSC) based on occupation. An analysis of mortality by region

and RGSC for the period 1991–93 found that the socio-economic differences in mortality were greater in Wales and northern regions of England than in the southern regions.[14] There was considerably more regional variation in mortality within Social Class V (unskilled manual occupations) than within Social Class I (professionals).

RGSC was replaced by the NS-SEC in official statistics in 2001.[15] The implications of this change for mortality analysis were reported in the first article in this series.[1] The previous two articles found that the differences in male mortality between the most advantaged and least advantaged NS-SEC classes were broadly similar to those between the highest and lowest classes using RGSC. However, the pattern in the intervening classes was more complex in NS-SEC than in RGSC. This article examines whether these social patterns of mortality risk differ at a regional level from those of England and Wales as a whole.

Methods

The National Statistics Socio-economic Classification

The conceptual basis for the NS-SEC is the structure of employment relations operating in modern developed economies.[15] Occupations are differentiated in terms of reward mechanisms, promotion prospects, autonomy and job security. The most advantaged NS-SEC groups (higher managerial and professional occupations), typically exhibit personalised reward structures, have good opportunities for advancement, have relatively high levels of autonomy within the job, and are relatively secure. These attributes tend to be reversed for the most disadvantaged group (routine occupations). Box One shows the NS-SEC analytical class breakdowns used in this analysis, and provides examples of the occupations included in each class.

Further information on the rationale, derivation and application of the NS-SEC is available on the Office for National Statistics website.[16]

Box one

National Statistics Socio-economic Classification – analytic classes

Analytic class		Examples of occupations included
1	Higher managerial and professional occupations	Directors and chief executives of major organisations; officers in the armed forces; civil engineers; medical practitioners; physicists; geologists; IT strategy and planning professionals; legal professionals; architects
2	Lower managerial and professional occupations	Teachers in primary and secondary schools; quantity surveyors; public service administrative professionals; social workers; nurses; IT technicians
3	Intermediate occupations	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; sewing machinists; van, bus and coach drivers; labourers; hotel porters; bar staff; cleaners and domestics; road sweepers; car park attendants

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Box two

Causes of death included in the analysis

Cause of death	ICD–10 codes
All causes of death	A00–R99, V00–Y89
All malignant neoplasms	C00–C97
Trachea, bronchus and lung	C33–C34
All circulatory diseases	I00–I99
Ischemic heart disease	I20–I25
All digestive diseases	K00–K93
All liver diseases	K70–K77
All respiratory diseases	J00–J99

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 these categories and men who could not be allocated to an NS-SEC class for another reason.[17] Figures reported here are therefore restricted to occupied NS-SEC analytic classes only.

Death registrations collect information on the occupation and employment status of the deceased between the ages of 16 and 74. However, this analysis is restricted to men aged 25–64, since recording of occupational information outside this age range is less complete.

International Classification of Diseases 10th Revision

Cause of death in England and Wales is coded to the International Classification of Diseases (ICD). The tenth revision (ICD–10) has been in use since 2001.[18] The mortality rates reported in this article are for all deaths, four major groups of causes and three specific causes of death. These are listed in Box Two, with the ICD–10 codes used. Causes of death were grouped to ensure sufficiently large numbers for robust statistical analysis when broken down by region and NS-SEC class.

Government Office Regions

The Government Office Regions are the highest level statistical sub-divisions of England and are listed in Box Three. Wales is not sub-divided in this analysis. For convenience, use of the term 'region' throughout this article includes Wales.

Box three

The Government Office Regions of England

North East

North West

Yorkshire and The Humber

East Midlands

West Midlands

East of England

London

South East

South West

Further information can be found in the guide to UK geography on the Office for National Statistics website.[19]

Sources of data

Three sources of data were used to calculate the mortality rates by NS-SEC reported in this article.

- The routine collection in death registrations of age at death, sex, occupation, employment status and cause of death[20] provided information on the number of deaths occurring in each age group for each NS-SEC class in each region for the period 2001–03. Deaths were allocated to regions using postcode of usual residence

- The Census of population in the United Kingdom in 2001 provided information on age, sex, NS-SEC and region for all residents

- An earlier article in this series[1] provided population estimates by age and NS-SEC class for England and Wales as a whole, optimised for use in the analysis of mortality as described in that article. The article also provided adjustment factors to be applied to registered deaths to correct for an identified recording bias,

whereby some men in the lower professional and managerial class (NS-SEC class 2) tended to be classified as intermediate (NS-SEC class 3). This recording bias occurred because the supervisory responsibilities of some men were not reported during the death registration process

To calculate mortality rates for each region by NS-SEC, these optimised population estimates were used to estimate the regional person years at risk by region. For each age group and NS-SEC combination, the percentage distribution across the regions was calculated from 2001 Census data. The resulting percentages were applied to the optimised population estimates in order to obtain an estimate of person years at risk by five-year age group and NS-SEC for each region. Deaths by age group and NS-SEC were calculated by applying the adjustment factors, referred to above, to the death registration data for the residents of each region.

Outcome measures

To compare the mortality experience of NS-SEC analytic classes, directly age-standardised mortality rates for all men aged 25–64 were calculated, standardised to the European standard population. Age-standardised rates are a summary measure allowing populations with different age structures to be compared. In addition, 95 per cent confidence intervals were calculated for the mortality rates presented and are available on the Office for National Statistics website.[21]

Results

Table 1 shows the population at risk examined in this analysis, by NS-SEC classification and region. An extended version of this table, giving estimated populations broken down by five-year age group, is available on the Office for National Statistics website.[21] Table 2 displays the number of deaths in 2001–03 included in the analysis, broken down by NS-SEC and region for all causes of death and for selected causes.

The age-standardised mortality rates per 100,000 men aged 25–64 by NS-SEC class and region for all causes and for each cause of death studied are shown in Table 3, and illustrated in Figure 1 for deaths from all causes only. The shading indicates whether the rate is significantly higher or lower than the corresponding England and Wales rate. The socio-economic gradients by region and cause of death are presented in Table 4, and illustrated in Figure 2. Table 5 shows the ratios of the mortality rates of the region with the highest mortality to that with the lowest within each NS-SEC class by cause of death. The shading indicates where this ratio for a class is significantly higher or lower than that for all occupied classes. Spreadsheet versions of all tables, including 95 per cent confidence intervals where applicable, can be found on the Office for National Statistics website.[21]

Table 1	Optimised population estimates (person years at risk) by NS-SEC classification, men aged 25–64, 2001–03

Government Office Regions of England, Wales   Person years at risk (Thousands)

NS-SEC analytic classes	England and Wales	North East	North West	Yorkshire and The Humber	East Midlands	West Midlands	East of England	London	South East	South West	Wales
1 Higher managerial, professional	7,077	224	764	533	521	632	822	1,231	1,440	636	274
2 Lower managerial, professional	9,212	369	1,050	771	691	817	1,047	1,505	1,633	892	437
3 Intermediate	2,438	117	315	211	170	209	256	421	400	223	117
4 Small employers, own account workers	5,784	193	682	514	453	549	682	765	971	657	317
5 Lower supervisory and technical	5,660	323	779	597	514	622	585	540	807	549	343
6 Semi-routine	4,443	242	611	472	401	578	426	526	533	401	253
7 Routine	5,965	364	836	705	589	700	580	557	722	545	366

Table 2	Cause of death by NS-SEC, men aged 25–64, 2001–03

Government Office Regions of England, Wales
Number of deaths

NS-SEC analytic classes	England and Wales	North East	North West	Yorkshire and The Humber	East Midlands	West Midlands	East of England	London	South East	South West	Wales
All causes of death											
1 Higher managerial, professional	12,457	467	1,553	1,015	926	1,298	1,406	1,585	2,396	1,238	573
2 Lower managerial, professional	20,334	968	2,742	1,754	1,607	1,976	2,116	2,688	3,241	2,057	1,185
3 Intermediate	7,711	405	1,080	638	588	640	744	1,342	1,153	684	437
4 Small employers, own account workers	20,493	801	2,779	1,766	1,517	2,012	2,125	2,844	3,142	2,198	1,309
5 Lower supervisory and technical	20,377	1,432	3,307	2,160	1,618	2,291	1,881	2,076	2,645	1,675	1,292
6 Semi-routine	20,442	1,096	3,434	2,223	1,707	2,719	1,737	2,460	2,382	1,585	1,099
7 Routine	32,347	2,516	5,498	4,036	2,800	3,955	2,494	3,084	3,264	2,366	2,334
All malignant neoplasms											
1 Higher managerial, professional	5,191	197	621	420	396	544	570	594	1,084	551	214
2 Lower managerial, professional	7,796	366	962	676	599	730	835	945	1,356	853	474
3 Intermediate	2,376	143	329	202	197	174	224	386	351	232	138
4 Small employers, own account workers	7,591	285	1,013	654	542	754	809	954	1,231	861	488
5 Lower supervisory and technical	7,606	570	1,242	810	598	851	751	676	998	626	484
6 Semi-routine	6,337	374	1,052	743	538	811	526	703	745	503	342
7 Routine	10,210	868	1,705	1,301	892	1,182	810	946	1,045	732	729
Trachea, bronchus and lung neoplasms											
1 Higher managerial, professional	819	36	103	87	79	87	91	84	143	78	31
2 Lower managerial, professional	1,458	73	195	138	115	140	140	187	251	136	83
3 Intermediate	471	36	67	47	37	24	38	82	70	46	24
4 Small employers, own account workers	1,958	75	297	183	132	176	174	270	327	200	124
5 Lower supervisory and technical	1,958	156	344	239	143	232	168	167	257	137	115
6 Semi-routine	1,790	103	333	219	149	233	145	192	190	125	101
7 Routine	3,168	303	568	440	247	379	228	290	300	191	222
All circulatory diseases											
1 Higher managerial, professional	3,877	156	515	329	282	390	460	450	700	377	218
2 Lower managerial, professional	6,492	319	1,012	588	531	638	690	833	913	593	375
3 Intermediate	2,364	122	340	200	165	207	241	426	333	193	137
4 Small employers, own account workers	6,911	302	964	601	553	636	721	951	1,015	723	445
5 Lower supervisory and technical	6,786	487	1,088	743	575	752	578	710	838	553	462
6 Semi-routine	6,788	376	1,110	749	576	921	563	821	782	493	397
7 Routine	10,931	888	1,890	1,404	965	1,309	761	1,026	1,070	772	846
Ischaemic heart diseases											
1 Higher managerial, professional	2,600	105	347	241	201	273	295	267	461	251	159
2 Lower managerial, professional	4,356	225	700	417	369	437	452	505	590	398	263
3 Intermediate	1,555	94	229	130	115	137	149	248	221	141	91
4 Small employers, own account workers	4,610	213	658	415	358	449	460	616	649	489	303
5 Lower supervisory and technical	4,645	339	764	548	386	500	402	444	546	375	341
6 Semi-routine	4,562	256	754	526	371	653	373	506	524	334	265
7 Routine	7,593	613	1,337	1,010	690	914	505	668	706	541	609
All digestive diseases											
1 Higher managerial, professional	795	28	121	63	59	107	76	124	124	59	34
2 Lower managerial, professional	1,536	81	216	125	114	164	139	222	227	166	82
3 Intermediate	638	42	110	41	45	47	48	125	90	43	47
4 Small employers, own account workers	1,526	57	225	108	111	161	132	280	241	142	69
5 Lower supervisory and technical	1,521	116	294	156	104	184	97	172	204	103	91
6 Semi-routine	1,680	105	328	156	117	223	120	248	183	114	86
7 Routine	2,587	195	517	298	198	336	172	247	256	171	197
All liver diseases											
1 Higher managerial, professional	566	21	94	43	37	77	49	89	86	47	23
2 Lower managerial, professional	1,118	61	162	99	81	118	82	163	175	116	61
3 Intermediate	465	36	91	31	28	29	39	89	60	27	35
4 Small employers, own account workers	1,064	32	168	80	71	109	87	203	166	99	49
5 Lower supervisory and technical	1,065	75	209	101	72	131	71	129	135	70	72
6 Semi-routine	1,142	60	235	100	83	153	76	171	129	73	62
7 Routine	1,757	130	368	203	110	245	109	173	179	112	128
All respiratory diseases											
1 Higher managerial, professional	454	12	59	43	39	38	54	78	69	48	14
2 Lower managerial, professional	880	45	121	87	78	76	75	138	130	86	44
3 Intermediate	413	17	63	33	33	40	32	79	55	42	19
4 Small employers, own account workers	1,019	40	147	88	64	105	101	152	146	106	70
5 Lower supervisory and technical	1,124	92	205	117	72	130	93	131	142	90	52
6 Semi-routine	1,367	69	254	145	111	190	119	168	143	98	70
7 Routine	2,282	203	417	297	209	256	156	225	210	152	157

Deaths from all causes

Within each NS-SEC class, mortality rates in the North East and the North West were significantly higher than for England and Wales as a whole, and those in the South East and the East of England were significantly lower (Table 3). The South West also had mortality rates that were significantly lower than for England and Wales as a whole within each NS-SEC class, except for higher managerial and

professional occupations (NS-SEC class 1). The mortality rate for the East Midlands was significantly lower than that for England and Wales as a whole within the small employers and own account workers, lower supervisory and technical, semi-routine and routine occupations (NS-SEC classes 4 to 7). For London, on the other hand, mortality rates for all classes were higher than those for England and Wales as a whole, with the exception of the higher managerial and professional class (NS-SEC class 1).

Table 3	Age-standardised mortality rates[1] by cause of death and NS-SEC, men aged 25–64, 2001–03

Government Office Regions of England, Wales   Rate per 100,000

NS-SEC analytic classes	England and Wales	North East	North West	Yorkshire and The Humber	East Midlands	West Midlands	East of England	London	South East	South West	Wales
All causes of death											
1 Higher managerial, professional	194	215	214	201	187	209	184	193	179	193	205
2 Lower managerial, professional	259	301	303	264	264	269	228	270	221	245	299
3 Intermediate	286	340	326	270	299	275	250	331	248	252	351
4 Small employers, own account workers	307	373	347	304	280	313	268	365	279	272	346
5 Lower supervisory and technical	374	471	443	383	326	370	329	427	333	314	396
6 Semi-routine	473	514	597	495	428	477	394	513	433	395	476
7 Routine	513	699	644	555	447	535	391	540	412	398	635
All malignant neoplasms											
1 Higher managerial, professional	82	92	86	84	80	88	76	76	82	86	77
2 Lower managerial, professional	99	114	107	102	99	98	89	98	91	100	118
3 Intermediate	91	123	104	89	103	76	77	101	77	86	115
4 Small employers, own account workers	109	129	122	106	97	112	98	122	104	101	123
5 Lower supervisory and technical	140	189	167	145	121	137	131	141	126	117	149
6 Semi-routine	147	180	185	167	135	142	117	148	134	125	150
7 Routine	158	241	197	176	140	155	121	163	127	119	198
Trachea, bronchus and lung neoplasms											
1 Higher managerial, professional	13	17	14	18	16	14	12	11	11	12	11
2 Lower managerial, professional	19	23	22	21	19	19	15	20	17	16	21
3 Intermediate	19	33	22	21	20	10	13	22	16	17	20
4 Small employers, own account workers	28	34	36	29	23	25	20	35	27	22	30
5 Lower supervisory and technical	36	52	46	43	29	37	30	35	32	26	36
6 Semi-routine	41	50	59	50	37	41	32	41	33	31	45
7 Routine	48	84	65	59	38	49	33	50	36	31	60
All circulatory diseases											
1 Higher managerial, professional	61	72	72	66	58	63	60	58	53	59	77
2 Lower managerial, professional	84	100	112	89	87	88	75	88	63	70	95
3 Intermediate	90	105	106	87	86	92	82	109	73	71	112
4 Small employers, own account workers	100	138	117	99	100	95	88	121	87	84	112
5 Lower supervisory and technical	125	161	146	133	116	122	102	148	105	104	143
6 Semi-routine	158	179	195	169	145	162	126	174	141	122	175
7 Routine	172	247	221	192	153	175	116	179	132	126	230
Ischaemic heart diseases											
1 Higher managerial, professional	41	49	49	48	41	44	39	35	35	39	56
2 Lower managerial, professional	56	71	77	63	61	60	49	54	41	47	67
3 Intermediate	60	81	73	57	60	61	51	65	48	52	74
4 Small employers, own account workers	66	97	79	68	64	66	55	79	55	57	76
5 Lower supervisory and technical	86	112	103	98	78	81	71	93	69	71	105
6 Semi-routine	107	123	133	119	93	115	83	108	95	83	117
7 Routine	119	171	156	138	109	122	77	116	87	89	166
All digestive diseases											
1 Higher managerial, professional	12	12	16	12	12	17	10	15	9	9	12
2 Lower managerial, professional	20	25	24	18	19	22	15	23	16	20	22
3 Intermediate	23	34	31	17	22	20	16	31	20	16	36
4 Small employers, own account workers	23	26	29	19	21	26	17	36	22	17	18
5 Lower supervisory and technical	28	38	39	28	21	30	17	37	26	20	28
6 Semi-routine	40	48	57	35	30	40	28	53	35	29	37
7 Routine	43	54	63	42	33	48	29	46	34	30	54
All liver diseases											
1 Higher managerial, professional	9	9	13	8	7	12	6	11	6	7	8
2 Lower managerial, professional	14	19	18	14	13	16	9	17	12	14	16
3 Intermediate	17	29	25	13	14	12	13	21	13	10	26
4 Small employers, own account workers	16	14	22	14	13	18	11	26	15	12	13
5 Lower supervisory and technical	20	25	28	18	15	21	13	28	18	14	22
6 Semi-routine	27	27	41	23	21	28	18	37	25	19	26
7 Routine	30	36	45	29	18	36	19	33	25	20	36
All respiratory diseases											
1 Higher managerial, professional	7	5	8	9	8	6	7	10	5	8	5
2 Lower managerial, professional	12	14	14	13	13	11	8	15	9	11	11
3 Intermediate	16	16	20	15	17	18	11	21	12	16	17
4 Small employers, own account workers	15	18	18	15	11	15	13	19	12	12	17
5 Lower supervisory and technical	21	31	27	21	14	21	16	27	18	17	16
6 Semi-routine	31	33	44	32	28	33	26	35	25	24	31
7 Routine	35	57	48	40	32	33	23	38	25	24	43

Note: 95 per cent confidence intervals are available in the web version of this table.
1 Directly age-standardised rate using the European standard population.

■ Indicates a mortality rate significantly higher than that of England and Wales at 5 per cent level.
■ Indicates a mortality rate significantly lower than that of England and Wales at 5 per cent level.

Figure 1	Age-standardised mortality rates[1] from all causes of death by NS-SEC, men aged 25–64, 2001–03

Government Office Regions of England, Wales

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

In each region, mortality differed significantly between the following groups of NS-SEC classes: higher and lower managerial and professional occupations (1 and 2), self-employed and lower supervisory occupations (4 and 5) and lower supervisory and semi-routine occupations (5 and 6). The highest mortality rates occurred for routine workers (NS-SEC class 7) in most regions, and the rates were significantly higher than those in semi-routine occupations for around half of the regions studied. The North East had a significantly higher mortality rate for routine occupations than any other region (699 per 100,000). In the North West, rates for semi-routine occupations were significantly higher than any other region (597 per 100,000).

To indicate the size of the relative socio-economic differences in mortality in each region, Table 4 shows the ratio between the mortality rates of those in routine occupations and those in higher managerial and professional occupations (NS-SEC classes 7 and 1 respectively). For all-cause mortality, the largest gradients occurred in the North East (3.3), Wales (3.1), and the North West (3.0). In these regions, men in routine occupations had a mortality rate around three times higher than those in higher managerial and professional occupations. By contrast, relative differences in the South East, the East of England, the South West and the East Midlands were less than in other regions (between 2 and 2.4).

These relative differences were mainly accounted for by routine occupations, since mortality varied relatively little by region for higher managers and professionals (Table 5 and Figure 2). For higher managers and professionals there was a 20 per cent difference between the region with the lowest and highest mortality. For routine workers the corresponding figure was 80 per cent. In general, regional differences were significantly lower for the more socially advantaged classes (NS-SEC classes 1, 2 and 4).

Table 4	Socio-economic gradients[1] by cause of death, men aged 25–64, 2001–03

Government Office Regions of England, Wales

Rate per 100,000

Causes of death	England and Wales	North East	North West	Yorkshire and The Humber	East Midlands	West Midlands	East of England	London	South East	South West	Wales
All causes of death	2.6	3.3	3.0	2.8	2.4	2.6	2.1	2.8	2.3	2.1	3.1
All malignant neoplasms	1.9	2.6	2.3	2.1	1.7	1.8	1.6	2.1	1.6	1.4	2.6
Trachea, bronchus and lung neoplasms	3.7	5.1	4.5	3.3	2.4	3.5	2.7	4.4	3.3	2.5	5.3
All circulatory diseases	2.8	3.5	3.1	2.9	2.7	2.8	1.9	3.1	2.5	2.1	3.0
Ischaemic heart diseases	2.9	3.5	3.2	2.9	2.6	2.8	2.0	3.3	2.5	2.3	2.9
All digestive diseases	3.5	4.3	3.8	3.6	2.8	2.9	3.0	3.0	3.7	3.3	4.5
All liver diseases	3.5	3.9	3.5	3.7	2.6	3.0	3.1	3.1	3.8	2.8	4.4
All respiratory diseases	4.9	10.5	5.8	4.7	3.9	5.2	3.2	3.9	4.8	3.2	8.9

Note: 95 per cent confidence intervals are available in the web version of this table.
1 Ratio of the mortality rate of NS-SEC class 7 to the mortality rate of NS-SEC class 1.
Indicates a socio-economic gradient significantly higher than that of England and Wales at 5 per cent level.
Indicates a socio-economic gradient significantly lower than that of England and Wales at 5 per cent level.

Table 5	Ratio between the highest and lowest mortality rates among regions in each NS-SEC analytic class, by cause of death, men aged 25–64, 2001–03

England and Wales

Causes of death	All occupied NS-SEC classes	1 Higher managerial, professional	2 Lower managerial, professional	3 Intermediate	4 Small employers, own account workers	5 Lower supervisory and technical	6 Semi-routine	7 Routine
All causes of death	1.6	1.2	1.4	1.4	1.4	1.5	1.5	1.8
All malignant neoplasms	1.6	1.2	1.3	1.6	1.3	1.6	1.6	2.0
Trachea, bronchus and lung neoplasms	2.1	1.7	1.5	3.2	1.7	2.0	1.9	2.7
All circulatory diseases	1.8	1.5	1.8	1.6	1.6	1.6	1.6	2.1
Ischaemic heart diseases	1.9	1.6	1.9	1.7	1.8	1.6	1.6	2.2
All digestive diseases	2.1	1.8	1.6	2.2	2.1	2.2	2.0	2.2
All liver diseases	2.3	2.1	2.2	2.7	2.3	2.2	2.1	2.5
All respiratory diseases	2.1	2.1	1.7	1.8	1.8	2.1	1.9	2.5

Note: 95 per cent confidence intervals are available in the web version of this table.
Indicates a regional ratio significantly higher than that of all occupied classes at the 5 per cent level.
Indicates a regional ratio significantly lower than that of all occupied classes at the 5 per cent level.

Figure 2	Age-standardised mortality rates[1] for NS-SEC classes 7 and 1, men aged 25–64, 2001–03

Government Office Regions of England, Wales
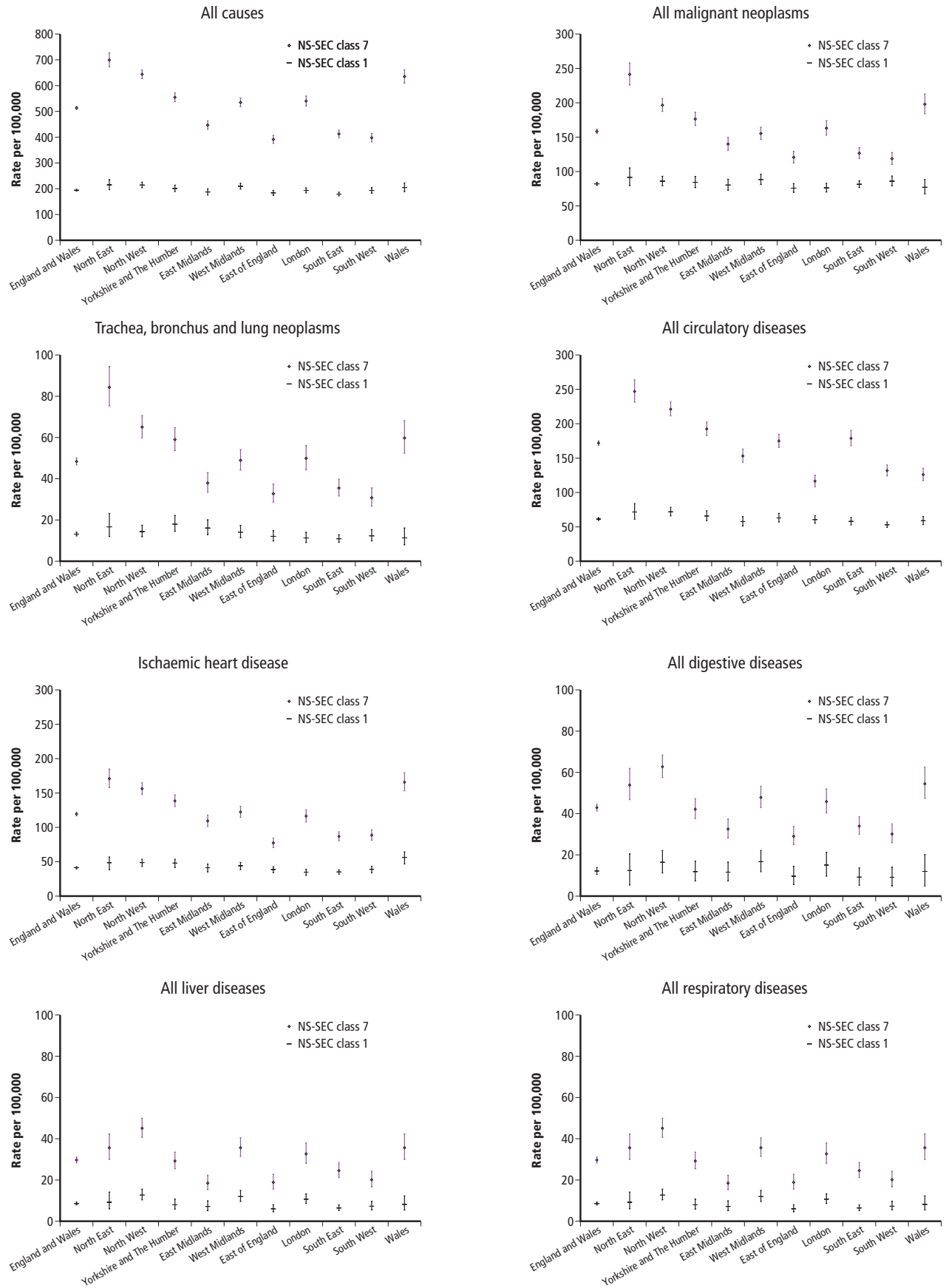
1 Directly age-standardised rate using the European standard population.

Selected causes of death

In general, within each region, increasing mortality risk was associated with more disadvantaged NS-SEC classes for all the causes of death selected for analysis. However, the pattern of inequality in mortality varied by cause of death.

All cancers (malignant neoplasms)

Mortality from all cancers was highest for routine workers (NS-SEC class 7) in the North East, with a rate of 241 deaths per 100,000 (Table 3). It was lowest for higher managerial and professional occupations (NS-SEC class 1) in London and the East of England (76 deaths per 100,000). Overall, the pattern of mortality from all cancers by class and region was generally similar to that of deaths from all causes. However, there were exceptions to this. Mortality rates for the higher managerial and professional class (NS-SEC class 1) did not differ significantly from the England and Wales figure in any region. In London, only small employers and own account workers (NS-SEC class 4) had a mortality rate significantly higher than the rate for this class in England and Wales as a whole. This contrasts with deaths from all causes, for which most NS-SEC classes had higher rates in London than for England and Wales as a whole.

Socio-economic differences in mortality from all cancers were less than those observed for the other major causes analysed in every region (Table 4). The largest relative differences between classes were in Wales and the North East (2.6 in both cases). The lowest ratio was 1.4 in the South West.

Cancers of trachea, bronchus and lung

Cancers of the trachea, bronchus and lung represented a quarter of deaths from all cancers. Mortality was highest for routine workers (NS-SEC class 7) in the North East with a rate of 84 deaths per 100,000 (Table 3). Mortality was lowest for higher managerial and professional occupations (NS-SEC class 1) in London, the South East and Wales, all with rates of 11 deaths per 100,000. The regional pattern of mortality from these causes was broadly similar to that of all cancers, with one notable exception. In Wales, only routine workers (NS-SEC class 7) had significantly higher mortality than the England and Wales rate for the class.

Relative socio-economic differences were greater for this cause than for all cancers (Table 4). For example, in Wales the relative difference was 5.3, while that for all cancers was 2.6. No region had a significantly larger socio-economic difference than England and Wales as whole. Differences were significantly smaller than for England and Wales as a whole in the South West, East Midlands and the East of England.

Circulatory diseases

Mortality from circulatory diseases was highest for routine workers (NS-SEC class 7) in the North East with a rate of 247 deaths per 100,000 (Table 3). It was lowest for higher managerial and professional occupations (NS-SEC class 1) in the South East with a rate of 53 deaths per 100,000. The only region with a major difference in pattern from that of all-cause mortality was Wales, where mortality rates for circulatory diseases for the higher managerial and professional class and the lower supervisory and technical class (NS-SEC classes 1 and 5) were significantly higher than those of England and Wales as a whole.

Only the North East had a difference in mortality rate ratio for circulatory diseases between routine occupations (NS-SEC class 7) and higher managerial and professional occupations (NS-SEC class 1) that was significantly greater than that of England and Wales as a whole (Table 4). The corresponding ratios for the East of England, the South East and the South West were all significantly smaller than that observed for England and Wales. The greatest mortality rate ratio of 3.5 was in the North East and the lowest of 1.9 was in the East of England.

Ischaemic heart disease

Ischaemic heart disease comprised 67 per cent of deaths from circulatory diseases. Mortality was highest for routine workers (NS-SEC class 7) in the North East with a rate of 171 deaths per 100,000 (Table 3) and lowest for higher managerial and professional occupations (NS-SEC class 1) in London and the South East with a rate of 35 deaths per 100,000. The pattern of mortality from this cause was similar to that for all circulatory diseases. The principal exceptions were Yorkshire and The Humber and London. In Yorkshire and The Humber most classes had rates that were significantly higher than England and Wales as a whole. In London only small employers and own account workers had mortality rates for ischaemic heart disease that were significantly higher than those for England and Wales as a whole, whereas for all circulatory diseases four classes had rates that were significantly higher.

Mortality rate ratios between higher managerial and professional occupations (NS-SEC class 1) and routine occupations (NS-SEC class 7) followed the pattern of all circulatory diseases (Table 4).

Digestive diseases

Mortality from digestive diseases was highest for routine workers (NS-SEC class 7) in the North West with a rate of 63 deaths per 100,000 (Table 3). Mortality was lowest for higher managerial and professional occupations (NS-SEC class 1) in the South East and the South West with a rate of 9 deaths per 100,000.

In comparison with all-cause mortality, the main differences occurred in Wales and Yorkshire and The Humber. In Wales, small employers and own account occupations (NS-SEC class 4) had a mortality rate that was significantly lower than that for England and Wales as a whole, and only intermediate and routine occupations (NS-SEC classes 3 and 7) had rates which were significantly higher than England and Wales. In Yorkshire and The Humber, small employers and own account workers also had a rate which was significantly lower than that for England and Wales.

Socio-economic differences between higher managerial and professional occupations (NS-SEC class 1) and routine occupations (NS-SEC class 7) for digestive diseases were generally greater than those for all-cause mortality, but there was no significant regional variation in relative differences (Table 4). Unlike for all-cause mortality, the ratio of the mortality rate of the region with the highest rate to that with the lowest for all digestive diseases (Table 5) did not vary significantly with NS-SEC classification.

Liver diseases

Deaths from liver diseases accounted for 70 per cent of deaths from digestive diseases. Mortality from liver diseases was highest for routine workers (NS-SEC class 7) in the North West with a rate of 45 deaths per 100,000 (Table 3). Mortality was lowest for higher managerial and professional occupations (NS-SEC class 1) in the South East and the East of England with a rate of 6 deaths per 100,000. The general pattern of mortality rates was similar to that for all digestive diseases.

Socio-economic differences between higher managerial and professional occupations (NS-SEC class 1) and routine occupations (NS-SEC class 7) for liver diseases were similar to those for digestive diseases as a whole (Table 4).

Respiratory diseases

Mortality rates from respiratory diseases were highest for routine workers (NS-SEC class 7) in the North East with a rate of 57 deaths per 100,000 (Table 3). They were lowest for higher managerial and professional occupations (NS-SEC class 1) in the South East, North East and Wales with a rate of 5 deaths per 100,000. The pattern of mortality rates was similar to that for all-cause mortality, although many combinations of region and NS-SEC did not differ significantly from the corresponding figures for England and Wales as a whole, possibly because of the relatively small number of deaths involved.

Mortality from respiratory diseases had the greatest ratio between routine occupations (NS-SEC class 7) and higher managerial and professional occupations (NS-SEC class 1), of all causes of death selected for analysis in most regions (Table 4). For example, in Wales, mortality from respiratory diseases was about nine times higher for routine occupations than for higher managerial and professional occupations. The relative socio-economic differences in mortality in Wales and the North East were significantly higher than that for England and Wales as a whole. This was not the case in the North West for respiratory diseases.

Discussion

The results presented here suggest that the relationship between region and NS-SEC in 2001–03 was broadly similar to that between region and RGSC in the 1991–93 study.[14] Differences in mortality by NS-SEC were found in every region, but were greatest in the North East, North West and Wales and least in the South East, South West and the East of England. Differences between regions were small for the most advantaged classes and greatest for the least advantaged. In all regions, mortality rates among routine occupations (NS-SEC class 7) in 2001–03 were typically two to three times greater than those in the higher professional and managerial classes (NS-SEC class 1). While NS-SEC was not designed as an ordinal measure, the intervening classes generally showed increasing mortality rates between these two extremes, pointing to a clear socio-economic 'gradient'.

A consequence of these patterns was that, in general, those regions with the highest mortality rates also had the greatest socio-economic variation and those with the lowest mortality rates the least variation.

London had a different pattern to the South East, with raised all-cause mortality rates in each NS-SEC class except higher managerial and professional occupations.

Previous studies relating to the 1980s[22] and the 1990s[14] also suggested that socio-economic characteristics are insufficient to explain regional differences in mortality, since within class differences persist across regions. The use of NS-SEC has not changed that observation.

The results also broadly accord with investigations into regional differences in self-reported health in 2001.[6,23] Both of these studies reported a 'north-south divide' in the level of reported ill-health. One study[6] found that Wales, the North East and the North West had the highest level of reported ill-health for men within England and Wales. However, it also found that London had the greatest inequality, as measured by the ratio of reported rates of 'not good' health for routine occupations to those for higher managerial and professional occupations, while the North East had a significantly lower gradient than for England as a whole. Thus, the association between overall mortality rate and the socio-economic gradient in mortality by region appears to be greater than the corresponding association for self reported ill-health rates.

Several possible factors could have contributed to the regional mortality differences within NS-SEC classes reported here. Firstly, NS-SEC is based on individual occupation and employment status, but cannot take into account occupation-related factors which may differ by region. For example, historically, the risk of unemployment varies by both occupation and region and may not be fully accounted for in the attribution of NS-SEC. Previous analyses have found that men who were unemployed at the time of a census had a higher probability of death in the next ten years after controlling for social class and age.[24,25] The risk was greatest in regions with the highest levels of unemployment. The persistence of this effect means that it could have an impact on those who were employed and/or had an occupied NS-SEC at death registration. The largest impact on those with an occupied NS-SEC class would be upon those in routine occupations whose employment is typically the least secure. Unemployment among economically active men was 9.2 per cent in the North East compared with 3.6 per cent in the South East according to the 2001 Census. This could be expected to have an impact on mortality beyond that accounted for by occupation and socio-economic status alone.

Secondly, the occupational composition of classes may vary by region, reflecting the geographical distribution of different industries, which could imply differing levels of occupation-specific hazards within the same class. The occupational composition of each NS-SEC group may have an effect on within-class variations in mortality. For example, an analysis of mortality in 1971 by occupation,[26] found that miners and quarrymen over the age of 35 had a 37 per cent higher mortality rate than men of the same social class, after standardising for age. The current analysis did not extend to any sub-division of the NS-SEC classes by occupation.

Thirdly, incomes and resources, such as house and car ownership, may vary by region within NS-SEC class, based on historical patterns of deprivation, local industries and labour market conditions. Non-occupational social factors have been shown to be highly correlated with health inequalities and have a separate effect on mortality from that due to occupational social class.[27]

There is also considerable literature on the relative contribution of area of residence (and in particular areas of deprivation) independent of the socio-economic characteristics of the residents.[7,8,9,28] In the simultaneous study of socio-economic and geographic effects, it is important to distinguish between the impact of the immediate environment (or local area) and that of the wider geographic region. There is greater variation in life expectancy within most regions than between them.[11] It has also been found that the most localised neighbourhood effects, as measured by the Carstairs index of ward deprivation,[29] had a powerful effect on mortality after controlling for social class, whereas district level factors, as measured by ONS area classification, were not significant. There was, however, a positive independent effect of residence in the South East region in an earlier period.[28]

Another study found that the traditional 'north-south divide' in limiting long-term illness could be partly explained by correcting for individual socio-economic characteristics.[30] The residual variation was then largely accounted for by district classifiers as represented by the ONS area typology available at that time. The authors found that a combination of intermediate geographical indicators and individual circumstances tended to explain apparent broader regional differences.

Another factor which may have an effect on within-class regional variation is selective migration. Research in Great Britain, and two studies in particular[31,32] have tended to demonstrate that selective migration has strengthened the relationship between area deprivation and health outcomes including mortality. The first study, using local authority district level data from the British Household Panel Survey, found that, at the local authority district scale, variations in standardised mortality rates could be attributed to selective migration.[31] Similarly, using ONS

Longitudinal Study data at ward level, the second study found that migrants who move from more to less deprived areas are significantly healthier than those who move from less to more deprived areas, and the largest absolute flow was by relatively healthy migrants moving from more deprived to less deprived areas.[32]

While this demonstrates the importance of selective migration for mortality rates at the level of local geography, it is not clear that it explains within-class inequalities at the regional level. For example, the first study previously referred to[31] found no evidence of a significant effect of migration on inequality at the level of region. Those of the highest socio-economic status migrate proportionately more between regions (though not within regions),[33] and it appears that migrants from more advantaged classes carry the protective effect of life-course advantage to new areas. This may contribute to the relative within-class homogeneity of mortality rates across regions among these groups. It is also possible that the healthy among those in the most disadvantaged class in the less prosperous regions are more likely to migrate across regional boundaries than those of corresponding health and class status in more prosperous regions, for example moving to seek work. The cumulative effect of these migrations within the least advantaged class may result in a residual group of less healthy non-migrants which is substantial enough to have a within-class impact at regional level. More research is needed as to whether selective migration has a significant effect on within class mortality differences at regional level.

It is also possible that regional variations in socio-economic gradients in mortality may reflect geographical patterns in the prevalence of health-related behaviours, such as smoking and drinking among the more disadvantaged NS-SEC classes. These results show that for each region some of the highest socio-economic gradients are associated with 'lifestyle' diseases such as lung cancer and liver diseases. However, the death burden for these particular diseases is outweighed by other major causes such as circulatory diseases and malignant neoplasms other than lung cancer. The pattern observed is therefore not conclusive. Respiratory diseases is the only category where a high socio-economic gradient for a specific cause of death appears to be associated with high regional differences in the mortality gradient. Further analysis is required to investigate the relationship between health behaviours, individual causes and regional differences in inequality.

Inequalities in the health of ethnic groups in England and Wales are well documented, and may have contributed to the patterns observed.[23] The proportion of the population in minority ethnic groups varies by region, and is highest in London. Studies of mortality by place of birth have shown a raised risk of ischaemic heart disease in men from India, Pakistan and Bangladesh,[34] and this could be reflected in the atypical pattern of inequality by NS-SEC found for this cause of death in London.

Limitations of the analysis

Regional populations by age and NS-SEC were estimated using a census based apportionment of the optimised populations, along with denominator adjustments, described in the first article of this series.[1] As the adjustments were applied uniformly to all regions, there is an implicit assumption that the sources of error for which the adjustment corrected did not vary across regions.

Only more common causes of death were examined, since it was necessary for the sample to contain sufficient deaths to obtain meaningful results across regions for each cause. This placed a restriction on the causes studied. Some causes of death which have known socio-economic gradients, such as accidents and violence, were not included for this reason.

The age range chosen was limited to 25–64, as in previous articles in this series, since the recording of occupation at death registration above this age is often insufficiently detailed to code NS-SEC accurately. Consequently, these results do not reflect regional differences in the patterns of mortality in children, younger adults and those beyond working age.

Adjustments were made to reduce the effects of health selection into and out of the labour market, but it is not possible to know the extent to which these measures have eliminated selection bias. In addition, health related social mobility may have an impact on the estimation of inequalities, and this cannot be addressed in a cross-sectional study.

Selective migration between regions may also lead to bias since deaths are assigned to the region containing the usual place of residence at death, whereas the denominator is calculated using census data allocated to regions according to the addresses of the workforce in 2001.

The analysis did not take account of factors which may be related to both NS-SEC and region, such as the health hazards of specific occupations and the risk of unemployment. Similarly, ethnicity and country of birth were not taken into account and could be important in explaining some of the differences in socio-economic inequality between regions. Further research using multivariate and multilevel regression models is required to identify these factors and quantify the contributions of different variables to the patterns observed.

Conclusions

This analysis of male deaths in 2001–03 shows that substantial socio-economic gradients in mortality existed within Wales and all regions of England. The size of these gradients varied significantly between regions. They were greatest in the North East, North West and Wales and least in the South East, South West and the East of England. Differences between regions were small for the most advantaged classes and greatest for the least advantaged.

The pattern was broadly similar for all causes of death studied, but lung cancer, liver and respiratory diseases showed higher socio-economic inequalities in all regions than other causes. Further research is needed to explain the regional variation in mortality rates within NS-SEC classes.

Key findings

- There were socio-economic differences in mortality for men across Wales and all English regions in the period 2001–03, with higher mortality rates in the most disadvantaged NS-SEC classes

- The socio-economic gradient in mortality for most causes of death was greatest in Wales, the North East and North West and least in the South East, South West and the East of England

- London had a different pattern to the South East, with significantly raised all-cause mortality rates in most NS-SEC classes

- Regional differences in mortality were small for the most advantaged classes and greatest for the least advantaged

- Among causes of death analysed, socio-economic differences were greater in every region for lung cancer and respiratory diseases and least for all cancers combined

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Geographical trends in infant mortality: England and Wales, 1970–2006

Paul Norman
University of Leeds
Ian Gregory
Lancaster University

Danny Dorling
University of Sheffield

Allan Baker
Office for National Statistics

At national level in England and Wales, infant mortality rates fell rapidly from the early 1970s and into the 1980s. Subnational areas have also experienced a reduction in levels of infant mortality. While rates continued to fall to 2006, the rate of reduction has slowed. Although the Government Office Regions Yorkshire and The Humber, the North West and the West Midlands and the Office for National Statistics local authority types Cities and Services and London Cosmopolitan have experienced relatively large absolute reductions in infant mortality, their rates remained high compared with the national average. Within all regions and local authority types, a strong relationship was found between ward level deprivation and infant mortality rates. Nevertheless, levels of infant mortality declined over time even in the most deprived areas with a narrowing of absolute differences in rates between areas. Areas in which the level of deprivation eased have experienced greater than average reductions in levels of infant mortality.

Introduction

The level of infant mortality can be seen as a major indicator of the health of a nation[1,2] with the focus on infant mortality rates (deaths at ages under one year, per 1,000 live births) remaining high on academic[3] and public health and policy agendas[4,5] within the UK and throughout the world.[6] Throughout the 20th century, infant mortality rates in England and Wales steadily declined, largely due to 'improved living conditions, diet and sanitation, birth control, advances in medical science and the availability of healthcare'.[7] The reduction in infant mortality has been cited as the single greatest factor contributing to increased life expectancy over the past 100 years.[8,9]

A range of social and biological factors are associated with high infant mortality.[10,11] These factors include low birthweight, multiple births, marital status, age of mother, country of birth of mother and father's social class.[2,12,13,14] Social class differences in infant mortality rates are wider in the postneonatal period (deaths between 28 days and one year) than the neonatal period (deaths under 28 days).[15] Despite reductions in infant mortality over time, health inequalities in infant mortality remain between different social groups.[4,16,17]

During the 20th century geographical variations in infant mortality have been observed[18,19] with reductions in rates unevenly distributed,[20] although to some extent this is explained by distributions of people by social class. From 1900 up to the 1960s infant mortality rates in Wales were higher than rates for England,[21] though by the 1990s Wales had lower infant mortality than England. At regional level within England, a north-south divide has existed with higher rates tending to be found in the north.[22]

Since the 19th century, the strong tendency has been for infant mortality rates in urban and mining areas to be higher than those in more rural locations, largely due to adverse living conditions and housing density.[20,23,24,25,26] During 1991–97, high infant mortality rates were concentrated in the major urban areas including London, Birmingham, Sheffield and Manchester.[15,22] To draw out geographical patterns, and to avoid small number problems, areas can be grouped together using their socio-demographic characteristics. During the 1990s the local authorities classified[27] as East Inner London, Ports and Industry and in particular the Manufacturing Centres had the highest infant mortality rates with lower rates for the Most Prosperous, Growth Areas and Rural Amenity locations.[22] Consistently over time, the most deprived areas within the countries of the UK have had the highest infant mortality rates and the least deprived areas the lowest rates.[22,28,29,30,31] Moreover, low birthweight, a risk factor associated with infant mortality,[15] is itself associated with area deprivation.[14,32] Despite ongoing reductions in infant mortality rates in England and Wales, reports have continued to highlight subnational variations in infant mortality.[33,34,35]

Recent advances in the development of a time-series of demographic data[36,37,38] enabled trends in infant mortality to be investigated. Given the previous findings referred to above, the work reported here aimed to investigate whether the reductions in infant mortality rates, observed at national level between 1970 and 2006, were uniform geographically by specific geographies and by area types. This was achieved by:

- the compilation of a database of counts of live births and deaths to infants aged under one year with all data georeferenced to a common small area geography – in this case the Census Area Statistics wards (CAS) as used for the dissemination of the 2001 Census

- the aggregation of these small area statistics into both larger geographies and into different types of areas. After the calculation of rates, this enabled the investigation of regional trends in infant mortality and whether trends varied across different types of area, with a particular focus on the relationship between infant mortality and area deprivation

This paper first reports on the compilation of the database of the relevant vital statistics and defines the geographies and methods used in the analysis. The results section which follows describes national and regional trends in infant mortality between 1970 and 2006 and explores trends by area types.

Data and methods

Compiling a database on a consistent geography at ward level from 1970 onwards

Annual data on live births and deaths of infants aged under one year, collected through the national system of birth and death registration and processed by the Office for National Statistics (ONS), were used for England and Wales from 1970 to 2006. While these were available annually at national level, it was not possible to obtain the relevant subnational vital statistics for 1973 to 1978, and data were therefore analysed only for 1970–72 and 1979 onwards.

The last few decades of the 20th century saw widespread changes in the administrative geographies of England and Wales, particularly at small area level. Taking the census years as examples, in 1971 there were over 16,000 electoral wards nesting into the London, County and Municipal Boroughs and the Urban and Rural Districts which formed the then system of local government in England and Wales. This was subsequently reformed in 1974. In 1981 and 1991 there were 9,289 and 9,527 wards respectively, which nested into 403 local authority districts

and the Registrar General's Standard Regions. Following further local government reorganisation during the 1990s, by 2001 there were 376 local authorities (a mix of London Boroughs, Metropolitan Districts, County Districts and the new Unitary Authorities) which nested within the nine Government Office Regions (GORs) in England, and Wales. For the dissemination of the 2001 Census, 8,850 CAS wards were used, which nested into local authorities and thus GORs, and Wales.

The complexity of geographical changes presents a challenge to the creation of a data time-series so that trends can be analysed.[36,37,38] To identify change over time, the original births and deaths data were adjusted to a common geography. For the results to have currency, the 2001 CAS wards were used. Geographical consistency was achieved in two ways:

- data for 1970–72 and 1979–89 were apportioned between the geography in which the data exist (the 'source' geography) to the 2001 Census wards (the 'target' geography). This apportionment was computed using a proxy for population distribution – the counts of postcodes (weighted by the number of addresses at each) which fall in the intersections of the source and target geographies. This technique is well-established[39,40] and is reliable enough that a similar approach is now adopted by the ONS Small Area Population Estimates team to provide mid-year estimates for non-standard areas[41]

- data for 1990–2006 were directly allocated by ONS to the 2001 wards using the postcode recorded on the birth or death registration certificate

Geographies used in the analysis

With the time series of births and deaths harmonised to the 2001 wards, the data could be aggregated into higher geographies. For this study, these comprised the Government Office Regions and the National Statistics Area Classification of local authorities.[42,43] Through these aggregations it was possible to investigate whether changes in infant mortality rates observed at national level occurred evenly for the GORs and across seven different types of areas – the Supergroups known as Cities and Services, London Suburbs, London Centre, London Cosmopolitan, Prospering UK, Coastal and Countryside, and Mining and Manufacturing. Map 1 illustrates the distribution of these area types. The area classification is based on 41 variables from the key statistics tables of the 2001 Census. In this 'geodemographic' scheme areas are grouped together based on similarities in the socio-economic characteristics of their residents, even though like areas may be geographically distant.

Measuring area deprivation over time

In addition to these local authority area types, the relationship between infant mortality and deprivation over time was also investigated. The Index of Multiple Deprivation (IMD) is the Government's current preferred indicator of deprivation in England. Similar, but not directly comparable, IMDs have been developed for the other constituent countries of the UK. The relative complexity of the IMD, lack of consistency between the index for England compared with the scheme in Wales and a lack of equivalent data over time means that it is not feasible to construct historical datasets.

The Townsend Index of Material Deprivation,[44] one of the most widely-used indices,[15,45,46,47,48] was used here since consistent input variables are available for successive censuses. Townsend scores are based on four input variables: unemployed residents as a percentage of all economically active residents; households without access to a car as a percentage of all households; households that are not in owner occupied accommodation as a percentage of all households; and overcrowded households (more than one person per room) as a percentage of all households.

Map 1	National Statistics 2001 Area Classification for Local Authorities, England and Wales

Supergroups

Cities and Services
London Suburbs
London Centre
London Cosmopolitan
Prospering UK
Coastal and Countryside
Mining and Manufacturing

Scilly Isles

London inset
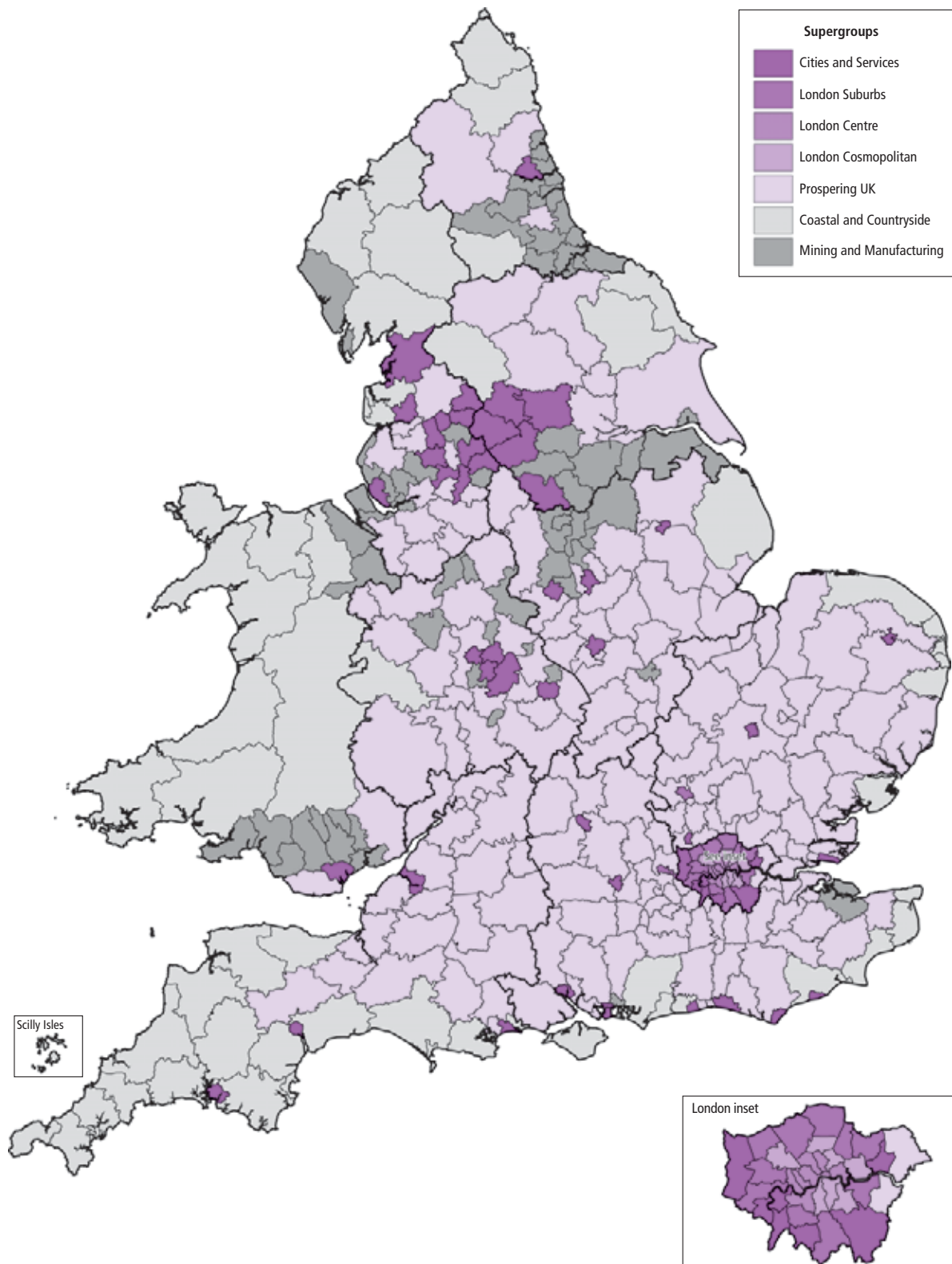
Raw data were available in computerised format at ward level from the 1971, 1981, 1991 and 2001 Censuses so it was possible to calculate Townsend scores for these time points. As with the births and deaths data, the input variables were apportioned from the census geographies for which they were originally disseminated to be consistent with the 2001 Census wards, with deprivation scores then calculated for that geography. To calculate the scores, the unemployment and overcrowding variables were log transformed to produce less skewed distributions and all four variables were standardised as z-scores and summed, with each variable given an equal weight, to give a final deprivation score. The average score for England and Wales is zero, while higher positive scores indicate greater levels of material deprivation and more negative scores indicate less deprived areas. It is common in health studies to summarise results across deprivation quintiles, calculated with each quintile comprising either 20 per cent of the number of areas or 20 per cent of the population distribution. Here deprivation quintiles have been calculated, each with 20 per cent of live births. Quintile 1 contains the least deprived wards, with the most deprived wards in quintile 5. Map 2 illustrates the 2001 distribution of the deprivation quintiles across England and Wales, revealing a strong urban-rural gradient of deprivation.

For the Townsend indicator variables, national levels of non-home ownership, no access to a car and household overcrowding all steadily reduced over time. Contrary to these trends, overall unemployment rose between 1971 and 1981, was still relatively high in 1991, but reduced by 2001. Variations at more local level exist though. As a check on their applicability over time, the Townsend scores were compared with another indicator of deprivation, the Breadline Britain measure.[36] This measures relative poverty based on a lack of the perceived necessities of life, using information from poverty surveys. Incorporating more indicators of deprivation than the Townsend index, the Breadline Britain measure has been applied every 10 years since 1970 to produce geographical estimates of the number of 'poor' households. When incorporated into a common geography, a correlation between Townsend scores and the percentage of households which are 'Breadline poor' showed a very strong relationship (significant correlations of 0.88 in 1971 and 0.98 in 1981, 1991 and 2001).

It has been demonstrated that when the deprivation levels of areas change, there is an associated change in the general health of the people who live in those areas.[49] To investigate this for infant mortality, rates were calculated for those wards which remained in the same deprivation quintile or became more or less deprived over time. Thus, wards which were allocated into the least and most deprived quintiles at each of the 1971, 1981, 1991 and 2001 Censuses were identified, with the remainder classified as changing quintile during the time period. A further classification flagged those wards becoming more deprived or less deprived, and also those experiencing a bigger change by becoming more, or less, deprived by two or more quintiles.

In the results section which follows, this paper reports on a time-series of infant mortality rates for England and Wales, for the regions of England, and Wales, and for local authority area types for the periods 1970–72 and 1979–2001. These rates were calculated using rolling averages of annual births and deaths data. The averages were based on data for three-years, except at the start and end of the two time periods where two years were used (that is 1970–71, 1970–72, 1972–73, 1979–80, 1979–81, 1980–82…2004–06, 2005–06). National infant mortality rates for England and Wales were based on an aggregation of data which had been allocated to the English GORs and Wales. These figures therefore exclude non-residents who are normally included in the routine publication of national infant mortality rates by ONS.

The relationship between infant mortality and deprivation is then investigated by presenting cross-sections of infant mortality rates by deprivation quintile for four periods around the census years from 1971 to 2001, and also for more recent data. These were calculated as an average of the three years surrounding each census and relate therefore to 1970–72, 1980–82, 1990–92 and 2000–02. Infant mortality rates for 2004–06 were calculated in relation

to 2001 deprivation. At each of these time points, to show the relative difference in infant mortality between the most and least deprived areas, rate ratios are used (calculated as the rate in quintile 5 divided by the rate in quintile 1), along with their associated confidence intervals.[50]

Results

National level

For England and Wales, the infant mortality rate fell rapidly from 17.7 infant deaths per 1,000 live births in 1970 to a rate of 11.9 at the start of the 1980s (Figure 1). Rates continued to fall through the 1980s though not so rapidly in the mid-decade. In 1990 the national rate was 7.5. A more modest, but steady, decline continued through the last decade of the 20th century, to a rate of 5.5 in 2000. This decline continued, with the rate for 2006 being at an all time low of 5.0 infant deaths per 1,000 live births.

| Figure 1 | Infant mortality rate,[1] 1970–2006 |

England and Wales[2]

1 Rates are based on rolling averages of annual data for live births and infant deaths.
2 Excludes non-residents of England and Wales.
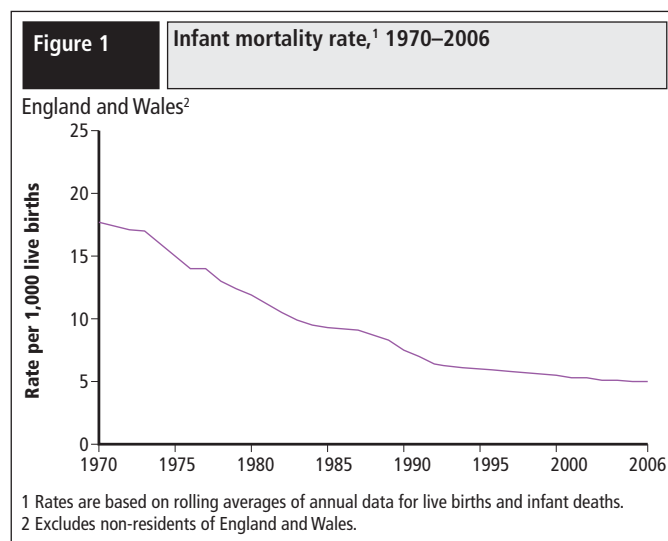
Government Office Regions, and Wales

There was considerable regional variation between infant mortality rates in 1970, with the lowest at 14.7 per 1,000 live births in the South East and the highest, at 20.3, in the North West. All regions experienced a large reduction in infant mortality rates, through a rapid decline up to the early 1990s, after which the reductions were more modest (Table 1 and Figure 2). Between 1970 and 2006, absolute differences in infant mortality rates between regions narrowed considerably. Despite having the smallest absolute reduction, the South East remained the GOR with the lowest rate (4.0). The West Midlands, with a rate of 6.4, replaced the North West as the region with the highest infant mortality.

While the year-by-year fluctuations create rather 'busy' looking graphs (Figure 3), plotting each region's rate relative to the England and Wales rate each year shows that the relative reductions in infant mortality over the study period were not evenly distributed, neither geographically nor over time. Overall, there was more variation in relative ratios in the 1990s and 2000s than in the early 1980s. Three regions, the East of England, South East and South West, had infant mortality rates which were lower than the national average for England and Wales across the whole period 1970–2006. From 1979 to the late 1980s their rates were more similar to the national average than they had been in 1970–72. From the late 1980s onwards however, their rates were particularly low compared to the England and Wales rate. Yorkshire and The Humber, the North West, and the West Midlands had infant mortality rates which were consistently higher than the national average. Despite the absolute reductions in infant mortality in these regions, from the late 1980s onwards their rates were increasingly high compared to the rate for England and Wales. The

| Map 2 | Ward-level deprivation, 2001: Townsend scores in quintiles with 20 per cent of live births, England and Wales |

Deprivation quintiles

- 5 Most deprived
- 4
- 3
- 2
- 1 Least deprived
- No data available

Scilly Isles

See inset

London inset
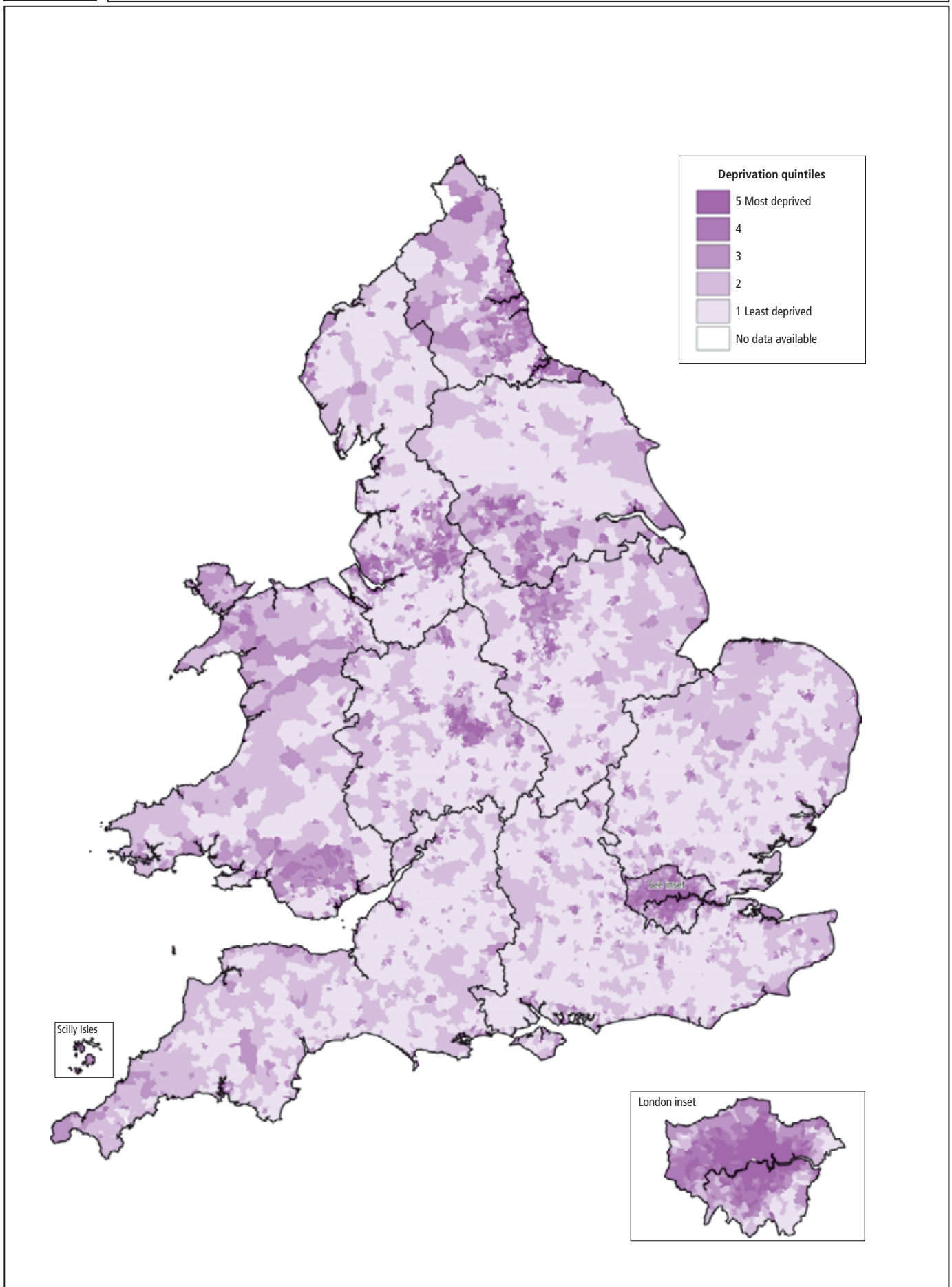
Table 1	Infant mortality rates:[1] Government Office Regions of England, and Wales,[2] 1970–72, 1979–2006											

Government Office Regions of England, Wales — Rate per 1,000 live births

	England and Wales	England	North East	North West	Yorkshire and The Humber	East Midlands	West Midlands	East of England	London	South East	South West	Wales
1970	17.7	17.5	18.8	20.3	20.2	17.5	18.1	15.0	17.7	14.7	15.6	18.2
1971	17.4	17.4	19.1	19.8	19.7	17.5	18.1	14.6	17.6	14.4	15.6	17.4
1972	17.1	17.1	19.3	19.2	19.3	17.5	17.9	14.3	17.5	14.1	15.3	16.8
1973–78	..	..	..	..	..	..	..	..	..	..	..	..
1979	12.4	12.5	12.9	13.2	13.3	11.3	13.7	11.5	12.7	11.8	11.7	10.6
1980	11.9	11.9	12.1	12.5	12.9	11.1	13.0	10.8	12.0	11.2	11.2	11.1
1981	11.2	11.2	10.9	12.0	12.1	10.6	12.4	10.3	11.2	10.6	10.6	10.9
1982	10.5	10.4	10.1	11.1	11.3	10.6	11.5	9.3	10.1	9.7	10.0	10.8
1983	9.9	10.0	9.7	10.4	10.7	10.0	11.3	8.9	9.7	9.2	9.5	9.5
1984	9.5	9.5	9.7	9.9	10.5	9.8	10.6	8.4	9.2	8.7	9.1	9.1
1985	9.3	9.4	9.4	9.8	10.4	9.6	10.4	8.3	9.1	8.4	8.9	8.6
1986	9.2	9.2	9.0	9.8	10.2	9.7	9.8	8.3	9.2	8.5	8.7	8.8
1987	9.1	9.1	8.7	9.5	9.9	9.7	9.9	8.0	9.2	8.5	8.8	8.3
1988	8.7	8.7	8.4	8.9	9.3	9.1	9.8	7.6	9.1	8.2	8.2	7.8
1989	8.3	8.3	8.3	8.5	9.0	8.6	9.9	6.8	8.6	7.7	7.7	7.0
1990	7.5	7.6	8.1	7.9	8.4	7.6	9.3	6.0	7.8	6.7	6.6	6.6
1991	7.0	7.0	7.6	7.3	7.8	7.2	8.8	5.3	7.2	6.1	6.1	6.1
1992	6.4	6.5	7.3	6.7	7.4	6.8	7.7	5.2	6.8	5.3	5.8	5.8
1993	6.2	6.3	6.7	6.5	7.2	6.6	7.3	5.2	6.5	5.1	5.5	5.7
1994	6.1	6.2	6.6	6.5	7.2	6.3	6.9	5.2	6.3	4.9	5.4	5.9
1995	6.0	6.1	6.4	6.4	6.8	6.0	7.0	5.2	6.2	5.2	5.5	6.1
1996	5.9	5.9	6.2	6.4	6.7	5.8	6.9	5.1	6.1	5.0	5.4	5.7
1997	5.8	5.8	5.7	6.3	6.6	5.8	6.9	5.0	6.0	4.9	5.2	5.7
1998	5.7	5.7	5.5	6.4	6.8	5.6	6.7	4.7	5.9	4.6	4.8	5.5
1999	5.6	5.6	5.6	6.3	6.6	5.6	6.7	4.6	5.8	4.6	4.8	5.7
2000	5.5	5.5	5.5	6.1	6.3	5.5	6.5	4.5	5.8	4.4	4.8	5.4
2001	5.3	5.4	5.2	5.7	6.0	5.5	6.5	4.4	5.7	4.4	4.7	5.0
2002	5.3	5.3	4.8	5.7	5.8	5.7	6.7	4.5	5.6	4.4	4.4	4.6
2003	5.1	5.2	4.7	5.6	5.9	5.5	6.8	4.3	5.4	4.2	4.3	4.6
2004	5.1	5.1	4.7	5.6	5.8	5.2	6.8	4.2	5.3	4.0	4.4	4.4
2005	5.0	5.0	4.9	5.5	5.8	5.0	6.4	4.1	5.0	4.0	4.4	4.4
2006	5.0	5.0	5.0	5.5	5.8	5.1	6.4	4.1	5.0	4.0	4.3	4.1

1 Rates are based on rolling averages of annual data for live births and infant deaths (see Methods section).
2 Excludes non-residents of England and Wales.
.. Not available

West Midlands, which had a similar rate to that of England and Wales in 1970–72, tended to have the highest rate from 1979 onwards, with relative ratios to the national average increasing over time. The infant mortality rate in Wales was higher than that in England in 1970, but after that was mostly consistently lower. By 2006 the rate in Wales was only 4.1 infant deaths per 1,000 live births, compared with 5.0 in England.

Local authority types

Infant mortality rates for all the National Statistics Area Classification Supergroups also showed a rapid decline from 1970 (lowest rate in Coastal and Countryside at 15.0; highest rate in London Cosmopolitan at 20.9) to the early 1990s (Table 2 and Figure 4). The falls in infant mortality rates were then more modest so that in 2001 the lowest rate again occurred in areas classified as Coastal and Countryside (4.2), with the highest rate again in London Cosmopolitan (7.6). In 2006, however, the lowest rate was in Prospering UK (4.0) with Cities and Services experiencing the highest rate (5.9).

Plotting the rates for each Supergroup relative to the national level in each year (Figure 5) shows a clearer difference in infant mortality between area types. Compared to the early 1970s, in the early 1980s there was a reduction in the amount of relative difference from national rates. From the early 1990s to the turn of the century, the difference in rates between Supergroups increased markedly, though by 2006 this had reduced somewhat. Throughout the study period (1970–2006), the strong tendencies were that Cities and Services and London Cosmopolitan had high infant mortality rates relative to the national level while Coastal and Countryside and Prospering UK had relatively low rates. The London Centre area had the most volatile relative ratios. This could be a 'small number' problem since this area had around 400 infant deaths per year in the early 1970s, which reduced to less than 100 per year in recent years. The counts of live births used as the denominators were also relatively small.

Ward level deprivation
Infant mortality rates around each census year from 1971 to 2001 (Table 3 and Figure 6), showed a strong, positive relationship with deprivation, with significant differences between quintiles (except between quintiles 1 and 2 in 1981 and 1991 when the confidence intervals overlap). The 2004–06 rates, centred around 2005, also showed the same relationship. Such is the reduction over time in levels of infant mortality that the rates in all deprivation quintiles in 1981 were below even the least deprived

Figure 2 — Infant mortality rates,[1] Government Office Regions of England, and Wales,[2] 1970–72, 1979–2006

Government Office Regions of England, Wales
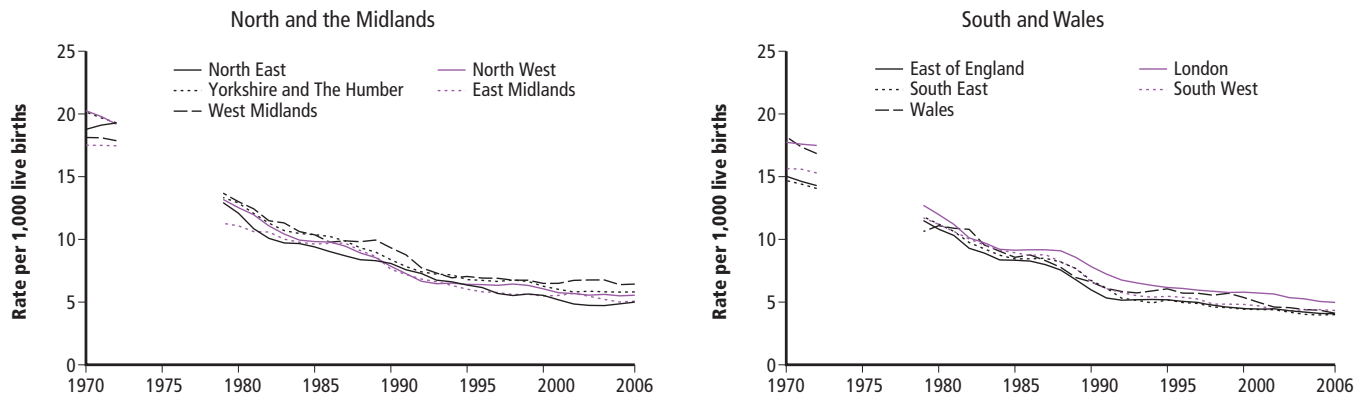
1 Rates are based on rolling averages of annual data for live births and infant deaths.
2 Excludes non-residents of England and Wales.

Figure 3 — Infant mortality rates[1] for Government Office Regions, and Wales, relative to England and Wales,[2] 1970–72, 1979–2006

Government Office Regions of England, Wales
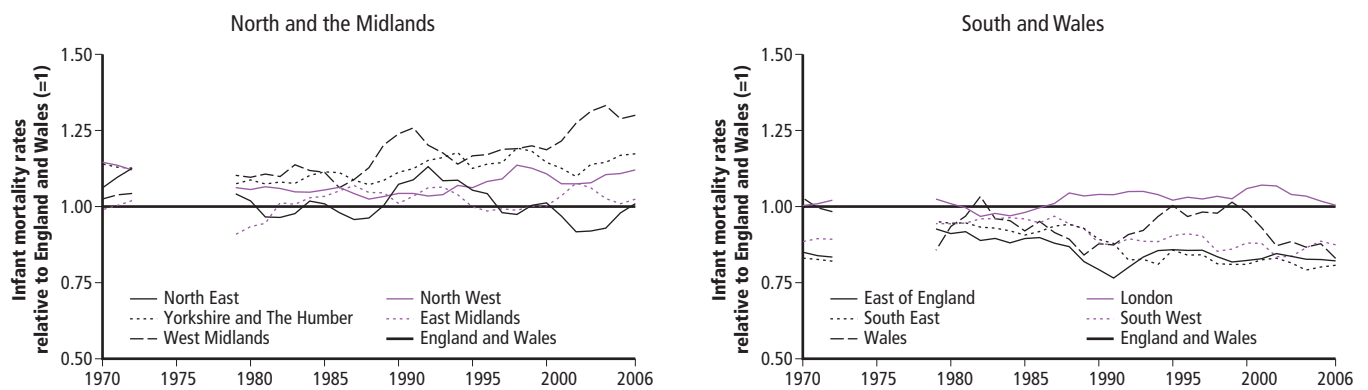
1 Rates are based on rolling averages of annual data for live births and infant deaths.
2 Excludes non-residents of England and Wales.

areas in 1971, a pattern which was repeated in 1991. This was no longer the case by 2001 when reductions in rates had slowed down, but all 2001 quintiles had significantly lower rates than their equivalents in 1991. By 2005, the only quintile with rates which were significantly lower than its counterpart in 2001, was quintile 5, containing the most deprived areas.

Inequalities between differently deprived areas are highlighted more clearly in Figure 7 which illustrates the ratio of infant mortality rates in the most to least deprived areas. Rate ratios above one occur when rates in quintile 5 are higher than those in quintile 1. Over the study period, although the ratio of rates in the most and least deprived areas narrowed between 1971 and 1981 from 1.40 to 1.26, it widened to 1.59 in 1991 and 2.19 in 2001. By 2005, the relative inequality reduced to 1.87. The 95 per cent confidence intervals, illustrated in Figure 7, show that the ratios at each time point were statistically significantly different from each other.

Of the wards which remained in the same deprivation quintile in all four censuses, 15 per cent were in quintile 1 (least deprived) and five per cent were in quintile 5 (most deprived). For the wards that remained in quintile 1 the infant mortality rate in 1971 was 14.0 and in 2005 was 3.5. The wards which remained in quintile 5 had significantly higher rates compared to the wards that remained in quintile 1 in both 1971 (20.8) and 2005 (6.6), but the absolute reduction was larger (10.5 reduction in quintile 1; 14.2 reduction in quintile 5). The rates for wards remaining in the most and least deprived quintiles were only marginally different to the rates calculated for all wards in quintiles 1 and 5 in 1971 and 2005. This suggests that current area deprivation is influential on mortality outcomes rather than there being a cumulative advantage or disadvantage.

In wards which became less deprived, infant mortality rates decreased from 17.5 in 1971 to 4.5 in 2005, a reduction of 13.0. Wards which became relatively more deprived experienced less of a decrease since rates in these locations were 17.1 in 1971 and 5.2 in 2005, a reduction of 11.9. A slightly bigger disparity exists for those wards which became less deprived by two or more quintiles over time since areas with particularly reduced deprivation had a rate of 4.0 in 2005 compared with 17.3 in 1971, a decrease in the infant mortality rate of 13.3. While the rate in wards which became much more deprived by two or more quintiles was not as high in 1971 (16.8) as in other areas, the rate in 2006 (5.4) was relatively high, compared with wards which became less deprived. Wards which became relatively less deprived experienced a reduction in infant mortality rates greater than that for national rates in England and Wales.

Table 2	National Statistics 2001 Area Classification for local authorities: infant mortality rates[1] for Supergroups, England and Wales,[2] 1970–72, 1979–2006

Supergroups   Rate per 1,000 live births

	Cities and Services	London Suburbs	London Centre	London Cosmopoli-tan	Prospering UK	Coastal and Countryside	Mining and Manu-facturing
1970	19.6	16.5	18.9	20.9	15.4	15.0	19.5
1971	19.6	16.1	19.2	20.6	15.1	14.4	19.1
1972	19.4	15.7	19.0	20.6	14.9	13.8	18.6
1973–78	..	..	..	..	..	..	..
1979	13.8	13.3	12.7	13.6	11.6	9.5	12.7
1980	13.0	12.2	11.9	12.9	11.0	9.9	12.3
1981	12.4	11.0	11.6	12.2	10.5	9.7	11.5
1982	11.5	9.9	11.0	10.9	9.6	10.2	10.7
1983	11.0	9.4	10.5	10.7	9.1	9.8	10.0
1984	10.6	9.2	9.3	10.5	8.6	9.4	9.6
1985	10.6	9.1	8.4	10.6	8.4	9.0	9.3
1986	10.4	9.2	8.8	10.7	8.4	8.8	9.1
1987	10.1	9.2	8.9	10.6	8.3	8.7	9.0
1988	9.5	9.0	9.4	10.2	8.0	8.1	8.7
1989	9.2	8.5	8.9	9.3	7.5	7.7	8.5
1990	8.5	7.6	8.3	8.7	6.6	6.8	7.9
1991	8.0	7.0	7.5	8.3	6.0	6.3	7.2
1992	7.5	6.3	6.9	8.2	5.5	5.6	6.7
1993	7.2	5.9	6.7	8.2	5.4	5.6	6.4
1994	7.0	6.0	6.1	8.0	5.2	5.6	6.5
1995	6.8	6.1	5.6	7.9	5.2	5.7	6.4
1996	6.8	6.1	5.4	7.6	5.0	5.4	6.3
1997	6.8	5.9	5.3	7.7	4.9	5.2	6.1
1998	6.7	5.9	5.8	7.3	4.7	4.9	5.9
1999	6.7	5.9	5.3	7.3	4.6	4.6	6.0
2000	6.7	5.8	5.4	7.4	4.4	4.4	5.7
2001	6.8	5.6	4.8	7.6	4.4	4.2	5.2
2002	6.7	5.4	4.9	7.5	4.3	4.4	5.0
2003	6.4	5.2	4.6	6.9	4.3	4.3	5.1
2004	6.2	5.5	4.6	6.1	4.2	4.4	5.1
2005	6.0	5.5	4.3	5.8	4.0	4.6	5.2
2006	5.9	5.6	4.2	5.7	4.0	4.7	5.2

1 Rates are based on rolling averages of annual data for live births and infant deaths (see Methods section).
2 Excludes non-residents of England and Wales.
.. Not available

Table 3	Infant mortality rates: Townsend deprivation quintiles, England and Wales, 1970–72 to 2004–06

                                      Rate per 1,000 live births

Deprivation quintile	1970–72	1980–82	1990–92	2000–02	2004–06
Q1: Least deprived	14.5	10.0	5.7	3.5	3.5
Q2	15.8	10.5	6.0	4.4	4.1
Q3	17.2	11.1	6.6	5.0	4.9
Q4	19.3	11.9	7.5	6.1	5.7
Q5: Most deprived	20.4	12.6	9.0	7.7	6.5
England and Wales	17.4	11.2	7.0	5.3	5.0

Wards which became relatively more deprived had lower infant mortality rates than the national average in 1971, but higher rates by 2005.

Ward level deprivation within Government Office Regions

It was noted above that levels of infant mortality vary between GORs and also by ward level of deprivation. To investigate whether the relationship

with ward deprivation is evident within regions, results are presented here for East of England and for the West Midlands – regions which generally have relatively low and high infant mortality rates respectively. Note that the deprivation quintiles are relative to the national distribution so the number of live births in each quintile within GORs may not be equal.

Figure 8 shows that in both East of England and the West Midlands there was evidence of increasing infant mortality with increasing deprivation, as noted above for all wards in England and Wales. The differences in rates between adjacent deprivation quintiles in each year and GOR were not necessarily significant (given small numbers), but the overall pattern is clear and the differences between quintiles 1 and 5 were significant. In both the East of England and the West Midlands, the infant mortality rates progressively decreased across the deprivation gradient from one census time point to the next. Reflecting the generally advantageous infant mortality position in East of England, levels of infant mortality were consistently lower compared with the West Midlands. Nevertheless, even in East of England inequalities between the most and least deprived areas were evident. For example, in 2001, the ratio between rates in the most and least deprived wards was 2.73, a slightly greater disparity than in West Midlands where the rate ratio was significantly lower (2.50), even though the rates in the East of England were lower. Similar situations exist within all the other GORs, with levels of infant mortality increasing with deprivation but reducing in each deprivation quintile overall over time.

Ward level deprivation within local authority types

Similarly, to identify whether the relationship between infant mortality and deprivation existed within local authority area types, rates were calculated for the Prospering UK and Cities and Services Supergroups – area types which were shown above to experience relatively low and high infant mortality respectively. The deprivation quintiles are relative to the national distribution so the number of live births in each quintile within Supergroups may not be equal.

Figure 9 shows that the relationship between infant mortality and deprivation observed for all wards also exists within area type. Over time, rates declined in all deprivation quintiles by area type with rates in Prospering UK consistently below those in City and Services, reflecting the overall differences between the area types. Despite the classification label of Prospering UK, local authorities of this type still contain relatively deprived areas and inequalities exist between the most and least deprived areas. In Prospering UK areas, rate ratios increased significantly from the situation in the early 1970s when rates in quintile 5 were 1.34 times those in quintile 1, to 2.11 around 2001, but reduced a little by 2004–06 to 1.99. A similar pattern exists for wards in Cities and Services areas in which the quintile 5 to quintile 1 inequalities increased significantly from 1.28 around 1971 to 2.29 at the start of the 21st century but levelled off to 2.26 by 2004–06. In other area types, the relationship with deprivation described here is also found with similar reductions over time.

Discussion

Examining trends in population health for subnational geographies can be severely hampered when data are released over time in different formats, especially when the areas for which data are disseminated change. To investigate trends in infant mortality, an annual time-series of vital statistics data from the early 1970s to 2006 was assembled, harmonised to the ward geography used for the 2001 Census. Unfortunately, the subnational time-series was incomplete between 1973 and 1978.

At national level in England and Wales, infant mortality rates fell rapidly from the early 1970s and into the 1980s. While rates then continued to fall, the reduction slowed. Nevertheless, in 2006 the national rate of infant mortality was at an all time low of 5.0 deaths to infants aged under one year per 1,000 live births. Broadly, this pattern was also seen when the ward level data were aggregated into Government Office Regions, local

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Figure 4 — Infant mortality rates[1] by Supergroups, 1970–72, 1979–2006

England and Wales[2]
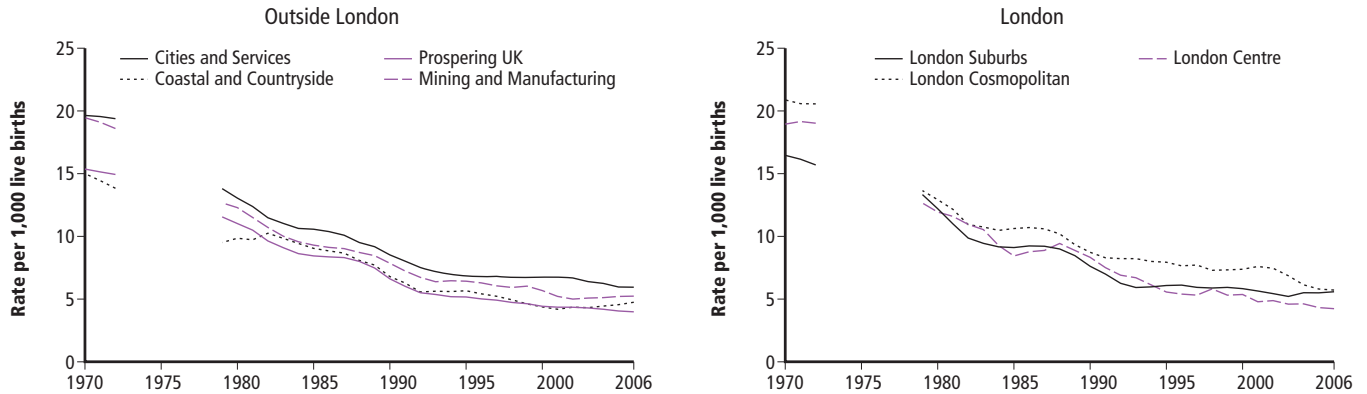
Outside London

London

1 Rates are based on rolling averages of annual data for live births and infant deaths.
2 Excludes non-residents of England and Wales.

Figure 5 — Infant mortality rates[1] for Supergroups, relative to England and Wales,[2] 1970–72, 1979–2006

England and Wales[2]
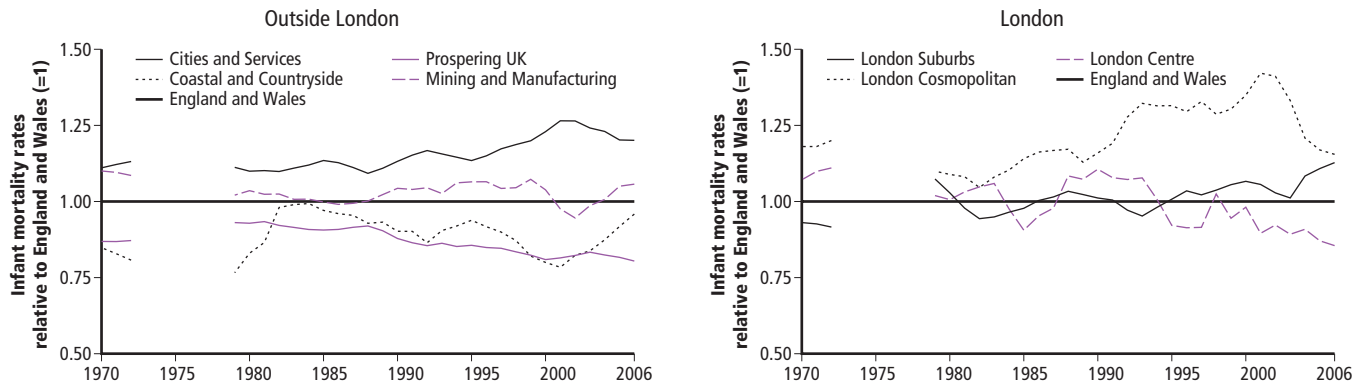
Outside London

London

1 Rates are based on rolling averages of annual data for live births and infant deaths.
2 Excludes non-residents of England and Wales.

Figure 6 — Infant mortality rates by deprivation quintile, 1970–72 to 2004–06

England and Wales

Q1: Least deprived
Q2
Q3
Q4
Q5: Most deprived
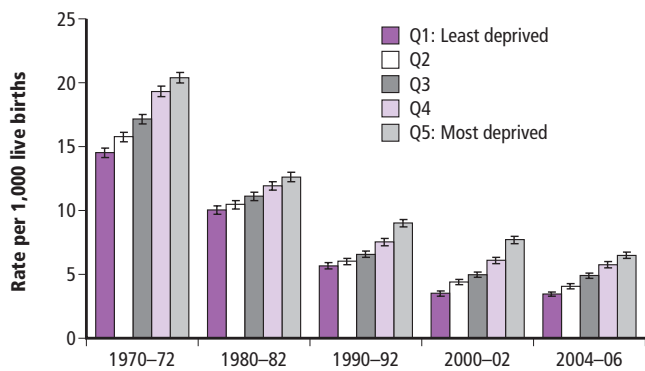
Figure 7 — Rate ratios of infant mortality rates: most to least deprived areas, England and Wales, 1970–72 to 2004–06

England and Wales
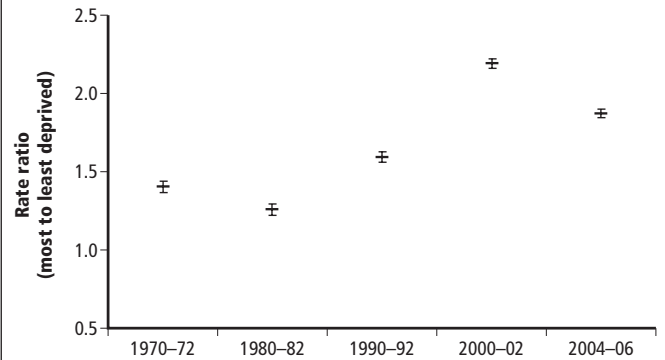
Figure 8 | Infant mortality rates by deprivation quintile and Government Office Region, 1970–72 to 2004–06
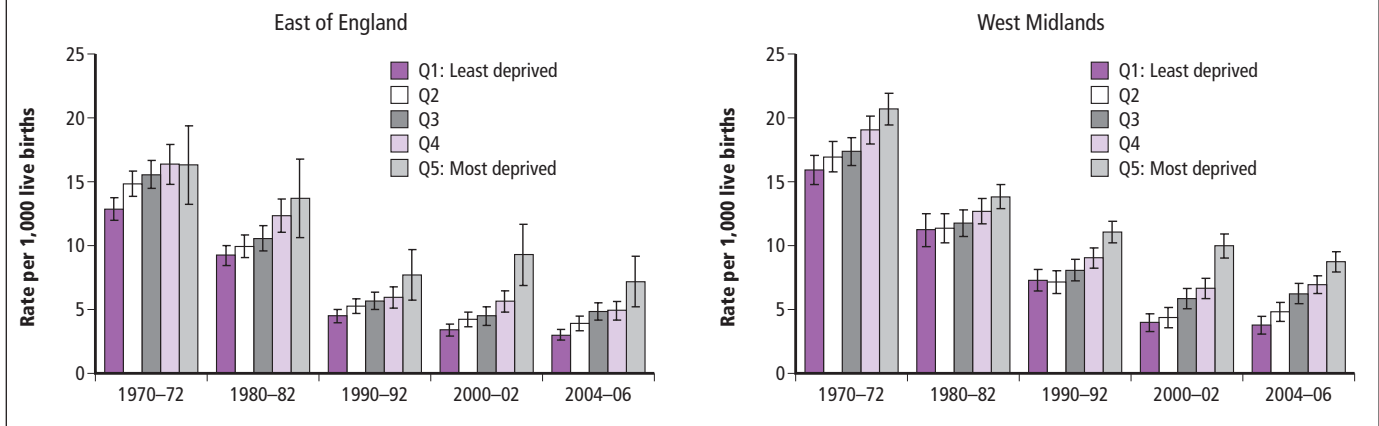
Figure 9 | Infant mortality rates by deprivation quintile and Supergroup, 1970–72 to 2004–06
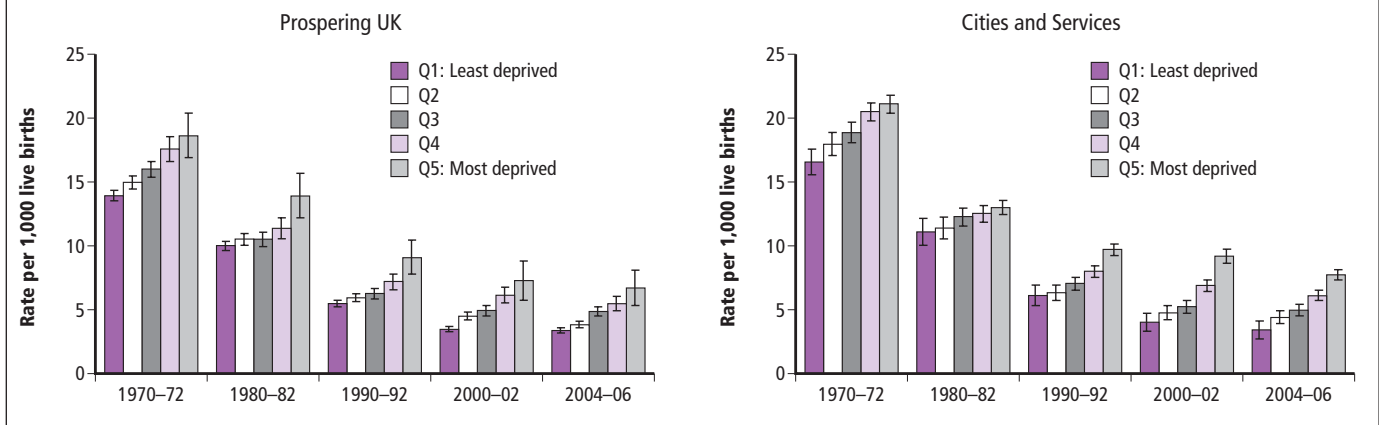
authority area types and quintiles of deprivation. However, while all areas experienced a decrease in levels of infant mortality, different locations and area types did not see the same pace of reduction. For example, relative to the national level, infant mortality in Yorkshire and The Humber, the North West and the West Midlands or the area types Cities and Services and London Cosmopolitan remained high. Southern regions and non-urban area types had relatively low infant mortality rates. Disparities between both regions and area types reduced a little between 2001 and more recent data for 2004–06, but there was more difference in infant mortality by local authority type than by region. Although the geographies and area types are defined differently, the regional north-south differentials and urban-rural area type variations are consistent with infant mortality rates previously reported for the 1970s, 1980s,[51] and 1990s.[22]

Between the early 1970s and 2006 levels of infant mortality reduced for all quintiles of deprivation over time but the relationship between infant mortality and deprivation was essentially consistent with more deprived areas having relatively high rates compared to the least deprived areas. This relationship holds for deprivation quintiles within regions and across local authority area types. What is particularly telling is that deprived wards had relatively poor infant mortality rates even within larger areas with apparently advantageous rates. Similarly, the least deprived wards within regions and area types with relatively poor infant mortality experienced lower rates. Generally, the infant mortality/deprivation gradient existed across all areas, but at a level tempered up or down in relation to the larger area geography. These infant mortality-deprivation relationships are in

line with previous studies[28,29,30,31] especially that this relationship persists within regions.[22] At national level, recent infant mortality rates are at a similar level to the Netherlands (4.7 per 1,000 live births), Canada (4.8), New Zealand (5.0) and Italy (5.0). At 3.5 per 1,000 live births, the infant mortality rate in the least deprived areas of England and Wales (wards in quintile 1 using the Townsend index) are lower than national rates in France (4.2) and Germany (4.3) but not as low as Norway (3.3), Japan (3.2) and Iceland (2.9). The most deprived areas in England and Wales (wards in quintile 5) have rates (6.5) similar to Croatia (6.4) and Malta (6.5).[52] Note that these international comparisons must be interpreted with care due to potential differences in data quality, definitions and time periods.

Researchers and policy makers have tended to focus on the social and biological factors which are associated with high infant mortality.[10,12,13,14,15,53,54] The research reported here has shown that small area deprivation is more strongly related to levels of infant mortality than larger area geography and that a reduction in disparities between the most and least deprived areas between the early 1970s and 1980s was paralleled by rapid reductions in infant mortality. When ward level inequalities increased during the 1990s, the reductions in rates for regions and local authority types slowed down and the relative differences increased. From 2001 to 2004–06, when inequalities in infant mortality by deprivation narrowed again, there was a similar reduction in rate differences between larger geographic regions. It should be acknowledged that the most recent rates have been related to deprivation calculated for 2001 and that any changes in the geography of deprivation in the intervening period are not accounted for.

Higher rates of infant mortality in more deprived communities may be the result of many factors.[22] For example, more deprived areas tend to have much higher rates of teenage pregnancies, babies born with a low birthweight and people of low social class (and therefore on low income); all of which are associated with higher risk of infant mortality. For the general population, during the latter part of the 20th century, health has become more strongly aligned with deprivation than in the mid-century, due in part to both health-selective migration and to long-term immobility in deprived places.[55,56]

On both conceptual and technical levels, the choice of which deprivation index and indicator variables to use has been subject to wide debate.[47,57,58] However, it is worth noting that the various commonly-used deprivation measures tend to correlate closely[59,60] and that a strong relationship between deprivation and health is consistently found, however measured. The reasons for this relationship existing and persisting are complex but include that health and health-related behaviours tend to be poorer in more disadvantaged areas and that the range of resources and facilities which might promote health are less common in poorer areas.[61]

Deaths during the first year of life tend to be concentrated in the first week (early neonatal) or month (neonatal) and, during this period, causes of infant deaths tend to be different from those occurring later. The infant mortality rate can therefore be broken down into the early and late neonatal rates and the postneonatal mortality rate (deaths after 28 days). During the late 20th century the declines in neonatal mortality rates were relatively steady at national level but the decline in postneonatal rates was much smaller. As noted before, social class differences in infant mortality rates have been found to be wider in the postneonatal than the neonatal period.[15] Given changes in the major causes of infant deaths over time, an examination of the association between socio-economic and health care factors (such as the fall in sudden infant deaths) may be informative.

Previous research has found that when small areas become more or less deprived over time the health experience of the population responds accordingly.[49] Although infant mortality reduced even in areas where relative deprivation worsened, the biggest reductions were found for those areas where deprivation eased. Even in relatively advantaged regions and area types, to complement policy aimed at addressing social inequalities, resources targeted at relatively deprived areas may help reduce infant mortality.

Key findings

- Infant mortality rates for England and Wales fell rapidly from the early 1970s and into the 1980s and then slowed to 2006

- Infant mortality fell in subnational areas, but this was not evenly distributed. The Government Office Regions of Yorkshire and The Humber, the North West and the West Midlands and the ONS local authority types Cities and Services and London Cosmopolitan experienced relatively large absolute reductions in infant mortality but their rates remained high compared with the national average

- Within all Government Office Regions and local authority types a strong relationship existed between ward level deprivation and infant mortality rates, with highest rates in the most deprived areas

- Infant mortality reduced over time, even in the most deprived areas, with a narrowing of absolute differences in rates between areas

- Wards which became relatively less deprived experienced a reduction in infant mortality rates greater than that for national rates in England and Wales

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Standardised Mortality Ratios – the effect of smoothing ward-level results

**Allan Baker, Martin Ralphs
and Clare Griffiths**
Office for National Statistics

Geographical indicators of mortality provide one of the most important means of assessing the health of populations and are particularly effective in identifying inequalities in health. Geographical mortality indicators have regularly been produced by the Office for National Statistics, but not normally for areas smaller than local authorities. In order to allow variations in mortality within local authorities to be examined, in 2006 ONS published Standardised Mortality Ratios (SMRs) for wards in England and Wales, based on deaths in 1999–2003. For mortality indicators for small populations, based on small numbers of deaths, there is however a risk that results will be unstable, making geographical patterns hard to interpret. To examine whether this problem could be overcome, methods for smoothing SMRs in time and space were considered, with conclusions published in a methodology report in 2007. This article presents results from that work, illustrating the geographical patterns in mortality that emerge following smoothing of the ward-level SMRs.

Introduction

The Office for National Statistics (ONS) and its predecessor organisations have long reported on geographical differences in mortality. Although analyses have regularly been produced for regions and local authority administrative areas, they have not been routinely produced for smaller areas. When, in 2001, ONS reported on the large inequalities in life expectancy at birth that exist between local authorities in the UK, it was noted that the analysis was subject to a number of limitations.[1] As local authorities vary substantially in size, ananalysis at that geographical level could not examine variations in mortality within large authorities such as Birmingham and Manchester. It was also noted that there are known to be substantial variations in mortality at small area level within most local authorities that cannot be captured by authority level analysis.

In order to address the need to examine variations in mortality within local authorities, in April 2006 ONS published Standardised Mortality Ratios (SMRs) for wards in England and Wales, based on deaths under age 85 in 1999–2003.[2] (Ward-level figures for life expectancy at birth for the same period were also published in June 2006.)[3] The results demonstrated that big variations in mortality could exist within local authorities. In Liverpool, for example, a large authority with an overall high level of mortality, SMRs for wards ranged from 84 to 204. Even though mortality data were aggregated over a five-year period, many of the published results were however still based on rather small numbers of deaths. This leads to a risk that the SMRs may be unstable, with results illustrating chance variations in numbers of deaths between wards, rather than real underlying patterns of mortality.

To examine this potential problem some research was carried out to consider basic methods for smoothing the ward-level SMRs in time and space.

Smoothing

Abrupt variations in data, whether in a time series or between geographical areas, may make it hard to detect meaningful underlying patterns. Such variations may be due to real, underlying changes; to noise (caused by measurement or sampling error or random variation); or to a mixture of these. Smoothing is the application of procedures to remove noise from data. This can be done over time, across space, or a combination of the two. The objective of smoothing methods is to enhance the visibility of underlying trends in noisy data.

With ward-level SMRs, noise can arise from random mortality – numbers of deaths that cannot be predicted and which do not correlate with an underlying component. The aim of smoothing SMRs is therefore to reduce or eliminate this noise, to better uncover the underlying pattern.

The magnitude of noise is related to both population size and underlying mortality rates but smoothing can help to stabilise rates based on small numbers of deaths. Time smoothing can be used to reduce abrupt changes in mortality from year to year to reveal underlying local variation. The SMRs were also considered amenable to spatial smoothing as there is a high probability that underlying patterns of mortality may well cross small area boundaries. Spatial smoothing can therefore provide indications of possible patterns that might otherwise be difficult to detect.[4] Data that have been smoothed can be used to produce maps from which geographical patterns previously hidden by noise can be uncovered.[5]

Ideally, smoothing will obtain the best estimate of underlying mortality by reducing noise but still retain useful information about local variation. While noise is reduced as much as possible, substantial local differences should still be evident if the smoothing procedure is effective. A smooth estimate of underlying mortality does not necessarily mean a better estimate. It is certainly possible to over-smooth. For example, the smoothest estimate for each ward is the national mortality rate. While this is certainly very stable, it has the unwanted side effect of removing all local variation from the data.

Data and methods

A note on the calculation and interpretation of SMRs can be found in Box One. Ward-level results were calculated using deaths registered in England and Wales from 1999–2003. Published figures were based on five aggregated years of data to try to provide a reasonable number of deaths for each ward. The two years either side of 2001 were selected, as population estimates for wards were only available for 2001 and 2002. Only records where the age at death was less than 85 were selected as it is known that some wards have particularly large proportions of their total population in nursing homes. As age-specific mortality in nursing homes is higher than in the general population it may appear that death rates in these areas are unexpectedly high. Deaths at age 85 and above were therefore excluded from the calculations to partly ameliorate this effect. Deaths were assigned to 2001 Census Standard Table wards based on the place of usual residence of the deceased.

The ward populations used were 2001 experimental population estimates for census wards. Due to the small populations of the City of London and Isles of Scilly, population estimates were not produced for the individual wards within these areas, but were calculated for the two local authorities as a whole.

The SMRs were standardised using age-specific rates for England and Wales from 1999–2003. These were based on deaths registered in 1999–2003 and mid-year population estimates from 1999–2003. By aggregating

Box one

Standardised Mortality Ratios (SMRs)

SMRs are a means of measuring mortality which takes into account the age structure of the population being considered. They are calculated by using a standard set of age-specific death rates (such as results for England and Wales) which are used to calculate how many deaths would be expected in a particular population, given its size and age structure. This gives a total number of 'expected' deaths. This figure is then compared with the actual number of 'observed' deaths which did take place. For example, given national death rates the number of deaths in a particular ward might be expected to be 80 but only 40 were observed. The SMR is then the ratio of the observed to expected or 40 divided by 80. For presentational purposes the ratios are normally multiplied by 100. The formula is therefore:

$$SMR = \frac{Observed}{Expected} \times 100$$

An SMR could therefore be defined as the ratio of the observed number of deaths in a ward to the number expected if the ward had the same age-specific rates as England and Wales.

As national death rates were used as the standard for the results, the SMR for England and Wales is 100. The results for wards therefore allow their mortality experience to be compared with the national average. If an SMR is less than 100 that means the number of deaths for a ward was less than would have been expected. Conversely if an SMR is greater than 100 the number of deaths was greater than expected.

mortality data for five years, the SMRs published by ONS had already, in effect, been smoothed over time. In order to consider other mechanisms for time smoothing the data, we also used SMRs calculated for the single years 1999–2003, and results for three periods where deaths were aggregated over three years: 1999–2001, 2000–02, and 2001–03. All of the SMRs, whether for five, three or single years, were calculated using only the ward population estimates for 2001 however.

Using these SMRs, a selection of simple time and space smoothing techniques were defined and applied to the ward-level results. The objective was to establish whether spatial smoothing methods could provide more stable estimates of underlying patterns of mortality from the published ward-level SMRs, and to identify which approaches were most suitable for application.

A range of simple techniques for smoothing in space were tested, by replacing the individual value for each target ward by a weighted average of itself and its neighbours. Neighbours were defined as first order (immediate) and second order (neighbours of first order neighbours) and with two types of weights: equal (where all wards under consideration have equal influence) and tapering over space (where the contribution of neighbouring wards tails off as we move farther away from the target ward).

The number of neighbours per ward ranged from 0 (for one area: Isles of Scilly) to 19 first order neighbours and 43 second order neighbours. The average number of first order neighbours per ward was 5.9 and the average number of second order neighbours was 14.3.

The best performing spatial smoother in this study used weights that differentiated between first and second order neighbours, with slightly

higher weight for the first order neighbours relative to the second order ones. The techniques chosen, and methods used in the analysis, are described in detail in a report published as part of the National Statistics Methodological Series.[6] The report includes evaluations of the performance of the simple smoothing solutions defined, identifies the most suitable simple smoothing solution for the SMR data under analysis and indicates the direction for future work in relation to smoothing SMRs.

The published ward SMRs were for both sexes combined, and males and females separately (standardised with sex-specific mortality rates). The smoothing study however used examples only for all persons, and it is these results which are illustrated here.

Results

The 8,797 wards for which SMRs were calculated had an average population in 2001 of just over 5,800 for those aged under 85. Population size differed considerably across England and Wales, from just under 1,000 in some of the smallest wards in Wales, to over 35,000 in the largest ward in Birmingham. This variation was reflected in the annual number of deaths. In 2001 the mean number of deaths under age 85 per ward was 41. Three wards however had only one death in this year, while one ward in Birmingham had 241.

SMRs based on data for a single year would, for some wards, therefore be based on very small numbers of deaths, with the risk of inherent instability. This was evident when SMRs for the five single years from 1999–2003 were examined. Standard deviations for the SMRs, which quantify variability by measuring the dispersion of values from the mean, differed considerably between wards. Standard deviations ranged from 1 to 74. (If all SMRs had been the same in each of the five years the standard deviation would have been zero and increasing results indicate greater variability.) Thus while a small number of wards had SMRs which were similar across all years, others, such as one ward in Northampton, had SMRs which ranged between 59 and 208. Just over three-quarters of wards had a standard deviation which was greater than 10.

Using results for a single year would therefore produce geographical patterns from which it would be hard to discern underlying patterns of mortality. This can be seen in Map 1 where SMRs based only on deaths in 2001 are illustrated. The map presents the SMRs grouped into six categories, each containing an equal numbers of wards. (In the map's legend, ranges for the categories appear to overlap as they have been rounded to whole numbers.) Although some patterns are apparent in the map, because of the variability of the SMRs for single years, it is hard to judge whether these are real, reflecting genuine underlying differences in mortality between areas, or whether they are spurious, a result of random variation in numbers of deaths.

Map 2 illustrates the SMRs which were published by ONS, with data aggregated for 1999–2003 — results which have in effect been smoothed in time. While Map 1 contains 1,466 wards in each category, in Map 2 there are more wards in the middle ranges and fewer wards in the highest and lowest categories (1,272 wards in the highest range of SMRs and only 732 wards in the lowest range). Map 2 does still show some sharp variations in mortality between wards, but patterns are easier to see than in Map 1. Despite the time-smoothed results being more stable than those for single years, the mortality patterns in Maps 1 and 2 do appear similar in some areas, and it may be surprising that there is not greater contrast

between the two. This may be partly related to the division of results into sixths and, in particular, to the width of the upper and lower bands used. Some wards had big differences between SMRs for 1999 and 1999–2003, for example, one ward had an SMR of 226 for 1999 but only 126 for 1999–2003. The latter result still placed this ward in the sixth of areas with the highest SMRs however, and so it is shaded the same in both Maps 1 and 2.

Using the best performing spatial smoother in our study, the time-smoothed SMRs illustrated in Map 2 were also smoothed in space. The advantages of this spatial smoothing can clearly be seen in Map 3, especially when it is compared with Map 2. Patterns of mortality, which cross ward boundaries, are far easier to discern and it is simple to see, for example, the areas of high mortality around urban areas in the north east and north west, and across south Wales and parts of inner London. Compared with Map 2, there is a further concentration of wards in the central ranges. In Map 3 only 109 wards had an SMR in the lowest range and 769 had an SMR in the highest range. In contrast the middle two ranges (SMRs of 83–93 and 93–105) had 2,511 and 2,114 wards, respectively.

Discussion

The results shown here illustrate the potential benefit of smoothing ward-level SMRs across time and space, by reducing noise and thereby revealing underlying patterns of mortality.

Although our initial findings are promising, there are some challenges and problems raised by smoothing. Different smoothing techniques will produce different results when applied to the same data. Within a given technique, the outcome of smoothing is also closely linked to the choice of smoothing parameters (time span, area covered, specific weights): the larger the degree of smoothing, the smaller the variance of the smoothed value (by reducing the size of random errors) and the larger the bias (the amount that the smoothed value is different from the raw value). Reduction in variance at the cost of increased bias in the smoothed value is the fundamental trade-off in all smoothing methods. Some data users may be concerned about the differences between raw and smoothed values (which may be large), although the potential benefits of smoothing may outweigh these concerns.

Although the smoothed SMRs we produced do illustrate the added benefit provided by smoothing in space, the spatial smoothers that we considered were very simple, based on contiguity between neighbouring wards. These were selected as this was the first project by ONS to examine spatial smoothing and simple methods were thought appropriate to best convey the essence of the technique. They also provided results which could be used in an exploratory way by allowing the visualisation of underlying geographical patterns of mortality. Further work is needed however to compare the performance of these simple methods with more sophisticated techniques. Bayesian inference methods, in particular, have been advocated as smoothing solutions when mapping the risk of disease or mortality.[7,8,9,10] The investigation of such methods would help to ensure best practice for the publication of smoothed mortality indicators for small areas in the future.

Our study showed however that the time-smoothed estimates, calculated using five years of mortality data, performed well in our evaluation. The published SMRs for 1999–2003 therefore still retain an inherent value.

Map 1	SMRs for all persons aged under 85, 2001, England and Wales

SMRs

122 to 341
105 to 122
93 to 105
83 to 93
70 to 83
9 to 70

Scilly Isles

London inset

Map 2 SMRs for all persons aged under 85, 1999 to 2003, England and Wales

SMRs

- 122 to 341
- 105 to 122
- 93 to 105
- 83 to 93
- 70 to 83
- 9 to 70

Scilly Isles

London inset
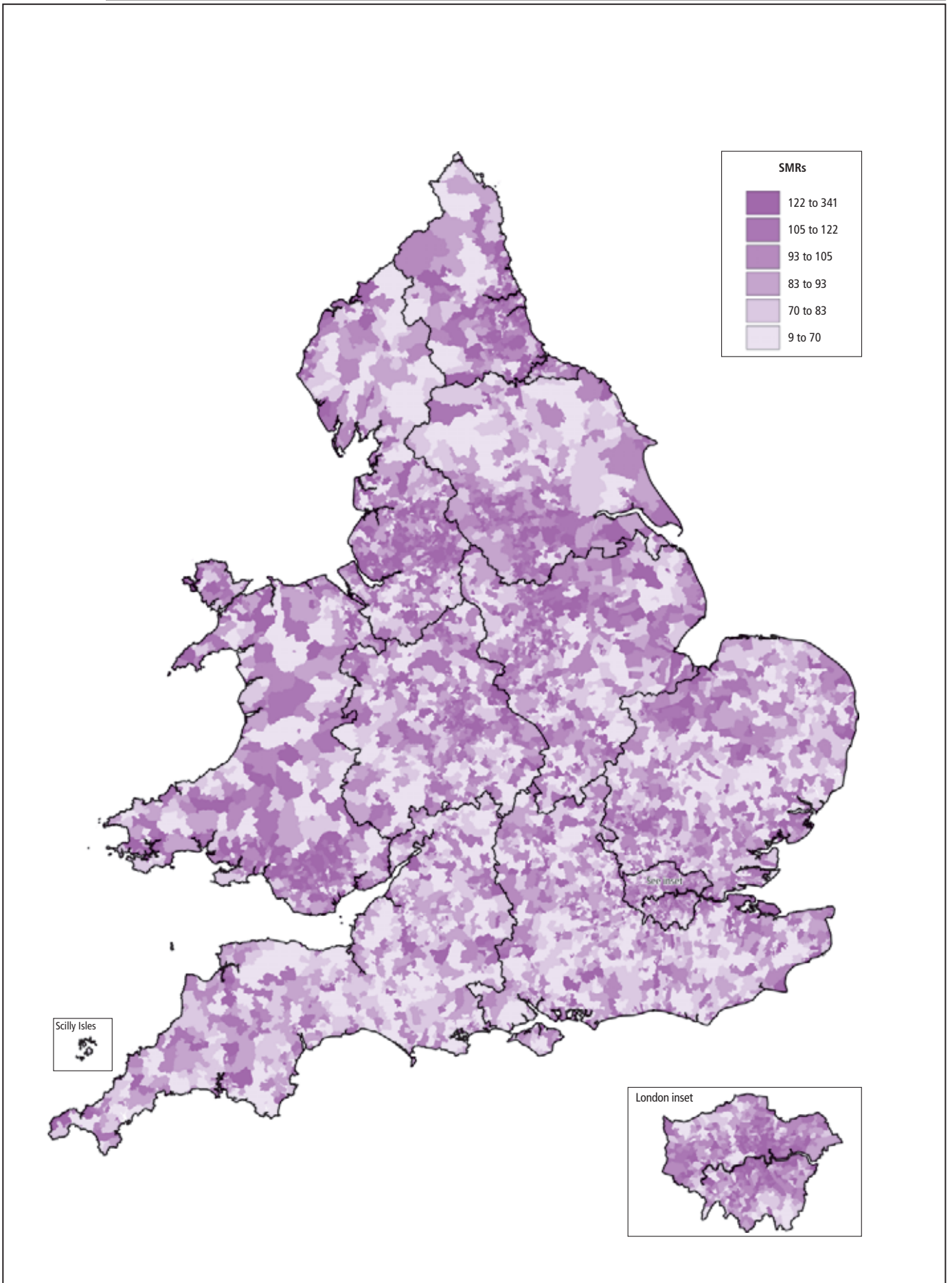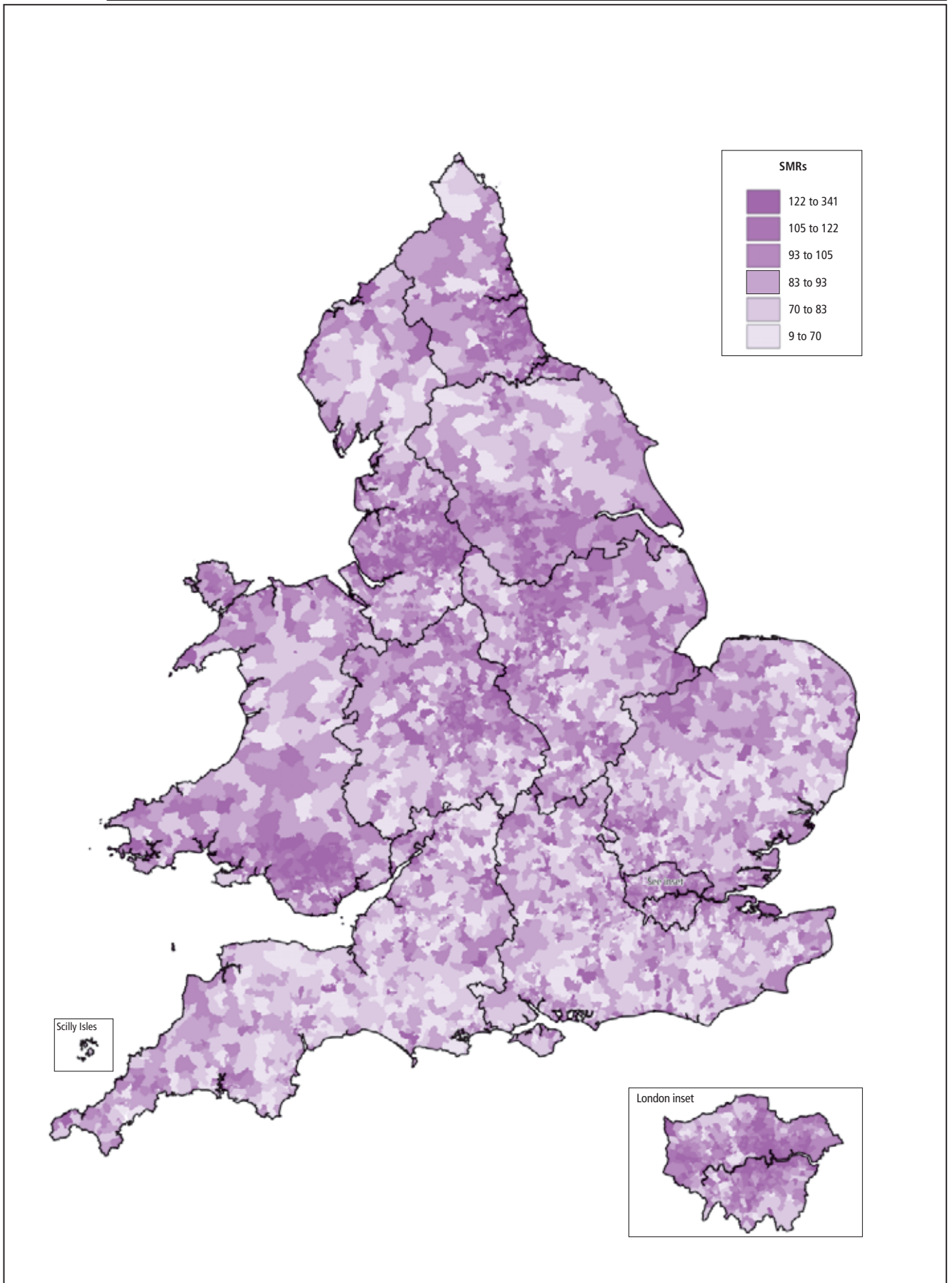
Map 3	Time and spatially-smoothed SMRs for all persons aged under 85, 1999 to 2003, England and Wales
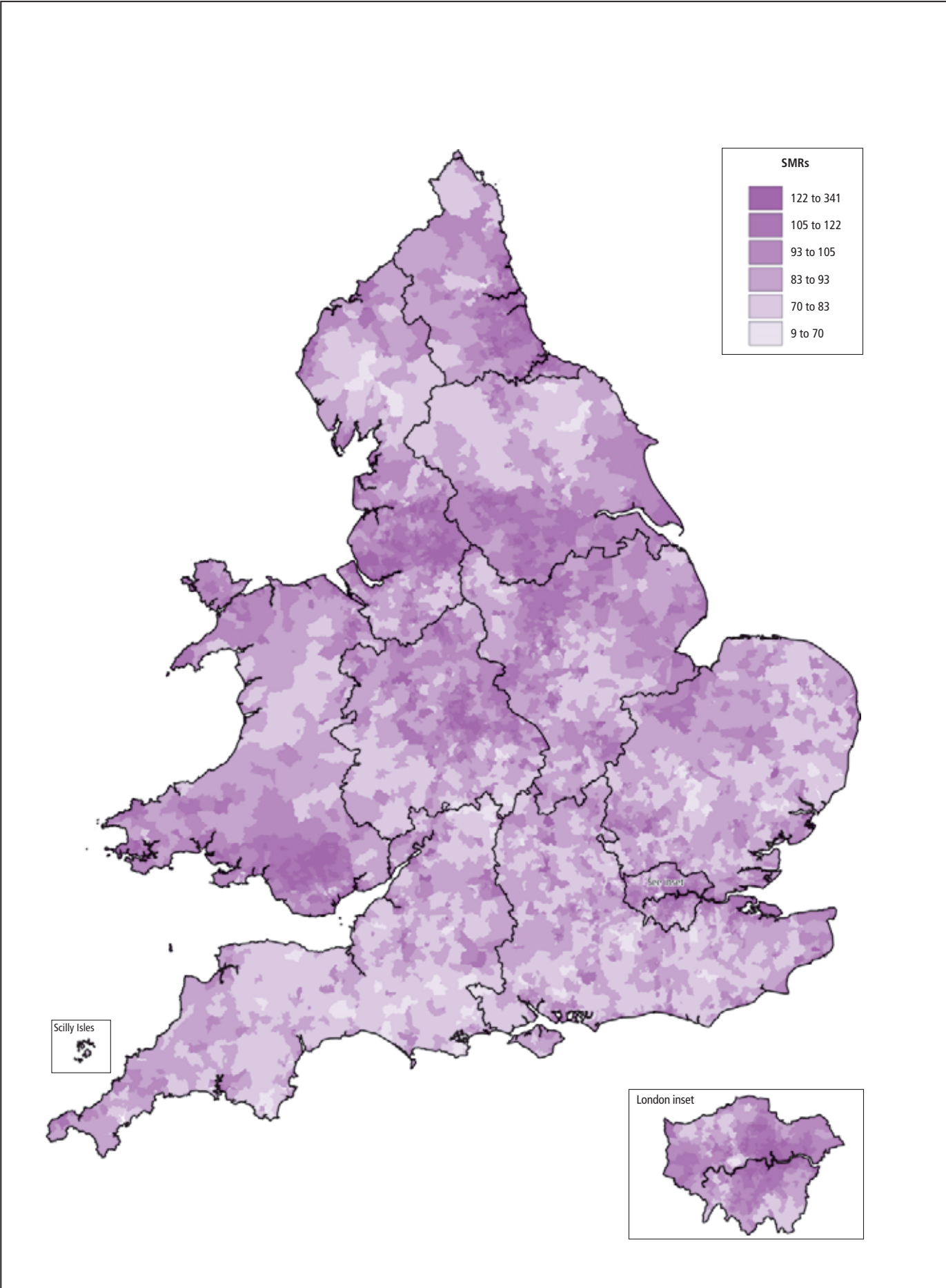
SMRs

- 122 to 341
- 105 to 122
- 93 to 105
- 83 to 93
- 70 to 83
- 9 to 70

Scilly Isles

London inset

Acknowledgements

Key findings

- Ward-level SMRs based on mortality data for a single year can be highly variable. Resulting geographical patterns may be a result of random variation in the number of deaths, rather than reflecting genuine underlying differences in mortality rates between areas

- Time smoothing SMRs, by basing figures on five years of mortality data, produces more stable results

- Spatially smoothing the time-smoothed results adds further benefit, producing patterns of mortality which are easier to discern when mapped

- Work is needed to investigate further smoothing techniques if ONS is to publish smoothed mortality indicators for small areas in the future

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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 is available 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 information is available on the National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=14459

Deaths
Figures for England and Wales relate to the number of deaths registered in each year up until 1992, and the number of deaths occuring in a year between 1993 and 2005. From 2006 onwards, all figures relate to the number of deaths registered in the year. All figures for 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 (ICD) 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* 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
Quarterly rates are calculated using seasonal adjustments which take into account the number of days in the month/year. The denominators used for calculating quarterly rates have been produced from mid-year population estimates and projections.

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 (for example 123.4); where appropriate, for small figures (below 10.0), two decimal places are given (for example 7.62). Figures which are provisional or estimated are given in less detail (for example 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	Bulgaria	Cyprus[1]	Czech Republic	Denmark	Estonia	Finland	France	Germany[2]	Greece[3]	Hungary
Population (thousands)													
1971	55,928	7,501	9,673	8,540	610	9,810	4,963	1,369	4,612	51,251	78,313	8,831	10,370
1976	56,216	7,566	9,818	8,760	498	10,094	5,073	1,435	4,726	52,909	78,337	9,167	10,590
1981	56,357	7,569	9,859	8,891	515	10,293	5,121	1,482	4,800	54,182	78,408	9,729	10,712
1986	56,684	7,588	9,862	8,958	545	10,340	5,120	1,534	4,918	55,547	77,720	9,967	10,631
1991	57,439	7,813	9,979	8,982	587	10,309	5,154	1,566	5,014	57,055	79,984	10,247	10,346
1996	58,164	7,959	10,137	8,363	661 [12]	10,315	5,262	1,416	5,125	58,026	81,896	10,709	10,193
2001	59,113	8,043	10,287	7,910	701 [12]	10,224	5,359	1,364	5,188	59,322	82,340	10,950	10,188
2002	59,323	8,084	10,333	7,869	710 [12]	10,201	5,374	1,359	5,201	59,678	82,482	10,988	10,159
2003	59,557	8,118	10,376	7,824	721 [12]	10,202	5,387	1,354	5,213	60,028	82,520	11,024	10,130
2004	59,846	8,175	10,421	7,781	737 [12]	10,207	5,401	1,349	5,228	60,381	82,501	11,062	10,107
2005	60,238	8,233	10,479	7,740	758 [12]	10,234	5,416	1,346	5,246	60,996	82,464	11,104	10,087
2006	60,587	8,280ᴾ	10,511ᴾ	7,680ᴾ	766 [12]	10,280ᴾ	5,427ᴾ	1,345	5,270	61,350ᴾ	82,370ᴾ	11,150ᴾ	10,077ᴾ
2007	60,975	..	..	..	..	..	..	1,340ᴾ	5,290ᴾ	..	82,260ᴾ	..	..
Population changes (per 1,000 per annum)													
1971–76	1.0	1.7	3.0	5.2	−36.7	5.8	4.4	9.6	4.9	6.5	0.1	7.6	4.2
1976–81	0.5	0.1	0.8	3.0	6.8	3.9	1.9	6.6	3.1	4.8	0.2	12.3	2.3
1981–86	1.2	0.5	0.1	1.5	11.7	0.9	0.0	7.0	4.9	5.0	−1.8	4.9	−1.5
1986–91	2.7	5.9	2.4	0.5	15.4	−0.6	1.3	4.2	3.9	5.4	5.8	5.6	−5.4
1991–96	2.5	3.7	3.6	−13.8	25.2	0.1	4.2	−12.4	3.8	3.4	4.8	9.0	−3.0
1996–01	3.3	2.1	2.6	−10.8	12.1	−1.8	3.7	−7.3	2.5	4.5	1.1	4.5	−0.1
2001–02	3.5	5.1	4.5	−5.2	12.8	−2.2	2.8	−3.7	2.5	6.0	1.7	4.4	−2.8
2002–03	3.9	4.2	4.2	−5.7	15.5	0.1	2.4	−3.7	2.3	5.9	0.5	2.4	−2.9
2003–04	4.8	7.0	4.3	−5.5	22.2	0.5	2.6	−3.7	2.9	5.9	−0.2	3.4	−2.3
2004–05	6.6	7.1	5.6	−5.3	28.5	2.6	2.8	−2.2	3.4	10.2	−0.4	3.8	−2.0
2005–06	5.8	5.7ᴾ	3.1ᴾ	−7.8ᴾ	10.6	4.5ᴾ	2.0ᴾ	−0.7	4.6	5.8ᴾ	−1.1ᴾ	4.1ᴾ	−1.0ᴾ
2006–07	6.4	..	..	..	..	..	..	−3.7ᴾ	3.8ᴾ	..	−1.3ᴾ	..	..
Live birth rate (per 1,000 population per annum)													
1971–75	14.1	13.3	13.4	13.2	17.7	17.8	14.6	15.4	13.1	16.0	10.5	15.8	16.1
1976–80	12.5	11.5	12.5	15.1	19.0	17.1	12.0	15.0	13.6	14.1	10.5	15.6	15.8
1981–85	12.9	12.0	12.0	13.7	20.2	13.5	10.2	15.6	13.4	14.2	10.7	13.3	12.3
1986–90	13.7	11.6	12.1	12.7	18.8	12.7	11.5	15.5	12.7	13.8	9.8	10.6	11.8
1991–95	13.2	11.8	12.0	9.8	16.9	11.1	13.1	10.7	12.9	12.7	10.9	9.9	11.7
1996–00	12.0	10.2	11.2	8.3	13.2	8.8	12.6	8.9	11.3	12.7	9.6	10.2	9.8
2001	11.3	9.4	11.1	8.6	11.6	8.9	12.2	9.3	10.8	13.0	8.9	9.3	9.5
2002	11.3	9.7	10.8	8.5	11.1	9.6	11.9	9.6	10.7	12.7	8.7	9.5	9.5
2003	11.7	9.5	10.9	8.6	11.2	9.2	12.0	9.6	10.9	12.7	8.6	9.5	9.3
2004	12.0	9.7	11.1	9.0	11.3	9.6	11.9	10.4	11.0	12.7	8.6	9.6	9.4
2005	12.0	9.5	11.2	9.2	10.9	10.0	11.9	10.7	11.0	12.7	8.3	9.7	9.7
2006	12.4	9.3	11.5	9.6	11.3	10.3	12.0	11.1	11.2	13.0	8.2	10.0	9.9
2007	12.7ᴾ	9.1	11.4	9.8	10.8	11.1	11.7	11.7	11.1	12.8	8.3	9.8	9.7
Death rate (per 1,000 population per annum)													
1971–75	11.8	12.6	12.1	9.8	9.9	12.4	10.1	11.1	9.5	10.7	12.3	8.6	11.9
1976–80	11.9	12.3	11.6	12.9	10.4	12.5	10.5	12.1	9.3	10.2	12.2	8.8	12.9
1981–85	11.7	12.0	11.4	11.3	10.0	12.8	11.1	12.3	9.3	10.1	12.0	9.0	13.7
1986–90	11.4	11.1	10.8	11.9	10.2	12.4	11.5	11.9	9.8	9.5	11.6	9.3	13.5
1991–95	11.1	10.4	10.4	12.9	9.0	11.6	11.9	13.9	9.8	9.1	10.8	9.5	14.3
1996–00	10.6	9.7	10.3	14.0	7.7	10.8	11.2	13.1	9.6	9.2	10.4	9.7	13.9
2001	10.2	9.3	10.1	14.2	6.9	10.5	10.9	13.6	9.4	8.9	10.1	9.4	13.0
2002	10.2	9.4	10.2	14.3	7.3	10.6	10.9	13.5	9.5	9.2	10.2	9.5	13.1
2003	10.3	9.5	10.4	14.3	7.2	10.9	10.7	13.4	9.4	9.2	10.3	9.6	13.4
2004	9.7	9.1	9.8	14.2	7.1	10.5	10.3	13.2	9.1	8.4	10.0	9.5	13.1
2005	9.7	9.1	9.8	14.6	7.2	10.6	10.2	12.9	9.1	8.6	10.1	9.5	13.5
2006	9.4	8.9	..	14.8	6.7	10.2	10.2	12.9	9.1	..	9.9	9.5	13.1
2007	9.4ᴾ	8.9	..	..	..	..	10.2	..	9.2	..	10.0	..	13.0

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* (June 2008), *the United Nations Demographic Yearbook* (May 2008), and the Eurostat website (June 2008).

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 For 1971 the European Union consisted of the 6 original member countries. This has since been expanded to include: 9 countries (1976–EU15); 10 countries (2004–EU25); 2 countries (2007–EU27). In this table, all totals include the EU27.

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 Indicates population estimates of uncertain reliability.
13 Data refer to 15 April.
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.
p provisional.

Table 1.1 continued	Population and vital rates: international

Selected countries — Numbers (thousands)/Rates per thousand

Year	Irish Republic	Italy	Latvia	Lithuania	Luxem–bourg	Malta[4]	Nether–lands	Poland[5]	Portugal[6]	Romania	Slovakia	Slovenia	Spain[7]	Sweden
Population (thousands)														
1971	2,992	54,073	2,366	3,160	342	330	13,194	32,800	8,644	20,470	4,540	1,732	34,216	8,098
1976	3,238	55,718	2,465	3,315	361	330	13,774	34,360	9,356	21,450	4,764	1,809	36,118	8,222
1981	3,443	56,502	2,515	3,422	365	322	14,247	35,902	9,851	22,353	4,996	1,910	37,741	8,320
1986	3,543	56,596	2,588	3,560	368	344	14,572	37,456	10,011	22,823	5,179	1,975	38,536	8,370
1991	3,526	56,751	2,662	3,742	387	358	15,070	38,245	9,871	23,185	5,283	2,002	38,920	8,617
1996	3,626 [13]	56,860	2,457	3,602	414	380	15,530	38,618	10,058	22,608	5,374	1,991	39,479	8,841
2001	3,839 [13]	56,978	2,355	3,481	442	393	16,046	38,251	10,293	22,408	5,380	1,992	40,721	8,896
2002	3,917 [13]	57,157	2,339	3,469	446	396	16,149	38,232	10,368	21,795	5,379	1,996	41,314	8,925
2003	3,996 [13]	57,605	2,325	3,454	450	399	16,225	38,195	10,441	21,734	5,379	1,997	42,005	8,958
2004	4,044 [13]	58,175	2,313	3,436	453	401	16,282	38,180	10,502	21,673	5,382	1,997	42,692	8,994
2005	4,131 [13]	58,607	2,301	3,414	457	404	16,320	38,161	10,549	21,624	5,387	2,001	43,398	9,030
2006	4,230 [13]	58,940	2,295	3,390ᴾ	470ᴾ	410ᴾ	16,350ᴾ	38,130	10,580	21,580ᴾ	5,400ᴾ	2,010	44,100	9,090ᴾ
2007	4,340ᴾ	59,420ᴾ	2,270ᴾ	3,370ᴾ	..	410ᴾ	16,370ᴾ	..	..	21,540ᴾ	5,390ᴾ	2,020ᴾ	44,850ᴾ	9,140ᴾ
Population changes (per 1,000 per annum)														
1971–76	16.4	6.1	8.4	9.8	10.7	0.0	8.8	9.5	16.5	9.6	9.9	8.9	11.1	3.1
1976–81	12.7	2.8	4.1	6.5	2.5	−4.8	6.9	9.0	10.6	8.4	9.7	11.2	9.0	2.4
1981–86	5.8	0.3	5.8	8.1	1.8	13.7	4.6	8.7	3.2	4.2	7.3	6.8	4.2	1.2
1986–91	−1.0	0.5	5.7	10.2	10.2	8.1	6.8	4.2	−2.8	3.2	4.0	2.7	2.0	5.9
1991–96	4.3	0.4	−12.8	−1.7	13.9	8.4	6.1	2.0	3.8	−5.0	3.4	−1.1	2.9	5.1
1996–01	11.7	0.4	−8.3	−6.7	13.5	6.8	6.6	−1.9	4.7	−1.8	0.2	0.1	6.3	1.2
2001–02	20.3	3.1	−6.8	−3.4	9.0	7.6	6.4	−0.5	7.3	−27.4	−0.2	2.0	14.6	3.3
2002–03	20.2	7.8	−6.0	−4.3	9.0	7.6	4.7	−1.0	7.0	−2.8	0.0	0.5	16.7	3.7
2003–04	12.0	9.9	−5.2	−5.2	6.7	5.0	3.5	−0.4	5.8	−2.8	0.6	0.0	16.4	4.0
2004–05	21.5	7.4	−5.2	−6.4	8.8	7.5	2.3	−0.5	4.5	−2.3	0.9	2.0	16.5	4.0
2005–06	24.0	5.7	−2.6	−7.0ᴾ	28.4ᴾ	14.9ᴾ	1.8ᴾ	−0.8	2.9	−2.0ᴾ	2.4ᴾ	4.5	16.2	6.6ᴾ
2006–07	26.0ᴾ	8.1ᴾ	−10.9ᴾ	−5.9ᴾ	..	0.0ᴾ	1.2ᴾ	..	..	−1.9ᴾ	−1.9ᴾ	5.0ᴾ	17.0ᴾ	5.5ᴾ
Live birth rate (per 1,000 population per annum)														
1971–75	22.2	16.0	14.4	16.4	11.6	17.5	14.9	17.9	20.3	19.3	19.7	16.4	19.2	13.5
1976–80	21.3	12.6	13.9	15.4	11.2	17.0	12.6	19.3	17.9	18.9	20.3	16.3	17.1	11.6
1981–85	19.2	10.6	15.2	16.0	11.6	15.3	12.2	19.0	14.5	15.6	18.0	14.2	12.8	11.3
1986–90	15.8	9.8	15.3	15.8	12.2	16.0	12.8	15.5	11.9	15.8	15.8	12.3	10.8	13.2
1991–95	14.0	9.6	10.8	13.1	13.3	14.0	12.8	12.9	11.4	11.1	13.3	10.0	9.8	13.3
1996–00	14.2	9.2	8.0	10.4	13.1	12.0	12.6	10.4	11.3	10.4	10.7	9.1	9.5	10.2
2001	15.1	9.2	8.3	9.1	12.4	10.0	12.6	9.6	11.0	9.8	9.5	8.8	10.0	10.3
2002	15.5	9.4	8.6	8.7	12.0	9.6	12.5	9.3	11.0	9.7	9.5	8.8	10.2	10.7
2003	15.4	9.4	9.0	8.9	11.8	10.1	12.3	9.2	10.8	9.8	9.6	8.7	10.5	11.1
2004	15.3	9.7	8.8	8.9	11.8	9.7	11.9	9.3	10.4	10.0	10.0	9.0	10.6	11.2
2005	14.8	9.5	9.4	9.0	11.8	9.6	11.5	9.6	10.4	10.2	9.3	9.1	10.7	11.2
2006	15.2	9.5	9.7	9.2	11.7	9.6	11.3	9.8	10.0	10.1	10.0	9.4	10.9	11.7
2007	16.2	9.5	10.1	9.5	11.4	9.5	11.0	10.2	10.0	9.9	10.1	9.7	10.8	11.7
Death rate (per 1,000 population per annum)														
1971–75	11.0	9.8	11.6	9.0	12.2	9.0	8.3	8.4	11.0	9.4	9.4	10.0	8.5	10.5
1976–80	10.2	9.7	12.6	10.1	11.5	9.0	8.1	9.2	10.1	9.8	9.8	9.8	8.0	10.9
1981–85	9.4	9.5	12.8	10.6	11.2	8.2	8.3	9.6	9.6	10.3	10.1	10.3	7.7	11.0
1986–90	9.1	9.4	12.4	10.3	10.5	7.4	8.5	10.0	9.6	10.8	10.1	9.6	8.2	11.1
1991–95	8.8	9.7	14.8	12.0	9.8	7.6	8.8	10.2	10.4	11.5	9.9	9.7	8.7	10.9
1996–00	8.5	9.8	13.9	11.5	9.0	7.7	8.8	9.8	10.5	12.0	9.7	9.5	9.1	10.6
2001	7.9	9.6	14.0	11.6	8.4	7.6	8.7	9.5	10.2	11.6	9.7	9.3	8.9	10.5
2002	7.5	9.8	13.9	11.8	8.4	7.8	8.8	9.4	10.2	12.4	9.6	9.4	8.9	10.6
2003	7.2	10.2	13.9	11.9	9.0	7.7	8.7	9.6	10.4	12.3	9.7	9.7	9.2	10.4
2004	7.0	9.4	13.9	12.0	7.6	7.2	8.4	9.5	9.7	11.9	9.6	9.3	8.7	10.1
2005	6.6	9.7	14.2	12.8	8.0	7.8	8.4	9.7	10.2	12.1	9.9	9.4	8.9	10.2
2006	6.5	9.5	14.5	13.2	8.0	..	8.3	9.7	9.7	11.9	9.9	9.1	8.4	10.0
2007	..	..	14.5	13.5	..	..	..	..	..	11.7	9.9	..	..	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	EU[8]	Russian Federation	Australia	Canada	New Zealand	China	India[9]	Japan[10]	USA[11]	Year
Population (thousands)										
1971	438,728	130,934	13,067	22,026	2,899	852,290 [16]	551,311	105,145	207,661	1971
1976	450,468	135,027	14,033	23,517	3,163	937,170 [16]	617,248	113,094	218,035	1976
1981	459,807	139,225	14,923	24,900	3,195	1,008,460 [16]	675,185	117,902	229,958	1981
1986	465,336	144,154	16,018	26,204	3,317	1,086,733 [16]	767,199	121,672	240,680	1986
1991	473,094	148,245	17,284	28,031	3,477	1,170,100 [16]	851,897	123,964	252,639	1991
1996	478,084	148,160 [14]	18,311 [15]	29,611 [15]	3,732	1,217,550 [16]	942,157 [12]	125,757	269,394	1996
2001	482,464	145,976 [14]	19,413 [15]	31,021 [15]	3,880	1,271,850 [16]	1,035,066 [12]	127,130	285,108	2001
2002	483,643	145,306 [14]	19,641 [15]	31,373 [15]	3,939	1,280,400 [16]	1,050,640 [12]	127,400	287,985	2002
2003	485,617	144,566 [14]	19,873 [15]	31,669 [15]	4,009	1,288,400 [16]	1,068,214 [12]	127,650	290,850	2003
2004	487,720	143,821 [14]	20,111 [15]	31,974 [15]	4,061	1,296,075 [16]	1,085,600 [12]	127,670	293,623	2004
2005	490,125	143,150 [14]	20,409 [15]	32,312 [15]	4,099	1,303,720 [16]	1,101,000 [12]	127,773	296,410	2005
2006	492,068[P]	142,490 [14]	20,700 [15]	32,650 [15]	4,180	1,311,020 [16]	1,117,730 [12]	127,760	299,400	2006
2007	..	..	21,020 [15,P]	32,980 [15,P]	4,230[P]	..	1,134,000 [12]	127,770	..	2007
Population changes (per 1,000 per annum)										
1971–76	5.4	6.3	14.8	13.5	18.2	19.9	23.9	15.1	10.0	1971–76
1976–81	4.1	6.2	12.7	11.8	2.0	15.2	18.8	8.5	10.9	1976–81
1981–86	2.4	7.1	14.7	10.5	7.6	15.5	27.3	6.4	9.3	1981–86
1986–91	3.3	5.7	15.8	13.9	9.6	15.3	22.1	3.8	9.9	1986–91
1991–96	2.1	–1.7	11.9	11.3	14.7	10.3	21.1	2.9	12.1	1991–96
1996–01	1.8	–2.9	12.0	9.5	7.9	8.9	19.7	2.2	11.7	1996–01
2001–02	2.4	–4.6	11.7	11.3	15.2	6.7	15.0	2.1	10.1	2001–02
2002–03	4.1	–5.1	11.8	9.4	17.8	6.2	16.7	2.0	9.9	2002–03
2003–04	4.3	–5.2	12.0	9.6	13.0	6.0	16.3	0.2	9.5	2003–04
2004–05	4.9	–4.7	14.8	10.6	9.4	5.9	14.2	0.8	9.5	2004–05
2005–06	3.8[P]	–4.6	14.3	10.5	19.8	5.6	15.2	–0.1	10.1	2005–06
2006–07	..	..	15.5[P]	10.1[P]	12.0[P]	..	14.6	0.1	..	2006–07
Live birth rate (per 1,000 population per annum)										
1971–75	..	..	18.8	15.9	20.4	27.2	35.6	18.6	15.3	1971–75
1976–80	..	..	15.7	15.5	16.8	18.6	33.4	14.9	15.2	1976–80
1981–85	..	..	15.6	15.1	15.8	19.2	..	12.6	15.7	1981–85
1986–90	..	..	15.1	14.8	17.1	..	..	10.6	16.0	1986–90
1991–95	11.4	10.2	14.7	13.6	16.9	18.5 [17]	..	9.7	13.1	1991–95
1996–00	10.6	8.6	13.4	11.4	14.9	..	..	9.5	14.3	1996–00
2001	10.1	9.0	12.7	10.8	14.4	13.4 [16]	25.4	9.2	14.1	2001
2002	10.3	9.6	12.8	10.5	13.7	12.9 [16]	25.0	9.1	14.0	2002
2003	10.3	10.2	12.6	10.6	14.0	12.4 [16]	24.8	8.8	14.1	2003
2004	10.4	10.5	12.7	10.5	14.3	12.3 [16]	24.1	8.7	14.0	2004
2005	10.4	10.2	12.9	10.6	14.1	12.4 [16]	23.8	8.3	14.0	2005
2006	10.6	10.4	12.9	..	14.1	..	..	8.6	..	2006
2007	10.6	10.9	..	..	15.2	..	..	..	..	2007
Death rate (per 1,000 population per annum)										
1971–75	..	..	8.2	7.4	8.4	7.3	15.5	6.4	9.1	1971–75
1976–80	..	..	7.6	7.2	8.2	6.6	13.8	6.1	8.7	1976–80
1981–85	..	..	7.3	7.0	8.1	6.7	..	6.1	8.6	1981–85
1986–90	..	..	7.2	7.3	8.2	..	..	6.4	8.7	1986–90
1991–95	10.4	13.7	7.0	7.8	7.8	..	..	7.0	8.7	1991–95
1996–00	10.2	14.3	6.9	7.2	7.2	..	..	7.4	8.5	1996–00
2001	9.9	15.4	6.6	7.1	7.2	6.4 [16]	8.4	7.6	8.5	2001
2002	9.9	16.1	6.8	7.1	7.1	6.4 [16]	8.1	7.7	8.5	2002
2003	10.1	16.4	6.7	7.1	7.0	6.4 [16]	8.0	8.0	8.4	2003
2004	9.7	16.0	6.6	7.1	7.0	6.4 [16]	7.5	8.1	8.2	2004
2005	9.8	15.2	6.4	7.2	6.6	6.5 [16]	7.6	8.5	..	2005
2006	..	15.0	6.5	..	6.7	..	..	8.5	..	2006
2007	..	..	..	..	6.8	..	..	..	..	2007

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	59,323	57,627	52,572	49,652	2,920	5,055	1,697
2003	59,557	57,855	52,797	49,866	2,931	5,057	1,703
2004	59,846	58,136	53,057	50,111	2,946	5,078	1,710
2005	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
2007	60,975	59,216	54,072	51,092	2,980	5,144	1,759
2007 by age group **(percentages)**							
0–4	5.9	5.9	5.9	5.9	5.5	5.3	6.6
5–15	13.0	12.9	13.0	13.0	13.2	12.5	15.1
16–44	40.1	40.1	40.2	40.3	37.4	39.3	41.2
45–64M/59F	22.0	22.1	21.9	21.9	22.9	23.4	20.7
65M/60F–74	11.2	11.3	11.2	11.1	12.5	11.9	10.1
75 and over	7.7	7.8	7.8	7.8	8.5	7.5	6.3
Projections[1]							
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[2]	23.4	23.4	23.3	23.3	23.5	24.4	23.9
65–74[2]	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 National projections based on mid-2006 population estimates.
2 Between 2010 and 2020, state pension 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	2,541	6,778	5,002	4,222	5,295	5,433	7,362	8,047	4,973
2003	2,541	6,800	5,028	4,254	5,312	5,475	7,364	8,087	5,005
2004	2,542	6,820	5,064	4,291	5,327	5,511	7,389	8,125	5,042
2005	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
2007	2,564	6,864	5,177	4,400	5,382	5,661	7,557	8,309	5,178
2007 by age group **(percentages)**									
0–4	*5.5*	*5.9*	*5.8*	*5.6*	*6.1*	*5.9*	*7.0*	*5.8*	*5.2*
5–15	*12.6*	*13.2*	*13.0*	*12.9*	*13.4*	*13.2*	*12.2*	*13.2*	*12.5*
16–44	*38.9*	*39.4*	*40.3*	*39.4*	*39.1*	*38.6*	*48.3*	*38.9*	*37.1*
45–64M/59F	*23.2*	*22.3*	*22.0*	*22.7*	*22.0*	*22.4*	*18.6*	*22.5*	*22.9*
65M/60F–74	*11.9*	*11.5*	*11.3*	*11.6*	*11.6*	*11.7*	*8.1*	*11.3*	*12.6*
75 and over	*8.0*	*7.7*	*7.6*	*7.8*	*7.9*	*8.2*	*5.7*	*8.3*	*9.5*
Projections[1]									
2006	2,556	6,853	5,142	4,364	5,367	5,607	7,512	8,238	5,124
2011	2,594	7,014	5,377	4,591	5,506	5,890	7,817	8,550	5,368
2016	2,638	7,193	5,621	4,825	5,662	6,179	8,114	8,871	5,620
2021	2,685	7,377	5,866	5,060	5,824	6,471	8,390	9,202	5,882
2026	2,730	7,546	6,101	5,286	5,977	6,747	8,633	9,523	6,139
2029	2,754	7,638	6,234	5,412	6,061	6,901	8,768	9,702	6,283
2031	2,769	7,696	6,319	5,491	6,114	6,997	8,858	9,814	6,374
2031 by age group **(percentages)**									
0–4	*5.2*	*5.5*	*5.6*	*5.3*	*5.9*	*5.5*	*6.7*	*5.5*	*5.0*
5–15	*12.1*	*12.6*	*12.5*	*12.3*	*13.2*	*12.6*	*12.6*	*12.7*	*11.8*
16–44	*35.6*	*36.3*	*37.7*	*35.6*	*35.7*	*34.9*	*43.7*	*35.1*	*33.9*
45–64[2]	*23.0*	*23.2*	*23.0*	*23.8*	*22.8*	*23.7*	*22.9*	*23.6*	*23.7*
65–74[2]	*11.7*	*10.9*	*10.2*	*11.0*	*10.5*	*10.9*	*7.4*	*10.8*	*11.8*
75 and over	*12.4*	*11.5*	*10.9*	*12.0*	*11.9*	*12.4*	*6.7*	*12.4*	*13.9*

Note: Figures may not add exactly due to rounding.
1 These projections are based on the 2006 population estimates and are consistent with the 2006-based national projections produced by the Office for National Statistics.
2 Between 2010 and 2020, state pension 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	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
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	8,898	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	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	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	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	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
2007	60,975	756	2,837	7,128	8,156	7,859	9,248	11,728	3,483	5,058	3,424	873	425	11,509	37,904	11,562
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	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	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	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	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
2007	29,916	387	1,453	3,649	4,193	3,936	4,578	5,786	1,701	2,398	1,432	295	108	5,895	19,789	4,233
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	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	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	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	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
2007	31,059	368	1,383	3,480	3,963	3,924	4,670	5,942	1,782	2,660	1,992	578	317	5,615	18,116	7,329
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	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	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	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	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
2007	54,072	675	2,528	6,314	7,219	6,999	8,209	10,347	3,092	4,468	3,049	787	385	10,212	33,588	10,271
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	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	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	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	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
2007	26,569	346	1,295	3,231	3,715	3,508	4,076	5,110	1,511	2,127	1,283	268	99	5,230	17,563	3,775
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	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	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	6,185
2004	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	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
2007	27,503	329	1,233	3,082	3,505	3,490	4,132	5,237	1,581	2,342	1,767	520	286	4,982	16,026	6,496

Note: Figures may not add exactly due to rounding.

1 Between 2010 and 2020, state pension age will change from 65 years for men and 60 years for women to 65 years for both sexes.   Tel no. for all enquiries relating to population estimates:- 01329 444661

Table 1.4 continued	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/65F[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			
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	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	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	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	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
2007	51,092	641	2,398	5,961	6,812	6,669	7,791	9,758	2,904	4,192	2,865	739	363	9,656	31,792	9,645
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	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	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	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	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
2007	25,114	328	1,228	3,050	3,506	3,345	3,874	4,821	1,418	1,995	1,205	251	93	4,944	16,626	3,544
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	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	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	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	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
2007	25,978	312	1,170	2,910	3,306	3,324	3,917	4,937	1,485	2,198	1,660	488	270	4,711	15,166	6,100
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	2,920	30	132	380	365	354	414	578	156	265	185	39	20	582	1,749	589
2003	2,931	31	129	377	376	345	417	582	161	268	187	38	21	577	1,759	595
2004	2,946	32	127	373	385	339	421	586	166	270	188	39	21	572	1,773	602
2005	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
2007	2,980	34	130	353	407	330	418	590	188	276	185	48	22	557	1,797	627
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	1,414	16	68	195	184	172	202	285	77	125	74	12	5	299	900	215
2003	1,423	16	66	194	190	168	204	287	79	127	75	11	5	296	908	218
2004	1,432	16	65	192	196	166	205	288	82	128	76	12	5	294	917	221
2005	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
2007	1,454	17	67	181	209	164	203	289	93	132	78	16	6	286	937	231
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	1,506	15	65	185	181	182	212	293	80	140	111	27	16	283	849	374
2003	1,508	15	63	183	185	176	214	295	82	141	112	27	16	280	851	377
2004	1,514	15	62	182	189	172	216	298	84	142	112	26	16	278	856	380
2005	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
2007	1,526	16	63	172	198	166	215	300	96	144	107	32	16	271	860	395

See notes on first page of table.

Table 1.4 continued	Population: age and sex

Constituent countries of the United Kingdom   Numbers (thousands)

		Age group														
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
2007	5,144	57	218	576	676	629	781	1,060	301	457	290	66	32	917	3,227	1,001
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
2007	2,486	29	112	295	345	313	375	517	146	210	116	21	8	469	1,662	354
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
2007	2,659	28	106	281	332	316	406	542	155	247	174	45	24	448	1,564	646
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
2007	1,759	24	91	239	260	231	259	321	90	132	84	19	8	380	1,089	290
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
2007	862	13	47	123	134	114	127	158	44	61	33	6	2	195	564	103
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
2007	897	12	44	116	127	117	132	163	46	70	51	13	6	185	526	187

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	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
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[1]	42,135	7,086	11,008	1,534	730	20,358	5,957	11,075	2,036	2,710	21,777
2003[1]	42,409	7,272	10,929	1,589	727	20,517	6,126	11,000	2,096	2,669	21,892
2004[1]	42,731	7,483	10,851	1,642	724	20,700	6,311	10,935	2,156	2,629	22,031
2005[1]	43,141	7,708	10,801	1,696	722	20,927	6,529	10,882	2,215	2,589	22,214
2006	43,494	7,944	10,723	1,739	720	21,126	6,740	10,812	2,266	2,549	22,367
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	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
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[1]	2,630	1,352	4	1	1	1,357	1,259	13	1	1	1,273
2003[1]	2,703	1,392	4	1	1	1,397	1,293	12	0	1	1,306
2004[1]	2,771	1,424	3	0	0	1,428	1,332	11	0	0	1,343
2005[1]	2,801	1,434	2	0	0	1,436	1,355	9	0	0	1,365
2006	2,829	1,457	2	0	0	1,459	1,364	7	0	0	1,370
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	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
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[1]	3,212	1,533	69	3	1	1,606	1,430	167	8	1	1,606
2003[1]	3,281	1,573	68	3	1	1,645	1,465	161	8	1	1,636
2004[1]	3,376	1,639	69	3	1	1,712	1,497	157	8	2	1,664
2005[1]	3,477	1,700	66	3	1	1,771	1,547	150	8	2	1,706
2006	3,558	1,749	59	3	1	1,812	1,599	138	7	1	1,746
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	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
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[1]	3,365	1,286	375	26	1	1,688	1,054	568	52	3	1,676
2003[1]	3,284	1,281	340	25	1	1,647	1,060	527	49	2	1,638
2004[1]	3,280	1,297	319	24	1	1,641	1,089	501	47	2	1,639
2005[1]	3,354	1,344	307	23	1	1,675	1,143	488	46	2	1,679
2006	3,434	1,400	295	23	1	1,718	1,198	471	46	2	1,716

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

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	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
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[1]	3,992	959	918	105	2	1,984	742	1,093	167	6	2,009
2003[1]	3,919	979	864	102	2	1,947	766	1,041	159	6	1,972
2004[1]	3,810	988	810	97	2	1,897	777	982	149	5	1,913
2005[1]	3,724	1,002	761	92	2	1,856	791	933	139	5	1,868
2006	3,606	1,010	703	84	2	1,799	800	876	127	5	1,808
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	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
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[1]	7,964	1,031	2,490	424	12	3,957	751	2,650	572	35	4,007
2003[1]	8,058	1,089	2,471	435	12	4,007	804	2,631	583	34	4,051
2004[1]	8,133	1,141	2,441	443	11	4,036	858	2,613	593	32	4,097
2005[1]	8,194	1,195	2,417	450	11	4,073	910	2,583	597	31	4,121
2006	8,213	1,249	2,371	448	11	4,080	965	2,543	595	30	4,134
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	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
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[1]	12,573	670	4,642	779	120	6,211	413	4,597	960	391	6,362
2003[1]	12,710	702	4,643	814	119	6,278	437	4,612	1,002	381	6,432
2004[1]	12,852	736	4,643	850	117	6,347	465	4,625	1,045	371	6,505
2005[1]	13,021	774	4,652	888	117	6,431	497	4,642	1,090	362	6,590
2006	13,243	818	4,676	926	117	6,537	535	4,677	1,138	356	6,706
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	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
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[1]	8,398	255	2,508	196	594	3,554	309	1,987	276	2,272	4,844
2003[1]	8,454	257	2,538	210	593	3,597	301	2,017	295	2,245	4,857
2004[1]	8,510	258	2,566	224	592	3,640	293	2,046	314	2,216	4,870
2005[1]	8,571	260	2,596	239	590	3,685	286	2,077	335	2,187	4,885
2006	8,611	261	2,618	254	589	3,722	279	2,101	353	2,155	4,889

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	3.81	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	2.44	3.7	5.39	8.0
2002	668.8	11.3	271.7	406	293.0	..	:	:	160.5	..	606.2	10.2	3.54	5.3	2.37	3.6	5.53	8.2
2003	695.6	11.7	288.5	415	308.6	..	:	:	166.7	..	612.0	10.3	3.69	5.3	2.54	3.7	5.92	8.5
2004	716.0	12.0	302.6	423	313.6	..	:	:	167.1	..	583.1	9.7	3.66	5.1	2.49	3.5	5.88	8.2
2005	722.5	12.0	310.2	429	286.8	..	1.95 [10]	..	155.1	..	582.7	9.7	3.68	5.1	2.52	3.5	5.78	8.0
2006	748.6	12.4	326.8	437	275.1[P]	..	16.11	..	148.1	..	572.2	9.4	3.74	5.0	2.61[P]	3.5	5.94	7.9
2007	772.2[P]	12.7[P]	343.2[P]	444[P]	..	..	8.73[P]	..	144.2[P]	..	574.7[P]	9.4[P]	3.74[P]	4.8[P]	2.55[P]	3.3[P]	5.97[P]	7.7[P]
2006 March	178.9	12.0	77.5	433	30.2[P]	..	4.87	..	37.7	..	159.9	10.7	0.90	5.1	0.61	3.4	1.45	8.1
June	186.0	12.3	80.2	431	76.4[P]	..	4.36	..	36.7	..	141.4	9.4	0.94	5.0	0.65	3.5	1.50	8.0
Sept	195.2	12.8	85.8	439	120.7[P]	..	4.49	..	37.0	..	130.7	8.6	0.93	4.8	0.67	3.4	1.54	7.8
Dec	188.5	12.3	83.3	442	47.8[P]	..	2.38	..	36.7	..	140.2	9.2	0.97	5.2	0.68	3.6	1.45	7.7
2007 March	184.4[P]	12.3[P]	81.9[P]	444[P]	..	..	1.69[P]	..	38.9[P]	..	159.3[P]	10.6[P]	0.91[P]	4.9[P]	0.64[P]	3.4[P]	1.47[P]	7.9[P]
June	189.8[P]	12.5[P]	82.6[P]	435[P]	..	..	2.37[P]	..	37.2[P]	..	138.0[P]	9.1[P]	0.99[P]	5.2[P]	0.66[P]	3.5[P]	1.52[P]	8.0[P]
Sept	202.8[P]	13.2[P]	90.5[P]	446[P]	..	..	2.96[P]	..	36.7[P]	..	129.9[P]	8.4[P]	0.87[P]	4.3[P]	0.59[P]	2.9[P]	1.50[P]	7.3[P]
Dec	195.3[P]	12.7[P]	88.1[P]	451[P]	..	..	1.71[P]	..	31.4[P]	..	147.5[P]	9.6[P]	0.88[P]	4.5[P]	0.60[P]	3.1[P]	1.49[P]	7.6[P]
2008 March	195.2[P]	12.8[P]	88.7[P]	455[P]	..	..	1.25[P]	..	..	..	155.4[P]	10.2[P]	0.95[P]	4.9[P]	0.66[P]	3.4[P]	1.52[P]	7.7[P]
June	197.3[P]	12.5[P]	82.6[P]	449[P]	..	..	..	..	..	..	139.8[P]	9.2[P]	0.82[P]	4.2[P]	0.59[P]	3.0[P]	1.47[P]	7.4[P]
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	247.8	23.1	1.86[10]	5.7[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	237.0[P]	21.6[P]	14.94	1.4	132.6	12.2	502.6	9.4	3.37	5.0	2.35	3.5	5.36	8.0
2007	690.0	12.8	305.6	443	..	..	7.93	0.7[P]	128.5[P]	11.9[P]	504.1	9.3	3.35	4.8	2.28	3.3	5.35[P]	7.7
2006 March	159.5	12.0	68.7	431	25.8[P]	9.5[P]	4.58	1.7	34.3	12.8	141.0	10.6	0.82	5.2	0.56	3.5	1.32	8.2
June	166.2	12.4	71.4	430	65.9[P]	24.1[P]	4.01	1.5	33.0	12.2	123.9	9.2	0.84	5.1	0.58	3.5	1.37	8.2
Sept	174.9	12.9	76.8	439	105.5[P]	38.1[P]	4.18	1.5	32.9	12.0	114.6	8.5	0.85	4.8	0.60	3.4	1.38	7.9
Dec	169.0	12.5	74.5	441	40.4[P]	14.6[P]	2.18	0.8	32.4	11.8	123.1	9.1	0.86	5.1	0.60	3.6	1.30	7.6
2007 March	164.0	12.3	72.5	442	..	..	1.55	0.6[P]	34.7[P]	13.1[P]	139.3	10.5	0.80	4.9	0.56	3.4	1.30	7.9
June	169.5	12.6	73.5	434	..	..	2.16	0.8[P]	33.1[P]	12.4[P]	121.0	9.0	0.88	5.2	0.60	3.5	1.36	8.0
Sept	181.4	13.3	80.8	445	..	..	2.68	1.0[P]	33.0[P]	12.2[P]	114.0	8.4	0.84	4.6	0.57	3.1	1.35	7.4
Dec	175.0	12.8	78.7	450	..	..	1.54	0.6[P]	27.6[P]	10.2[P]	129.7	9.5	0.83	4.7	0.56	3.2	1.34	7.6
2008 March	173.5[P]	12.8[P]	78.4[P]	452[P]	..	..	1.13[P]	0.4[P]	31.7[P]	11.9[P]	136.1[P]	10.1[P]	0.86[P]	5.0[P]	0.60[P]	3.4[P]	1.36[P]	7.8[P]
June	176.1[P]	13.0[P]	78.9[P]	448[P]	..	..	..	..	..	..	122.7[P]	9.1[P]	0.79[P]	4.5[P]	0.53[P]	3.0[P]	1.32[P]	7.5[P]
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	233.8	..	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	223.5[P]	..	14.38	..	125.6	..	470.3	9.3	3.19	5.0	2.24	3.5	5.11	8.0
2007	655.4	12.8	287.0	438[P]	..	..	7.64	..	121.9[P]	..	470.7	9.2	3.13	4.8	2.15	3.3	5.08	7.7
2006 March	151.4	12.1	64.5	426	24.4[P]	..	4.42	..	32.5	..	132.0	10.5	0.79	5.2	0.54	3.6	1.26	8.3
June	157.8	12.5	67.0	425	62.1[P]	..	3.86	..	31.2	..	115.9	9.2	0.80	5.1	0.56	3.5	1.31	8.2
Sept	166.0	13.0	72.0	434	99.5[P]	..	4.02	..	31.2	..	107.1	8.4	0.80	4.8	0.57	3.4	1.31	7.8
Dec	160.5	12.5	70.0	436	38.2[P]	..	2.09	..	30.7	..	115.3	9.0	0.81	5.0	0.57	3.6	1.24	7.7
2007 March	155.9	12.4	68.1	437	..	..	1.49	..	32.9[P]	..	130.3	10.3	0.74	4.7	0.52	3.3	1.22	7.8
June	161.0	12.6	69.0	429	..	..	2.06	..	31.4[P]	..	112.9	8.9	0.84	5.2	0.57	3.5	1.30	8.0
Sept	172.2	13.4	75.9	441	..	..	2.60	..	31.4[P]	..	106.4	8.3	0.79	4.6	0.54	3.1	1.29	7.4
Dec	166.3	12.9	74.0	445	..	..	1.48	..	26.2[P]	..	121.2	9.4	0.76	4.6	0.53	3.2	1.27	7.8
2008 March	164.7[P]	12.9[P]	73.6[P]	445[P]	..	..	1.08[P]	..	30.1[P]	..	127.3[P]	9.9[P]	0.82[P]	5.0[P]	0.60[P]	3.6[P]	1.29[P]	7.8[P]
June	167.1[P]	13.1[P]	74.0[P]	443[P]	..	..	..	..	114.7[P]	..	114.7[P]	9.0[P]	0.74[P]	4.4[P]	0.50[P]	3.0[P]	1.25[P]	7.4[P]

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. Death figures for 2006 and provisional death figures for 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.
Infant, neonatal and perinatal mortality rates for Northern Ireland have now been amended to take account of the non-resident livebirths.
Rates for 2008 are based on 2006-based population projections for 2008. Marriage, civil partnership and divorce rates for 2007 and 2008 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	13.2	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	14.0	..	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	13.5^p	..	0.56	..	6.9	..	31.1	10.5	0.14	4.1	0.09	2.8	0.23	6.9
2007	34.4	11.5	18.5	538	..	..	0.29	..	6.7^p	..	32.1	10.8	0.18	5.3	0.12	3.4	0.25	7.3
2006 March	8.1	11.1	4.2	520	1.4^p	..	0.16	..	1.8	..	8.7	11.9	0.03	3.1	0.02	2.0	0.06	7.0
June	8.3	11.2	4.3	523	3.8^p	..	0.15	..	1.7	..	7.6	10.3	0.03	4.1	0.02	2.4	0.05	6.3
Sept	8.8	11.8	4.8	543	6.0^p	..	0.16	..	1.7	..	7.2	9.7	0.04	4.0	0.03	3.1	0.07	7.7
Dec	8.4	11.2	4.5	535	2.2^p	..	0.09	..	1.7	..	7.5	10.1	0.04	5.1	0.03	3.6	0.06	6.6
2007 March	8.1	11.0	4.3	536	..	..	0.06	..	1.8^p	..	8.8	11.9^p	0.05	6.3	0.03	3.7	0.07	9.0
June	8.5	11.4	4.5	530	..	..	0.10	..	1.8^p	..	7.9	10.6^p	0.04	4.5	0.02	2.8	0.06	6.8
Sept	9.1	12.1	4.9	541	..	..	0.08	..	1.7^p	..	7.3	9.7^p	0.04	4.4	0.03	2.8	0.05	5.7
Dec	8.7	11.6	4.8	547	..	..	0.06	..	1.4^p	..	8.3	11.0^p	0.05	6.1	0.04	4.1	0.07	7.9
2008 March	8.7^p	11.7^p	4.8^p	552^p	..	..	0.06^p	..	1.6^p	..	8.6^p	11.5^p	0.04^p	4.1^p	0.03^p	3.0^p	0.06^p	6.8^p
June	8.9^p	12.0^p	4.9^p	555^p	..	..	..	..	..	..	7.7^p	10.4^p	0.04^p	4.3^p	0.03^p	3.3^p	0.06^p	6.5^p
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	10.9	26.6	477	29.9	28.7	1.05	1.0	13.0	12.3	55.1	10.8	0.25	4.5	0.17	3.1	0.42	7.4
2007	57.8	11.2	28.4	491	29.9	28.7^p	0.69	0.7^p	12.8	12.1^p	56.0	10.9^p	0.27	4.7	0.19	3.2	0.45	7.8
2006 March	13.6	10.8	6.6	487	3.5	13.6	0.26	1.0	2.6	10.1	14.9	11.8	0.05	3.7	0.03	2.4	0.09	6.7
June	14.0	11.0	6.7	475	8.3	32.1	0.32	1.2	3.1	11.7	13.9	10.9	0.07	5.0	0.05	3.3	0.09	6.4
Sept	14.2	11.0	6.7	471	12.2	46.4	0.28	1.1	3.6	13.4	12.7	9.8	0.05	3.8	0.04	2.9	0.11	7.8
Dec	13.9	10.8	6.6	477	5.9	22.4	0.19	0.7	3.7	14.1	13.6	10.6	0.07	5.3	0.04	3.7	0.12	8.7
2007 March	14.2	11.2	7.1	501	3.3	13.0^p	0.11	0.4^p	33.2	12.7^p	15.8	12.5	0.07	4.9	0.05	3.6	0.12	8.1
June	14.3	11.1	6.9	482	8.1	31.4^p	0.18	0.7^p	33.4	12.7^p	13.4	10.4	0.08	5.3	0.05	3.4	0.12	8.6
Sept	14.9	11.5	7.2	485	12.6	48.1^p	0.25	0.9^p	30.3	11.4^p	12.6	9.7	0.07	4.6	0.05	3.0	0.11	7.1
Dec	14.4	11.1	7.1	497	5.8	22.0^p	0.15	0.6^p	30.9	11.6^p	14.2	10.9	0.06	3.9	0.04	2.9	0.11	7.5
2008 March	15.1^p	11.8^p	7.7^p	509^p	3.4^p	13.4^p	0.10^p	0.4^p	27.4^p	10.5^p	15.1^p	11.8^p	0.06^p	3.9^p	0.04^p	2.8^p	0.11^p	7.0^p
June	14.9^p	11.6^p	7.3^p	488^p	7.9^p	30.5^p	0.11^p	0.4^p	29.2^p	11.5^p	13.5^p	10.5^p	0.06^p	4.0^p	0.04^p	2.5^p	0.11^p	7.5^p
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	5.0	0.08	3.8	0.16	7.2
2001	22.0	13.0	7.1	325	7.3	..	:	:	2.4	..	14.5	8.6	0.13	6.0	0.10	4.5	0.19	8.4
2002	21.4	12.6	7.2	335	7.6	..	:	:	2.2	..	14.6	8.6	0.10	4.6	0.07	3.5	0.19	8.7
2003	21.6	12.7	7.4	344	7.8	..	:	:	2.3	..	14.5	8.5	0.12	5.2	0.09	4.0	0.18	8.0
2004	22.3	13.0	7.7	345	8.3	..	:	:	2.5	..	14.4	8.4	0.12	5.5	0.08	3.7	0.19	8.0
2005	22.3	12.9	8.1	363	8.1	..	0.01[10]	..	2.4	..	14.2	8.3	0.14	6.1	0.11	4.9	0.19	8.1
2006	23.3	13.4	8.8	380	8.3	..	0.12	..	2.6	..	14.5	8.4	0.12	5.1	0.09	3.8	0.17	6.9
2007	24.5^p	13.9^p	9.3^p	379^p	8.7^p	..	0.11^p	..	2.9^p	..	14.6^p	8.3^p	0.12^p	4.9^p	0.08^p	3.2^p	0.17^p	6.9^p
2006 March	5.8	13.6	2.2	370	0.9	..	0.03	..	0.7	..	4.0	9.4	0.03	5.2	0.02	3.2	0.04	6.7
June	5.8	13.3	2.2	381	2.3	..	0.04	..	0.7	..	3.6	8.4	0.02	4.6	0.02	3.6	0.04	7.3
Sept	6.1	13.9	2.3	358	3.5	..	0.03	..	0.5	..	3.4	7.8	0.03	4.8	0.02	3.5	0.05	7.4
Dec	5.6	12.8	2.2	393	1.5	..	0.02	..	0.6	..	3.5	7.9	0.03	5.8	0.03	4.9	0.04	6.3
2007 March	6.1^p	14.2^p	2.4^p	383^p	1.0^p	..	0.02^p	..	0.9^p	..	4.2^p	9.7^p	0.04^p	6.7^p	0.03^p	4.6^p	0.05^p	7.6^p
June	6.0^p	13.7^p	2.2^p	365^p	2.4^p	..	0.03^p	..	0.7^p	..	3.6^p	8.2^p	0.03^p	5.1^p	0.02^p	2.9^p	0.04^p	6.7^p
Sept	6.5^p	14.5^p	2.5^p	386^p	3.8^p	..	0.04^p	..	0.7^p	..	3.3^p	7.3^p	0.03^p	4.6^p	0.02^p	3.2^p	0.05^p	7.0^p
Dec	5.9^p	13.2^p	2.2^p	380^p	1.6^p	..	0.02^p	..	0.6^p	..	3.6^p	8.1^p	0.02^p	3.3^p	0.01^p	2.2^p	0.04^p	6.5^p
2008 March	6.5^p	14.8^p	2.4^p	396^p	1.1^p	..	0.02^p	..	..	..	4.1^p	9.4^p	0.03^p	4.6^p	0.03^p	3.9^p	0.05^p	7.3^p
June	6.3^p	14.3^p	2.4^p	384^p	2.2^p	..	0.02^p	..	..	..	3.6^p	8.2^p	0.03^p	4.7^p	0.02^p	3.6^p	0.04^p	6.6^p

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

| Year and quarter | Population | Live births | Deaths | Dependency ratio | | TFR[3] | Live births | | | Age-standardised mortality rate[6] | Period expectation of life (in years) at birth[7] | | Infant mortality rate[8] |
				Children[1]	Elderly[2]		Standardised mean age of mother at birth (years)[4]	Unstandardised mean age of mother at birth (years)[5]	Outside marriage as percentage of total live births		Males	Females	
United Kingdom													
1976	56,216.1	675.5	680.8	42.1	29.5	1.74	26.7	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	74.2	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	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	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	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	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	572.2	30.6	30.1	1.84	29.1	29.5	43.7	6,067	77.2	81.5	5.0
2007	60,975.4	772.2p	574.7	30.4	30.5	1.90p	29.3p	29.5p	44.4p	5,966p	..	..	4.8p
England													
1976	46,659.9	550.4	560.3	41.4	29.7	1.70	26.5	26.4	9.2	10,271	..	..	14.2
1981	46,820.8	598.2	541.0	36.4	29.9	1.79	27.0	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	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	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	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	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	470.3	30.6	29.9	1.86	29.2	29.5	43.0	5,916	77.5	81.7	5.0
2007	51,092.0	655.4	470.7	30.4	30.3	1.92	29.3	29.6	43.8	5,792	..	..	4.8
Wales													
1976	2,799.3	33.4	36.3	42.0	30.9	1.78	26.2	26.0	8.6	10,858	..	..	13.7
1981	2,813.5	35.8	35.0	37.6	31.6	1.87	26.7	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	73.8	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	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	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	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	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	31.1	31.4	34.3	1.86	28.5	28.6	53.0	6,190	76.7	81.1	4.1
2007	2,980.0	34.4	32.1	31.0	34.9	1.90	28.6	28.6	53.8	6,307	..	..	5.3
Scotland													
1976	5,233.4	64.9	65.3	44.7	28.4	1.79	26.4	26.0	9.3	11,675	..	..	14.8
1981	5,180.2	69.1	63.8	38.2	28.4	1.84	26.8	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	74.6	79.6	5.2
2006	5,116.9	55.7	55.1	28.7	30.6	1.67	29.1	29.5	47.7	7,161	74.8	79.7	4.5
2007	5,144.2	57.8	56.0	28.4	31.0	1.73	29.2	29.4	49.1	7,150	..	..	4.7
Northern Ireland													
1976	1,523.5	26.4	17.0	56.1	25.3	2.68	27.8	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	23.3	14.5	35.3	26.4	1.94	29.6	29.7	38.0	6,397	76.2	81.2	5.1
2007	1,759.1	24.5p	14.6p	34.9	26.6	2.02p	29.8p	29.8p	37.9p	6,321p	..	..	4.9p

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. Death figures for 2006 onwards 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
Rates for 2007 are based on the 2007 population estimates published on 21 August 2008.

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 All countries: figures for all years based on registered deaths. A minor methodological change was introduced for the 2006 figures to ensure consistency with population estimates of the very elderly for England and Wales. The effect on calculated life expectancies is marginal.
8 Deaths at age under one year per 1,000 live births.
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| 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	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	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	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	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
2007	690.0	44.8	130.8	182.6	191.1	115.4	25.4	29.5	62.0	26.0	73.5	104.0	110.2	56.9	12.0	29.3	1.92
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	93.6	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 March	164.0	10.9	31.1	42.7	45.7	27.4	6.2	29.5	59.8	25.5	70.9	98.6	106.9	54.8	12.0	29.3	1.85
June	169.5	10.7	31.4	44.6	47.8	28.9	6.2	29.6	61.1	25.0	70.8	101.9	110.5	57.1	11.8	29.4	1.89
Sept	181.4	11.9	34.6	48.6	50.0	29.9	6.4	29.5	64.7	27.3	77.1	109.9	114.4	58.6	12.0	29.2	2.00
Dec	175.0	11.3	33.7	46.6	47.6	29.2	6.6	29.5	62.4	26.1	75.0	105.4	108.9	57.1	12.4	29.3	1.93
2008 March	173.5[P]	11.1[P]	33.4[P]	46.7[P]	47.2[P]	28.8[P]	6.4[P]	29.5[P]	62.6[P]	26.1[P]	73.5[P]	103.2[P]	110.7[P]	58.1[P]	12.3[P]	29.3[P]	1.92[P]
June	176.1[P]	10.9[P]	33.2[P]	48.1[P]	48.2[P]	29.1[P]	6.5[P]	29.5[P]	63.5[P]	25.7[P]	73.1[P]	106.5[P]	113.2[P]	58.7[P]	12.5[P]	29.4[P]	1.95[P]

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.
   Rates for 2008 are based on 2006-based population projections for 2008.
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.
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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 — Live births outside marriage (numbers)							Mean age[1] (years)	Age of mother at birth — Percentage of total live births in age group							Registration[2] — Joint (As a percentage of all births outside marriage)		Sole
	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	Same[3] address	Different[3] address	
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
2007	305.6	41.7	91.9	76.0	53.0	34.0	9.0	27.1	44.3	93.1	70.3	41.6	27.7	29.5	35.5	65.0	20.1	15.0
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	72.5	10.2	21.7	17.6	12.6	8.2	2.2	27.1	44.2	93.5	69.8	41.3	27.5	29.8	35.1	64.0	20.5	15.5
June	73.5	9.9	21.8	18.3	13.0	8.3	2.2	27.1	43.4	92.6	69.5	41.0	27.2	28.8	35.2	65.1	19.9	14.9
Sept	80.8	11.1	24.4	20.4	13.9	8.8	2.2	27.0	44.5	93.2	70.5	41.9	27.8	29.6	35.0	65.2	20.1	14.7
Dec	78.7	10.6	24.0	19.7	13.5	8.7	2.4	27.1	45.0	93.1	71.3	42.2	28.3	29.6	36.5	65.3	19.9	14.8
2008 March	78.4ᵖ	10.4ᵖ	23.8ᵖ	20.0ᵖ	13.4ᵖ	8.6ᵖ	2.3ᵖ	27.1ᵖ	45.2ᵖ	94.3ᵖ	71.2ᵖ	42.8ᵖ	28.4ᵖ	29.8ᵖ	35.6ᵖ	65.3ᵖ	20.0ᵖ	14.7ᵖ
June	78.9ᵖ	10.2ᵖ	23.7ᵖ	20.4ᵖ	13.7ᵖ	8.5ᵖ	2.3ᵖ	27.1ᵖ	44.8ᵖ	93.4ᵖ	71.3ᵖ	42.4ᵖ	28.5ᵖ	29.4ᵖ	35.7ᵖ	66.0ᵖ	19.8ᵖ	14.2ᵖ

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

		Age of woman at conception							
Year and quarter	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
2006	870.0	7.8	41.8	103.1	191.2	222.2	212.4	115.4	25.5
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	214.0	1.8	10.2	25.4	47.5	54.2	52.4	28.3	6.2
June	212.6	2.1	10.6	25.7	46.9	53.8	51.4	28.3	6.5
Sept	215.1	2.0	10.0	24.7	46.3	55.3	53.6	28.9	6.4
Dec	228.2	2.0	11.0	27.3	50.6	58.9	55.1	29.9	6.5
2007 March[1,P]	220.6	2.0	10.7	26.4	48.8	56.3	52.0	28.9	6.4
June[1,P]	220.1	2.1	10.9	26.7	48.9	56.9	51.5	28.7	6.5
Sept[1,P]	222.0	2.0	10.3	25.5	48.1	58.3	52.4	29.5	6.6
(b) rates (conceptions per thousand women in age group)									
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
2006	78.3	7.8	40.9	60.2	109.5	129.5	117.5	56.3	12.3
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	78.2	7.1	40.4	60.3	111.2	129.2	116.2	55.7	12.2
June	76.7	8.2	41.4	60.3	108.1	126.1	113.6	55.3	12.5
Sept	76.8	7.7	38.8	57.2	104.8	127.4	118.1	56.0	12.1
Dec	81.4	8.1	42.8	63.0	114.1	134.9	122.4	58.2	12.3
2007 March[1,2,P]	80.4	8.0	42.6	62.4	111.9	130.7	119.1	57.6	12.5
June[1,2,P]	79.3	8.7	42.7	62.4	110.2	129.8	117.8	56.7	12.4
Sept[1,2,P]	79.1	8.2	39.9	58.7	106.9	131.1	120.1	57.8	12.5
(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
2006	22.3	59.8	48.4	41.9	28.7	18.0	13.1	17.1	31.8
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	22.5	59.0	47.7	41.6	29.1	18.4	13.0	17.5	31.1
June	23.1	59.5	49.0	42.5	29.6	18.8	13.9	17.8	31.6
Sept	21.5	60.4	48.0	41.3	27.7	17.5	12.7	16.3	32.8
Dec	22.0	60.2	49.1	42.0	28.3	17.4	12.8	16.9	31.7
2007 March[1,P]	22.7	62.7	50.9	43.4	29.7	18.5	13.1	17.0	31.4
June[1,P]	22.6	62.1	50.5	43.4	28.8	18.2	12.9	17.1	31.9
Sept[1,P]	21.1	58.0	48.8	41.6	27.2	16.7	12.4	16.2	31.1

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, June and September quarters of 2007 exclude maternities where the mother's age was not recorded.
2   Conception rates for March and June quarters of 2007 are calculated using 2006-based population projections for 2007. Rates for September quarter of 2007 are calculated using mid-year population estimates for 2007. All rates will be updated using 2007 population estimates when final annual 2007 conception figures are released.
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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

	All ages			All women (residents)										
				Age group							Gestation weeks (percentages)			
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
Numbers (thousands)											**Percentages**			
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
2007	205.6	198.5	7.1	4.4	39.6	57.0	41.7	27.3	27.9	0.7	57.9	31.9	8.8	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
Dec	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	55.3	53.3	1.9	1.2	10.8	15.4	11.1	7.3	7.4	0.2	54.1	35.0	9.4	1.6
June	51.2	49.4	1.8	1.1	9.9	14.3	10.3	6.7	6.8	0.2	56.6	32.6	9.2	1.5
Sept	49.9	48.2	1.7	1.0	9.5	13.5	10.2	6.6	7.0	0.2	58.6	31.2	8.8	1.4
Dec	49.2	47.6	1.6	1.1	9.4	13.7	10.0	6.6	6.7	0.2	62.7	28.3	7.6	1.4
2008 March[p]	53.3	51.5	1.8	1.1	10.5	14.7	10.8	7.0	7.1	0.2	58.4	31.0	9.0	1.6
June[p]	51.7	49.9	1.9	1.0	9.9	14.4	10.7	6.8	6.9	0.2	60.8	29.4	8.3	1.4

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
2007	18.6	17.9	:	4.4	28.9	32.6	24.3	15.1	6.7	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	20.0	19.2	:	4.7	31.4	35.3	25.6	16.7	7.2	0.4
June	18.5	17.8	:	4.4	28.8	32.7	23.7	15.5	6.6	0.4
Sept	18.0	17.4	:	4.2	27.7	30.8	23.3	15.4	6.8	0.4
Dec	17.8	17.2	:	4.4	27.2	31.1	22.7	15.3	6.5	0.4
2008 March[p]	19.3	18.6	:	4.6	30.4	33.2	24.3	16.5	7.0	0.4
June[p]	18.6	18.0	:	4.3	28.9	32.2	23.9	16.0	6.7	0.3

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										Females							
Year	At birth	At age							Year	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	74.2	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	75.3	70.9	56.1	46.6	28.0	19.5	12.3	7.0	2000	80.1	75.6	60.8	51.0	31.9	23.0	15.0	8.6
2001	75.6	71.2	56.4	46.9	28.2	19.7	12.5	7.1	2001	80.4	75.8	61.0	51.2	32.1	23.2	15.1	8.7
2002	75.9	71.4	56.6	47.1	28.5	19.9	12.6	7.1	2002	80.5	75.9	61.1	51.3	32.2	23.3	15.2	8.7
2003	76.2	71.7	56.9	47.4	28.7	20.2	12.8	7.3	2003	80.7	76.1	61.3	51.5	32.4	23.4	15.3	8.7
2004	76.5	72.0	57.3	47.7	29.0	20.5	13.1	7.4	2004	80.9	76.4	61.5	51.7	32.6	23.6	15.5	8.8
2005	76.9	72.4	57.6	48.0	29.4	20.8	13.4	7.6	2005	81.3	76.7	61.9	52.0	32.9	23.9	15.8	9.0
2006	77.2	72.7	57.9	48.3	29.6	21.1	13.6	7.7	2006	81.5	76.9	62.0	52.2	33.1	24.1	15.9	9.1
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	55.3	45.8	27.1	18.6	11.6	6.6	1996	79.6	75.1	60.2	50.4	31.3	22.5	14.6	8.4
2000	75.6	71.1	56.4	46.8	28.1	19.6	12.3	7.0	2000	80.3	75.8	60.9	51.1	32.0	23.1	15.1	8.6
2001	75.9	71.4	56.7	47.1	28.4	19.9	12.5	7.1	2001	80.5	76.0	61.2	51.3	32.2	23.3	15.2	8.7
2002	76.1	71.6	56.9	47.3	28.6	20.1	12.7	7.2	2002	80.7	76.1	61.3	51.5	32.3	23.4	15.3	8.7
2003	76.4	71.9	57.2	47.6	28.9	20.3	12.9	7.3	2003	80.9	76.3	61.5	51.7	32.5	23.6	15.4	8.8
2004	76.8	72.3	57.5	47.9	29.2	20.6	13.2	7.4	2004	81.1	76.6	61.7	51.9	32.7	23.8	15.6	8.9
2005	77.2	72.7	57.9	48.3	29.6	21.0	13.5	7.6	2005	81.5	76.9	62.0	52.2	33.1	24.1	15.9	9.1
2006	77.4	72.9	58.2	48.5	29.8	21.2	13.7	7.7	2006	81.7	77.1	62.2	52.4	33.2	24.3	16.0	9.2
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	45.8	27.1	18.7	11.7	6.6	1996	79.6	75.1	60.3	50.4	31.3	22.5	14.6	8.4
2000	75.6	71.2	56.4	46.9	28.2	19.6	12.4	7.0	2000	80.3	75.8	61.0	51.2	32.0	23.1	15.1	8.6
2001	75.9	71.4	56.7	47.1	28.5	19.9	12.6	7.1	2001	80.6	76.0	61.2	51.4	32.2	23.3	15.2	8.7
2002	76.1	71.7	56.9	47.4	28.7	20.1	12.7	7.2	2002	80.7	76.1	61.3	51.5	32.4	23.4	15.3	8.7
2003	76.5	72.0	57.2	47.6	28.9	20.4	12.9	7.3	2003	80.9	76.4	61.5	51.7	32.6	23.6	15.4	8.8
2004	76.8	72.3	57.6	48.0	29.2	20.7	13.2	7.4	2004	81.1	76.6	61.7	51.9	32.8	23.8	15.6	8.9
2005	77.2	72.7	57.9	48.3	29.6	21.0	13.5	7.6	2005	81.5	76.9	62.1	52.3	33.1	24.1	15.9	9.1
2006	77.5	73.0	58.2	48.6	29.8	21.2	13.7	7.7	2006	81.7	77.1	62.3	52.4	33.3	24.3	16.0	9.2
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	73.8	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	74.8	70.4	55.7	46.2	27.6	19.1	12.0	6.8	2000	79.7	75.2	60.4	50.6	31.5	22.6	14.7	8.4
2001	75.3	70.8	56.0	46.6	28.0	19.5	12.3	7.0	2001	80.0	75.4	60.6	50.8	31.7	22.8	14.9	8.5
2002	75.5	70.9	56.2	46.8	28.2	19.7	12.4	7.1	2002	80.1	75.5	60.7	50.9	31.8	22.9	15.0	8.6
2003	75.8	71.2	56.5	47.0	28.4	19.9	12.6	7.2	2003	80.3	75.7	60.9	51.1	32.0	23.1	15.1	8.6
2004	76.1	71.6	56.8	47.3	28.7	20.2	12.8	7.3	2004	80.6	76.0	61.1	51.3	32.2	23.3	15.2	8.7
2005	76.6	72.0	57.3	47.7	29.2	20.6	13.2	7.6	2005	80.9	76.3	61.5	51.6	32.6	23.7	15.5	8.9
2006	76.7	72.1	57.4	47.8	29.3	20.8	13.4	7.6	2006	81.1	76.5	61.6	51.8	32.7	23.8	15.7	9.0
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
2006	74.8	70.3	55.5	46.1	27.9	19.6	12.6	7.2	2006	79.7	75.1	60.3	50.5	31.5	22.8	15.0	8.6
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
2006	76.2	71.7	57.1	47.6	29.1	20.6	13.1	7.3	2006	81.2	76.6	61.8	52.0	32.8	23.9	15.7	8.9

Note: All figures are based on a three-year period, so that for instance 2003 represents 2002–2004. The population estimates used to calculate these life expectancies are the latest available at time of publication of the 2005–2007 interim life tables (30 October 2008). All figures are based on death registrations. A minor methodological change was introduced for the 2006 figures to ensure consistency with population estimates of the very elderly for England and Wales. The effect on calculated life expectancies is marginal.

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		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
2007		240.8	1.88	0.34	0.18	0.23	0.80	1.22	3.14	6.26	11.9	27.5	47.8	80.6	58.9
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		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
2007		263.3	1.46	0.24	0.12	0.19	0.36	0.45	1.36	3.79	8.1	18.2	33.9	79.4	115.8
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		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
2007[2]		9.1	5.3	0.26	0.12	0.13	0.42	0.65	0.89	1.54	3.42	8.7	22.5	62.8	161.0
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	March	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	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	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	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[2]	March	10.0	5.3	0.29	0.12	0.14	0.47	0.65	0.92	1.55	3.68	9.2	24.4	69.9	184.3
	June	8.8	5.7	0.26	0.12	0.14	0.44	0.65	0.90	1.50	3.39	8.6	22.1	60.7	152.3
	Sept	8.3	5.1	0.22	0.09	0.13	0.40	0.61	0.88	1.49	3.18	8.2	20.7	57.1	140.5
	Dec	9.3	5.2	0.28	0.13	0.12	0.43	0.69	0.88	1.61	3.45	9.0	22.8	63.6	167.3
2008[3]	March[p]	9.7	5.4	0.21	0.12	0.11	0.36	0.60	0.84	1.56	3.65	9.0	23.3	65.7	178.3
	June[p]	8.8	5.3	0.22	0.12	0.12	0.45	0.61	0.87	1.58	3.38	8.5	21.6	59.8	155.6
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		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
2007[2]		9.6	4.3	0.19	0.08	0.12	0.21	0.25	0.39	0.92	2.27	5.6	14.5	44.9	143.6
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	March	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	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	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	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[2]	March	10.9	4.5	0.24	0.07	0.12	0.27	0.27	0.38	0.97	2.31	5.9	16.3	51.7	167.0
	June	9.2	4.6	0.21	0.10	0.13	0.18	0.22	0.44	0.86	2.31	5.5	14.1	42.8	136.0
	Sept	8.5	4.1	0.14	0.06	0.11	0.18	0.28	0.36	0.87	2.22	5.2	12.9	40.0	124.3
	Dec	9.8	4.2	0.16	0.10	0.12	0.20	0.25	0.38	0.96	2.25	5.7	14.7	45.4	147.9
2008[3]	March[p]	10.4	4.5	0.20	0.07	0.09	0.22	0.23	0.41	0.93	2.34	5.6	15.0	48.6	161.8
	June[p]	9.3	3.6	0.20	0.11	0.10	0.16	0.27	0.41	0.92	2.29	5.4	13.7	42.7	140.5

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, 2006, 2007 and provisional 2008 figures 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 2007 have been calculated using the mid 2007 population estimates published on 21 August 2008.
3 Death rates for 2008 are based on the 2006-based population projections for 2008.
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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		10.5	10.2	9.6	9.6	9.7	9.2	6.8	9.2	10.1
2007[1]		10.4	10.3	9.7	9.4	9.7	9.1	6.7	9.1	10.2
2006	March	11.6	11.4	10.7	10.8	11.1	10.6	7.8	10.8	11.6
	June	10.6	10.2	9.5	9.5	9.6	9.2	6.7	8.9	9.9
	Sept	9.4	9.3	8.8	8.7	8.8	8.3	6.2	8.1	9.1
	Dec	10.6	9.9	9.5	9.5	9.4	9.0	6.5	8.8	9.9
2007[1]	March	11.8	11.7	10.9	10.6	11.0	10.2	7.4	10.0	11.5
	June	9.9	9.9	9.5	9.1	9.4	8.8	6.5	8.8	9.8
	Sept	9.4	9.2	8.8	8.5	8.5	8.3	6.1	8.2	9.2
	Dec	10.7	10.4	10.0	9.7	9.8	9.4	6.8	9.5	10.5
2008[1]	March[p]	11.4	10.9	10.3	10.0	10.4	9.9	7.2	9.7	10.8
	June[p]	9.9	9.7	9.5	9.2	9.3	9.0	6.4	8.8	9.8
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		5.4	5.6	5.7	5.4	6.4	4.1	4.9	4.1	4.0
2007		4.7	5.0	5.7	5.3	5.9	4.3	4.5	3.9	4.2
2006	March	5.4	6.0	5.4	5.9	6.6	3.8	5.5	4.3	4.2
	June	6.4	5.5	6.1	5.0	7.0	4.3	4.6	4.2	3.7
	Sept	5.4	5.2	4.8	5.3	6.7	3.6	4.8	4.2	3.6
	Dec	4.5	5.7	6.6	5.5	5.3	4.6	4.7	3.9	4.7
2007	March	5.1	5.1	4.5	5.3	6.4	4.2	4.5	3.9	4.4
	June	4.5	5.5	7.2	6.5	6.1	3.9	5.1	4.3	3.9
	Sept	4.0	4.3	5.2	5.1	5.5	4.7	4.7	3.9	4.1
	Dec	5.3	5.2	5.7	4.3	5.7	4.4	4.0	3.5	4.2
2008	March[p]	4.3	4.9	5.8	4.7	7.7	4.4	4.0	4.5	4.9
	June[p]	4.4	4.9	4.6	4.9	6.7	4.3	3.9	3.7	3.1
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		3.8	3.8	4.0	4.0	4.6	2.9	3.4	2.8	2.9
2007		3.0	3.3	4.0	3.6	4.5	3.0	3.1	2.6	2.8
2006	March	4.1	3.8	4.0	4.2	4.6	2.7	3.4	2.9	3.2
	June	4.0	3.8	4.2	3.9	5.1	3.2	3.3	2.7	2.4
	Sept	3.4	3.5	3.3	3.9	5.4	2.5	3.5	2.9	2.6
	Dec	3.7	4.1	4.7	4.0	3.2	3.1	3.6	2.5	3.6
2007	March	4.0	3.8	3.3	3.4	4.8	2.9	3.0	2.6	3.0
	June	1.8	3.7	5.2	4.5	4.6	2.6	3.5	3.0	2.5
	Sept	2.6	2.7	3.5	3.5	4.2	3.1	3.1	2.5	3.1
	Dec	3.7	2.9	3.8	2.8	4.6	3.6	2.7	2.4	2.7
2008	March[p]	3.3	3.3	4.0	3.6	5.8	3.0	2.8	2.9	3.1
	June[p]	2.7	3.4	2.7	3.3	4.3	2.7	2.6	2.7	2.5
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		8.0	8.3	8.5	8.4	9.2	6.7	8.8	7.0	6.6
2007		7.3	7.9	8.8	7.3	9.1	7.0	8.4	6.6	6.4
2006	March	8.2	9.0	7.6	8.7	9.6	7.4	9.1	7.6	6.5
	June	8.7	8.3	9.2	9.1	10.1	7.0	8.7	6.8	6.8
	Sept	7.5	8.0	8.4	8.4	9.6	6.6	8.7	6.6	6.2
	Dec	7.8	7.8	8.7	7.6	7.4	6.0	8.9	7.0	7.0
2007	March	7.8	8.5	7.8	6.8	9.5	7.6	8.3	6.6	6.8
	June	6.8	7.4	9.2	8.6	9.8	6.7	9.1	7.1	6.5
	Sept	7.4	7.2	8.9	7.1	7.7	7.0	8.6	6.1	6.5
	Dec	7.1	8.5	9.0	6.7	9.5	6.8	7.6	6.6	6.0
2008	March[p]	6.5	8.2	9.2	7.9	11.5	6.1	7.7	6.6	6.3
	June[p]	7.5	8.0	7.7	7.5	9.3	6.4	7.7	6.6	6.3

Note: Figures represent the numbers of deaths occurring in each year with the exception of 2006, 2007 and provisional 2008 figures 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 2007 and 2008 have been calculated using the mid-2007 population estimates published on 21 August 2008.
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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

Year and quarter	All deaths Number (thousands)	All deaths Crude rate per 100,000 population	All causes (age-standardised rates per million population[2]) A00–R99 V01–Y89	Oesophagus (C15)	Stomach (C16)	Colon (C18)	Rectosigmoid junction, rectum, and anus (C19–C21)	Trachea, bronchus and lung (C33–C34)	Melanoma of skin (C43)	Other malignant neoplasms of skin (C44)	Breast (C50)	Cervix uteri (C53)	Ovary (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	240.9	913	7,123	131	83	132	90	509	31	7	2	:	:
2007	240.8	906	6,949	128	82	128	88	498	31	8	3	:	:
2006 March	66.5	1,023	7,931	131	82	134	98	522	32	7	2	:	:
June	59.4	904	7,058	132	82	128	87	504	30	7	2	:	:
Sept	55.5	835	6,536	128	81	133	85	497	29	7	1	:	:
Dec	59.5	894	6,985	131	86	133	91	515	31	8	3	:	:
2007 March	65.4	998	7,616	126	88	132	86	523	33	7	2	:	:
June	58.2	879	6,756	130	84	122	86	493	31	8	3	:	:
Sept	55.2	824	6,340	128	80	126	87	470	29	7	3	:	:
Dec	62.0	926	7,096	129	78	132	94	509	31	9	3	:	:
2008[3] March	64.4 P	967 P	7,288 P	135 P	80 P	132 P	88 P	508 P	29 P	5 P	1 P	:	:
June	58.9 P	884 P	6,700 P	125 P	77 P	130 P	90 P	476 P	33 P	8 P	2 P	:	:
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	261.7	956	4,989	48	35	93	46	300	19	4	277	24	99
2007	263.3	957	4,921	47	35	92	48	300	21	4	267	24	96
2006 March	74.5	1,104	5,658	48	40	90	45	309	16	4	296	26	105
June	64.4	945	4,940	46	34	89	46	294	18	4	266	22	101
Sept	59.1	856	4,540	47	33	99	44	289	19	3	272	23	96
Dec	63.7	923	4,832	51	34	95	49	307	21	4	273	23	93
2007 March	74.0	1,091	5,523	50	35	92	49	315	22	4	284	25	95
June	62.8	916	4,757	48	31	88	45	296	22	4	267	22	97
Sept	58.8	847	4,408	40	37	91	47	285	21	3	251	22	97
Dec	67.7	976	5,007	51	37	96	49	306	20	4	269	25	94
2008[3] March	71.7 P	1,042 P	5,252 P	50 P	35 P	86 P	47 P	301 P	20 P	3 P	269 P	24 P	93 P
June	63.8 P	927 P	4,758 P	46 P	36 P	86 P	47 P	297 P	21 P	3 P	259 P	23 P	91 P

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. The number of deaths for 2006 onwards 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 2008 are provisional and based on the 2006-based population projections for 2008.
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	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
247	81	66	71	1,280	481	303	337	11	39	162	79	119	2007
256	79	73	86	1,543	611	434	440	11	52	158	83	128	2006 March
249	81	63	75	1,351	506	318	351	10	48	164	90	117	June
241	83	67	66	1,210	454	242	271	11	41	158	77	112	Sept
252	80	69	71	1,312	509	287	312	8	41	164	82	134	Dec
252	83	66	77	1,442	541	395	433	11	44	178	84	115	2007 March
246	80	69	65	1,249	465	286	311	11	37	154	77	121	June
233	78	61	65	1,146	429	226	265	9	35	152	73	116	Sept
257	82	69	75	1,287	489	306	339	11	40	167	82	125	Dec
239P	75P	64P	75P	1,324P	514P	363P	412P	11P	47P	164P	67P	107P	2008 March
228P	78P	65P	72P	1,191P	453P	283P	321P	8P	39P	160P	70P	121P	June
													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
:	27	38	53	592	455	251	218	14	26	87	23	35	2007
:	29	42	60	733	551	371	283	19	37	87	25	40	2006 March
:	27	34	56	637	477	259	214	16	27	85	27	37	June
:	29	35	51	562	427	186	163	13	27	86	21	41	Sept
:	29	35	51	585	459	231	193	16	25	89	23	38	Dec
:	29	40	58	689	517	353	298	18	28	96	23	33	2007 March
:	29	36	49	569	439	228	204	14	27	86	27	31	June
:	24	34	50	520	399	178	156	12	24	80	22	35	Sept
:	26	41	56	591	464	249	217	14	26	86	20	39	Dec
:	29P	36P	54P	613P	487P	320P	262P	17P	28P	90P	20P	33P	2008[3] March
:	27P	36P	51P	547P	432P	237P	206P	14P	26P	85P	22P	39P	June

See notes opposite.

Report:

Infant and perinatal mortality in England and Wales by social and biological factors, 2007

Kath Moser
Office for National Statistics

Introduction

This report presents statistics on stillbirths and infant deaths registered in England and Wales that occurred in 2007. 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 2007, 3,266 infant deaths occurred in England and Wales of which 3,185 (98 per cent) were linked to their birth records. Of the 81 records that were not linked, 31 were born outside England and Wales (and were therefore not registered in England and Wales) and 50 were not linked because no record of the birth could be found. The linkage rate for 2007 is comparable with that for previous years since linkage began in 1975.

In 2007, of all the linked infant deaths 1,710 (54 per cent) were early neonates (babies dying aged under 7 days), 2,201 (69 per cent) were neonatal deaths (babies dying aged under 28 days) and 984 (31 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 177.5 and 38.2 deaths per 1,000 live births respectively compared with a rate of 1.8 among normal birthweight babies (2,500 grams and over). Forty-four per cent of infant deaths occurred among very low birthweight babies

- There were 830 stillbirths weighing less than 1,500 grams delivered at 24–27 weeks gestation. This represented 94 per cent of all stillbirths delivered at 24–27 weeks and 55 per cent of all very low birthweight stillbirths

- The infant mortality rate was highest among babies of mothers aged under 20 (7.2 deaths per 1,000 live births) followed by babies of mothers aged 20–24 (5.3 per 1,000 live births). The infant mortality rate was lowest among babies with mothers in the 30–34 age group (4.0 per 1,000 live births)

- Babies of mothers aged 40 and over had the highest stillbirth and perinatal mortality rates at 7.7 and 10.3 per 1,000 births respectively

- Babies of mothers born in Pakistan had a particularly high infant mortality rate (9.1 deaths per 1,000 live births) compared with the overall infant mortality rate of 4.6 per 1,000 live births. The stillbirth and the perinatal mortality rates were also particularly high in babies of mothers born in Pakistan and babies of mothers born in the Caribbean

- The registration types with the highest infant mortality rates were births outside marriage jointly registered by both parents giving different addresses (6.5 deaths per 1,000 live births) and sole registered births (6.3 per 1,000 live births)

- Babies born inside marriage to women with three or more previous children had a high infant mortality at 6.1 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 5.8 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 2.8 per 1,000 live births

- Seventy-two 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 86 per cent of all neonatal deaths. For postneonatal deaths, 29 per cent were related to congenital anomalies, 16 per cent were sudden infant deaths, 14 per cent were from infections, and 11 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 2007 and were on our database at 18 September 2008. These figures are provisional.

Birthweight information was not available for 1.1 per cent of live births and 2.6 per cent of stillbirths. The information, however, may improve when birth registration records are linked to NHS Numbers for Babies records at a later date.

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 from those used in previous years due to further EU enlargement, and changes affecting some New Commonwealth country groupings.

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, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, 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, Mozambique, Tanzania, Uganda, Zambia
Southern Africa
Botswana, Lesotho, Namibia, South Africa, Swaziland
Rest of Africa
Cameroon, The Gambia, Ghana, Mauritius, Nigeria, Seychelles, Sierra Leone
Far East
Brunei, Malaysia, Singapore
Caribbean
Anguilla, Antigua, Bahamas, Barbados, Belize, Bermuda, British Virgin Islands, Cayman Islands, Dominica, Grenada, Guyana, Jamaica, Montserrat, St Kitts 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, 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, 2007

England and Wales   Numbers and rates

| Birthweight (grams) | Numbers | | | | | | Rates[1] | | | | |
| | Births | | Deaths | | | | | | | | |
	Live births	Stillbirths	Early neonatal	Neonatal	Postneonatal	Infant	Stillbirth	Perinatal	Neonatal	Postneonatal	Infant
All	689,893	3,600	1,710	2,201	984	3,185	5.2	7.7	3.2	1.4	4.6
Under 1,500	7,867	1,516	910	1,138	258	1,396	161.6	258.6	144.7	32.8	177.5
1,500–1,999	9,918	407	107	139	67	206	39.4	49.8	14.0	6.8	20.8
2,000–2,499	31,555	422	139	181	103	284	13.2	17.5	5.7	3.3	9.0
2,500–2,999	114,452	432	151	214	188	402	3.8	5.1	1.9	1.6	3.5
3,000–3,499	244,570	413	128	177	204	381	1.7	2.2	0.7	0.8	1.6
3,500 and over	274,149	318	151	202	142	344	1.2	1.7	0.7	0.5	1.3
Not stated	7,382	92	124	150	22	172	12.3	28.9	20.3	3.0	23.3

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, 2007

England and Wales   Numbers

| Birthweight (grams) | All | Gestation (weeks) | | | | | |
		24–27	28–31	32–35	36–39	40 and over	Not stated
All	3,600	881	605	647	897	491	79
Under 1,000	1,046	754	219	43	15	5	10
1,000–1,499	470	76	256	121	16	1	–
1,500–1,999	407	12	102	213	73	5	2
2,000–2,499	422	6	14	178	187	35	2
2,500–2,999	432	3	3	63	274	88	1
3,000–3,499	413	8	1	14	196	191	3
3,500 and over	318	10	7	9	125	165	2
Not stated	92	12	3	6	11	1	59

Table 3 — Live births, stillbirths and infant deaths by mother's age, 2007

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	689,893	3,600	1,710	2,201	984	3,185	5.2	7.7	3.2	1.4	4.6
Under 20	44,797	251	158	207	117	324	5.6	9.1	4.6	2.6	7.2
20–24	130,749	693	350	460	228	688	5.3	7.9	3.5	1.7	5.3
25–29	182,544	946	406	522	256	778	5.2	7.4	2.9	1.4	4.3
30–34	191,080	917	446	560	207	767	4.8	7.1	2.9	1.1	4.0
35–39	115,379	597	284	367	138	505	5.1	7.6	3.2	1.2	4.4
40 and over	25,344	196	66	85	38	123	7.7	10.3	3.4	1.5	4.9

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, 2007 |

England and Wales   Numbers and rates

| Country of birth | Numbers | | | | | | Rates[1] | | | | |
| | Births | | Deaths | | | | | | | | |
	Live births	Stillbirths	Early neonatal	Neonatal	Postneonatal	Infant	Stillbirth	Perinatal	Neonatal	Postneonatal	Infant
All	689,893	3,600	1,710	2,201	984	3,185	5.2	7.7	3.2	1.4	4.6
United Kingdom	529,594	2,513	1,268	1,639	745	2,384	4.7	7.1	3.1	1.4	4.5
England and Wales	519,384	2,464	1,249	1,615	728	2,343	4.7	7.1	3.1	1.4	4.5
Scotland	7,377	35	15	20	12	32	4.7	6.7	2.7	1.6	4.3
Northern Ireland	2,451	12	2	2	1	3	4.9	5.7	0.8	0.4	1.2
Elsewhere	382	2	2	2	4	6	5.2	10.4	5.2	10.5	15.7
Outside the United Kingdom	160,299	1,087	442	562	239	801	6.7	9.5	3.5	1.5	5.0
Irish Republic	3,226	20	5	8	5	13	6.2	7.7	2.5	1.5	4.0
Other European Union	34,104	159	61	82	25	107	4.6	6.4	2.4	0.7	3.1
Rest of Europe	7,710	40	16	19	4	23	5.2	7.2	2.5	0.5	3.0
Commonwealth											
Australia, Canada and New Zealand	4,707	21	4	5	5	10	4.4	5.3	1.1	1.1	2.1
New Commonwealth	68,650	552	245	310	138	448	8.0	11.5	4.5	2.0	6.5
Asia											
Bangladesh	8,774	56	23	33	17	50	6.3	8.9	3.8	1.9	5.7
India	12,008	86	32	40	14	54	7.1	9.8	3.3	1.2	4.5
Pakistan	17,651	175	80	104	56	160	9.8	14.3	5.9	3.2	9.1
East Africa	4,195	20	13	15	11	26	4.7	7.8	3.6	2.6	6.2
Southern Africa	4,658	24	16	16	5	21	5.1	8.5	3.4	1.1	4.5
Rest of Africa	12,681	132	62	76	25	101	10.3	15.1	6.0	2.0	8.0
Far East	1,328	8	3	4	–	4	6.0	8.2	3.0	–	3.0
Caribbean	3,572	32	10	12	6	18	8.9	11.7	3.4	1.7	5.0
Rest of the New Commonwealth	3,783	19	6	10	4	14	5.0	6.6	2.6	1.1	3.7
Rest of World and not stated	41,902	295	111	138	62	200	7.0	9.6	3.3	1.5	4.8

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, 2007 |

England and Wales   Numbers and rates

| Marital status Parity/type of registration | Numbers | | | | | | Rates[1] | | | | |
| | Births | | Deaths | | | | | | | | |
	Live births	Stillbirths	Early neonatal	Neonatal	Postneonatal	Infant	Stillbirth	Perinatal	Neonatal	Postneonatal	Infant
All	689,893	3,600	1,710	2,201	984	3,185	5.2	7.7	3.2	1.4	4.6
Inside marriage											
All	384,428	1,910	906	1,154	455	1,609	4.9	7.3	3.0	1.2	4.2
0	164,759	912	454	574	180	754	5.5	8.2	3.5	1.1	4.6
1	134,965	537	232	303	132	435	4.0	5.7	2.2	1.0	3.2
2	53,880	274	117	150	81	231	5.1	7.2	2.8	1.5	4.3
3 and over	30,824	187	103	127	62	189	6.0	9.4	4.1	2.0	6.1
Outside marriage											
All	305,465	1,690	804	1,047	529	1,576	5.5	8.1	3.4	1.7	5.2
Joint registration/same address	198,433	1,036	494	642	250	892	5.2	7.7	3.2	1.3	4.5
Joint registration/different address	61,341	331	191	256	141	397	5.4	8.5	4.2	2.3	6.5
Sole registration	45,691	323	119	149	138	287	7.0	9.6	3.3	3.0	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), 2007[2] |

England and Wales   Numbers and rates

| NS-SEC | Numbers | | | | | | Rates[3] | | | | |
| | Births | | Deaths | | | | | | | | |
	Live births	Stillbirths	Early neonatal	Neonatal	Post-neonatal	Infant	Stillbirth	Perinatal	Neonatal	Post-neonatal	Infant
All[4]	644,202	3,277	1,591	2,052	846	2,898	5.1	7.5	3.2	1.3	4.5
Inside marriage											
All[5]	384,428	1,910	906	1,154	455	1,609	4.9	7.3	3.0	1.2	4.2
1.1 Large employers and higher managerial	3,681	123	62	77	21	98	3.3	5.0	2.1	0.6	2.7
1.2 Higher professional	5,271	237	101	123	40	163	4.5	6.4	2.3	0.8	3.1
2 Lower managerial and professional	9,182	401	179	224	76	300	4.3	6.3	2.4	0.8	3.3
3 Intermediate	2,381	120	57	74	34	108	5.0	7.4	3.1	1.4	4.5
4 Small employers and own-account workers	4,933	209	115	142	50	192	4.2	6.5	2.9	1.0	3.9
5 Lower supervisory and technical	4,142	175	86	118	39	157	4.2	6.3	2.8	0.9	3.8
6 Semi-routine	3,672	275	124	161	59	220	7.4	10.8	4.4	1.6	6.0
7 Routine	3,425	220	102	138	77	215	6.4	9.3	4.0	2.2	6.3
Other[6]	1,728	150	74	90	49	139	8.6	12.9	5.2	2.8	8.0
Outside marriage joint registration											
All[5]	259,774	1,367	685	898	391	1,289	5.2	7.9	3.5	1.5	5.0
1.1 Large employers and higher managerial	994	34	23	26	7	33	3.4	5.7	2.6	0.7	3.3
1.2 Higher professional	1,168	60	25	32	13	45	5.1	7.2	2.7	1.1	3.9
2 Lower managerial and professional	3,937	181	73	100	37	137	4.6	6.4	2.5	0.9	3.5
3 Intermediate	1,309	62	27	33	18	51	4.7	6.8	2.5	1.4	3.9
4 Small employers and own-account workers	3,772	161	94	118	33	151	4.3	6.7	3.1	0.9	4.0
5 Lower supervisory and technical	4,098	181	93	123	45	168	4.4	6.7	3.0	1.1	4.1
6 Semi-routine	3,643	214	118	153	64	217	5.8	9.1	4.2	1.8	6.0
7 Routine	5,058	316	157	199	78	277	6.2	9.3	3.9	1.5	5.5
Other[6]	2,053	157	60	97	82	179	7.6	10.5	4.7	4.0	8.7

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, 2007 |

England and Wales   Numbers and rates

| Cause group | Numbers | | | | | | Rates[1] | | | | |
| | Births | | Deaths | | | | | | | | |
	Live births	Stillbirths	Early neonatal	Neonatal	Post-neonatal	Infant	Stillbirth	Perinatal	Neonatal	Post-neonatal	Infant
All causes	689,893	3,600	1,710	2,201	984	3,185	5.2	7.7	3.2	1.4	4.6
Congenital anomalies		557	413	595	287	882	0.8	1.4	0.9	0.4	1.3
Antepartum infections		31	33	64	3	67	–	0.1	0.1	–	0.1
Immaturity related conditions		:	1,021	1,236	110	1,346	:	1.5	1.8	0.2	2.0
Asphyxia, anoxia or trauma (intrapartum)		91	202	222	23	245	0.1	0.4	0.3	–	0.4
External conditions		7	2	6	39	45	–	–	–	0.1	0.1
Infections		:	10	26	140	166	:	–	–	0.2	0.2
Other specific conditions		202	14	19	27	46	0.3	0.3	–	–	0.1
Asphyxia, anoxia or trauma (antepartum)		913	:	:	:	:	1.3	1.3	:	:	:
Remaining antepartum deaths		1,733	:	:	:	:	2.5	2.5	:	:	:
Sudden infant deaths		:	3	12	155	167	:	–	–	0.2	0.2
Other conditions		66	12	21	200	221	0.1	0.1	–	0.3	0.3

1 Stillbirths and perinatal deaths per 1,000 live births and stillbirths. Neonatal, postneonatal and infant deaths per 1,000 live births.
: not applicable.
– less than 0.05.

Report:

Excess winter mortality in England and Wales, 2007/08 (provisional) and 2006/07 (final)

Anita Brock
Office for National Statistics

Introduction

This report analyses provisional estimated figures for excess winter mortality (EWM) for the winter period 2007/08, and final figures for the winter period 2006/07 for deaths occurring in England and Wales. Historical trends in EWM are presented for people in England and Wales from 1950/51 to 2007/08. Figures by sex and age for the Government Office Regions of England, and Wales are presented for the five-year period 2003/04 to 2007/08, and by cause of death from 2004/05 to 2006/07.

Due to difficulties experienced with the introduction of a new system for registering deaths during 2007, this report was not published last year. However, provisional EWM figures for the winter period 2006/07 and final figures for 2005/06 were published on the Office for National Statistics website. Monthly mortality data for deaths occurring in 2006 were not published so this report contains monthly mortality data for both 2006 and 2007 in the appendices.

Background

England and Wales experiences higher levels of mortality in the winter than in the summer. A measure of this increase is provided on an annual basis, in the form of the excess winter mortality (EWM) figure and index. The elderly are more vulnerable than others during the winter and these figures are used to monitor health targets at a national and local level. Policies aimed at tackling EWM, such as winter fuel payments[1] and influenza vaccinations,[2] particularly focus on the elderly. Although EWM is associated with low temperatures, conditions directly relating to cold, such as hypothermia, are not the main cause of excess winter mortality. A previous article[3] on EWM showed that circulatory and respiratory diseases exhibited marked seasonal fluctuations, with deaths from respiratory illnesses having the largest percentage seasonal increase.

Method

Excess winter mortality (EWM) is calculated by comparing the number of deaths occurring in winter with the number occurring in a non-winter period. Previous analysis compared methods of calculating EWM using different winter and non-winter periods.[3] The method for calculating EWM used in this report can be found in Box One.

Box one

Method for calculating excess winter mortality

The current ONS standard method defines the winter period as December to March, and compares the number of deaths which occurred in this winter period with the average number of deaths occurring in the preceding August to November and the following April to July:

$$EWM = \text{winter deaths} - \text{average non-winter deaths}$$

This produces a number of excess winter deaths which is rounded to the nearest 10 for final data and to the nearest 100 for provisional data.

The EWM index is calculated so that comparisons can be made between sexes, age groups and regions. It is calculated as the number of excess winter deaths divided by the average non-winter deaths, expressed as a percentage:

$$EWM\ Index = (EWM\ /\ \text{average non-winter deaths}) * 100$$

The EWM index is presented with 95 per cent confidence intervals in this report.

Mortality data are collected from death registration. Most deaths (over 95 per cent) are registered within one month of the date of occurrence, although violent or unexpected deaths, which need further investigation from a coroner, can take much longer. So that timely EWM figures can be produced, ONS produces a special extract of mortality data in September for deaths which were registered by this month but which occurred up to the end of July. These figures are then adjusted using the number of deaths from the previous year's extract, compared with the final number. This produces a provisional estimated number of deaths for January to July in the current year so that EWM can be calculated for the previous winter. As these figures are provisional, they are rounded to the nearest 100 and are not produced for areas smaller than Government Office Region, or by cause of death. Appendix A and Appendix B at

| Figure 1 | Excess winter mortality and smoothed EWM with trendline, 1950/51 to 2007/08 |
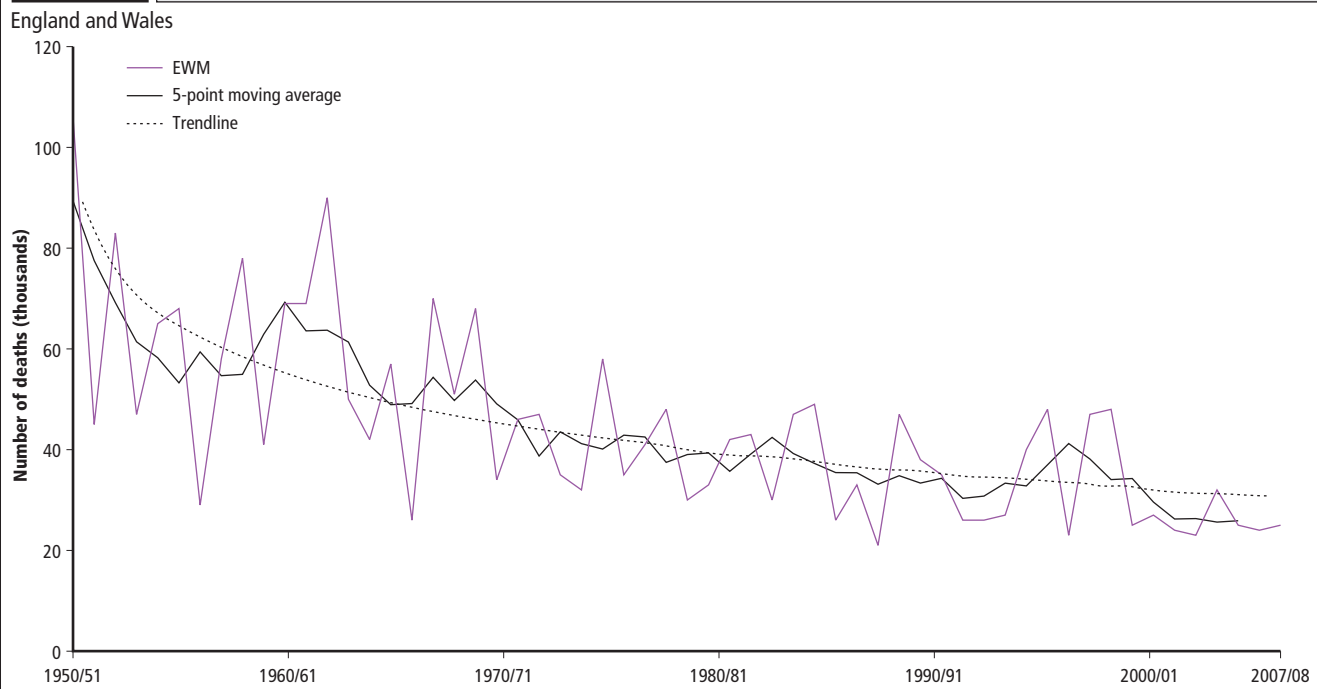
England and Wales

Results

Total excess winter mortality in England and Wales

Figure 1 shows EWM in England and Wales from the winter of 1950/51 to 2007/08. There has been a log-linear decrease over time, showing a general downward trend in EWM over a period of years rather than in any particular time period.

In the four months of winter 2007/08 there were an estimated 25,300 more deaths in England and Wales than in the non-winter period. This was more than in the previous winter, and similar to the winter of 2005/06, but not as many as in the winter of 2004/05. There were just over 1,500 more excess winter deaths in 2007/08 than in 2006/07, an increase of 7 per cent.

The number of extra deaths occurring in winter varies depending on temperature and the level of disease (particularly influenza) in the population, as well as other factors. Figure 2 shows that the increase in EWM between 2006/07 and 2007/08 corresponded with a decrease in the average temperature across the winter period. However, when monthly mortality data for 2007/08 were compared with the five-year average between 2002/03 and 2006/07 (Figure 3), no winter month reported a higher number of deaths than the five-year average and only December and March had a lower mean monthly temperature.

When daily deaths for the period 1 August 2007 to 31 July 2008 are compared with the five-year average for 2002/03 to 2006/07 (Figure 4), there were far fewer deaths than average from February to mid-March. During the winter period, only on some days during December and early January did the number of deaths exceed the average number for the previous five years. The lower number of deaths in February 2008 may be related to the very mild temperatures experienced during this month.[4]

the end of this report contain mortality data by age, sex, area of usual residence (that is, Government Office Regions of England, and Wales), and month of occurrence from January to December 2006. Appendix C and Appendix D present equivalent data for January to December 2007.

| Figure 2 | Excess winter mortality and average winter temperature, 1998/99 to 2007/08 |
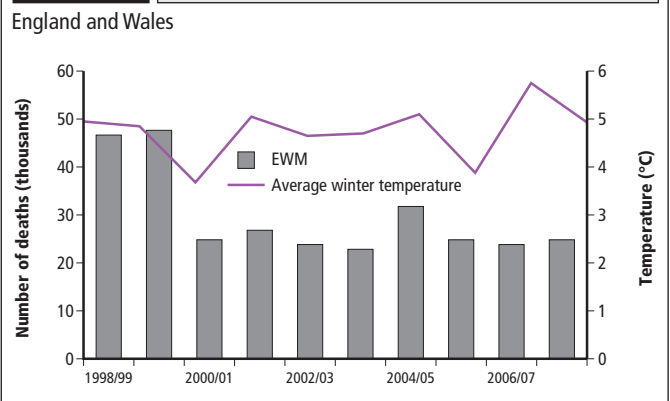
England and Wales

Excess winter mortality by sex and age

Figure 5 shows the numbers of excess winter deaths by sex and age in England and Wales for 2005/06 to 2007/08.

In 2007/08, there were 11,100 and 14,200 excess winter deaths in males and females respectively. The majority of these deaths occurred amongst the elderly (aged 75 and over) in both sexes, although proportions varied by sex. Among those aged under 75, there were more excess winter deaths in males than females with a male:female ratio of 1.68. In those aged 75 and over, there were more excess winter deaths in women than men, with a male:female ratio of 0.62. A greater number, and higher proportion, of the female population is elderly (9 per cent of females were aged 75 and over compared with 6 per cent of males in 2007), which may wholly, or partially, account for the higher number of excess winter deaths in women.

There were more excess winter deaths for males in 2007/08 than in the previous two winters (2005/06 and 2006/07), but fewer among females. In 2007/08, overall EWM for males was 18 per cent higher than in the

| Figure 3 | Monthly deaths and mean monthly temperature, August 2007 to July 2008 |

England and Wales

| Figure 4 | Daily deaths (five-day moving average) for 2007/08 and five-year average for 2002/03 to 2006/07 |

England and Wales
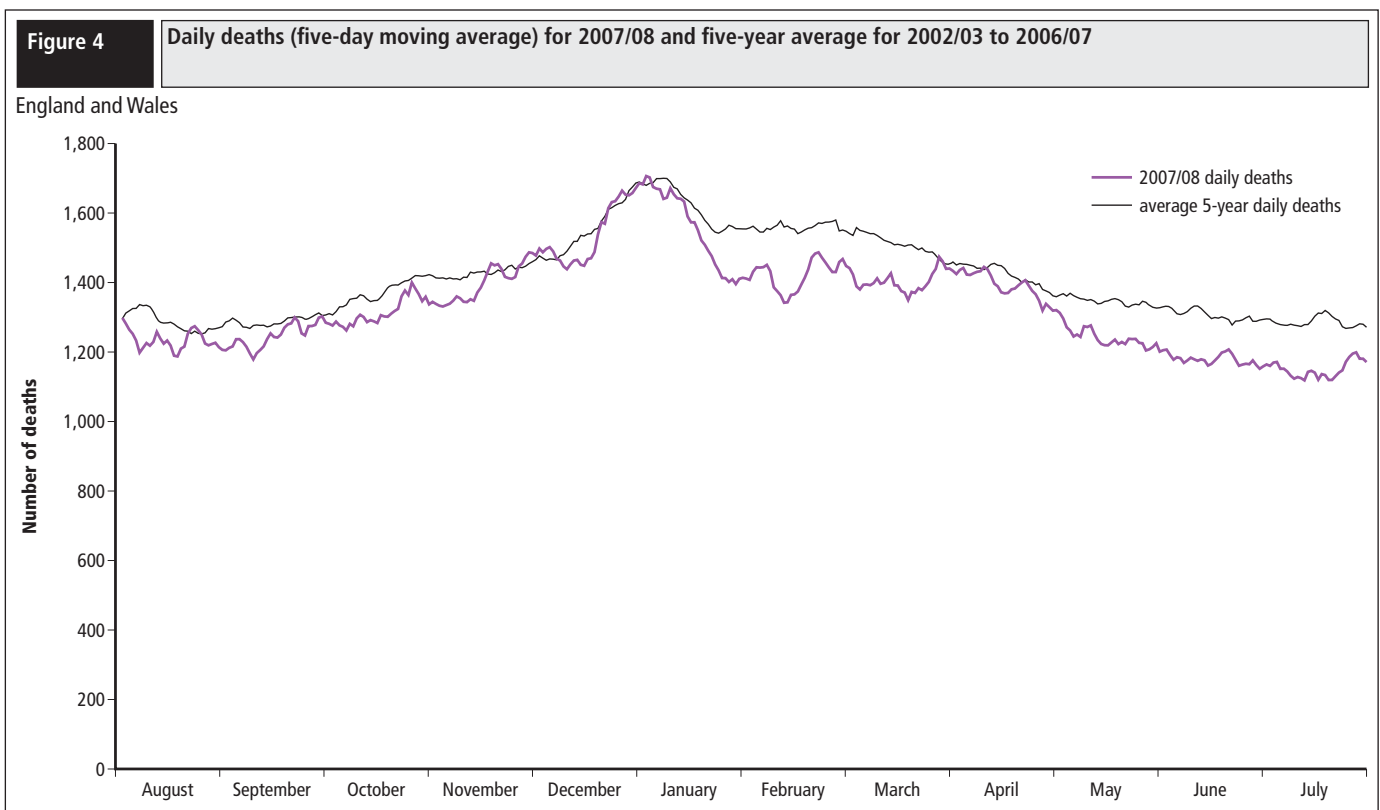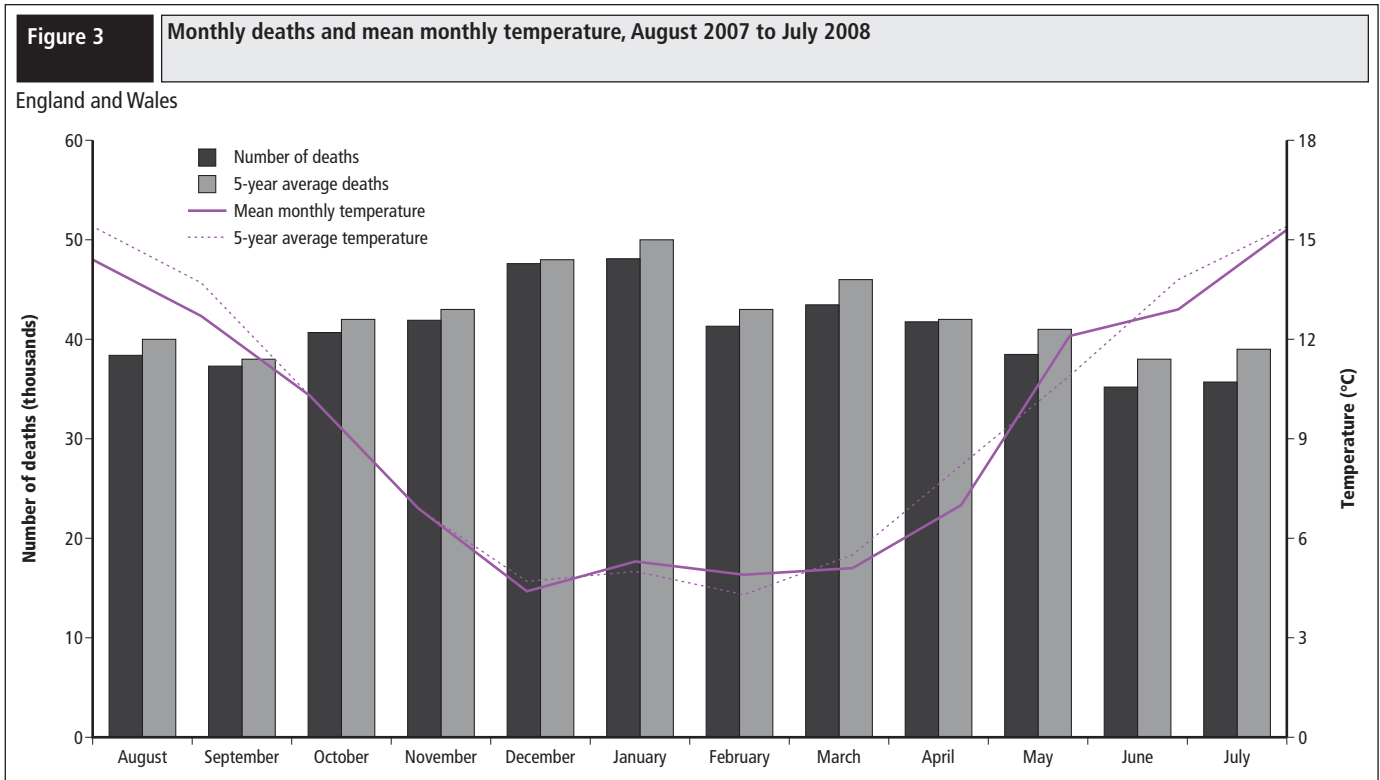
winter of 2006/07. The majority of this increase was in males aged under 65 where the number tripled: deaths in this age group accounted for 17 per cent of all excess deaths in 2007/08 compared with 6 per cent in 2006/07. This was the highest proportion of excess winter deaths seen in this age group. For females in 2007/08, overall EWM decreased by 1 per cent compared with 2006/07. Numbers fell in all age groups except females aged under 65 where the number increased by 64 per cent. However, due to the smaller proportion of deaths which occur at this age in females, this had little effect on the overall decrease in EWM.

Excess winter mortality for Government Office Regions of England, and Wales

Table 1 presents EWM and the EWM index by age for Government Office Regions of England, and Wales. There are substantial year-on-year changes in the rank order of regions for EWM – for example, the South East had the highest EWM index in the winter of 2005/06 and the lowest EWM index for the following winter of 2006/07. Previous research[5] examining EWM among the elderly found little evidence for any consistent variation by geographical region within the UK.

Table 1	Excess winter mortality by age group and usual residence of deceased, 2003/04 to 2007/08

Government Office Regions of England, Wales

		2003/04		2004/05		2005/06		2006/07		2007/08	
		EWM[1]	EWM Index	EWM[1]	EWM Index	EWM[1]	EWM Index	EWM[1]	EWM Index	EWM[2]	EWM Index
England, Wales and elsewhere	0–64	1,570	5.4	2,460	8.7	1,960	6.9	1,190	4.2	2,900	11.1
	65–74	3,140	10.6	4,000	14.1	2,930	10.7	3,120	11.9	3,000	11.8
	75–84	8,590	15.0	10,810	19.7	8,030	15.3	7,730	15.3	7,500	14.9
	85+	10,160	19.4	14,380	28.3	12,340	23.7	11,700	22.2	11,900	21.5
	All ages	23,450	13.9	31,640	19.5	25,270	15.8	23,740	15.0	25,300	16.1
North East	0–64	60	3.7	50	3.3	120	8.1	90	5.4	200	15.7
	65–74	200	10.7	210	11.5	140	8.3	370	24.2	200	14.4
	75–84	570	17.7	480	15.2	350	11.8	540	19.4	400	15.0
	85+	370	15.8	730	31.7	470	19.3	510	20.7	700	26.2
	All ages	1,190	13.2	1,460	16.6	1,080	12.6	1,510	18.0	1,500	18.4
North West	0–64	320	7.4	520	12.1	260	6.0	150	3.5	400	9.6
	65–74	500	11.3	750	17.7	300	7.3	490	12.1	500	11.6
	75–84	1,390	17.5	1,520	19.9	1,140	15.5	1,070	15.2	900	13.6
	85+	1,340	20.3	1,650	25.8	1,300	19.6	1,710	25.6	1,700	23.9
	All ages	3,560	15.2	4,440	19.7	3,000	13.4	3,430	15.5	3,400	15.8
Yorkshire and The Humber	0–64	290	10.2	260	9.1	240	8.7	150	5.3	400	13.5
	65–74	370	12.4	410	14.2	240	8.7	340	12.8	300	10.1
	75–84	940	16.4	1,270	23.6	580	10.9	770	14.9	800	16.0
	85+	1,110	22.3	1,320	27.5	1,010	20.6	1,070	21.0	1,100	20.7
	All ages	2,710	16.4	3,250	20.5	2,070	13.1	2,330	14.7	2,500	16.1
East Midlands	0–64	160	6.9	140	5.8	170	7.5	120	5.0	100	6.7
	65–74	240	9.7	340	14.4	240	10.6	270	12.4	200	8.4
	75–84	750	15.9	860	18.9	690	15.4	640	14.9	600	15.3
	85+	850	20.4	1,130	28.0	880	20.6	980	23.1	800	17.4
	All ages	1,990	14.6	2,460	18.6	1,990	14.9	2,010	15.4	1,800	13.5
West Midlands	0–64	290	9.4	290	9.7	50	1.7	180	5.9	300	11.7
	65–74	270	8.5	430	14.2	490	17.0	400	14.3	500	17.9
	75–84	860	14.4	1,240	21.7	960	17.5	1,020	19.3	900	16.6
	85+	1,140	23.0	1,630	33.0	1,210	23.6	1,060	20.5	1,200	22.4
	All ages	2,560	14.9	3,590	21.5	2,710	16.3	2,670	16.3	2,900	17.9
East of England	0–64	50	2.0	210	8.2	240	9.2	150	5.5	400	15.7
	65–74	390	14.0	420	15.6	350	13.5	260	10.4	200	9.5
	75–84	840	14.3	1,120	19.7	820	15.0	860	16.2	800	15.0
	85+	990	17.1	1,540	27.9	1,400	24.1	1,310	22.9	1,400	22.7
	All ages	2,280	13.3	3,290	20.0	2,810	17.0	2,570	15.9	2,800	17.1
London	0–64	40	1.2	370	10.5	260	7.4	120	3.5	400	14.3
	65–74	270	8.3	340	11.5	230	8.2	220	8.1	300	11.4
	75–84	720	12.6	1,150	21.5	770	15.1	650	13.5	800	17.6
	85+	1,010	18.6	1,580	31.3	1,300	26.1	1,080	21.8	1,200	23.1
	All ages	2,040	11.3	3,440	20.4	2,560	15.6	2,070	13.0	2,800	17.7
South East	0–64	210	5.3	310	8.2	260	6.8	–	0.1	300	8.8
	65–74	370	9.3	430	11.2	570	15.6	250	7.2	400	10.2
	75–84	1,140	13.5	1,500	18.4	1,470	19.2	1,080	14.8	900	12.6
	85+	1,580	17.9	2,350	27.4	2,380	27.3	1,690	19.2	2,000	21.1
	All ages	3,310	13.1	4,590	18.8	4,680	19.6	3,030	12.9	3,600	15.0
South West	0–64	90	3.4	170	7.0	160	6.4	160	6.3	200	10.3
	65–74	230	8.6	380	15.0	180	7.1	330	13.8	400	17.6
	75–84	890	15.2	1,010	17.8	810	14.9	650	12.4	700	12.8
	85+	1,080	17.1	1,650	27.0	1,700	28.3	1,640	26.2	1,300	19.1
	All ages	2,290	13.1	3,220	19.2	2,840	17.3	2,780	16.9	2,600	15.7
Wales	0–64	70	3.6	140	8.0	200	11.9	100	5.5	100	8.5
	65–74	310	16.4	300	16.2	210	11.6	210	12.4	100	8.3
	75–84	480	13.2	670	18.9	460	13.8	460	14.2	600	18.1
	85+	700	22.4	810	26.3	690	22.3	640	19.5	700	20.4
	All ages	1,550	14.9	1,930	18.8	1,560	15.7	1,400	14.1	1,500	15.6
England	0–64	1,510	5.6	2,320	8.8	1,760	6.7	1,120	4.2	2,800	11.5
	65–74	2,850	10.3	3,700	14.1	2,750	10.8	2,940	12.1	2,900	12.1
	75–84	8,110	15.2	10,150	19.8	7,580	15.4	7,280	15.4	6,900	14.7
	85+	9,460	19.2	13,570	28.5	11,650	23.8	11,050	22.4	11,200	21.6
	All ages	21,930	13.9	29,740	19.6	23,740	15.8	22,380	15.2	23,800	16.2
England and Wales	0–64	1,570	5.4	2,460	8.8	1,910	6.7	1,270	4.4	2,900	11.3
	65–74	3,160	10.7	4,000	14.2	2,940	10.5	3,270	12.2	3,000	11.9
	75–84	8,590	15.0	10,820	19.7	8,390	15.4	7,930	15.1	7,500	15.0
	85+	10,160	19.4	14,390	28.3	13,350	24.3	12,680	22.8	11,900	21.5
	All ages	23,480	14.0	31,670	19.6	26,580	16.0	25,160	15.3	25,300	16.2

1 Rounded to the nearest 10.
2 Provisional, rounded to the nearest 100.

| Figure 5 | Excess winter mortality by sex and age, 2005/06, 2006/07 and 2007/08 |
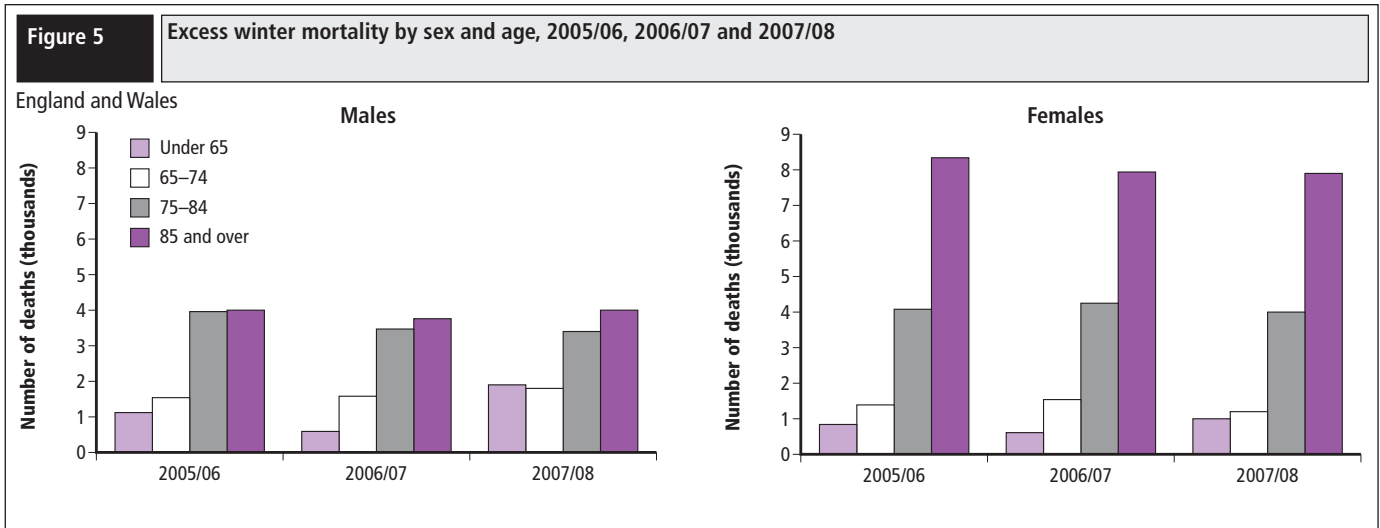
England and Wales

Figure 6 shows the EWM index for Government Office Regions of England, and Wales, for the winters of 2005/06 to 2007/08. The EWM index was significantly higher in 2007/08 than the previous winter for the Yorkshire and The Humber, West Midlands, East of England, London and South East regions of England, and Wales. However, the East Midlands and South West regions of England had significantly lower EWM indexes than the previous winter. The North East region had the highest EWM index for 2007/08 but London had the greatest percentage point increase between 2006/07 and 2007/08 (4.7 percentage points). The region with the lowest EWM index in 2007/08 was the East Midlands.

Excess winter mortality by underlying cause of death

Figure 7 shows EWM and the EWM index for circulatory diseases, respiratory diseases, external causes of injury and poisoning, and cancers (all neoplasms) for the winters of 2004/05 to 2006/07. Although cancers account for a quarter of all deaths annually, previous research[3] found that there was no clear seasonal pattern for these deaths which accounts for the low EWM and EWM index for these causes seen in Figure 7. Injury and poisoning deaths, however, include accidental falls which can be affected by wintry conditions – for example, icy pavements, and the EWM index was 9 per cent for this in 2004/05 where very wintry conditions were seen during February.

| Figure 6 | Excess winter mortality by Government Office Region of England, and Wales, 2005/06, 2006/07 and 2007/08 |

Government Office Regions of England, Wales
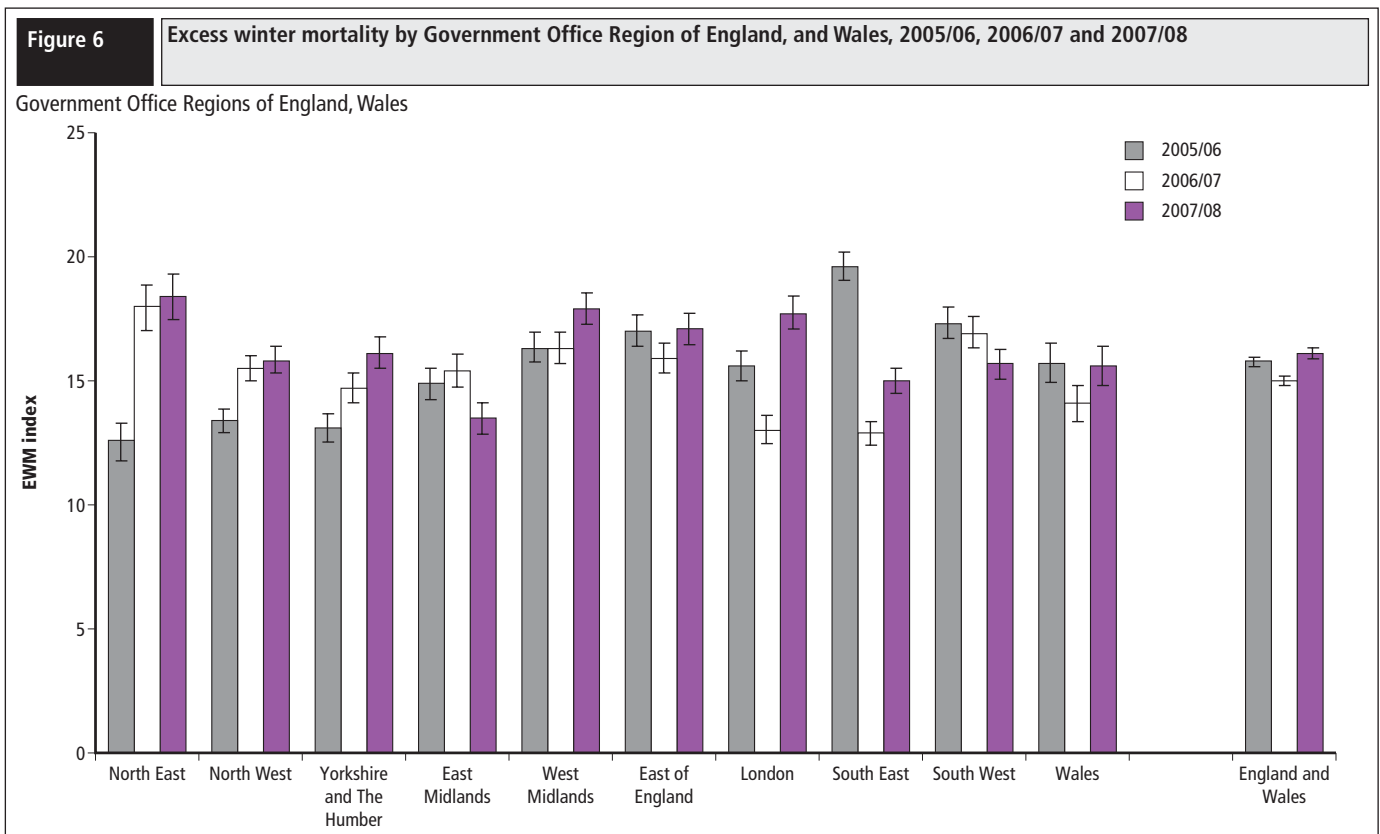
Figure 7   Excess winter mortality by underlying cause of death, 2004/05 to 2006/07

England and Wales
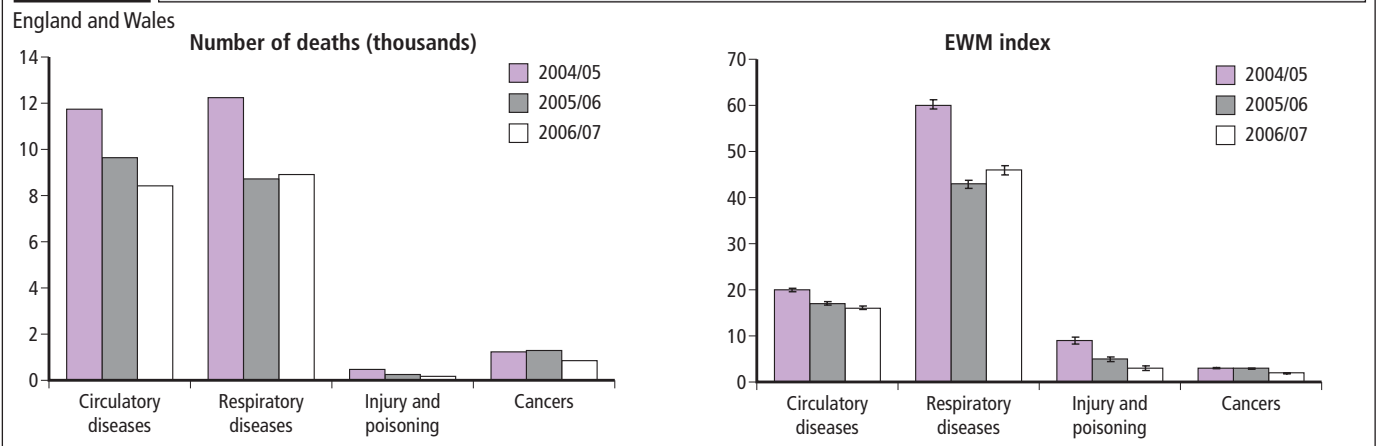
There were slightly more excess winter deaths with an underlying cause of respiratory disease than circulatory disease for the winters of 2004/05 and 2006/07, and a higher number of excess winter circulatory disease deaths in 2005/06 (Figure 7), although the numbers for each cause of death for each winter were similar. However, the EWM index is much lower for circulatory diseases than for respiratory diseases for all of the winter periods. This means that a greater number of circulatory disease deaths than respiratory disease deaths occurred during the non-winter periods than during the winter periods in 2004/05 to 2006/07.

For all of the causes examined except respiratory diseases, both numbers of excess winter deaths and the EWM index decreased between 2005/06 and 2006/07. The number of excess winter deaths due to respiratory diseases increased by 2 per cent in 2006/07. Respiratory disease deaths had the highest EWM index for all of the winters analysed. In the winter of 2006/07, the EWM index was 46 per cent. This was an increase of 3 percentage points from the previous winter.

Table 2 shows the number of excess winter deaths and the EWM index by sex and age group for circulatory and respiratory diseases, injury and poisoning deaths, and cancers in England and Wales for the winters of 2004/05 to 2006/07. For circulatory diseases, elderly adults aged 85 and over had the highest EWM index in both males and females across the winter periods. The general pattern is for the EWM index for circulatory diseases to increase with age for both males and females. However, in 2006/07, men and women aged 65–74 had slightly higher EWM indexes than those aged 75–84.

For respiratory diseases, elderly adults aged 85 and over also had the highest EWM index for males and females for the three winter periods examined. The pattern at younger ages varied more than for circulatory diseases. For deaths from injury and poisoning in 2006/07, the EWM index was higher in men and women aged 75–84 than for those aged 85 and over. Deaths from cancers varied across age groups for both sexes.

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| Table 2 | Excess winter mortality by sex, age group and underlying cause of death, 2004/05 to 2006/07 |

England and Wales

		2004/05		2005/06		2006/07	
		EWM[1]	EWM Index	EWM[1]	EWM Index	EWM[1]	EWM Index
Males							
Circulatory diseases	0–64	440	9.1	620	13.6	250	5.5
(ICD–10 I00–I99)	65–74	1,070	17.8	720	12.9	710	13.7
	75–84	2,030	18.6	1,750	17.4	1,220	12.7
	85+	1,580	23.8	1,500	22.3	1,490	21.8
	All ages	5,110	18.0	4,600	17.0	3,660	14.0
Respiratory diseases	0–64	440	46.5	340	36.5	280	30.1
(ICD–10 J00–J99)	65–74	690	42.0	570	34.9	540	35.3
	75–84	1,780	47.0	1,180	31.6	1,250	36.3
	85+	1,690	54.7	1,360	43.0	1,370	42.8
	All ages	4,600	48.6	3,460	36.4	3,440	37.8
Injury and poisoning	0–64	−10	−0.6	−110	−5.0	−160	−7.0
(ICD–10 V01–Y89)	65–74	30	9.2	10	3.4	–	−0.6
	75–84	30	6.0	40	10.5	80	20.0
	85+	50	14.9	80	23.8	50	13.1
	All ages	90	2.7	20	0.5	−30	−1.0
Cancers	0–64	–	–	160	2.9	−130	−2.4
(ICD–10 C00–D48)	65–74	230	3.4	70	1.0	70	1.0
	75–84	100	1.1	190	2.3	250	3.1
	85+	190	5.8	140	3.9	160	4.4
	All ages	510	2.1	550	2.3	350	1.4
Females							
Circulatory diseases	0–64	240	12.7	160	8.8	170	9.9
(ICD–10 I00–I99)	65–74	480	13.9	460	14.3	470	16.1
	75–84	2,410	22.2	1,540	15.5	1,420	15.6
	85+	3,510	24.4	2,890	20.2	2,700	19.4
	All ages	6,630	21.7	5,040	17.3	4,760	17.2
Respiratory diseases	0–64	430	71.5	320	49.3	260	40.4
(ICD–10 J00–J99)	65–74	780	63.4	470	39.1	620	54.9
	75–84	2,330	64.1	1,480	40.9	1,580	47.4
	85+	4,100	76.2	2,990	54.4	3,020	57.9
	All ages	7,640	70.4	5,260	48.0	5,480	53.1
Injury and poisoning	0–64	10	1.0	40	5.1	–	–
(ICD–10 V01–Y89)	65–74	30	19.8	20	10.7	10	5.4
	75–84	130	29.1	40	8.0	80	19.3
	85+	220	28.8	150	19.4	110	14.7
	All ages	390	18.4	230	11.4	210	10.1
Cancers	0–64	120	2.3	40	0.7	−100	−1.9
(ICD–10 C00–D48)	65–74	140	2.7	290	6.0	160	3.2
	75–84	250	3.5	190	2.6	280	4.0
	85+	200	4.7	220	4.9	160	3.4
	All ages	720	3.3	730	3.4	500	2.3

1 Rounded to the nearest 10.

| Appendix A | Number of deaths by month, age group and area of usual residence, males, 2006 |

Government Office Regions of England, Wales

		January	February	March	April	May	June	July	August	September	October	November	December	Total
England, Wales and elsewhere	0–64	4,841	4,286	4,644	4,393	4,440	4,434	4,488	4,357	4,207	4,456	4,458	4,449	53,453
	65–74	4,463	4,019	4,620	4,206	3,959	3,967	4,052	3,791	3,552	3,887	4,076	4,351	48,943
	75–84	7,646	7,087	7,846	7,001	6,772	6,308	6,574	6,241	5,938	6,653	6,755	7,163	81,984
	85+	5,327	4,923	5,548	4,646	4,509	4,316	4,341	4,144	4,054	4,493	4,825	5,176	56,302
	All ages	22,277	20,315	22,658	20,246	19,680	19,025	19,455	18,533	17,751	19,489	20,114	21,139	240,682
North East	0–64	275	209	231	271	263	223	228	250	218	251	253	275	2,947
	65–74	276	239	253	248	249	211	262	215	194	231	236	312	2,926
	75–84	390	380	436	388	365	325	376	304	337	369	370	384	4,424
	85+	227	231	243	187	205	186	167	179	186	213	241	236	2,501
	All ages	1,168	1,059	1,163	1,094	1,082	945	1,033	948	935	1,064	1,100	1,207	12,798
North West	0–64	696	654	733	665	699	676	716	658	651	633	665	654	8,100
	65–74	664	566	662	646	592	633	598	532	572	616	612	662	7,355
	75–84	1,098	963	1,049	973	944	835	917	842	804	881	892	944	11,142
	85+	630	545	673	547	581	541	535	505	502	536	580	628	6,803
	All ages	3,088	2,728	3,117	2,831	2,816	2,685	2,766	2,537	2,529	2,666	2,749	2,888	33,400
Yorkshire and The Humber	0–64	491	437	463	415	430	450	439	446	416	465	464	422	5,338
	65–74	485	394	456	446	397	412	425	374	358	380	413	438	4,978
	75–84	715	711	751	717	698	614	637	645	627	669	665	714	8,163
	85+	498	434	485	422	420	387	399	436	408	424	464	481	5,258
	All ages	2,189	1,976	2,155	2,000	1,945	1,863	1,900	1,901	1,809	1,938	2,006	2,055	23,737
East Midlands	0–64	394	351	373	343	346	396	357	339	348	408	361	341	4,357
	65–74	368	329	376	329	301	310	352	322	264	330	351	362	3,994
	75–84	671	596	695	627	602	562	653	553	507	612	599	615	7,292
	85+	440	400	480	413	371	324	390	350	355	373	420	438	4,754
	All ages	1,873	1,676	1,924	1,712	1,620	1,592	1,752	1,564	1,474	1,723	1,731	1,756	20,397
West Midlands	0–64	515	456	510	475	512	490	501	469	463	463	481	496	5,831
	65–74	464	437	507	465	458	423	403	417	420	422	424	488	5,328
	75–84	846	722	835	718	695	673	700	627	641	675	735	744	8,611
	85+	546	485	552	474	446	414	448	415	409	450	477	484	5,600
	All ages	2,371	2,100	2,404	2,132	2,111	2,000	2,052	1,928	1,933	2,010	2,117	2,212	25,370
East of England	0–64	441	400	441	389	369	369	379	381	372	408	439	411	4,799
	65–74	451	405	454	405	407	380	394	352	347	364	367	402	4,728
	75–84	776	774	817	715	717	682	701	663	640	719	756	781	8,741
	85+	629	570	657	586	527	503	511	440	463	529	539	587	6,541
	All ages	2,297	2,149	2,369	2,095	2,020	1,934	1,985	1,836	1,822	2,020	2,101	2,181	24,809
London	0–64	639	530	606	553	559	568	577	546	526	534	545	564	6,747
	65–74	437	436	487	427	415	400	434	450	365	380	436	431	5,098
	75–84	772	666	744	686	651	599	609	619	569	651	643	696	7,905
	85+	500	494	565	435	418	437	433	366	361	420	464	506	5,399
	All ages	2,348	2,126	2,402	2,101	2,043	2,004	2,053	1,981	1,821	1,985	2,088	2,197	25,149
South East	0–64	621	590	573	568	589	583	599	590	558	614	584	596	7,065
	65–74	617	571	675	571	499	559	510	493	470	531	553	555	6,604
	75–84	1,114	1,044	1,200	1,009	972	900	926	918	818	940	977	1,106	11,924
	85+	912	842	952	738	750	727	723	698	682	750	782	855	9,411
	All ages	3,264	3,047	3,400	2,886	2,810	2,769	2,758	2,699	2,528	2,835	2,896	3,112	35,004
South West	0–64	421	361	394	395	370	363	371	390	353	403	357	379	4,557
	65–74	426	363	457	405	356	382	385	356	335	389	400	399	4,653
	75–84	780	751	788	722	716	718	642	643	633	731	711	716	8,551
	85+	629	601	632	535	556	541	495	494	457	533	577	646	6,696
	All ages	2,256	2,076	2,271	2,057	1,998	2,004	1,893	1,883	1,778	2,056	2,045	2,140	24,457
Wales	0–64	310	273	288	287	269	283	280	253	271	238	274	278	3,304
	65–74	264	270	283	252	269	242	278	266	211	231	272	296	3,134
	75–84	470	474	527	433	402	387	400	417	357	395	402	452	5,116
	85+	313	316	308	308	234	250	234	256	229	263	281	309	3,301
	All ages	1,357	1,333	1,406	1,280	1,174	1,162	1,192	1,192	1,068	1,127	1,229	1,335	14,855
England	0–64	4,493	3,988	4,324	4,074	4,137	4,118	4,167	4,069	3,905	4,179	4,149	4,138	49,741
	65–74	4,188	3,740	4,327	3,942	3,674	3,710	3,763	3,511	3,325	3,643	3,792	4,049	45,664
	75–84	7,162	6,607	7,315	6,555	6,360	5,908	6,161	5,814	5,576	6,247	6,348	6,700	76,753
	85+	5,011	4,602	5,239	4,337	4,274	4,060	4,101	3,883	3,823	4,228	4,544	4,861	52,963
	All ages	20,854	18,937	21,205	18,908	18,445	17,796	18,192	17,277	16,629	18,297	18,833	19,748	225,121
England and Wales	0–64	4,803	4,261	4,612	4,361	4,406	4,401	4,447	4,322	4,176	4,417	4,423	4,416	53,045
	65–74	4,452	4,010	4,610	4,194	3,943	3,952	4,041	3,777	3,536	3,874	4,064	4,345	48,798
	75–84	7,632	7,081	7,842	6,988	6,762	6,295	6,561	6,231	5,933	6,642	6,750	7,152	81,869
	85+	5,324	4,918	5,547	4,645	4,508	4,310	4,335	4,139	4,052	4,491	4,825	5,170	56,264
	All ages	22,211	20,270	22,611	20,188	19,619	18,958	19,384	18,469	17,697	19,424	20,062	21,083	239,976
elsewhere	0–64	38	25	32	32	34	33	41	35	31	39	35	33	408
	65–74	11	9	10	12	16	15	11	14	16	13	12	6	145
	75–84	14	6	4	13	10	13	13	10	5	11	5	11	115
	85+	3	5	1	1	1	6	6	5	2	2	–	6	38
	All ages	66	45	47	58	61	67	71	64	54	65	52	56	706

| Appendix B | Number of deaths by month, age group and area of usual residence, females, 2006 |

Government Office Regions of England, Wales

		January	February	March	April	May	June	July	August	September	October	November	December	Total
England, Wales and elsewhere	0–64	3,062	2,784	3,067	2,845	2,795	2,693	2,791	2,699	2,719	2,780	2,798	2,898	33,931
	65–74	3,174	2,931	3,185	2,844	2,894	2,777	2,763	2,731	2,588	2,823	2,782	3,029	34,521
	75–84	7,794	7,027	7,792	7,087	6,579	6,321	6,566	6,117	5,900	6,387	6,683	7,055	81,308
	85+	11,226	10,023	11,103	9,823	8,771	8,560	8,677	7,956	7,972	8,862	9,095	10,123	112,191
	All ages	25,256	22,765	25,147	22,599	21,039	20,351	20,797	19,503	19,179	20,852	21,358	23,105	261,951
North East	0–64	178	138	188	154	157	151	130	174	152	161	172	152	1,907
	65–74	204	190	213	173	195	191	164	161	155	176	153	186	2,161
	75–84	452	409	418	450	410	364	360	333	334	360	395	473	4,758
	85+	536	437	498	479	383	401	398	382	389	432	412	476	5,223
	All ages	1,370	1,174	1,317	1,256	1,145	1,107	1,052	1,050	1,030	1,129	1,132	1,287	14,049
North West	0–64	454	410	454	428	398	453	413	431	396	433	458	454	5,182
	65–74	497	424	450	440	443	420	410	404	416	417	436	457	5,214
	75–84	1,064	955	1,146	1,102	943	872	916	894	841	925	942	1,010	11,610
	85+	1,458	1,258	1,360	1,351	1,167	1,101	1,102	1,022	1,017	1,164	1,189	1,294	14,483
	All ages	3,473	3,047	3,410	3,321	2,951	2,846	2,841	2,751	2,670	2,939	3,025	3,215	36,489
Yorkshire and The Humber	0–64	315	288	292	285	270	239	255	248	279	300	277	314	3,362
	65–74	321	305	319	306	315	312	296	289	262	315	296	328	3,664
	75–84	774	696	752	679	667	669	654	580	600	683	688	726	8,168
	85+	1,012	861	1,010	907	826	813	832	767	768	830	878	977	10,481
	All ages	2,422	2,150	2,373	2,177	2,078	2,033	2,037	1,884	1,909	2,128	2,139	2,345	25,675
East Midlands	0–64	250	244	235	270	226	216	240	213	199	223	247	224	2,787
	65–74	239	254	257	243	238	245	236	233	195	206	239	259	2,844
	75–84	661	597	671	586	528	513	519	513	509	544	586	616	6,843
	85+	859	831	867	829	681	729	714	659	595	727	711	798	9,000
	All ages	2,009	1,926	2,030	1,928	1,673	1,703	1,709	1,618	1,498	1,700	1,783	1,897	21,474
West Midlands	0–64	303	268	314	310	278	312	299	284	301	314	279	299	3,561
	65–74	360	317	339	298	301	270	256	283	280	348	289	342	3,683
	75–84	845	763	796	717	688	624	736	641	599	623	626	768	8,426
	85+	1,101	1,004	1,118	961	899	842	855	766	828	836	916	960	11,086
	All ages	2,609	2,352	2,567	2,286	2,166	2,048	2,146	1,974	2,008	2,121	2,110	2,369	26,756
East of England	0–64	270	255	284	242	277	217	246	247	248	250	256	280	3,072
	65–74	331	288	330	279	265	289	276	265	233	245	294	295	3,390
	75–84	811	744	774	735	667	683	660	641	620	677	705	753	8,470
	85+	1,215	1,111	1,216	1,046	972	897	950	867	839	939	946	1,153	12,151
	All ages	2,627	2,398	2,604	2,302	2,181	2,086	2,132	2,020	1,940	2,111	2,201	2,481	27,083
London	0–64	341	333	379	329	330	326	366	335	325	318	286	314	3,982
	65–74	273	310	312	310	298	256	306	257	258	290	277	291	3,438
	75–84	724	675	735	622	610	642	656	599	568	586	621	626	7,664
	85+	1,073	1,020	1,092	879	854	826	855	767	761	815	844	1,010	10,796
	All ages	2,411	2,338	2,518	2,140	2,092	2,050	2,183	1,958	1,912	2,009	2,028	2,241	25,880
South East	0–64	472	399	417	385	425	360	390	365	378	364	395	386	4,736
	65–74	460	394	468	386	380	358	376	383	372	389	370	394	4,730
	75–84	1,169	1,067	1,197	1,030	971	925	943	867	834	980	958	1,021	11,962
	85+	1,992	1,758	1,909	1,679	1,473	1,421	1,525	1,264	1,359	1,512	1,573	1,635	19,100
	All ages	4,093	3,618	3,991	3,480	3,249	3,064	3,234	2,879	2,943	3,245	3,296	3,436	40,528
South West	0–64	273	243	280	255	257	219	231	230	244	237	243	269	2,981
	65–74	278	246	278	244	243	236	252	266	240	248	262	287	3,080
	75–84	802	684	828	698	666	626	671	660	577	596	732	662	8,202
	85+	1,322	1,153	1,384	1,068	1,002	1,003	933	957	916	1,058	1,055	1,200	13,051
	All ages	2,675	2,326	2,770	2,265	2,168	2,084	2,087	2,113	1,977	2,139	2,292	2,418	27,314
Wales	0–64	186	186	208	173	160	183	198	156	177	166	169	197	2,159
	65–74	204	196	211	155	206	186	181	175	167	179	160	185	2,205
	75–84	478	435	467	455	423	398	441	381	410	409	419	392	5,108
	85+	653	583	639	624	509	518	510	500	497	545	568	613	6,759
	All ages	1,521	1,400	1,525	1,407	1,298	1,285	1,330	1,212	1,251	1,299	1,316	1,387	16,231
England	0–64	2,856	2,578	2,843	2,658	2,618	2,493	2,570	2,527	2,522	2,600	2,613	2,692	31,570
	65–74	2,963	2,728	2,966	2,679	2,678	2,577	2,572	2,541	2,411	2,634	2,616	2,839	32,204
	75–84	7,302	6,590	7,317	6,619	6,150	5,918	6,115	5,728	5,482	5,974	6,253	6,655	76,103
	85+	10,568	9,433	10,454	9,199	8,257	8,033	8,164	7,451	7,472	8,313	8,524	9,503	105,371
	All ages	23,689	21,329	23,580	21,155	19,703	19,021	19,421	18,247	17,887	19,521	20,006	21,689	245,248
England and Wales	0–64	3,042	2,764	3,051	2,831	2,778	2,676	2,768	2,683	2,699	2,766	2,782	2,889	33,729
	65–74	3,167	2,924	3,177	2,834	2,884	2,763	2,753	2,716	2,578	2,813	2,776	3,024	34,409
	75–84	7,780	7,025	7,784	7,074	6,573	6,316	6,556	6,109	5,892	6,383	6,672	7,047	81,211
	85+	11,221	10,016	11,093	9,823	8,766	8,551	8,674	7,951	7,969	8,858	9,092	10,116	112,130
	All ages	25,210	22,729	25,105	22,562	21,001	20,306	20,751	19,459	19,138	20,820	21,322	23,076	261,479
elsewhere	0–64	20	20	16	14	17	17	23	16	20	14	16	9	202
	65–74	7	7	8	10	10	14	10	15	10	10	6	5	112
	75–84	14	2	8	13	6	5	10	8	8	4	11	8	97
	85+	5	7	10	–	5	9	3	5	3	4	3	7	61
	All ages	46	36	42	37	38	45	46	44	41	32	36	29	472

Appendix C	Number of deaths by month, age group and area of usual residence, males, 2007

Government Office Regions of England, Wales

		January	February	March	April	May	June	July	August	September	October	November	December	Total
England, Wales and elsewhere	0–64	4,735	4,392	4,511	4,478	4,515	4,229	4,299	4,109	4,080	4,324	4,179	4,616	52,467
	65–74	4,443	3,974	4,206	3,957	3,974	3,762	3,786	3,735	3,615	3,855	4,057	4,386	47,750
	75–84	7,444	7,241	7,175	6,620	6,537	6,118	6,241	6,402	5,963	6,533	6,654	7,499	80,427
	85+	5,586	5,508	5,367	4,765	4,641	4,373	4,465	4,387	4,240	4,724	5,022	5,884	58,962
	All ages	22,208	21,115	21,259	19,820	19,667	18,482	18,791	18,633	17,898	19,436	19,912	22,385	239,606
North East	0–64	256	237	261	246	253	216	258	214	212	247	223	253	2,876
	65–74	280	231	271	220	217	225	215	204	203	192	231	255	2,744
	75–84	430	413	382	352	349	344	342	355	379	372	364	398	4,480
	85+	252	234	261	223	205	188	195	203	207	202	226	265	2,661
	All ages	1,218	1,115	1,175	1,041	1,024	973	1,010	976	1,001	1,013	1,044	1,171	12,761
North West	0–64	711	682	657	689	711	617	623	621	625	620	634	713	7,903
	65–74	703	572	652	594	606	612	619	566	561	600	540	645	7,270
	75–84	1,062	989	963	902	884	838	876	873	830	887	949	958	11,011
	85+	717	720	658	563	551	540	523	504	512	569	624	742	7,223
	All ages	3,193	2,963	2,930	2,748	2,752	2,607	2,641	2,564	2,528	2,676	2,747	3,058	33,407
Yorkshire and The Humber	0–64	511	442	452	463	449	426	416	433	422	429	438	508	5,389
	65–74	458	414	434	435	379	337	383	377	331	403	427	426	4,804
	75–84	714	712	700	655	662	633	607	665	563	644	625	770	7,950
	85+	515	508	492	461	415	412	391	403	379	427	452	516	5,371
	All ages	2,198	2,076	2,078	2,014	1,905	1,808	1,797	1,878	1,695	1,903	1,942	2,220	23,514
East Midlands	0–64	372	376	360	370	364	326	315	327	345	361	363	359	4,238
	65–74	347	348	354	341	339	331	318	323	295	317	326	360	3,999
	75–84	601	635	641	559	596	507	500	536	500	515	599	639	6,828
	85+	469	438	468	389	394	370	371	374	354	394	435	511	4,967
	All ages	1,789	1,797	1,823	1,659	1,693	1,534	1,504	1,560	1,494	1,587	1,723	1,869	20,032
West Midlands	0–64	519	474	504	490	471	481	424	432	437	481	450	509	5,672
	65–74	498	437	461	418	438	398	407	389	414	395	426	508	5,189
	75–84	799	807	803	673	699	673	673	648	599	670	703	805	8,552
	85+	535	523	515	434	478	451	420	443	428	480	456	578	5,741
	All ages	2,351	2,241	2,283	2,015	2,086	2,003	1,924	1,912	1,878	2,026	2,035	2,400	25,154
East of England	0–64	451	388	425	407	417	391	442	392	390	387	387	430	4,907
	65–74	448	374	388	374	398	355	341	344	355	372	419	423	4,591
	75–84	814	777	750	716	659	624	653	677	632	723	658	809	8,492
	85+	629	601	569	571	519	457	503	485	480	493	552	604	6,463
	All ages	2,342	2,140	2,132	2,068	1,993	1,827	1,939	1,898	1,857	1,975	2,016	2,266	24,453
London	0–64	568	548	553	506	542	561	532	501	483	462	489	556	6,301
	65–74	451	393	422	422	405	383	393	386	414	360	448	455	4,932
	75–84	710	702	641	643	604	584	640	597	590	601	666	695	7,673
	85+	541	477	529	472	462	426	440	399	382	451	504	580	5,663
	All ages	2,270	2,120	2,145	2,043	2,013	1,954	2,005	1,883	1,869	1,874	2,107	2,286	24,569
South East	0–64	632	544	588	580	641	530	592	546	519	647	531	566	6,916
	65–74	580	509	550	515	532	509	512	506	506	542	575	645	6,481
	75–84	1,063	998	1,056	964	943	853	899	941	885	948	1,012	1,098	11,660
	85+	936	942	887	754	761	719	756	723	708	822	881	1,033	9,922
	All ages	3,211	2,993	3,081	2,813	2,877	2,611	2,759	2,716	2,618	2,959	2,999	3,342	34,979
South West	0–64	411	386	408	399	374	383	393	351	356	373	350	389	4,573
	65–74	401	417	391	379	363	347	346	345	300	360	356	385	4,390
	75–84	775	723	785	712	667	655	662	655	613	750	650	781	8,428
	85+	661	734	671	574	564	551	570	568	527	583	618	722	7,343
	All ages	2,248	2,260	2,255	2,064	1,968	1,936	1,971	1,919	1,796	2,066	1,974	2,277	24,734
Wales	0–64	278	281	261	297	269	261	271	256	260	274	287	304	3,299
	65–74	262	268	273	247	281	247	232	274	227	299	297	275	3,182
	75–84	468	480	446	432	467	399	375	441	366	406	424	533	5,237
	85+	325	327	314	319	290	254	291	281	259	298	272	330	3,560
	All ages	1,333	1,356	1,294	1,295	1,307	1,161	1,169	1,252	1,112	1,277	1,280	1,442	15,278
England	0–64	4,431	4,077	4,208	4,150	4,222	3,931	3,995	3,817	3,789	4,007	3,865	4,283	48,775
	65–74	4,166	3,695	3,923	3,698	3,677	3,497	3,534	3,440	3,379	3,541	3,748	4,102	44,400
	75–84	6,968	6,756	6,721	6,176	6,063	5,711	5,852	5,947	5,591	6,110	6,226	6,953	75,074
	85+	5,255	5,177	5,050	4,441	4,349	4,114	4,169	4,102	3,977	4,421	4,748	5,551	55,354
	All ages	20,820	19,705	19,902	18,465	18,311	17,253	17,550	17,306	16,736	18,079	18,587	20,889	223,603
England and Wales	0–64	4,709	4,358	4,469	4,447	4,491	4,192	4,266	4,073	4,049	4,281	4,152	4,587	52,074
	65–74	4,428	3,963	4,196	3,945	3,958	3,744	3,766	3,714	3,606	3,840	4,045	4,377	47,582
	75–84	7,436	7,236	7,167	6,608	6,530	6,110	6,227	6,388	5,957	6,516	6,650	7,486	80,311
	85+	5,580	5,504	5,364	4,760	4,639	4,368	4,460	4,383	4,236	4,719	5,020	5,881	58,914
	All ages	22,153	21,061	21,196	19,760	19,618	18,414	18,719	18,558	17,848	19,356	19,867	22,331	238,881
elsewhere	0–64	26	34	42	31	24	37	33	36	31	43	27	29	393
	65–74	15	11	10	12	16	18	20	21	9	15	12	9	168
	75–84	8	5	8	12	7	8	14	14	6	17	4	13	116
	85+	6	4	3	5	2	5	5	4	4	5	2	3	48
	All ages	55	54	63	60	49	68	72	75	50	80	45	54	725

Appendix D	Number of deaths by month, age group and area of usual residence, females, 2007

Government Office Regions of England, Wales

		January	February	March	April	May	June	July	August	September	October	November	December	Total
England, Wales and elsewhere	0–64	3,066	2,795	2,901	2,853	2,873	2,696	2,692	2,683	2,627	2,770	2,835	3,038	33,829
	65–74	3,251	3,005	3,054	2,804	2,751	2,599	2,523	2,543	2,579	2,770	2,823	3,099	33,801
	75–84	7,833	7,196	7,163	6,609	6,201	5,973	6,116	5,965	5,858	6,373	6,609	7,490	79,386
	85+	11,213	10,918	10,472	9,440	9,059	8,576	8,607	8,563	8,341	9,331	9,733	11,594	115,847
	All ages	25,363	23,914	23,590	21,706	20,884	19,844	19,938	19,754	19,405	21,244	22,000	25,221	262,863
North East	0–64	173	167	166	163	158	135	140	138	125	163	145	165	1,838
	65–74	221	185	213	161	174	172	154	152	158	152	160	197	2,099
	75–84	434	394	433	369	363	340	341	359	352	379	388	434	4,586
	85+	541	468	493	444	399	379	440	397	370	444	472	533	5,380
	All ages	1,369	1,214	1,305	1,137	1,094	1,026	1,075	1,046	1,005	1,138	1,165	1,329	13,903
North West	0–64	471	383	440	412	414	371	441	400	416	413	423	453	5,037
	65–74	507	508	504	445	430	447	383	363	363	451	473	439	5,313
	75–84	1,111	1,030	1,046	970	899	855	916	853	856	923	935	1,028	11,422
	85+	1,475	1,468	1,408	1,263	1,155	1,130	1,084	1,073	1,138	1,239	1,277	1,511	15,221
	All ages	3,564	3,389	3,398	3,090	2,898	2,803	2,824	2,689	2,773	3,026	3,108	3,431	36,993
Yorkshire and The Humber	0–64	299	321	281	314	287	269	260	279	269	271	313	350	3,513
	65–74	361	297	297	290	296	274	287	268	301	288	288	329	3,576
	75–84	827	785	737	708	668	624	584	614	620	662	674	820	8,323
	85+	1,097	1,063	1,012	941	868	817	874	856	836	914	935	1,183	11,396
	All ages	2,584	2,466	2,327	2,253	2,119	1,984	2,005	2,017	2,026	2,135	2,210	2,682	26,808
East Midlands	0–64	280	242	249	231	243	215	252	214	213	236	243	258	2,876
	65–74	272	242	243	238	234	181	196	232	209	220	228	231	2,726
	75–84	635	632	557	534	483	496	488	486	505	553	511	641	6,521
	85+	880	904	837	664	744	688	689	691	676	758	761	907	9,199
	All ages	2,067	2,020	1,886	1,667	1,704	1,580	1,625	1,623	1,603	1,767	1,743	2,037	21,322
West Midlands	0–64	297	306	311	294	305	288	244	267	295	285	292	307	3,491
	65–74	346	317	334	290	282	255	271	236	270	292	286	359	3,538
	75–84	843	796	744	701	637	671	670	612	583	650	691	766	8,364
	85+	1,054	1,108	1,071	967	880	845	804	888	770	885	934	1,193	11,399
	All ages	2,540	2,527	2,460	2,252	2,104	2,059	1,989	2,003	1,918	2,112	2,203	2,625	26,792
East of England	0–64	299	260	290	270	272	272	242	229	230	248	271	279	3,162
	65–74	282	280	280	266	286	248	247	280	239	270	270	304	3,252
	75–84	831	705	731	632	655	583	627	644	625	619	679	813	8,144
	85+	1,204	1,185	1,115	1,007	978	936	929	887	889	1,051	1,058	1,270	12,509
	All ages	2,616	2,430	2,416	2,175	2,191	2,039	2,045	2,040	1,983	2,188	2,278	2,666	27,067
London	0–64	346	300	350	326	326	335	301	331	320	309	307	339	3,890
	65–74	326	283	306	298	268	251	238	242	275	276	301	320	3,384
	75–84	776	649	668	607	556	569	575	544	547	594	618	706	7,409
	85+	1,054	969	966	854	907	783	799	789	738	836	917	1,086	10,698
	All ages	2,502	2,201	2,290	2,085	2,057	1,938	1,913	1,906	1,880	2,015	2,143	2,451	25,381
South East	0–64	396	378	374	393	422	387	387	385	366	424	376	439	4,727
	65–74	431	384	372	364	356	360	334	372	326	413	390	424	4,526
	75–84	1,098	1,028	1,006	966	932	828	917	862	814	890	994	1,077	11,412
	85+	1,781	1,780	1,697	1,581	1,521	1,482	1,444	1,452	1,410	1,521	1,631	1,952	19,252
	All ages	3,706	3,570	3,449	3,304	3,231	3,057	3,082	3,071	2,916	3,248	3,391	3,892	39,917
South West	0–64	285	245	258	255	246	241	218	247	229	250	274	265	3,013
	65–74	281	273	296	236	210	220	227	228	236	222	237	276	2,942
	75–84	765	702	773	683	626	601	614	632	575	697	656	735	8,059
	85+	1,388	1,303	1,262	1,121	1,038	1,002	993	1,009	1,000	1,117	1,154	1,273	13,660
	All ages	2,719	2,523	2,589	2,295	2,120	2,064	2,052	2,116	2,040	2,286	2,321	2,549	27,674
Wales	0–64	208	182	173	182	185	164	188	172	146	160	179	168	2,107
	65–74	218	223	204	202	204	185	172	157	190	180	184	209	2,328
	75–84	502	469	464	425	373	399	374	355	372	395	457	463	5,048
	85+	730	664	609	592	567	511	549	517	509	565	591	678	7,082
	All ages	1,658	1,538	1,450	1,401	1,329	1,259	1,283	1,201	1,217	1,300	1,411	1,518	16,565
England	0–64	2,846	2,602	2,719	2,658	2,673	2,513	2,485	2,490	2,463	2,599	2,644	2,855	31,547
	65–74	3,027	2,769	2,845	2,588	2,536	2,408	2,337	2,373	2,377	2,584	2,633	2,879	31,356
	75–84	7,320	6,721	6,695	6,170	5,819	5,567	5,732	5,606	5,477	5,967	6,146	7,020	74,240
	85+	10,474	10,248	9,861	8,842	8,490	8,062	8,056	8,042	7,827	8,765	9,139	10,908	108,714
	All ages	23,667	22,340	22,120	20,258	19,518	18,550	18,610	18,511	18,144	19,915	20,562	23,662	245,857
England and Wales	0–64	3,054	2,784	2,892	2,840	2,858	2,677	2,673	2,662	2,609	2,759	2,823	3,023	33,654
	65–74	3,245	2,992	3,049	2,790	2,740	2,593	2,509	2,530	2,567	2,764	2,817	3,088	33,684
	75–84	7,822	7,190	7,159	6,595	6,192	5,966	6,106	5,961	5,849	6,362	6,603	7,483	79,288
	85+	11,204	10,912	10,470	9,434	9,057	8,573	8,605	8,559	8,336	9,330	9,730	11,586	115,796
	All ages	25,325	23,878	23,570	21,659	20,847	19,809	19,893	19,712	19,361	21,215	21,973	25,180	262,422
elsewhere	0–64	12	11	9	13	15	19	19	21	18	11	12	15	175
	65–74	6	13	5	14	11	6	14	13	12	6	6	11	117
	75–84	11	6	4	14	9	7	10	4	9	11	6	7	98
	85+	9	6	2	6	2	3	2	4	5	1	3	8	51
	All ages	38	36	20	47	37	35	45	42	44	29	27	41	441

Report:

Health expectancies in the United Kingdom, 2004–06

Michael Smith, Grace Edgar and Genevieve Groom
Office for National Statistics

Introduction

This report presents the latest figures on male and female health expectancy, at birth and at age 65, for the UK and its four constituent countries in 2004–06. While life expectancy (LE) provides an estimate of average expected life-span, healthy life expectancy (HLE) divides total LE into years spent in good or 'not good' health. Disability-free life expectancy (DFLE) divides LE into years lived with and without a chronic illness or disability.

These figures are three-year averages. LE is taken from the UK national interim life tables published annually by ONS, and the measures of health and chronic illness from the General Household Survey (GHS) in Great Britain and the Continuous Household Survey (CHS) in Northern Ireland.

Interpretation of health expectancies

Health expectancies are an extension of LE indicators, and represent the period of time that an individual might expect to remain in good or fairly good health or free from a limiting chronic illness or disability if he or she experienced the particular age-specific rates for that time period and country throughout his or her life. Health expectancies reported here do not reflect the actual time a person can expect to live in good or fairly good health or without a limiting chronic illness or disability, as the current age-specific rates are likely to change in the future because of differing population structures and differing likelihood of health and illness resulting from changing risk profiles.

Health expectancies at birth are also not a guide to the remaining expectation of life in a given health state having survived to a given age. For example, if female HLE in England was 70 years at birth, HLE for women aged 65 years would exceed five years. This reflects the fact that health expectancies at a particular age depend only on the health expectancies beyond that age, whereas health expectancies at birth are dependent on health expectancies at every age.

Nevertheless, health expectancies are powerful indicators of the interactions between health and mortality and can be used to monitor the health of the population in relation to increased life expectancies over time and also between different geographical areas.

Healthy life expectancy, 2004–06

Table 1 shows the 2004–06 figures for LE, HLE and DFLE at birth and at age 65 by sex for the UK and each constituent country. On average, males in the UK could expect to live in good or fairly good health (HLE) for 68.2 years at birth and 12.8 years at age 65. The equivalent figures for females were 70.4 and 14.5 years respectively.

Of the four constituent countries of the UK, England had the highest HLE at birth for both sexes. This was also true for females at age 65; but for males at this age, the figure for both England and Northern Ireland was 12.9 years.

For males, HLE at birth in England was 68.5 years, significantly higher than in Wales (66.7 years), Scotland (66.5 years) and Northern Ireland (66.9 years). There were no significant differences in HLE between constituent countries for males at age 65.

For females, HLE at birth was significantly higher in England than in Northern Ireland, and at age 65, significantly higher in England than in both Northern Ireland and Wales. HLE estimates for Scotland at birth were the second highest in the UK at 69.6 years; however, this country had the lowest LE. As a consequence, it is estimated that female residents of Scotland spend the least number of years in 'not good' health compared to other countries in the UK. The lowest HLE estimate for females at birth was in Northern Ireland (68.8 years), 1.6 years lower than the UK estimate. At age 65, the lowest HLE for females was in Wales at 13.3 years, 1.2 years lower than the UK estimate.

Disability-free life expectancy, 2004–06

In 2004–06, newly born males in the UK could expect to live on average 62.4 years free from a limiting chronic illness or disability (DFLE), and 10.1 years at age 65. For females the equivalent DFLE figures were 63.9 years at birth and 10.6 years at age 65.

The variation in DFLE between countries of the UK was similar to the variation in HLE, except for Northern Ireland which had a significantly lower DFLE than England for males at age 65.

DFLE estimates for Scotland were the second highest in the UK for males at birth and at age 65. For females at age 65, DFLE was highest in

| Table 1 | Life expectancy, healthy life expectancy and disability-free life expectancy at birth and age 65: by country and sex, 2004–06 |

United Kingdom

	Country	Life expectancy	Healthy life expectancy			Disability-free life expectancy		
		Years	Years	Lower 95 per cent confidence interval	Upper 95 per cent confidence interval	Years	Lower 95 per cent confidence interval	Upper 95 per cent confidence interval
At birth								
Males	United Kingdom	76.9	68.2	67.9	68.4	62.4	62.1	62.7
	Great Britain	76.9	68.2	67.9	68.5	62.5	62.2	62.9
	England	77.2	68.5	68.2	68.8	62.8	62.4	63.2
	Wales	76.6	66.7*	65.3	68.1	59.8*	58.1	61.4
	Scotland	74.6	66.5*	65.5	67.4	61.7	60.6	62.8
	Northern Ireland	76.1	66.9*	66.3	67.5	60.0*	59.4	60.6
Females	United Kingdom	81.3	70.4	70.1	70.7	63.9	63.6	64.2
	Great Britain	81.3	70.5	70.1	70.8	64.0	63.7	64.4
	England	81.5	70.7	70.3	71.0	64.1	63.7	64.5
	Wales	80.9	68.9	67.5	70.3	63.5	61.9	65.1
	Scotland	79.6	69.6	68.6	70.6	63.4	62.2	64.5
	Northern Ireland	81.0	68.8*	68.2	69.4	60.7*	60.0	61.3
At age 65								
Males	United Kingdom	16.9	12.8	12.6	13.0	10.1	9.9	10.3
	Great Britain	16.9	12.8	12.6	13.1	10.1	9.9	10.4
	England	17.1	12.9	12.7	13.2	10.2	9.9	10.5
	Wales	16.7	12.3	11.4	13.3	9.5	8.4	10.5
	Scotland	15.8	12.2	11.5	12.9	9.8	9.0	10.6
	Northern Ireland	16.6	12.9	12.5	13.4	9.1*	8.7	9.6
Females	United Kingdom	19.7	14.5	14.3	14.7	10.6	10.4	10.8
	Great Britain	19.7	14.5	14.3	14.8	10.7	10.4	11.0
	England	19.9	14.7	14.4	14.9	10.7	10.5	11.0
	Wales	19.5	13.3*	12.3	14.3	9.8	8.7	10.9
	Scotland	18.6	14.2	13.5	14.8	10.7	9.9	11.5
	Northern Ireland	19.5	13.8*	13.4	14.3	9.0*	8.6	9.5

* Significantly different from England at the 95% level.

England and Scotland at 10.7 years. As Scotland has the lowest LE for both sexes, residents in Scotland could expect to live the least number of years with a disability compared to other UK countries.

For males, Wales had the lowest DFLE of all the constituent countries at birth (59.8 years) and Northern Ireland the lowest at age 65 (9.1 years). For females, Northern Ireland had the lowest DFLE estimates: 60.7 years at birth and 9.0 years at age 65.

Trends in health expectancies

The pattern of health expectancies at birth and at age 65 by sex across countries of the UK in 2004–06 was predominantly similar to that reported in 2003–05.[1] There were, however, slight differences: Northern Ireland, for example, had the highest HLE for males at age 65 in 2003–05 but was equivalent to England in 2004–06. The year-on-year variation in ranking is partly due to the sampling variability of the estimates, arising from the use of survey data to estimate the proportion of life spent in good/fairly good health or without a limiting chronic illness or disability.

Table 2 shows both the 2000–02 and 2004–06 figures for LE, HLE and DFLE at birth and at age 65 by sex for the UK and each constituent country. With one exception (HLE for females at birth in Wales), estimates of HLE and DFLE rose over this period, indicating a general increase in the length of time that males and females may expect to live in good health and free from a limiting chronic illness or disability. For the UK as a whole, HLE and DFLE estimates rose significantly for males at birth and

at age 65 between these years; for females, estimates of HLE increased significantly at age 65 and DFLE increased significantly at birth.

For the UK, between 2000–02 and 2004–06 HLE and DFLE estimates for males at birth rose by 1.4 and 2.1 years, and at age 65 by 0.9 and 1.3 years respectively. The equivalent increases for females were lower at 0.5 and 1.1 years at birth and 0.5 and 0.4 years at age 65.

There were significant increases over the period in estimated HLE and DFLE at birth and at age 65 for males in both England and Northern Ireland. In England, male HLE and DFLE estimates at birth rose by 1.4 and 2.1 years respectively, and 0.9 and 1.3 years at age 65. In Northern Ireland, estimates of HLE and DFLE at birth for males increased by 1.8 and 2.1 years respectively, and 1.8 and 1.5 years at age 65.

For females, there were significant increases in HLE at age 65 between 2000–02 and 2004–06 in Northern Ireland (1.3 years) and in DFLE in England at birth (1.1 years). In Wales, HLE for females at birth fell from 69.4 years in 2000–02 to 68.9 years in 2004–06.

When differences in the magnitude of change (or the absolute change in terms of number of years) between LE and the health expectancy estimates occur, the **proportions** of expected life spent healthy or free from a limiting chronic illness or disability also change. Comparisons over time in the proportion of life spent healthy are indicative of relative change that serves to establish whether gains in LE are matched by, fall short of, or exceed changes in the health expectancy estimates over the same period.

Table 2	Life expectancy, healthy life expectancy and disability-free life expectancy, at birth and age 65: by country and sex, 2000–02 and 2004–06

United Kingdom   Years

	Country	Life expectancy		Healthy life expectancy		Disability-free life expectancy	
		2000–02	2004–06	2000–02	2004–06	2000–02	2004–06
At birth							
Males	United Kingdom	75.7	76.9	66.8	68.2*	60.3	62.4*
	Great Britain	75.7	76.9	66.8	68.2*	60.4	62.5*
	England	76.0	77.2	67.1	68.5*	60.7	62.8*
	Wales	75.4	76.6	65.5	66.7	57.7	59.8
	Scotland	73.3	74.6	65.3	66.5	58.8	61.7*
	Northern Ireland	75.2	76.1	65.1	66.9*	57.9	60.0*
Females	United Kingdom	80.4	81.3	69.9	70.4	62.8	63.9*
	Great Britain	80.4	81.3	69.9	70.5	62.9	64.0*
	England	80.6	81.5	70.1	70.7	63.0	64.1*
	Wales	80.1	80.9	69.4	68.9	61.1	63.5
	Scotland	78.8	79.6	68.6	69.6	62.6	63.4
	Northern Ireland	80.1	81.0	67.2	68.8*	59.7	60.7
At age 65							
Males	United Kingdom	15.9	16.9	11.9	12.8*	8.8	10.1*
	Great Britain	15.9	16.9	11.9	12.8*	8.8	10.1*
	England	16.1	17.1	12.0	12.9*	8.9	10.2*
	Wales	15.7	16.7	11.1	12.3	7.3	9.5*
	Scotland	14.9	15.8	11.5	12.2	8.7	9.8
	Northern Ireland	15.7	16.6	11.1	12.9*	7.6	9.1*
Females	United Kingdom	19.0	19.7	14.0	14.5*	10.2	10.6
	Great Britain	19.0	19.7	14.0	14.5*	10.3	10.7
	England	19.2	19.9	14.2	14.7	10.4	10.7
	Wales	18.7	19.5	12.8	13.3	8.5	9.8*
	Scotland	18.0	18.6	13.5	14.2	10.0	10.7
	Northern Ireland	18.7	19.5	12.5	13.8*	8.5	9.0

* Significant difference between 2000–02 and 2004–06 at the 95% level.

The proportion of life spent in good or fairly good health in 2004–06 is largely consistent with 2000–02 estimates. The notable exception is Northern Ireland where males and females at age 65 have seen their proportions of life spent in good or fairly good health increase by 10 per cent and 6 per cent respectively.

Table 3 shows the 2000–02 and 2004–06 figures for the proportion of life free from a limiting chronic illness or disability, and the absolute change in months, at birth and at age 65 by sex for the UK and each constituent country.

Proportions of life spent free from a limiting chronic illness or disability mostly increased for males and females at birth and at age 65 over the period. At birth, males in the UK experienced a proportional gain in DFLE, representing an increase of more than 11 months after taking account of the gain in LE. The smaller gains of 11 months were observed in England and in Wales, while the greatest increase of 20 months occurred in Scotland. For females at birth, there were generally more modest increases in the proportion of life free from a limiting chronic illness or disability. In the UK, females at birth gained 2 months in absolute terms. The smallest proportional gain at birth for females occurred in Scotland where there was a negligible increase. The greatest proportional increase was in Wales, with a gain of 19 months after taking account of the gain in LE.

At age 65, due to lower life expectancies, changes over time represented in months are less than at birth, despite the often greater gains in the proportion of life free from a limiting chronic illness or disability. In the UK, males at age 65 gained 3 months in absolute terms free from a limiting chronic illness or disability between 2000–02 and 2004–06. In contrast to males at birth, the smallest proportional increase at age 65

occurred in Scotland: 2 months in absolute terms. The greatest proportional increase occurred in Wales: 14 months in absolute terms.

For females at age 65 in the UK, the proportion of LE spent free from limiting chronic illness or disability increased slightly between 2000–02 and 2004–06; however, this represented a fall of 3 months in absolute terms. The greatest proportional increase was in Wales, representing approximately 6 months in absolute terms. In England, a decrease in the proportion of life spent free from limiting chronic illness or disability was observed, resulting in a fall of 4 months of life free from a limiting chronic illness or disability in absolute terms.

Trends since 2000–02 in disability-free life expectancy for males and females at birth in the UK and constituent countries continue to support the notion of a compression of morbidity over time, where periods of ill-health with disability decline prior to death in an ageing population.[2] Indeed, the estimates presented suggest a predominant pattern of increasing proportions of life spent free from a limiting chronic illness or disability, using the current methodology, between 2000–02 and 2004–06.

Methods

ONS produces two measures of health expectancy: HLE defined as expected years of life in good or fairly good health; and DFLE, defined as expected years of life free from a limiting chronic illness or disability. UK health expectancies are calculated using the Sullivan method incorporating national period life expectancies.[3,4] Briefly, prevalence rates of self-reported good/'not good' health or with/without a limiting chronic illness or disability by country, sex and five-year age band are calculated partly from responses to the GHS and CHS aggregated over three years.

Table 3	Proportion of life spent free from disability, at birth and age 65: by country and sex, 2000–02 and 2004–06		

United Kingdom

Per cent, months

Country		Proportion of life free from disability		Absolute gain over the period
		2000–02	2004–06	
		Per cent	Per cent	Months
At birth				
Males	United Kingdom	79.7	81.2	11
	Great Britain	79.8	81.3	11
	England	79.9	81.3	11
	Wales	76.5	78.1	11
	Scotland	80.2	82.7	20
	Northern Ireland	77.0	78.8	14
Females	United Kingdom	78.1	78.6	2
	Great Britain	78.2	78.8	3
	England	78.2	78.7	3
	Wales	76.3	78.5	19
	Scotland	79.4	79.6	–
	Northern Ireland	74.5	74.9	1
At age 65				
Males	United Kingdom	55.3	59.7	3
	Great Britain	55.3	59.9	4
	England	55.3	59.7	4
	Wales	46.5	56.9	14
	Scotland	58.4	61.8	2
	Northern Ireland	48.4	54.8	7
Females	United Kingdom	53.7	53.9	–3
	Great Britain	54.2	54.3	–4
	England	54.2	54.0	–4
	Wales	45.5	50.2	6
	Scotland	55.6	57.5	1
	Northern Ireland	45.5	46.2	–4

Note: Calculations based on rounded LE figures and unrounded DFLE figures.

Because the GHS and CHS do not include residents of communal establishments, such as nursing homes, the prevalence of the various health states in this population is based on data from the 2001 Census for all the years covered. The proportion of the population in communal establishments is adjusted to match current aggregated mid-year population estimates.[5]

Combined survey and communal establishment prevalence rates are multiplied by the total person years lived at a given age interval, calculated from aggregated mid-year population estimates and period life tables to give the total number of person years lived at that age interval in good/ 'not good' health or with/without a limiting chronic illness or disability. The total number of person years in good health, or without a limiting chronic illness or disability, at a given age, is then divided by the number of people surviving to that age to give an estimate of HLE or DFLE. Significant differences between countries and over time are indicated by non-overlapping 95 per cent confidence intervals. The methods and the data sources used to calculate health expectancies are reported in further detail in the article 'Review of sources and methods to monitor healthy life expectancy' published in *Health Statistics Quarterly* 26.[6]

The design of survey sources has remained unchanged for the calculation of health expectancy estimates between 2000–02 and 2003–05; however, in 2006 the GHS changed to a longitudinal (rotating panel) design. Consequently, the 2006 sample is composed of both follow-up respondents and new entrants to the survey. In order to maintain the cross-sectional nature of the data used to compile ONS estimates of HLE and DFLE, the analysis

presented here is based on only new entrants, approximately one third of the total sample in 2006, combined with full samples from 2004 and 2005. This change results in a loss of approximately 22 per cent of the survey sample for England, Wales and Scotland in the aggregated dataset used to construct the 2004–06 estimate. Compared to previous years, therefore, the ability to identify significant differences between countries and changes over time in 2004–06 is diminished due the relatively lower contribution of survey data from 2006 to the aggregated dataset. The effect of further reductions in sample size on future ONS estimates of HLE and DFLE is under investigation and will be reported in a future article in *Health Statistics Quarterly*.

Website report and results

The results in this report can also be found on the Office for National Statistics website at:
www.statistics.gov.uk/statbase/Product.asp?vlnk=12964

Figures on the Office for National Statistics website include estimates of LE, HLE and DFLE for the UK, Great Britain, England, Scotland, Wales and Northern Ireland from 2000–02 to 2004–06. For Great Britain and England, long-term health expectancies trend data are also available for the period 1981 to 2001. All estimates (with 95 per cent confidence intervals) are presented along with the corresponding life expectancy figures.[7]

Independent in-depth analyses of Scottish health expectancies figures can be found on the Scottish Public Health Observatory website, accessed 8 October 2008, available at:
www.scotpho.org.uk/hle

Further information

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

Centre for Health Analysis and Reporting
Room 1.276
Office for National Statistics
Cardiff Road
Newport NP10 8XG
Tel: 01633 45 5925
Email: HLE@ons.gov.uk

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Report:

Life expectancy at birth and at age 65 by local areas in the United Kingdom, 2005–07

Claudia Wells and Emma Gordon
Office for National Statistics

Introduction

This report presents the latest figures on male and female period life expectancy at birth and at age 65 for local areas in the UK, constituent countries and English regions for 2005–07. 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 (ONS), except those for Scotland which were calculated by the General Register Office for Scotland (GROS) using the same methods.

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.

Interpretation of period life expectancy

All figures presented here are period life expectancies. Period expectation of life 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.

Period 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.

Life expectancy at birth

Results for 2005–07 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, the North West of England and Northern Ireland. For males there was a difference of 4.1 years between Scotland as a whole which had the lowest life expectancy (74.8 years), and the South East of England where life expectancy was highest (78.9 years). For females the gap between Scotland and the South West of England (79.7 and 82.9 years respectively) was 3.2 years.

The local areas with the highest and lowest male and female life expectancy at birth in the UK in 2005–07 are presented in Tables 1 and 2 respectively.

Table 1	Local areas with the highest and lowest male life expectancy at birth, 2005–07

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	83.7
2	Westminster	London	81.5
3	East Dorset	South West	81.3
4	Elmbridge	South East	81.1
5	Hart	South East	81.0
6	Fareham	South East	80.9
7	Wokingham	South East	80.8
8	Sevenoaks	South East	80.7
9	Three Rivers	East of England	80.6
10	Cotswold	South West	80.6
Lowest life expectancy at birth			
432	Glasgow City	Scotland	70.8
431	West Dunbartonshire	Scotland	71.9
430	Inverclyde	Scotland	72.5
429	North Lanarkshire	Scotland	72.7
428	Eilean Siar	Scotland	72.9
427	Blackpool	North West	73.2
426	Manchester	North West	73.4
425	Belfast	Northern Ireland	73.6
424	Renfrewshire	Scotland	73.7
423	North Ayrshire	Scotland	73.7

Table 2	Local areas with the highest and lowest female life expectancy at birth, 2005–07		

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	87.8
2	East Dorset	South West	85.0
3	Rutland	East Midlands	84.7
4	Hart	South East	84.7
5	Westminster	London	84.6
6	Christchurch	South West	84.5
7	Chiltern	South East	84.4
8	Rochford	East of England	84.4
9	South Cambridgeshire	East of England	84.4
10	Epsom and Ewell	South East	84.4
Lowest life expectancy at birth			
432	Glasgow City	Scotland	77.1
431	East Ayrshire	Scotland	77.9
430	West Dunbartonshire	Scotland	77.9
429	Hartlepool	North East	78.1
428	Inverclyde	Scotland	78.2
427	North Lanarkshire	Scotland	78.4
426	Halton	North West	78.6
425	Blaenau Gwent	Wales	78.7
424	Liverpool	North West	78.7
423	Renfrewshire	Scotland	78.7

As in 2004–06, the local area with lowest male life expectancy was Glasgow City (70.8 years). The local area with the highest life expectancy for males was Kensington and Chelsea (83.7 years), 12.9 years more than Glasgow City. Kensington and Chelsea also had the highest life expectancy for females (87.8 years), 10.7 years more than Glasgow City, the area with the lowest figure (77.1 years).

Life expectancy at age 65

Life expectancies at age 65 for the constituent countries of the UK and English regions in 2005–07 show a similar geographical pattern to the results at birth. The lowest estimates were in Scotland and the North East of England; the highest were in the South East and South West of England. Men in Scotland had a life expectancy at 65 of 16.1 years, 2.1 years lower than the result for men in the South East and South West who could expect to live another 18.2 years. The gap between the areas with the highest and

Table 3	Local areas with the highest and lowest male life expectancy at age 65, 2005–07		

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	22.7
2	Westminster	London	21.2
3	Crawley	South East	20.3
4	South Shropshire	West Midlands	19.7
5	Christchurch	South West	19.7
6	Lewes	South East	19.5
7	East Dorset	South West	19.4
8	Guildford	South East	19.4
9	Rutland	East Midlands	19.4
10	Tandridge	South East	19.3
Lowest life expectancy at age 65			
432	Glasgow City	Scotland	13.8
431	North Lanarkshire	Scotland	14.9
430	West Dunbartonshire	Scotland	15.0
429	Inverclyde	Scotland	15.1
428	Renfrewshire	Scotland	15.2
427	North Ayrshire	Scotland	15.4
426	Manchester	North West	15.5
425	East Ayrshire	Scotland	15.5
424	Liverpool	North West	15.5
423	Hartlepool	North East	15.5

Table 4	Local areas with the highest and lowest female life expectancy at age 65, 2005–07		

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	25.2
2	East Dorset	South West	22.7
3	Rutland	East Midlands	22.7
4	Westminster	London	22.6
5	Hammersmith and Fulham	London	22.3
6	Brent	London	22.3
7	Lewes	South East	22.2
8	Christchurch	South West	22.2
9	Purbeck	South West	22.2
10	West Somerset	South West	22.1
Lowest life expectancy at age 65			
432	Glasgow City	Scotland	17.4
431	West Dunbartonshire	Scotland	17.6
430	West Lothian	Scotland	17.7
429	East Ayrshire	Scotland	17.8
428	Renfrewshire	Scotland	17.8
427	North Lanarkshire	Scotland	17.8
426	Hartlepool	North East	18.0
425	Halton	North West	18.0
424	Liverpool	North West	18.1
423	Burnley	North West	18.1

lowest life expectancies at 65 for women was similar to the gap for men. Women in Scotland had a life expectancy at 65 of 18.8 years, 2.2 years lower than women in the South West of England (21.0 years).

The local areas with the highest and lowest life expectancy at age 65 for men and women in the UK in 2005–07 are presented in Tables 3 and 4 respectively.

At local area level in 2005–06, 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 (22.7 years), 8.9 years more than Glasgow City. Kensington and Chelsea also had the highest life expectancy at 65 for women (25.2), 7.8 years more than Glasgow City, the area with the lowest figure (17.4 years)

Table 5 includes results for all local areas in the UK for both life expectancy at birth and life expectancy at 65 for 2005–07, and their relative rank order. Results are presented alphabetically by local area name within each constituent country and English region.

Methods

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 Office for National Statistics website.[3,4]

The calculation of confidence intervals (available on the Office for National Statistics website) used the method developed by Chiang.[5] A report which details research undertaken by ONS to compare methodologies to allow the calculation of confidence intervals for life expectancy at birth has been published 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.[6]

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.[7]

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

Comparison with national results

The national interim life tables are the definitive life expectancy figures for the entire UK and constituent countries. National interim life tables are calculated using complete life tables (based on single years of age) and are published separately on the Office for 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 sub-national results, with abridged life tables in which deaths and populations are aggregated into age groups. Therefore 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).

Differences between period and cohort life expectancies

Expectations of life can be calculated in two ways, period life expectancy (as presented in this report) and cohort life expectancy.

Cohort life expectancies are calculated using age-specific mortality rates which allow for known or projected changes in mortality in later years and are therefore regarded as a more appropriate measure of how long a person of a given age would be expected to live, on average, than period life expectancy.

For example, period life expectancy at age 65 in 2000 would be worked out using the mortality rate for age 65 in 2000, for age 66 in 2000, for age 67 in 2000, and so on. Cohort life expectancy at age 65 in 2000 would be worked out using the mortality rate for age 65 in 2000, for age 66 in 2001, for age 67 in 2002, and so on.

Period life expectancies are a useful measure of mortality rates actually experienced over a given period and, for past years, provide an objective means of comparison of the trends in mortality over time, between areas of a country and with other countries. Official life tables in the UK and in other countries which relate to past years are generally period life tables for these reasons. Cohort life expectancies, even for past years, usually require projected mortality rates for their calculation and hence, in such cases, involve an element of subjectivity.

More information on the differences between period and cohort life expectancies can be found on the Office for National Statistics website.[8]

Results on the Office for 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 Office for National Statistics website at: www.statistics.gov.uk/statbase/Product.asp?vlnk=8841

The four workbooks contain:

- Results for the United Kingdom – figures for 1991–93 to 2005–07 for the UK, England and Wales, England, Wales, Scotland and Northern Ireland. Tables are also included showing the rank order of local areas in the UK in 2005–07

- Results for England and Wales – figures for 1991–93 to 2005–07 for local authorities in England and Wales, counties in England and Government Office regions in England.

- Results for Scotland – figures for 1991–93 to 2005–07 for council areas and health boards in Scotland

- Results for Northern Ireland – figures for 1991–93 to 2005–07 for local government district areas and health and social service boards in Northern Ireland

Results for 1991–93 to 2005–07 have also been published on the Office for 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

Life expectancy results for local areas in Scotland for 2005–07 were first published in a report on the 25 September 2007 on the GROS website, accessed on 7 October 2008, available at: www.gro-scotland.gov.uk/statistics/publications-and-data/life-expectancy/index.html

Results for Scotland and other small areas within Scotland can also be found on the Scottish Public Health Observatory website, accessed 7 October 2008, available at: www.scotpho.org.uk/home/Comparativehealth/Profiles/chp_profiles.asp

Further information

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

Geographic Analysis of Mortality
Room 1.276
Office for National Statistics
Cardiff Road
Newport
NP10 8XG
Tel: 01633 45 5867
Email: healthgeog@ons.gov.uk

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    www.statistics.gov.uk/statbase/Product.asp?vlnk=15098

| Table 5 | Life expectancy at birth and at age 65[1] and relative position (rank order[2]) of local areas in the United Kingdom, 2005–07 |

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	77.3		17.3		81.5		20.0	
England and Wales	77.5		17.4		81.7		20.1	
England	77.6		17.5		81.8		20.2	
Government Office Regions and local areas within England								
North East	76.3		16.5		80.4		19.0	
Alnwick	78.6	138	17.9	162	81.4	277	19.9	263
Berwick-upon-Tweed	78.8	119	18.9	31	83.6	39	21.1	81
Blyth Valley	76.3	331	16.0	395	80.0	390	18.6	404
Castle Morpeth	78.6	137	18.3	100	82.4	168	20.2	214
Chester-le-Street	77.0	274	16.4	361	80.7	338	19.2	352
Darlington	76.3	335	16.9	313	80.4	364	19.2	354
Derwentside	76.1	346	16.1	387	80.3	374	18.5	411
Durham	77.5	239	17.1	284	81.2	293	19.4	325
Easington	75.8	367	15.9	401	79.2	413	18.5	409
Gateshead	75.8	368	16.8	330	80.4	365	19.0	376
Hartlepool	75.1	398	15.5	423	78.1	429	18.0	426
Middlesbrough	75.0	403	16.0	396	79.6	402	18.7	397
Newcastle upon Tyne	75.7	371	16.3	372	80.5	353	19.2	359
North Tyneside	76.7	305	16.6	343	80.9	322	19.4	326
Redcar and Cleveland	76.7	304	17.0	300	80.8	328	19.6	312
Sedgefield	76.4	322	16.2	377	80.1	384	18.7	398
South Tyneside	75.6	377	16.2	384	80.4	358	19.0	371
Stockton-on-Tees	76.5	320	16.8	335	80.8	331	18.9	385
Sunderland	75.6	376	15.9	404	80.2	379	18.6	402
Teesdale	78.0	209	17.6	206	81.8	227	19.9	267
Tynedale	79.0	113	18.0	139	82.0	203	20.0	253
Wansbeck	76.2	337	16.7	336	80.0	388	18.5	410
Wear Valley	76.0	357	16.0	393	79.6	406	18.7	393
North West	76.0		16.6		80.4		19.3	
Allerdale	76.9	292	16.7	341	80.7	335	19.4	329
Barrow-in-Furness	76.0	353	16.2	378	80.9	318	20.1	230
Blackburn with Darwen	74.2	418	15.8	416	79.2	412	18.2	421
Blackpool	73.2	427	16.1	389	79.0	420	18.6	406
Bolton	75.1	396	16.1	386	79.6	400	18.8	387
Burnley	75.4	384	16.8	324	79.0	419	18.1	423
Bury	76.6	313	16.6	354	80.6	351	19.2	353
Carlisle	76.7	302	16.9	318	81.1	302	20.2	207
Chester	78.3	179	17.9	165	82.0	205	20.4	191
Chorley	77.4	248	16.8	329	81.4	269	19.6	307
Congleton	78.6	135	17.9	161	82.7	125	21.0	97
Copeland	76.6	308	16.6	348	80.7	339	19.3	344
Crewe and Nantwich	77.0	280	17.1	290	81.5	266	19.6	301
Eden	78.2	181	17.8	173	83.0	92	20.9	108
Ellesmere Port & Neston	77.2	265	17.6	201	81.8	225	20.2	223
Fylde	78.7	126	17.8	172	81.7	245	20.1	236
Halton	74.5	415	15.8	412	78.6	426	18.0	425
Hyndburn	75.4	387	16.6	345	79.9	392	19.0	377
Knowsley	74.9	407	15.7	418	79.2	415	18.2	418
Lancaster	76.8	301	17.2	274	81.3	279	19.9	271
Liverpool	73.9	421	15.5	424	78.7	424	18.1	424
Macclesfield	79.2	94	18.2	118	82.8	119	20.7	148
Manchester	73.4	426	15.5	426	78.9	422	18.6	400
Oldham	75.3	391	15.9	405	79.2	414	18.3	416
Pendle	76.1	349	16.9	311	80.5	356	20.0	252
Preston	75.0	399	16.1	390	79.9	393	18.9	378
Ribble Valley	78.8	123	17.7	190	82.8	115	20.2	222
Rochdale	75.1	395	16.0	399	79.6	403	18.9	386
Rossendale	75.4	383	15.8	413	80.3	375	18.6	405
Salford	74.6	410	15.8	415	79.0	417	18.6	403
Sefton	76.6	314	17.2	273	81.4	276	19.6	302
South Lakeland	79.4	70	18.8	36	83.1	83	21.0	104
South Ribble	77.5	240	17.5	221	81.6	248	19.9	259
St. Helens	75.4	388	15.9	400	80.0	386	19.0	375
Stockport	77.4	247	17.1	275	82.1	191	20.6	152
Tameside	75.3	390	15.9	410	79.6	404	18.3	415
Trafford	77.7	228	17.5	224	82.0	211	20.2	221
Vale Royal	78.0	199	17.3	254	81.3	287	19.6	306
Warrington	76.4	327	16.3	376	80.8	332	19.2	355
West Lancashire	77.7	230	17.0	301	80.6	345	18.9	380
Wigan	75.4	386	15.9	408	79.6	405	18.5	407
Wirral	75.7	370	16.6	352	80.9	319	19.8	279
Wyre	77.0	273	17.2	271	81.3	288	19.7	294

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2 Life expectancy figures are presented to one decimal place. The rankings in this table reflect differences in the unrounded numbers. 1= Highest, 432 = Lowest.

Table 5 continued	Life expectancy at birth and at age 65[1] and relative position (rank order[2]) of local areas in the United Kingdom, 2005–07

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]
Yorkshire and The Humber	76.9		17.1		81.1		19.7	
Barnsley	75.5	381	16.0	392	79.8	395	18.5	412
Bradford	75.9	360	16.5	355	79.8	396	18.9	381
Calderdale	76.7	303	17.1	291	81.4	278	19.8	280
Craven	79.7	51	18.7	46	83.3	64	20.9	110
Doncaster	76.0	356	16.6	350	80.6	341	19.3	348
East Riding of Yorkshire	78.6	139	18.0	145	81.9	214	20.2	215
Hambleton	79.2	92	18.2	106	83.4	51	21.3	43
Harrogate	79.6	55	18.4	77	82.7	132	20.7	140
Kingston upon Hull, City of	74.8	409	16.0	397	79.1	416	18.4	414
Kirklees	76.5	318	16.9	310	80.6	349	19.1	366
Leeds	76.9	288	17.2	269	81.8	234	20.3	202
North East Lincolnshire	76.0	352	16.6	347	80.8	330	19.7	298
North Lincolnshire	77.1	268	17.3	259	81.1	303	19.8	284
Richmondshire	79.3	78	18.5	66	81.7	242	20.2	219
Rotherham	76.2	338	16.5	358	80.6	347	19.2	357
Ryedale	78.4	168	17.8	182	82.3	173	21.7	25
Scarborough	76.8	299	17.4	241	81.6	251	20.4	184
Selby	78.2	182	17.3	261	82.5	159	20.2	220
Sheffield	77.2	260	17.2	266	81.2	291	19.7	295
Wakefield	76.3	330	16.5	356	80.6	352	19.2	349
York	78.6	147	18.0	138	83.4	53	21.0	85
East Midlands	77.6		17.3		81.6		20.0	
Amber Valley	78.1	193	17.6	208	82.2	180	20.5	168
Ashfield	76.1	348	16.2	380	80.6	343	19.3	345
Bassetlaw	76.9	287	17.0	306	81.1	305	19.2	350
Blaby	80.0	26	19.2	14	83.2	73	21.3	47
Bolsover	76.4	323	15.9	407	80.7	340	18.7	396
Boston	76.3	328	17.1	278	81.2	298	19.7	299
Broxtowe	78.6	136	17.3	253	82.2	185	20.0	250
Charnwood	78.4	159	17.5	229	82.7	131	20.6	153
Chesterfield	76.8	296	16.8	326	81.2	299	19.3	337
Corby	74.6	412	16.4	362	80.2	377	19.3	346
Daventry	78.5	155	17.9	154	82.1	197	20.0	251
Derby	77.0	277	17.1	279	81.9	222	20.3	204
Derbyshire Dales	79.3	87	18.3	97	82.8	117	20.4	187
East Lindsey	77.5	241	17.9	167	81.9	221	20.0	242
East Northamptonshire	78.9	116	17.9	170	81.0	314	19.3	340
Erewash	77.3	254	17.0	299	81.3	281	19.8	277
Gedling	78.6	133	17.6	200	82.2	183	20.3	192
Harborough	79.5	59	18.2	122	82.6	139	21.0	102
High Peak	78.4	160	17.8	177	81.5	262	20.2	208
Hinckley and Bosworth	79.5	58	18.3	91	82.0	208	19.9	268
Kettering	77.8	223	17.3	246	81.3	284	20.0	247
Leicester	75.3	389	16.1	388	79.9	394	18.7	395
Lincoln	76.6	312	17.1	277	80.4	361	19.5	315
Mansfield	75.6	379	16.3	375	80.4	359	19.4	323
Melton	79.3	83	17.9	155	82.4	162	20.9	109
Newark and Sherwood	77.8	224	17.3	248	81.1	300	19.9	265
North East Derbyshire	78.0	198	17.2	263	81.0	313	19.5	318
North Kesteven	79.3	84	18.0	152	83.0	93	20.7	132
North West Leicestershire	77.8	222	17.2	264	81.3	285	19.6	308
Northampton	77.2	261	17.3	245	81.5	264	20.1	232
Nottingham	74.6	411	15.8	411	80.1	383	19.4	328
Oadby and Wigston	79.2	90	18.4	85	82.2	182	20.3	205
Rushcliffe	79.7	49	18.3	95	83.6	41	20.9	106
Rutland	80.1	25	19.4	9	84.7	3	22.7	3
South Derbyshire	77.9	213	17.2	270	82.0	206	19.9	257
South Holland	78.1	192	17.9	164	81.7	239	20.8	128
South Kesteven	77.9	216	17.9	166	82.2	189	20.2	212
South Northamptonshire	80.1	24	18.4	86	83.2	71	21.1	72
Wellingborough	77.8	226	17.3	249	82.6	143	20.6	150
West Lindsey	78.5	153	17.7	191	80.8	327	20.0	238
West Midlands	76.9		17.1		81.4		19.9	
Birmingham	75.6	378	16.6	349	80.8	333	19.7	285
Bridgnorth	78.4	157	17.3	251	83.2	74	20.7	141
Bromsgrove	79.1	99	17.6	204	81.7	244	19.9	266
Cannock Chase	76.3	332	16.0	398	80.3	373	18.9	382
Coventry	76.2	342	16.9	308	80.9	320	20.1	233
Dudley	77.0	272	16.9	316	81.6	253	19.9	261
East Staffordshire	76.9	290	16.8	332	80.8	329	19.7	296
Herefordshire, County of	78.1	185	17.8	175	83.0	91	21.0	87
Lichfield	78.4	161	17.7	198	81.6	250	19.5	321
Malvern Hills	78.6	140	18.1	126	82.4	161	20.6	161
Newcastle-under-Lyme	76.6	309	16.7	337	81.5	258	19.9	264
North Shropshire	78.0	204	17.7	193	82.2	178	20.3	199

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Table 5 continued	Life expectancy at birth and at age 65[1] and relative position (rank order[2]) of local areas in the United Kingdom, 2005–07

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]
North Warwickshire	77.4	251	16.7	340	81.3	283	19.1	367
Nuneaton and Bedworth	76.5	317	16.4	360	80.4	363	18.8	388
Oswestry	78.1	188	17.7	194	82.6	153	20.3	198
Redditch	77.3	257	17.0	298	80.6	350	20.1	228
Rugby	78.0	205	17.7	183	81.4	272	20.0	254
Sandwell	74.2	417	15.8	414	80.0	389	18.8	389
Shrewsbury and Atcham	77.8	221	18.3	98	82.9	106	21.2	62
Solihull	78.4	164	17.9	156	83.8	31	21.8	21
South Shropshire	80.1	20	19.7	4	82.7	130	21.0	98
South Staffordshire	78.2	183	17.3	260	81.8	231	19.6	309
Stafford	78.0	203	17.5	218	81.9	215	20.0	237
Staffordshire Moorlands	78.0	200	17.4	238	81.8	228	19.9	273
Stoke-on-Trent	75.0	404	15.8	417	80.0	391	19.2	361
Stratford-on-Avon	79.0	108	17.8	171	82.1	198	20.2	224
Tamworth	78.3	178	17.5	231	80.7	337	19.5	319
Telford and Wrekin	76.9	284	16.8	325	81.4	267	20.2	211
Walsall	75.7	369	16.8	331	81.3	282	19.9	260
Warwick	79.1	102	18.8	35	83.1	77	21.1	78
Wolverhampton	75.7	374	16.8	333	80.3	369	19.4	335
Worcester	77.3	256	17.5	217	82.0	207	20.2	209
Wychavon	79.0	111	18.1	135	83.6	35	21.3	50
Wyre Forest	77.9	212	18.2	123	82.0	209	20.3	203
East of England	78.7		18.0		82.6		20.6	
Babergh	79.4	73	18.2	102	83.5	46	21.0	90
Basildon	77.9	217	17.4	239	81.7	246	19.9	272
Bedford	78.4	170	18.1	133	82.0	212	20.1	234
Braintree	78.6	141	17.7	192	82.6	150	20.5	166
Breckland	79.1	104	17.9	160	82.6	138	20.5	167
Brentwood	80.3	15	18.6	49	83.6	40	21.3	52
Broadland	79.1	98	17.9	159	82.9	102	20.5	178
Broxbourne	79.6	53	18.6	50	82.5	154	20.6	154
Cambridge	78.0	206	17.5	214	82.6	141	20.5	176
Castle Point	79.7	42	18.1	129	82.2	188	20.2	213
Chelmsford	79.9	37	18.8	34	83.9	25	21.4	41
Colchester	78.4	167	17.6	211	83.1	79	21.0	100
Dacorum	79.2	93	18.2	107	82.9	103	20.8	117
East Cambridgeshire	80.1	23	18.4	76	84.0	19	21.5	31
East Hertfordshire	80.0	27	18.8	39	83.0	87	21.0	103
Epping Forest	78.3	175	17.5	228	82.2	187	20.0	248
Fenland	77.4	245	17.2	272	80.9	317	19.6	304
Forest Heath	79.1	103	18.4	89	83.5	45	21.1	76
Great Yarmouth	77.0	278	17.3	257	81.8	224	20.0	246
Harlow	77.7	229	18.0	151	82.7	133	21.1	71
Hertsmere	78.7	129	18.2	105	82.2	177	19.9	262
Huntingdonshire	78.8	124	18.2	120	82.6	136	20.4	185
Ipswich	77.9	211	17.8	178	82.7	134	20.5	172
King's Lynn and West Norfolk	78.4	171	18.1	124	82.1	199	20.7	138
Luton	76.5	315	17.0	304	80.3	372	19.0	374
Maldon	78.4	163	17.6	205	82.6	140	20.5	165
Mid Bedfordshire	78.8	121	17.8	176	82.6	137	20.4	179
Mid Suffolk	80.2	18	18.7	48	83.8	30	21.4	38
North Hertfordshire	78.5	151	17.5	225	82.7	135	20.4	180
North Norfolk	78.4	165	18.5	69	84.3	12	22.0	12
Norwich	77.2	263	18.0	137	83.1	82	21.8	22
Peterborough	76.4	326	17.0	307	80.5	354	19.3	338
Rochford	79.6	54	18.3	99	84.4	8	21.7	23
South Bedfordshire	78.1	195	17.5	230	81.5	254	19.7	286
South Cambridgeshire	80.4	14	18.9	30	84.4	9	21.8	19
South Norfolk	80.0	31	19.0	21	83.4	50	21.3	53
Southend-on-Sea	77.1	269	17.3	247	81.5	256	19.9	270
St Albans	80.0	32	18.2	119	83.3	65	21.0	83
St Edmundsbury	79.1	97	18.2	110	83.0	94	21.0	95
Stevenage	77.6	236	17.4	232	81.8	230	20.0	240
Suffolk Coastal	80.3	16	18.7	45	83.4	57	21.2	57
Tendring	77.7	231	17.8	179	81.8	229	20.5	174
Three Rivers	80.6	9	18.9	32	82.9	107	20.4	183
Thurrock	77.9	218	17.0	296	81.6	252	20.1	231
Uttlesford	79.4	67	18.0	143	83.1	80	20.7	139
Watford	77.5	244	17.0	297	81.1	306	19.4	334
Waveney	78.7	127	18.2	113	82.4	163	20.7	136
Welwyn Hatfield	78.8	122	18.1	131	82.8	113	20.8	115
London	77.9		17.8		82.4		20.7	
Barking and Dagenham	76.3	329	16.4	368	80.3	371	19.2	356
Barnet	79.5	65	18.8	42	83.6	44	21.3	51
Bexley	78.7	125	18.1	130	82.7	120	20.9	112
Brent	78.5	149	19.0	22	83.8	32	22.3	6

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Table 5 continued	Life expectancy at birth and at age 65[1] and relative position (rank order[2]) of local areas in the United Kingdom, 2005–07

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]
Bromley	79.5	64	18.5	59	83.5	47	21.3	49
Camden	76.9	286	17.3	258	82.2	179	20.3	195
Croydon	78.3	176	18.5	60	82.0	210	20.4	182
Ealing	78.2	184	18.2	109	83.0	100	21.2	68
Enfield	78.5	148	18.2	112	82.4	166	20.7	142
Greenwich	74.9	405	15.9	406	81.4	274	20.2	218
Hackney	75.7	375	17.1	293	82.1	196	21.2	59
Hammersmith and Fulham	78.0	207	18.4	84	84.0	20	22.3	5
Haringey	76.1	345	17.1	286	82.8	114	21.3	44
Harrow	79.6	56	18.6	51	83.6	38	21.5	32
Havering	78.3	177	17.4	237	82.1	200	20.1	235
Hillingdon	78.0	208	17.5	216	82.7	127	21.1	79
Hounslow	76.9	285	17.1	285	81.2	294	19.5	320
Islington	75.1	397	16.4	367	80.8	325	19.3	339
Kensington and Chelsea	83.7	1	22.7	1	87.8	1	25.2	1
Kingston upon Thames	79.3	75	18.0	144	83.0	89	20.6	155
Lambeth	75.8	366	17.1	287	80.6	346	19.7	300
Lewisham	76.0	350	16.2	383	80.8	326	19.2	358
Merton	79.7	46	18.7	47	83.0	86	21.0	84
Newham	75.7	373	17.0	303	79.8	397	18.8	392
Redbridge	78.3	174	18.0	150	82.4	167	20.4	181
Richmond upon Thames	80.0	29	18.4	74	83.8	29	21.6	27
Southwark	77.0	276	18.0	136	82.0	201	21.2	63
Sutton	78.7	132	17.9	168	82.6	152	20.5	169
Tower Hamlets	75.3	392	16.3	371	80.4	362	18.9	379
Waltham Forest	75.9	359	16.3	369	81.0	311	19.5	316
Wandsworth	76.9	291	16.8	334	81.4	271	20.0	249
Westminster	81.5	2	21.2	2	84.6	5	22.6	4
South East	78.9		18.2		82.7		20.7	
Adur	78.3	173	17.6	210	81.2	290	20.2	225
Arun	78.1	189	18.0	147	82.3	175	20.8	116
Ashford	79.7	45	19.2	11	82.2	181	20.7	147
Aylesbury Vale	79.3	81	18.2	116	82.0	202	20.0	243
Basingstoke and Deane	79.4	72	18.0	149	82.7	122	20.7	137
Bracknell Forest	78.9	115	17.5	220	83.0	90	21.2	69
Brighton and Hove	76.5	319	17.3	252	81.8	235	20.6	156
Canterbury	78.6	143	18.0	140	81.9	220	20.1	226
Cherwell	78.8	117	18.2	103	83.3	61	21.6	30
Chichester	79.1	105	18.4	80	82.6	148	20.9	113
Chiltern	79.5	61	18.8	33	84.4	7	21.9	16
Crawley	79.9	33	20.3	3	83.0	98	21.1	80
Dartford	78.1	187	17.3	250	81.6	247	19.1	363
Dover	77.4	246	17.6	202	81.6	249	20.2	216
East Hampshire	79.2	88	18.3	90	82.3	174	20.5	162
Eastbourne	77.9	219	18.4	72	82.1	194	20.8	123
Eastleigh	79.7	50	18.2	117	83.0	96	20.5	164
Elmbridge	81.1	4	19.2	13	83.2	68	21.1	77
Epsom and Ewell	79.9	38	18.6	54	84.4	10	21.6	26
Fareham	80.9	6	19.1	19	83.9	24	21.3	45
Gosport	77.3	253	17.1	281	81.2	292	20.0	241
Gravesham	78.6	144	17.7	184	81.9	219	20.0	239
Guildford	80.2	17	19.4	8	84.4	11	21.9	17
Hart	81.0	5	19.1	18	84.7	4	22.0	13
Hastings	75.9	358	16.9	312	80.3	368	19.7	291
Havant	78.8	118	18.5	63	82.7	121	20.7	134
Horsham	80.1	22	19.0	26	83.4	58	21.5	35
Isle of Wight	78.8	120	18.3	101	83.1	81	21.2	58
Lewes	79.9	36	19.5	6	84.1	14	22.2	7
Maidstone	78.1	191	17.7	197	82.2	184	20.0	245
Medway	76.6	310	16.6	353	81.0	310	19.4	332
Mid Sussex	79.9	39	18.3	93	82.6	147	20.4	188
Milton Keynes	78.0	202	17.4	235	81.5	263	19.6	303
Mole Valley	79.8	41	18.8	38	83.9	23	21.0	94
New Forest	80.4	12	19.2	15	84.1	15	22.1	11
Oxford	78.1	190	18.2	115	82.5	160	20.8	126
Portsmouth	76.7	306	17.1	294	81.9	216	20.5	175
Reading	77.6	235	17.7	187	81.9	218	20.6	159
Reigate and Banstead	78.7	128	17.5	219	82.5	156	20.3	194
Rother	79.0	112	18.3	96	82.8	112	21.2	64
Runnymede	79.1	106	18.4	79	83.0	85	21.1	70
Rushmoor	79.3	85	17.9	158	82.6	149	20.6	160
Sevenoaks	80.7	8	19.0	27	83.8	27	21.5	36
Shepway	77.6	233	17.9	153	81.5	260	20.0	244
Slough	77.9	215	18.5	58	82.3	171	20.5	173
South Bucks	80.5	11	19.0	23	83.0	88	20.9	114
South Oxfordshire	79.2	91	18.2	108	83.1	84	21.0	101
Southampton	77.1	267	17.6	212	82.0	204	20.6	157

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

Table 5 continued	Life expectancy at birth and at age 65[1] and relative position (rank order[2]) of local areas in the United Kingdom, 2005–07

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]
Spelthorne	79.0	109	17.8	174	82.6	144	20.8	125
Surrey Heath	80.0	28	18.6	55	83.0	99	20.5	171
Swale	77.1	266	17.1	292	81.0	316	19.6	310
Tandridge	79.9	34	19.3	10	83.4	56	20.7	133
Test Valley	79.0	110	17.5	223	83.2	72	21.0	89
Thanet	76.3	333	16.8	321	80.9	324	19.5	317
Tonbridge and Malling	79.5	60	18.2	111	83.4	54	20.9	107
Tunbridge Wells	79.2	89	18.6	53	82.8	111	20.8	120
Vale of White Horse	79.8	40	18.5	57	83.7	33	21.0	91
Waverley	80.2	19	19.0	25	83.6	36	21.2	60
Wealden	80.4	13	18.9	28	83.8	28	21.4	37
West Berkshire	79.3	80	18.5	71	82.9	101	21.1	73
West Oxfordshire	79.6	52	18.1	127	83.4	55	21.0	88
Winchester	80.0	30	18.8	37	83.4	52	21.3	56
Windsor and Maidenhead	79.1	96	18.1	132	82.8	118	20.3	197
Woking	79.1	95	18.4	87	83.0	97	20.9	105
Wokingham	80.8	7	19.2	12	83.6	42	21.0	93
Worthing	78.1	196	17.6	207	81.2	295	19.9	256
Wycombe	79.5	62	18.7	44	83.6	43	21.8	18
South West	**78.7**		**18.2**		**82.9**		**21.0**	
Bath and North East Somerset	79.7	48	18.5	65	83.2	75	21.1	75
Bournemouth	77.9	210	18.4	83	82.1	193	20.7	143
Bristol, City of	77.0	282	17.1	289	81.4	268	19.9	258
Caradon	78.4	158	17.7	186	82.8	109	20.7	135
Carrick	78.5	154	18.0	142	83.2	70	21.6	28
Cheltenham	79.1	100	18.4	81	82.9	105	21.0	86
Christchurch	80.1	21	19.7	5	84.5	6	22.2	8
Cotswold	80.6	10	19.1	20	83.3	62	21.2	61
East Devon	79.5	63	18.8	41	83.4	49	21.5	34
East Dorset	81.3	3	19.4	7	85.0	2	22.7	2
Exeter	78.1	186	17.5	213	83.2	76	21.4	40
Forest of Dean	77.4	249	17.7	188	82.4	165	21.0	96
Gloucester	77.9	214	17.8	181	81.8	226	19.8	281
Kennet	79.3	76	17.7	189	82.7	124	20.8	131
Kerrier	77.6	237	17.4	234	82.4	164	20.7	146
Mendip	78.6	146	18.6	56	82.7	128	20.8	127
Mid Devon	79.7	47	18.9	29	83.3	66	21.3	55
North Cornwall	78.7	131	18.4	88	82.6	145	20.7	144
North Devon	78.2	180	18.3	94	82.7	126	20.7	145
North Dorset	79.9	35	19.0	24	84.0	17	21.9	15
North Somerset	79.3	77	18.5	70	82.9	108	20.8	129
North Wiltshire	79.1	101	18.0	141	82.7	129	20.8	130
Penwith	78.4	169	17.9	157	82.2	190	20.5	163
Plymouth	76.8	298	17.1	280	81.9	217	20.3	193
Poole	78.9	114	18.4	82	83.3	60	21.3	48
Purbeck	79.6	57	18.8	40	84.1	16	22.2	9
Restormel	78.6	145	18.2	121	82.6	151	20.6	158
Salisbury	79.3	82	18.5	67	83.0	95	21.1	74
Sedgemoor	78.7	130	18.2	114	82.9	104	20.8	119
South Gloucestershire	79.4	69	18.1	128	83.6	37	21.2	65
South Hams	79.0	107	18.4	73	83.3	63	21.3	54
South Somerset	79.5	66	18.5	62	83.2	67	21.2	67
Stroud	78.3	172	17.7	195	82.7	123	20.8	121
Swindon	77.5	238	16.8	323	81.5	265	19.5	313
Taunton Deane	78.4	156	18.0	148	82.8	110	20.8	122
Teignbridge	79.7	43	18.5	64	84.0	21	21.9	14
Tewkesbury	79.3	79	18.5	61	83.1	78	21.1	82
Torbay	77.3	252	17.9	169	82.3	172	21.0	92
Torridge	78.4	162	18.3	92	83.3	59	21.2	66
West Devon	79.3	74	18.2	104	84.2	13	21.8	20
West Dorset	79.4	68	18.8	43	83.5	48	21.4	39
West Somerset	79.3	86	19.2	16	84.0	22	22.1	10
West Wiltshire	79.4	71	18.5	68	83.9	26	21.5	33
Weymouth and Portland	78.5	152	18.4	78	81.9	223	20.9	111
Wales	**76.8**		**17.0**		**81.2**		**19.8**	
Local areas within Wales								
Blaenau Gwent	75.2	393	16.0	394	78.7	425	18.2	420
Bridgend	75.9	362	16.2	379	80.2	381	19.1	370
Caerphilly	75.8	365	16.3	370	80.3	367	19.0	372
Cardiff	76.5	316	16.8	322	81.5	259	20.2	217
Carmarthenshire	76.2	339	16.6	346	81.4	275	19.7	297
Ceredigion	79.7	44	19.2	17	84.0	18	21.7	24
Conwy	76.8	294	17.5	215	81.2	297	20.3	196
Denbighshire	77.3	255	17.3	255	81.3	280	20.2	210
Flintshire	77.5	242	17.5	227	81.4	270	19.3	343

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

Table 5 continued	Life expectancy at birth and at age 65[1] and relative position (rank order[2]) of local areas in the United Kingdom, 2005–07

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]
Gwynedd	77.0	275	17.5	222	81.9	213	20.4	190
Isle of Anglesey	76.9	289	17.4	233	82.1	195	20.1	229
Merthyr Tydfil	75.5	380	16.1	385	79.4	410	18.6	399
Monmouthshire	78.6	134	18.1	134	83.7	34	21.6	29
Neath Port Talbot	76.4	324	16.7	338	80.6	344	19.4	330
Newport	77.1	270	17.1	283	80.9	323	19.8	275
Pembrokeshire	76.7	307	17.3	244	81.7	240	19.7	287
Powys	78.6	142	18.0	146	82.2	186	20.8	118
Rhondda, Cynon, Taff	75.0	402	15.9	402	80.0	387	18.8	391
Swansea	76.4	321	17.3	256	81.0	312	19.7	289
The Vale of Glamorgan	77.7	227	17.6	209	81.7	241	19.8	282
Torfaen	77.2	259	17.3	262	81.1	304	19.7	288
Wrexham	77.2	262	17.0	305	80.7	336	19.3	336
Scotland	74.8		16.1		79.7		18.8	
Local areas within Scotland								
Aberdeen City	75.2	394	16.2	381	80.2	378	19.0	373
Aberdeenshire	77.5	243	17.6	203	81.3	286	19.6	305
Angus	76.0	355	16.8	320	80.5	357	19.2	351
Argyll & Bute	76.2	341	17.0	295	80.1	385	19.4	327
City of Edinburgh	76.2	343	16.9	317	81.0	308	19.9	255
Clackmannanshire	74.1	419	15.5	422	79.4	409	18.6	401
Dumfries & Galloway	76.2	340	16.9	319	80.3	376	18.9	384
Dundee City	73.8	422	16.6	351	79.4	411	19.4	333
East Ayrshire	74.0	420	15.5	425	77.9	431	17.8	429
East Dunbartonshire	78.0	201	17.3	243	82.5	158	20.3	200
East Lothian	76.2	344	16.3	374	81.0	309	19.4	331
East Renfrewshire	77.4	250	17.2	267	82.5	157	20.4	186
Eilean Siar	72.9	428	15.6	420	80.2	382	19.7	293
Falkirk	74.9	408	15.9	409	79.5	408	18.1	422
Fife	75.8	364	16.6	344	80.4	366	19.3	342
Glasgow City	70.8	432	13.8	432	77.1	432	17.4	432
Highland	75.8	363	16.7	339	80.6	348	19.5	322
Inverclyde	72.5	430	15.1	429	78.2	428	18.3	417
Midlothian	76.0	354	16.4	364	79.7	398	18.2	419
Moray	75.9	361	16.4	365	80.2	380	18.9	383
North Ayrshire	73.7	423	15.4	427	79.0	418	18.5	408
North Lanarkshire	72.7	429	14.9	431	78.4	427	17.8	427
Orkney Islands	74.9	406	16.2	382	81.5	261	19.6	311
Perth & Kinross	76.9	293	17.5	226	81.2	289	19.8	283
Renfrewshire	73.7	424	15.2	428	78.8	423	17.8	428
Scottish Borders	76.6	311	16.7	342	80.7	334	19.2	360
Shetland Islands	76.1	347	18.4	75	82.6	142	21.0	99
South Ayrshire	75.7	372	16.8	328	80.6	342	19.3	347
South Lanarkshire	74.4	416	15.6	421	79.5	407	18.4	413
Stirling	76.8	295	16.5	357	81.0	315	19.1	369
West Dunbartonshire	71.9	431	15.0	430	77.9	430	17.6	431
West Lothian	75.4	385	16.0	391	79.0	421	17.7	430
Northern Ireland	76.2		16.9		81.3		19.8	
Local areas within Northern Ireland								
Antrim	76.8	297	17.2	265	80.5	355	19.4	324
Ards	77.0	281	17.1	282	81.7	237	19.7	292
Armagh	76.3	334	17.2	268	81.8	232	19.5	314
Ballymena	77.8	225	17.7	185	82.6	146	20.1	227
Ballymoney	77.2	264	17.1	276	82.5	155	21.4	42
Banbridge	78.5	150	18.6	52	83.2	69	20.7	149
Belfast	73.6	425	15.6	419	79.6	401	19.1	365
Carrickfergus	76.4	325	16.5	359	80.4	360	18.8	390
Castlereagh	78.1	194	17.1	288	82.3	176	20.2	206
Coleraine	78.4	166	17.9	163	82.3	170	20.8	124
Cookstown	75.0	401	16.3	373	81.7	243	19.7	290
Craigavon	77.3	258	17.6	199	82.4	169	20.6	151
Derry	74.5	414	15.9	403	79.7	399	18.7	394
Down	77.6	234	17.8	180	80.9	321	19.8	276
Dungannon	74.5	413	16.4	366	81.4	273	20.3	201
Fermanagh	75.0	400	16.9	314	81.5	255	19.9	269
Larne	77.0	279	16.8	327	81.2	296	19.1	368
Limavady	76.8	300	17.0	302	81.0	307	19.1	364
Lisburn	77.0	283	17.4	242	81.7	236	19.8	278
Magherafelt	77.1	271	17.4	240	81.8	233	20.5	177
Moyle	77.6	232	18.1	125	82.1	192	20.4	189
Newry and Mourne	76.0	351	16.4	363	80.3	370	19.3	341
Newtownabbey	77.9	220	17.4	236	81.7	238	19.8	274
North Down	78.0	197	17.7	196	82.8	116	21.3	46
Omagh	75.4	382	16.9	315	81.5	257	20.5	170
Strabane	76.3	336	16.9	309	81.1	301	19.2	362

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

Report:

Cancer incidence and mortality in the United Kingdom and constituent countries, 2003–05

Susan Westlake
Office for National Statistics

Introduction

This report summarises information on cancer cases and deaths in the UK during 2003–05. UK data for 2002–04 were published in *Health Statistics Quarterly* 35[1] and on the Office for National Statistics website.[2] Additionally, ONS has analysed trends in UK incidence and mortality 1993–2004.[3]

This report presents the numbers of newly diagnosed cases of cancer (incidence) and deaths from cancer (mortality), together with the age-standardised incidence and mortality rates (see Technical note 1). The report covers all cancers combined (excluding the incidence of non-melanoma skin

cancer – see Technical note 2), and 21 common cancers. Results are given for the UK as a whole and for its four constituent countries (see Technical note 3). Numbers and age-standardised rates have been calculated as averages over the three-year period 2003–05 (see Technical note 4).

The major cancers included in the tables and figures presented here accounted for almost 90 per cent of all cases of cancer, and just over 80 per cent of all deaths from cancer, in the UK in 2003–05. The three most common cancers accounted for around 50 per cent of both cases and deaths from cancer.

Incidence

In the UK, there were on average around 288,000 newly diagnosed cases of cancer each year in 2003–05, with around 144,000 cases among males and 144,000 among females. Although there were almost identical numbers of cases among males and females, the overall age-standardised incidence rate was higher among males – 411 per 100,000 compared with 351 per 100,000 for females (Table 1).

The three most common cancers were prostate, lung and colorectal for males, and breast, lung and colorectal for females (Figure 1). The incidence of lung cancer was 75 per cent higher in males than in females (63 and 36 per 100,000 respectively), and the incidence of colorectal cancer was around 60 per cent higher in males (55 and 34 per 100,000 for males and females, respectively). Overall, breast cancer in females had the highest incidence rate (121 per 100,000), 26 per cent higher than the cancer with the highest incidence in males – prostate cancer (97 per 100,000).

Mortality

There were on average 154,000 deaths from cancer each year in the UK in 2003–05, with around 80,000 deaths among males and 74,000 among females. The equivalent age-standardised mortality rates were 222 and 156 per 100,000 among males and females, respectively (Table 2).

The three most common cancers for both sexes were also the most common causes of death from cancer (Figure 2). However, for females the mortality rate was lower for breast than for lung cancer (28 and 30 per 100,000 respectively). For males, the mortality rate for lung cancer

Key findings

- Around 144,000 males and 144,000 females were newly-diagnosed with cancer on average each year in the UK during 2003–05, corresponding to an incidence rate of 411 and 350 per 100,000 respectively

- Around 80,000 males and 74,000 females died from cancer on average each year in the UK, corresponding to a mortality rate of 222 and 156 per 100,000 respectively

- In females, breast cancer had the highest incidence rate in the UK (121 per 100,000), 26 per cent higher than the cancer with the highest incidence in males – prostate cancer (97 per 100,000)

- Wales had the highest overall cancer incidence rate for males, which was 11 per cent higher than the UK average; the mortality rate was 3 per cent higher. In Scotland, the overall cancer incidence rates for males and females were around 10 per cent higher, and the mortality rates were around 16 per cent higher, than the UK average

- In England and Northern Ireland, overall cancer incidence and mortality rates were similar to those for the UK as a whole

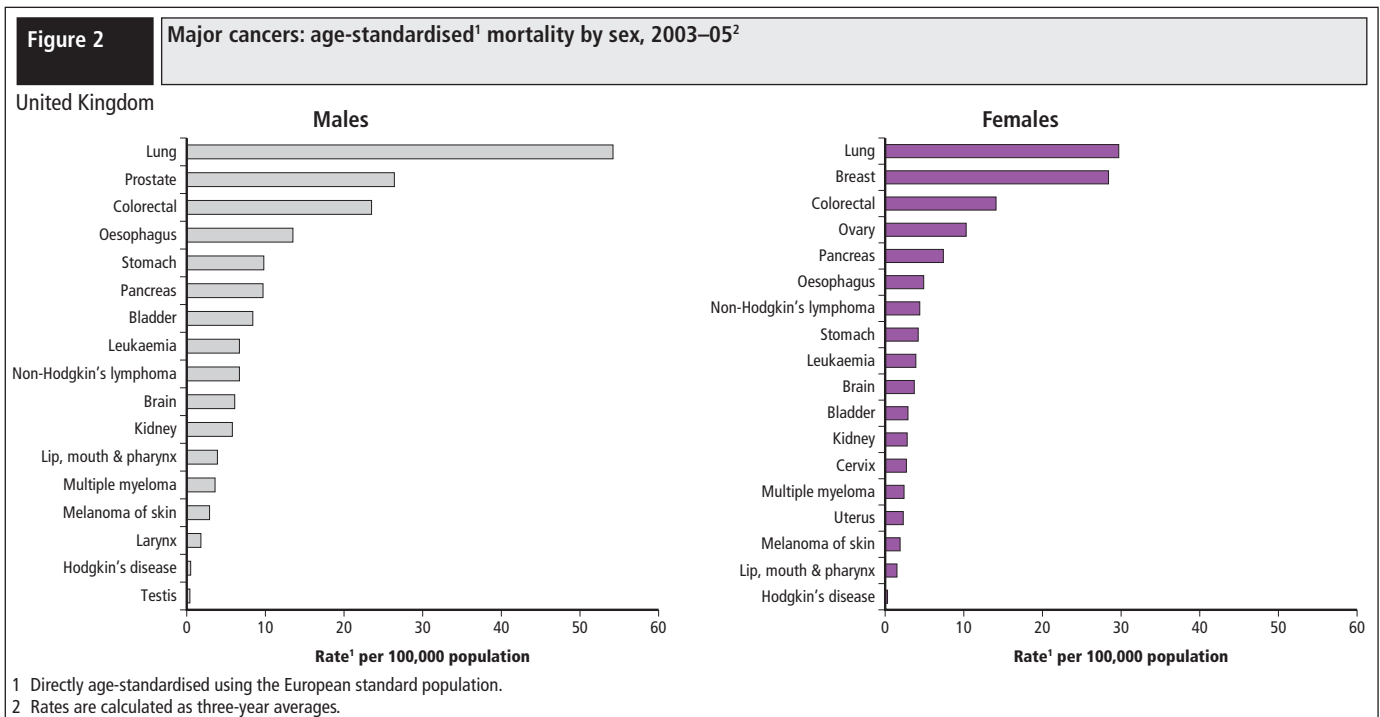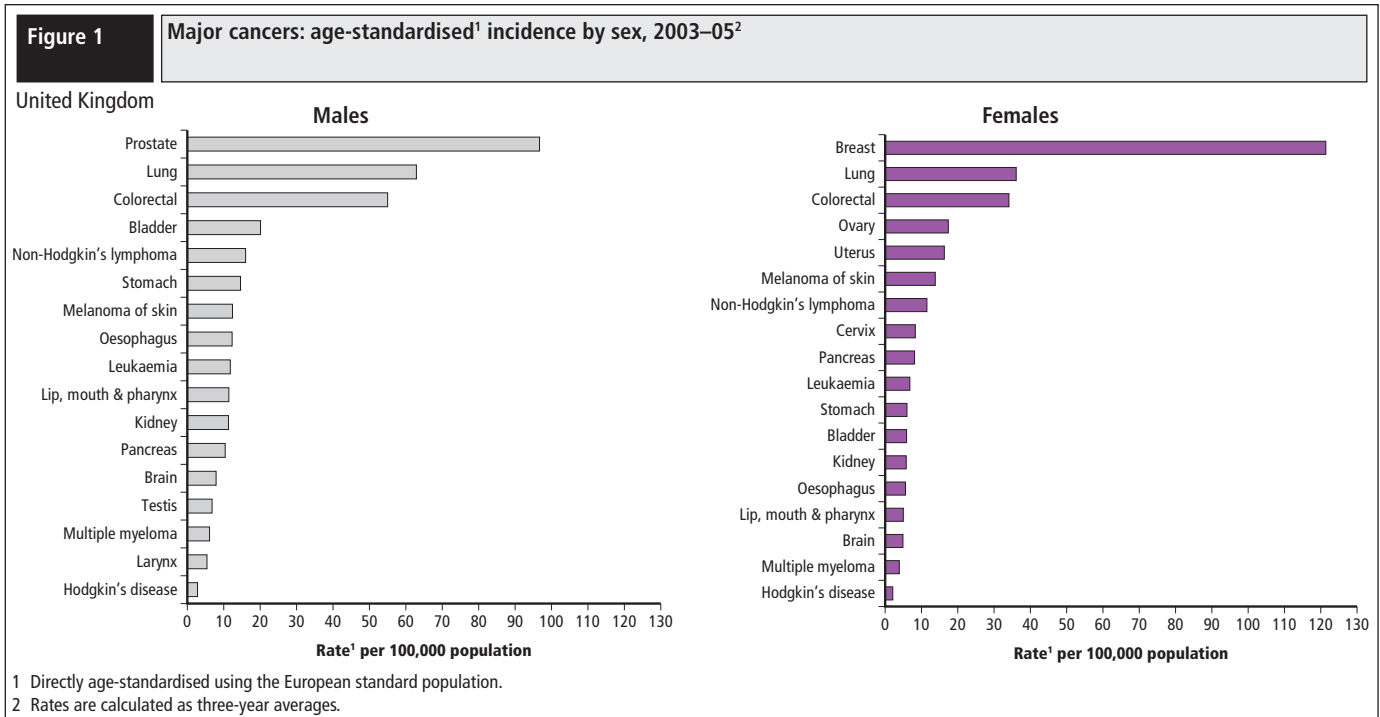| Table 1	Newly diagnosed cases of cancer and directly age-standardised[1] incidence rates per 100,000 population: selected sites by sex and country, 2003–05[2]

United Kingdom

ICD–10	Site description	Sex	United Kingdom		England		Wales		Scotland		N Ireland	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
C00–C97	**All malignancies[3]**	**M**	**143,894**	**411.4**	**118,741**	**404.2**	**8,574**	**457.7**	**13,084**	**448.4**	**3,495**	**408.8**
		F	**143,851**	**350.5**	**118,349**	**348.9**	**8,035**	**372.8**	**13,869**	**384.3**	**3,598**	**349.0**
C00–C14	Lip, mouth & pharynx	M	3,653	11.4	2,890	10.8	207	12.4	462	16.7	93	11.3
		F	1,956	5.0	1,574	4.9	99	5.0	231	6.7	52	5.2
C15	Oesophagus	M	4,326	12.3	3,443	11.6	262	14.0	519	17.8	103	12.2
		F	2,783	5.6	2,260	5.5	157	5.9	314	7.4	52	4.2
C16	Stomach	M	5,256	14.6	4,289	14.1	333	17.4	494	16.6	140	16.1
		F	3,020	6.0	2,401	5.7	203	7.4	329	7.6	87	7.2
C18–C20	Colorectal	M	19,517	55.0	15,973	53.6	1,121	58.7	1,884	63.7	539	62.8
		F	16,032	34.1	13,161	33.8	864	34.8	1,572	38.7	435	38.1
C25	Pancreas	M	3,646	10.4	3,068	10.4	209	11.1	291	9.9	77	9.2
		F	3,893	8.1	3,244	8.1	228	8.9	336	8.3	85	7.0
C32	Larynx	M	1,798	5.4	1,426	5.1	91	5.1	229	8.1	52	6.2
		F	396	1.0	297	0.9	21	1.0	64	1.9	14	1.5
C34	Lung	M	22,509	62.9	18,150	60.4	1,276	66.3	2,521	84.4	562	65.0
		F	16,120	36.1	12,748	34.5	895	38.7	2,102	54.0	376	34.6
C43	Melanoma of skin	M	4,058	12.4	3,380	12.3	206	12.2	375	13.6	96	11.6
		F	4,974	13.8	4,117	13.7	253	13.7	471	15.0	133	13.8
C50	Breast	F	45,147	121.4	37,741	123.0	2,377	121.9	3,941	120.0	1,088	114.3
C53	Cervix	F	2,813	8.3	2,286	8.0	167	10.1	280	9.6	79	8.7
C54	Uterus	F	6,276	16.3	5,222	16.5	370	18.1	512	15.2	172	18.0
C56	Ovary	F	6,768	17.4	5,558	17.3	396	19.3	621	18.2	193	19.6
C61	Prostate	M	34,575	96.7	29,093	97.0	2,182	111.4	2,519	84.3	781	91.1
C62	Testis	M	2,003	6.8	1,637	6.6	102	7.6	201	8.1	64	7.6
C64	Kidney	M	3,828	11.3	3,139	11.1	237	13.2	359	12.6	93	11.0
		F	2,390	5.8	1,934	5.7	151	7.1	237	6.4	68	6.7
C67	Bladder	M	7,311	20.1	6,012	19.6	639	33.3	510	17.0	150	17.2
		F	2,972	5.9	2,405	5.7	252	10.0	255	5.9	60	5.1
C71	Brain	M	2,526	7.9	2,119	7.9	136	8.2	210	7.8	61	7.3
		F	1,780	4.9	1,480	4.9	107	5.7	148	4.6	45	4.9
C81–C96	Lymphomas and Leukaemias	M	12,745	37.7	10,548	37.2	756	42.3	1,131	40.2	310	36.4
		F	10,465	25.1	8,610	25.0	614	27.5	970	26.8	271	25.5
C81–C85	Lymphomas	M	6,246	18.8	5,213	18.7	327	19.0	548	19.7	158	18.7
		F	5,421	13.5	4,484	13.5	281	13.5	499	14.2	156	14.8
C81	Hodgkin's disease	M	848	2.8	701	2.7	43	2.9	78	3.1	25	2.9
		F	653	2.1	545	2.1	31	2.0	60	2.1	18	2.0
C82–C85	Non-Hodgkin's lymphoma	M	5,397	16.0	4,512	15.9	283	16.2	469	16.6	133	15.7
		F	4,767	11.5	3,939	11.5	251	11.4	439	12.1	138	12.8
C90	Multiple myeloma	M	2,142	6.1	1,763	6.0	135	7.1	175	6.0	68	7.9
		F	1,815	3.9	1,481	3.9	120	4.8	167	4.0	47	4.2
C91–C95	Leukaemia	M	4,034	11.8	3,287	11.4	279	15.3	387	13.8	82	9.7
		F	2,840	6.8	2,281	6.5	202	8.8	290	8.2	66	6.3

1 Using the European standard population.
2 All numbers and rates in this table are calculated as three-year averages.
3 Figures exclude non-melanoma skin cancer (ICD–10 C44).

Figure 1 | **Major cancers: age-standardised[1] incidence by sex, 2003–05[2]**

United Kingdom

1 Directly age-standardised using the European standard population.
2 Rates are calculated as three-year averages.

Figure 2 | **Major cancers: age-standardised[1] mortality by sex, 2003–05[2]**

United Kingdom

1 Directly age-standardised using the European standard population.
2 Rates are calculated as three-year averages.

(54 per 100,000) was twice as high as that for prostate cancer (26 per 100,000). Overall, the highest mortality rate was for lung cancer in males. The mortality rate for lung cancer was 83 per cent higher in males than in females. The mortality rate for colorectal cancer was 66 per cent higher in males than females (24 and 14 per 100,000 for males and females respectively).

Variations between countries

Lung cancer incidence and mortality rates for both sexes were much higher in Scotland than in the rest of the UK (Figure 3). Rates in Wales, Northern Ireland and England were fairly similar. For colorectal cancer, the variation in incidence rates between the countries was similar to that in mortality

rates, with Scotland generally having the highest rates and England the lowest (Figure 4). The one exception was for female mortality, where the rate for Northern Ireland was slightly higher than that for Scotland. Breast cancer incidence and mortality rates were similar in England, Wales and Scotland, but lower in Northern Ireland. Incidence rates for prostate cancer varied, with Wales having the highest and Scotland the lowest, but mortality rates were very similar in each country (Tables 1 and 2).

The variation between countries in incidence rates for oesophageal cancer was different for males and females, with Scotland having the highest rates for both sexes while England had the lowest male rate and Northern Ireland the lowest female rate (Figure 5). Differences in coding practices could account for some of the variation.[4] Male mortality rates followed a similar pattern to

Table 2	Table 2 Deaths from cancer and directly age-standardised[1] mortality rates per 100,000 population: selected sites by sex and country, 2003–05[2]

United Kingdom

ICD–10	Site description	Sex	United Kingdom		England		Wales		Scotland		N Ireland	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
C00–C97	All malignancies	M	80,031	221.5	66,053	217.3	4,405	227.2	7,655	257.3	1,917	221.3
		F	73,928	156.0	60,589	154.2	4,044	161.4	7,444	181.9	1,851	158.1
C00–C14	Lip, mouth & pharynx	M	1,289	3.9	1,016	3.7	70	4.0	173	6.2	30	3.5
		F	680	1.5	547	1.5	39	1.6	76	2.0	18	1.6
C15	Oesophagus	M	4,754	13.5	3,898	13.2	255	13.4	502	17.0	99	11.7
		F	2,588	4.9	2,098	4.8	149	5.2	289	6.4	52	4.1
C16	Stomach	M	3,619	9.8	2,938	9.5	225	11.6	356	11.9	100	11.4
		F	2,237	4.2	1,790	4.0	140	4.7	239	5.3	69	5.3
C18–C20	Colorectal	M	8,516	23.5	6,921	22.7	517	26.6	843	28.1	234	27.1
		F	7,348	14.1	6,018	13.9	407	14.4	718	16.3	205	16.8
C25	Pancreas	M	3,430	9.7	2,870	9.6	190	9.9	294	9.9	77	9.0
		F	3,687	7.4	3,070	7.5	202	7.5	326	7.9	89	7.2
C32	Larynx	M	632	1.8	504	1.7	37	2.1	78	2.7	14	1.6
		F	171	0.4	133	0.3	7	0.3	25	0.7	6	[3]
C34	Lung	M	19,598	54.2	15,861	52.2	1,064	54.5	2,175	72.5	498	57.1
		F	13,729	29.7	10,915	28.5	727	30.5	1,762	43.7	325	28.8
C43	Melanoma of skin	M	968	2.9	804	2.8	54	3.1	86	3.0	25	3.0
		F	819	1.9	688	2.0	51	2.5	66	1.8	15	1.3
C50	Breast	F	12,426	28.4	10,424	28.8	676	29.0	1,121	29.7	205	19.0
C53	Cervix	F	1,082	2.7	875	2.6	62	3.1	116	3.4	29	2.8
C54	Uterus	F	1,115	2.3	927	2.3	65	2.6	105	2.4	18	1.5
C56	Ovary	F	4,413	10.3	3,642	10.3	238	10.6	405	10.5	128	11.8
C61	Prostate	M	10,132	26.4	8,545	26.4	576	27.5	784	25.8	227	25.9
C62	Testis	M	88	0.4	65	0.3	5	[3]	10	0.4	8	6.3
C64	Kidney	M	2,026	5.8	1,678	5.7	110	6.0	181	6.2	57	6.7
		F	1,293	2.8	1,041	2.7	73	2.9	147	3.6	33	2.9
C67	Bladder	M	3,158	8.4	2,659	8.4	165	8.1	278	9.2	56	6.4
		F	1,666	2.9	1,375	2.9	88	2.8	175	3.6	28	2.0
C71	Brain	M	1,990	6.1	1,655	6.1	93	5.6	195	7.1	46	5.5
		F	1,389	3.7	1,136	3.7	76	3.9	144	4.2	34	3.5
C81–C96	Lymphomas and Leukaemias	M	6,357	17.8	5,380	17.9	326	17.0	501	17.1	150	17.2
		F	5,445	11.1	4,540	11.2	271	10.5	500	12.0	135	10.8
C81–C85	Lymphomas	M	2,544	7.2	2,164	7.3	112	5.9	205	7.1	63	7.3
		F	2,264	4.7	1,880	4.7	108	4.2	212	5.2	63	5.1
C81	Hodgkin's disease	M	173	0.5	147	0.5	8	0.4	13	0.5	4	[3]
		F	125	0.3	108	0.3	5	[3]	8	0.2	4	[3]
C82–C85	Non-Hodgkin's lymphoma	M	2,372	6.7	2,017	6.8	104	5.5	192	6.6	59	6.8
		F	2,139	4.4	1,772	4.4	103	3.9	204	4.9	59	4.7
C90	Multiple myeloma	M	1,318	3.6	1,101	3.6	74	3.8	106	3.5	37	4.2
		F	1,229	2.4	1,024	2.4	63	2.4	112	2.4	30	2.3
C91–C95	Leukaemia	M	2,409	6.7	2,040	6.8	135	7.1	185	6.3	49	5.6
		F	1,913	3.9	1,602	3.9	97	3.9	172	4.3	42	3.3

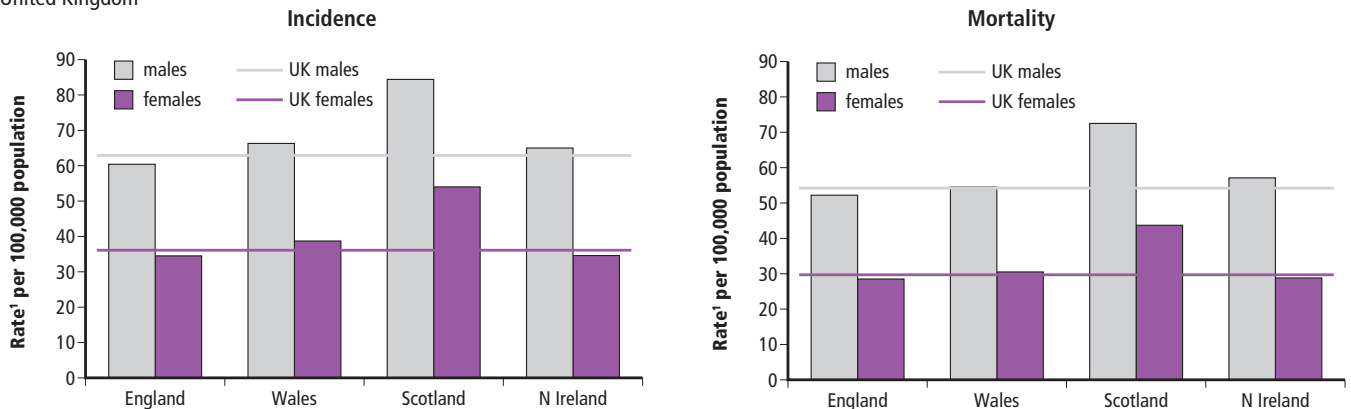1 Using the European standard population.
2 All numbers and rates in this table are calculated as three-year averages.
3 Directly age-standardised rates were considered unreliable and were not calculated when there were fewer than 20 deaths over three years in an area.

Figure 3 — Lung cancer: age-standardised[1] incidence and mortality by sex and country, 2003–05[2]
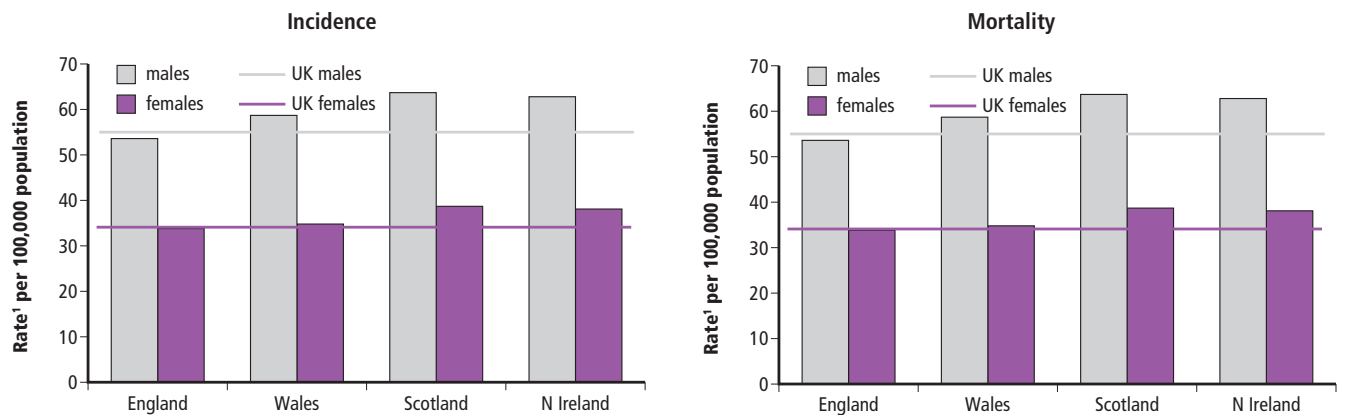
United Kingdom

Incidence / Mortality

1 Directly age-standardised using the European standard population.
2 Rates are calculated as three-year averages.

Figure 4 — Colorectal cancer: age-standardised[1] incidence and mortality by sex and country, 2003–05[2]

United Kingdom

Incidence / Mortality

1 Directly age-standardised using the European standard population.
2 Rates are calculated as three-year averages.

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the female rates, with Scotland having the highest and Northern Ireland the lowest. For stomach cancer, Wales had the highest male incidence rate and England the lowest (Figure 6). For females, incidence was similar in Scotland, Wales and Northern Ireland but lower in England. Stomach cancer mortality rates for males were similar in Scotland, Wales and Northern Ireland, but lower in England. Female mortality rates were similar in Scotland and Northern Ireland, but a little lower in Wales and England.

Overall incidence and mortality rates for England were similar to those for the UK, since the cases and deaths for England accounted for more than 80 per cent of the UK total.

Wales had the highest incidence rate for male cancer in the UK. The incidence of prostate cancer was 15 per cent higher for Wales than for the UK as a whole, though mortality from prostate cancer was only 4 per cent higher. In both males and females, the incidence of bladder cancer was nearly 70 per cent higher than the rate for the UK, but mortality was not higher than for the UK as a whole. This is because certain types of bladder cancer, which are classified as benign elsewhere, are registered as malignant in Wales.[5]

In Scotland, the incidence of lung cancer was 34 per cent higher for males and 50 per cent higher for females than in the UK as a whole.

The incidence of other smoking-related cancers – oesophagus, lip, mouth and pharynx, and larynx – was also higher in Scotland than in the other countries of the UK. The incidence of prostate cancer was 13 per cent lower in Scotland than in the UK as a whole. The overall cancer mortality rates for both sexes were around 16 per cent higher than those for the UK as a whole, and the overall cancer incidence rates were around 10 per cent higher. The mortality rate for lung cancer in Scotland was 34 per cent higher for males and 47 per cent higher for females than in the UK as a whole. In males it was nearly three times the mortality rate for prostate cancer and in females it was 47 per cent higher than the mortality rate for breast cancer. Female mortality from cancer of the kidney was 29 per cent higher in Scotland than in the UK as a whole.

In Northern Ireland, overall incidence and mortality rates were very close to those for the UK as a whole. The rates for colorectal cancer were higher than those for the UK; incidence was 14 per cent higher in males and 12 per cent higher in females while mortality was 15 per cent higher in males and 19 per cent higher in females. The mortality rate for bladder cancer was 24 per cent lower in males compared with the UK as a whole, and 31 per cent lower in females. The incidence and mortality rates for breast cancer were the lowest in the UK, with the mortality rate being a third lower than that for the UK as a whole.

Figure 5 | **Oesophageal cancer: age-standardised[1] incidence and mortality by sex and country, 2003–05[2]**
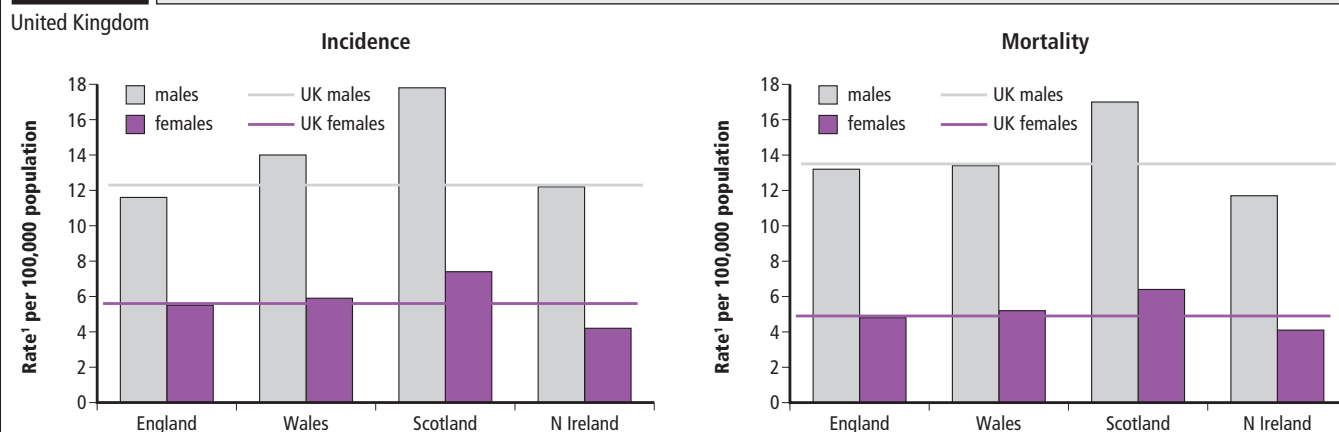
United Kingdom

1 Directly age-standardised using the European standard population.
2 Rates are calculated as three-year averages.

Figure 6 | **Stomach cancer: age-standardised[1] incidence and mortality by sex and country, 2003–05[2]**
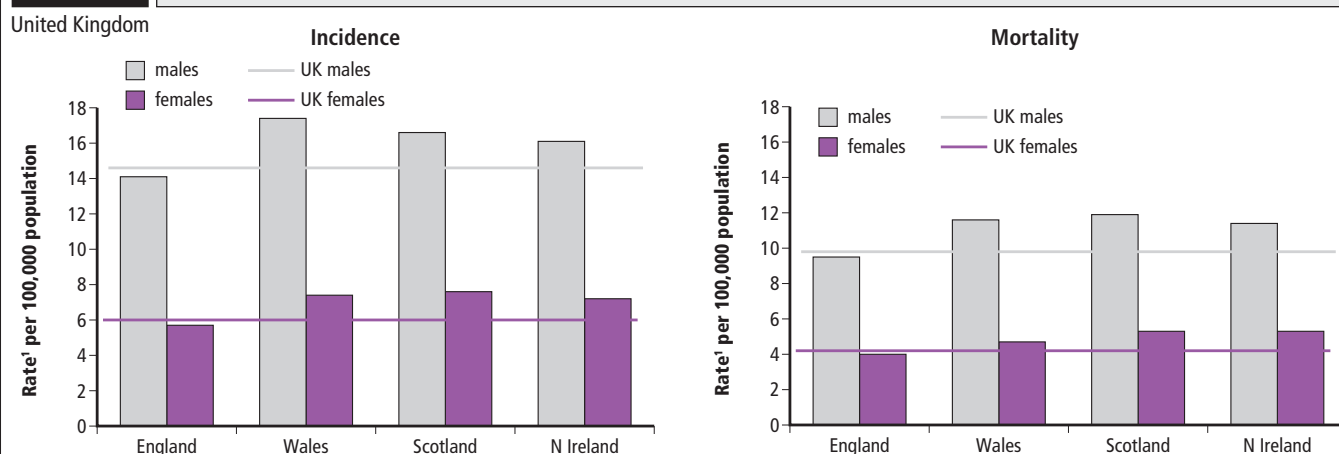
United Kingdom

1 Directly age-standardised using the European standard population.
2 Rates are calculated as three-year averages.

Acknowledgements

Technical notes

1. Incidence and mortality rates have been directly age-standardised, using the European standard population, to control for differences in the age structure of the population between countries, and over time, to allow unbiased comparisons between rates.

2. The Office for National Statistics has been advised, both by expert epidemiologists and by members of the Advisory Committee on Cancer Registration, that non-melanoma skin cancer (ICD–10 C44) is greatly under-registered. Registration varies widely depending on a registry's degree of access to out-patient records and general practitioners. Incidence figures given in this report for 'all cancers' therefore exclude non-melanoma skin cancer.

3. The incidence figures in this report are those published at the time of the annual releases. The cancer registration systems are live databases. Therefore, the figures presented here may not reflect those on the live databases.

4. Numbers and rates presented in this report have been calculated as three-year averages to reduce the effects of random variation in small numbers over time.

5. These data are available on the Office for National Statistics website at:
www.statistics.gov.uk/statbase/Product.asp?vlnk=14209

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- Population 'turnover' and 'churn' – enhancing understanding of internal migration in Britain through measures of stability
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Annual updates
- Births in England and Wales, 2007

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Publication February 2009

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- Death certification following MRSA bacteraemia, England, 2004–05
- Investigation of the impact of question change on estimates of Healthy life expectancy and revision to time series

Reports:
- Conceptions in England and Wales, 2007
- Congenital anomalies notifications 2007, England and Wales