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The Office for National Statistics (ONS) is the Government Agency responsible for compiling, analysing and disseminating many of the United Kingdom's economic, social and demographic statistics, including the retail prices index, trade figures and labour market data, as well as the periodic census of the population and health statistics. The Director of ONS is also Head of the Government Statistical Service (GSS) and Registrar General in England and Wales and the agency carries out all statutory registration of births, marriages and deaths there.

About Health Statistics Quarterly and Population Trends

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

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Annual subscription for both *Health Statistics Quarterly* and *Population Trends*, including postage, is £135.

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The Office for National Statistics works in partnership with others in the Government Statistical Service to provide Parliament, government and the wider community with the statistical information, analysis and advice needed to improve decision-making, stimulate research and inform debate. It also registers key life events. It aims to provide an authoritative and impartial picture of society and a window on the work and performance of government, allowing the impact of government policies and actions to be assessed.

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Articles: 5,000 words max.

Dates for submissions

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

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ISBN 0 11 621181 4
ISSN 0307-4463

Health statistics

Quarterly

Summer 2000

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in brief



Background

The launch of National Statistics, planned for 7th June, will mark a significant change in the governance arrangements and accountability of official statistics. The aim of this initiative is to address concerns expressed by users over quality and the actual or perceived political interference in statistical operations.

The Vision

National Statistics are defined as statistical outputs prepared and produced for public use. Our intention is to establish a framework that will ensure National Statistics are acknowledged as being produced independently to the highest professional standards.

The Process

In February 1998 the Government published the Green Paper, *Statistics: A Matter of Trust*. This was a consultation document that outlined various models for a new framework of governance for official statistics.

The White Paper, *Building Trust in Statistics* was published in October 1999. This paper outlined how the government intended to provide a sound platform for delivering public confidence in official statistics, based on the consensus achieved through the Green Paper consultation.

The key changes

- the creation of an independent **Statistics Commission** to publicly advise Ministers and comment on the program for National Statistics
- the appointment of a **National Statistician** who will assume professional responsibility for National Statistics
- a new **Code of Practice** to define professional standards to be applied by all producers of National Statistics
- a **Framework Document** to clearly outline the roles and responsibilities of all the key players
- a **rolling program of quality reviews** of all key outputs on a continuous five-year cycle

A new structure

The consultation process made it clear that users of official statistics prefer to think in terms of topic areas rather than individual departments. It is less important that they know which arm of government produces a particular output than it is they regard it as a credible source of statistical information.

To meet this challenge, a new structure has been developed in which all statistical outputs across government will be assigned to one of twelve **Themes**. Each Theme will have its own working group comprising representatives

from the key departmental statistical producers to that Theme.

The Themes are:

- **Health and Care**
- Agriculture, Fishing and Forestry
- Crime and Justice
- Transport, Travel and Tourism
- The Natural and Built Environment
- Education and Training
- Population and Migration
- The Economy
- Commerce, Energy and Industry
- Labour Market
- Social and Welfare
- Other (e.g. outputs from Department for International Development, Cabinet Office etc.)

Health and Care Theme Working Group

John Fox of the Department of Health (DH) will chair this Group. The Secretary will be David Canham of the Office for National Statistics (ONS). Other Group members will include representatives from DH, ONS, Health and Safety Executive, and Health and Care statistics producers from Scotland, Wales, and Northern Ireland.

This Group, like the other theme working groups, will be responsible for

- Drawing up National Statistics plans for their theme;
- Ensuring that good user consultation arrangements are in place;
- Developing a programme of quality reviews.

Health Statistics Quarterly will be a key National Statistics output for Health and Care. It is envisaged that HSQ will include details of the more common questions and views from users relating to National Statistics plans, and our response to these. See below.

www.statistics.gov.uk

This is the address of the new National Statistics website which is currently being

developed and will replace the existing Government Statistical Service and ONS sites. It should also be launched on June 7th and will contain information including datasets, output information, and copies of key documents for National Statistics. Each Theme, including Health and Care, will have its own pages on the site. The Health and Care pages will have an area called Your Views: it is planned that these pages will contain key papers from the Health and Care Theme Working Group and will include an e-mail feedback facility which will enable users and other stakeholders to feed in their views on National Statistics Health and Care planning.

International Comparisons of Cancer Survival

A workshop was held in London on 30–31 March to review the evidence that survival from most – but not all – cancers in the UK is lower than elsewhere in Europe. Experts from Europe and North America came together to discuss whether the observed differences were real (and not due simply to problems of cancer registration or follow-up of patients or other artefacts) and, if the differences in survival were real, to determine the main reasons for this, how the relative performance of the UK might be better assessed and what needs to be done to take this forward.

The workshop was organised by Professor Mike Richards (National Cancer Director at the Department of Health) together with Professor Michel Coleman (London School of Hygiene and Tropical Medicine and Deputy Chief Medical Statistician at ONS), Professor David Forman and Professor Bob Haward (both at Northern and Yorkshire Cancer Registry). Over 50 cancer clinicians, cancer epidemiologists, directors of the cancer registries in the UK and ONS, public health specialists, and policy makers from DH attended. Six countries whose cancer registries participated in EUROCORE, a very large study of cancer survival in Europe^{1,3}, were represented by experts in cancer registration and survival methods, along with two experts from Canada.

The opening session was chaired by Professor Liam Donaldson, the Chief Medical Officer for England. It was addressed by Yvette Cooper (the Minister at the Department of Health with responsibility for cancer) and Professor Mike Richards. The carefully standardised data

collection methods in the EUROCORE study and the survival results were presented by Dr Franco Berrino (the project leader from the Istituto Nazionale dei Tumori in Milan) and other principal investigators. This was followed by a discussion of some of the results including preliminary findings from some in-depth investigations of survival for breast and colorectal cancer (these studies will be published shortly). Commentaries were then given by experts from the perspectives of epidemiology, surgery, oncology, pathology, and public health.

A few participants still had some doubts about some of the results from EUROCORE and about the representativeness of some of the participating registries which covered only small parts of their respective countries. But there was general agreement that the inter-country differences were large, consistent, and in line with what would be expected from incidence and mortality data; and that cancer survival in the UK was genuinely lower than in many other countries (or parts of them) in the rest of Europe. Possible reasons for this, and pointers for future work, will be summarised in a consensus statement to be published shortly by the Department of Health.

Dr M J Quinn

Director, National Cancer Intelligence Centre, ONS

- 1 Berrino F, Sant M, Verdecchia A, Capocaccia R, Hakulinen T, Estève J, Eds. *Survival of cancer patients in Europe. The EUROCORE Study* (IARC Scientific Publications No. 132). International Agency for Research on Cancer (Lyon: 1995).
- 2 Coebergh JWW, Sant M, Berrino F, Verdecchia A, Eds. *Survival of Adult Cancer Patients in Europe Diagnosed from 1978-1989: The EUROCORE II Study. European Journal of Cancer* 34 (1998), 2137–2278.
- 3 Berrino F, Sant M, Verdecchia A, Capocaccia R, Hakulinen T, Estève J, Eds. *Survival of cancer patients in Europe. The EUROCORE-2 Study* (IARC Scientific Publication No. 151). International Agency for Research on Cancer (Lyon: 1999).

BINOCAR 2000

The third annual BINOCAR (British Isles Network of Congenital Anomaly Registers) meeting took place on the 2–3 March 2000 in Birmingham. It was co-hosted by ONS staff from London and Titchfield and the West

Midlands Congenital Anomaly Register. About eighty people attended the meeting representing a total of eighteen regional and condition registers throughout the British Isles. BINOCAR was set up jointly, in 1996, by ONS and Dr David Stone at the Glasgow Register of Congenital Anomalies. The purpose of the network is to bring together all those working in the field of monitoring and reporting congenital anomalies. It includes the National Congenital Anomaly System at ONS, regional congenital anomaly registers and other registers which cover specific anomalies such as Down syndrome and facial clefts.

The meeting provided an excellent opportunity for those with similar objectives and achievements to share ideas and develop collaborative projects. Such projects have included the electronic transfer of data to the National Congenital Anomaly System from regional registers in Trent, Wales, Merseyside and Cheshire and North Thames. This method of data collection has added greatly to the completeness of congenital anomaly reporting for regions in England and Wales. The impact on data for Wales was outlined in *Health Statistics Quarterly* 05, published on 24th February and a similar evaluation of the Trent CAR will appear in a forthcoming issue. In England and Wales only half of all births are covered by a regional congenital anomaly register. The members of BINOCAR also discussed the 1999 Data Protection Act. The Act is likely to have far reaching implications for the exchange of personal data between registers and it was agreed that a BINOCAR working group would be set up to explore and provide further guidance on these issues.

In addition to providing a forum for such relationships to develop, the BINOCAR meeting included presentations on work currently being undertaken in the field. The delegates heard about new methods being developed to improve data collection, validation and analysis, including feasibility work being undertaken at ONS on linkage of congenital anomaly data to birth records. There were several scientific presentations on the health implications of landfill sites, water disinfection and prenatal diagnosis. The 2000 meeting also incorporated a focus on Down syndrome, looking at geographical variation, prenatal detection and diagnosis. Work on improving Down syndrome notification rates at a national level was also described, the results of which are presented in this issue of *Health Statistics Quarterly*.

The 4th annual BINOCAR meeting will be held in Scotland in 2001.

Childhood, infant and perinatal mortality statistics 1998

Mortality statistics: childhood, infant and perinatal 1998, Series DH3 no. 31 was published on 28 March 2000. For deaths that occurred in England and Wales in 1998, the volume includes the numbers and rates in infancy (under one year) and childhood (1–15 years), as well as deaths by cause for stillbirths, neonates (aged under 28 days), postneonates (aged between 28 days and 1 year) and childhood.

The volume also includes figures based on linkage of infant death records to their corresponding birth records. This produces two types of data. One relating to deaths that occurred in 1998 with information on births. The other, a birth cohort, provides information on deaths to those born in 1997. Using linked data, analysis can be undertaken of perinatal and infant deaths according to risk factors collected at birth registration such as birthweight, mother's age, mother's country of birth, marital status and father's social class based on his occupation. The volume presents data as at 20th December

1999. Summary analyses, using an earlier version of the data (as at 9th June 1999) were published in a report *Infant and perinatal mortality by social and biological factors, 1998* in *Health Statistics Quarterly* 04, published in November 1999.

In 1998, 3,557 of the 3,625 records of infant deaths (98.1 per cent) that occurred in England and Wales were linked to their birth records. Of the 68 records that were not linked, 52 were born outside England and Wales (and the births was not registered in England and Wales) and 16 were not linked because no record of the birth could be found. The linkage rate for 1998 is comparable with that for earlier years since linkage began in 1975.

The linked infant mortality rate fell from 5.8 per 1,000 live births in 1997 to 5.6 in 1998, the lowest ever recorded. There were 1,835 (51.6 per cent) early neonatal deaths (aged under 7 days), 2,401 (67.5 per cent) neonatal deaths and 1,156 (32.5 per cent) postneonatal deaths.

Half of all neonatal deaths were given a condition related to the immaturity of the baby. The conditions that most commonly resulted in postneonatal deaths, based on the underlying cause of death, were congenital anomalies (19 per cent) and sudden infant death syndrome (19 per cent). The latter represents a marked change from 1997, when sudden infant death syndrome accounted for 25 per cent of all postneonatal deaths.

Healthy life expectancy

The International Network on Health Expectancy and the Disability Process (usually known by the initials REVES – Réseau Espérance de Vie en Santé) held its twelfth annual conference in March 2000. The conference was hosted by the Andrus Gerontology Center at the University of Southern California in Los Angeles. This year's theme was 'Linking Policy to Science'. The conference was attended by about 70 researchers from around the world, including Sue Kelly and Allan Baker from the Demography and Health Division of ONS. This year's programme was very varied – 46 papers were presented ranging from *A new disability model for the 21st Century to Incontinence free life expectancy in Switzerland*.

Sue Kelly and Allan Baker presented a paper on *Healthy life expectancy in Great Britain, 1980–96, and its use as an indicator in UK Government strategies*. The detailed results from this analysis by ONS will be published in an article in the next issue of *Health Statistics Quarterly*. Healthy life expectancy is used as an indicator in three Government strategies that were published last year : tackling poverty and social exclusion; sustainable development; and public health (*Saving Lives : Our Healthier Nation*).

Recent ONS publications

Health in England 1998: investigating the links between social inequalities and health (The Stationery Office, March, £32.50, ISBN 0 11 621357 4)

Adult Dental Health Survey Oral Health in the United Kingdom 1998 (The Stationery Office, March, £59, ISBN 0 11 621268 3)

Guide to Official Statistics (The Stationery Office, March, £32, ISBN 0 11 621161 X)

Living in Britain Results from the 1998 General Household Survey (The Stationery Office, March, £32.50, ISBN 0 11 621254 3)

Mental Health of children and adolescents in Great Britain (The Stationery Office, March, £35, ISBN 0 11 621373 6)

Mortality statistics 1998: Childhood, infant and perinatal (The Stationery Office, March, £35, ISBN 0 11 621363 9)

Population Trends 99 (The Stationery Office, March, £20, ISBN 0 11 621176 8)

Focus on London 2000 (The Stationery Office, April, £45, ISBN 0 11 621280 2)

Key population and vital statistics 1998 (The Stationery Office, April, £35, ISBN 0 11 621364 7)

Social Inequalities (The Stationery Office, May, £30, ISBN 0 11 621269 1)

Health indicators

England and Wales

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

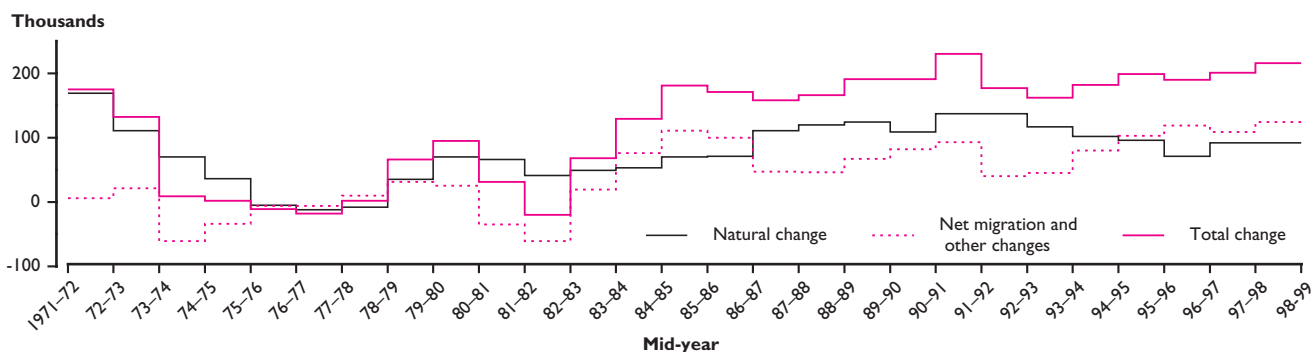


Figure B Age-standardised mortality rate

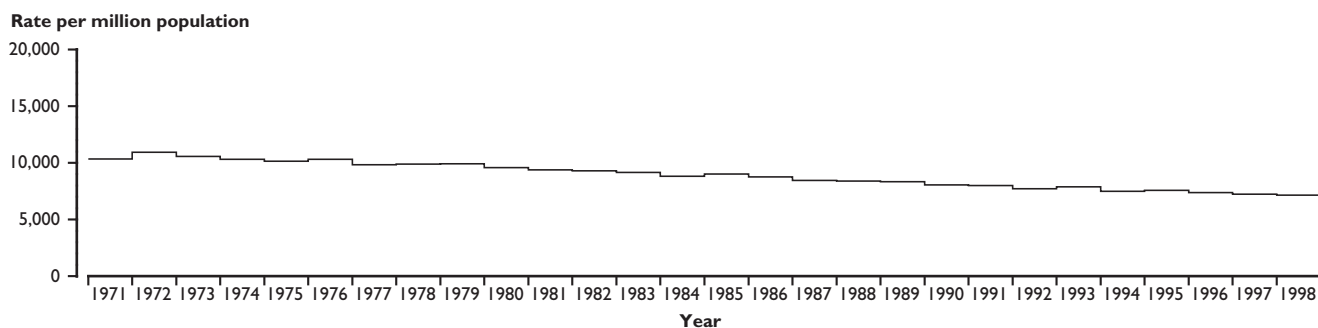


Figure C Infant mortality (under 1 year)

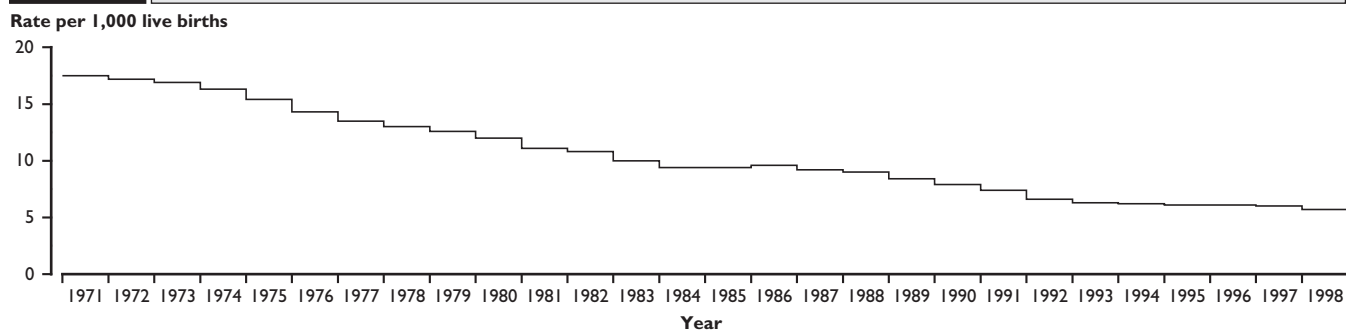
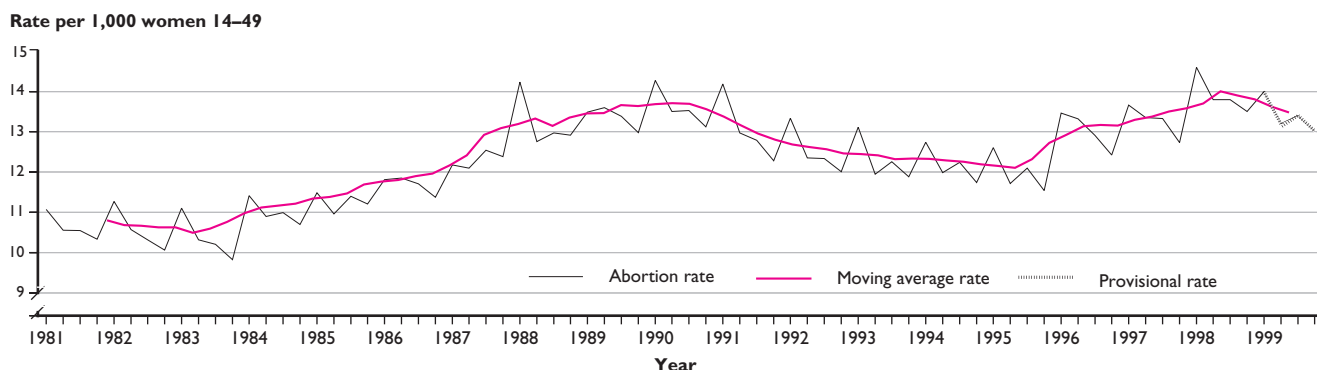


Figure D Quarterly abortion rates – residents



An examination of persisting disadvantage and mortality in the regions using the Longitudinal Study

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INTRODUCTION

In the previous edition of *Health Statistics Quarterly* we presented evidence of a continuing North South divide in terms of social disadvantage and mortality.¹ Geographic differences in deprivation and mortality are well established.^{2,3,4} These issues are topical as policy makers seek to address the gap between standard of living and health consequences.^{5,6} In this paper we examine the extent to which persisting advantage and disadvantage differs between the regions and whether there are regional differences in the mortality of those who remain disadvantaged.

METHOD

The ONS Longitudinal Study was used for this analysis - See Box One for details.

For the examination of long term disadvantage and mortality in each region the 1981 cohort was used.¹ Study members were present at the 1981 and 1991 Censuses, aged 26 and over in 1981 and stayed in the same region. People were classified as living in owner occupied housing at both censuses, changed housing tenure between censuses, or living in either privately or local authority rented housing at both censuses. We used housing tenure as a measure of socio-economic position due to its comprehensive coverage at all ages and because it has been shown to be a good discriminator of health differences.⁷

The relationship between long term advantage/disadvantage and mortality in 1991–97 was examined using Cox regression models.⁸ All relative risks were adjusted in five-year ages bands.

This paper examines regional differences in long term disadvantage and its impact on regional inequalities in mortality. Long term disadvantage was measured by living in rented housing in the 1981 and 1991 Census and long term advantage was measured by being in owner occupied housing on both occasions. Together these two groups comprised 83 percent of those that stayed in the same region. Using this measure, long term disadvantage was greater in the North than the South. This indicator of long term disadvantage was strongly associated with mortality in 1991–97. Region of residence was also linked to mortality. Adjusting for differences in long term disadvantage did not explain the overall North/South divide.

Box one

THE ONS LONGITUDINAL STUDY

The ONS Longitudinal Study is a record linkage study of approximately a one per cent representative sample of the population of England and Wales (about 550 000 people). The initial sample, drawn from the 1971 Census, is continually updated to include new members through birth and immigration and those identified at subsequent censuses. Subsequent census and vital event information is linked to the records of study members through the National Health Service Central Register. Full details of the linkage procedure are described elsewhere.¹⁴

RESULTS

The majority of people remained in the same region at both censuses - 93% of those in the Northern region at the 1981 census were in the same region at the 1991 Census. The comparable figures for Yorkshire and Humberside, the North West and Wales were 93%, East Midlands 90%, West Midlands 92%, East Anglia 89%, South East 92% and South West 91%. This paper focuses on those who stayed in the same region. They have slightly higher levels of mortality than those who move between regions. However the numbers moving between regions are unlikely to affect the overall conclusions.⁹ This will be examined in more detail in future work.

Table 1 shows the distribution of long term advantage/disadvantage based on the number of times people were in owner occupied or rented housing at the two censuses. The majority of people remained in the same housing category at both censuses, with fewer than 20% of people changing their housing status between 1981 and 1991. The highest proportions of men and women that remained in owner occupied housing were in the South West. The lowest proportions of men and women who remained in owner occupied housing were in the Northern region. Those in local authority rather than in privately rented housing accounted for most of the people in the rented group (not shown). Twenty four percent of women remained in local authority housing in the Northern region compared with 12% in the South West. This was similar for men; 22% remained in local authority housing in the Northern region compared with 9% in the South West.

Table 1 Distribution of men and women aged 26 years and over in every region by long term advantage/disadvantage
ONS Longitudinal Study, 1981 Cohort present at the 1991 Census and same region of residence at both censuses

	Living in owner occupied housing at both censuses %	Changed tenure between censuses %	Living in rented housing at both censuses %	Total in the same region* at both censuses=100%
Men				
South East	63	17	20	34,996
South West	66	17	17	9,093
East Midlands	63	17	20	8,302
West Midlands	62	17	21	11,391
Northern	49	22	29	6,717
Yorkshire and Humberside	61	17	22	10,517
North West	65	15	20	13,364
East Anglia	62	16	22	3,911
Wales	63	19	18	6,010
All England and Wales	62	17	21	104,301
Women				
South East	61	15	24	40,323
South West	65	15	20	10,769
East Midlands	61	16	23	9,283
West Midlands	60	15	25	12,453
Northern	48	19	33	7,565
Yorkshire and Humberside	57	16	27	11,862
North West	61	14	24	15,451
East Anglia	60	15	25	4,448
Wales	60	18	22	6,796
All England and Wales	60	16	24	118,950

* Private householders only

Table 2

Mortality 1991-97, of men and women aged 26 years and over in each region by long term advantage/disadvantage
ONS Longitudinal Study, 1981 Cohort present at the 1991 Census and same region of residence at both censuses

	Men			Women		
	Hazard Ratio	95% Confidence Interval	Deaths	Hazard Ratio	95% Confidence Interval	Deaths
<i>South East</i>						
Owner occupied at both censuses	1.00		2,399	1.00		2,435
Changed tenure between censuses	1.27 *	(1.16-1.39)	627	1.08	(.98-1.18)	535
Rented at both censuses	1.46 *	(1.36-1.55)	1,546	1.26 *	(1.19-1.34)	1,820
<i>South West</i>						
Owner occupied at both censuses	1.00		780	1.00		711
Changed tenure between censuses	1.32 *	(1.11-1.56)	166	1.14	(.96-1.36)	158
Rented at both censuses	1.42 *	(1.25-1.61)	336	1.28 *	(1.12-1.52)	393
<i>East Midlands</i>						
Owner occupied at both censuses	1.00		617	1.00		528
Changed tenure between censuses	1.31 *	(1.11-1.54)	180	1.12	(.93-1.34)	152
Rented at both censuses	1.34 *	(1.18-1.52)	402	1.24 *	(1.09-1.42)	412
<i>West Midlands</i>						
Owner occupied at both censuses	1.00		764	1.00		687
Changed tenure between censuses	1.18 *	(1.01-1.49)	205	1.19 *	(1.01-1.40)	187
Rented at both censuses	1.55 *	(1.39-1.73)	573	1.24 *	(1.05-1.52)	558
<i>Northern</i>						
Owner occupied at both censuses	1.00		365	1.00		309
Changed tenure between censuses	1.03	(.84-1.25)	140	1.18	(.97-1.44)	143
Rented at both censuses	1.53 *	(1.33-1.76)	444	1.51 *	(1.31-1.75)	500
<i>Yorkshire and Humberside</i>						
Owner occupied at both censuses	1.00		677	1.00		596
Changed tenure between censuses	1.22 *	(1.05-1.43)	209	1.24 *	(1.06-1.45)	207
Rented at both censuses	1.74 *	(1.56-1.95)	600	1.40 *	(1.25-1.56)	665
<i>North West</i>						
Owner occupied at both censuses	1.00		985	1.00		981
Changed tenure between censuses	1.27 *	(1.11-1.45)	278	1.16 *	(1.01-1.33)	258
Rented at both censuses	1.59 *	(1.44-1.76)	659	1.31 *	(1.19-1.44)	784
<i>East Anglia</i>						
Owner occupied at both censuses	1.00		285	1.00		261
Changed tenure between censuses	1.14	(.87-1.49)	66	1.25	(.95-1.65)	64
Rented at both censuses	1.42 *	(1.18-1.71)	193	1.26 *	(1.05-1.52)	197
<i>Wales</i>						
Owner occupied at both censuses	1.00		481	1.00		431
Changed tenure between censuses	1.24 *	(1.03-1.49)	147	1.04	(.85-1.27)	123
Rented at both censuses	1.40 *	(1.19-1.64)	224	1.31 *	(1.12-1.52)	269
<i>All England and Wales</i>						
Owner occupied at both censuses	1.00		7,353	1.00		6,939
Changed tenure between censuses	1.24 *	(1.18-1.30)	2,018	1.14 *	(1.08-1.20)	1,827
Rented at both censuses	1.51 *	(1.45-1.56)	4,977	1.30 *	(1.26-1.35)	5,598

* p<0.05

Persisting advantage, disadvantage and mortality

Table 2 shows that in every region mortality was lowest among those in owner occupied housing and highest among those in rented housing at both censuses. The gradient was steepest among men in Yorkshire and Humberside and women in the Northern region. There was a consistent pattern of steeper gradients for men than for women in every region except for the Northern region. At a national level tenure movers, in both directions, had intermediate mortality.¹⁰ This will be examined in relation to every region in future work.

Table 3 shows that there are regional differences in mortality among those who remained advantaged or disadvantaged. Among men who remained in owner occupied housing at both censuses those in the East Midlands, Northern, North West and Wales had the highest mortality.

Among men who remained in rented housing at both censuses those in the West Midlands, Northern, Yorkshire and Humberside and North West regions had the highest mortality. The differences were not as great for women. Among women who remained in owner occupied housing at both censuses those in the North West had the highest mortality. Among women who remained in rental housing at both censuses those in the Northern and North West regions had the highest mortality.

Table 4 shows the mortality of men and women unadjusted and adjusted for long term socio-economic disadvantage. Regional differences in mortality remained virtually the same after adjusting for differences in long term disadvantage; the highest mortality was in the North and Midlands for men and the North for women.

Table 3
Region of residence by long term advantage/disadvantage and mortality of men and women aged 26 years and over
ONS Longitudinal Study, 1981 Cohort present at the 1991 Census and same region of residence at both censuses

	Men			Women		
	Hazard Ratio	95% Confidence Interval	Deaths	Hazard Ratio	95% Confidence Interval	Deaths
<i>Owner Occupied at both censuses</i>						
South East	1.00		2399	1.00		2,435
South West	0.99	(.91 - 1.07)	780	0.93	(.85 - 1.01)	711
East Midlands	1.14 *	(1.04 - 1.25)	617	1.08	(.98 - 1.19)	528
West Midlands	1.10 *	(1.01 - 1.19)	764	1.07	(.98 - 1.16)	687
Northern	1.15 *	(1.03 - 1.28)	365	1.05	(.94 - 1.19)	309
Yorkshire and Humberside	1.03	(.95 - 1.13)	677	1.00	(.92 - 1.10)	596
North West	1.16 *	(1.07 - 1.24)	985	1.11 *	(1.03 - 1.20)	981
East Anglia	1.01	(.89 - 1.14)	285	0.96	(.85 - 1.09)	261
Wales	1.11 *	(1.01 - 1.23)	481	1.03	(.93 - 1.14)	431
<i>Changed tenure between censuses</i>						
South East	1.00		627	1.00		535
South West	1.02	(.86 - 1.22)	209	0.98	(.82 - 1.17)	158
East Midlands	1.20 *	(1.01 - 1.41)	180	1.11	(.93 - 1.33)	152
West Midlands	1.03	(.88 - 1.20)	205	1.16	(.99 - 1.38)	187
Northern	0.94	(.78 - 1.13)	140	1.14	(.94 - 1.37)	143
Yorkshire and Humberside	1.00	(.85 - 1.17)	209	1.15	(.98 - 1.35)	207
North West	1.15	(.99 - 1.32)	278	1.19 *	(1.02 - 1.38)	258
East Anglia	0.90	(.70 - 1.16)	66	1.12	(.87 - 1.45)	64
Wales	1.11	(.93 - 1.33)	224	0.99	(.82 - 1.21)	123
<i>Rented at both censuses</i>						
South East	1.00		1546	1.00		1,820
South West	0.97	(.87 - 1.10)	336	0.95	(.85 - 1.06)	393
East Midlands	1.03	(.92 - 1.15)	402	1.02	(.92 - 1.14)	412
West Midlands	1.14 *	(1.04 - 1.25)	573	1.01	(.92 - 1.11)	558
Northern	1.16 *	(1.04 - 1.29)	444	1.18 *	(1.07 - 1.30)	500
Yorkshire and Humberside	1.22 *	(1.11 - 1.34)	600	1.07	(.98 - 1.17)	665
North West	1.23 *	(1.12 - 1.35)	659	1.12 *	(1.03 - 1.21)	784
East Anglia	0.99	(.86 - 1.16)	193	0.95	(.82 - 1.10)	197
Wales	1.06	(.92 - 1.22)	224	1.04	(.92 - 1.19)	269

* p<0.05

Table 4

Mortality 1991-97, of men and women aged 26 years and over by region of residence unadjusted and adjusted for long term disadvantage

ONS Longitudinal Study, 1981 Cohort present at the 1991 Census and same region of residence at both censuses

Region	Adjusted for age			Adjusted for age and long term disadvantage		
	Hazard Ratio	95% Confidence Interval	Deaths	Hazard Ratio	95% Confidence Interval	Deaths
<i>Men</i>						
Long term advantage/disadvantage						
Owner occupied at both censuses				1.00		7,353
Changed tenure between censuses				1.23 *	(1.17 - 1.30)	2,018
Rented at both censuses				1.50 *	(1.44 - 1.55)	4,977
Region of residence						
South East	1.00		4,572	1.00		4,572
South West	0.97	(.91 - 1.03)	1,282	1.00	(.94 - 1.06)	1,282
East Midlands	1.11 *	(1.04 - 1.18)	1,199	1.10 *	(1.03 - 1.17)	1,199
West Midlands	1.11 *	(1.05 - 1.18)	1,542	1.10 *	(1.04 - 1.16)	1,542
Northern	1.18 *	(1.10 - 1.26)	949	1.12 *	(1.04 - 1.20)	949
Yorkshire & Humberside	1.10 *	(1.05 - 1.18)	1,486	1.09 *	(1.03 - 1.16)	1,486
North West	1.17 *	(1.11 - 1.24)	1,922	1.17 *	(1.11 - 1.24)	1,922
East Anglia	0.99	(.91 - 1.09)	544	0.99	(.91 - 1.08)	544
Wales	1.08 *	(1.01 - 1.17)	852	1.10 *	(1.02 - 1.19)	852
<i>Women</i>						
Long term advantage/disadvantage						
Owner occupied at both censuses				1.00		6,939
Changed tenure between censuses				1.13 *	(1.07 - 1.19)	1,827
Rented at both censuses				1.29 *	(1.24 - 1.34)	5,598
Region of residence						
South East	1.00		4,790	1.00		4,790
South West	0.93 *	(.87 - .99)	1,262	0.94	(.89 - 1.00)	1,262
East Midlands	1.06	(.96 - 1.13)	1,092	1.06	(.99 - 1.13)	1,092
West Midlands	1.06	(.99 - 1.12)	1,432	1.05	(.99 - 1.11)	1,432
Northern	1.17 *	(1.08 - 1.25)	952	1.13 *	(1.05 - 1.21)	952
Yorkshire & Humberside	1.06 *	(1.00 - 1.13)	1,468	1.04	(.98 - 1.11)	1,468
North West	1.12 *	(1.07 - 1.18)	2,023	1.12 *	(1.06 - 1.18)	2,023
East Anglia	0.98	(.89 - 1.07)	522	0.98	(.89 - 1.07)	522
Wales	1.02	(.95 - 1.10)	823	1.03	(.96 - 1.11)	823

* p<0.05

Table 5

Changes in region of residence* and housing tenure at the 1981 and 1991 Censuses for men, aged 26–64, and women, aged 26–59

ONS Longitudinal Study, 1981 Cohort present at the 1991 Census

Men				Women			
Stayed in region	Moved n=100%	Region in 1981	Region in 1991	Stayed in region	Moved n=100%	Region in 1981	Region in 1991
23,210	551	North Owner Occupier (73%) Renter (27%)	South Owner Occupier (88%) Renter (12%) Owner Occupier (48%) Renter (52%)	19,726	533	North Owner Occupier (75%) Renter (25%)	South Owner Occupier (87%) Renter (13%) Owner Occupier (53%) Renter (47%)
	371	North Owner Occupier (81%) Renter (19%)	Midlands Owner Occupier (94%) Renter (6%) Owner Occupier (51%) Renter (49%)		285	North Owner Occupier (79%) Renter (21%)	Midlands Owner Occupier (91%) Renter (9%) Owner Occupier (64%) Renter (36%)
	130	North Owner Occupier (77%) Renter (23%)	Wales Owner Occupier (93%) Renter (7%) Owner Occupier (73%) Renter (27%)		106	North Owner Occupier (70%) Renter (30%)	Wales Owner Occupier (96%) Renter (4%) Owner Occupier (59%) Renter (41%)
14,878	525	Midlands Owner Occupier (74%) Renter (26%)	South Owner Occupier (87%) Renter (13%) Owner Occupier (51%) Renter (49%)	12,645	475	Midlands Owner Occupier (77%) Renter (23%)	South Owner Occupier (86%) Renter (14%) Owner Occupier (51%) Renter (49%)
	309	Midlands Owner Occupier (74%) Renter (26%)	North Owner Occupier (91%) Renter (9%) Owner Occupier (59%) Renter (41%)		261	Midlands Owner Occupier (77%) Renter (23%)	North Owner Occupier (91%) Renter (9%) Owner Occupier (63%) Renter (37%)
	89	Midlands Owner Occupier (73%) Renter (27%)	Wales Owner Occupier (91%) Renter (9%) Owner Occupier (58%) Renter (42%)		70	Midlands Owner Occupier (76%) Renter (24%)	Wales Owner Occupier (96%) Renter (4%) Owner Occupier (59%) Renter (41%)
36,873	641	South Owner Occupier (73%) Renter (27%)	Midlands Owner Occupier (92%) Renter (8%) Owner Occupier (71%) Renter (29%)	32,314	537	South Owner Occupier (72%) Renter (28%)	Midlands Owner Occupier (93%) Renter (7%) Owner Occupier (71%) Renter (29%)
	489	South Owner Occupier (67%) Renter (33%)	North Owner Occupier (87%) Renter (13%) Owner Occupier (61%) Renter (39%)		416	South Owner Occupier (67%) Renter (33%)	North Owner Occupier (92%) Renter (8%) Owner Occupier (71%) Renter (29%)
	203	South Owner Occupier (71%) Renter (29%)	Wales Owner Occupier (92%) Renter (8%) Owner Occupier (68%) Renter (32%)		164	South Owner Occupier (74%) Renter (26%)	Wales Owner Occupier (93%) Renter (7%) Owner Occupier (83%) Renter (17%)
4,385	137	Wales Owner Occupier (69%) Renter (31%)	South Owner Occupier (86%) Renter (14%) Owner Occupier (60%) Renter (40%)	3,727	103	Wales Owner Occupier (70%) Renter (30%)	South Owner Occupier (89%) Renter (11%) Owner Occupier (48%) Renter (52%)
	51	Wales Owner Occupier (63%) Renter (27%)	Midlands Owner Occupier (88%) Renter (12%) Owner Occupier (58%) Renter (42%)		36	Wales Owner Occupier (72%) Renter (28%)	Midlands Owner Occupier (85%) Renter (15%) Owner Occupier (50%) Renter (50%)
	65	Wales Owner Occupier (72%) Renter (28%)	North Owner Occupier (87%) Renter (13%) Owner Occupier (56%) Renter (44%)		49	Wales Owner Occupier (82%) Renter (18%)	North Owner Occupier (88%) Renter (12%) Owner Occupier (78%) Renter (22%)

* North – Northern, North West, Yorkshire and Humberside
South – South East, South West and East Anglia
Midlands – East and West Midlands

DISCUSSION

Longitudinal studies allow the measurement of long term socio-economic disadvantage and its impact on health. This study confirmed the findings of our previous paper¹, which reported the importance of both region of residence and disadvantage on mortality differences using information from the 1981 and 1991 census separately. Here we used information from two censuses to obtain a measure of long term disadvantage. The findings were clear, long term disadvantage was an important predictor of mortality differences in every region. These gradients were steeper in the North than the South. Region of residence was also independently related to mortality. Long term disadvantage was greater in the North than the South but this did not explain the overall North/South divide.

Examining people who remained in the same region and using a score of the number of times a person was in a socio-economic category, reduced the likelihood that geographical/social mobility accounted for the gradients in mortality reported in our previous paper.¹

There is evidence however that migration is selective.^{11,12} Preliminary analysis shows that regardless of where you moved from or to, you were likely to remain in owner occupied housing if you were already in it (Table 5). Of those who moved from rented to owner occupied housing, more moved from the South to the North than from the North to the South. The influence of mobility on the magnitude of regional inequalities in mortality is currently being examined.

One of the limitations of using the Longitudinal Study is that we are only able to measure region of residence and socio-economic position at the census. We are unable to assess status in the intercensal period. Other work on the unemployed¹³, has shown that being unemployed twice is indicative of having a greater than average chance of becoming unemployed again. In this context disadvantage at two census points would reflect long term disadvantage.

CONCLUSION

Long term disadvantage was greater in the North than the South. Both socio-economic disadvantage and region of residence were important predictors of regional mortality differences.

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Improving the completeness of Down syndrome notification

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ONS has recently undertaken an exercise to follow-up notifications of Down syndrome to the National Congenital Anomaly System (NCAS) in 1997 and 1998 with an aim to improve the completeness of notification. This exercise resulted in the number of notifications increasing by 44 per cent. The overall rate for England and Wales increased from 4.4 to 6.3 per 10,000 births. This reflects a good improvement in notifications and is closer to levels in registers known to be more complete. Some local registers now provide data electronically to ONS. These registers use multiple source ascertainment, so for these areas data transfer should allow these improved levels to be sustained. However, for the remaining areas that use traditional methods of notification sustained effort will be needed to maintain these levels of notification.

BACKGROUND

The ONS National Congenital Anomaly System (NCAS) was set up in 1964 after the thalidomide epidemic. It was designed as a surveillance system to quickly detect any future increases in notifications. It remains the only national source of data on the birth prevalence of congenital anomalies. There are also a number of local regional registers in England and Wales, plus a number of registers which collect information restricted to specific conditions. ONS also provides statistical summaries of data from NCAS to the International Clearinghouse for Birth Defects Monitoring Systems (the 'Clearinghouse'), for international studies into the prevalence and epidemiology of congenital anomalies. It is important that the NCAS data are as complete as possible. Therefore regular reviews are made of data for specific conditions. This article reviews NCAS data on Down syndrome (Trisomy 21), in comparison with data from local and condition specific registers.

Assuming no change in background incidence, over time the birth prevalence of Down syndrome is falling as more cases are prenatally detected and the pregnancy is terminated. The average age at childbirth is increasing¹ as women delay childbearing. As the risk of Down syndrome increases with maternal age this should result in an increase in prevalence. The balance of these two trends determines the birth prevalence in a given year.

In 1987 Down syndrome was estimated from epidemiological studies to have a birth prevalence of 10.8 per 10,000 births.² Data from the NCAS in 1974–87 showed that only 67 per cent of the estimated number of affected births were notified to the national system.² More recently the National Down Syndrome Cytogenetic Register (NDSCR) found a decreasing trend in birth prevalence. This showed a fall in birth prevalence from 11.1 cases per 10,000 live births in 1989 to 9.2 in

1993.³ A more recent comparison of NCAS data with that from the NDSCR based on data for 1990–93 suggested that only 48 per cent of Down syndrome live births were notified to NCAS. The observed rates from NDSCR were in close agreement with annual birth prevalence of Down syndrome from other more complete sources.⁴ Given this fall in the completeness of Down syndrome notifications, ONS undertook further comparison work using more recent data by contacting the health authorities and asking if they could provide more complete data.

This analysis examines trends in the number of notifications of Down syndrome in births and terminations from 1987 to 1998. It also describes the impact of additional notifications in 1997 and 1998 on both the overall rates and the distribution of cases by age of mother and their region of residence.

DATA USED

ONS has collected information on congenital anomalies since 1964 through the voluntary NCAS. Health authorities notify ONS of congenital anomalies, usually via NHS Community Trusts. Although there is no time limit, many health authorities base their notifications on information from notification at birth alone. This may therefore miss cases waiting for cytogenetic confirmation. In two areas, however, Wales and Trent, notification from health authorities has been replaced by notification from the local regional register. These two registers use multiple source ascertainment so provide more complete data.⁵ Moreover, both these regional registers routinely collect information on terminations for fetal defect. However, over 80 per cent of all notifications are still received from NHS Community Trusts and these do not collect information on terminations.

NCAS only collects information on live and stillbirths. Data on terminations where the medical condition was given as Down syndrome are obtained separately by ONS from notifications of terminations that take place under the 1967 Abortion Act. As notification of abortions to the Chief Medical Officers in England and in Wales is a legal requirement under the Act, there are different issues of completeness. This analysis was restricted to Down syndrome in registrable births.

Information about most Down syndrome cases is sent to the NDSCR based at St Bartholomew's Hospital Medical School, London. This register was established in 1989 and was originally funded by the MRC. It is a register of all diagnoses of Trisomy 21 and its variants, reported from all the Clinical Cytogenetic Centres in England and Wales. An earlier survey of health authorities by ONS (unpublished) showed that only one health authority had used these laboratories as a source of congenital anomaly information. Therefore since NCAS and the NDSCR use independent sources of data, capture-recapture techniques can be used to estimate completeness of notification to both sources. Using this methodology, the NDSCR has been previously calculated to be 94 per cent complete.⁴

METHOD

NCAS wrote to data suppliers in the NHS Community Trusts in April 1999 giving details of babies resident in their health authority notified as having Down syndrome. The Trusts were asked to check against their known cases to see whether they could find additional cases of Down syndrome and to supply completed notification forms for any additional cases identified. This request for additional cases was restricted to 1997 and 1998 births, because it was felt that given recent changes in Trusts, earlier cases might be difficult for them to trace.

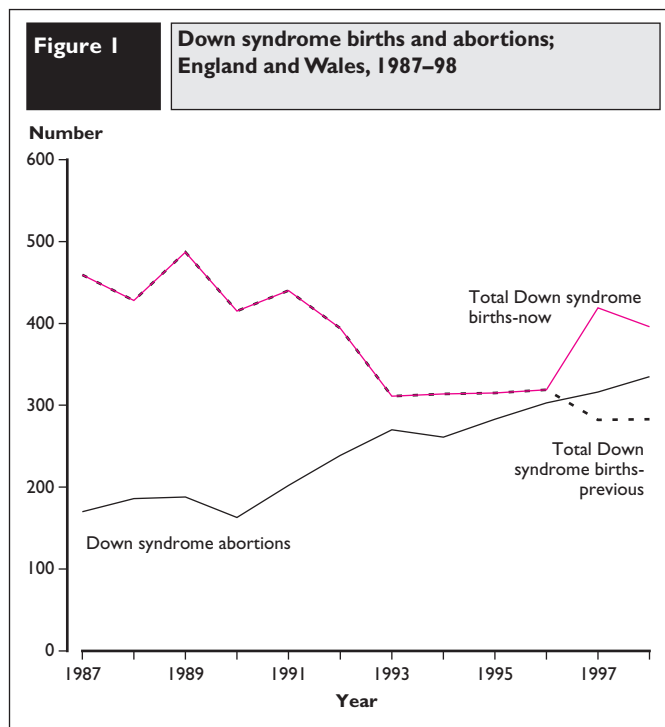
For cases in Trent and Wales, however, where ONS already received notifications from their local Register (CARIS in Wales and the Trent

CAR), and in the Northern Region, NCAS worked with the local register to improve completeness. These registers were asked to provide electronic details of cases not previously notified.

Comparisons were made between the NCAS database before and after the additional cases had been added. The data were analysed by region of residence, to measure both absolute rates after improving the completeness, and the relative size of the improvement. Analyses also examined whether the additional cases changed the age-specific rates and the distribution of cases by mother's age.

RESULTS

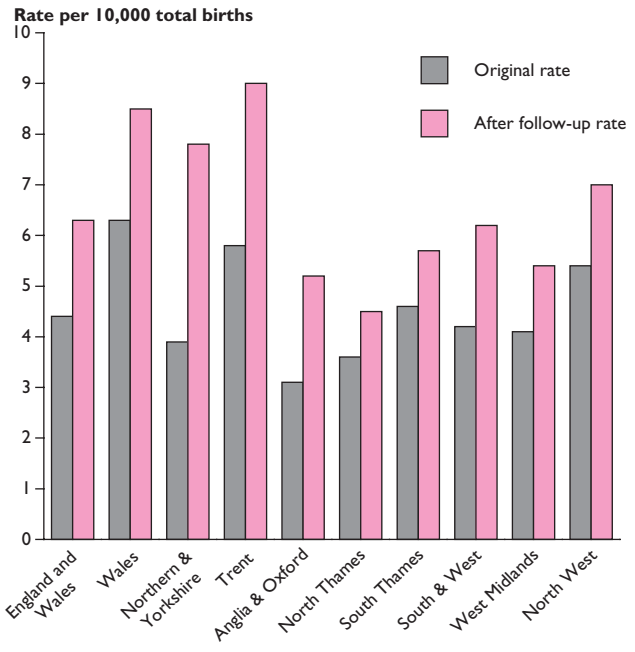
Over the period 1987 to 1998 the number of notifications of Down syndrome decreased from almost 500 to 280. Over the same period, the number of abortion notifications, which gave Down syndrome as the principle medical condition, increased from fewer than 200 per year to over 300 (Figure 1). In 1997, for the first time ever, the number of notifications of Down syndrome in terminations was higher than in the original number of notifications for births. Given this increase in the number of terminations, some decrease in the number of Down syndrome notifications would be expected in births. Nevertheless, the number of Down syndrome notifications in births was at the low level which previous analysis had shown missed 50 per cent of cases.⁴ Therefore, it was important to follow-up notifiers to try to improve completeness.



The follow-up exercise resulted in an increase in the number of notifications for 1997 and 1998. The number notified rose from 282 to 419 in 1997 and from 283 to 396 in 1998, an overall increase of 44 per cent (Figure 1). This represents on average two extra cases per health authority per year, with the resulting birth prevalence of 6.3 cases per 10,000 births.

Figure 2 shows the increase in notification rate for each regional office based on data for 1997 and 1998 combined. The percentage increase in the rate varied between 24 per cent for South Thames and 100 per cent for Northern and Yorkshire. All other increases were in the range 25 to 68 per cent. For the two regional registers who provide data to ONS,

Figure 2 Original and After follow-up Down syndrome rates by Regional Office in England and Wales, 1997-98 combined



and for the South and West and the North West Regional Offices, the biggest increase was for 1998 data. For all the other areas the biggest increase was for 1997 data.

Figure 3 shows the increase in notification rates by age groups for 1997 and 1998 combined. The proportional increase varied for different age groups and showed no consistent pattern with age. The largest increase in rates was for mothers aged 35-39, and the second largest for mothers aged 20-24. The smallest increase was for the youngest mothers, who experience the lowest rates. Prior to follow-up there were numerically

Figure 3 Original and After follow-up Down syndrome rates by age-group in England and Wales, 1997-98 combined

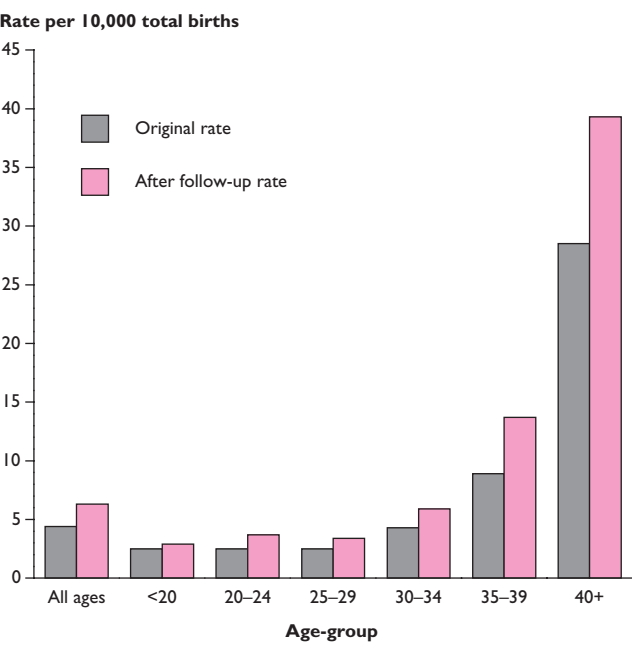
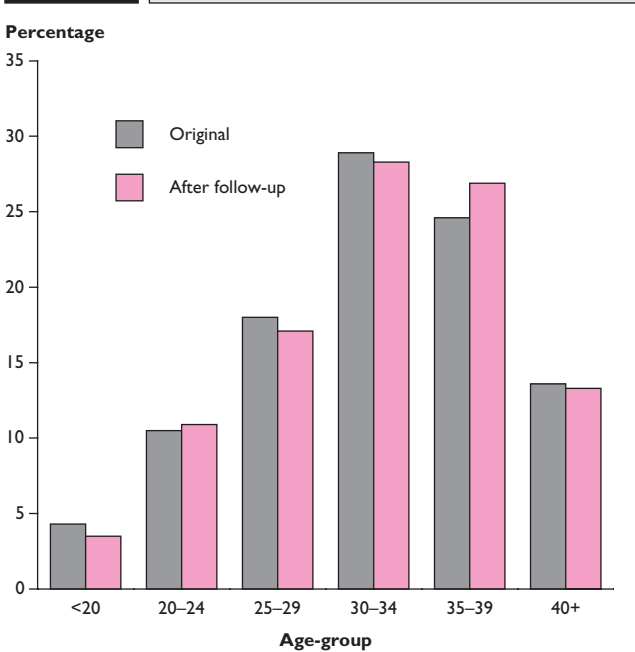


Figure 4 Original and After follow-up percentage distribution of Down syndrome by age-group for England and Wales, 1997-98 combined



more cases for mothers aged 30-34, but after follow-up the absolute number of notifications for those aged 35-39 reached almost the same level as those for women aged 30-34.

Since the proportional increase in rates varied for different age groups, the percentage distribution of Down syndrome (as shown in Figure 4) changed after follow-up to proportionally more aged 35-39 and 20-24 and proportionally less in all the other groups.

DISCUSSION

The identification of new cases in all Regions shows the high level of participation from all areas in this completeness exercise. Despite the fact that NHS Community Trusts can notify NCAS at any time, most focus on congenital anomalies given on birth notification. Late diagnoses are seldom notified to NCAS. Given that NCAS was thought to miss 50 per cent of all Down syndrome notifications, however, the additional cases identified represent only half of the estimated shortfall. Further evidence for this is given by the variation by geographical region.

Crude rates are not usually appropriate for comparisons in analyses of Down syndrome since rates can vary considerably depending on the maternal age distribution. However, maternal age differences alone could not account for the large variation in rates shown in Figure 2. After follow-up the three highest crude rates were for the two areas where notifications are sent to NCAS by the regional registers and for Northern and Yorkshire where the NCAS worked closely with the regional register as part of the follow-up exercise. The resulting rate in each of these three areas - between 8 and 9 per 10,000 total births is similar to those in other countries where termination of pregnancy is legal.⁶ On the assumption that variation in rates between the regions of England and in Wales is small, the high rates from these Regions is an indication of the levels which could be reached with more complete notification from other Regions. A good example to illustrate this is to compare with data from the West Midlands Congenital Anomaly Register. Using data from NCAS, the notification rate was initially 4.1

per 10,000 births, increasing to 5.4 after follow-up (Figure 2). Yet published data from the West Midlands Register give the 3-year incidence rate for live and stillborn Down syndrome cases in the West Midlands to be 10.2 per 10,000 registered births, almost double the rate after follow-up.⁷ This illustrates the deficiencies in reporting to NCAS by the local NHS Community Trusts.

The lowest rate after follow-up was for North Thames. It is therefore particularly pleasing that from January 2000 notification to NCAS for some health authorities in this area will be from a local congenital anomaly register in this region. It is hoped that this change in method of notification will improve completeness from this area.

Interestingly, for the two areas where notification comes to NCAS directly from regional registers, the biggest increase in notifications was for 1998, whereas for most of the other regions the largest increase was for 1997. This is likely to be due to the use of multiple sources by the regional registers, which means that notifications of different conditions may come in some time after the birth. These additional notifications are passed on to NCAS in the month after they are added to the regional register. Thus Down syndrome diagnoses which occurred some time after birth for babies born in 1997 would have already been notified to the regional register and passed on to NCAS. This left fewer 1997 cases to be identified through the follow-up process. For the local NHS Community Trusts, who tend to use birth notifications as their primary or sole source of notification, however, late diagnosed cases from 1997 would never have been notified to NCAS. This would result in more missed cases being identified during this exercise.

Down syndrome rates originally showed the well-known pattern of increasing with older maternal age. The proportional increase in rates after follow-up was not the same for all age groups. Since most areas rely on birth notification as their only source of congenital anomaly information, it would be expected that notification would be more complete at birth for cases where Down syndrome had been detected or suspected prenatally. The risk of Down syndrome is higher for older women and these women are more likely to have prenatal screening tests. Therefore it could be expected that in this group Down syndrome was likely to be well notified at birth and that there would be fewer additional cases to find at follow-up. It is therefore surprising that in this analysis the biggest increase in rates after follow-up was in those aged 35–39. There may have been an expectation at delivery that all women in this age group had been scanned prenatally, so perhaps Down syndrome was not expected and initially missed at birth notification.

Nevertheless, increasingly more women are being tested antenatally using a range of tests developed in the past decade. These tests do not rely on age alone. A survey on the extent of antenatal screening for Down syndrome in 1998 obtained a 100 per cent response rate. It showed that the main method of screening in Britain was a double test. The first part measures the mother's serum for the level of alpha-fetoprotein (the concentrations of a protein produced by the fetal liver which is lower in the presence of Down syndrome). The second part measures the human chorionic gonadotrophin hormones (a placenta derived glycoprotein) and weights the result according to maternal age. This test was offered by 57 per cent of health authorities in 1998.

The use of maternal age alone as a method of screening has been declining for several years and reached a low level of 8 per cent of authorities in 1998.⁸

An important impact of improving notifications of Down syndrome to NCAS is that the new data from 1997 and 1998 should form part of the baseline data for this condition. This has both positive and negative implications however. The positive aspect is that the baselines will then be closer to true prevalence levels. However, if these new baselines are being used, it is essential to continue to work with the notifiers to sustain these new levels of notification. This will ensure that an alarm is triggered if a real increase occurs.

Comparing the resulting NCAS rates with other international rates⁶ shows that the crude rates of notified Down syndrome from Wales and from Trent are close to those reported by other participating countries in the Clearinghouse. This increases the evidence that these registers are providing almost complete notification to NCAS and provides estimates of the shortfall from the other regions.

CONCLUSION

Follow-up is an effective way to improve notification of Down syndrome. Its main disadvantage is that it does not change the regular notification practices and so the improved levels of notification are difficult to sustain. Regular follow-up exercises would therefore be necessary. However, since NCAS now receives notification direct from two regional registers and two other regional registers will be able to notify NCAS directly from 2000 onwards, it is possible that their notification will be more complete. The regional registers use multiple source ascertainment and notify all their cases to NCAS as they receive them so follow-up in these areas will be unnecessary. These results show clearly the positive benefit to national congenital anomaly data of data exchange with the local registers.

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Are we looking forward to a longer and healthier retirement?

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This article reviews trends in health among people aged 55–64. They are experiencing rapidly decreasing death rates leading to a greater expectation of life and longer retirement. But are they more healthy and will their extra years be increasingly free of chronic illness and disability? A range of indicators are reviewed for mortality, morbidity, health services use and patterns of health related behaviour in this pre-retirement age group to examine their future health prospects. Preliminary results from recent ONS work on healthy life expectancy, indicate that the retiring population can expect its healthy life expectancy to increase but not by as much as total life expectancy.

INTRODUCTION

The question of whether the population is becoming generally more healthy is of great interest for a variety of reasons. Health is an asset to individuals and also to society and the economy. We therefore seek to maximise it. Ill health, in contrast, creates pressures and costs for individuals, their families and society as a whole. Care for those in poor health and preventive care for the healthy has to be planned and resourced at all levels of government and by other organisations. But at present we have no single generally accepted measure by which to assess the health status of an individual, a group or a nation. It is therefore necessary to take as much of the information that is available about various aspects of health, put it all together and see if we can answer the question, “Are we healthier?”.

Traditionally the health of populations has been measured by death rates – partly because they are indisputable, reliable and cover whole populations. In Britain death rates have been declining for decades. This leads to longer life expectancy and is generally taken as signifying improving health. But the pattern of disease has changed, with mortality from infectious disease declining, and disability caused by chronic disease on the increase. Over the same period demand for and utilisation of health services has continued to increase. Much of this may be due to increased expectations of health services and the greatly increased number of drugs and other treatments becoming available.

The challenge to analysts in this field is therefore to assess the potentially conflicting information. We first did this in ONS in relation to children.¹ This was in the context of rapidly declining infant and child mortality rates combined with continuing concern about health and development. We developed a more general analysis for the population as a whole.^{2,3} This concluded that although mortality was

improving for almost every age group there was much evidence that the onset of chronic disease and the prevalence of behaviours related to ill health were not moving in the same direction. This leads to a situation where extra years of life are not all extra years of healthy life, with significant implications for future health services and carers.

As we have shown for children, this model for looking at the health of the population can be applied to any particular age group. The population aged 55–64 became of interest because death rates at this age fell more than for any other age group of adults over the last decade, raising the question of whether other measures of health are moving in the same direction. There is always much interest in research on the health of the elderly – generally men and women aged 65 and over. But what about the health legacy of the population in the ten years before they reach age 65? This age group is also of interest because they are in the last, potentially most productive decade of their working lives, their children are grown up, the menopause is past. They will be looking forward to a long retirement, the more so as remaining life expectancy at age 65 continues to increase. This age group constitutes an increasing proportion of the population of England and Wales, which is projected to rise from just under ten percent in England and Wales in 1998 to 12.1 per cent in 2010.⁴

Work for this article has reviewed the available indicators for several different aspects of health - health status, use of health services and health related behaviour. Many of them derive from large national, continuous or repeated surveys or data from the National Health Service. We have identified those indicators that are available for the age group 55–64 over a period of twenty years where possible. This enables us to describe trends in health over recent years and to identify a model for monitoring the group in future.

SOURCES

This article is largely based on data from the ONS General Household Survey (GHS), covering Great Britain, from 1979 to 1996. The GHS has regularly included sections on health and health related behaviour, and it is valuable for examining trends because of the length of time it has been in use and the consistency of the questions asked. Most GHS data referred to cover the specific age group being examined, 55–64, although for some variables a broader age range of 45–64 has been used where base numbers for some subcategories would otherwise be somewhat small. Some very recent data for the broader 45–64 ageband has also been included from the 1998 GHS. The GHS covers around 20,000 people each year, of whom about two thousand are in the 55–64 age group. For many purposes we have combined data into three-year averages based on a sample size of around 7,500.

ONS collects detailed cancer incidence data from records submitted by the regional cancer registries in England and Wales. Cancer incidence data from 1971 are held on the national cancer registrations database at ONS. However, the start year of 1979 used in this analysis avoids possible difficulties caused by some incomplete coverage in the early years of the national cancer registration system that could affect interpretation of incidence trends in the 1970s. Provisional incidence data have recently been published for 1994 to 1996.⁵

Information on GP referrals to hospital outpatient departments in England and Wales has been obtained from the General Practice Research Database (GPRD). Hospital admissions data in England have been provided by Hospital Episodes Statistics (HES) in the Department of Health. Use is also made of some of the findings of the Health Survey for England which has been carried out for the Department of Health annually since 1991. Reference is also made to the ten-yearly UK Adult Dental Health Survey.

The variety of sources used has resulted in some differences of geographical coverage for the variables studied. The General Household Survey covers the whole of Great Britain whereas other routinely collected ONS data referred to for this article, mortality and cancer registrations, cover England and Wales only. The GPRD data used also cover England and Wales. Department of Health hospital admissions data cover England only, as does the annual Health Survey.

Further work is required to bring data together on a consistent UK basis. A range of key health data for the UK will be published in the coming year.

MORTALITY AMONG 55–64 YEAR OLDS

The last hundred years have seen substantial declines in mortality among males and females at most ages, a trend which has continued through the 1980s and 1990s. Between 1988 and 1998 those aged 55–64 experienced the greatest overall decrease in mortality among adults, as can be seen from Table 1.

Table 1 Death rates per 1,000 population, men and women aged 55–64, 1988–98, England and Wales

Age-group	1988		1998		% change 1988/98	
	Males	Females	Males	Females	Males	Females
All ages	11.4	11.2	10.3	10.9	-10.1	-2.9
0–14	1.0	0.8	0.6	0.5	-43.5	-41.5
15–24	0.8	0.3	0.7	0.3	-12.0	-6.6
25–34	0.9	0.5	1.0	0.4	6.9	-4.9
35–44	1.7	1.2	1.6	1.0	-7.1	-14.1
45–54	5.0	3.1	3.9	2.6	-20.4	-14.6
55–64	15.5	8.9	11.3	6.8	-27.1	-23.6
65–74	40.5	22.6	32.4	19.9	-19.9	-12.0
75–84	95.7	59.1	81.3	53.9	-15.1	-8.9
85 and over	201.7	160.6	187.2	151.5	-7.2	-5.7

The 1998 mortality rate in England and Wales was 73 per cent of the 1988 rate for men, and 76 per cent for women. As well as the decrease in mortality among those in this age group and older, life expectancy at age 65 increased by over one year during the same period, from 13.9 years to 15.3 years for men, and 17.8 years to 18.7 years for women.⁶ To what extent are these improvements in mortality indicative of improved health?

HEALTH STATUS

Self-reported health from the General Household Survey

For a number of years the General Household Survey has included questions on general health and on morbidity. Respondents are asked if they consider their health is 'good', 'fairly good', or 'not good'. The GHS then enquires if respondents suffer from any 'long-standing illness, disability or infirmity', and whether this restricts their activities at all (*limiting long-standing illness*). Respondents are also asked if they have suffered any restriction of activity as a result of illness or injury in the previous two weeks (*acute illness*).

The GHS provides a subjective measure of health, and it is possible that trends over time may reflect not only real changes in the prevalence of illness but also some changes in people's expectations of health during the period. Nevertheless people's assessments and expectations are related to their health behaviour, in terms of seeking treatment and adopting particular lifestyles.

Figure 1

General health, men and women aged 55–64, 1979–96, Great Britain, from the General Household Survey

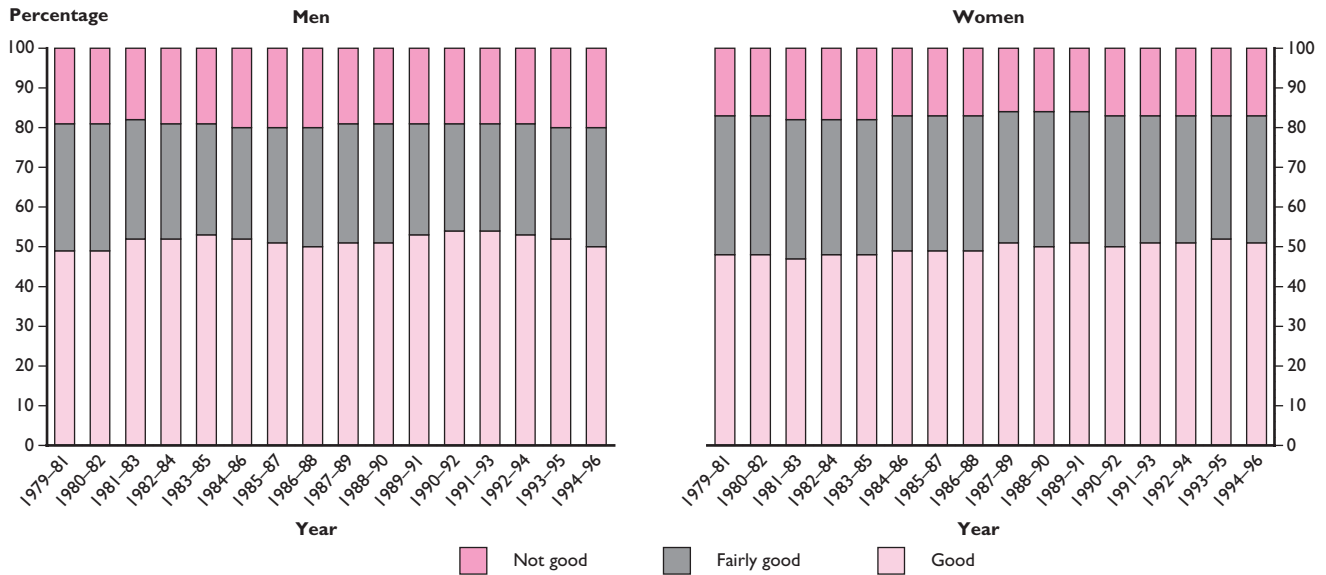


Figure 1 shows the proportion of the population aged 55–64 reporting their health as ‘good’, ‘fairly good’ or ‘not good’ from 1979 to 1996.⁷ The relative proportions of these three categories have remained remarkably constant over this period. About the same proportion of men reported their health as not good in 1979–81 as in 1994–96 (19 and 20 per cent respectively), while the same proportion of women reported poor health over this time, at 17 per cent in both 1979–81 and 1994–96. There is little variation in the intervening years.

The prevalence of long-standing illness in this age group (Figure 2) increased from 47 per cent of men in 1979–81 to 53 per cent in 1994–96, and from 45 per cent to 50 per cent of women. The proportion reporting limiting long-standing illness also rose slightly from 33 to 36 per cent of men and from 30 to 33 per cent of women.

We also find that there has been an increase in the prevalence of acute illness in this age group. In 1979–81, 14 per cent of men aged 55–64 reported some restriction of activity (acute illness) in the previous two weeks compared with 19 per cent in 1994–96. The proportion of women reporting restricted activity increased from 15 per cent to 20 per cent over the same period.

Looking at this another way, there has also been a rise in the number of days of restricted activity. In 1979–81 there was an average of 30 days of restricted activity per year for men and 32 for women, rising to 42 and 46 days respectively in 1994–96 (Figure 3).

It can be seen from Table 2 that the prevalence of different types of long-standing illness for the broader 45–64 age group remained similar between 1988 and 1998 (Table 2). There was little change during the intervening years.^{8,9}

Figure 2

Three measures of morbidity among men and women aged 55–64, 1979–96, Great Britain, from the General Household Survey

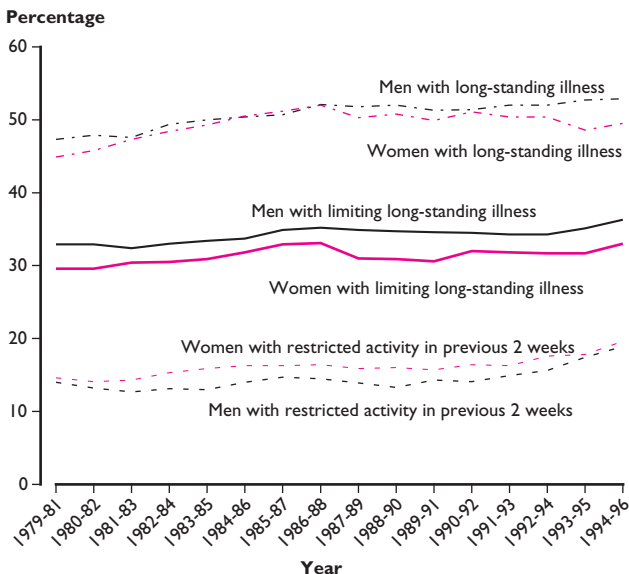


Figure 3

Days of restricted activity per year, men and women aged 55–64, 1979–96, Great Britain, from the General Household Survey

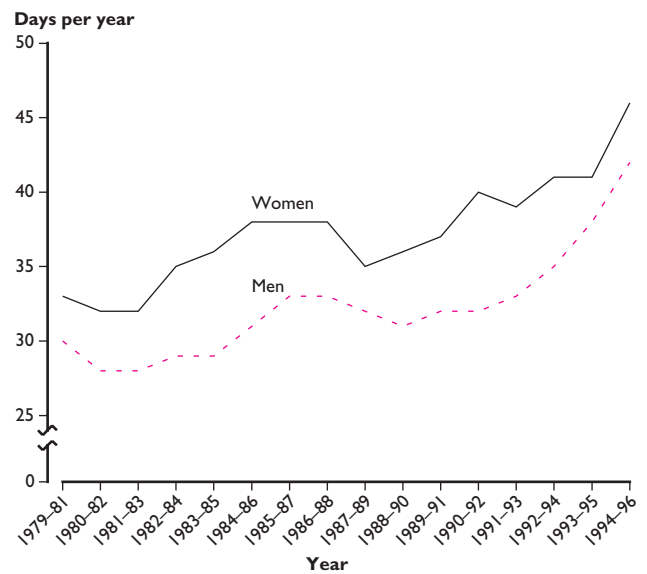


Table 2

Chronic sickness: percentages reporting selected long-standing condition groups, 45–64s, Great Britain, 1988 and 1998 from the General Household Survey

	Men		Women	
	1988	1998	1988	1998
Musculoskeletal system	18	20	20	21
Heart and circulatory system	14	16	11	11
Respiratory system	7	6	6	8
Digestive system	5	5	5	5
Bases	2,700	2,393	2,787	2,499

Cancer

Table 3 shows the trends in incidence of the main cancers among men and women aged 55–64 between 1979 and 1996 in England and Wales. For men aged 55–64 there has been little change since the late 1970s in cancer incidence rates as a whole. However, there have been changes for individual types of cancer.

Lung cancer is the most common cancer among men in this age group. There was a large decrease in the incidence of lung cancer in men over the period, from 273 to 154 per 100,000, a fall of 43 per cent. A major factor in this fall is likely to have been the reduction in cigarette smoking over this period.¹⁰ Cigarette smoking prevalence was higher in each age group in 1976 than it was in 1996. Smoking prevalence among men aged 35–44 in 1976 was 51 per cent. In 1996, these men would have been aged 55–64, and the prevalence of smoking among them was only 26 per cent, a reduction of about half. Allowing for time lags, this reduction of smoking in the lives of these men is likely to have accounted for much of the fall in lung cancer

incidence. The incidence of colorectal cancer, the next most common male cancer in this age group after that of the lung, rose by a fifth among 55–64s between 1979 and 1996.

Registrations of prostate cancer, the most common cancer among men after lung cancer and colorectal cancer, have risen sharply since the end of the 1980s, so that the incidence rate in this age group in 1996 was more than double that in 1979. However, this rise is probably largely due to increased detection of latent neoplasms following operations for enlarged prostate or at post-mortem in men who have died from other causes, together with the recent availability of prostate specific antigen (PSA) testing.

Among women in this age group, the overall rate of cancer incidence has risen throughout the period. Breast cancer is the most common female cancer, and most of the increase in cancer incidence among women is accounted for by breast cancer among the 55–64s. Having risen throughout the 1980s, breast cancer registrations reduced from a peak over 1991–92. The national screening programme commenced in 1988, and screened women aged 50–64. The rise in incidence from 1988 in the 55–64 age group was due to the detection of prevalent cases. With the completion of the first round of screening, incidence fell and by 1995 appeared to return to pre-screening levels.

The incidence of lung cancer, the next most common cancer among women in this age group, increased from 80 cases per 100,000 in 1979 to 97 per 100,000 in 1988 before falling back in 1996 to approximately the 1979 level. This rise and fall is related to smoking patterns among the cohort of women born in the mid 1920s.¹⁰ Among women aged 55–64, the incidence of colorectal cancer rose by slightly more than a tenth over the period, so that by 1996 it was approximately equal to that of lung cancer. The incidence of cancers of the ovary and of the uterus has also increased.

Table 3

Trends in incidence of major cancers among men and women aged 55–64, England and Wales, rates per 100,000 population, 1979–96

	Lung		Colorectal		Prostate	Ovary	Uterus
	men	women	men	women			
1979	273	80	92	71	39	41	37
1980	267	80	89	70	43	44	37
1981	267	87	93	74	42	42	39
1982	260	90	97	77	42	41	40
1983	257	86	100	79	44	44	38
1984	251	93	103	75	46	45	38
1985	257	96	103	75	50	48	40
1986	233	91	101	79	51	44	38
1987	223	96	105	77	51	45	37
1988	225	97	103	76	55	47	39
1989	205	94	108	77	54	47	40
1990	201	90	106	76	58	47	41
1991	193	85	112	75	58	51	41
1992	181	84	115	80	61	49	40
1993	168	80	118	78	71	47	42
1994*	166	77	111	77	82	46	43
1995*	157	74	107	71	82	48	42
1996*	154	78	112	78	90	50	43
Percentage change, 1979–96	-43.4	-2.4	+21.8	+10.3	+132.5	+22.2	+17.5

* Provisional

Cardiovascular disease

Cardiovascular disease remains the major cause of death for men and women. Its treatment and prevention have therefore been important features of health policy in recent years. This has led to improved statistics, in England, with the introduction of the Health Survey for England in 1991. The GHS does not aim to measure prevalence of heart disease specifically, but Table 2 suggests that the prevalence of long-standing circulatory disease has not changed in the last 10 years. More specific questions covering the 1990s only, support this finding.

The important aspect of the Health Survey for England is the incorporation of measurements marking the existence of risk factors for disease – in this case high blood pressure and obesity. Such measurements, unlike survey questions, do not reflect people’s changing expectations. They are therefore important objective indicators which add to the picture of health status that we are trying to build.

Cardiovascular problems affect a significant proportion of the population entering retirement. As Table 2 shows, for the broader age range of those aged 45–64 the proportion reporting some form of cardiovascular disorder was similar in both 1988 and 1998. In 1998 this was 16 per cent among men and 11 per cent among women. The General Practice Research Database reports that the prevalences of treated coronary heart disease among men and women aged 55–64 in 1996 were nine per cent and five per cent of patients respectively.¹¹

The prevalence of high blood pressure reported by the Health Survey for England among the 55–64s is shown in Table 4. Over most of the period covered by the survey there has been no change in the proportion of men and women with high blood pressure.

Obesity

The Health Survey for England also includes detailed anthropometric measurements for height and weight. These are used to calculate a Body Mass Index (BMI) with values indicating various levels of underweight, acceptable weight, overweight and obesity. Table 4 shows

Table 4 Percentage prevalence of high blood pressure* and of overweight/obesity** among men and women aged 55–64, England 1993–98

	1993	1994	1995	1996	1997	1998
Men						
High blood pressure	38	37	38	37	42	39
Bases	908	817	801	814	442	766
Overweight	71	69	73	74	75	76
Obese	20	18	22	24	27	23
Bases	1,020	925	919	938	511	910
Women						
High blood pressure	36	37	36	39	38	32
Bases	951	861	914	900	482	896
Overweight	63	64	65	68	67	68
Obese	24	26	23	28	30	29
Bases	1,060	988	1,028	1,007	552	1,043

Source: Health Survey for England.

* Defined as systolic blood pressure of 160 mmHg or higher or diastolic blood pressure 95 mmHg or higher, or taking drugs commonly used to treat high blood pressure. 1998 figures under this definition are unpublished.

** ‘Overweight’ defined as having a Body Mass Index (BMI) greater than 25. ‘Obese’ defined as having a BMI greater than 30.

that even during the 1990s the proportion of both men and women aged 55–64 who were obese has risen considerably so that just over one in four were obese in 1998.¹² A comparable survey carried out in 1980¹³ found that only nine per cent of men and 14 per cent of women in this age group were obese. This represents a doubling of the proportion of those obese at this age among both men and women over the last 20 years. Proportions overweight have also increased considerably.

Respiratory problems

In 1995 and 1996 the Health Survey for England included questions on respiratory problems. In this two year period, it was found that 23 per cent of respondents aged 55–64 had experienced wheezing in the previous 12 months, and 10 per cent reported having doctor-diagnosed asthma.¹⁴ The GPRD reports that the prevalence of treated asthma in 1996 was five per cent of men and seven per cent of women in this age group.

Dental health

Data from the UK Adult Dental Health Survey show that the proportion of the older population retaining their teeth has increased over the last 20 years. Between 1978 and 1998 the proportion of persons aged 55–64 with no natural teeth reduced from 56 per cent to 20 per cent.¹⁵ This trend is also reflected by the GHS which records a fall in edentulousness among 55–64 year olds from 43 per cent in 1983 to 22 per cent in 1995.¹⁶

USE OF HEALTH SERVICES

GP referrals

Data from the GPRD show that GP rates of referral to hospital outpatient departments among the 55–64 age group showed little change over the period 1994 to 1996. Rates were slightly higher for women than for men. Referral rates for this age group were 168 per thousand person years at risk for men in 1994, and 172 per thousand in 1996 whilst for women the referral rate increased from 198 per thousand person years at risk in 1994 to 209 per thousand.

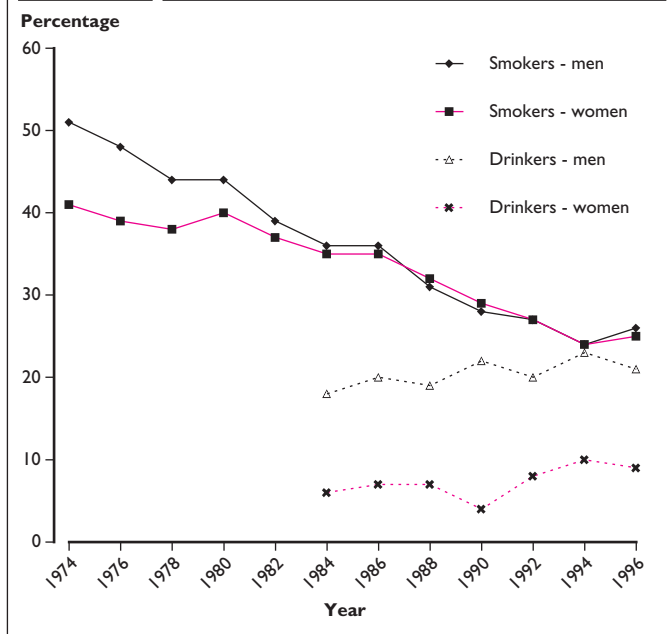
The GHS provides a similar picture of recent trends in contacts with outpatient departments. Between 1990 and 1996 the proportion of men aged 55–64 who reported attending a hospital outpatient department in the previous three months increased slightly from 17 to 19 per cent. Among women of the same age there was also a small increase from 18 to 21 per cent.

Hospital admissions

Data from the Department of Health show that there has been a marked increase in the rate of admissions to hospital in England among those aged 55–64 in recent years. The rate of admission among men for ordinary admissions and day cases combined increased from 177 per thousand in 1990 to 240 per thousand in 1996, an increase of 36 per cent, whilst the rate of admission of women increased from 146 per thousand in 1990 to 206 per thousand in 1996, an increase of 41 per cent.

Information on self-reported admissions from the GHS suggests a fairly constant level of hospital attendance. In 1990, 10 per cent of both men and women in this age group reported having attended hospital as a inpatient one or more times in the previous 12 months. In 1996 the proportions were similar at 11 and 12 per cent respectively. A question on day patient attendances which was included from 1992 suggests some rise in the proportion attending hospital. Between 1992 and 1996 the proportion of respondents in this age group who reported having attended hospital as a day patient at least once in the previous 12 months rose from four to seven per cent for both men and women.

Figure 4 Smoking and drinking among men and women aged 55–64, 1974–96, Great Britain, from the General Household Survey



HEALTH RELATED BEHAVIOUR

Another aspect of health which is important to monitor is health related behaviour. Here we show trends in smoking, drinking and exercise as measured by the GHS over a number of years.

Smoking

The prevalence of cigarette smoking among the 55–64 age group reduced by over a third during the period from 1974 to 1996, from 51 per cent to 26 per cent of men, and from 41 per cent to 25 per cent of women. However, it can be seen from Figure 4 that there has been little change in recent years.

Drinking

Since the publication in 1995 of *Sensible Drinking*, a report of an interdepartmental working group on the effects of drinking alcohol, the Department of Health has given advice on drinking on the basis of daily benchmarks rather than weekly limits.¹⁷ However until 1995 Department of Health advice was in terms of weekly consumption and trends for 1984 onwards are available on this basis. Trends in drinking remained fairly constant between 1984 and 1996. The proportion of men among the 55–64s who drank more than 21 units of alcohol per week was 18 per cent in 1984 and 21 per cent in 1996. The proportion of women of the same age drinking 14 or more units per week was six per cent in 1984 and nine per cent in 1996 (Figure 4). The GHS has reported a general increase in drinking among women since 1984.¹⁸

Exercise

Levels of exercise among the older population have remained constant in recent years. In 1990 the proportion of men and women aged 55–64 who had participated in some kind of physical activity, including walking, in the four weeks before interview were 62 per cent and 54 per cent respectively. The proportions in 1996 were almost identical, at 63 per cent of men and, again, 54 per cent of women.

ECONOMIC ACTIVITY

Among men approaching the normal age of retirement, the proportion aged 55–64 who report themselves as permanently unable to work approximately doubled from 10 to 19 per cent over the period 1979 to 1996. Among women approaching their sixtieth year (at which they would normally retire) there was also a large rise over the period, from five to 13 per cent among the 55–59 age group.

SOCIO- ECONOMIC INEQUALITIES IN HEALTH

Levels of wellbeing vary from one socio-economic group to another. Mortality is higher, and life expectancy shorter, among the manual and unskilled classes compared to the professional and managerial classes.^{19,20} Among men, between the 1970s and the early 1990s, the largest gain in life expectancy at birth (four years) was made by men in non-manual skilled jobs. The smallest gain (three years) was made by men in partly skilled and unskilled jobs. Among women, the largest gain in life expectancy (three years) was made by women in professional and managerial jobs whilst the smallest gain (two years) was made by women in partly skilled and unskilled jobs.²¹ For the middle aged and those entering retirement, chronic illness is more prevalent among the manual socio-economic groups than the non-manual groups, as Table 5 shows (here using the broader ageband of 45–64).

Table 5 Chronic sickness: percentages of men and women aged 45–64 reporting selected long-standing condition groups, whether manual or non-manual socio-economic group*

Condition Group	1988		1998		
	Men	Women	Men	Women	
Musculoskeletal	Non-manual	13	17	14	17
	Manual	22	23	25	26
Heart and circulatory	Non-manual	14	9	12	8
	Manual	15	13	19	13
Respiratory	Non-manual	5	5	5	6
	Manual	8	7	8	11
Digestive system	Non-manual	4	4	4	3
	Manual	6	6	6	6
Bases (Non-manual)		1,206	1,313	1,197	1,310
(Manual)		1,487	1,425	1,171	1,148

* 'Non-manual' comprises socio-economic groups (SEGs) 1-6 and 13 (professional, employers and managers, intermediate and junior non-manual) and 'manual' comprises SEGs 7-12, 14 and 15 (skilled and semi-skilled manual and unskilled manual) (OPCS Standard Occupational Classification 1990).

DISCUSSION

The population entering retirement can expect to live longer. The increase in life expectancy might on its own suggest that they are becoming healthier. However, quality as well as length of life needs to be taken into account. The majority of the measures of health examined in this article provide no indication that health among the population aged 55–64 is improving. The prevalence of self perceived poor health, chronic and acute illnesses, cancer, and cardiovascular and respiratory conditions, and rates of GP referrals, hospital admissions, and numbers unable to work, have all either remained fairly constant or have increased.

Some aspects of changing behaviour may appear positive for the future. The decreases in the proportion of smokers among the 55–64 age group, and at younger ages, suggest there might be a decline in the

proportion of retired people suffering from chronic illnesses caused by smoking, particularly cancer and heart disease, and a reduction in the severity of some illnesses that would otherwise be worsened by smoking, with a consequent decrease in the prevalence of chronic illness. However, the overall prevalence of long-standing illness has not reduced over the period studied.

The picture gained from other health related behaviours among the pre-retirement population is not very positive. Levels of exercise participation and of drinking have remained similar while the prevalence of obesity has increased markedly. These patterns of behaviour are an indication that the older population will remain vulnerable to circulatory, musculoskeletal and other disorders that could otherwise be reduced or avoided. For example, research has shown that moderate exercise and avoidance of smoking do appear to have a measurable and positive impact on healthy life expectancy among older people.²² Social class also has an effect on the expectation of a healthy life. Not only do those in the lowest socio-economic groups have a higher prevalence of chronic illness, but compared to those in the top groups, they can expect significantly fewer years of healthy life.²³

Implications for healthy life expectancy

In view of the general lack of improvements in the health of the population entering retirement, as measured by these indicators, it becomes important to assess the health prospects of the retiring population that are likely to result. If the incidence of chronic illness or disabling health problems remains the same, or even increases, over a period whilst survival improves, the number of years lived with impaired health will also increase. From this perspective, of just as much interest as the number of years of life remaining (*life expectancy*) is the expected number of remaining years of healthy life (*healthy life expectancy*).

Healthy life expectancy (HLE) has been the subject of increased investigation in recent years, both nationally and internationally.^{24,25,26}

Preliminary results from recent work by ONS on healthy life expectancy, based on GHS self perceived general health data from 1980 to 1996, suggest a small improvement. HLE at age 65 (based on three-

year average calculations) for both men and women in Great Britain, increased between 1981 and 1995. In 1995 women aged 65 could expect to live a further 18.3 years, of which 5.3 years would be in poor health. For men aged 65, the corresponding figures are 14.7 and 3.4 years (Figure 5). However, the HLE has not increased by as much as total life expectancy, leading to more time being lived in poor health. The detailed results from these analyses, together with the methodology used, will be published in *Health Statistics Quarterly* later this year.

Issues closely related to HLE are the definition of 'healthy life' and of the severity of illness or disability experienced in ageing. Using the available data, we have focused on prevalence and duration of health problems. More precise evidence of changes in severity of chronic conditions is not available from the GHS beyond distinguishing between self-reported limiting and non-limiting illness, although some further questions on ability to carry out activities of daily life have been asked of those aged 65 and over in some years. The true picture may be more complex however. Research indicates that severe longstanding illness may be lessening in this and other developed countries. It is possible that more severe limiting illnesses are being contained, while there is an increase in the prevalence of less severe long-standing illness.^{25,26,27}

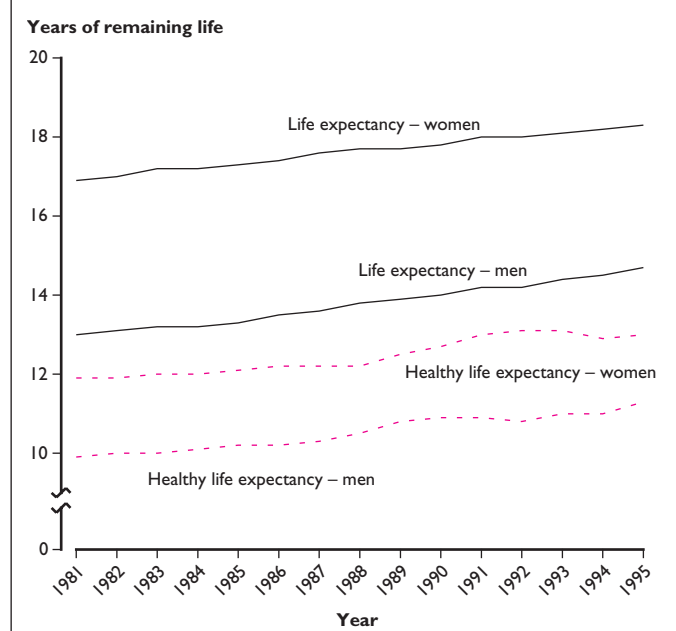
CONCLUSION

Those in the pre-retirement age group can look forward to a longer but not necessarily healthier retirement. It is difficult to find signs of improving health status in this group. Half of them suffer from a range of chronic illnesses. There are also large and dramatic inequalities in all types of illness indicating the potential for improvement. The trends in morbidity and health related behaviour among the 55-64 age group, together with other findings on health expectancy, indicate that the time the older population spends in ill health has increased over the last 15 years.

A key aim of the Government's 'Our Healthier Nation' initiative is "to improve the health of the population as a whole by increasing the length of people's lives and the number of years people spend free from illness".²⁸ Healthy life expectancy is an important measure in this respect. Recent ONS work on HLE in Great Britain and in England will be reported in *Health Statistics Quarterly* later this year. The monitoring of healthy life expectancy will receive increasing attention in future.

There remain a number of uncertainties, such as the extent to which severity of illness is changing or will change, the impact of new technologies on healthcare and on morbidity, and people's changing expectations and perceptions of their health. However it is hoped that the present article will contribute to the discussion of changing patterns of morbidity among the ageing population and their possible effects.

Figure 5 Life expectancy, and life expectancy in good or fairly good general health, men and women aged 65, 1981-95, Great Britain



Key findings

- Mortality since the late 1980s has improved more among the 55-64s than any other age group
- Signs of increasing health problems in this age group are the increased rates of some cancers and obesity
- Signs of little or no change in health problems are self-reported health and high blood pressure
- Signs of improving health are the decreases in smoking and in the incidence of lung cancer, and improved dental health
- Healthy life expectancy for those at age 65 has increased, but not by as much as total life expectancy.

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Death rates from dementias and neurodegenerative disorders in England and Wales and the USA, 1993–97

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The aim of the study was to examine and to compare death rates from dementias and neurodegenerative disorders in people aged 15 years and over in England and Wales and the USA from 1993 to 1997. There has been an increase in death rates from dementias and neurodegenerative disorders in both England and Wales and the USA from 1993 to 1997. The USA showed higher death rates for all dementias and neurodegenerative disorders and also had the largest increase in the death rate from 1993 to 1997. Death rates from dementias and neurodegenerative disorders among people aged 15–34 years showed no increase, and the increase in all dementias and neurodegenerative disorders was mainly due to an increase in rates among the elderly.

INTRODUCTION

Diseases of the brain that lead to a deterioration in intellectual functions and cognition are very important for patients, carers, and society. Medically, such conditions are collectively termed dementias and neurodegenerative disorders. This group of disorders includes many diseases including senile dementia, Alzheimer's disease and Creutzfeldt-Jakob disease. As well as leading to intellectual impairment, such disorders can also affect the personality of an individual and their behaviour.¹ Patients with these disorders often have complex health needs, which can lead to difficulties for both carers and for health and social services. The prevalence of these disorders increases with age and they are rare among the younger age groups.^{2,3} Because of the increasing number of elderly people in the population, and the subsequent increase in the number of people suffering from dementia, primary care and community services will have to care for more patients with dementia in the future.⁴

One cause of dementia is Creutzfeldt-Jakob disease (CJD), which can exist in several forms. In Britain, a new type of CJD, variant CJD, was first reported in 1996.⁵ The new form of CJD differed in many ways from the traditional sporadic form of CJD. In particular, it affected a younger age group than sporadic CJD and is mainly confined to Britain. There is increasing evidence that variant CJD is caused by exposure to the prion that causes bovine spongiform encephalopathy (BSE), a disease that affects the central nervous system of cattle.^{6,7} In 1989, to try to limit the risk of BSE to people, the use of cattle brain and spinal cord for human consumption was banned (the specified bovine offal ban). However, large numbers of people would have been exposed to BSE-infected material before the introduction of the specified bovine offal ban and because of this, there are concerns that Britain may experience a large epidemic of variant CJD. Until now, there has only

been a small increase in the death rate from both sporadic and variant CJD.^{8,9} However, although CJD remains rare, there is enormous public health interest in CJD both in Britain and elsewhere.

Both sporadic and variant Creutzfeldt-Jakob disease are difficult to diagnose and can only be diagnosed with certainty after neuropathological examinations. It is therefore possible that cases of sporadic and variant Creutzfeldt-Jakob disease have occurred in Britain that were not correctly diagnosed because histological examination was not performed.¹⁰ In such cases, patients could have been diagnosed as dying from a different neurological disorder. This would have increased mortality from other dementias and neurodegenerative disorders and led to under-ascertainment of death from Creutzfeldt-Jakob disease in England and Wales.

In this paper, we examine the death rates from dementia and neurodegenerative disorders for men and women aged 15 years and over in England and Wales and the USA from 1993 to 1997. Death rates from dementia have been rising in the UK for many years and a comparison to the USA will help show if this increase is unique to the UK or whether it has also been observed in other countries.

METHODS

The number of deaths for residents of England and Wales from selected dementias and neurodegenerative disorders were obtained from data held by the Office for National Statistics, in people aged 15–34, 35–64, 65–74, 75–84 and 85 years and over during 1993 to 1997. The causes of death selected and their respective codes in the ninth version of the International Classification of Diseases (ICD9), are shown in Box one. The disorders in Box one were selected after discussion with specialists at the UK National CJD Surveillance Unit. The number of deaths for residents in the USA were obtained for the same age groups, time frame and ICD codes from the National Centre for Health Statistics in the USA.

The annual numbers of deaths in each age group in England and Wales and the USA were used together with population estimates for the two countries to calculate age-sex specific death rates for each year and each cause of death between 1993 and 1997. Direct age-standardisation to the European Standard population was used to adjust for any changes in overall death rates within each country and, also, for differences in the age structure in the population of England and Wales and the USA. To enable an easier comparison of the results, the causes of death were grouped into three main categories: senile &

Box one

DEMENTIAS AND NEURODEGENERATIVE DISORDERS: PREFERRED TERMS AND THEIR CORRESPONDING CODES IN THE NINTH REVISION OF THE INTERNATIONAL CLASSIFICATION OF DISEASES (ICD9).

GROUP 1. SENILE & PRESENILE ORGANIC PSYCHOTIC CONDITIONS

290.0	Senile dementia, simple type
290.1	Presenile dementia
290.2	Senile dementia, depressed or paranoid type
290.3	Senile dementia with acute confusional state
290.4	Arteriosclerotic dementia
290.8	Senile dementia, other
290.9	Senile dementia, unspecified
331.2	Senile degeneration of the brain

GROUP 2. ALZHEIMER'S DISEASE

331.0	Alzheimer's disease
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GROUP 3. OTHER DEMENTIAS AND NEURODEGENERATIVE DISORDERS

046	<i>Slow virus infection of central nervous system</i>
046.1	Creutzfeldt-Jakob disease
046.2	Subacute sclerosing panencephalitis
046.3	Progressive multifocal leucoencephalopathy
046.8	Other
046.9	Unspecified
298	<i>Other non-organic psychoses</i>
298.0	Depressive type
298.1	Excitatory type
298.2	Reactive confusion
298.8	Other and unspecified reactive psychosis
298.9	Unspecified psychosis

323	<i>Encephalitis, myelitis and encephalomyelitis</i>
323.5	Encephalitis following immunization procedures
323.8	Encephalitis, myelitis and encephalomyelitis, other
323.9	Encephalitis, myelitis and encephalomyelitis, unspecified
331	<i>Other cerebral degenerations</i>
331.1	Pick's disease
331.3	Communicating hydrocephalus
331.4	Obstructive hydrocephalus
331.8	Other cerebral degeneration
331.9	Other cerebral degeneration, unspecified
333	<i>Other extrapyramidal disease and abnormal movement disorders</i>
333.0	Other degenerative diseases of the basal ganglia
333.1	Essential and other specified forms of tremor
333.2	Myoclonus
333.3	Tics of organic origin
333.4	Huntington's chorea
333.5	Other choreas
333.6	Idiopathic torsion dystonia
333.7	Symptomatic torsion dystonia
333.8	Fragments of torsion dystonia
333.9	Other and unspecified
334	<i>Spinocerebellar disease</i>
334.0	Friedreich's ataxia
334.1	Hereditary spastic paraplegia
334.2	Primary cerebellar degeneration
334.3	Other cerebellar ataxia
334.8	Other
334.9	Unspecified

presenile organic psychotic conditions (ICD9 290 & 331.2); Alzheimer's disease (ICD9 331.0); and all other dementias and neurodegenerative disorders. No tests of statistical significance were carried out because with the size of the populations being studied (around 50 million in England and Wales and 250 million in the USA) even very small differences in rates would be highly statistically significant.

RESULTS

Senile & pre-senile organic psychotic conditions

England and Wales

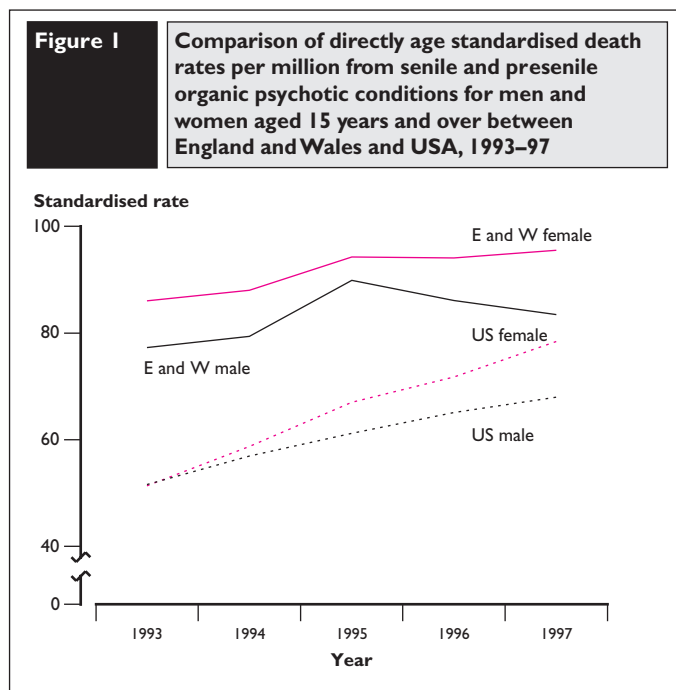
The number of deaths from senile & pre-senile organic psychotic conditions in people aged 15 years and over in England and Wales increased by 19% from 5,683 in 1993 to 6,745 in 1997. Age-standardised death rates increased by 9% during the same time period from 85 to 93 per million. The number of deaths in men increased by 19% from 1,637 to 1,953. The number of deaths in women increased by 18% from 4,046 to 4,792. Age-standardised death rates increased by 9%, from 77 to 84 per million in men, and by 12%, from 86 to 96 per million in women.

USA

The number of deaths from senile & pre-senile organic psychotic conditions in people aged 15 years and over in the USA increased by 61% from 13,714 in 1993 to 22,100 in 1997. Age-standardised death rates increased by 46% during the same time period from 52 to 76 per million. The number of deaths in men increased by 49% from 4,527 to 6,752. The number of deaths in women increased by 67% from 9,187 to 15,348. Age-standardised death rates increased by 31%, from 52 to 68 per million in men and by 53%, from 51 to 78 per million in women.

Comparison between England and Wales and USA

Women from England and Wales had the highest death rates from senile & pre-senile organic psychotic conditions during the 5 year period from 1993 – 97 (Figure 1). Men from England and Wales had the second highest rate, followed by US-women, and US-men showed the lowest death rate during 1993 – 97. However, women from the USA showed the largest increase in the death rate from senile and pre-senile organic psychotic conditions, followed by US-men compared to a smaller increase in the death rate shown by women from England and Wales. Men from England and Wales showed a big increase from 1994 to a peak in 1995, but decreased after that until 1997.



Alzheimer's disease

England and Wales

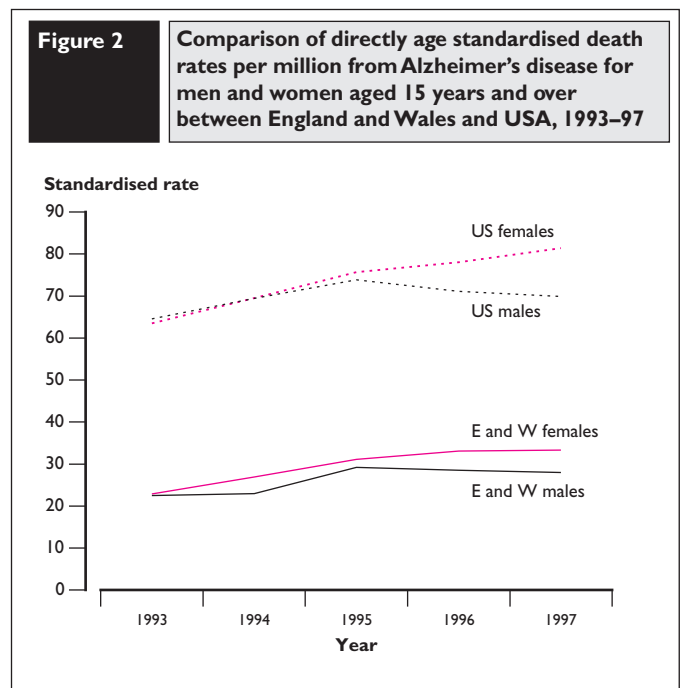
The number of deaths from Alzheimer's disease in people aged 15 and over in England and Wales increased by 48% from 1,473 in 1993 to 2,185 in 1997. Age-standardised death rates increased by 38% during the same time period from 23 to 31 per million. The number of deaths in men increased by 36% from 488 to 664. The number of deaths in women increased by 54% from 985 to 1,521. Age-standardised death rates increased by 24%, from 23 to 28 per million in men, and by 45%, from 23 to 33 per million in women.

USA

The number of deaths from Alzheimer's disease in people aged 15 years and over in the USA increased by 34% from 16,753 in 1993 to 22,473 in 1997. Age-standardised death rates increased by 21% during the same time period from 64 to 78 per million. The number of deaths in men increased by 21% from 5,820 to 7,036. The number of deaths in women increased by 41% from 10,933 to 15,437. Age-standardised death rates increased by 9%, from 65 to 70 per million in men, and by 28%, from 64 to 81 per million in women. This increase occurred mainly during 1993 to 1995, and from 1995 onwards, rates were relatively stable.

Comparison between England and Wales and USA

Death rates from Alzheimer's disease were much higher in the USA than in England and Wales between 1993 and 1997 (Figure 2). Women from the USA showed the highest death rates, followed closely by US-men. Women from England and Wales had constantly higher death rates than men from England and Wales and they also had the largest increase in the death rate from Alzheimer's disease from 1993 to 1997. Men from England and Wales had the lowest death rates.



Other dementias and neurodegenerative disorders

England and Wales

The number of deaths from other dementias and neurodegenerative disorders in people aged 15 years and over in England and Wales increased by 24% from 1,786 in 1993 to 2,216 in 1997. Age-standardised death rates increased by 17% during the same time period from 30 to 35 per million. The number of deaths in men increased by 25% from 665 to 830. The number of deaths in women increased by

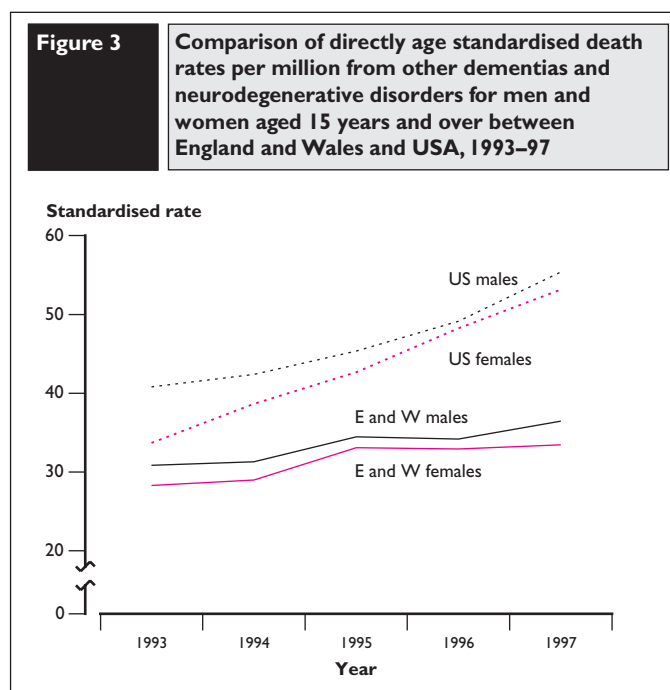
23%, from 1,131 to 1,386. Age-standardised death rates increased by 17%, from 31 to 36 per million in men, and by 20%, from 28 to 34 per million in women.

USA

The number of deaths from other dementias and neurodegenerative disorders in people aged 15 years and over in the USA increased by 68% from 9,124 in 1993 to 15,295 in 1997. Age-standardised death rates increased by 49% during the same time period from 37 to 55 per million. The number of deaths in men increased by 51%, from 3,642 to 5,482. The number of deaths in women increased by 79%, from 5,482 to 9,813. Age-standardised death rates increased by 35%, from 41 to 55 per million in men, and by 57%, from 34 to 53 per million in women.

Comparison between England and Wales and the USA

Death rates from other dementias and neurodegenerative disorders were higher in the USA than in England and Wales between 1993 and 1997 (Figure 3). US-men had the highest death rates from 1993 till 1997, followed by US-women. Women from the USA showed the largest increase in the death rates during that 5-year period. Men and women from England and Wales showed low death rates during that time period and also had very small increases in the death rate from 1993 to 1997 from other dementias and neurodegenerative disorders.



All dementias and neurodegenerative disorders

England and Wales

The number of deaths from all dementias and neurodegenerative disorders in people aged 15 years and over in England and Wales increased by 25% from 8,942 in 1993 to 11,146 in 1997. Age-standardised death rates increased by 16% from 137 to 159 per million. The number of deaths in men increased by 24%, from 2,780 to 3,447. The number of deaths in women increased by 25%, from 6,162 to 7,699. Age-standardised death rates increased by 13%, from 131 to 148 per million in men, and by 18%, from 137 to 162 per million in women.

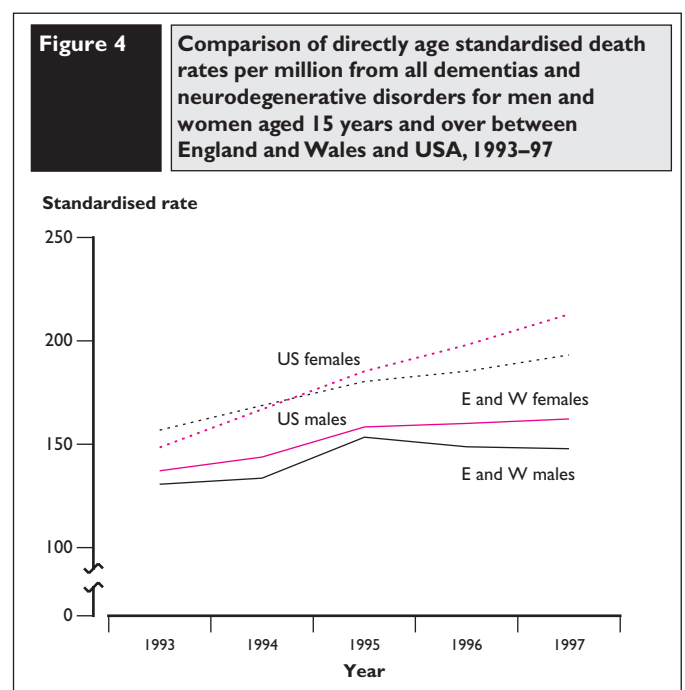
USA

The number of deaths from all dementias and neurodegenerative disorders in people aged 15 years and over in the USA increased by 51% from 39,591 in 1993 to 59,868 in 1997. Age-standardised death

rates increased by 36% from 153 to 208 per million. The number of deaths in men increased by 38% from 13,989 to 19,270. The number of deaths in women increased by 59% from 25,602 to 40,598. Age-standardised death rates increased by 23% from 157 to 193 per million in men and by 43% from 149 to 213 per million in women.

Comparison between England and Wales and USA

The USA had higher death rates than England and Wales during the entire 5-year period from 1993 to 1997 (Figure 4). The USA also showed a larger increase in death rates from 1993 to 1997. US-women had the highest death rates from 1994 until 1997. Women from the USA also showed the largest increase in the death rate between 1993 and 1997. US-men had the second highest death rate, except in 1993 when they showed the highest death rate. Women from England and Wales had lower death rates than both US men and women during the entire time period, and men from England and Wales had the lowest death rates between 1993 and 1997.



There were large differences in the death rates for both men and women in England and Wales and the USA between the different age groups (Table 1) and, as expected, death rates increased in the older age groups. Among 15 to 34 year olds, England and Wales had a higher death rate during 1993 to 1997 than the USA (Figure 5). However, there was no evidence of any increase in death rates among this age group from the selected neurological disorders examined in either the USA or England and Wales.

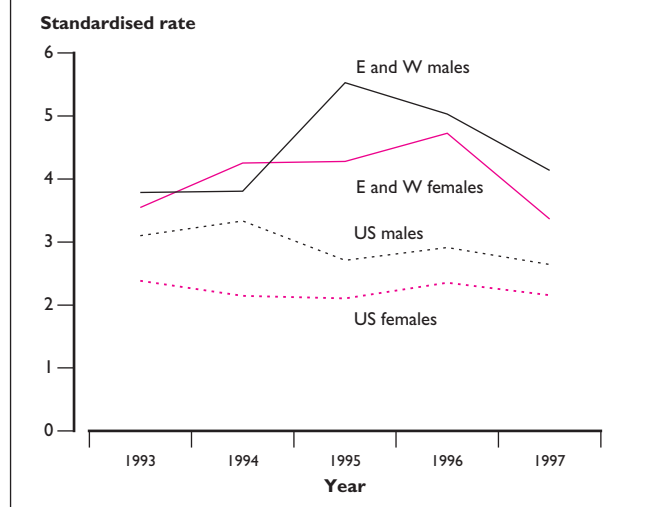
DISCUSSION

The study has shown that there has been an increase in death rates from dementia and neurodegenerative disorders in England and Wales and in the USA from 1993 to 1997. Overall, the USA showed higher death rates from all dementias and neurodegenerative disorders during the entire 5 year period from 1993 to 1997 than England and Wales. The USA also showed the largest increase in the death rates. The death rates from all dementias and neurodegenerative disorders increased by 16% in England and Wales, and by 36% in the USA from 1993 to 1997. However, when analysed by age groups, men and women in England and Wales showed higher death rates for all dementias and neurodegenerative disorders among 15-34 year olds. Although 15-34 year old men and women from England and Wales experienced a

Table 1 Age- and sex-specific death rates per 100,000 from all dementias and neurodegenerative disorders for women and men aged 15 years and over in England and Wales and the USA, 1993-97

	15-34		35-64		65-74		75-84		85 and over	
	F	M	F	M	F	M	F	M	F	M
England and Wales										
1993	0.35	0.38	1.27	2.03	17.54	20.94	120.20	118.27	526.98	427.99
1994	0.43	0.38	1.81	1.84	18.93	21.96	127.81	123.92	524.11	434.25
1995	0.43	0.55	1.71	2.15	20.67	25.17	136.34	138.30	603.73	506.87
1996	0.47	0.50	1.71	1.81	21.39	23.45	144.13	136.08	587.01	503.42
1997	0.34	0.41	1.69	1.82	21.15	22.17	138.51	132.88	626.81	517.07
USA										
1993	0.24	0.31	1.37	1.73	18.28	25.44	123.70	145.40	599.12	533.73
1994	0.21	0.33	1.40	1.81	21.92	26.91	137.35	151.78	675.44	592.54
1995	0.21	0.27	1.62	1.73	22.77	27.39	154.46	165.48	753.62	643.74
1996	0.24	0.29	1.57	1.78	23.54	28.40	161.50	169.13	827.25	662.39
1997	0.22	0.26	1.48	1.78	24.89	28.61	170.41	174.21	911.85	708.06

Figure 5 Comparison of directly age standardised death rates per million from all dementias and neurodegenerative disorders for men and women aged 15-34 years, between England and Wales and the USA, 1993-97



decrease in the death rates from 1995 for men and from 1996 for women until 1997, the death rate in this age group was still higher in England and Wales from 1993 to 1997 than in the USA.

People in England and Wales had constantly higher death rates from senile and pre-senile organic psychotic conditions than people in the USA during 1993 to 1997. However, women and men from USA showed consistently higher death rates from Alzheimer's disease and from other dementias and neurodegenerative disorders. This finding seems to imply that in England and Wales conditions that are coded to senile and pre-senile organic psychotic conditions are more widely used when diagnosing the cause of a dementia death, whereas in the USA more doctors certified Alzheimer's disease or other dementias and neurodegenerative disorders as the cause of death. The findings may be due to differences in the two health care systems, as a definite diagnoses of Alzheimer's disease can only be made after post-mortem or neuropathological examination of brain samples. The American health care system uses more neuropathological investigations and this may therefore result in more people who suffered from dementia being diagnosed as having died of Alzheimer's disease.^{10,11,12,13,14,15}

Alzheimer's disease is the most prevalent form of dementia. It affects about 57% - 88% of all cases of dementia in people aged 75 years and over.¹⁶ Like the other dementia related illnesses, the incidence of Alzheimer's disease increases with age.^{17,18} Death rates will underestimate the burden of disease caused by diseases such as dementia. Studies that estimate the prevalence of dementia might be better in estimating the burden of disease. However, prevalence studies might offer very different estimates of the burden of disease, depending on the diagnostic criteria used to diagnose dementia.¹⁹

Women had slightly higher death rates than men for senile & pre-senile organic psychotic conditions and for Alzheimer's disease. Men showed higher death rates for other dementias and neurodegenerative disorders. For all dementias and neurodegenerative disorders, women also had the higher death rates. However, sex differences in death rates were generally not very large in this study. As expected, there was a marked increase in the death rates with increasing age. This is the case for every category of disease and for both, men and women, from England and Wales and from the USA.

It is difficult to draw conclusions about trends over time in the incidence of dementia from mortality data. Age-standardised death rates increased between 1993 and 1997 in England and Wales and in the USA, but it is not clear whether this was due to a true increase in incidence, or to a greater recording of dementias and neurodegenerative disorders on death certificates by doctors, or to a combination of both. However, there is no evidence that the death rates in England and Wales are increasing at a faster rate than in the USA.

Dementia and neurodegenerative disorders have a different impact on health and social services when they occur in a young person than in an elderly person. Young people are also more likely than the elderly people to have a post-mortem or neuropathological examination after a dementia-related death. The diagnosis of a certain dementia at death in a young person is therefore more likely to be a true diagnosis and a representation of the true incidence of dementia in young persons. A recent study on misclassification at death of CJD in England from 1979 to 1996 showed that there were no undetected cases of CJD found in people aged 15-44, who had died of a dementia or a neurodegenerative disorder.²⁰ This implies that surveillance and histological examination in the younger age-groups was good, and that CJD in this age-group had not been missed or misclassified. The likelihood of a histological examination of brain tissue or a post-mortem being carried out in a young person that suffered from dementia or a neurodegenerative disorder is much higher than the same examination being carried out on

an older person.¹⁰ Therefore it is more likely that cases of dementia and neurodegenerative disorders may have been missed or misclassified among the elderly.

Further monitoring of dementia trends in England and Wales, as well as further comparisons of dementia death rates between England and Wales and other countries will be important for health and social service providers, and also for an early detection of a possible epidemic of variant CJD.

Key findings

- Age-standardised death rates from dementias and neurodegenerative disorders increased in both the USA and England and Wales from 1993 to 1997. However, there was no evidence that rates were increasing more quickly in England and Wales than in the USA.
- Except among people aged 15–34 years, death rates from dementias and neurodegenerative disorders were higher in the USA than in England and Wales.
- England and Wales had a higher death rate from senile & pre-senile organic psychotic conditions than the USA.
- The USA had a much higher death rate from Alzheimer's disease than England and Wales.

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Recording of births and deaths in the countries of the United Kingdom

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This paper provides a summary of the various definitions and procedures used in the registration of births and deaths in the United Kingdom. It is based on information supplied by the three offices handling vital registration data, namely the Office for National Statistics (for England and Wales), the General Register Office (Scotland), and the General Register Office (Northern Ireland). A brief commentary is given on some differences in practice between the three areas, which often arise from their differing legal and administrative environments.

INTRODUCTION

This paper compares the main features of birth and death registration by the Registrars General of England and Wales, Scotland and Northern Ireland. The material is presented (in Table 1) so as to highlight key similarities and differences across the countries of the United Kingdom (excluding the Channel Islands and the Isle of Man), and not to identify minor variation. More information may be obtained from the enquiry points listed at the end of the paper, or from other sources^{1,2,3}.

BIRTHS

In most respects the three General Register Offices use similar definitions and procedures for registering live births. One variation is in the time allowed to register a birth. In Scotland it is only 21 days, compared to 42 days elsewhere. In England and Wales very few births are registered after 42 days, and most of these are re-registrations. Related to this are differences in the definitions used for published annual data. For England and Wales tables are compiled based mainly on births occurring in the data year, while Scotland and Northern Ireland use births registered in the year. The annual births dataset for England and Wales is based on a cutoff date of 11 February of the following year, equivalent to the 42 days legally allowed. Thus, births occurring in a particular year are included if they are registered by 11 February of the following year. Births registered later than this are included in the annual dataset corresponding to the year of registration⁴.

There are some differences in the information recorded at registration. In general, rather more information is collected in Scotland than in Northern Ireland and England and Wales, such as details of mother's marital status, and of the country of residence of both parents. However, birthweight is recorded at registration only in England and

Wales. The information is collected by the midwife or doctor in attendance, and then sent to the local health authority, who subsequently supply the data to a registrar.

The Population Statistics Acts of 1938 and 1960 apply to England and Wales and Scotland. Under this legislation certain items of information must be provided at registration but are not entered in the public record, and may only be used for statistical purposes by the Registrars General. The items include details for currently married women, such as mother's date of birth and her fertility history within marriage. In Northern Ireland similar additional confidential information is collected under the Registration (Births, Stillbirths and Deaths) Regulation (NI) of 1973.

The treatment of births to mothers not usually resident in the country where they gave birth also varies. In England and Wales these births are not included in figures for sub-national areas such as local and health authorities, but are included in aggregate totals for the country. In Scotland and Northern Ireland however they are included in the area in which they occur, and thus also in national aggregates^{5,6}.

For stillbirths, the information collected is uniform across the United Kingdom, except that in Northern Ireland there is no record of whether a post mortem was carried out. Data on conceptions - requiring information on live births, stillbirths and abortions - have been produced for England and Wales since 1969, but are not available for either Scotland or Northern Ireland.

DEATHS

Throughout the United Kingdom the majority of deaths are certified and registered using a simple and standard procedure¹. The certifying doctor provides a medical certificate of cause of death, which is then taken to a local registrar who completes the registration details using information supplied by the informant. The latter is the person providing information, whose qualifications are set out in Table 1. These qualifications are consistent across the UK, except that in Scotland there is no provision for the informant to be the person causing the disposal of the deceased's body.

On the details collected at registration, duration of illness of the deceased is collected in all countries except Northern Ireland, while the fact of whether the death was related to a pregnancy is collected only in Scotland. A question asked only in England and Wales is whether the deceased's employment was related to the cause of death, but in practice this has yielded little usable information⁷. There are also significant variations in the detail collected on the spouse of deceased, for those who were married. No information is collected on surviving spouse in Northern Ireland, while in England and Wales particulars are recorded on husband's occupation (where the deceased was a married woman or a widow). In Scotland the number of surviving spouses are recorded, together with their details, including for the last or only spouse the industry and employment status.

On death registrations the information required by the Population Statistics Acts (noted above) is the deceased's marital status and the date of birth of any surviving spouse. This applies only in England and Wales, and Scotland. As for births, these items of information are not

on the public record, and may be used by the Registrar General for statistical purposes only.

In England and Wales a neonatal death certificate is used for deaths occurring within the first 28 days of life. Introduced in 1986, in line with WHO recommendations, it allows entry of relevant medical conditions for both mother and child. As a result it is not possible to assign an underlying cause for neonatal deaths. No such certificate is used in either Northern Ireland or Scotland.

The time allowed to register a death varies - eight days in Scotland, and five days elsewhere, although the latter may be extended if the death is referred to a coroner³. The practices for publishing annual mortality data vary as for births, with published figures for England and Wales based on deaths occurring in a year, while in Scotland and Northern Ireland the base is deaths registered in a year. For England and Wales this means that annual deaths information is available some months after the end of the year, to include the majority of all relevant death occurrences, whenever registered⁸.

The statistics on deaths for which the deceased was not usually resident in the country where they died varies across the UK. In England and Wales these deaths are not included in figures for sub-national areas such as local and health authorities, but are included in aggregate totals for the country. In Scotland and Northern Ireland however these deaths are included in the area in which they occur, and thus also in national aggregates.

For a proportion of deaths it is necessary to refer the case to a coroner (in England and Wales, and in Northern Ireland), or the Procurator Fiscal (in Scotland). The reasons for referral vary widely³. However in practice there may be little difference between the countries as to which deaths are referred, since some grounds can be interpreted quite widely. In Northern Ireland there are only five (broad) grounds for referral, in Scotland 21, while in England and Wales there are 10. However, those specified in Northern Ireland include a range of circumstances covered more specifically elsewhere - for instance, a death by 'unfair means'. Other specific reasons omitted in Northern Ireland are neglect, suicides, abortion, and deaths in police custody. In Scotland a number of specific grounds are listed that are not used elsewhere. These include food poisoning, notifiable infectious disease, unknown residence, and deaths of infants.

What then happens to the case may vary widely, according to the circumstances. In England and Wales the coroner may refer the death back to the registrar if it is considered that no further investigation is needed. If investigation is required, there may follow a post mortem and/or inquest, the second of which may be adjourned if legal proceedings are initiated. The practice in Northern Ireland is similar. In Scotland the Procurator Fiscal investigates the death further and may hold an inquiry.

ACKNOWLEDGEMENTS

Thanks are due to Stanley Campbell (GRO (Northern Ireland)) and to Ian Brown (GRO (Scotland)) for their considerable help in compiling Table 1; also to colleagues in ONS Registration Division for their informed assistance.

Table 1 Recording of births and deaths in the countries of the United Kingdom

England and Wales	Northern Ireland	Scotland
BIRTHS		
Time allowed to register a birth		
Within 42 days	Within 42 days	Within 21 days
Qualified informants		
<ul style="list-style-type: none"> • Mother, and father if parents married • Any person present at the birth • Any person having charge of the child • Occupier of house in which the child was born 	<ul style="list-style-type: none"> • Mother, and father if parents married • Any grandmother/grandfather/aunt/uncle of the child who has a knowledge of the birth • Any person present at the birth • Any person having charge of the child • Occupier of the premises in which the child was born 	<ul style="list-style-type: none"> • Father or mother • Any relative of either parent with a knowledge of the child • Any person present at the birth • Any person having charge of the child • Occupier of the premises in which the child was born
Particulars collected		
<i>For the child:</i>		
<ul style="list-style-type: none"> • name and surname • sex • date of birth • place of birth 	<ul style="list-style-type: none"> • forename and surname • sex • date of birth • place of birth • District Council of birth 	<ul style="list-style-type: none"> • forename(s) and surname • sex • when born (date and time) • where born (includes postcode and institution code) • whether a foundling
<i>For the mother:</i>		
<ul style="list-style-type: none"> • name and surname • maiden surname • surname at marriage • place of birth • occupation • industry/employment status* • date of birth† • usual address (if different to place of birth of child) 	<ul style="list-style-type: none"> • name and surname • maiden surname • surname at marriage • place of birth • occupation (collected since 1997) • industry/employment status • date of birth † • address, with postcode 	<p><i>(if known)</i></p> <ul style="list-style-type: none"> • forename(s) and surname • maiden surname • country of birth • occupation • industry/employment status • date of birth† • marital status • usual address (if different to birthplace of child) • country of residence
<i>For the father:</i>		
<ul style="list-style-type: none"> • name and surname • place of birth • occupation • industry/employment status* • date of birth† • usual address (if different to that of mother) 	<ul style="list-style-type: none"> • name and surname • place of birth • occupation • employment status • date of birth † • usual address (if a joint registration) 	<p><i>(If known)</i></p> <ul style="list-style-type: none"> • forename(s) and surname • country of birth • occupation • industry/employment status • date of birth† • usual residence (at time of birth) • country of residence
<i>For the informant:</i>		
<ul style="list-style-type: none"> • name and surname • address • qualification 	<ul style="list-style-type: none"> • signature • address • qualification 	<ul style="list-style-type: none"> • signature and transcription • address • relationship to child
<i>Other particulars</i>		
<ul style="list-style-type: none"> • Date of registration • Registration district and sub-district of birth • Registrar's signature • Local authority • Birthweight* • Postcode of usual address* 	<ul style="list-style-type: none"> • Date of registration • Registration reference number • Registrar's signature • Local government district • whether more than one marriage (mother) ** • number of children previously born to mother ** 	<ul style="list-style-type: none"> • Date of registration • Registration district and entry number • Registrar's signature • Whether parents married • whether mother previously married† • number of previous children (live births/stillbirths/total)†
<i>If parents married:</i>		
<ul style="list-style-type: none"> • date of marriage† 	<ul style="list-style-type: none"> • date and place of marriage † • length of marriage † 	<ul style="list-style-type: none"> • date and place of marriage†
<ul style="list-style-type: none"> • whether mother was married previously† • number of children previously born to mother† 	<ul style="list-style-type: none"> • whether more than one marriage (mother) ** • number of children previously born to mother ** 	<ul style="list-style-type: none"> • whether mother previously married† • number of previous children (live births/stillbirths/total)†

* details collected for statistical purposes only, and not entered in the register.

† details collected under the Population Statistics Acts 1938 and 1960 (for England and Wales, and Scotland) or under the Registration Regulations (NI) 1973 (for Northern Ireland).

Table 1
continued

Recording of births and deaths in the countries of the United Kingdom

England and Wales	Northern Ireland	Scotland
BIRTHS - continued		
<p>Multiple maternities:</p> <ul style="list-style-type: none"> • Whether a multiple maternity* • Total number of births recorded* • Number of live births and number of stillbirths* 	<p>Multiple maternities:</p> <ul style="list-style-type: none"> • Whether a multiple maternity • Total number of births recorded † • Number of live births and number of stillbirths † 	<ul style="list-style-type: none"> • Indicator for multiple births • Related entry number
Restrictions on release of information		
<p>Certain particulars are collected under the Population Statistics Acts - see footnote. These details are confidential and collected for statistical purposes only, but are not entered in the register.</p>	<p>No information is divulged that may identify any Person. Certain confidential particulars are collected under the registration legislation, but are not entered in the register.</p>	<p>Certain particulars are collected under the Population Statistics Acts - see footnote. These details are confidential and collected for statistical purposes only, but are not entered in the register.</p>
<p>Statistical information may be supplied on individual births, subject to an undertaking of confidentiality</p>	<p>Statistical information may be supplied on individual births subject to an undertaking of confidentiality</p>	<p>Individual identifiable information is provided only in specific instances, and subject to confidentiality undertakings</p>
Non-resident mothers		
<p>If the mother was usually resident outside England and Wales, the birth is included in any aggregate for England and Wales, but excluded from the figures for sub-national areas</p>	<p>Births to non-resident mothers are allocated to the District Council in which the birth occurred, and are included in total numbers for Northern Ireland.</p>	<p>Births to non-resident mothers are registered in the district in which the birth took place, and are included in total numbers for Scotland.</p>
Other information		
<p>Definition of areas stillbirth changed in 1992 from a baby showing no sign of life after 28 completed weeks gestation, to 24 weeks</p>	<p>Definition of stillbirth changed in 1992 from a baby showing no sign of life after 28 completed weeks gestation, to 24 weeks</p>	<p>Definition of stillbirth changed in 1992 from a baby showing no sign of life after 28 completed weeks gestation, to 24 weeks</p>
<p>Data on conceptions (Live births and stillbirths, and legal abortions) have been produced since 1969.</p>		
Legislation		
<p>Births and Deaths Registration Act 1953 Population Statistics Acts 1938 and 1960</p>	<p>Births and Deaths Registration (Northern Ireland) Order 1976 Registration (Births, Stillbirth and Deaths) Regulations (NI) 1973</p>	<p>Registration of Births, Deaths and Marriages (Scotland) Act 1965 Population Statistics Acts 1938 and 1960</p>
Tabulations		
<p>Published annual statistics include births occurring in a particular year and registered by 11 February of the following year</p>	<p>Statistics are published by year of registration and district of usual residence, but can be produced by year or place of occurrence on request.</p>	<p>Published data are based on date of registration but can be produced by date of occurrence on request</p>
Stillbirths		
<p>As for live births, but with additional details on:</p> <ul style="list-style-type: none"> • cause of death, and evidence for stillbirth • duration of pregnancy • weight of foetus • whether a post mortem carried out 	<ul style="list-style-type: none"> • cause of death • duration of pregnancy • weight of foetus 	<p>As for live births (except that whether a foundling omitted), but with additional details on:</p> <ul style="list-style-type: none"> • cause or probable cause of death • duration of pregnancy • weight of foetus • whether a post mortem carried out • name and address of certifying doctor or midwife • whether certifier present or not

* details collected for statistical purposes only, and not entered in the register.

† details collected under the Population Statistics Acts 1938 and 1960 (for England and Wales, and Scotland) or under the Registration Regulations (NI) 1973 (for Northern Ireland).

Table 1
continued

Recording of births and deaths in the countries of the United Kingdom

England and Wales	Northern Ireland	Scotland
DEATHS		
Time allowed to register a death		
Within five days of death, but can be extended to fourteen days regardless of coroner involvement, provided the registrar is sent notification of the death	Within five days of occurrence, but this may be extended to fourteen days	Within eight days from the date of the death
Ways of registering a death		
<ul style="list-style-type: none"> • By a qualified informant on production of a medical certificate of cause of death, properly completed by a medical practitioner • By a qualified informant after a coroner’s notification to the registrar that he/she does not consider it necessary to hold an inquest; a coroner’s post mortem may or may not have been held (Forms 100B and A respectively) • By the registrar on receipt of a coroner’s certificate after inquest (Form 99(REV) A and B) • By the registrar on receipt of a coroner’s certificate after inquest adjourned (Form 120A and B) • On the authority of the Registrar General 	<ul style="list-style-type: none"> • By a qualified informant on production of a medical certificate of cause of death, properly completed by a medical practitioner • By a qualified informant after the registrar has received from the coroner a coroner’s statement (Form 14) or a coroner’s certificate (Form 17) • By the registrar on receipt of a coroner’s certificate after inquest (Form 21) On the authority of the Registrar General 	<ul style="list-style-type: none"> • By a qualified informant on production of a medical certificate of cause of death, properly completed by a medical practitioner • By a qualified informant after the registrar receives a Form 49D from the Procurator Fiscal • On the authority of the Registrar General
Where should the death be registered?		
In the registration district in which the death occurred; information may be given by declaration in a district of choice, but the death is not registered there.	In the district where the death occurred or in the district of usual residence	In the district where the death occurred, or in the district where the deceased usually resided
Who may register the death?		
<ul style="list-style-type: none"> • A relative of the deceased • A person present at the death • The occupier or inmate of the house, if he/she knows of the happening of the death • The person causing the disposal of the body • The executor or administrator of the deceased’s estate, if acting in the capacity of ‘causing disposal’ • Where a dead body is found: <ul style="list-style-type: none"> • the person who found the body • the person in charge of the body • a relative or person present at the death 	<ul style="list-style-type: none"> • Any relative of the deceased • Any person present at the death • Occupier of premises where the death occurred • The person procuring the disposal of the body • The executor or administrator of the deceased’s estate • the person finding the body • the person who took charge of the body 	<ul style="list-style-type: none"> • Any relative of the deceased • Any person present at the death • Occupier of premises where the death took place • The executor or other legal representative of the deceased • Any other person having knowledge of the particulars to be registered
Particulars collected		
<i>For the deceased:</i>		
<ul style="list-style-type: none"> • name and surname, and any other names by which the deceased was known, including maiden surname • sex • date of death • place of death 	<ul style="list-style-type: none"> • name and surname • maiden surname • sex • date of death • place of death 	<ul style="list-style-type: none"> • forename(s) and surname • sex • date of death (including time) • where died (including postcode, institution name and code, and length of residence)

* details collected for statistical purposes only, and not entered in the register.

† details collected under the Population Statistics Acts 1938 and 1960 (for England and Wales, and Scotland) or under the Registration Regulations (NI) 1973 (for Northern Ireland).

Table 1
continued

Recording of births and deaths in the countries of the United Kingdom

England and Wales	Northern Ireland	Scotland
DEATHS - continued		
<ul style="list-style-type: none"> • type of institution*, and • length of stay in institution* • usual address 	<ul style="list-style-type: none"> • usual address 	<ul style="list-style-type: none"> • usual residence (if different from place of death) • country of residence • former residence • †marital status
<ul style="list-style-type: none"> • marital status†, and • date of birth of surviving spouse† • date and place of birth • age* 	<ul style="list-style-type: none"> • marital status • date and place of birth 	<ul style="list-style-type: none"> • date of birth, and country of birth • age
<ul style="list-style-type: none"> • cause of death • duration of illness* • confirmation by post mortem* • whether body seen after death* • date deceased last seen alive* • whether additional information available later* • whether referred to coroner* 	<ul style="list-style-type: none"> • cause of death • confirmation by post mortem* • whether body seen after death* • whether additional information available later* • whether referred to coroner* 	<ul style="list-style-type: none"> • cause(s) of death • post mortem • whether body seen after death (maternal death) • additional information later • whether Procurator Fiscal informed • whether found dead
<ul style="list-style-type: none"> • whether employment contributed to death* 		<ul style="list-style-type: none"> • number of spouses • names and occupations of spouses • Industry and employment status of last or only spouse
<i>On economic activity:</i>		
<i>If the deceased was male and aged 16 or over:</i>		
<ul style="list-style-type: none"> • occupation • industry/employment status* 	<ul style="list-style-type: none"> • occupation • Industry/employment status 	<ul style="list-style-type: none"> • occupation • industry/employment status
<i>If the deceased was a married female or a widow, aged 16 or over:</i>		
<ul style="list-style-type: none"> • Her own occupation • Name of husband or deceased husband • Occupation of husband or deceased husband • Industry/employment status of husband or deceased husband* 	<ul style="list-style-type: none"> • Name of husband or deceased husband • Occupation of husband or deceased husband • Industry/employment status of husband or deceased husband 	<ul style="list-style-type: none"> • Her own occupation • Name of husband or deceased husband • Occupation of husband or deceased husband • Industry/employment status of husband or deceased husband
<i>If the deceased was a divorced female or a single female aged 16 or over:</i>		
<ul style="list-style-type: none"> • Her own occupation • Her own industry/employment status* 	<ul style="list-style-type: none"> • Her own occupation • Her own industry/employment status* 	<ul style="list-style-type: none"> • Her own occupation • Her own industry/employment status*
<i>If the deceased was a child aged under 16:</i>		
<ul style="list-style-type: none"> • Name and surname of father • Occupation of father • Industry/employment status of father* 	<ul style="list-style-type: none"> • Name of father • Occupation of father • Industry/employment status of father 	<ul style="list-style-type: none"> • Forenames and surname of father • Occupation of father • Industry/employment status of father • Parent annotation
<ul style="list-style-type: none"> • Name and surname of mother • Occupation of mother • Industry/employment status of mother* 	<ul style="list-style-type: none"> • Name of mother (if child illegitimate) • Occupation of mother (if child illegitimate) • Industry/employment status of mother (if child illegitimate) 	<ul style="list-style-type: none"> • Forenames and surname of mother • Occupation of mother • Industry/employment status of mother • Parent annotation
<i>For the informant:</i>		
<ul style="list-style-type: none"> • qualification • address 	<ul style="list-style-type: none"> • qualification: • address • signature 	<ul style="list-style-type: none"> • relationship to deceased • Name • address
<ul style="list-style-type: none"> • Date of registration 	<ul style="list-style-type: none"> • Date of registration 	<ul style="list-style-type: none"> • Date of registration • registration district and entry number

* details collected for statistical purposes only, and not entered in the register.

† details collected under the Population Statistics Acts 1938 and 1960 (for England and Wales, and Scotland) or under the Registration Regulations (NI) 1973 (for Northern Ireland).

**Table 1
continued**

Recording of births and deaths in the countries of the United Kingdom

England and Wales	Northern Ireland	Scotland
Deaths - continued		
<i>Regarding the certifier:</i>		
<ul style="list-style-type: none"> • Signature • Qualifications • Residence 		<ul style="list-style-type: none"> • Name and address of certifying doctor
Confidentiality restrictions		
<p>Certain particulars are collected under the Population Statistics Acts - see footnote. These details are confidential and collected for statistical purposes only, but are not entered in the register.</p>	<p>No information is divulged that may identify any person</p>	<p>Certain particulars are collected under the Population Statistics Acts - see footnote. These details are confidential and collected for statistical purposes only, but are not entered in the register.</p>
<p>Information regarding cause of death may be supplied to ONS in confidence after registration</p>	<p>Information on individual deaths which includes restricted details is supplied only after a declaration of confidentiality has been completed. Information regarding cause of death may be supplied to GRO(NI) in confidence after registration</p>	<p>Individual identifiable information provided in specific instances and subject to confidentiality restrictions</p> <ul style="list-style-type: none"> • Name of consultant • Own doctor name and address
Non-residents		
<p>If deceased was normally resident outside England and Wales, the death is included in overall E&W statistics but excluded from figures for individual regions or areas</p>	<p>Deaths of non-residents of NI are allocated to the District Council in which the death occurred, and are included in overall figures for Northern Ireland.</p>	<p>Deaths of non-residents are registered in the district in which the death took place, and are included in overall figures for Scotland.</p>
Tabulations		
<p>Statistics published by year of occurrence and area of usual residence of deceased. Statistics also issued by year of registration for users requiring earlier release of data.</p>	<p>Statistics published by date of registration, and by district of usual residence of deceased. Can be provided by year of occurrence and district of occurrence, if required.</p>	<p>Published data by date of registration, but can be provided by date of occurrence if required</p>
Neonatal deaths		
<p>Treated as for non-neonatal deaths, but a separate medical certificate of cause of death is used, which requires both maternal and foetal conditions. Neonatal deaths by cause are not included in general mortality statistics.</p>	<p>Treated as for non-neonatal deaths.</p>	<p>Treated as for non-neonatal deaths, with a link to the birth record, and cause coded as for other deaths</p>
Medical enquiries		
<p>Up to 1992 certifying doctors were asked for further information when one of a standard list of vague terms, diseases and conditions were found on a death certificate</p>	<p>Doctors may be contacted in order to obtain clarification of causes of death</p>	<p>Medical enquiries conducted for specific conditions where further additional information is expected to be available, and the provision of this information would be likely to lead to a more accurate coding of the cause of death</p>
<p>Enquiries are sent by the registrar when certifier indicates that further information may be available later. Enquiry to coroner if no verdict stated on certificate after inquest</p>	<p>Enquiries are sent by GRO (NI) when certifier indicates that further information may be available later.</p>	
When should the death be referred elsewhere?		
<p>To a coroner if:</p> <ul style="list-style-type: none"> • the cause of death is unknown • the deceased was not seen by the certifying doctor either after death or within the fourteen days before death • the death was violent or unnatural, or there are suspicious circumstances 	<p>The coroner should be notified if a person has died either directly or indirectly:</p> <ul style="list-style-type: none"> • from any cause other than natural illness or disease for which a person was seen and treated by a registered medical practitioner within 28 days prior to death • as a result of violence or misadventure, or by unfair means • as a result of negligence, misconduct, or malpractice on the part of others 	<p>To the Procurator Fiscal when the death comes into one of the following categories:</p> <ul style="list-style-type: none"> • any sudden death • any uncertified death • any other death due to violent, suspicious or unexplained cause

* details collected for statistical purposes only, and not entered in the register.

† details collected under the Population Statistics Acts 1938 and 1960 (for England and Wales, and Scotland) or under the Registration Regulations (NI) 1973 (for Northern Ireland).

Table I
continued

Recording of births and deaths in the countries of the United Kingdom

England and Wales	Northern Ireland	Scotland
Deaths - continued		
<ul style="list-style-type: none"> the death may be due to an accident (whenever it occurred) the death may be due to self-neglect or neglect by others the death may be due to an industrial disease or may be related to the deceased's employment the death may be due to an abortion the death occurred during an operation or recovery from the effects of anaesthesia the death occurred during or shortly after detention in police or prison custody the death may be a suicide 	<ul style="list-style-type: none"> if it is believed that the deceased person has died as a result of an industrial disease of the lungs in such circumstances as may require investigation (including death as a result of the administration of an anaesthetic) 	<ul style="list-style-type: none"> any death which was caused by an accident arising out of the use of a vehicle, including an aircraft, a ship or a train death by drowning any death resulting from an accident in the home, hospital, institution or any public place any death by burning or scalding or as a result of fire or explosion any death due to poisoning (domestic gas, barbiturates, solvent fumes etc) any death apparently caused by neglect (eg malnutrition) any death due to industrial disease or industrial poisoning any death resulting from an accident in the course of any work as an employer, employee or self-employed person any death following an abortion or attempted abortion any death of a new-born child whose body is found death of child from suffocation (including overlaying) any death which may be sudden death in infancy syndrome (cot death) any death of a foster child any death where there are indications that it occurred during the actual administration of general or local anaesthetic or that it was due to an anaesthetic any death occurring whilst the deceased was in legal custody any death (occurring not in a house) where deceased's residence is unknown any death occurring as a result of food poisoning or of a notifiable infectious disease any death where the circumstances seem to indicate suicide
Accidental or violent deaths		
Unnatural and industrial deaths are referred to a coroner by the registrar, if not already referred by the doctor.	Referred to coroner by the registrar, if not referred by the doctor	Reported to the Procurator Fiscal by the registrar if not already referred by the doctor.
Relevant legislation		
Births and Deaths Registration Act 1953 Population Statistics Acts 1938 and 1960	Births and Deaths Registration (Northern Ireland) Order 1976 Registration (Births, Stillbirths and Deaths) Regulations (Northern Ireland) 1973 Coroners Act (Northern Ireland) Act 1959	Registration of Births, Deaths and Marriages (Scotland) Act 1965 Population Statistic Acts 1938 and 1960

* details collected for statistical purposes only, and not entered in the register.

† details collected under the Population Statistics Acts 1938 and 1960.

SOURCES OF FURTHER INFORMATION

More details on registration practice and the processing of vital event data are available at the points listed below.

England and Wales: Office for National Statistics - Registration practice: tel 0151 471 4200 - Tables: 01329 813758

Northern Ireland: General Register Office (Northern Ireland) - tel 028 90 252037

Scotland: General Register Office (Scotland) - tel 0131 334 0380

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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

Changes to tables

With the introduction of *Health Statistics Quarterly*, the previous *Population Trends* tables have been reviewed and some small changes introduced, in particular, a new table, Table 2.2, showing key demographic and health indicators for the constituent countries of the United Kingdom.

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.

Population

The estimated and projected populations of an area include all those usually resident in the area, whatever their nationality. Members of HM forces stationed outside the United Kingdom are excluded. Students are taken to be resident at their term-time addresses.

Figures for the United Kingdom do not include the population of the Channel Islands or the Isle of Man.

The population estimated for mid-1991 onwards are final figures based on the 1991 Census of Population with allowance for subsequent births, deaths and migration.

Live births

For England and Wales, figures relate to numbers occurring in a period; for Scotland and Northern Ireland, figures relate to those registered in a period. See also Note on page 63 of *Population Trends 67*.

Perinatal mortality

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

Expectation of life

The life tables on which these expectations are

based use current death rates to describe mortality levels for each year. Each individual year shown is based on a three-year period, so that for instance 1986 represents 1985–87. More details may be found in *Population Trends 60*, page 23.

Deaths

Figures for England and Wales represent the numbers of deaths registered in each year up to 1992, and the number of deaths occurring in each year from 1993. Provisional figures are registrations.

Figures for both Scotland and Northern Ireland represent the number of deaths registered in each year.

Age-standardised mortality

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.

Marriages and divorces

Marriages are tabulated according to date of solemnisation. Divorces are tabulated according to date of decree absolute, and the term 'divorces' includes decrees of nullity.

Government Office Regions

Figures refer to Government Office Regions (GORs) of England which were adopted as

the primary classification for the presentation of regional statistics from April 1997.

Health Regional Office areas

Figures refer to new health regions of England which are as constituted on 1 April 1996.

Sources

Figures for Scotland and Northern Ireland shown in these tables (or included in totals for the United Kingdom or Great Britain) have been provided by their respective General Register Offices, except for the projections in Table 1.2 which are provided by the Government Actuary.

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 (e.g. 123.4); where appropriate, for small figures (below 10.0), two decimal places are given (e.g. 7.62). Figures which are provisional or estimated are given in less detail (e.g. 123 or 7.6 respectively) if their reliability does not justify giving the standard amount of detail. Where, for some other reason, 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 (see note above on rounding) and will be updated in future issues when later information becomes available. Where figures are not yet available, cells are left blank. Population estimates and rates based on them may be revised in the light of results from future censuses of populations.

Table 1.1 Population and vital rates: international Selected countries

Year	United Kingdom (1)	Austria (2)	Belgium (2)	Denmark (2)	Finland (2)	France (2)	Germany (Fed. Rep (2))*	Germany (2)†	Greece (2)	Irish Republic (2)	Italy (2)	Luxembourg (2)	Netherlands (2)	Portugal (2)
Population (thousands)														
1971	55,928	7,501	9,673	4,963	4,612	51,251	61,302	78,352	8,831	2,978	54,074	342	13,195	8,644
1976	56,216	7,566	9,811	5,073	4,726	52,909	61,531	78,321	9,167	3,228	55,718	361	13,774	9,355
1981	56,357	7,569	9,859	5,122	4,800	54,182	61,682	78,419	9,729	3,443	56,510	365	14,247	9,851
1986	56,859	7,588	9,862	5,121	4,918	55,547	61,066	77,694	9,967	3,541	56,596	368	14,572	10,011
1991	57,814	7,818	10,005	5,154	5,014	57,055	64,074	80,014	10,247	3,526	56,751	387	15,070	9,871
1992	58,013	7,915	10,045	5,170	5,042	57,373	64,865	80,624	10,322	3,557	56,859	393	15,184	9,867
1993	58,198	7,989	10,085	5,189	5,066	57,654	65,534	81,156	10,380	3,574	57,049	398	15,290	9,881
1994	58,401	8,028	10,116	5,205	5,089	57,899	65,858	81,438	10,426	3,587 ‡	57,204	404	15,383	9,902
1995	58,612	8,047	10,137	5,228	5,108	58,137 ‡	66,715	81,678	10,454	3,605 ‡	57,301	410	15,459	9,917
1996	58,807	8,059	10,157	5,262	5,125	58,374 ‡		82,071	10,475	3,626 ‡	57,397	416	15,531	9,927
1997	59,014	8,072	10,170	5,284	5,140	58,607 ‡			10,485 ‡	3,661 ‡	57,523	418	15,604	9,934 ‡
1998	59,237													
Population changes (per 1,000 per annum)														
1971-76	1.0	1.7	2.9	4.4	4.9	6.5	0.7	-0.1	7.6	16.8	6.1	10.7	8.8	16.5
1976-81	0.5	0.1	1.0	1.9	3.1	4.8	0.5	0.3	12.3	13.3	2.8	2.5	6.9	10.6
1981-86	1.8	0.5	0.1	0.0	4.9	5.0	-2.0	-1.8	4.9	5.7	0.3	1.8	4.6	3.2
1986-91	1.7	6.1	2.9	1.3	3.9	5.4	9.9	6.0	5.6	-0.8	0.5	10.2	6.8	-2.8
1991-92	3.4	12.3	4.1	3.2	5.6	5.6	12.3	7.6	7.3	8.8	1.9	13.9	7.6	-0.4
1992-93	3.2	9.3	3.9	3.7	4.8	4.9	10.3	6.6	5.6	4.8	3.4	14.3	7.0	1.4
1993-94	3.5	4.9	3.1	3.0	4.4	4.2	4.9	3.5	4.5	3.9 ‡	2.7	14.3	6.1	2.2
1994-95	3.6	2.4	2.1	4.4	3.7	4.1 ‡	13.0	2.9	2.7	5.0 ‡	1.7	14.6	4.9	1.4
1995-96	3.3	1.6	1.9	6.4	3.3	4.1 ‡		4.8	2.0	5.8 ‡	1.7	14.4	4.6	1.1
1996-97	3.5	1.6	1.3	4.3	3.0	4.0 ‡			1.0	9.6 ‡	2.2	5.8	4.7	0.7
1997-98	3.8													
Live birth rate (per 1,000 per annum)														
1971-75	14.1	13.3	13.4	14.6	13.1	16.0	10.8	10.5	15.8	22.2	16.0	11.6	14.9	20.3
1976-80	12.5	11.5	12.5	12.0	13.6	14.1	9.7	10.5	15.6	21.3	12.6	11.2	12.6	17.9
1981-85	12.9	12.0	12.0	10.2	13.4	14.2	9.8	10.7	13.3	19.2	10.6	11.6	12.2	14.5
1986-90	13.6	11.6	12.1	11.5	12.7	13.8	10.9	10.6	10.6	15.8	9.8	12.2	12.8	11.9
1991	13.7	12.1	12.6	12.5	13.0	13.3	11.3	10.4	10.1	15.0	9.9	12.9	13.2	11.8
1992	13.5	12.1	12.4	13.1	13.3	13.0	11.1	10.1	10.1	14.4	9.7	13.1	13.0	11.6
1993	13.1	11.9	12.0 ‡	13.0	12.8	12.3	11.0	9.9	9.8	13.8	9.6	13.4	12.8	11.5
1994	12.9	11.5	11.5 ‡	13.4	12.8	12.3	10.5	9.5	10.0	13.4 ‡	9.3	13.5	12.7	11.0
1995	12.5	11.0	11.4 ‡	13.4	12.3	12.5 ‡	10.2	9.4	9.7	13.5 ‡	9.2 ‡	13.2	12.3	10.8
1996	12.5	11.0	11.4 ‡	12.9 ‡	11.8	12.6 ‡	10.6 ‡	9.7 ‡	9.6 ‡	13.9 ‡	9.2 ‡	13.7	12.2	11.1
1997	12.3	10.4	11.4 ‡	12.8 ‡	11.5 ‡	12.4 ‡			9.7 ‡	14.3 ‡	9.2 ‡	13.1	12.2 ‡	11.4
1998	12.1													
Death rate (per 1,000 per annum)														
1971-75	11.8	12.6	12.1	10.1	9.5	10.7	11.9	12.3	8.6	11.0	9.8	12.2	8.3	11.0
1976-80	11.9	12.3	11.6	10.5	9.3	10.2	11.7	12.2	8.8	10.2	9.7	11.5	8.1	10.1
1981-85	11.7	12.0	11.4	11.1	9.3	10.1	11.6	12.0	9.0	9.4	9.5	11.2	8.3	9.6
1986-90	11.4	11.1	10.8	11.5	9.8	9.5	11.3	10.6	9.3	9.1	9.4	10.5	8.5	9.6
1991	11.3	10.7	10.5	11.6	9.8	9.2	11.1	11.4	9.3	8.9	9.7	9.7	8.6	10.5
1992	11.0	10.5	10.3	11.8	9.9	9.1	10.7	11.0	9.5	8.7	9.6	10.2	8.6	10.2
1993	11.3	10.3	10.7 ‡	12.1	10.1	9.2	10.9	11.1	9.4	8.7	9.7	9.8	9.0	10.7
1994	10.7	10.0	10.4 ‡	11.7	9.4	9.0	10.7	10.9	9.4	8.6 ‡	9.7 ‡	9.4	8.7	10.0
1995	10.9	10.1	10.5 ‡	12.1	9.6	9.1 ‡	10.6	10.8	9.6	9.0	9.5 ‡	9.3	8.8	10.4
1996	10.9	10.0	10.4 ‡	11.6 ‡	9.6	9.2 ‡	10.7	10.8	9.6	8.8 ‡	9.5 ‡	9.4	8.9 ‡	10.8
1997	10.8	9.8	10.2 ‡	11.3 ‡	9.6	9.1 ‡			9.6	8.6 ‡	9.6 ‡	9.4	8.7 ‡	10.5

* Excluding former GDR throughout.

† Including former GDR throughout.

‡ Provisional.

≠ Estimates prepared by the Population Division of the United Nations.

+ Rates are for 1990-95.

(1) Population estimated at 30 June each year.

(2) Average of estimated populations at start and end of year as given in Council of Europe report *Recent demographic developments in Europe 1997*.

(3) EU as constituted 1 January 1986 and including countries subsequently admitted.

(4) Population estimated at 1 June each year.

(5) Population estimated at 31 December each year.

(6) Population estimated at 1 July except for 1991 (1 March).

(7) Population estimated at 1 October. (Rates for Japan are based on population of Japanese nationality only)

Note: Figures may not add exactly due to rounding.

Table 1.1
continued

Population and vital rates: international

Selected countries

Spain (2)	Sweden (2)	European Union (3)	Russian Federation (2)	Australia (1)	Canada (4)	New Zealand (5)	China (5)	India (6)	Japan (7)	USA (1)	Year
Population (thousands)											
34,190	8,098	342,631		13,067	22,026	2,899	852,290	551,311	105,145	207,661	1971
35,937	8,222	350,384		14,033	23,517	3,163	943,033 ≠	617,248	113,094	218,035	1976
37,742	8,321	356,511	139,422	14,923	24,900	3,195	1,011,219 ≠	676,218	117,902	230,138	1981
38,537	8,370	359,543	144,475	16,018	26,204	3,317	1,086,733 ≠	767,199	121,672	240,680	1986
38,920	8,617	366,256	148,624	17,284	28,120	3,450	1,170,052 ≠	851,661	123,102	252,177	1991
39,008	8,668	368,033	148,689	17,495	28,542	3,516	1,183,617 ≠	867,818	123,476	255,078	1992
39,086	8,719	369,706 ‡	148,520	17,667	28,947	3,556	1,190,360 ≠	833,910	123,788	257,783	1993
39,150	8,781	371,005 ‡	148,336	17,855	29,256	3,604	1,208,841 ≠	918,570 ≠	124,069	260,341	1994
39,210	8,827	372,122 ‡	148,141	18,072	29,615	3,658	1,221,462 ≠	935,744 ≠	124,299	262,755	1995
39,270	8,841	373,331 ‡	147,739	18,311	29,964 ‡	3,716	1,232,083 ≠	936,000 ≠	124,709	265,284	1996
39,323	8,847			18,530							1997
											1998
Population changes (per 1,000 per annum)											
10.2	3.1	4.5	5.6	14.8	13.5	18.2	19.9	23.9	15.1	10.0	1971-76
10.0	2.4	3.5	8.5	12.7	11.8	2.0	15.2	18.8	8.5	10.9	1976-81
4.2	1.2	1.7	7.2	14.7	10.5	7.6	15.5	27.3	6.4	9.3	1981-86
2.0	5.9	3.7	5.7	15.8	14.6	8.0	15.3	22.0	2.4	9.6	1986-91
2.3	5.9	4.9 ‡	0.4	12.2	15.0	19.0	11.6	19.0	3.0	11.5	1991-92
2.0	5.8	4.5 ‡	-1.1	9.9	14.2	11.5	5.7	18.5	2.5	10.6	1992-93
1.6	7.1	3.5 ‡	-1.2	10.6	10.7	13.5	15.5	39.2	2.3	9.9	1993-94
1.5	5.3	3.0 ‡	-1.3	12.2	12.3	15.0	10.4	18.7	1.9	9.3	1994-95
1.5	1.6		-2.7	13.2	11.8 ‡	15.8	8.7		3.3	9.6	1995-96
1.3	0.7			12.0							1996-97
Live birth rate (per 1,000 per annum)											
19.2	13.5	14.7		18.8	15.9	20.4	27.2	35.6	18.6	15.3	1971-75
17.1	11.6	13.1		15.7	15.5	16.8	18.6	33.4	14.9	15.2	1976-80
12.8	11.3	12.2		15.6	15.1	15.8	19.2	..	12.6	15.7	1981-85
10.8	13.2	13.3		15.1	14.8	17.1			10.6	16.0	1986-90
10.2	14.3	11.7	12.1	14.9	14.3	17.4		29.5	9.9	16.3	1991
10.2	14.2	11.5	10.7	15.1	14.0	17.2		29.0	9.7	16.0	1992
9.9	13.5	11.2 ‡	9.3	14.7	13.4	17.1	18.3+	28.7	9.5	15.5	1993
9.5	12.8	10.9 ‡	9.5	14.5	13.2	16.4		28.7	9.9	15.2	1994
9.3 ‡	11.7	10.7 ‡	9.2	14.2	12.8	16.3		28.3	9.5	14.8	1995
9.1 ‡	10.8		8.8	13.9					9.6 ‡	14.8 ‡	1996
9.2 ‡	10.2		8.6								1997
Death rate (per 1,000 per annum)											
8.5	10.5	10.8		8.2	7.4	8.4	7.3	15.5	6.4	9.1	1971-75
8.0	10.9	10.6		7.6	7.2	8.2	6.6	13.8	6.1	8.7	1976-80
7.7	11.0	10.4		7.3	7.0	8.1	6.7	..	6.1	8.6	1981-85
8.2	11.1	11.4		7.2	7.3	8.2			6.4	8.7	1986-90
8.6	11.0	10.2	11.4	6.9	7.0	7.8		9.8	6.7	8.6	1991
8.5	10.9	10.0	12.2	7.1	6.9	7.9		10.1	6.9	8.5	1992
8.7	11.1	10.2 ‡	14.3	6.8	7.1	7.7	7.2+	9.3	7.0	8.8	1993
8.6	10.5	9.9 ‡	15.5	7.1	7.1	7.5		9.3	7.0	8.7	1994
8.8 ‡	10.6	10.0 ‡	14.9	6.9	7.1	7.6		9.0	7.4	8.8	1995
8.9 ‡	10.6		14.1	7.0	7.2	7.6			7.1	8.8 ‡	1996
8.9 ‡	10.5		13.7								1997

See notes opposite.

Table 1.2

Population: national
Numbers (thousands) and percentage age distribution

Constituent countries of the United Kingdom

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	56,859	55,285	50,162	47,342	2,820	5,123	1,574
1991	57,814	56,207	51,100	48,208	2,891	5,107	1,607
1992	58,013	56,388	51,277	48,378	2,899	5,111	1,625
1993	58,198	56,559	51,439	48,533	2,906	5,120	1,638
1994	58,401	56,753	51,621	48,707	2,913	5,132	1,648
1995	58,612	56,957	51,820	48,903	2,917	5,137	1,655
1996	58,807	57,138	52,010	49,089	2,921	5,128	1,669
1997	59,014	57,334	52,211	49,284	2,927	5,123	1,680
1998	59,237	57,548	52,428	49,495	2,933	5,120	1,689
of which (percentages)							
0-4	6.2	6.2	6.2	6.2	5.9	5.9	7.2
5-15	14.2	14.2	14.2	14.2	14.5	13.9	16.5
16-44	40.8	40.8	40.7	40.9	38.2	41.6	42.8
45-64M/59F	20.6	20.7	20.7	20.6	21.4	20.6	18.3
65M/60F-74	10.8	10.8	10.8	10.7	11.9	11.3	9.4
75 and over	7.3	7.3	7.4	7.4	8.0	6.7	5.8
Projections[≠]							
2001	59,954	58,246	53,137	50,187	2,950	5,109	1,708
2006	60,860	59,119	54,021	51,052	2,969	5,098	1,742
2011	61,773	60,002	54,915	51,922	2,993	5,087	1,771
2016	62,729	60,930	55,853	52,831	3,021	5,078	1,799
2021	63,642	61,820	56,763	53,715	3,047	5,058	1,821
of which (percentages)							
0-4	5.6	5.6	5.6	5.6	5.5	5.3	5.9
5-15	12.2	12.1	12.1	12.1	12.2	11.8	13.3
16-44	35.9	35.9	36.0	36.0	34.8	34.9	37.0
45-64†	27.1	27.2	27.1	27.1	26.3	28.3	26.6
65-74†	10.4	10.5	10.4	10.4	11.4	10.9	9.4
75 and over	8.7	8.8	8.8	8.7	9.7	8.8	7.8

[≠] These projections are based on the mid-1998 population estimates.

[†] Between 2010 and 2020, state retirement age will change from 65 years for men and 60 years for women, to 65 years for both sexes.

Note: Figures may not add exactly due to rounding.

Table 1.3

Population: subnational
 Numbers (thousands) and percentage age distribution

Health Regional Office areas of England*

Mid-year	Northern and Yorkshire	Trent	Eastern	London	South East	South West	West Midlands	North West
Estimates								
1971	6,723	4,483	4,380	7,750	7,136	4,132	5,146	6,662
1976	6,729	4,557	4,448	7,307	7,378	4,299	5,178	6,588
1981	6,718	4,608	4,781	7,018	7,621	4,300	5,187	6,488
1986	6,692	4,634	4,938	7,013	7,892	4,910	5,197	6,397
1991	6,285	5,035	5,150	6,890	8,266	4,718	5,266	6,600
1992	6,309	5,060	5,175	6,905	8,302	4,746	5,278	6,603
1993	6,323	5,081	5,193	6,933	8,329	4,768	5,290	6,617
1994	6,332	5,096	5,223	6,968	8,379	4,798	5,295	6,616
1995	6,337	5,109	5,257	7,007	8,446	4,827	5,306	6,614
1996	6,338	5,121	5,293	7,074	8,500	4,842	5,317	6,605
1997	6,336	5,128	5,334	7,122	8,569	4,876	5,321	6,598
1998	6,339	5,134	5,377	7,187	8,620	4,901	5,333	6,604
of which (percentages)								
0-4	6.0	6.0	6.2	7.0	6.1	5.7	6.3	6.1
5-15	14.4	14.1	13.9	13.7	14.0	13.6	14.6	14.9
16-44	40.3	40.1	40.2	46.2	40.3	38.3	39.9	40.2
45-64M/59F	20.8	21.1	21.2	18.2	21.2	21.3	21.1	20.7
65M/60F-74	11.3	11.3	10.9	8.7	10.6	12.0	11.0	10.9
75 and over	7.2	7.4	7.5	6.2	7.8	9.1	7.1	7.2
Projections[‡]								
2001	6,365	5,184	5,448	7,215	8,757	4,977	5,343	6,582
2006	6,382	5,232	5,582	7,337	8,985	5,097	5,358	6,553
2011	6,405	5,277	5,702	7,470	9,191	5,213	5,372	6,530
2016	6,435	5,324	5,823	7,608	9,396	5,333	5,391	6,521
2021	6,464	5,371	5,941	7,736	9,594	5,452	5,411	6,515
of which (percentages)[◇]								
0-4	5.5	5.4	5.5	6.4	5.5	4.9	5.7	5.7
5-15	12.2	11.9	12.1	12.5	12.1	11.2	12.5	12.5
16-44	35.5	35.2	34.5	41.5	34.9	32.8	34.9	35.6
45-64†	27.4	27.5	27.2	26.3	27.4	27.8	27.3	27.4
65-74†	10.9	10.9	11.2	7.7	10.9	12.4	10.7	10.5
75 and over	8.5	9.0	9.5	5.6	9.2	10.8	8.9	8.3

* The Regional Office boundaries were revised from 1 April 1999. See *Health Statistics Quarterly 03 In Brief* for details of the changes. Earlier years' figures have been revised to reflect the new boundaries.

[‡] These projections are based on the mid-1996 population estimates.

† Between 2010 and 2020, state retirement age will change from 65 years for men and 60 years for women, to 65 years for both sexes.

◇ The percentages shown in this table are correct and show the proportion in each age group for 2021. These replace the percentage figures shown in *Health Statistics Quarterly* numbers 01, 02 and 03, which were miscalculated.

Note: Figures may not add exactly because of rounding.

Table 1.4 Population: subnational Numbers (thousands) and percentage age distribution Government Office Regions of England

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	2,601	6,852	4,906	3,919	5,197	5,012	6,803	7,492	4,560
1991	2,603	6,885	4,983	4,035	5,265	5,150	6,890	7,679	4,718
1992	2,609	6,890	5,002	4,062	5,278	5,175	6,905	7,712	4,746
1993	2,612	6,903	5,014	4,083	5,290	5,193	6,933	7,737	4,768
1994	2,610	6,902	5,025	4,102	5,295	5,223	6,968	7,784	4,798
1995	2,605	6,900	5,029	4,124	5,306	5,257	7,007	7,847	4,827
1996	2,600	6,891	5,036	4,141	5,317	5,293	7,074	7,895	4,842
1997	2,594	6,885	5,037	4,156	5,321	5,334	7,122	7,959	4,876
1998	2,590	6,891	5,043	4,169	5,333	5,377	7,187	8,004	4,901
of which (percentages)									
0-4	5.9	6.1	6.2	6.0	6.3	6.2	7.0	6.1	5.7
5-15	14.4	14.8	14.5	14.2	14.6	13.9	13.7	13.9	13.6
16-44	40.2	40.1	40.5	40.1	39.9	40.2	46.2	40.3	38.3
45-64M/59F	20.8	20.8	20.6	21.3	21.1	21.2	18.2	21.1	21.3
65M/60F-74	11.7	11.0	11.0	11.1	11.0	10.9	8.7	10.7	12.0
75 and over	7.0	7.2	7.3	7.3	7.1	7.5	6.2	7.8	9.1
Projections[‡]									
2001	2,579	6,871	5,071	4,234	5,343	5,448	7,215	8,134	4,977
2006	2,555	6,843	5,098	4,312	5,358	5,582	7,337	8,344	5,098
2011	2,536	6,820	5,130	4,384	5,372	5,702	7,470	8,534	5,213
2016	2,521	6,813	5,165	4,455	5,391	5,823	7,609	8,722	5,333
2021	2,509	6,808	5,200	4,523	5,411	5,941	7,736	8,905	5,452
of which (percentages)[◇]									
0-4	5.4	5.7	5.6	5.4	5.7	5.5	6.4	5.4	4.9
5-15	12.1	12.4	12.2	12.0	12.5	12.1	12.5	12.1	11.2
16-44	35.1	35.4	35.9	35.1	34.9	34.5	41.5	34.9	32.8
45-64†	27.7	27.5	27.3	27.4	27.3	27.2	26.3	27.4	27.8
65-74†	11.2	10.6	10.6	11.1	10.7	11.2	7.7	10.9	12.4
75 and over	8.4	8.4	8.4	9.0	8.9	9.5	5.6	9.3	10.8

* The North West GOR was created on 3 August 1998 as a merger of the former North West and Merseyside GORs.

‡ These projections are based on the mid-1996 population estimates.

† Between 2010 and 2020, state retirement age will change from 65 years for men and 60 years for women, to 65 years for both sexes.

◇ The percentages shown in this table are correct and show the proportion in each age group for 2021. These replace the percentage figures shown in *Health Statistics Quarterly* numbers 01, 02 and 03, which were miscalculated.

Note: Figures may not add exactly because of rounding.

Table 1.5 continued

Population: age and sex
Numbers (thousands)

Constituent countries of the United Kingdom

Mid-year	All ages	Age group														
		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	16-64/59	65/60 and over
Scotland																
Persons																
1971	5,236	86	358	912	781	617	612	926	294	430	183	29	9	1,440	2,986	810
1976	5,233	67	291	904	806	692	591	897	282	460	202	31	11	1,352	3,023	858
1981	5,180	69	249	780	875	724	603	880	260	460	232	35	14	1,188	3,110	882
1986	5,123	66	257	657	870	742	665	849	273	435	251	41	15	1,063	3,171	889
1991	5,107	66	259	634	754	809	699	853	265	441	259	50	19	1,023	3,174	910
1993	5,120	64	260	648	705	825	694	888	262	451	249	52	21	1,032	3,176	912
1994	5,132	63	261	651	690	829	703	902	260	456	243	53	21	1,038	3,183	911
1995	5,137	61	261	649	677	827	715	911	258	450	250	55	22	1,036	3,187	914
1996	5,128	59	255	647	663	821	728	919	256	446	255	56	23	1,028	3,185	915
1997	5,123	60	247	649	651	809	744	924	255	443	259	56	24	1,021	3,185	917
1998	5,120	58	243	650	643	793	760	932	257	442	260	57	24	1,014	3,186	920
Males																
1971	2,516	44	184	467	394	306	299	440	134	176	60	8	2	738	1,530	247
1976	2,517	34	149	463	408	347	290	429	128	193	65	8	2	693	1,556	269
1981	2,495	35	128	400	445	364	298	424	118	194	77	8	3	610	1,603	282
1986	2,474	34	131	337	445	375	332	410	127	184	86	10	3	545	1,647	283
1991	2,470	34	133	325	385	407	348	415	124	192	91	12	3	524	1,646	299
1993	2,479	33	133	332	360	415	345	434	123	197	88	13	4	528	1,648	302
1994	2,486	32	133	333	353	418	350	441	122	200	86	14	4	531	1,651	304
1995	2,489	31	133	332	346	416	356	446	121	198	90	14	4	530	1,653	307
1996	2,486	30	130	331	339	413	362	450	121	197	92	15	4	526	1,651	309
1997	2,484	31	126	332	333	407	371	453	121	196	95	15	5	522	1,651	311
1998	2,484	30	124	332	329	399	378	457	122	197	96	16	5	519	1,652	314
Females																
1971	2,720	42	174	445	387	311	313	485	160	254	122	20	7	701	1,455	563
1976	2,716	32	142	440	398	345	301	468	154	267	137	23	8	659	1,468	589
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	425	368	334	439	146	250	165	32	12	518	1,525	606
1991	2,637	32	126	309	369	402	351	437	141	249	168	37	16	499	1,528	611
1993	2,642	32	127	316	345	409	349	454	139	254	161	39	17	504	1,528	609
1994	2,646	31	128	318	337	412	353	461	138	256	157	40	17	507	1,532	607
1995	2,647	30	128	317	331	411	359	465	136	252	160	40	18	506	1,534	607
1996	2,642	29	125	316	324	408	366	469	135	249	163	41	19	502	1,534	606
1997	2,638	29	121	317	318	403	374	471	135	247	164	41	19	498	1,534	605
1998	2,636	28	118	317	315	394	382	475	135	245	164	41	19	495	1,535	606
Northern Ireland																
Persons																
1971	1,540	31	126	299	247	189	165	243	74	106	51	7	2	483	853	205
1976	1,524	26	111	306	243	198	163	231	73	111	53	8	2	471	840	212
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	..	..	423	917	234
1991	1,607	26	106	260	256	240	200	241	70	120	69	14	6	417	945	246
1993	1,638	25	105	265	256	249	205	252	70	122	69	14	6	419	969	250
1994	1,648	24	103	266	253	254	209	256	69	123	69	15	6	419	978	250
1995	1,655	24	102	265	250	255	213	261	69	123	71	15	7	418	985	252
1996	1,669	24	100	266	249	260	218	266	69	123	72	15	7	417	999	253
1997	1,680	25	98	267	247	261	225	270	70	122	73	16	7	415	1,010	255
1998	1,689	24	98	266	244	262	230	275	71	122	74	16	8	414	1,018	257
Males																
1971	755	16	64	152	127	95	81	116	36	45	19	2	1	246	441	67
1976	754	13	58	157	127	102	81	111	34	47	19	3	0	242	442	70
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	..	..	217	474	77
1991	783	13	54	133	131	119	100	118	32	53	26	4	1	213	487	83
1993	801	13	54	136	132	124	102	123	32	54	26	4	1	215	501	85
1994	805	12	53	136	131	126	104	126	32	54	26	4	1	215	506	85
1995	809	12	52	136	129	127	106	128	32	54	26	4	1	214	509	86
1996	816	12	51	136	128	130	108	131	33	54	27	4	2	213	516	87
1997	823	12	50	137	128	131	111	133	33	54	28	4	2	213	523	87
1998	827	12	50	136	126	132	113	135	34	54	28	4	2	212	527	88
Females																
1971	786	15	62	147	119	95	84	126	39	61	32	5	2	237	411	138
1976	769	13	53	149	116	96	81	120	38	64	33	6	2	229	398	143
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	..	..	206	442	157
1991	824	13	52	127	125	121	100	123	38	67	44	10	4	203	458	163
1993	838	12	51	129	123	125	103	128	38	69	44	11	5	205	468	165
1994	842	12	50	130	122	127	105	131	37	69	43	11	5	205	472	165
1995	846	12	50	129	121	128	107	133	36	69	44	11	5	204	476	166
1996	853	11	49	129	121	130	110	135	36	69	45	11	5	203	483	167
1997	857	12	48	130	119	129	114	137	37	68	45	11	6	202	487	168
1998	861	12	48	130	118	129	117	139	37	68	46	12	6	202	491	168

Table 1.6

Population: age, sex and legal marital status
Numbers (thousands)

England and Wales

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	39,887	5,673	11,886	919	695	19,173	4,613	11,994	1,164	2,943	20,714
1991	40,796	6,024	11,745	1,200	731	19,699	4,822	11,838	1,459	2,978	21,097
1993	40,925	6,147	11,580	1,342	732	19,801	4,906	11,661	1,610	2,946	21,124
1994	41,003	6,221	11,492	1,413	730	19,855	4,958	11,583	1,684	2,922	21,147
1995	41,167	6,345	11,415	1,480	729	19,968	5,058	11,488	1,754	2,898	21,199
1996	41,356	6,482	11,339	1,543	728	20,091	5,171	11,406	1,819	2,870	21,265
1997	41,540	6,622	11,256	1,604	726	20,209	5,292	11,319	1,882	2,838	21,331
1998	41,746	6,768	11,815	1,659	725	20,338	5,415	11,244	1,940	2,808	21,408
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	3,144	1,601	10	0	0	1,611	1,483	49	1	0	1,533
1991	2,680	1,372	8	0	0	1,380	1,267	32	0	0	1,300
1993	2,421	1,242	4	0	0	1,246	1,157	18	0	0	1,175
1994	2,360	1,212	3	0	0	1,215	1,131	14	0	0	1,145
1995	2,374	1,220	3	0	0	1,222	1,139	13	0	0	1,152
1996	2,436	1,251	2	0	0	1,253	1,171	12	0	0	1,183
1997	2,517	1,291	2	0	0	1,293	1,212	11	0	0	1,224
1998	2,578	1,322	2	0	0	1,324	1,242	11	0	0	1,254
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	4,203	1,794	322	14	0	2,130	1,382	658	32	1	2,072
1991	3,966	1,764	249	12	0	2,025	1,421	490	29	1	1,941
1993	3,770	1,742	182	8	0	1,933	1,432	381	23	1	1,838
1994	3,625	1,699	152	7	0	1,858	1,416	330	20	1	1,767
1995	3,495	1,658	127	6	0	1,791	1,404	282	17	0	1,703
1996	3,329	1,597	105	5	0	1,707	1,369	238	15	0	1,622
1997	3,177	1,536	87	4	0	1,628	1,333	204	12	0	1,549
1998	3,084	1,500	76	3	0	1,579	1,314	180	10	0	1,505
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	3,724	841	956	79	1	1,877	527	1,204	113	4	1,847
1991	4,246	1,183	894	85	1	2,163	800	1,158	123	2	2,083
1993	4,220	1,263	807	80	1	2,152	880	1,062	124	2	2,069
1994	4,168	1,293	754	76	1	2,124	908	1,011	122	2	2,044
1995	4,094	1,326	696	70	1	2,092	936	947	116	2	2,002
1996	4,045	1,368	639	64	1	2,071	977	887	109	2	1,975
1997	3,972	1,401	577	58	1	2,037	1,014	818	101	2	1,935
1998	3,883	1,422	520	51	0	1,994	1,047	750	91	2	1,889
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	3,341	356	1,200	125	2	1,683	206	1,292	154	6	1,658
1991	3,762	535	1,206	160	2	1,903	335	1,330	189	5	1,859
1993	3,999	662	1,194	174	2	2,032	418	1,338	205	5	1,967
1994	4,126	732	1,187	179	2	2,100	467	1,340	213	5	2,025
1995	4,235	799	1,177	182	2	2,160	518	1,333	218	5	2,075
1996	4,296	855	1,155	181	2	2,194	560	1,316	221	5	2,103
1997	4,318	903	1,125	177	3	2,207	598	1,287	222	5	2,111
1998	4,294	938	1,085	171	3	2,196	627	1,247	219	5	2,098
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	6,863	397	2,743	293	12	3,444	213	2,816	350	39	3,419
1991	7,056	482	2,658	388	12	3,539	280	2,760	444	34	3,517
1993	6,887	522	2,500	423	12	3,456	316	2,612	473	31	3,431
1994	6,925	556	2,463	444	12	3,475	343	2,587	491	29	3,449
1995	7,003	601	2,446	464	12	3,523	374	2,568	509	29	3,480
1996	7,146	657	2,449	483	13	3,602	414	2,575	527	28	3,544
1997	7,325	725	2,458	503	13	3,700	459	2,593	545	28	3,625
1998	7,515	802	2,467	520	14	3,803	510	2,612	563	27	3,712

Note: Population estimates by marital status for 1971 and 1976 are based on the 1971 Census and those for 1981 and 1986 are based on the 1981 Census and have not been rebased using the 1991 Census.

**Table 1.6
continued****Population: age, sex and legal marital status**
Numbers (thousands)*England and Wales*

Mid-year	Total population	Males					Females				
		Single	Married	Divorced	Widowed	Total	Single	Married	Divorced	Widowed	Total
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	4,423	332	141	5,356	326	4,221	388	569	5,504
1991	10,960	456	4,394	456	127	5,433	292	4,211	521	503	5,527
1993	11,436	479	4,532	544	122	5,677	297	4,376	615	471	5,759
1994	11,596	489	4,564	587	120	5,759	300	4,422	659	456	5,837
1995	11,730	500	4,581	630	119	5,830	305	4,452	703	440	5,900
1996	11,844	512	4,587	673	118	5,890	310	4,473	746	425	5,954
1997	11,959	524	4,590	715	117	5,946	318	4,494	789	412	6,013
1998	12,103	541	4,604	758	117	6,019	328	4,523	832	401	6,085
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	7,752	223	2,233	76	539	3,070	475	1,754	127	2,325	4,681
1991	8,127	231	2,337	99	589	3,257	427	1,858	153	2,433	4,870
1993	8,191	237	2,360	113	596	3,306	405	1,873	170	2,436	4,885
1994	8,203	239	2,368	121	595	3,323	393	1,879	179	2,429	4,880
1995	8,237	241	2,385	128	595	3,349	382	1,893	190	2,422	4,887
1996	8,259	242	2,401	137	594	3,375	370	1,904	201	2,410	4,884
1997	8,272	242	2,417	147	593	3,399	358	1,912	213	2,390	4,873
1998	8,288	242	2,432	156	592	3,422	347	1,921	225	2,372	4,866

See note opposite.

Table 2.1

Vital statistics summary
Numbers (thousands) and rates

Constituent countries of the United Kingdom

Year and quarter	All live births		Live births outside marriage		Marriages		Divorces		Deaths****		Infant mortality***		Neonatal mortality†††		Perinatal mortality****	
	Number	Rate*	Number	Rate†	Number	Rate**	Number	Rate††	Number	Rate*	Number	Rate†	Number	Rate†	Number	Rate††††
United Kingdom																
1971	901.6	16.1	73.9	82	459.4	..	79.6	..	645.1	11.5	16.2	17.9	10.8	12.0	20.7	22.6
1976	675.5	12.0	61.1	90	406.0	..	135.4	..	680.8	12.1	9.79	14.5	6.68	9.9	12.3	18.0
1981	730.8	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	755.0	13.3	158.5	210	393.9	43.5	168.2	12.5	660.7	11.6	7.18	9.5	4.00	5.3	7.31	9.6
1991	792.5	13.7	236.1	298	349.7	36.0	173.5	13.0	646.2	11.3	5.82	7.4	3.46	4.4	6.45	8.1
1993	761.7	13.1	241.8	318	341.6	..	180.0	..	658.5	11.3	4.83	6.3	3.18	4.2	6.73	8.8
1994	750.7	12.9	240.1	320	331.2	..	173.6	..	627.6	10.7	4.63	6.2	3.09	4.1	6.74	9.0
1995	732.0	12.5	245.7	336	322.3	..	170.0	..	645.5	11.0	4.52	6.2	3.05	4.2	6.52	8.9
1996	733.4	12.5	260.4	355	317.5	..	171.7	..	636.0	10.8	4.50	6.1	3.00	4.1	6.41	8.7
1997	726.8	12.3	267.0	367	310.2	..	161.1	..	629.7	10.7	4.25	5.9	2.81	3.9	6.06	8.3
1998	717.1	12.1	269.7	376	304.8‡	..	160.1‡	..	629.2	10.6	4.08	5.7	2.71	3.8	5.94	8.2
1999	700.2‡	11.8‡	271.6‡	388‡	..	..	..	..	629.4‡	10.6‡	4.06‡	5.8‡	2.73‡	3.9‡	5.79‡	8.2‡
1998 March	176.0	12.1	65.7	373	37.7‡	..	40.8‡	..	166.7	11.4	1.02	5.8	0.68	3.9	1.52	8.6
1998 June	178.9	12.1	65.5	366	85.6‡	..	40.4‡	..	151.7	10.3	0.97	5.4	0.65	3.6	1.45	8.0
1998 Sept	187.1	12.5	70.7	378	125.5‡	..	40.8‡	..	143.1	9.6	0.98	5.2	0.68	3.6	1.44	7.7
1998 Dec	175.0	11.7	67.7	387	56.0‡	..	38.0‡	..	167.7	11.2	1.11	6.3	0.71	4.0	1.54	8.7
1999 March	171.9‡	11.7‡	66.5‡	387‡	36.9‡	..	40.0‡	..	184.2‡	12.6‡	1.06‡	6.2‡	0.68‡	3.9‡	1.50‡	8.7‡
1999 June	177.0‡	11.9‡	67.1‡	379‡	83.2‡	..	39.3‡	..	143.5‡	9.7‡	1.02‡	5.8‡	0.69‡	3.9‡	1.47‡	8.2‡
1999 Sept	180.3‡	12.0‡	70.5‡	391‡	..	..	40.1‡	..	139.2‡	9.3‡	0.99‡	5.5‡	0.72‡	4.0‡	1.46‡	8.0‡
1999 Dec	170.9‡	11.4‡	67.4‡	394‡	..	..	..	..	162.7‡	10.9‡	0.98‡	5.8‡	0.65‡	3.8‡	1.37‡	7.9‡
England and Wales																
1971	783.2	15.9	65.7	84	404.7	69.0	74.4	5.9	567.3	11.5	13.7	17.5	9.11	11.6	17.6	22.3
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	10.5	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	43.5	153.9	12.9	581.2	11.6	6.31	9.6	3.49	5.3	6.37	9.6
1991	699.2	13.7	211.3	302	306.8	35.6	158.7	13.5	570.0	11.2	5.16	7.4	3.05	4.4	5.65	8.0
1993	673.5	13.1	216.5	322	299.2	33.9	165.0	14.2	578.8	11.3	4.24	6.3	2.80	4.2	6.03	8.9
1994	664.7	12.9	215.5	324	291.1	32.6	158.2	13.7	553.2	10.7	4.10	6.2	2.74	4.1	5.95	8.9
1995	648.1	12.5	219.9	339	283.0	31.0	155.5	13.6	569.7	11.0	3.98	6.1	2.70	4.2	5.70	8.8
1996	649.5	12.5	232.7	358	279.0	30.0	157.1	13.8	560.1	10.8	3.99	6.1	2.68	4.1	5.62	8.6
1997	643.1	12.3	238.2	370	272.5	28.7	146.7	13.0	555.3	10.6	3.80	5.9	2.52	3.9	5.38	8.3
1998	635.9	12.2	240.6	378	267.3‡	27.7‡	145.2‡	12.9‡	555.0	10.6	3.63	5.7	2.42	3.8	5.26	8.2
1999	621.9‡	11.8‡	241.9‡	389‡	..	..	..	..	553.5‡	10.6‡	3.64‡	5.8‡	2.44‡	3.9‡	5.14‡	8.2‡
1998 March	155.8	12.1	58.5	375	33.4‡	14.0‡	37.0‡	13.4‡	146.9	11.4	0.93	6.0	0.61	3.9	1.35	8.6
1998 June	158.6	12.1	58.4	368	75.0‡	31.2‡	36.6‡	13.1‡	133.4	10.2	0.83	5.3	0.56	3.6	1.28	8.0
1998 Sept	166.1	12.6	63.2	380	110.2‡	45.3‡	37.1‡	13.1‡	125.8	9.5	0.86	5.2	0.60	3.6	1.26	7.5
1998 Dec	155.4	11.8	60.5	389	48.7‡	20.0‡	34.4‡	12.2‡	148.9	11.3	1.00	6.5	0.64	4.1	1.38	8.8
1999 March	152.1‡	11.7‡	59.0‡	388‡	32.4‡	13.6‡	36.4‡	13.2‡	161.7‡	12.5‡	0.96‡	6.3‡	0.62‡	4.1‡	1.34‡	8.7‡
1999 June	157.2‡	12.0‡	59.8‡	380‡	72.9‡	30.3‡	35.7‡	12.8‡	126.1‡	9.7‡	0.89‡	5.7‡	0.60‡	3.8‡	1.28‡	8.1‡
1999 Sept	160.1‡	12.1‡	62.9‡	393‡	..	..	36.6‡	13.0‡	122.4‡	9.3‡	0.91‡	5.7‡	0.66‡	4.1‡	1.32‡	8.2‡
1999 Dec	152.5‡	11.5‡	60.2‡	395‡	..	..	..	..	143.3‡	10.8‡	0.87‡	5.7‡	0.57‡	3.7‡	1.20‡	7.9‡
England																
1971	740.1	15.9	62.6	85	382.3	..	..	..	532.4	11.5	12.9	17.5	8.58	11.6	16.6	22.1
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	11.5	5.92	9.5	3.27	5.2	5.98	9.5
1991	660.8	13.7	198.9	301	290.1	..	150.1	..	534.0	11.2	4.86	7.3	2.87	4.3	5.33	8.0
1993	636.5	13.1	203.6	320	283.3	..	156.1	..	541.1	11.1	4.00	6.3	2.65	4.2	5.70	8.9
1994	629.0	13.0	202.7	322	275.5	..	149.6	..	517.6	10.6	3.83	6.1	2.57	4.1	5.58	8.8
1995	613.2	12.5	206.8	337	268.3	..	147.5	..	532.6	10.9	3.74	6.1	2.55	4.2	5.41	8.8
1996	614.2	12.5	218.2	355	264.2	..	148.7	..	524.0	10.7	3.74	6.1	2.53	4.1	5.36	8.7
1997	608.2	12.3	223.4	367	258.0	..	138.7‡	..	519.1	10.5	3.60	5.9	2.37	3.9	5.09	8.3
1998	602.1	12.2	225.7	375	253.1‡	..	137.4‡	..	519.6	10.5	3.39	5.6	2.29	3.8	4.97	8.2
1999	589.5‡	11.8‡	227.0‡	385‡	..	..	..	..	517.1‡	10.4‡	3.38‡	5.7‡	2.29‡	3.9‡	4.86‡	8.2‡
1998 March	147.5	12.1	54.9	372	31.6‡	..	35.1‡	..	137.5	11.3	0.88	5.9	0.58	3.9	1.28	8.6
1998 June	150.1	12.2	54.8	365	71.0‡	..	34.6‡	..	124.8	9.6	0.77	5.1	0.53	3.5	1.20	8.0
1998 Sept	157.3	12.6	59.3	377	104.4‡	..	35.1‡	..	117.6	8.9	0.79	5.0	0.56	3.6	1.18	7.5
1998 Dec	147.2	11.8	56.7	385	46.1‡	..	32.6‡	..	139.7	10.6	0.95	6.5	0.62	4.2	1.31	8.9
1999 March	144.1‡	11.7‡	55.4‡	384‡	30.8‡	..	34.5‡	..	151.0‡	12.4‡	0.90‡	6.2‡	0.58‡	4.0‡	1.26‡	8.7‡
1999 June	149.0‡	12.0‡	56.1‡	377‡	69.0‡	..	33.8‡	..	117.7‡	9.0‡	0.84‡	5.6‡	0.56‡	3.8‡	1.23‡	8.2‡
1999 Sept	151.7‡	12.1‡	59.0‡	389‡	..	..	34.8‡	..	114.3‡	8.6‡	0.84‡	5.6‡	0.62‡	4.1‡	1.24‡	8.2‡
1999 Dec	144.7‡	11.5‡	56.5‡	390‡	..	..	..	..	134.1‡	10.1‡	0.81‡	5.6‡	0.53‡	3.6‡	1.12‡	7.7‡

* Per 1,000 population of all ages. † Per 1,000 live births. ** Persons marrying per 1,000 unmarried population 16 and over. †† Persons divorcing per 1,000 married population. *** Deaths under 1 year.

††† Deaths under 4 weeks. **** Stillbirths and deaths under 1 week. In October 1992 the legal definition of a stillbirth was changed, from baby born dead after 28 completed weeks of gestation or more, to one born dead after 24 completed weeks of gestation or more. †††† Per 1,000 live births and stillbirths. ***** 1998 deaths figures for England and Wales in *Health Statistics Quarterly* 03 and 04 were incorrectly shown as being final when they were still provisional. The final 1998 figures are shown here. ‡ Provisional.

Table 2.1
continued**Vital statistics summary**
Numbers (thousands) and rates

Constituent countries of the United Kingdom

Year and quarter	All live births		Live births outside marriage		Marriages		Divorces		Deaths		Infant mortality***		Neonatal mortality†††		Perinatal mortality***	
	Number	Rate*	Number	Rate†	Number	Rate**	Number	Rate††	Number	Rate*	Number	Rate†	Number	Rate†	Number	Rate††††
Wales																
1971	43.1	15.7	3.1	71	22.4	..	..	..	34.8	12.7	0.79	18.4	0.53	12.3	1.07	24.4
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	..	..	..	35.0	12.4	0.45	12.6	0.29	8.1	0.51	14.1
1986	37.0	13.1	7.8	211	19.5	..	7.9	..	34.7	12.3	0.35	9.5	0.21	5.6	0.38	10.3
1991	38.1	13.2	12.3	323	16.6	..	8.6	..	34.1	11.8	0.25	6.6	0.16	4.1	0.30	7.9
1993	36.6	12.6	12.9	352	15.9	..	8.9	..	35.9	12.4	0.20	5.5	0.12	3.3	0.30	8.2
1994	35.4	12.2	12.7	360	15.5	..	8.6	..	33.9	11.6	0.22	6.1	0.14	4.1	0.33	9.3
1995	34.5	11.8	13.1	381	14.7	..	8.0	..	35.6	12.2	0.20	5.9	0.13	3.9	0.27	7.9
1996	34.9	11.9	14.4	412	14.8	..	8.4	..	34.6	11.8	0.20	5.6	0.13	3.6	0.26	7.5
1997	34.5	11.8	14.8	428	14.6	..	8.0	..	34.6	11.8	0.20	5.9	0.13	3.9	0.27	7.9
1998	33.4	11.4	14.8	444	14.2‡	..	7.8‡	..	34.0	11.6	0.19	5.6	0.12	3.6	0.27	8.0
1999	32.1‡	10.9‡	14.8‡	461‡	..	..	..	..	34.9‡	11.9‡	0.21‡	6.4‡	0.13‡	4.1‡	0.25‡	7.8‡
1998 March	8.3	11.4	3.6	435	1.8‡	..	2.0‡	..	9.0	12.5	0.04	5.0	0.03	3.5	0.07	8.1
1998 June	8.4	11.4	3.6	428	4.0‡	..	2.0‡	..	8.2	11.2	0.05	5.6	0.03	3.9	0.07	8.7
1998 Sept	8.8	11.8	3.9	444	5.8‡	..	2.0‡	..	7.8	10.6	0.05	5.9	0.04	4.0	0.07	8.2
1998 Dec	8.0	10.9	3.8	468	2.6‡	..	1.8‡	..	8.9	12.1	0.05	6.0	0.02	3.0	0.06	6.9
1999 March	7.9‡	10.9‡	3.6‡	454‡	1.6‡	..	1.9‡	..	10.3‡	14.2‡	0.05‡	6.3‡	0.03‡	4.0‡	0.06‡	8.0‡
1999 June	8.2‡	11.2‡	3.6‡	445‡	3.8‡	..	1.8‡	..	8.1‡	11.1‡	0.05‡	5.5‡	0.03‡	3.5‡	0.05‡	5.7‡
1999 Sept	8.3‡	11.1‡	3.9‡	470‡	..	..	1.9‡	..	7.7‡	10.4‡	0.05‡	6.3‡	0.03‡	3.6‡	0.07‡	8.2‡
1999 Dec	7.7‡	10.4‡	3.7‡	475‡	..	..	..	..	8.9‡	12.0‡	0.06‡	7.8‡	0.04‡	5.2‡	0.07‡	9.4‡
Scotland																
1971	86.7	16.6	7.0	81	42.5	64.1	4.8	3.9	61.6	11.8	1.72	19.9	1.17	13.5	2.15	24.5
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	42.8	12.8	10.7	63.5	12.4	0.58	8.8	0.34	5.2	0.67	10.2
1991	67.0	13.1	19.5	291	33.8	38.7	12.4	10.6	61.0	12.0	0.47	7.1	0.29	4.4	0.58	8.6
1993	63.3	12.4	19.9	313	33.4	37.6	12.8	11.0	64.0	12.5	0.41	6.5	0.25	4.0	0.61	9.6
1994	61.7	12.0	19.2	312	31.5	35.1	13.1	11.4	59.3	11.6	0.38	6.2	0.25	4.0	0.56	9.0
1995	60.1	11.7	20.3	337	30.7	33.7	12.2	10.7	60.5	11.8	0.38	6.2	0.24	4.0	0.58	9.6
1996	59.3	11.6	21.4	360	30.2	32.8	12.3	10.9	60.7	11.8	0.37	6.2	0.23	3.9	0.55	9.2
1997	59.4	11.6	22.4	377	29.6	31.7	12.2	11.0	59.5	11.6	0.32	5.3	0.19	3.2	0.47	7.8
1998	57.3	11.2	22.3	389	29.7	31.2	12.4	11.2	59.2	11.6	0.32	5.5	0.20	3.5	0.49	8.5
1999	55.1‡	10.8‡	22.7‡	412‡	..	..	..	..	60.2‡	11.8‡	0.27‡	5.0‡	0.18‡	3.3‡	0.42‡	7.5‡
1998 March	14.2	11.2	5.5	389	3.5	14.7	3.1	11.5	15.7	12.5	0.06	4.2	0.04	2.8	0.12	8.1
1998 June	14.2	11.2	5.5	384	8.4	35.4	3.2	11.5	14.4	11.3	0.09	6.4	0.06	4.0	0.12	8.5
1998 Sept	14.8	11.5	5.7	385	11.9	49.8	3.1	11.1	13.8	10.7	0.09	5.7	0.06	4.1	0.13	9.0
1998 Dec	14.1	10.9	5.6	396	5.9	24.7	3.0	10.8	15.2	11.8	0.08	5.9	0.05	3.2	0.12	8.3
1999 March	13.9‡	11.0‡	5.7‡	411‡	3.6‡	15.4‡	2.9‡	10.8‡	17.7‡	14.0‡	0.06‡	4.4‡	0.04‡	2.5‡	0.10‡	7.4‡
1999 June	13.9‡	10.9‡	5.6‡	402‡	8.1‡	34.4‡	3.1‡	11.2‡	13.7‡	10.7‡	0.09‡	6.4‡	0.06‡	4.2‡	0.12‡	8.3‡
1999 Sept	14.1‡	10.9‡	5.7‡	406‡	11.9‡	49.7‡	2.9‡	10.5‡	13.3‡	10.3‡	0.05‡	3.5‡	0.04‡	2.5‡	0.09‡	6.2‡
1999 Dec	13.3‡	10.3‡	5.7‡	430‡	6.3‡	26.3‡	..	..	15.6‡	12.1‡	0.08‡	5.8‡	0.05‡	4.0‡	0.11‡	8.2‡
Northern Ireland																
1971	31.8	20.7	1.2	38	12.2	..	0.3	..	17.6	12.8	0.72	22.7	0.51	15.9	0.88	27.2
1976	26.4	17.3	1.3	50	9.6	..	0.6	..	17.0	11.2	0.48	18.3	0.35	13.3	0.59	22.3
1981	27.3	17.8	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	28.2	18.0	3.6	127	10.2	..	1.5	..	16.1	10.3	0.36	13.2	0.23	8.3	0.42	15.3
1991	26.3	16.5	5.3	202	9.2	37.7	2.3	6.8	15.1	9.4	0.19	7.4	0.12	4.6	0.22	8.4
1993	24.9	15.3	5.5	219	9.0	..	2.2	..	15.6	9.6	0.18	7.1	0.12	4.9	0.22	8.8
1994	24.3	14.9	5.4	220	8.7	..	2.3	..	15.1	9.2	0.15	6.1	0.10	4.2	0.24	9.7
1995	23.9	14.5	5.5	231	8.6	..	2.3	..	15.3	9.3	0.17	7.1	0.13	5.5	0.25	10.4
1996	24.6	14.8	6.4	259	8.3	..	2.3	..	15.2	9.1	0.14	5.8	0.09	3.7	0.23	9.4
1997	24.3	14.5	6.4	266	8.1	..	2.2	..	15.0	9.0	0.14	5.6	0.10	4.2	0.21	8.6
1998	23.9	14.2	6.8	283	7.8	..	2.5	..	15.0	8.9	0.13	5.6	0.09	3.9	0.20	8.1
1999	23.2‡	13.7‡	7.0‡	301‡	..	..	..	..	15.7‡	9.3‡	0.15‡	6.4‡	0.11‡	4.8‡	0.23‡	10.0‡
1998 March	6.1	14.6	1.7	281	0.8	..	0.6	..	4.1	9.8	0.04	5.8	0.03	4.3	0.05	8.8
1998 June	6.1	14.5	1.7	273	2.2	..	0.6	..	3.8	9.1	0.04	7.1	0.03	4.4	0.05	7.7
1998 Sept	6.2	14.7	1.8	285	3.4	..	0.6	..	3.5	8.2	0.03	5.5	0.02	3.5	0.05	8.0
1998 Dec	5.5	13.0	1.6	294	1.4	..	0.6	..	3.6	8.5	0.02	4.0	0.02	3.3	0.05	8.2
1999 March	6.0‡	14.3‡	1.8‡	302‡	0.9‡	..	0.7‡	..	4.7‡	11.3‡	0.03‡	5.7‡	0.02‡	4.0‡	0.06‡	10.2‡
1999 June	5.9‡	14.0‡	1.8‡	297‡	2.2‡	..	0.6‡	..	3.7‡	8.7‡	0.04‡	7.4‡	0.03‡	5.8‡	0.07‡	11.4‡
1999 Sept	6.1‡	14.3‡	1.8‡	303‡	..	..	0.5‡	..	3.4‡	8.1‡	0.04‡	5.9‡	0.03‡	4.4‡	0.05‡	8.2‡
1999 Dec	5.2‡	12.2‡	1.6‡	303‡	..	..	0.5‡	..	3.8‡	8.9‡	0.03‡	6.5‡	0.03‡	5.2‡	0.05‡	10.1‡

Notes: 1. Rates for the most recent quarters will be particularly subject to revision, even when standard detail is given, as they are based on provisional numbers or on estimates derived from events registered in the period. 2. Figures for England and Wales represent the numbers of deaths registered in each year up to 1992, and the number of deaths occurring in each year from 1993. Provisional figures are registrations. 3. The marriage and divorce rates for 1991 onwards differ in part from those previously published because of a revision of the denominators. 4. From 1972 figures for England and figures 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.

Table 2.2

Key demographic and health indicators

Constituent countries of the United Kingdom

Numbers (thousands), rates, percentages, mean age

	Population	Live births	Deaths****	Dependency ratio		Live births			Expectation of life (in years) at birth		Infant mortality rate***	
				Children*	Elderly†	TFR**	Outside marriage as percentage of total live births	Mean age of mother at birth (years)	Age-standardised mortality rate††	Males		Females
United Kingdom												
1971	55,928.0	901.6	645.1	43.8	28.0	2.41	8.2	26.2	10,448	68.8	75.0	17.9
1976	56,216.1	675.5	680.8	42.1	29.5	1.74	9.0	26.4	10,486	69.6	75.2	14.5
1981	56,357.5	730.8	658.0	37.1	29.7	1.82	12.5	26.8	9,506	70.8	76.8	11.2
1986	56,858.5	755.0	660.7	33.5	29.6	1.78	21.0	27.0	8,897	71.9	77.7	9.5
1991	57,813.8	792.5	646.2	33.1	29.9	1.82	29.8	27.6	8,107	73.2	78.8	7.4
1993	58,197.7	761.7	658.5	33.3	29.9	1.76	31.8	28.1	8,037	73.7	79.1	8.3
1994	58,400.8	750.7	627.6	33.6	29.9	1.74	32.0	28.4	7,622	73.9	79.2	6.2
1995	58,611.7	732.0	645.5	33.8	29.8	1.71	33.6	28.5	7,706	74.1	79.4	6.2
1996	58,807.2	733.4	636.0	33.8	29.7	1.72	35.5	28.6	7,522	74.3	79.5	6.1
1997	59,014.0	726.8	629.7	33.6	29.6	1.72	36.7	28.8	7,370	74.6‡	79.6‡	5.9
1998	59,237.0	717.1	629.2	33.4	29.5	1.72	37.6	28.9	7,290			5.7‡
1999		700.2‡	629.4‡				38.8‡		7,274‡			5.8‡
England												
1971	46,411.7	740.1	532.4	42.9	28.1	2.37	8.5		10,278			17.5
1976	46,659.9	550.4	560.3	41.4	29.7	1.70	9.2	26.4	10,271			14.2
1981	46,820.8	598.2	541.0	36.4	29.9	1.79	12.9	26.8	9,298	71.1	77.0	10.9
1986	47,342.4	623.6	544.5	33.1	29.8	1.87	21.4	27.0	8,694	72.0	77.9	9.5
1991	48,208.1	660.8	534.0	32.8	29.9	1.81	30.1	27.7	7,941	73.4	79.0	7.3
1993	48,532.7	636.5	541.1	33.1	30.0	1.76	32.0	28.1	7,825	74.0	79.3	6.3
1994	48,707.5	629.0	517.6	33.4	29.9	1.74	32.2	28.4	7,440	74.1	79.4	6.1
1995	48,903.4	613.2	532.6	33.6	29.8	1.71	33.7	28.6	7,526	74.4	79.6	6.1
1996	49,089.1	614.2	524.0	33.6	29.8	1.73	35.5	28.7	7,333	74.6	79.7	6.1
1997	49,284.2	608.6	519.1	33.4	29.6	1.72	36.7	28.8	7,190	74.9‡	79.9‡	5.9
1998	49,494.6	602.5	519.6	33.3	29.5	1.72	37.5	29.0	7,128			5.6‡
1999		589.5‡	517.1‡				38.5‡		7,079‡			5.7‡
Wales												
1971	2,740.3	43.1	34.8	43.4	29.8	2.44	7.2		11,175			18.4
1976	2,799.3	33.4	36.3	42.0	30.9	1.79	8.7	26.0	10,858			13.7
1981	2,813.5	35.8	35.0	37.6	31.6	1.87	11.2	26.6	9,846	70.4	76.4	12.6
1986	2,819.6	37.0	34.7	34.4	32.5	1.86	21.1	26.5	9,012	71.6	77.6	9.5
1991	2,891.5	38.1	34.1	34.4	33.4	1.88	32.3	27.0	8,074	73.2	78.9	6.6
1993	2,906.5	36.6	35.9	34.6	33.6	1.84	35.2	27.4	8,227	73.5	79.0	5.5
1994	2,913.0	35.4	33.9	34.9	33.6	1.79	36.0	27.7	7,753	73.5	79.0	6.1
1995	2,916.8	34.5	35.6	35.1	33.6	1.78	38.1	27.8	7,953	73.8	79.2	5.8
1996	2,921.1	34.9	34.6	35.0	33.6	1.82	41.2	27.8	7,664	74.0	79.2	5.6
1997	2,926.9	34.5	34.6	34.7	33.5	1.82	42.8	28.0	7,578	74.4‡	79.4‡	5.9
1998	2,933.3	33.4	34.0	34.5	33.5	1.79	44.4	28.0	7,366			5.6‡
1999		32.1	34.9‡				46.1‡		7,548‡			6.4‡
Scotland												
1971	5,235.6	86.7	61.6	48.2	27.1	2.53	8.1		11,444	67.3	73.7	19.9
1976	5,233.4	64.9	65.3	44.7	28.4	1.80	9.3	26.0	11,675	68.2	74.4	14.8
1981	5,180.2	69.1	63.8	38.2	28.4	1.84	12.2	26.3	10,849	69.1	75.3	11.3
1986	5,123.0	65.8	63.5	33.5	28.0	1.67	20.6	26.6	10,135	70.2	76.2	8.8
1991	5,107.0	67.0	61.0	32.2	28.7	1.70	29.1	27.4	9,254	71.4	77.1	7.1
1993	5,120.2	63.3	64.0	32.3	28.7	1.62	31.3	27.9	9,529	71.7	77.3	6.5
1994	5,132.4	61.7	59.3	32.5	28.7	1.58	31.2	28.2	8,840	71.9	77.4	6.2
1995	5,136.6	60.1	60.5	32.6	28.6	1.55	33.7	28.4	8,887	72.1	77.6	6.2
1996	5,128.0	59.3	60.7	32.5	28.7	1.55	36.0	28.5	8,868	72.2	77.8	6.2
1997	5,122.5	59.4	59.5	32.3	28.7	1.57	37.7	28.6	8,623	72.4‡	77.9‡	5.3
1998	5,120.0	57.3	59.2	32.0	28.8	1.54	38.9	28.8	8,533			5.5‡
1999		55.1	60.2‡				41.2‡		8,652‡			5.0‡
Northern Ireland†††												
1971	1,540.4	31.8	17.6	56.6	24.0	3.13	3.8		11,607	67.6	73.7	22.7
1976	1,523.5	26.4	17.0	56.1	25.3	2.70	5.0	27.4	11,746	67.5	73.8	18.3
1981	1,543.0	27.3	16.3	50.6	25.3	2.60	7.0	27.6	10,567	69.2	75.5	13.2
1986	1,573.5	28.2	16.1	46.5	24.7	2.46	12.7	27.6	10,071	70.9	77.1	10.2
1991	1,607.3	26.3	15.1	44.0	25.6	2.18	20.2	28.0	8,564	72.6	78.4	7.4
1993	1,638.3	24.9	15.6	43.6	25.4	2.01	21.9	28.4	8,600	73.0	78.7	7.1
1994	1,648.0	24.3	15.1	43.3	25.4	1.95	22.0	28.6	8,256	73.1	78.6	6.1
1995	1,654.9	23.9	15.3	42.9	25.2	1.91	23.1	28.8	8,255	73.5	78.9	7.1
1996	1,669.0	24.6	15.2	42.3	25.1	1.95	25.9	28.8	8,057	73.8	79.2	5.8
1997	1,680.3	24.3	15.0	41.6	24.9	1.93	26.6	29.0	7,810	74.2‡	79.5‡	5.6
1998	1,688.6	23.9	15.0	40.8	25.0	1.91	28.3	29.1	7,438			5.6‡
1999		23.2	15.7‡				30.1‡		7,726‡			6.4‡

‡ Provisional. * Percentage of children under 16 to working population (males 16–64 and females 16–59). † Percentage of males 65 and over and females 60 and over to working population (males 16–64 and females 16–59). ** TFR (the 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 TPF (the total period fertility rate). †† Per million population. The age-standardised mortality rate makes allowances for changes in the age structure of the population. See Notes to tables. **** Deaths under one year per 1,000 live births. ††† Northern Ireland data has been revised to take account of changed Northern Ireland population estimates from 1981. ***** 1998 deaths figures for England and Wales in *Health Statistics Quarterly* 03 and 04 were incorrectly shown as being final when they were still provisional. The final 1998 figures are those below.

Notes: 1. Some of these indicators are also in other tables. They are brought together to make comparison easier.

2. 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.

Table 3.1

Live births: age of mother
 Numbers (thousands), rates, mean age and TFRs

England and Wales

Year and quarter	Age of mother at birth							Age of mother at birth							Mean age (years)	TFR†
	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*								
1961	811.3	59.8	249.8	248.5	152.3	77.5	23.3	89.2	37.3	172.6	176.9	103.1	48.1	15.0	27.6	2.77
1964(max)†	876.0	76.7	276.1	270.7	153.5	75.4	23.6	92.9	42.5	181.6	187.3	107.7	49.8	13.7	27.2	2.93
1966	849.8	86.7	285.8	253.7	136.4	67.0	20.1	90.5	47.7	176.0	174.0	97.3	45.3	12.5	26.8	2.75
1971	783.2	82.6	285.7	247.2	109.6	45.2	12.7	83.5	50.6	152.9	153.2	77.1	32.8	8.7	26.2	2.37
1976	584.3	57.9	182.2	220.7	90.8	26.1	6.5	60.4	32.2	109.3	118.7	57.2	18.6	4.8	26.4	1.71
1977(min)†	569.3	54.5	174.5	207.9	100.8	25.5	6.0	58.1	29.4	103.7	117.5	58.6	18.2	4.4	26.5	1.66
1981	634.5	56.6	194.5	215.8	126.6	34.2	6.9	61.3	28.1	105.3	129.1	68.6	21.7	4.9	26.8	1.80
1986	661.0	57.4	192.1	229.0	129.5	45.5	7.6	60.6	30.1	92.7	124.0	78.1	24.6	4.8	27.0	1.77
1991	699.2	52.4	173.4	248.7	161.3	53.6	9.8	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	63.5	31.7	86.2	117.3	87.2	33.4	5.8	27.9	1.80
1993	673.5	45.1	152.0	236.0	171.1	58.8	10.5	62.6	31.0	82.7	114.1	87.0	34.1	6.2	28.1	1.76
1994	664.7	42.0	140.2	229.1	179.6	63.1	10.7	61.9	29.0	79.4	112.1	88.7	35.8	6.4	28.4	1.75
1995	648.1	41.9	130.7	217.4	181.2	65.5	11.3	60.4	28.5	76.8	108.6	87.3	36.2	6.8	28.5	1.72
1996	649.5	44.7	125.7	211.1	186.4	69.5	12.1	60.5	29.8	77.5	106.9	88.6	37.2	7.2	28.6	1.73
1997	643.1	46.4	118.6	202.8	187.5	74.9	12.9	59.8	30.2	76.6	104.8	88.8	38.9	7.6	28.8	1.73
1998	635.9	48.3	113.5	193.1	188.5	78.9	13.6	59.0	30.9	75.5	102.2	89.9	39.8	7.8	28.9	1.72
1999‡	621.9	48.4	110.8	181.8	185.4	81.2	14.2	57.5	30.6	73.2	99.4	89.2	39.8	8.0	29.0	1.70
1996 Dec	164.2	12.0	32.1	52.6	46.6	17.7	3.2	61.9	32	82	109	90	38	8	28.6	1.79
1997 March	158.1	11.5	29.8	50.4	45.7	17.7	3.1	60.8	31	78	107	90	38	8	28.7	1.75
1997 June	163.3	11.3	29.5	51.6	48.4	19.2	3.3	60.4	29	75	106	91	40	8	28.9	1.74
1997 Sept	164.9	11.8	30.3	52.1	48.1	19.3	3.3	59.0	30	76	104	88	38	7	28.8	1.71
1997 Dec	156.8	11.8	29.0	48.7	45.4	18.7	3.2	59.0	31	76	103	87	39	8	28.8	1.72
1998 March	155.8	11.7	27.8	47.9	46.2	18.8	3.3	59.4	31	75	103	90	39	8	28.9	1.73
1998 June	158.6	11.4	27.5	48.6	48.1	19.7	3.3	58.7	29	73	103	91	40	8	29.0	1.71
1998 Sept	166.1	12.7	29.8	50.6	48.9	20.7	3.6	59.6	31	76	104	90	40	8	28.9	1.74
1998 Dec	155.4	12.4	28.5	46.1	45.4	19.6	3.4	58.6	32	77	101	88	40	8	28.9	1.72
1999 March‡	152.1	12.0	27.1	45.0	45.1	19.6	3.4	58.0	31	74	100	89	40	8	28.9	1.70
1999 June‡	157.2	11.8	27.2	46.2	48.0	20.5	3.6	57.8	30	71	100	92	40	8	29.1	1.70
1999 Sept‡	160.1	12.5	28.7	46.8	47.5	20.9	3.7	57.1	31	73	99	88	39	8	29.0	1.69
1999 Dec‡	152.5	12.0	27.8	43.8	44.9	20.2	3.6	57.2	31	74	98	88	40	8	29.0	1.70

* Births per 1,000 women in the age-group; all quarterly age-specific fertility rates are seasonally adjusted.

† TFR (the 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 TFR (the total period fertility rate). During the post Second World War period the TFR reached a maximum in 1964 and a minimum in 1977. Quarterly TFRs are seasonally adjusted.

‡ Provisional.

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.

Table 3.2 Live births outside marriage: age of mother and type of registration
 Numbers (thousands), mean age and percentages England and Wales

Year and quarter	Age of mother at birth								Mean age (years)	Age of mother at birth								Registration*		
	All ages	Under 20	20-24	25-29	30-34	35-39	40 and over	All ages		Under 20	20-24	25-29	30-34	35-39	40 and over	Joint		Sole		
																Same address†	Different address†			
Live births outside marriage (numbers)								Percentage of total births in age-group								As a percentage of all births outside marriage				
1971	65.7	21.6	22.0	11.5	6.2	3.2	1.1	23.7	8.4	26.1	7.7	4.7	5.7	7.0	9.0	45.5		54.5		
1976	53.8	19.8	16.6	9.7	4.7	2.3	0.7	23.3	9.2	34.2	9.1	4.4	5.2	8.6	10.1	51.0		49.0		
1981	81.0	26.4	28.8	14.3	7.9	1.3	0.9	23.4	12.8	46.7	14.8	6.6	6.2	3.9	12.5	58.2		41.8		
1986	141.3	39.6	54.1	27.7	13.1	5.7	1.1	23.8	21.4	69.0	28.2	12.1	10.1	12.6	14.7	46.6	19.6	33.8		
1991	211.3	43.4	77.8	52.4	25.7	9.8	2.1	24.8	30.2	82.9	44.9	21.1	16.0	18.3	21.3	54.6	19.8	25.6		
1992	215.2	40.1	77.1	55.9	28.9	10.9	2.3	25.2	31.2	83.7	47.2	22.8	17.3	19.3	22.9	55.4	20.7	23.9		
1993	216.5	38.2	75.0	57.5	31.4	11.9	2.5	25.4	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	25.9	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	26.0	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	25.0	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	67.6	61.2	44.9	20.8	4.3	26.4	38.9	89.0	61.1	33.6	24.2	25.6	30.2	61.8	18.2	19.9		
1996 Dec	61.3	10.6	18.7	16.4	10.5	4.2	0.8	26.0	37.3	87.9	58.2	31.2	22.6	23.9	26.7	58.2	19.9	21.8		
1997 March	58.5	10.2	17.4	15.7	10.2	4.2	0.9	26.1	37.0	88.7	58.4	31.0	22.4	23.9	28.7	58.4	19.5	22.1		
1997 June	58.9	10.1	17.1	15.5	10.6	4.7	0.9	26.3	36.1	89.1	58.0	30.1	22.0	24.3	28.4	59.6	19.4	21.0		
1997 Sept	61.4	10.5	17.9	16.5	10.9	4.7	0.9	26.2	37.3	88.8	58.9	31.8	22.7	24.4	27.8	59.9	18.9	21.2		
1997 Dec	59.3	10.4	17.2	15.7	10.4	4.6	0.9	26.2	37.8	88.3	59.2	32.2	23.0	24.8	29.3	60.0	19.2	20.7		
1998 March	58.5	10.4	16.5	15.3	10.7	4.6	1.0	26.3	37.5	89.0	59.5	31.9	23.1	24.4	29.6	60.5	18.4	21.1		
1998 June	58.4	10.3	16.2	15.4	10.8	4.7	0.9	26.4	36.8	89.6	59.1	31.8	22.5	24.0	28.3	61.0	18.2	20.8		
1998 Sept	63.2	11.3	17.9	16.3	11.5	5.2	1.0	26.3	38.1	89.2	60.0	32.3	23.6	25.2	28.5	60.9	18.4	20.7		
1998 Dec	60.5	11.0	17.2	15.4	10.9	5.0	1.0	26.3	38.9	88.5	60.4	33.3	24.0	25.6	29.6	61.2	18.4	20.4		
1999 March‡	59.0	10.8	16.4	15.0	10.9	5.0	1.0	26.3	38.8	89.7	60.5	33.4	24.1	25.4	29.5	61.4	18.2	20.4		
June‡	59.8	10.5	16.5	15.3	11.2	5.2	1.1	26.5	38.0	89.2	60.6	33.0	23.4	25.3	31.3	61.6	18.2	20.1		
Sept‡	62.9	11.1	17.7	16.0	11.7	5.4	1.1	26.4	39.3	88.7	61.8	34.1	24.7	25.6	29.3	62.2	18.1	19.6		
Dec‡	60.2	10.6	17.1	14.9	11.1	5.3	1.1	26.4	39.5	88.4	61.4	34.0	24.7	26.1	30.8	62.0	18.4	19.5		

* Births outside marriage can be registered by both the mother and father (joint) or by the mother alone (sole).
 † Usual address of parents.
 ‡ Provisional.

Table 4.1

Conceptions: age of woman at conception

England and Wales (residents)

Numbers (thousands) and rates; and percentage terminated by abortion

Year and quarter	Age of woman at conception								
	All ages	Under 16	Under 18	Under 20	20-24	25-29	30-34	35-39	40 and over
(a) numbers (thousands)									
1990	871.5	8.1	44.8	113.3	244.5	284.2	161.4	56.0	12.0
1991	853.7	7.5	40.1	101.6	233.3	281.5	167.5	57.6	12.1
1992	828.0	7.2	37.6	93.4	215.9	274.9	172.0	59.6	12.2
1993	819.0	7.3	35.8	87.2	203.6	271.7	181.0	63.0	12.6
1994	801.6	7.8	36.1	85.4	190.4	261.8	185.0	66.2	12.9
1995	790.3	8.1	37.9	86.6	181.1	250.3	190.3	68.7	13.2
1996	816.9	8.9	43.5	94.9	179.8	252.6	200.0	75.5	14.1
1997	800.4	8.3	43.4	96.0	167.3	242.6	200.9	78.9	14.7
1998‡	795.9	8.4	44.1	101.5	163.0	232.2	201.1	82.7	15.4
1996 March	206.3	2.3	10.9	24.2	47.3	64.0	49.2	18.3	3.4
June	200.8	2.3	10.9	23.7	44.6	61.9	48.7	18.2	3.6
Sept	202.6	2.1	10.5	22.6	43.1	63.2	50.8	19.2	3.6
Dec	207.2	2.1	11.2	24.2	44.9	63.5	51.2	19.8	3.6
1997 March	194.1	2.0	10.6	23.2	41.6	59.4	47.7	18.6	3.6
June	198.5	2.2	11.0	23.9	41.8	59.9	49.8	19.5	3.8
Sept	199.2	2.0	10.4	23.3	40.4	60.7	51.2	19.9	3.6
Dec	208.6	2.1	11.4	25.6	43.5	62.6	52.2	20.8	3.8
1998 March‡	196.6	2.1	11.2	25.3	41.2	57.7	48.9	19.9	3.6
June‡	195.9	2.1	11.0	25.3	40.5	56.8	49.0	20.5	3.8
Sept‡	200.7	2.1	10.7	24.7	40.0	59.1	51.9	21.1	3.9
Dec‡	202.7	2.1	11.1	26.2	41.4	58.7	51.3	21.2	4.0
1999 March‡	191.4	1.9	10.4	24.8	39.6	54.4	48.3	20.5	3.8
(b) rates (conceptions per thousand women in age-group)									
1990	79.2	9.5	47.7	68.0	124.0	138.0	89.7	33.6	6.6
1991	77.7	8.9	44.6	64.1	120.2	135.1	90.1	34.4	6.6
1992	76.3	8.4	43.6	61.9	114.0	131.7	89.9	35.1	6.9
1993	76.1	8.1	42.5	59.9	110.8	131.4	92.0	36.5	7.4
1994	74.7	8.3	42.0	58.9	107.8	128.1	91.3	37.5	7.6
1995	73.7	8.6	42.0	58.9	106.3	125.0	91.7	37.9	7.9
1996	76.1	9.5	46.4	63.3	110.9	127.9	95.1	40.4	8.4
1997	74.4	8.9	45.9	62.6	108.0	125.4	95.2	41.0	8.7
1998‡	73.9	8.9	47.0	64.9	108.3	122.9	95.9	41.7	8.9
1996 March	77.3	10.0	47.5	65.6	115.1	129.6	94.6	39.8	8.1
June	75.2	9.8	46.9	63.9	109.8	125.9	93.4	39.4	8.6
Sept	75.0	9.1	44.4	59.9	106.3	127.7	96.1	40.8	8.5
Dec	76.7	9.0	47.3	63.8	112.0	128.9	96.7	41.6	8.5
1997 March	73.2	8.6	45.5	61.9	107.1	123.6	91.7	39.6	8.5
June	74.1	9.4	46.8	62.6	107.5	123.8	94.6	40.8	8.9
Sept	73.5	8.5	43.9	60.2	103.8	124.9	96.3	41.0	8.3
Dec	76.9	8.9	47.8	65.6	112.7	129.6	98.4	42.4	8.9
1998 March‡	74.1	9.1	48.3	66.0	109.7	122.7	94.3	41.3	8.5
June‡	73.0	9.0	47.1	65.0	107.5	120.1	93.7	41.7	8.9
Sept‡	73.9	8.9	45.4	62.6	105.3	124.6	98.3	42.1	9.0
Dec‡	74.6	8.8	46.9	66.1	108.8	124.7	97.3	41.9	9.1
1999 March‡	71.9	8.0	45.0	64.0	106.3	119.0	93.9	41.2	8.8
(c) percentage terminated by abortion									
1990	19.9	50.8	41.1	35.7	22.3	13.5	13.8	23.1	43.2
1991	19.4	51.1	39.9	34.5	22.2	13.4	13.7	22.0	41.6
1992	19.3	48.6	39.1	33.9	22.3	13.9	13.9	22.2	41.5
1993	19.2	49.9	39.2	34.3	22.8	13.9	13.5	21.5	40.2
1994	19.5	50.3	39.8	34.7	23.4	14.3	13.6	21.1	40.9
1995	19.7	47.6	38.7	34.6	24.2	14.8	13.6	20.7	38.0
1996	20.8	49.2	40.0	36.2	25.7	15.6	14.1	21.2	37.6
1997	21.3	49.7	40.6	36.8	26.7	16.4	14.2	21.0	38.0
1998‡	22.3	52.5	42.0	37.8	27.9	17.1	14.9	21.6	38.0
1996 March	21.0	47.2	39.5	36.1	25.5	15.9	14.4	21.8	37.1
June	21.3	49.2	40.7	36.6	26.5	16.0	14.4	21.8	38.2
Sept	19.7	50.4	39.1	35.2	24.7	14.9	13.3	20.2	37.3
Dec	21.1	50.2	40.8	37.0	26.3	15.8	14.2	21.0	37.9
1997 March	21.4	48.4	39.7	36.0	26.6	16.6	14.5	21.0	38.6
June	21.7	49.5	40.3	36.7	27.1	16.8	14.6	21.9	39.1
Sept	20.5	48.1	40.6	36.6	25.8	15.8	13.5	20.7	36.4
Dec	21.6	52.5	41.6	37.6	27.2	16.5	14.3	20.6	37.8
1998 March‡	22.3	51.4	41.2	37.3	27.7	17.3	15.2	21.7	37.0
June‡	22.8	52.7	42.2	38.2	28.4	17.6	15.3	22.2	38.9
Sept‡	21.7	52.5	42.2	37.9	27.3	16.6	14.4	21.3	37.6
Dec‡	22.3	53.3	42.4	37.9	28.1	17.1	14.8	21.1	38.5
1999 March‡	22.3	51.4	42.0	38.0	27.8	17.1	14.7	21.6	36.3

‡ Provisional

Notes: 1. Conceptions are estimates derived from birth registrations and abortion notifications.

2. 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.

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

Year and quarter	All ages			All women (residents)							Gestation weeks (percentages)			
	All** women	Residents**	Non-** residents	Age group							Under 9	9-12	13-19	20 and over
				Under 16	16-19	20-24	25-29	30-34	35-44	45 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
1992	172.1	160.5	11.6	3.0	27.6	49.0	38.4	23.9	18.1	0.5	36.8	51.8	10.3	1.2
1993	168.7	157.8	10.9	3.1	25.8	46.8	38.1	24.7	18.8	0.5	39.2	49.7	9.9	1.2
1994	166.9	156.5	10.3	3.2	25.1	44.9	38.1	25.5	19.1	0.4	40.5	48.4	9.9	1.2
1995	163.6	154.3	9.3	3.2	24.9	43.4	37.3	25.8	19.2	0.5	41.9	47.3	9.6	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	23.7	0.5	41.4	47.6	9.7	1.3
1999‡	183.2	173.7	9.5	3.6	32.7	44.8	38.3	29.0	24.0	0.5	42.5	46.5	9.5	1.4
1996 March	45.7	43.2	2.4	0.9	7.4	12.4	10.2	7.2	5.2	0.1	38.0	50.5	10.2	1.2
June	45.5	42.9	2.5	0.9	7.3	11.9	10.1	7.2	5.4	0.1	38.9	49.3	10.5	1.4
Sept	44.0	41.6	2.4	0.9	7.1	11.2	9.8	7.0	5.4	0.1	40.0	48.3	10.3	1.4
Dec	42.4	40.1	2.2	0.9	7.0	10.8	9.3	6.8	5.2	0.1	43.1	46.3	9.3	1.3
1997 March	46.2	43.6	2.5	0.9	7.7	11.8	10.3	7.3	5.5	0.1	37.4	50.2	11.1	1.3
June	45.2	42.8	2.4	0.8	7.4	11.4	10.2	7.2	5.6	0.1	41.3	48.0	9.4	1.2
Sept	45.1	42.7	2.4	0.9	7.5	11.1	10.0	7.3	5.8	0.1	42.0	47.2	9.6	1.2
Dec	43.3	41.0	2.3	0.8	7.4	10.7	9.6	7.0	5.4	0.1	44.5	46.0	8.3	1.2
1998 March	48.4	45.9	2.5	1.0	8.7	12.0	10.5	7.7	5.8	0.1	37.5	50.4	10.8	1.3
June	46.4	44.0	2.4	0.9	8.1	11.4	10.1	7.6	5.8	0.1	40.8	48.3	9.5	1.4
Sept	46.9	44.5	2.4	1.0	8.3	11.3	10.0	7.6	6.1	0.1	42.5	46.7	9.5	1.2
Dec	45.7	43.5	2.2	0.9	8.1	11.0	9.8	7.5	5.9	0.1	44.9	45.0	8.9	1.2
1999‡ March	47.0	44.7	2.4	0.9	8.6	11.7	9.8	7.5	6.0	0.1	40.2	48.1	10.3	1.4
June	44.5	42.2	2.4	0.9	7.9	10.9	9.4	7.1	5.8	0.1	42.5	46.7	9.2	1.4
Sept	45.3	42.9	2.4	0.9	8.1	11.1	9.4	7.2	6.0	0.1	43.3	46.1	9.3	1.4
Dec	44.0	41.6	2.4	0.9	7.8	10.7	9.3	6.9	5.9	0.1	44.6	44.8	9.2	1.4
	Rates (per thousand women 14-49)													
1971	:	8.4	:	3.5	13.9	13.1	10.7	10.0	5.6	0.3				
1976	:	8.9	:	4.4	16.9	14.2	10.4	9.2	5.3	0.3				
1981	:	10.6	:	4.5	19.4	19.1	13.3	10.3	5.9	0.4				
1986	:	11.7	:	5.4	22.0	21.9	15.5	10.9	5.1	0.3				
1991	:	13.1	:	5.6	24.0	27.2	18.6	12.7	5.1	0.3				
1992	:	12.5	:	5.4	22.4	25.9	18.4	12.5	5.2	0.3				
1993	:	12.3	:	5.3	22.0	25.5	18.4	12.6	5.5	0.3				
1994	:	12.2	:	5.2	22.0	25.4	18.6	12.6	5.6	0.2				
1995	:	12.0	:	5.2	21.7	25.5	18.6	12.4	5.5	0.2				
1996	:	13.0	:	5.8	24.3	28.6	19.9	13.4	6.0	0.2				
1997	:	13.3	:	5.5	24.5	29.0	20.8	13.7	6.1	0.3				
1998	:	13.9	:	6.1	26.5	30.4	21.4	14.5	6.4	0.3				
1999‡*	:	13.6	:	5.6	25.7	29.6	20.9	14.0	6.3	0.3				
1996 March	:	13.5	:	5.7	25.0	30.7	20.7	13.8	5.9	0.2				
June	:	13.4	:	5.9	24.9	29.6	20.6	13.7	6.1	0.2				
Sept	:	12.8	:	5.9	24.0	27.5	19.7	13.3	6.1	0.2				
Dec	:	12.4	:	5.8	23.5	26.5	18.7	12.9	5.8	0.3				
1997 March	:	13.8	:	5.7	25.5	30.8	21.7	14.1	6.2	0.2				
June	:	13.4	:	5.4	24.1	29.6	21.1	13.8	6.2	0.3				
Sept	:	13.2	:	5.7	24.3	28.3	20.6	13.8	6.3	0.3				
Dec	:	12.7	:	5.3	24.0	27.4	19.7	13.1	5.9	0.3				
1998 March	:	14.6	:	6.4	28.2	32.4	22.4	14.9	6.4	0.3				
June	:	13.8	:	5.8	26.0	30.4	21.4	14.5	6.3	0.3				
Sept	:	13.8	:	6.1	26.2	29.9	21.1	14.4	6.6	0.3				
Dec	:	13.5	:	5.9	25.7	29.1	20.5	14.3	6.3	0.3				
1999‡* March	:	13.9	:	5.8	27.2	30.8	21.5	14.3	6.3	0.3				
June	:	13.2	:	5.4	24.9	28.9	20.6	13.7	6.1	0.3				
Sept	:	13.4	:	5.5	25.5	29.3	20.6	13.9	6.3	0.3				
Dec	:	13.0	:	5.7	24.4	28.4	20.3	13.4	6.2	0.3				

‡ Provisional.

* The denominators used to calculate rates are 1999 population projections (1998-based). Rates for Under 16 and 45 and over are based on female populations aged 14-15 and 45-49 respectively.

** Includes cases with not stated age and/or gestation weeks.

Table 5.1 Expectation of life (in years) at birth and selected age Constituent countries of the United Kingdom

Year	Males								Year	Females							
	At birth	At age								At birth	At age						
		5	20	30	50	60	70	80			5	20	30	50	60	70	80
United Kingdom*																	
1971	68.8	65.3	50.9	41.3	23.0	15.3	9.5	5.5	1971	75.0	71.4	56.7	47.0	28.3	19.8	12.5	6.9
1976	69.6	66.0	51.4	41.9	23.4	15.7	9.6	5.6	1976	75.2	72.0	57.3	47.5	28.7	20.3	12.9	7.2
1981	70.8	66.9	52.3	42.7	24.1	16.3	10.1	5.8	1981	76.8	72.7	57.9	48.1	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	73.5	58.7	48.9	29.8	21.2	13.8	7.9
1991	73.2	68.9	54.3	44.7	26.0	17.7	11.1	6.4	1991	78.8	74.4	59.6	49.7	30.7	21.9	14.4	8.4
1993	73.7	69.3	54.6	45.1	26.4	18.0	11.3	6.5	1993	79.1	74.6	59.8	50.1	30.9	22.1	14.5	8.4
1994	73.9	69.5	54.8	45.2	26.5	18.1	11.3	6.5	1994	79.2	74.7	59.9	50.1	31.0	22.2	14.5	8.4
1995	74.1	69.7	55.0	45.5	26.8	18.4	11.5	6.6	1995	79.4	74.9	60.1	50.3	31.2	22.4	14.6	8.5
1996	74.3	69.9	55.2	45.7	26.9	18.5	11.6	6.6	1996	79.5	75.0	60.1	50.3	31.2	22.4	14.6	8.5
1997‡	74.6	70.2	55.5	45.9	27.2	18.8	11.8	6.7	1997‡	79.6	75.1	60.3	50.5	31.4	22.6	14.7	8.5
England and Wales																	
1971	69.0	65.6	51.1	41.5	23.1	15.4	9.5	5.5	1971	75.2	71.6	56.9	47.1	28.4	20.0	12.6	7.0
1976	69.9	66.2	51.6	42.1	23.5	15.8	9.7	5.7	1976	76.0	72.2	57.4	47.7	28.8	20.4	13.0	7.2
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	10.6	6.1	1986	77.9	73.6	58.9	49.0	30.0	21.4	13.9	7.9
1991	73.4	69.1	54.5	44.9	26.2	17.9	11.2	6.4	1991	79.0	74.6	59.8	49.9	30.8	22.1	14.5	8.4
1993	74.0	69.6	54.9	45.3	26.5	18.2	11.4	6.5	1993	79.3	74.8	60.0	50.2	31.1	22.3	14.6	8.5
1994	74.1	69.7	55.0	45.4	26.7	18.3	11.4	6.5	1994	79.4	74.9	60.1	50.3	31.2	22.3	14.6	8.5
1995	74.4	70.0	55.2	45.7	26.9	18.5	11.6	6.6	1995	79.6	75.1	60.3	50.4	31.3	22.5	14.7	8.6
1996	74.6	70.2	55.4	45.9	27.1	18.7	11.7	6.7	1996	79.7	75.2	60.3	50.5	31.4	22.6	14.7	8.6
1997‡	74.8	70.4	55.7	46.1	27.4	18.9	11.8	6.8	1997‡	79.8	75.3	60.5	50.7	31.6	22.7	14.8	8.6
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	73.7	58.9	49.1	30.0	21.4	13.9	7.9
1991	73.4	69.1	54.5	44.9	26.2	17.9	11.2	6.4	1991	79.0	74.6	59.8	49.9	30.9	22.1	14.5	8.4
1993	74.0	69.6	54.9	45.3	26.6	18.2	11.4	6.5	1993	79.3	74.9	60.0	50.2	31.1	22.3	14.6	8.5
1994	74.1	69.7	55.0	45.5	26.7	18.3	11.4	6.6	1994	79.4	74.9	60.1	50.3	31.2	22.4	14.6	8.5
1995	74.4	70.0	55.3	45.7	27.0	18.5	11.6	6.6	1995	79.6	75.1	60.3	50.5	31.4	22.5	14.7	8.6
1996	74.6	70.2	55.5	45.9	27.2	18.7	11.7	6.7	1996	79.7	75.2	60.4	50.6	31.4	22.6	14.7	8.6
1997‡	74.9	70.5	55.7	46.2	27.4	18.9	11.9	6.8	1997‡	79.9	75.4	60.5	50.7	31.6	22.7	14.8	8.6
Wales																	
1981	70.4	66.5	51.9	42.2	23.6	15.8	9.7	5.5	1981	76.4	72.3	57.5	47.7	28.9	20.4	13.1	7.4
1986	71.6	67.5	52.9	43.3	24.6	16.6	10.4	6.0	1986	77.6	73.3	58.5	48.7	29.7	21.1	13.8	7.8
1991	73.2	68.9	54.2	44.6	25.9	17.6	11.0	6.4	1991	78.9	74.4	59.6	49.8	30.7	21.9	14.4	8.4
1993	73.5	69.1	54.4	44.9	26.1	17.8	11.2	6.6	1993	79.0	74.5	59.7	49.9	30.8	22.0	14.4	8.4
1994	73.5	69.1	54.4	44.9	26.2	17.9	11.1	6.5	1994	79.0	74.5	59.7	49.8	30.8	22.0	14.4	8.4
1995	73.8	69.4	54.7	45.2	26.5	18.1	11.3	6.6	1995	79.2	74.7	59.8	50.0	30.9	22.2	14.5	8.5
1996	74.0	69.5	54.8	45.4	26.6	18.3	11.4	6.5	1996	79.2	74.7	59.8	50.0	31.0	22.2	14.5	8.5
1997‡	74.4	69.9	55.2	45.7	27.0	18.6	11.6	6.7	1997‡	79.4	74.9	60.0	50.2	31.1	22.4	14.6	8.5
Scotland																	
1971	67.3	64.0	49.5	40.1	22.0	14.6	9.1	5.4	1971	73.7	70.1	55.4	45.6	27.2	19.0	11.9	6.7
1976	68.2	64.4	49.9	40.4	22.3	14.9	9.2	5.3	1976	74.4	70.6	55.9	46.1	27.6	19.4	12.4	6.9
1981	69.1	65.2	50.6	41.1	22.9	15.4	9.5	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	72.6	57.8	48.1	29.1	20.6	13.4	7.8
1993	71.7	67.3	52.7	43.2	24.8	16.8	10.5	6.0	1993	77.3	72.8	58.0	48.2	29.3	20.7	13.4	7.8
1994	71.9	67.5	52.8	43.4	24.9	16.9	10.6	6.1	1994	77.4	72.9	58.1	48.3	29.4	20.8	13.5	7.8
1995	72.1	67.7	53.1	43.6	25.2	17.2	10.8	6.2	1995	77.6	73.2	58.3	48.6	29.6	21.0	13.7	7.9
1996	72.2	67.8	53.1	43.7	25.3	17.3	10.9	6.2	1996	77.8	73.2	58.4	48.7	29.7	21.1	13.7	7.9
1997‡	72.4	67.9	53.3	43.9	25.5	17.5	11.0	6.3	1997‡	77.9	73.4	58.6	48.8	29.9	21.3	13.8	7.9
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
1993	73.0	68.6	54.0	44.6	25.8	17.6	11.1	6.5	1993	78.7	74.3	59.4	49.6	30.6	21.8	14.3	8.4
1994	73.1	68.8	54.2	44.7	26.0	17.8	11.2	6.6	1994	78.6	74.2	59.4	49.6	30.6	21.9	14.3	8.4
1995	73.5	69.1	54.5	45.0	26.3	18.0	11.3	6.6	1995	78.9	74.5	59.6	49.8	30.8	22.0	14.4	8.4
1996	73.8	69.4	54.7	45.2	26.5	18.2	11.3	6.6	1996	79.2	74.7	59.9	50.0	30.9	22.1	14.4	8.4
1997‡	74.2	69.7	55.0	45.5	26.8	18.3	11.5	6.6	1997‡	79.5	75.0	60.2	50.3	31.2	22.4	14.5	8.4

Note: Figures from 1981 are calculated from the population estimates revised in the light of the 1991 Census. All figures are based on a three-year period; see Notes to tables for further information.

‡ Provisional.

* United Kingdom and Northern Ireland data has been revised to take account of changed Northern Ireland population estimates from 1981.

Table 6.1 **Deaths: age and sex**** *England and Wales*
 Numbers (thousands) and rates

Year and quarter	All ages	Age group												
		Under 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														
1971	288.4	7.97	1.23	0.92	0.69	1.54	1.77	3.05	6.68	21.0	55.7	89.8	71.9	26.1
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	0.32	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
1993	279.6	2.41	0.51	0.28	0.34	0.91	1.60	3.81	5.78	13.4	33.3	78.9	93.8	44.5
1994	267.6	2.37	0.43	0.28	0.33	0.84	1.55	4.07	5.77	12.9	31.3	76.3	88.2	43.2
1995	274.4	2.31	0.39	0.27	0.34	0.91	1.53	4.04	5.88	13.5	31.0	75.0	92.3	47.1
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
1997	264.9	2.14	0.41	0.27	0.33	0.95	1.44	3.94	5.71	13.5	28.9	68.0	90.2	49.1
1998	264.7	2.07	0.41	0.24	0.29	0.88	1.29	4.01	5.90	13.6	29.1	66.1	90.5	50.4
1999†	263.2	2.08	0.41	0.22	0.29	0.91	1.27	3.98	5.92	13.6	28.5	64.0	90.0	52.0
Females														
1971	278.9	5.75	0.98	0.57	0.42	0.63	0.79	1.84	4.53	13.3	30.8	64.0	95.0	60.4
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
1993	299.2	1.84	0.37	0.19	0.25	0.39	0.58	1.80	3.63	8.6	20.4	55.2	100.9	105.0
1994	285.6	1.75	0.36	0.19	0.20	0.36	0.54	1.77	3.67	8.7	19.0	53.9	94.2	101.0
1995	295.2	1.68	0.33	0.20	0.21	0.38	0.50	1.86	3.64	9.0	18.9	53.0	97.2	108.4
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
1997	290.4	1.66	0.30	0.18	0.21	0.43	0.49	1.72	3.74	9.0	18.0	48.3	95.5	110.9
1998	290.3	1.56	0.31	0.18	0.19	0.41	0.48	1.72	3.68	9.1	17.9	46.9	94.7	113.2
1999†	290.4	1.56	0.31	0.17	0.22	0.40	0.48	1.71	3.77	9.0	17.9	45.0	93.4	116.5
Rates (deaths per 1,000 population in each age group)														
Males														
1971	12.1	19.8	0.76	0.44	0.37	0.90	0.93	0.97	2.31	7.07	20.1	50.5	113.0	231.8
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	0.71	0.82	0.87	1.67	5.27	16.6	42.9	101.1	214.8
1991	11.2	8.3	0.40	0.21	0.23	0.69	0.86	0.94	1.76	4.62	13.8	38.5	93.6	197.1
1993	11.1	7.0	0.36	0.16	0.21	0.59	0.83	0.91	1.67	4.24	13.3	37.9	93.3	202.3
1994	10.6	6.9	0.31	0.16	0.20	0.55	0.83	0.96	1.66	3.99	12.4	36.2	89.5	188.6
1995	10.8	6.9	0.28	0.15	0.21	0.58	0.86	0.95	1.67	4.08	12.3	36.1	89.4	196.0
1996	10.5	7.0	0.32	0.13	0.18	0.58	0.83	0.95	1.62	4.02	12.0	34.5	85.1	192.1
1997	10.3	6.5	0.31	0.15	0.19	0.58	0.89	0.93	1.54	3.94	11.5	33.2	82.5	190.3
1998	10.3	6.4	0.31	0.14	0.17	0.53	0.82	0.96	1.55	3.94	11.3	32.4	81.2	187.2
1999†	10.2	6.5	0.30	0.12	0.17	0.55	0.80	0.95	1.56	3.95	11.1	31.4	80.8	192.9
1998 March	10.9	6.6	0.36	0.15	0.22	0.55	0.92	0.99	1.59	4.09	12.0	34.7	86.6	201.9
1998 June	10.0	6.1	0.30	0.14	0.17	0.55	0.87	0.99	1.58	3.88	11.1	31.5	78.9	177.8
1998 Sept	9.3	5.6	0.29	0.13	0.16	0.51	0.78	0.92	1.51	3.82	10.5	29.6	73.4	162.1
1998 Dec	10.8	7.2	0.28	0.12	0.13	0.51	0.70	0.94	1.53	3.97	11.7	33.8	86.3	207.1
1999 March†	11.8	7.1	0.36	0.11	0.20	0.59	0.80	0.94	1.66	4.23	12.0	35.9	95.1	239.0
1999 June†	9.4	6.2	0.24	0.13	0.15	0.49	0.82	0.97	1.53	3.80	10.8	29.5	74.4	168.2
1999 Sept†	9.1	6.4	0.30	0.12	0.15	0.56	0.79	0.87	1.52	3.68	10.4	28.1	71.1	161.9
1999 Dec†	10.5	6.4	0.33	0.14	0.18	0.55	0.80	1.02	1.52	4.10	11.3	32.2	82.9	203.1
Females														
1971	11.0	15.1	0.63	0.29	0.24	0.39	0.42	0.60	1.59	4.32	10.0	26.1	73.6	185.7
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	3.23	9.2	23.4	62.5	171.0
1991	11.3	6.4	0.33	0.16	0.15	0.28	0.33	0.45	1.06	2.91	8.1	22.0	58.6	163.8
1993	11.4	5.6	0.28	0.12	0.16	0.27	0.31	0.45	1.06	2.73	7.9	22.0	59.4	156.5
1994	10.9	5.4	0.27	0.11	0.13	0.25	0.30	0.44	1.06	2.68	7.3	21.3	56.9	146.6
1995	11.2	5.3	0.25	0.12	0.13	0.26	0.29	0.46	1.05	2.72	7.3	21.4	57.1	153.1
1996	11.0	5.4	0.24	0.10	0.12	0.29	0.31	0.45	1.03	2.62	7.1	20.7	55.8	150.8
1997	10.9	5.3	0.23	0.10	0.13	0.28	0.32	0.42	1.03	2.63	6.9	20.2	54.6	151.8
1998	10.9	5.0	0.24	0.11	0.12	0.26	0.32	0.43	0.99	2.62	6.8	19.9	53.9	151.5
1999†	10.9	5.1	0.24	0.10	0.13	0.25	0.32	0.43	1.02	2.61	6.8	19.0	53.1	155.9
1998 March	11.8	5.3	0.25	0.13	0.14	0.29	0.37	0.44	1.01	2.61	7.0	21.6	58.3	165.3
1998 June	10.4	4.4	0.24	0.10	0.10	0.26	0.30	0.47	0.95	2.67	6.7	19.1	51.8	142.8
1998 Sept	9.7	4.7	0.20	0.08	0.10	0.28	0.29	0.42	1.00	2.48	6.3	18.0	47.9	132.1
1998 Dec	11.7	5.7	0.29	0.11	0.13	0.22	0.32	0.40	1.01	2.73	7.2	20.8	57.6	165.9
1999 March†	13.2	5.5	0.29	0.12	0.17	0.31	0.35	0.47	1.06	2.79	7.3	22.1	64.1	198.1
1999 June†	9.9	5.1	0.24	0.07	0.11	0.21	0.33	0.41	1.00	2.53	6.5	17.5	48.1	136.8
1999 Sept†	9.5	4.9	0.19	0.10	0.11	0.24	0.28	0.40	0.95	2.47	6.5	17.1	46.2	129.2
1999 Dec†	11.2	5.0	0.25	0.11	0.14	0.26	0.33	0.43	1.06	2.63	7.1	19.5	54.3	160.1

* Rates per 1,000 live births. † Provisional registrations.

** 1998 deaths figures for England and Wales in *Health Statistics Quarterly* 03 and 04 were incorrectly shown as being final when they were still provisional. The final 1998 figures are those below.

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.

Table 6.2

Deaths: subnational**
Rates

Health Regional Office areas of England*

Year and quarter	Northern and Yorkshire	Trent	Eastern	London	South East	South West	West Midlands	North West
Total deaths (deaths per 1,000 population of all ages)								
1991	11.8	11.2	10.3	10.0	10.8	11.9	10.8	12.0
1993	11.8	11.4	10.4	9.9	10.9	12.0	11.0	12.1
1994	11.2	10.8	10.1	9.4	10.4	11.4	10.5	11.5
1995	11.3	11.0	10.4	9.6	10.7	11.9	10.9	11.6
1996	11.2	10.9	10.2	9.2	10.6	11.5	10.6	11.5
1997	11.0	10.8	10.1	8.9	10.4	11.5	10.5	11.4
1998	11.3	11.0	10.1	8.6	10.2	11.3	10.5	11.5
1999‡	10.9	10.8	10.2	8.6	10.3	11.5	10.6	11.3
1998 Sept	10.0	9.6	9.2	7.9	9.2	10.2	9.4	10.3
1998 Dec	11.9	12.1	10.9	9.2	10.7	11.7	11.3	12.3
1999 March‡	12.9	12.9	12.2	9.9	12.2	13.5	12.6	13.6
1999 June‡	10.0	9.8	9.3	7.9	9.4	10.6	9.6	10.3
1999 Sept‡	9.6	9.5	8.9	7.5	9.1	10.2	9.1	10.0
1999 Dec‡	11.4	11.2	10.4	9.1	10.6	11.6	11.2	11.3
Infant mortality (deaths under 1 year per 1,000 live births)								
1991	8.6	8.0	5.7	7.0	6.8	6.3	8.7	7.5
1993	6.8	7.0	5.4	6.4	5.4	5.8	7.0	6.5
1994	6.8	7.2	5.3	6.3	4.9	5.3	7.2	6.2
1995	6.6	6.4	5.2	6.4	5.2	5.3	7.1	6.6
1996	6.3	6.3	5.3	6.3	5.4	5.5	6.8	6.4
1997	6.2	5.9	4.8	5.8	5.0	5.8	7.0	6.7
1998	6.1	6.0	5.0	6.0	4.5	4.8	6.5	6.3
1999‡	6.0	6.1	4.6	6.0	4.9	4.6	6.9	6.6
1998 Sept	5.1	5.4	4.6	5.0	4.0	4.9	5.9	6.0
1998 Dec	6.3	6.9	5.9	7.5	5.5	5.1	6.8	7.1
1999 March‡	7.1	6.0	4.5	5.5	5.9	5.6	7.2	7.8
1999 June‡	6.1	6.1	4.9	6.1	4.3	4.1	7.8	5.7
1999 Sept‡	4.9	6.4	4.6	6.4	4.8	3.9	6.0	6.9
1999 Dec‡	5.7	5.7	4.6	6.0	4.7	4.9	6.8	6.0
Neonatal mortality (deaths under 4 weeks per 1,000 live births)								
1991	4.9	4.8	3.4	4.1	4.1	3.6	5.9	4.0
1993	4.2	4.7	3.7	4.5	3.7	3.7	4.8	4.0
1994	4.5	5.0	3.4	4.2	3.3	3.4	5.4	3.9
1995	4.5	4.5	3.4	4.3	3.5	3.7	5.3	4.2
1996	4.1	4.2	3.5	4.4	3.6	3.8	4.9	4.1
1997	4.1	3.9	3.3	3.6	3.4	3.9	5.0	4.3
1998	3.8	4.2	3.4	4.1	2.9	3.3	4.8	4.1
1999‡	4.0	4.4	3.0	4.0	3.2	3.2	4.8	4.4
1998 Sept	3.1	3.8	3.4	3.8	2.8	3.4	4.2	4.3
1998 Dec	4.2	4.3	3.7	5.1	3.4	3.4	5.0	4.3
1999 March‡	4.8	4.3	2.8	3.6	3.5	3.7	4.9	4.8
1999 June‡	4.2	4.7	2.9	4.0	2.9	2.6	5.6	3.7
1999 Sept‡	3.4	5.1	3.6	4.8	3.7	2.6	4.4	4.7
1999 Dec‡	3.9	3.5	2.8	3.8	2.9	4.0	4.2	4.3
Perinatal mortality (stillbirths and deaths under 1 week per 1,000 total births)†								
1991	8.7	8.6	7.1	8.1	7.3	6.7	9.9	7.8
1993	9.3	8.9	8.1	9.5	8.4	7.9	9.9	8.9
1994	9.2	9.1	7.8	9.5	7.6	7.9	10.6	9.2
1995	9.5	9.3	7.7	9.7	7.5	7.4	10.1	8.6
1996	8.5	8.7	7.5	9.6	7.8	7.5	10.2	8.7
1997	8.2	7.9	7.3	8.9	7.3	8.7	9.6	8.8
1998	8.6	8.7	7.4	9.0	6.8	7.3	9.3	8.8
1999‡	8.3	8.1	7.1	8.9	6.9	7.8	9.9	8.6
1998 Sept	7.0	8.8	6.4	8.4	6.9	7.6	8.0	7.0
1998 Dec	8.8	8.5	8.6	9.9	7.5	8.2	9.4	9.7
1999 March‡	9.6	9.0	7.0	9.0	7.9	8.5	10.6	8.5
1999 June‡	9.0	8.6	7.5	9.0	6.4	7.1	10.7	7.8
1999 Sept‡	7.6	8.9	6.9	8.5	6.8	7.8	9.9	9.3
1999 Dec‡	7.0	6.2	6.9	9.1	6.7	8.0	8.5	8.8

* The Regional Office boundaries were revised from 1 April 1999. See *Health Statistics Quarterly 03 In Brief* for details of the changes. Earlier years' figures have been revised to reflect the new boundaries.

† 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.

‡ Provisional registrations.

** 1998 deaths figures for England and Wales *Health Statistics Quarterly 03* and *04* were incorrectly shown as being final when they were still provisional. The final 1998 figures are those below. Note: Figures represent the numbers of deaths registered in each year up to 1992 and the number of deaths occurring in each year from 1993.

Table 6.3

Deaths: selected causes (International Classification)* 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		All causes	Malignant neoplasms									
				Oesophagus	Stomach	Colon, rectum, rectosigmoid junction and anus	Trachea, bronchus and lung	Melanoma of skin	Other neoplasm of skin	Breast	Cervix uteri	Ovary and other uterine	Prostate
	Number (thousands)	Rate**		(150)	(151)	(153,154)	(162)	(172)	(173)	(174)	(180)	(183)	(185)
Males													
1971	288.4	1,207	13,464	76	317	331	1,066	10	12	:	:	:	198
1976	300.1	1,246	13,613	84	292	339	1,091	14	12	:	:	:	211
1981	289.0	1,196	12,200	90	251	316	1,028	17	9	:	:	:	214
1986	287.9	1,177	11,349	101	224	313	949	18	9	:	:	:	263
1991	277.6	1,121	10,234	117	185	310	841	23	10	:	:	:	302
1993	279.6	1,109	10,010	123	162	294	766	25	8	:	:	:	296
1994	267.6	1,057	9,502	128	162	283	743	24	9	:	:	:	295
1995	274.4	1,079	9,582	126	148	281	712	26	9	:	:	:	296
1996	268.7	1,051	9,271	126	145	272	681	25	8	:	:	:	287
1997	264.9	1,031	9,019	125	136	267	649	25	7	:	:	:	277
1998	264.7	1,025	8,895	128	131	262	641	26	8	:	:	:	274
1999‡	263.2	1,019	8,850	128	128	252	614	27	7	:	:	:	273
1998 Mar	69.6	1,093	9,480	127	131	271	657	25	8	:	:	:	273
1998 Jun	64.1	996	8,646	127	127	256	621	26	8	:	:	:	272
1998 Sept	60.6	931	8,089	131	133	259	634	26	6	:	:	:	271
1998 Dec	70.4	1,082	9,375	129	134	262	654	26	9	:	:	:	280
1999 Mar‡	75.1	1,180	10,209	125	137	255	618	24	7	:	:	:	273
1999 Jun‡	60.8	944	8,208	126	127	248	607	26	6	:	:	:	264
1999 Sept‡	59.0	906	7,891	126	119	245	609	29	8	:	:	:	266
1999 Dec‡	68.3	1,050	9,115	134	129	261	624	30	7	:	:	:	289
Females													
1971	278.9	1,104	8,186	40	149	255	183	14	6	379	83	127	:
1976	298.5	1,176	8,303	43	136	262	219	16	6	393	78	125	:
1981	288.9	1,134	7,433	42	111	231	252	16	5	405	69	122	:
1986	293.3	1,141	6,947	47	89	220	285	19	4	420	69	121	:
1991	292.5	1,127	6,399	49	74	207	300	18	4	401	54	118	:
1993	299.2	1,140	6,347	51	66	190	294	22	3	376	47	116	:
1994	285.6	1,085	6,039	50	66	187	298	22	4	370	42	114	:
1995	295.2	1,119	6,128	52	61	179	294	20	4	359	42	116	:
1996	291.5	1,102	5,995	51	55	174	292	20	3	343	41	122	:
1997	290.4	1,095	5,925	51	57	169	285	20	3	336	37	115	:
1998	290.3	1,091	5,874	49	54	163	291	21	3	327	35	117	:
1999‡	290.4	1,091	5,852	52	50	161	289	20	3	319	33	112	:
1998 Mar	77.3	1,178	6,290	45	51	157	293	21	4	329	37	118	:
1998 Jun	69.3	1,044	5,651	48	57	161	276	18	3	312	34	113	:
1998 Sept	65.3	973	5,303	50	57	167	285	22	3	325	35	118	:
1998 Dec	78.5	1,170	6,261	52	50	168	311	23	3	340	35	117	:
1999 Mar‡	86.6	1,319	6,897	53	51	163	287	19	3	326	33	115	:
1999 Jun‡	65.4	985	5,353	55	49	157	286	20	3	315	33	109	:
1999 Sept‡	63.4	946	5,176	50	50	165	282	21	2	313	33	115	:
1999 Dec‡	75.0	1,118	5,998	50	52	160	301	18	3	321	33	110	:

* The Ninth Revision of the International Classification of Diseases, 1975, came into operation in England and Wales on 1 January 1979. ONS has produced a publication containing details of the effect of this Revision (*Mortality statistics: comparison of the 8th and 9th revision of the International Classification of Diseases, 1978 (sample)*, (Series DH1 no.10).

‡ Provisional registrations.

† Directly age-standardised to the European Standard population. See Notes to Tables.

** Per 100,000 population.

*** 1998 deaths figures for England and Wales in *Health Statistics Quarterly* 03 and 04 were incorrectly shown as being final when they were still provisional. The final 1998 figures are those below.

- Notes
- Between 1 January 1984 and 31 December 1992, ONS applied the International Classification of Diseases Selection Rule 3 in the coding of deaths where terminal events and other 'modes of dying' such as cardiac arrest, cardiac failure, certain thromboembolic 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 Rule 3 allows 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 from 1993 onwards, such certificates are coded to the terminal event. ONS also introduced automated coding of cause of death in 1993, which may also affect comparisons of deaths by cause from 1993. Further details may 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.
 - On 1 January 1986 a new certificate for deaths within the first 28 days of life was introduced. It is not possible to assign one underlying cause of death from this certificate. The 'cause' figures for 1986 onwards therefore exclude deaths at ages under 28 days.
 - Figures represent the numbers of deaths registered in each year up to 1992, and the number of deaths occurring in each year from 1993. Provisional figures are registrations.

Table 6.3 continued

Deaths: selected causes (International Classification)* and sex*** *England and Wales*
 Number (thousands) and rate for all deaths and age-standardised rates† per million population for selected causes

Malignant neoplasms													Year and quarter
Bladder	Leukaemia	Diabetes mellitus	Ischaemic heart disease	Cerebro-vascular disease	Pneumonia	Bronchitis, emphysema and allied conditions	Asthma	Gastric, duodenal and peptic ulcers	Chronic liver disease and cirrhosis	Chronic renal failure	Motor vehicle traffic accidents	Suicides and undetermined deaths	
(188)	(204-208)	(250)	(410-414)	(430-438)	(480-486)	(490-492, 496)	(493)	(531-533)	(571)	(585)	(E810-E819)	(E950-E959, E980-E989 exc. E9888)	
													Males
124	74	82	3,801	1,541	920	944	21	107	35	48	198	124	1971
128	76	91	3,930	1,357	1,237	852	17	108	45	61	170	135	1976
121	74	82	3,664	1,141	1,054	683	28	90	49	44	113	151	1981
120	75	134	3,463	1,071	460	725	33	85	56	38	130	154	1986
121	76	130	2,981	939	390	605	31	73	70	24	117	158	1991
114	69	100	2,829	794	759	566	24	67	67	21	90	149	1993
109	68	97	2,595	755	679	494	23	67	67	20	86	148	1994
111	70	100	2,535	754	753	524	20	63	75	21	83	146	1995
104	65	96	2,410	743	725	480	19	63	88	19	87	137	1996
100	66	94	2,261	714	741	475	19	61	95	17	86	140	1997
98	66	93	2,200	699	709	460	18	59	105	17	79	147	1998
93	67	94	2,097	674	760	471	18	65	110	18	82	149	1999‡
94	64	97	2,381	747	828	553	17	63	106	17	77	160	1998 Mar
100	64	86	2,149	681	673	421	18	55	106	18	84	155	1998 Jun
97	66	85	1,945	624	537	354	17	55	106	16	76	145	1998 Sept
100	70	104	2,328	745	797	513	19	64	102	19	77	129	1998 Dec
94	67	105	2,418	788	1,121	686	20	80	107	23	81	142	1999 Mar‡
90	66	88	1,990	640	577	373	14	57	103	17	85	146	1999 Jun‡
96	66	83	1,829	580	538	342	19	55	110	15	71	154	1999 Sept‡
93	68	101	2,156	688	807	488	19	67	118	19	89	152	1999 Dec‡
32	47	89	1,668	1,352	623	193	25	44	26	30	80	84	1971
35	48	81	1,774	1,212	824	183	22	49	29	35	65	83	1976
35	46	66	1,601	1,012	741	155	30	57	36	28	39	81	1981
36	46	100	1,554	930	349	194	35	52	38	21	49	67	1986
34	43	95	1,404	809	324	211	30	46	45	13	44	51	1991
34	43	73	1,330	711	569	223	27	45	43	12	34	48	1993
34	42	69	1,222	677	499	202	24	43	46	12	33	44	1994
32	41	72	1,179	677	553	227	24	42	49	11	29	46	1995
31	40	67	1,126	667	534	220	21	43	52	10	29	44	1996
31	43	65	1,060	639	559	225	23	41	55	9	28	45	1997
31	40	64	1,042	634	533	225	22	40	58	11	27	43	1998
30	44	64	970	617	571	237	22	39	62	9	27	45	1999‡
32	41	68	1,137	684	642	288	24	44	57	12	29	49	1998 Mar
32	34	61	1,019	616	489	197	20	41	55	11	26	46	1998 Jun
32	40	60	923	572	376	156	19	34	55	9	28	42	1998 Sept
29	45	69	1,092	664	625	262	25	42	65	11	24	35	1998 Dec
29	46	73	1,135	719	908	353	26	44	63	12	27	41	1999 Mar‡
30	40	61	913	583	425	172	17	37	60	7	29	43	1999 Jun‡
31	44	57	840	542	372	163	20	36	61	9	27	47	1999 Sept‡
31	48	65	994	626	587	263	23	39	63	10	26	47	1999 Dec‡

Report:

Death registrations 1999: cause England and Wales

This report gives numbers of deaths **registered** in England and Wales in 1999 by age and sex, and for selected causes of death. It also compares death rates by age and sex with those for deaths which **occurred** in 1997 and 1998.

Deaths by sex and age of deceased

- 553,532 deaths were registered in 1999, compared with 553,435 registered in 1998, a small increase of less than 0.1 per cent.
- Between 1998 and 1999 male deaths fell by 0.4 per cent, while female deaths rose by 0.4 per cent.

Table 1 shows death rates by sex and age, for the years 1997 to 1999, together with percentage changes.

- In 1999 the provisional crude death rates (based on mid-1998 population estimates) were 10.2 per thousand for males, and 10.9 per thousand for females. The male rate declined slightly from 10.3 in 1998, while the female rate was unchanged.
- Between 1998 and 1999 the greatest percentage changes in age-specific rates were a rise of 15.9 per cent for girls aged 10-14, and a fall of 7.9 per cent for boys aged 5-9. Both these changes are however based upon small numbers of deaths.
- The infant mortality rate in 1999 rose slightly, from 5.7 to 5.8 deaths per thousand live births. However, this is a small deviation from the long-term declining trend (see reference table 2.1 in this publication).

Table 1

Death rates per 1,000 population, by age and sex: 1997-1999*

England and Wales

Age group	1997*		1998*		1999+		Percentage change 1997/98		Percentage change 1998/99	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
All ages	10.3	10.9	10.3	10.9	10.2	10.9	-0.6	-0.4	-0.6	0.0
Under 1**	6.5	5.3	6.4	5.0	6.5	5.1	-2.2	-5.6	2.6	2.4
1-4	0.3	0.2	0.3	0.2	0.3	0.2	0.9	4.7	-1.2	-0.3
5-9	0.1	0.1	0.1	0.1	0.1	0.1	-9.6	0.5	-7.9	-5.1
10-14	0.2	0.1	0.2	0.1	0.2	0.1	-12.1	-11.2	-0.7	15.9
15-19	0.6	0.3	0.5	0.3	0.5	0.3	-9.4	-6.4	3.4	-2.0
20-24	0.9	0.3	0.8	0.3	0.8	0.3	-7.7	0.8	-2.1	0.8
25-29	0.9	0.4	0.9	0.4	0.9	0.4	2.9	4.7	-1.3	-3.5
30-34	1.0	0.5	1.0	0.5	1.0	0.5	3.3	-0.2	-0.5	0.7
35-39	1.2	0.8	1.2	0.8	1.3	0.8	4.1	-8.9	1.7	2.1
40-44	1.9	1.3	1.9	1.3	1.9	1.3	-1.8	0.1	-0.6	2.9
45-49	3.0	2.0	3.0	2.0	3.0	2.0	0.4	-2.0	-1.8	-0.2
50-54	4.9	3.2	4.8	3.2	4.9	3.2	-1.5	-0.5	1.5	-1.0
55-59	8.7	5.3	8.6	5.2	8.5	5.2	-1.4	-0.5	-0.6	-0.3
60-64	14.5	8.7	14.3	8.5	14.0	8.5	-1.1	-2.5	-2.6	0.4
65-69	25.2	14.9	24.4	14.5	23.7	13.9	-3.1	-2.5	-2.8	-4.6
70-74	42.6	25.7	41.8	25.5	40.4	24.5	-2.0	-0.9	-3.4	-3.9
75-79	67.0	41.5	66.6	41.4	68.6	42.7	-0.6	-0.3	2.9	3.3
80-84	109.1	72.4	108.9	72.6	103.9	68.6	-0.2	0.2	-4.5	-5.4
85 and over	190.3	151.7	187.2	151.5	192.9	155.9	-1.7	-0.2	3.0	2.9

* 1997 and 1998 rates are based on death occurrences; 1999 rates on death registrations.

** Deaths per 1,000 live births.

+ Provisional rates based on mid-1998 population estimates.

Figures 1 and 2 show the relative change in age-specific death rates for males and females, respectively, between 1989 and 1999.

The long-term decline in death rates continued for most sex/age groups. At ages 15–44 male mortality rates have declined little over the ten-year period, while female rates have declined slightly more. The decline from 1989 to 1999 at ages 85 and over has also been modest, especially for women in this age-group.

Deaths by underlying cause

Table 2 gives deaths by sex and age for selected underlying causes of death.

In 1999 the main causes of death were cancer (25 per cent), heart disease (21 per cent), respiratory disease (17 per cent), and cerebrovascular disease (10 per cent). These proportions varied little from those for corresponding conditions in 1998.

EXPLANATORY NOTES

Changes to coding of underlying cause of death

From 1993 an automated coding system has been used to assign cause of death. We have also reviewed and clarified some of the internal coding rules and procedures for dealing with particular types of certificate. Most of the changes from 1993 in numbers of deaths for particular conditions arise from a revised interpretation of WHO coding rule 3, and from the absence of medical enquiries. More information about these changes, and their effect on mortality data, may be found in a recent annual reference volume¹.

Deaths assigned to external causes of injury and poisoning

There were particular problems in coding deaths for 1993 and 1994 which were due to external causes (ICD9 codes E800-E899). Since 1993 deaths from these causes have been coded clerically using information from coroners' certificates (including inquest verdicts) to

produce more reliable figures on suicides, homicides, and other deaths not from natural causes¹.

Every death from an external cause will have some injury or injuries associated with it, and these are included in Table 2 (ICD9 codes 800-999). Where more than one injury is described for a particular death, ONS assigns a single injury code, in accordance with WHO guidelines².

Occurrences and registrations

Up to 1992 ONS (formerly OPCS) publications gave numbers of deaths registered in the data year. Since 1993 most of our published figures represent the number of deaths which occurred in the data year. This change has had little effect on annual totals but makes it easier to analyse seasonal variations in mortality. We also reviewed our production of deaths data by period of occurrence or registration, and decided to take two annual extracts. The main reason for this is the considerable number of late registrations, particularly for deaths from external causes of injury and poisoning³.

The first annual extract from our deaths database, produced in April following the data year, comprises registrations in that year. Outputs produced using this extract include this Report and an area based Report in Population Trends, as well as VS tables and the Public Health Common Data Set. The second extract is produced in the following September, and comprises occurrences in the data year. This extract forms the basis for annual mortality publications, with the exception of the two Reports mentioned above. These new arrangements began in 1996, for annual extracts of 1995 data.

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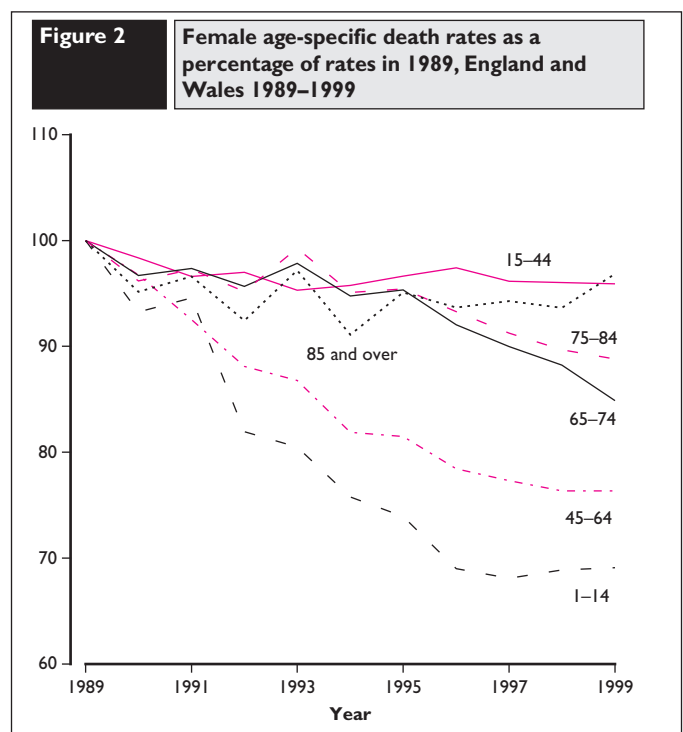
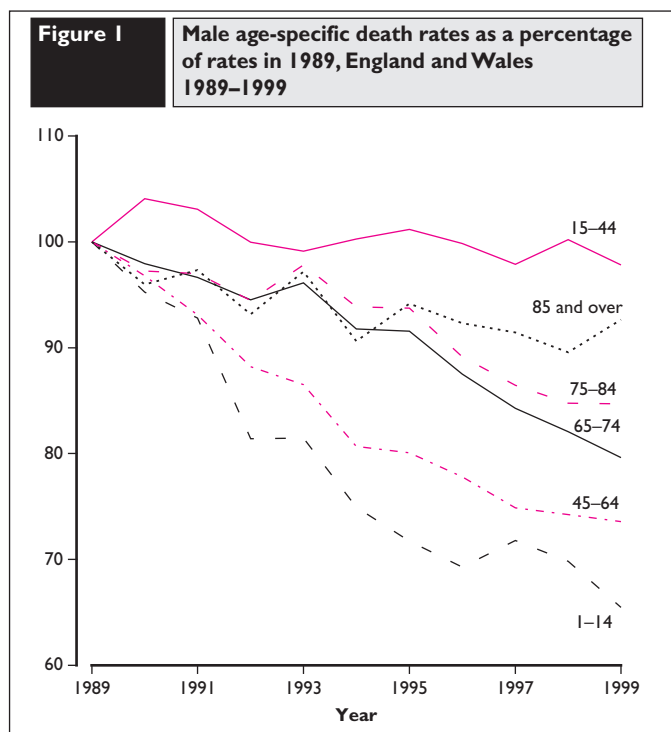


Table 2

Deaths by age, sex and underlying cause, 1999 registrations

England and Wales

ICD9 code	Causes of death *		All ages	Age group										
				Under 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 and over
	All causes, all ages	M	263,166	2,080	408	510	2,170	3,978	5,918	13,633	28,532	64,017	89,963	51,957
		F	290,366	1,555	308	387	883	1,707	3,773	8,999	17,949	44,958	93,360	116,487
	All causes, ages under 28 days	M	1,393	1,393	-	-	-	-	-	-	-	-	-	-
		F	1,046	1,046	-	-	-	-	-	-	-	-	-	-
	All causes, age 28 days and over	M	261,773	687	408	510	2,170	3,978	5,918	13,633	28,532	64,017	89,963	51,957
		F	289,320	509	308	387	883	1,707	3,773	8,999	17,949	44,958	93,360	116,487
001-139	Infectious and parasitic diseases	M	1,848	72	38	21	53	82	160	180	192	344	445	261
		F	1,763	68	25	18	45	39	58	86	142	277	483	522
001-009	Intestinal infectious diseases	M	166	17	-	3	2	-	2	5	12	21	49	55
		F	312	22	-	2	-	-	-	5	11	34	88	150
010-018	Tuberculosis	M	248	1	-	-	2	6	14	15	29	66	84	31
		F	139	-	-	-	3	4	6	7	10	34	42	33
010-012	Pulmonary and other respiratory tuberculosis	M	208	1	-	-	2	6	13	10	26	56	65	29
		F	95	-	-	-	1	3	4	4	6	26	32	19
033	Whooping cough	M	1	1	-	-	-	-	-	-	-	-	-	-
		F	2	2	-	-	-	-	-	-	-	-	-	-
034-035	Streptococcal sore throat, scarlatina and erysipelas	M	2	-	-	-	-	1	-	-	1	-	-	-
		F	-	-	-	-	-	-	-	-	-	-	-	-
036	Meningococcal infection	M	105	14	23	7	26	12	5	7	7	3	-	1
		F	111	17	16	9	23	7	4	9	6	7	10	3
038	Septicaemia	M	661	15	7	6	7	10	26	42	59	142	210	137
		F	730	13	5	2	6	5	18	23	53	118	239	248
042-044	HIV infection	M	128	-	1	-	2	21	54	28	15	6	1	-
		F	26	-	-	-	3	8	10	2	1	1	1	-
055	Measles	M	2	-	-	1	-	-	-	1	-	-	-	-
		F	-	-	-	-	-	-	-	-	-	-	-	-
084	Malaria	M	9	-	-	-	1	1	-	4	1	2	-	-
		F	2	-	-	-	-	-	-	1	-	1	-	-
137	Late effects of tuberculosis	M	32	-	-	-	-	-	-	-	-	13	15	4
		F	23	-	-	-	-	-	-	-	2	5	12	4
140-239	Neoplasms	M	70,259	9	63	122	188	395	1,051	4,370	10,806	21,797	23,094	8,364
		F	65,532	13	38	102	119	472	1,654	4,824	9,040	16,592	20,506	12,172
140-208	Malignant neoplasms	M	69,334	5	56	112	176	377	1,024	4,308	10,688	21,570	22,776	8,242
		F	64,415	8	33	89	109	453	1,627	4,753	8,947	16,365	20,103	11,928
140-149	Malignant neoplasm of lip, oral cavity and pharynx	M	1,079	-	-	1	3	11	43	199	264	277	198	83
		F	593	-	1	-	2	9	21	56	102	120	148	134
150-159	Malignant neoplasm of digestive organs and peritoneum	M	20,162	-	1	1	10	64	269	1,346	3,334	6,495	6,414	2,228
		F	17,064	1	-	2	9	46	196	759	1,810	4,114	6,000	4,127
150	Malignant neoplasm of oesophagus	M	3,722	-	-	-	-	11	56	336	708	1,181	1,110	320
		F	2,309	-	-	-	1	3	11	103	215	560	843	573
151	Malignant neoplasm of stomach	M	3,820	-	-	-	2	14	46	179	534	1,249	1,296	500
		F	2,313	-	-	-	1	11	22	78	213	519	855	614
153	Malignant neoplasm of colon	M	4,795	-	-	-	4	20	48	264	720	1,529	1,576	634
		F	5,085	-	-	-	1	13	62	206	530	1,216	1,742	1,315
154	Malignant neoplasm of rectum, rectosigmoid junction and anus	M	2,672	-	-	-	-	5	29	163	456	860	854	305
		F	2,012	-	-	-	3	6	34	116	207	450	667	529
157	Malignant neoplasm of pancreas	M	2,802	-	-	-	1	3	48	219	539	911	845	236
		F	3,124	-	-	-	-	3	33	150	376	819	1,119	624

*The figures for individual cause categories exclude deaths at ages under 28 days.

Table 2
continued

Deaths by age, sex and underlying cause, 1999 registrations

England and Wales

ICD9 code	Causes of death *	Sex	All ages	Age group										
				Under 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 and over
161	Malignant neoplasm of larynx	M	580	-	-	-	-	2	8	47	138	179	153	53
		F	157	-	-	-	-	-	1	10	30	50	51	15
162	Malignant neoplasm of trachea, bronchus and lung	M	18,297	-	-	-	1	9	146	952	3,019	6,577	6,067	1,526
		F	11,109	-	-	-	1	9	126	672	1,663	3,742	3,758	1,138
172	Malignant melanoma of skin	M	761	-	-	-	6	31	60	127	151	179	159	48
		F	713	-	-	-	4	22	49	83	117	144	179	115
173	Other malignant neoplasm of skin	M	213	-	-	-	-	3	3	8	17	49	84	49
		F	157	-	-	-	-	-	-	8	7	12	51	79
174	Malignant neoplasm of female breast	F	11,548	-	-	-	1	123	603	1,534	1,998	2,466	2,745	2,078
179-189	Malignant neoplasm of genitourinary organs	M	13,200	-	1	1	4	24	72	349	1,244	3,472	5,266	2,767
		F	9,192	-	-	1	13	81	281	756	1,466	2,342	2,722	1,530
179	Malignant neoplasm of uterus, part unspecified	F	433	-	-	-	-	-	5	22	71	98	139	98
180	Malignant neoplasm of cervix uteri	F	1,106	-	-	-	6	51	144	178	153	199	269	106
182	Malignant neoplasm of body of uterus	F	800	-	-	-	-	1	7	30	125	227	248	162
183	Malignant neoplasm of ovary and other uterine adnexa	F	3,946	-	-	-	4	19	87	423	838	1,134	1,038	403
185	Malignant neoplasm of prostate	M	8,502	-	-	-	-	-	3	76	560	2,063	3,724	2,076
186	Malignant neoplasm of testis	M	71	-	-	1	3	14	22	14	6	6	5	-
188	Malignant neoplasm of bladder	M	2,849	-	-	-	1	1	11	64	299	828	1,093	552
		F	1,460	-	-	-	-	3	8	29	103	326	540	451
189	Malignant neoplasm of kidney and other and unspecified urinary organs	M	1,687	-	1	-	-	8	33	186	362	562	411	124
		F	1,030	-	-	1	3	4	24	61	142	289	342	164
191	Malignant neoplasm of brain	M	1,625	1	17	37	26	52	114	313	393	431	212	29
		F	1,171	2	9	26	16	37	77	157	244	333	218	52
200-208	Malignant neoplasm of lymphatic and haematopoietic tissue	M	5,294	2	17	47	83	114	174	422	829	1,524	1,539	543
		F	4,818	3	19	38	42	80	141	293	628	1,173	1,495	906
204-208	Leukaemia	M	1,946	2	17	41	51	58	64	129	247	546	556	235
		F	1,728	3	18	34	29	43	69	110	196	377	456	393
210-239	Benign, in situ, other and unspecified neoplasms	M	925	4	7	10	12	18	27	62	118	227	318	122
		F	1,117	5	5	13	10	19	27	71	93	227	403	244
240-279	Endocrine, nutritional and metabolic diseases and immunity disorders	M	3,471	19	18	13	41	85	95	190	429	913	1,083	585
		F	4,066	12	19	18	40	46	65	125	307	731	1,312	1,391
250	Diabetes mellitus	M	2,814	-	-	1	7	39	52	128	344	774	961	508
		F	3,135	-	-	2	8	13	34	71	230	584	1,080	1,113
260-269	Nutritional deficiencies	M	28	-	-	-	-	1	2	2	5	6	6	6
		F	32	-	-	-	-	-	1	1	2	6	6	16
280-289	Diseases of blood and blood-forming organs	M	853	4	7	5	5	19	13	27	62	180	317	214
		F	1,002	1	7	6	4	14	16	16	32	134	336	436
280-285	Anaemias	M	185	-	1	2	4	11	1	7	9	27	65	58
		F	400	-	2	2	3	5	5	6	10	43	119	205
290-319	Mental disorders	M	3,860	-	-	1	196	338	225	147	129	345	1,176	1,303
		F	7,285	-	-	3	45	53	64	60	91	321	2,112	4,536
290	Senile and presenile organic psychotic conditions	M	2,089	-	-	-	-	-	-	2	31	199	842	1,015
		F	5,516	-	-	-	-	-	-	1	4	28	210	1,596	3,677

* The figures for individual cause categories exclude deaths at ages under 28 days.

Table 2
continued**Deaths by age, sex and underlying cause, 1999 registrations***England and Wales*

ICD9 code	Causes of death *		All ages	Age group										
				Under 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 and over
320-389	Diseases of the nervous system and sense organs	M	4,848	53	42	74	133	167	223	334	448	965	1,622	787
		F	5,316	38	41	53	56	105	144	284	379	797	1,712	1,707
320-322	Meningitis	M	98	10	8	8	5	4	10	13	8	15	14	3
		F	86	6	1	3	4	8	9	3	15	20	13	4
332	Parkinson's disease	M	1,554	-	-	-	-	-	-	3	28	302	804	417
		F	1,220	-	-	-	-	-	-	1	15	122	579	503
340	Multiple sclerosis	M	279	-	-	-	2	9	25	70	84	62	24	3
		F	482	-	-	-	3	11	39	121	107	103	81	17
345	Epilepsy	M	505	2	6	11	31	99	109	95	49	46	45	12
		F	361	2	9	7	19	53	55	65	38	30	39	44
390-459	Diseases of the circulatory system	M	104,650	29	34	26	81	330	1,355	4,616	11,211	27,134	39,201	20,633
		F	113,412	24	14	22	74	191	562	1,683	4,490	16,085	41,287	48,980
390-392†	Acute rheumatic fever	M	4	-	-	-	-	-	1	-	-	2	-	1
		F	4	-	-	-	-	-	-	1	1	2	-	-
393-398†	Chronic rheumatic heart disease	M	439	1	-	1	1	4	12	24	57	134	145	60
		F	1,187	1	-	-	3	-	8	27	103	265	465	315
401-405	Hypertensive disease	M	1,464	-	-	-	1	5	39	99	177	395	527	221
		F	1,825	-	-	-	1	2	13	27	92	275	714	701
410-414	Ischaemic heart disease	M	62,996	-	-	2	6	106	813	3,196	7,980	17,790	22,817	10,286
		F	51,471	-	-	2	4	26	172	672	2,347	8,650	19,871	19,727
410	Acute myocardial infarction	M	30,865	-	-	1	3	54	415	1,629	4,114	9,111	11,050	4,488
		F	24,502	-	-	1	4	15	89	359	1,249	4,652	9,846	8,287
415-429	Diseases of pulmonary circulation and other forms of heart disease	M	10,295	14	29	18	48	121	218	479	864	2,019	3,648	2,837
		F	16,055	16	12	12	38	74	121	305	537	1,850	5,071	8,019
430-438	Cerebrovascular disease	M	20,653	11	3	5	23	71	208	600	1,433	4,316	8,387	5,596
		F	35,214	7	2	6	23	69	212	520	1,116	3,839	12,225	17,195
433-434	Cerebral infarction	M	1,838	2	-	-	1	4	17	69	192	439	691	423
		F	2,780	-	-	-	2	9	13	43	86	336	1,013	1,278
440	Atherosclerosis	M	462	-	-	-	-	-	-	6	16	51	190	199
		F	884	-	-	-	-	-	-	1	10	52	240	581
451-453	Phlebitis, thrombophlebitis, venous embolism and thrombosis	M	621	1	-	-	-	2	21	51	88	161	202	95
		F	1,076	-	-	-	2	9	14	58	87	211	391	304
460-519	Diseases of the respiratory system	M	43,165	89	45	39	68	123	268	806	2,469	8,436	16,991	13,831
		F	53,288	44	37	25	53	92	222	565	1,769	6,431	16,828	27,222
480-486	Pneumonia	M	23,033	28	21	19	33	82	174	411	1,005	3,209	8,664	9,387
		F	35,416	25	15	10	22	48	126	236	681	2,530	10,303	21,420
487	Influenza	M	198	3	1	1	-	2	2	6	10	31	76	66
		F	363	-	1	1	-	1	2	4	12	27	101	214
490-496	Chronic obstructive pulmonary disease and allied conditions	M	15,532	4	5	13	26	19	46	291	1,174	4,310	6,618	3,026
		F	12,400	1	3	7	21	23	60	249	914	3,340	4,894	2,888
490-491	Bronchitis, chronic and unspecified	M	1,031	2	1	1	-	-	3	35	82	267	433	207
		F	640	-	2	1	-	3	6	13	41	130	228	216
493	Asthma	M	498	1	3	12	25	16	25	55	78	114	108	61
		F	858	-	1	5	21	18	38	64	97	179	232	203
496	Chronic airways obstruction, not elsewhere classified	M	12,514	1	1	-	1	-	10	150	839	3,483	5,486	2,543
		F	9,917	-	-	1	-	-	12	130	660	2,756	4,050	2,308

*The figures for individual cause categories exclude deaths at ages under 28 days.

† Figures inconsistent with those published for 1998 in the corresponding Report in HSO2, and with those published for 1993 to 1997 in Annual Reference Volumes.

For more details see section 2.6 in volume DH2 no.25 (1998).

Table 2
continued

Deaths by age, sex and underlying cause, 1999 registrations

England and Wales

ICD9 code	Causes of death *		All ages	Age group										
				Under 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 and over
520-579	Diseases of the digestive system	M	9,734	16	10	8	20	145	553	1,235	1,395	2,061	2,718	1,573
		F	11,872	12	6	11	18	92	346	646	881	1,878	3,786	4,196
531-533	Ulcer of stomach and duodenum	M	1,951	-	-	1	2	13	23	97	211	472	747	385
		F	2,046	-	-	-	2	3	17	38	109	297	772	808
540-543	Appendicitis	M	62	-	1	1	-	1	2	8	9	18	14	8
		F	72	-	-	3	1	2	-	2	11	14	21	18
550-553	Hernia of abdominal cavity	M	325	2	-	-	1	1	3	11	16	66	130	95
		F	384	-	-	-	-	-	1	7	14	43	136	183
562	Diverticula of intestine	M	415	-	-	-	1	-	4	14	36	102	160	98
		F	1,337	-	-	-	-	1	2	14	35	247	518	520
571	Chronic liver disease and cirrhosis	M	2,866	1	-	-	6	86	424	832	712	517	237	51
		F	1,809	1	-	-	2	48	259	418	391	380	245	65
580-629	Diseases of the genitourinary system	M	3,161	3	2	1	4	19	37	75	145	562	1,208	1,105
		F	4,118	5	2	6	3	21	25	58	133	483	1,343	2,039
580-589	Nephritis, nephrotic syndrome and nephrosis	M	1,450	2	1	-	3	9	24	38	73	290	537	473
		F	1,490	4	2	2	1	7	10	18	38	179	514	715
585	Chronic renal failure	M	560	-	-	-	-	1	11	15	30	96	208	199
		F	538	-	-	-	-	3	7	10	12	56	180	270
600	Hyperplasia of prostate	M	203	-	-	-	-	-	-	-	5	25	80	93
630-676	Complications of pregnancy, childbirth and the puerperium	F	31	-	-	-	2	19	10	-	-	-	-	-
630-639	Pregnancy with abortive outcome	F	5	-	-	-	-	4	1	-	-	-	-	-
640-646, 651-676	Direct obstetric causes	F	21	-	-	-	2	11	8	-	-	-	-	-
647-648	Indirect obstetric causes	F	5	-	-	-	-	4	1	-	-	-	-	-
680-709	Diseases of the skin and subcutaneous tissue	M	325	-	-	-	3	-	8	12	22	52	118	110
		F	821	-	-	-	3	1	6	13	21	96	247	434
710-739	Diseases of the musculoskeletal system and connective tissue	M	939	3	1	3	4	7	12	33	75	191	322	288
		F	2,628	-	1	2	9	11	32	44	134	337	809	1,249
714.0	Rheumatoid arthritis	M	129	-	-	-	-	1	-	1	20	41	48	18
		F	553	-	-	-	-	-	3	7	48	132	223	140
740-759	Congenital anomalies	M	578	128	39	29	50	57	47	49	54	52	47	26
		F	597	99	47	32	33	53	42	61	74	62	57	37
745-747	Anomalies of the heart and circulatory system	M	306	69	20	19	34	26	26	28	27	30	21	6
		F	303	56	22	13	20	27	22	25	36	33	38	11
760-779	Certain conditions originating in the perinatal period	M	63	56	6	1	-	-	-	-	-	-	-	-
		F	52	49	-	2	-	1	-	-	-	-	-	-
764-765	Slow fetal growth, fetal malnutrition and fetal immaturity	M	4	4	-	-	-	-	-	-	-	-	-	-
		F	3	3	-	-	-	-	-	-	-	-	-	-
767	Birth trauma	M	1	-	1	-	-	-	-	-	-	-	-	-
		F	4	3	-	1	-	-	-	-	-	-	-	-
768-770	Hypoxia, birth asphyxia and other respiratory conditions	M	41	35	5	1	-	-	-	-	-	-	-	-
		F	26	26	-	-	-	-	-	-	-	-	-	-
780-799	Signs, symptoms and ill-defined conditions	M	3,325	167	10	3	38	81	99	98	85	96	522	2,126
		F	11,326	113	7	10	14	26	31	56	31	98	1,243	9,697
797	Senility without mention of psychosis	M	2,571	-	-	-	-	-	-	-	-	26	455	2,090
		F	10,836	-	-	-	-	-	-	-	-	37	1,186	9,613
798.0	Sudden infant death syndrome	M	132	130	2	-	-	-	-	-	-	-	-	-
		F	90	89	1	-	-	-	-	-	-	-	-	-

* The figures for individual cause categories exclude deaths at ages under 28 days.

Table 2
continued

Deaths by age, sex and underlying cause, 1999 registrations

England and Wales

ICD9 code	Causes of death *		All ages	Age group										
				Under 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 and over
800-999	Injury and poisoning	M	10,694	39	93	164	1,286	2,130	1,772	1,461	1,010	889	1,099	751
		F	6,211	31	64	77	365	471	496	478	425	636	1,299	1,869
800-829	Fractures	M	1,404	1	8	21	93	102	103	88	111	137	359	381
		F	2,273	4	6	7	27	24	28	29	61	164	590	1,333
850-869	Intracranial injury (excluding skull fracture) and internal injuries of chest, abdomen and pelvis	M	3,118	18	24	85	503	567	444	404	307	280	333	153
		F	1,347	12	21	45	141	115	90	107	105	177	304	230
940-949	Burns	M	182	1	7	2	18	20	29	23	25	23	17	17
		F	113	-	4	4	4	12	10	9	4	11	29	26
950-957	Injury to nerves and spinal cord	M	42	-	-	1	5	5	4	6	3	7	7	4
		F	17	-	-	-	2	1	3	-	3	1	5	2
960-989	Poisoning and toxic effects	M	2,311	2	16	13	210	661	554	403	178	119	103	52
		F	1,109	3	16	9	100	190	220	200	107	108	118	38
994.1	Drowning and non-fatal submersion	M	397	-	19	12	48	63	58	63	58	37	29	10
		F	146	-	4	3	9	14	19	17	26	26	23	5
E800-E999	External causes of injury and poisoning	M	10,694	39	93	164	1,286	2,130	1,772	1,461	1,010	889	1,099	751
		F	6,211	31	64	77	365	471	496	478	425	636	1,299	1,869
E800-E949	Accidents and adverse effects	M	6,212	20	76	149	754	1,020	804	707	541	592	888	661
		F	4,710	15	52	70	215	210	213	241	263	469	1,151	1,811
E800-E848	Transport accidents	M	2,348	1	21	92	497	515	367	282	184	159	162	68
		F	867	2	18	52	152	103	69	68	67	116	147	73
E810-E819	Motor vehicle traffic accidents	M	2,164	1	19	83	466	480	332	253	160	150	155	65
		F	821	2	17	47	143	95	64	66	66	111	137	73
E850-E869	Accidental poisoning	M	790	-	3	4	102	296	207	101	35	18	18	6
		F	311	2	2	2	35	65	68	60	30	16	23	8
E880-E888	Accidental falls	M	1,537	-	5	9	31	48	78	129	152	198	461	426
		F	2,519	-	3	1	4	15	29	48	77	192	701	1,449
E890-E899	Accidents caused by fire and flames	M	216	2	10	6	15	23	30	28	27	32	24	19
		F	140	1	10	5	4	11	10	12	9	16	36	26
E900-E929	Other accidents including late effects	M	1,134	16	35	38	109	138	115	153	124	134	155	117
		F	661	9	17	8	19	13	28	40	57	81	184	205
E900-E909	Accidents due to natural and environmental factors	M	108	1	-	1	4	2	9	18	8	21	20	24
		F	112	1	1	1	2	1	2	1	4	12	35	52
E910-E929	Accidents caused by submersion, suffocation and foreign bodies, other accidents and late effects of accidental injury	M	1,026	15	35	37	105	136	106	135	116	113	135	93
		F	549	8	16	7	17	12	26	39	53	69	149	153
E950-E959	Suicide and self inflicted injury	M	2,856	-	-	2	279	692	627	521	317	199	149	70
		F	829	-	-	-	69	132	169	139	100	94	94	32
E960-E969	Homicide and injury purposely inflicted by other persons	M	187	4	7	5	34	41	39	29	14	7	5	2
		F	105	5	8	3	15	12	16	13	10	8	11	4
E980-E989	Injury undetermined whether accidentally or purposely inflicted	M	1,437	15	10	8	218	377	302	204	138	90	57	18
		F	567	11	4	4	66	117	98	85	52	65	43	22
E950-E959, E980-E989 less E988.8	Suicides and injury undetermined whether accidentally or purposely inflicted	M	3,977	2	5	8	434	984	868	688	429	276	198	85
		F	1,275	1	1	2	116	221	247	212	145	153	128	49

*The figures for individual cause categories exclude deaths at ages under 28 days.

Report:

Cancer survival in England and Wales, 1991-98

This report presents survival estimates for some 488,000 patients who were diagnosed with one of 20 common cancers during 1991-93 and followed up to 31 December 1998. It updates by three years the *Cancer survival trends* volume¹, published in April 1999, which included survival estimates for patients diagnosed up to 1990 and followed up to the end of 1995. The results come from a collaborative project on cancer survival involving the London School of Hygiene and Tropical Medicine and the Office for National Statistics (ONS).

Statistics on cancer incidence and survival in England and Wales are compiled by ONS from information on individual cases of cancer collected by the regional cancer registries. These data are subsequently linked with national death registrations to produce information on the survival of all patients diagnosed with cancer. The national cancer database is person-based, and second or subsequent tumours in the same person are linked. The results here relate to survival following a first primary malignant neoplasm.

Crude survival is the probability of survival irrespective of the cause of death. Cancer patients do not all die from their disease, however; the relative survival rate allows for this by comparing the crude survival among cancer patients with the expected survival in the general

population (the background mortality). The relative survival rate can be interpreted as survival from cancer in the absence of other causes of death. Crude survival rates are presented here, but discussion is focussed on relative survival rates.

One- and five-year relative survival rates for the four most common cancers in men and in women are given in Table 1 for patients diagnosed during 1991-93. These cancers account for over 50% of all malignant neoplasms in each sex. Survival estimates for patients diagnosed during 1986-90, taken from *Cancer survival trends*¹, are shown for comparison.

Detailed survival rates by age group and sex at one and five years after diagnosis for the same calendar periods are given in Table 2 for 16 of the major cancers in men and 17 in women (pages 76-77). These cancers account for almost 90% of all malignant neoplasms in each sex. Figures 1 and 2 illustrate the one- and five-year survival rates, respectively, for each cancer by sex. Figures 3a-3h show the survival trends for the five most common cancers in men and in women, for patients diagnosed in successive periods from the early 1970s to 1991-93. Figures 4a-4d present age-specific survival rates for five selected cancers for patients diagnosed in 1991-93.

Table 1

One-year and five-year relative survival (%) for patients diagnosed during 1986-90 and 1991-93, major cancers, England and Wales

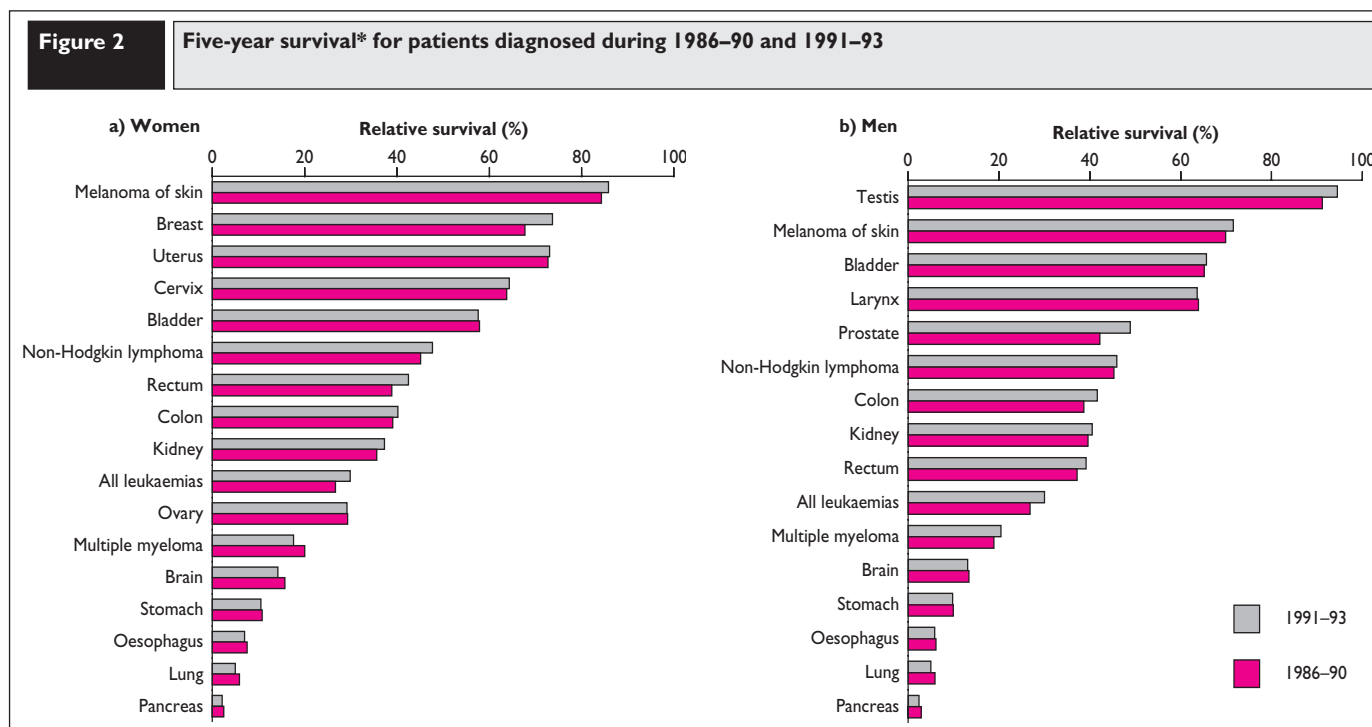
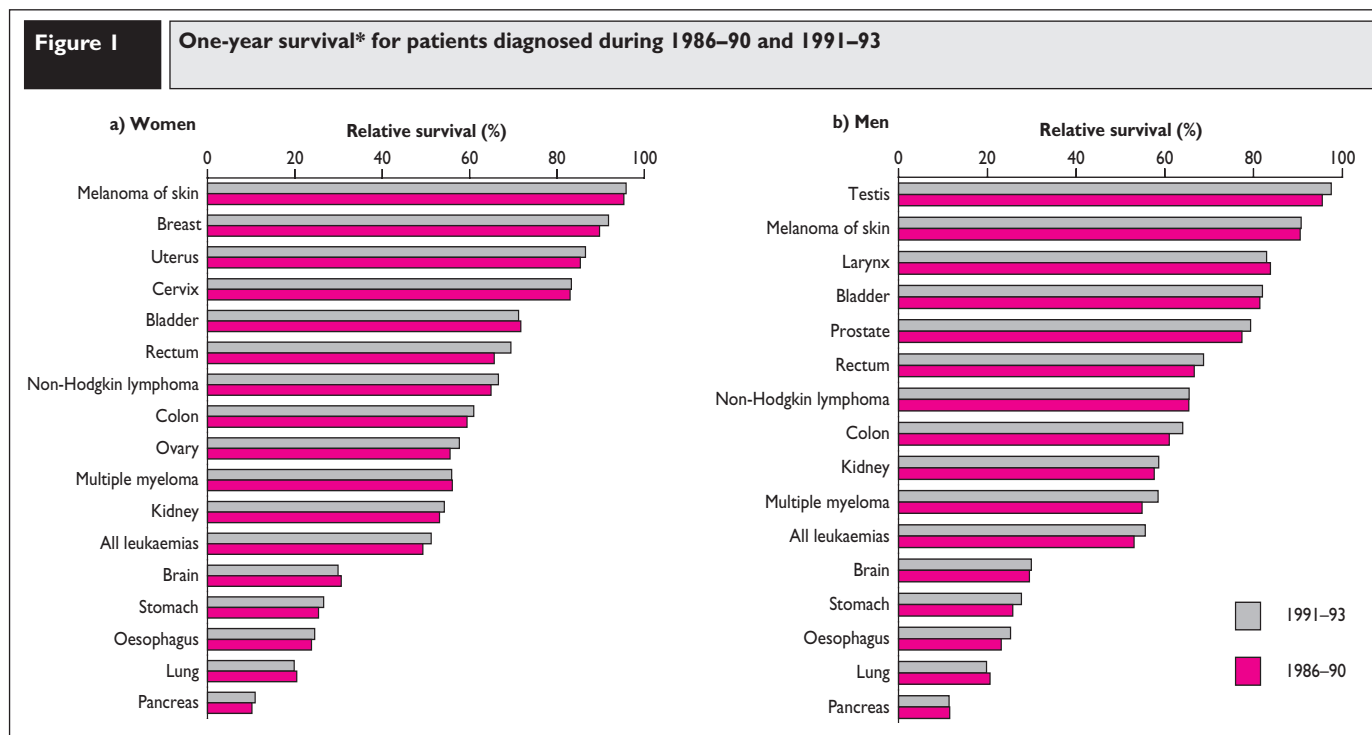
Cancer	Number of patients	One-year survival			Five-year survival		
		1991-93	1986-90	1991-93	Difference	1986-90	1991-93	Difference
Men							
Lung	60,300	20.6	19.8	-0.8	5.9	5.0	-0.9
Prostate	41,877	77.4	79.3	1.9	42.2	48.9	6.7
Colon	22,164	61.0	64.0	3.0	38.7	41.6	2.9
Rectum	16,807	66.6	68.7	2.1	37.2	39.2	2.0
Women							
Breast	83,912	89.7	91.8	2.1	67.7	73.7	6.0
Lung	29,052	20.4	19.8	-0.6	5.9	5.0	-0.9
Colon	24,239	59.4	60.9	1.5	39.1	40.2	1.1
Rectum	12,281	65.6	69.4	3.8	38.9	42.5	3.6

SURVIVAL TRENDS FOR 20 COMMON CANCERS

Five-year survival for men diagnosed with prostate cancer during 1991–93 rose to 48.9%, an increase of almost 7% compared with men diagnosed during 1986–90, an average of four years earlier. Five-year survival from breast cancer in women rose by 6% to 73.7%. Five-year survival improved by 3–4% for cancers of the colon and testis in men, rectal cancer and non-Hodgkin lymphoma (NHL) in women, and the leukaemias (all types combined) in both men and women. Five-year survival generally improved somewhat more than one-year survival, although for cancers of the colon and rectum the increase was similar at one and five years in both sexes. In

contrast, one-year survival improved by 2–4% for multiple myeloma and cancers of the oesophagus and stomach in men, and for ovarian cancer, but five-year survival did not improve at all.

For cancers of the pancreas, larynx, cervix, uterus, bladder, kidney and brain, and melanoma of the skin, gains in five-year survival for patients diagnosed during 1991–93 were either small and not statistically significant, or absent. The small increase (less than 2%) in five-year survival from melanoma contrasts with a rise of almost 8% in men and 6% in women in the previous five years; survival had improved more rapidly than for almost any other cancer in the 25 years up to 1995.¹



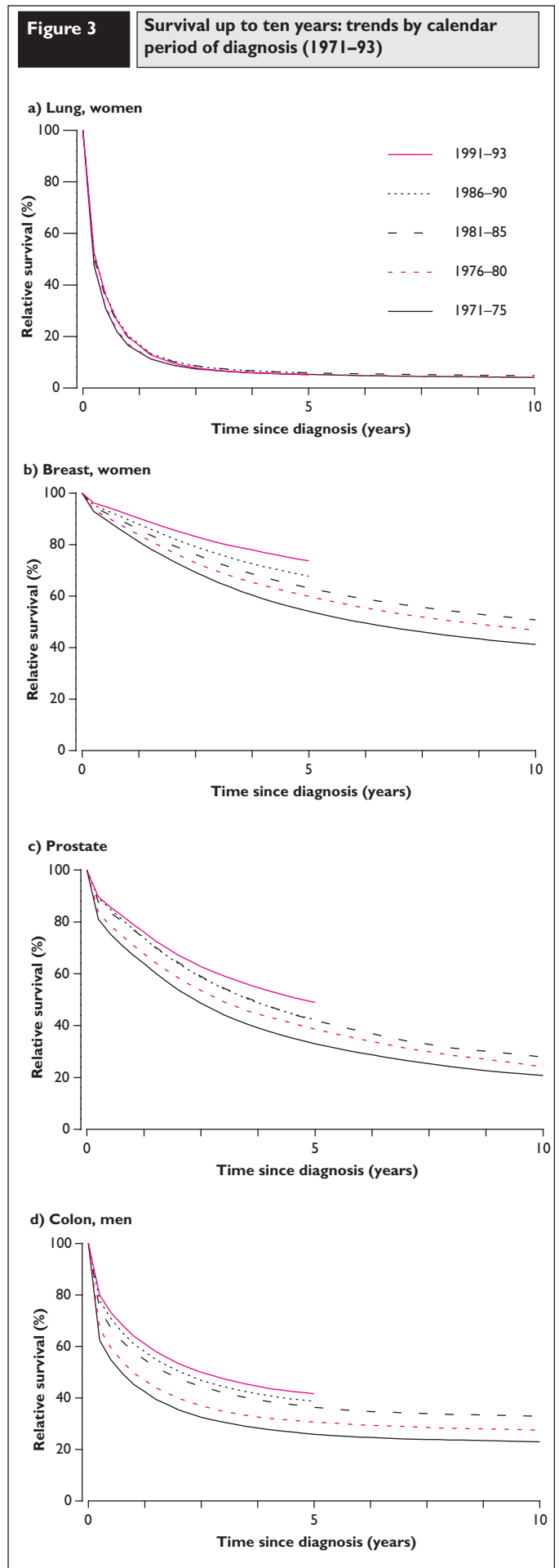
*The 95% confidence intervals around all these survival estimates are very narrow (see Table 2) and so have been omitted from the charts for clarity.

Survival from lung cancer has shown no discernible improvement for more than 20 years (Figure 3a). Five-year survival for lung cancer was 5.0% for both men and women diagnosed during 1991–93, compared with 5.9% for those diagnosed during 1986–90, a small but statistically significant decline of almost 1% in both sexes. This is likely to be due to inclusion in the analyses of more patients with very short survival. Patients whose survival is unknown cannot be included in the analyses; most of these are registered solely from a death certificate, and such cases tend to have had short survival. The proportion of these cases excluded from the latest analyses was smaller than for patients diagnosed during 1986–90. This reflects more complete registration of patients with short survival who were diagnosed during 1991–93, and hence the overall survival estimate is lower.

For women with breast cancer, five-year survival rose by 6% overall (Figure 3b), with increases of 7–10% in women aged 50–69 at diagnosis (Table 2). The particularly large improvements in this age group (compared with 1–4% increases for older and younger women) can be attributed to the impact of the breast screening programme, under which women aged 50–64 have been invited for routine three-yearly mammography since 1988². Earlier diagnosis following mammography will increase survival time even if death is not delayed by treatment (lead time bias), but this is unlikely to be the sole explanation for the increase in survival. For women in the broad age range 15–79 at diagnosis, five-year survival rose by more than one-year survival, suggesting the additional impact of improved treatment.

Compared with rates for men diagnosed with prostate cancer in 1986–90, five-year survival for those diagnosed in 1991–93 rose by 7–9% for those aged 50–79, but only by 1–3% for older and younger men (Table 2). These large increases in survival, the first since the early 1980s (Figure 3c), may be due in part to the more widespread use of prostate-specific antigen (PSA) testing since the early 1990s. The effect would be analogous to that of mammographic screening for breast cancer. Five-year survival from prostate cancer rose by 6.7%, compared with a 1.8% rise in one-year survival, also suggesting more effective treatment. Finally, while the PSA test enables invasive prostate cancer to be identified early, it also identifies latent, non-lethal, tumours that show no symptoms; these tumours are very common in elderly men. The average number of new cases per year rose by no less than 34% between 1986–90 and 1991–93.

Cancers of the large bowel (colon and rectum combined) are the third most common in men and the second most common in women. Five-year survival from colon cancer improved by almost 3% for men and 1% for women (Figure 3d). Survival from rectal cancer improved by 2% for men and 4% for women. Gains in one-year and five-year survival were similar. These trends in survival are consistent with the fall in deaths from bowel cancer despite the gradual increase in the number of new cases³, and they suggest the impact of more effective treatment, possibly as a result of earlier diagnosis.

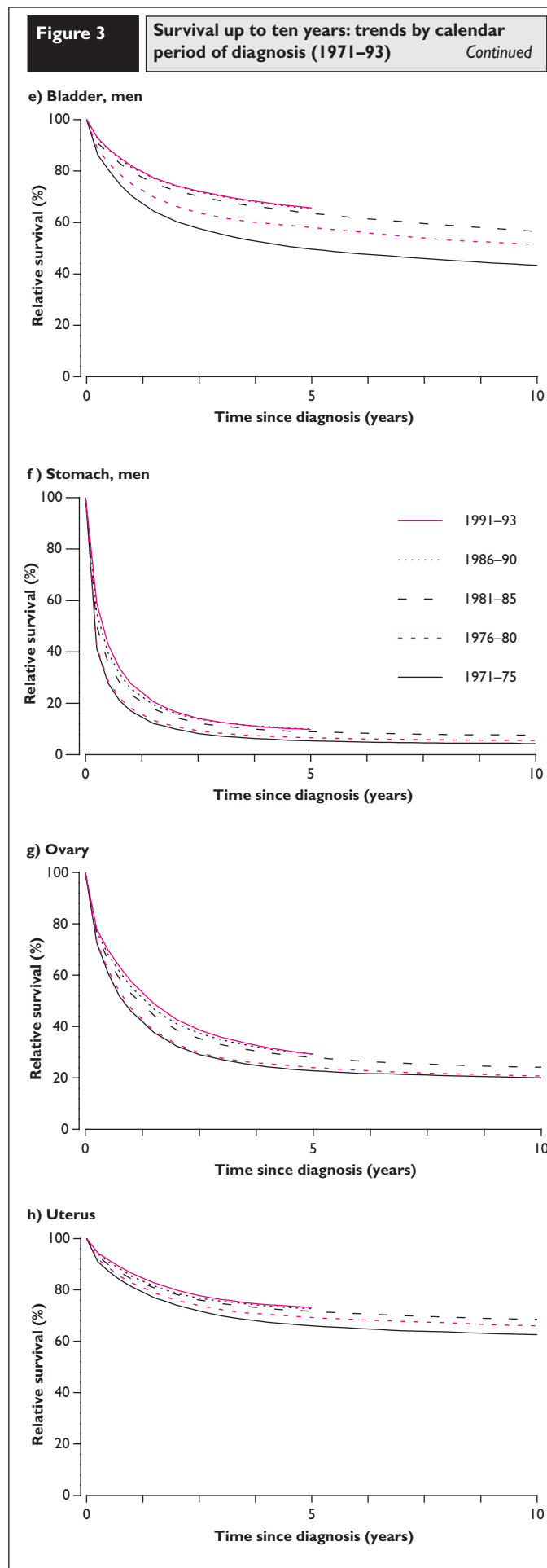


Survival from bladder cancer did not improve for either men or women diagnosed in 1991–93 compared with those diagnosed in 1986–90 (Figure 3e). In the period up to 1995, in contrast, survival improved by 4–6% every five years for both men and women. Most of this improvement occurred for patients diagnosed in the 1970s and early 1980s.¹ There has been little change since then.

One-year survival from stomach cancer for men diagnosed in 1991–93 rose by 2% overall compared with men diagnosed in 1986–90, reaching almost 28%; there were increases in all age groups (Figure 3f). Five-year survival for men remained unchanged at 10%, however, and there was no significant change for women (27% and 11% at one and five years, respectively). Survival from stomach cancer in England and Wales remains substantially lower than the average for Europe or the USA, where five-year survival rates are around 20–25% for both men and women.^{1,4,5}

Survival from ovarian cancer one year after diagnosis rose by 2% to about 58%, but five-year survival was unchanged at 29% (Figure 3g). The rise in one-year survival was most marked (4–5%) in women aged 60–79 years. Most of the improvement in survival from ovarian cancer occurred between women diagnosed in the late 1970s and early 1980s, with rises of 6% and 4% in one- and five-year survival respectively.¹ Mortality fell during the 1980s partly as a result of these improvements in survival but also due to a drop in incidence of the disease, with a reduced risk for women born after 1930.

Survival for women diagnosed with cancer of the uterus during 1991–93 was almost 87% at one year after diagnosis and 73% at five years (Figure 3h). Survival from cancer of the cervix is similar to that of uterine cancer at one year (83%) but 9% lower at five years (64%). Survival trends for these cancers have been closely similar since the early 1970s; there has been little improvement since the early 1980s.



SURVIVAL BY AGE

For most cancers, survival is lower in patients who are older at diagnosis, even after adjustment for higher background mortality in the elderly. For example, five-year survival from bladder cancer for men aged 15–39 years is 90%, but is just 50% for men aged 80–99 at diagnosis (Figure 4a). Bladder cancer is unusual in that men show a substantial survival advantage over women; for adults diagnosed in 1991–93, the difference is almost 11% at one year and 8% at five years after diagnosis. The advantage for men is most marked in those aged 15–39 or 80–99 years at diagnosis; this may be due to the registration of more small transitional cell papillomas in these age groups.

For several cancers, five-year survival falls from 20–50% at the youngest ages to only around 1% for the most elderly. Cancers of the oesophagus, pancreas, lung and brain each show this pattern (Figure 4b brain tumours).

Survival from cancers of the large bowel (colon and rectum) varies less across the age groups than for most cancers (Figure 4c colon cancer). Five-year survival for both cancers is 40–50% in the age range 40–79 years.

The patterns of survival by age for cancers of the breast and prostate are unusual: survival is higher in middle age, lower in younger and older patients (Figure 4d). Survival from breast cancer in women is lower in the 15–39 age group (70%) than in women aged 40–69 (77–80%). For prostate cancer, five-year survival is lower amongst the 40–49 age group (32%) than in men aged 50–79 (50–55%).

Figure 4 Five-year survival, with 95% confidence interval, by age at diagnosis and sex for patients diagnosed during 1991–93

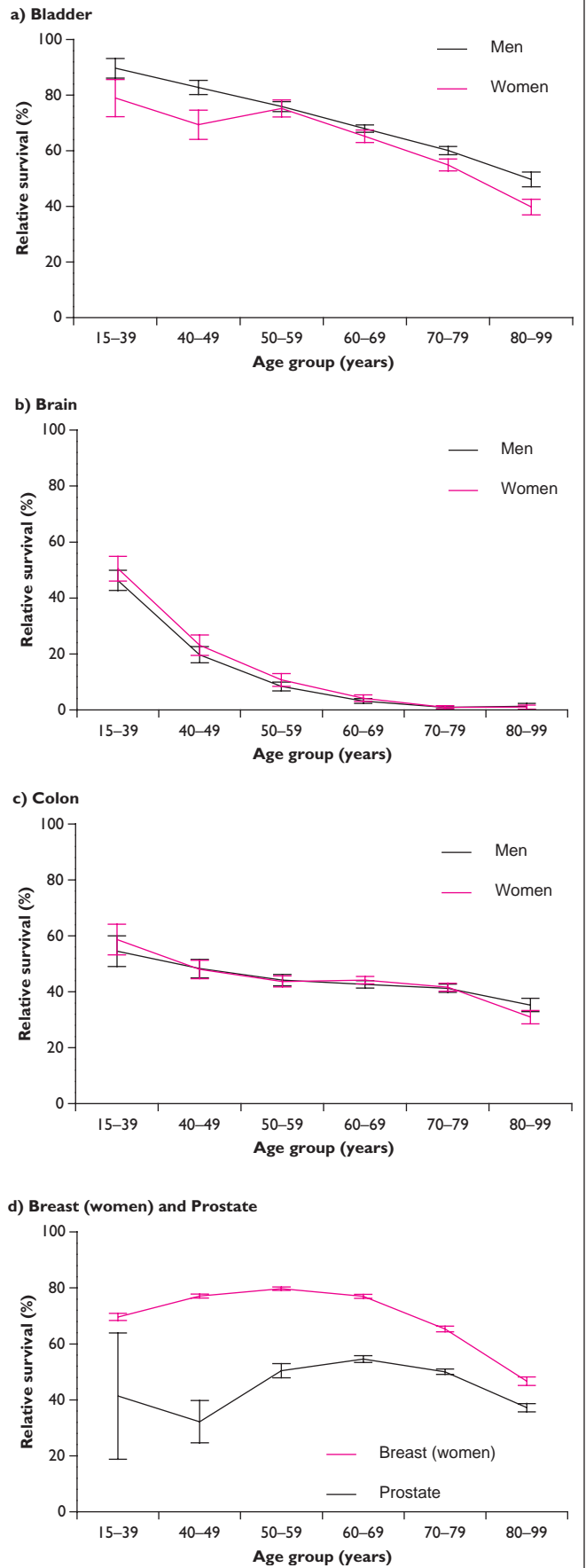


Table 2 One-and five-year survival of patients diagnosed in 1986–90 and 1991–93: major cancers, sex and age, England and Wales

Site (ICD9)	Age group	Patients diagnosed 1986–90					Patients diagnosed 1991–93					Difference*			
		Number of cases	One-year (%)		Five-year (%)		Number of cases	One-year survival (%)			Five-year survival (%)			One-Year	Five-Year
			Crude	Relative	Crude	Relative		Crude	Relative	(95% C.I.)*	Crude	Relative	(95% C.I.)*		
Oesophagus (150)															
Men	15–99	12,162	22	23.1	5	6.1	8,712	24	25.2	(24.2–26.1)	5	5.8	(5.3–6.4)	2.0	-0.3
	15–39	114	40	40	14	14	61	40	40	(28–52)	7	7	(2–15)	0.1	-7.0
	40–49	528	30	31	9	9	419	34	34	(29–39)	10	10	(7–13)	3.4	0.7
	50–59	1,710	28	29	8	8	1,219	31	32	(29–34)	7	8	(6–9)	2.8	-0.3
	60–69	3,980	24	25	6	7	2,677	27	28	(26–30)	6	7	(6–8)	3.0	0.0
	70–79	4,134	19	20	3	5	2,940	20	22	(20–23)	3	4	(4–5)	1.6	-0.6
	80–99	1,696	9	11	1	2	1,396	11	13	(11–15)	1	2	(1–3)	2.5	-0.5
Women	15–99	8,568	23	23.8	6	7.5	5,947	23	24.5	(23.4–25.6)	6	7.0	(6.3–7.8)	0.7	-0.4
	15–39	53	40	40	26	26	27	47	47	(28–64)	22	22	(9–39)	6.9	-3.8
	40–49	173	38	38	18	18	139	38	38	(30–46)	16	16	(10–22)	0.4	-2.2
	50–59	732	37	37	12	12	460	42	43	(38–47)	14	14	(11–17)	5.8	1.9
	60–69	1,905	31	32	10	11	1,219	30	30	(28–33)	9	10	(8–12)	-1.3	-1.1
	70–79	3,050	21	22	5	6	2,079	23	24	(22–25)	5	7	(6–8)	1.7	0.8
	80–99	2,655	10	11	2	3	2,023	12	14	(12–15)	1	2	(1–2)	2.3	-1.4
Stomach (151)															
Men	15–99	27,294	24	25.7	8	9.9	15,848	26	27.7	(27.0–28.4)	7	9.8	(9.2–10.3)	2.0	-0.1
	15–39	261	34	34	20	20	132	45	45	(36–53)	19	19	(13–27)	10.5	-0.6
	40–49	883	39	39	17	18	537	42	42	(38–47)	17	17	(14–20)	3.6	-1.1
	50–59	3,179	34	35	13	14	1,659	36	36	(34–39)	13	14	(12–16)	1.8	-0.1
	60–69	8,283	27	28	9	11	4,609	29	30	(29–32)	9	11	(10–12)	2.3	-0.3
	70–79	10,036	20	21	5	8	5,791	22	23	(22–24)	5	8	(7–9)	2.5	-0.1
	80–99	4,652	12	14	2	4	3,120	14	16	(15–18)	2	5	(4–6)	2.9	0.6
Women	15–99	16,291	24	25.4	9	10.8	9,198	25	26.6	(25.7–27.5)	8	10.5	(9.8–11.2)	1.2	-0.3
	15–39	189	42	42	23	23	111	46	46	(36–55)	18	18	(12–26)	4.0	-4.9
	40–49	398	42	43	19	19	248	42	42	(36–48)	20	20	(15–25)	-0.4	0.9
	50–59	1,114	38	39	18	18	567	40	41	(36–45)	17	17	(14–20)	2.0	-1.0
	60–69	3,209	32	32	13	15	1,687	32	33	(31–35)	13	14	(12–16)	0.7	-1.0
	70–79	5,869	22	23	7	9	3,167	24	25	(24–27)	8	9	(8–11)	2.4	0.4
	80–99	5,512	12	14	3	5	3,418	14	15	(14–17)	3	6	(5–7)	1.7	0.6
Colon (153)															
Men	15–99	31,651	58	61.0	29	38.7	22,164	60	64.0	(63.4–64.7)	31	41.6	(40.9–42.4)	3.0	2.9
	15–39	446	69	69	47	48	301	76	76	(71–81)	54	55	(49–60)	7.7	6.6
	40–49	1,344	69	70	44	45	894	73	74	(70–76)	47	48	(45–52)	4.0	3.3
	50–59	3,809	67	68	40	42	2,602	71	72	(70–73)	42	44	(42–46)	3.7	2.2
	60–69	9,043	63	65	34	40	6,382	66	68	(66–69)	37	43	(41–44)	2.8	2.7
	70–79	11,289	55	59	26	39	7,718	58	62	(60–63)	29	41	(40–43)	2.6	2.3
	80–99	5,720	38	44	14	32	4,267	43	49	(48–51)	16	35	(33–38)	5.0	3.3
Women	15–99	36,830	56	59.4	31	39.1	24,239	58	60.9	(60.2–61.5)	32	40.2	(39.5–40.9)	1.5	1.1
	15–39	448	73	73	49	49	257	77	77	(72–82)	58	59	(52–64)	4.1	9.7
	40–49	1,326	72	73	45	45	930	76	76	(73–79)	47	48	(45–51)	3.7	3.0
	50–59	3,626	70	70	42	44	2,254	72	73	(71–75)	42	44	(42–46)	2.7	-0.3
	60–69	8,418	66	67	39	43	5,410	67	68	(66–69)	40	44	(43–46)	0.3	1.2
	70–79	12,337	57	59	32	41	7,967	59	61	(60–62)	33	42	(40–43)	1.8	0.7
	80–99	10,675	38	42	16	30	7,421	40	45	(43–46)	17	31	(29–32)	2.5	0.9
Rectum (154)															
Men	15–99	25,064	63	66.6	28	37.2	16,807	65	68.7	(67.9–69.4)	30	39.2	(38.3–40.0)	2.1	2.0
	15–39	279	71	71	43	44	172	77	78	(71–83)	49	50	(42–57)	6.5	5.9
	40–49	1,085	77	77	42	43	802	77	77	(74–80)	43	44	(40–47)	0.2	0.8
	50–59	3,514	74	74	38	41	2,439	76	77	(75–78)	39	42	(39–43)	2.2	1.0
	60–69	7,835	68	70	33	39	5,202	70	71	(70–73)	35	41	(39–42)	1.5	1.6
	70–79	8,518	59	63	24	36	5,547	61	65	(64–67)	27	39	(37–40)	2.3	3.0
	80–99	3,833	43	50	13	30	2,645	46	53	(51–55)	13	31	(28–34)	3.0	0.7
Women	15–99	19,324	62	65.6	31	38.9	12,281	66	69.4	(68.5–70.3)	34	42.5	(41.5–43.5)	3.8	3.6
	15–39	262	72	72	48	48	152	86	86	(79–90)	55	55	(46–62)	13.6	6.7
	40–49	786	80	80	46	46	560	78	78	(75–81)	48	49	(45–53)	-1.2	3.1
	50–59	2,157	77	77	44	45	1,315	80	81	(78–83)	49	51	(48–53)	3.5	6.0
	60–69	4,739	72	73	39	43	2,780	77	78	(76–79)	43	47	(45–49)	4.8	3.9
	70–79	6,383	62	64	31	40	4,014	66	69	(67–70)	34	42	(40–44)	4.4	2.2
	80–99	4,997	42	47	14	26	3,460	46	52	(50–54)	16	31	(29–33)	4.9	4.7

*The difference (in percentage points) between the one- and five-year relative survival rates for patients diagnosed in 1991–93 and in 1986–90.
+ 95% confidence interval (see text).

Table 2
continued

One-and five-year survival of patients diagnosed in 1986-90 and 1991-93: major cancers, sex and age, England and Wales

Site (ICD9)	Age group	Patients diagnosed 1986-90						Patients diagnosed 1991-93						Difference*	
		Number of cases	One-year (%)		Five-year (%)		Number of cases	One-year survival (%)			Five-year survival (%)			One- Year	Five- Year
			Crude	Relative	Crude	Relative		Crude	Relative	(95% C.I.)*	Crude	Relative	(95% C.I.)*		
Pancreas (157)															
Men	15-99	11,214	11	11.5	2	2.9	7,012	11	11.4	(10.7-12.2)	2	2.4	(2.0-2.8)	-0.1	-0.6
	15-39	105	22	22	12	12	69	29	29	(19-39)	17	17	(10-27)	7.1	5.3
	40-49	474	17	17	5	5	338	17	17	(13-21)	5	5	(3-8)	-0.2	0.2
	50-59	1,462	15	15	3	4	909	15	16	(13-18)	3	4	(2-5)	0.4	-0.5
	60-69	3,410	11	11	3	3	1,955	11	11	(10-13)	1	2	(1-2)	0.3	-1.4
	70-79	3,938	8	8	1	2	2,483	8	8	(7-9)	1	1	(1-2)	-0.2	-0.6
	80-99	1,825	4	5	1	2	1,258	5	6	(5-7)	1	2	(1-3)	0.9	-0.3
Women	15-99	11,603	10	10.2	2	2.5	7,391	10	10.9	(10.2-11.6)	2	2.1	(1.8-2.5)	0.7	-0.3
	15-39	97	20	20	12	12	67	37	37	(26-48)	15	16	(8-25)	17.2	3.5
	40-49	300	18	18	6	6	215	17	17	(13-23)	9	10	(6-14)	-0.5	3.6
	50-59	984	14	14	4	4	602	16	17	(14-19)	3	3	(2-5)	2.2	-0.8
	60-69	2,744	12	12	2	2	1,659	13	13	(12-15)	2	2	(2-3)	1.3	0.3
	70-79	4,109	8	9	2	2	2,537	9	9	(8-10)	1	1	(1-2)	0.7	-0.8
	80-99	3,369	4	4	1	1	2,311	4	5	(4-5)	0	1	(0-1)	0.5	-0.2
Larynx (161)															
Men	15-99	7,195	80	83.8	51	63.9	4,501	79	82.9	(81.7-84.1)	51	63.6	(61.8-65.3)	-0.9	-0.3
	15-39	69	91	91	83	83	36	89	89	(73-96)	75	75	(57-86)	-2.4	-7.9
	40-49	431	86	86	68	69	312	89	89	(85-92)	67	68	(62-73)	2.5	-1.4
	50-59	1,391	85	86	62	66	805	84	85	(82-87)	63	66	(63-70)	-1.1	0.5
	60-69	2,725	83	85	54	63	1,557	82	84	(82-86)	55	64	(61-67)	-0.6	0.6
	70-79	1,963	77	82	43	62	1,388	76	80	(78-83)	44	61	(58-65)	-2.0	-1.0
	80-99	616	59	68	23	53	403	60	69	(63-74)	23	53	(43-61)	1.0	-0.2
Lung (162)															
Men	15-99	101,688	20	20.6	5	5.9	60,300	19	19.8	(19.5-20.1)	4	5.0	(4.8-5.2)	-0.9	-0.9
	15-39	467	33	33	18	18	265	30	30	(25-36)	13	13	(10-18)	-2.8	-4.8
	40-49	2,941	29	29	12	12	1,781	28	28	(26-30)	9	10	(8-11)	-1.0	-2.3
	50-59	12,227	26	27	8	9	6,804	25	25	(24-26)	7	8	(7-8)	-1.3	-1.3
	60-69	35,687	22	22	6	7	19,663	21	22	(21-22)	5	6	(6-6)	-0.7	-0.9
	70-79	36,984	15	16	2	3	22,388	15	16	(16-17)	2	3	(3-3)	-0.3	0.1
	80-99	13,382	7	8	1	1	9,399	8	9	(9-10)	0	1	(1-1)	1.1	0.0
Women	15-99	44,387	20	20.4	5	5.9	29,052	19	19.8	(19.4-20.3)	4	5.0	(4.8-5.3)	-0.6	-0.8
	15-39	409	41	41	24	24	181	46	46	(38-53)	29	29	(22-36)	5.1	4.8
	40-49	1,644	30	30	11	11	1,126	30	30	(28-33)	9	9	(7-11)	-0.2	-2.1
	50-59	5,569	27	28	9	9	3,021	27	27	(26-29)	8	8	(7-9)	-0.2	-0.8
	60-69	15,677	22	22	6	6	9,283	21	22	(21-22)	5	6	(5-6)	-0.3	-0.4
	70-79	14,791	15	15	3	3	10,507	15	16	(15-17)	3	3	(3-4)	0.6	0.2
	80-99	6,297	8	8	1	2	4,934	8	9	(8-10)	1	2	(1-2)	0.7	-0.4
Malignant melanoma of skin (172)															
Men	15-99	5,964	87	90.5	60	69.9	4,732	87	90.7	(89.7-91.6)	61	71.6	(70.0-73.1)	0.2	1.7
	15-39	1,112	93	94	75	76	788	94	94	(92-96)	79	79	(76-82)	0.7	3.2
	40-49	1,050	93	94	73	74	801	92	92	(90-94)	75	77	(73-80)	-1.2	2.6
	50-59	1,104	90	91	66	70	920	91	92	(89-93)	69	72	(69-75)	0.8	2.1
	60-69	1,331	86	89	56	65	1,030	85	88	(85-90)	56	65	(61-68)	-1.1	-0.2
	70-79	974	80	86	43	63	807	83	89	(86-92)	44	63	(58-68)	3.6	0.1
	80-99	393	68	79	19	44	386	68	80	(74-85)	24	56	(46-65)	1.6	11.8
Women	15-99	9,976	92	95.3	74	84.3	7,052	93	95.8	(95.2-96.3)	75	85.8	(84.7-86.8)	0.4	1.5
	15-39	2,133	98	98	90	90	1,464	97	98	(97-98)	91	91	(89-92)	-0.3	0.9
	40-49	1,734	96	96	86	87	1,263	97	97	(96-98)	87	88	(86-90)	0.4	1.0
	50-59	1,655	96	96	82	85	1,052	95	96	(94-97)	83	86	(83-88)	-0.4	0.8
	60-69	1,913	93	94	73	80	1,217	94	95	(94-97)	76	83	(80-86)	1.0	3.1
	70-79	1,604	88	91	59	74	1,230	91	94	(92-96)	61	77	(73-80)	3.0	2.6
	80-99	937	75	84	32	61	826	78	87	(84-90)	34	65	(58-70)	2.6	3.7
Breast (174)															
Women	15-99	116,883	87	89.7	59	67.7	83,912	88	91.8	(91.6-92.0)	64	73.7	(73.3-74.0)	2.1	6.0
	15-39	7,076	94	94	66	66	4,672	96	96	(95-96)	69	70	(68-71)	1.7	3.6
	40-49	18,195	95	95	72	73	13,388	96	96	(96-96)	76	77	(76-78)	1.1	4.1
	50-59	23,533	92	92	68	70	19,234	95	95	(95-96)	77	80	(79-80)	3.0	9.7
	60-69	29,593	89	90	64	70	20,246	91	93	(92-93)	71	77	(76-78)	2.3	7.0
	70-79	24,155	82	85	51	64	15,794	82	86	(85-86)	52	65	(64-66)	0.1	1.3
	80-99	14,331	65	73	24	46	10,578	66	74	(73-75)	25	47	(45-48)	1.1	0.7

Table 2 continued One-and five-year survival of patients diagnosed in 1986-90 and 1991-93: major cancers, sex and age, England and Wales

Site (ICD9)	Age group	Patients diagnosed 1986-90					Patients diagnosed 1991-93							Difference*	
		Number of cases	One-year (%)		Five-year (%)		Number of cases	One-year survival (%)			Five-year survival (%)			One-Year	Five-Year
			Crude	Relative	Crude	Relative		Crude	Relative	(95% C.I.) ⁺	Crude	Relative	(95% C.I.) ⁺		
Cervix (180)															
	15-99	19,108	81	83.0	58	63.8	9,446	81	83.3	(82.5-84.1)	59	64.3	(63.3-65.4)	0.3	0.5
	15-39	5,370	92	92	77	78	2,759	94	94	(93-95)	80	80	(78-81)	2.1	1.8
	40-49	3,650	89	90	71	72	1,902	90	90	(89-91)	72	72	(70-74)	0.7	0.5
	50-59	2,866	84	84	59	61	1,286	83	83	(81-85)	60	62	(59-65)	-0.6	0.9
	60-69	3,671	78	79	50	54	1,450	76	77	(75-80)	48	52	(50-55)	-1.5	-1.5
	70-79	2,473	63	66	31	39	1,428	64	66	(64-69)	30	38	(35-41)	0.8	-1.3
	80-99	1,078	40	45	11	20	621	41	45	(41-50)	12	21	(17-25)	0.4	0.9
Uterus (182)															
	15-99	16,508	82	85.3	62	72.7	10,764	83	86.5	(85.8-87.2)	62	73.1	(72.1-74.2)	1.2	0.5
	15-39	275	93	94	86	86	145	90	90	(84-94)	80	80	(73-86)	-3.8	-5.8
	40-49	1,114	93	93	83	84	766	94	94	(92-95)	85	86	(83-88)	1.0	2.0
	50-59	3,926	92	93	80	83	2,416	92	93	(92-94)	80	83	(81-84)	0.2	-0.3
	60-69	5,149	86	87	68	74	3,260	87	88	(87-90)	68	74	(72-76)	1.6	-0.1
	70-79	4,106	76	79	47	59	2,721	79	82	(80-83)	50	63	(60-65)	2.7	3.7
	80-99	1,938	56	62	23	42	1,456	59	66	(63-68)	25	46	(42-50)	3.5	3.7
Ovary (183)															
	15-99	21,241	54	55.5	26	29.3	13,867	56	57.6	(56.8-58.5)	26	29.2	(28.4-30.1)	2.1	-0.1
	15-39	1,270	84	84	69	69	696	84	84	(81-87)	68	69	(65-72)	0.4	-0.4
	40-49	2,424	76	77	43	43	1,600	79	79	(77-81)	44	45	(42-47)	2.5	1.8
	50-59	4,466	68	69	33	34	2,824	70	70	(69-72)	33	34	(32-36)	1.6	0.2
	60-69	5,949	53	53	23	25	3,752	57	58	(56-60)	23	25	(24-27)	4.6	0.5
	70-79	4,784	35	37	13	17	3,317	40	41	(40-43)	15	18	(17-20)	4.7	1.0
	80-99	2,348	21	23	6	12	1,678	21	23	(21-25)	6	12	(10-14)	-0.1	-0.4
Prostate (185)															
	15-99	51,910	71	77.4	28	42.2	41,877	73	79.3	(78.8-79.7)	33	48.9	(48.2-49.5)	1.8	6.7
	15-39	33	69	69	39	39	17	64	64	(37-82)	41	41	(19-63)	-5.0	2.4
	40-49	171	75	76	30	31	142	82	82	(74-87)	32	32	(25-40)	6.1	1.2
	50-59	2,214	81	81	40	43	1,700	84	85	(83-86)	48	50	(48-53)	3.3	7.4
	60-69	12,598	81	83	39	46	9,773	83	85	(84-86)	47	55	(53-56)	2.3	8.6
	70-79	23,384	73	78	29	43	18,419	75	81	(80-81)	34	50	(49-51)	2.5	7.1
	80-99	13,510	57	67	15	34	11,826	58	67	(66-68)	16	37	(36-39)	0.4	3.2
Testis (186)															
	15-99	5,581	95	95.5	89	91.2	3,968	97	97.5	(96.9-97.9)	92	94.5	(93.7-95.2)	1.9	3.3
	15-39	3,848	96	96	92	92	2,640	98	98	(97-98)	94	95	(94-96)	1.5	3.1
	40-49	1,027	95	96	91	92	838	98	98	(97-99)	93	95	(94-97)	2.6	3.4
	50-59	390	92	93	82	87	281	94	95	(91-97)	87	90	(85-94)	1.8	3.4
	60-69	170	80	82	64	74	115	89	91	(83-95)	74	85	(73-92)	8.6	10.6
	70-79	104	71	76	46	69	72	70	75	(61-84)	46	62	(45-76)	-1.3	-6.8
	80-99	42	48	55	18	36	22	47	55	(28-75)	14	23	(6-48)	0.0	-12.6
Bladder (188)															
Men	15-99	35,539	76	81.4	48	65.2	23,493	76	82.0	(81.4-82.5)	48	65.7	(64.8-66.5)	0.5	0.4
	15-39	448	94	95	88	88	209	97	97	(94-99)	89	90	(84-93)	2.7	1.7
	40-49	1,273	92	92	81	83	805	93	93	(91-94)	81	83	(80-85)	0.8	-0.2
	50-59	4,370	88	89	70	74	2,530	89	90	(88-91)	72	76	(74-78)	1.0	1.9
	60-69	10,820	82	84	57	67	6,841	84	86	(85-87)	58	68	(67-69)	1.5	1.0
	70-79	12,715	73	78	40	59	8,402	74	79	(78-80)	42	60	(59-62)	1.2	1.1
	80-99	5,913	57	67	21	48	4,706	58	67	(65-69)	22	50	(47-52)	0.2	1.7
	Women	15-99	13,779	68	71.7	45	57.9	9,035	67	71.2	(70.1-72.2)	44	57.6	(56.4-58.9)	-0.5	-0.3
15-39		202	86	86	77	77	105	85	85	(76-90)	79	79	(70-86)	-1.0	2.0
40-49		380	87	87	76	77	271	82	82	(77-86)	69	69	(63-75)	-4.8	-7.6
50-59		1,386	85	85	72	75	776	87	87	(85-90)	73	75	(72-78)	2.1	0.3
60-69		3,449	79	80	59	64	2,056	78	79	(77-81)	60	65	(63-67)	-0.8	1.2
70-79		4,745	66	69	42	53	3,105	68	71	(69-72)	44	55	(53-57)	1.6	1.9
80-99		3,617	49	54	22	40	2,722	49	55	(52-57)	21	40	(37-43)	0.3	-0.2
Kidney (189)															
Men	15-99	9,527	55	57.6	32	39.6	6,965	56	58.6	(57.3-59.8)	33	40.5	(39.2-41.9)	1.0	1.0
	15-39	272	76	76	56	57	184	77	77	(70-82)	54	54	(47-61)	0.7	-2.9
	40-49	717	70	70	49	50	611	67	67	(63-70)	49	49	(45-53)	-3.1	-0.7
	50-59	1,916	61	61	40	42	1,242	63	64	(61-66)	42	44	(42-47)	2.5	2.5
	60-69	3,098	55	57	33	39	2,239	58	59	(57-61)	35	40	(38-42)	2.3	1.2
	70-79	2,637	49	52	23	33	1,943	49	52	(50-55)	25	35	(33-38)	0.3	2.3
	80-99	887	34	39	11	25	746	35	41	(37-45)	12	27	(22-32)	1.6	1.7

*The difference (in percentage points) between the one- and five-year relative survival rates for patients diagnosed in 1991-93 and in 1986-90.
+ 95% confidence interval (see text).

Table 2
continued

One-and five-year survival of patients diagnosed in 1986–90 and 1991–93: major cancers, sex and age, England and Wales

Site (ICD9)	Age group	Patients diagnosed 1986–90					Patients diagnosed 1991–93							Difference*	
		Number of cases	One-year (%)		Five-year (%)		Number of cases	One-year survival (%)			Five-year survival (%)			One-Year	Five-Year
			Crude	Relative	Crude	Relative		Crude	Relative	(95% C.I.)*	Crude	Relative	(95% C.I.)*		
Kidney (189) continued															
Women	15–99	5,643	51	53.1	30	35.6	4,103	52	54.2	(52.6–55.8)	32	37.3	(35.7–39.0)	1.1	1.7
	15–39	183	69	69	51	51	134	71	71	(63–78)	52	52	(43–60)	2.6	1.2
	40–49	392	67	67	44	45	306	66	66	(60–71)	50	50	(45–56)	-0.8	5.4
	50–59	850	61	61	40	42	609	63	63	(59–67)	45	46	(42–50)	1.9	4.0
	60–69	1,614	56	57	35	39	1,093	55	56	(53–59)	35	39	(36–42)	-1.2	-0.3
	70–79	1,707	46	48	24	31	1,220	46	48	(45–51)	24	30	(27–33)	0.6	-1.4
	80–99	897	26	29	10	19	741	35	39	(35–42)	14	26	(21–30)	9.5	6.6
Brain (191)															
Men	15–99	6,942	29	29.5	13	13.4	4,914	29	29.9	(28.6–31.2)	12	13.1	(12.2–14.1)	0.4	-0.3
	15–39	1,115	75	75	43	43	751	75	75	(72–78)	46	46	(43–50)	0.3	3.3
	40–49	977	48	48	21	22	695	49	49	(45–53)	19	20	(17–23)	0.9	-2.3
	50–59	1,526	24	24	7	8	1,023	28	28	(25–31)	8	8	(7–10)	4.0	0.4
	60–69	2,082	13	13	3	3	1,333	14	14	(13–16)	3	3	(2–4)	1.4	0.2
	70–79	1,066	5	5	1	2	934	5	6	(4–7)	1	1	(0–2)	0.4	-1.1
	80–99	176	4	5	1	1	178	3	3	(1–6)	1	1	(0–5)	-1.5	0.3
Women	15–99	5,059	30	30.6	15	15.7	3,559	29	29.9	(28.4–31.4)	14	14.2	(13.0–15.4)	-0.7	-1.5
	15–39	836	77	77	49	49	517	79	80	(76–83)	50	51	(46–55)	2.4	1.5
	40–49	623	53	53	27	27	491	52	52	(47–56)	23	23	(19–27)	-1.8	-3.9
	50–59	984	26	26	10	10	620	31	32	(28–35)	10	11	(8–13)	5.3	0.7
	60–69	1,459	13	13	3	3	968	14	14	(12–16)	4	4	(3–6)	1.0	1.2
	70–79	930	6	7	3	3	722	5	5	(4–7)	1	1	(0–2)	-1.3	-2.1
	80–99	227	7	8	4	5	241	3	3	(1–6)	1	1	(0–3)	-4.8	-4.0
Non-Hodgkin Lymphoma (200, 202)															
Men	15–99	12,639	62	65.4	37	45.3	9,488	62	65.5	(64.5–66.5)	38	45.9	(44.8–47.1)	0.1	0.6
	15–39	1,289	79	79	62	63	915	76	76	(73–79)	62	62	(59–65)	-2.5	-1.1
	40–49	1,369	78	78	58	59	1,104	78	78	(76–81)	60	61	(58–64)	0.6	1.9
	50–59	2,105	74	74	50	53	1,569	75	75	(73–77)	50	53	(50–56)	1.0	0.0
	60–69	3,444	64	66	36	43	2,371	65	66	(64–68)	38	44	(41–46)	0.7	0.6
	70–79	3,134	50	53	20	30	2,415	51	54	(52–57)	22	32	(29–34)	1.5	1.8
	80–99	1,298	33	38	10	22	1,114	33	39	(35–42)	9	21	(17–25)	0.6	-1.1
Women	15–99	11,080	62	64.9	38	45.1	8,209	64	66.6	(65.5–67.6)	40	47.7	(46.4–48.9)	1.7	2.6
	15–39	726	82	82	67	67	532	83	83	(79–86)	68	68	(64–72)	0.5	1.4
	40–49	936	84	84	65	66	691	85	85	(83–88)	65	66	(62–69)	1.4	-0.3
	50–59	1,601	78	78	55	57	1,164	78	78	(76–81)	58	60	(57–62)	0.2	2.5
	60–69	2,653	66	67	42	46	1,868	70	71	(69–73)	45	49	(47–52)	3.6	3.4
	70–79	3,240	53	56	26	33	2,390	56	58	(56–60)	29	37	(34–39)	2.5	3.6
	80–99	1,924	37	41	13	23	1,564	39	43	(40–46)	15	27	(24–30)	2.0	4.3
Multiple myeloma (203)															
Men	15–99	5,392	52	54.9	14	18.9	3,774	55	58.5	(56.8–60.2)	16	20.4	(19.0–21.9)	3.6	1.5
	15–39	43	84	84	51	51	42	76	76	(60–87)	47	48	(32–62)	-7.4	-3.1
	40–49	218	72	72	31	32	198	85	85	(79–89)	38	39	(32–45)	12.9	6.6
	50–59	796	68	69	26	28	502	73	74	(70–78)	29	31	(27–35)	5.0	2.9
	60–69	1,602	60	62	18	21	1,089	61	63	(60–66)	19	22	(19–25)	1.0	0.9
	70–79	1,820	43	46	9	13	1,282	48	51	(48–54)	9	13	(11–16)	5.2	0.8
	80–99	913	26	30	3	7	661	27	32	(28–36)	3	8	(5–11)	2.4	0.6
Women	15–99	5,138	53	55.6	16	19.6	3,408	53	55.9	(54.1–57.7)	14	17.6	(16.2–19.1)	0.4	-1.9
	15–39	40	77	77	55	55	13	85	85	(53–96)	38	39	(14–63)	8.3	-16.5
	40–49	172	76	76	40	40	119	70	70	(61–78)	37	37	(29–46)	-5.8	-3.1
	50–59	566	71	71	31	32	328	77	78	(73–82)	33	34	(29–40)	6.3	2.6
	60–69	1,297	63	64	19	20	809	63	64	(60–67)	19	20	(18–23)	-0.8	0.0
	70–79	1,781	49	51	13	16	1,223	52	54	(52–57)	11	14	(12–16)	3.5	-2.7
	80–99	1,282	31	35	5	9	916	31	34	(31–37)	4	7	(5–9)	-0.6	-2.3
All leukaemias (204–208)															
Men	15–99	9,779	50	53.1	21	26.8	6,736	52	55.6	(54.3–56.8)	23	30.0	(28.8–31.3)	2.4	3.2
	15–39	916	67	67	35	35	623	72	72	(69–76)	42	43	(39–46)	5.3	7.6
	40–49	560	65	65	33	34	431	73	73	(68–77)	46	46	(41–51)	7.9	12.3
	50–59	1,127	64	65	32	34	759	67	68	(64–71)	38	40	(36–44)	2.8	6.0
	60–69	2,473	54	56	25	29	1,624	58	59	(57–62)	26	30	(28–33)	3.8	1.4
	70–79	3,077	42	45	14	21	2,052	44	47	(45–49)	15	22	(19–24)	1.9	0.6
	80–99	1,626	28	32	5	13	1,247	27	31	(29–34)	6	13	(10–16)	-0.7	-0.3
Women	15–99	7,978	47	49.3	21	26.7	5,166	49	51.2	(49.8–52.7)	24	29.9	(28.5–31.3)	1.9	3.1
	15–39	655	67	67	43	43	480	70	70	(66–74)	46	46	(42–51)	2.8	3.4
	40–49	460	60	60	34	34	298	66	67	(61–72)	36	37	(31–42)	6.3	2.6
	50–59	815	58	58	29	30	474	63	63	(58–67)	37	38	(34–43)	4.9	8.1
	60–69	1,547	55	56	28	30	936	59	60	(57–63)	34	37	(33–40)	4.8	6.6
	70–79	2,336	42	43	17	22	1,477	44	45	(43–48)	19	24	(21–26)	2.1	1.7
	80–99	2,165	29	33	8	15	1,501	27	31	(28–33)	8	15	(12–17)	-2.0	-0.3

METHODS

The methods used in these analyses were based closely on those used to analyse survival trends for the period 1971–1995; the monograph *Cancer survival trends*¹ should be consulted for details. All adult residents of England and Wales aged 15–99 years who were diagnosed with a first primary invasive malignant neoplasm (except non-melanoma skin cancer) during the period 1991–93 were eligible for analysis. Benign and *in situ* tumours were excluded. Incidence data for 1991–93 submitted to the Office for National Statistics by all the regional cancer registries in England and Wales were linked with death registrations and emigrations at the National Health Service Central Register (NHSCR). The data set was frozen for analysis as a single file on 24 January 2000, when death linkage was considered acceptably complete up to and including 31 December 1998.

Patients were excluded from analysis as follows: aged under 15 or 100 or more years at diagnosis (less than 0.1% for most cancers); duplicate registration (none); sex not known or incompatible with the cancer (less than 0.1%); and date(s) or sequence of dates invalid (less than 0.1%). Cancers diagnosed in the period 1991–93 were linked to the entire data set for 1971–90 to detect any previous tumour in the same patient. Patients were retained in the analysis only if the tumour diagnosed during 1991–93 was the first invasive malignant tumour (excluding non-melanoma skin cancer) in that patient. For synchronous tumours in the same organ or bilateral tumours, only one record was retained.

Tumours registered from a death certificate only (DCO cases) have unknown survival because the incidence date is unknown (it is taken as the date of death). For most of the period 1991–93, these cases could not be reliably distinguished in the national data from patients registered in the usual way who were known to have died on the day of diagnosis (true zero survival). Patients with zero or unknown survival were excluded from analysis. They comprised 4–15% (overall 9%) of eligible patients, up to 3% less (depending on the cancer) than for patients diagnosed during 1986–90.

When the record of a patient diagnosed with cancer during 1991–93 could not be traced at the NHSCR, that person's cancer record could not be linked with death or emigration records; such persons were excluded from analysis because their vital status was therefore unknown. Fewer than 1% of patients were excluded for this reason, however, compared with 5.3% for the period 1986–90. This represents a considerable improvement in the efficiency of linkage between cancer registrations and deaths. Overall, the percentage of patients excluded from analysis for all the above reasons fell by almost half, compared with the corresponding values for 1986–90.

Survival time was measured in years, calculated as the number of days between the dates of diagnosis and death (or emigration, or 31 December 1998, whichever was earlier) divided by 365.25. Crude survival was estimated as the cumulative probability of survival at one or five years. Relative survival for each age group and sex is the ratio of the crude survival and the expected survival in the corresponding group of the general population. Expected survival was estimated from the England and Wales life tables. These were obtained from the Government Actuary's Department for each sex and single year of age up to 106 years, both for the peri-censal period 1990–92 (used for deaths up to 1994) and the period 1995–97 (used for deaths 1995–98). Computations were done with a STATA algorithm using the method of Estève *et al.*⁶ Relative survival was estimated for each single year of age but results are presented for the age ranges 15–39, 40–49, 50–59, 60–69, 70–79, 80–99 years, together with 95% confidence intervals. Overall (all ages) survival rates are not age-standardised. The main comparisons made here are with survival rates for patients diagnosed during 1986–90, and any changes in the age distribution of cancer patients by 1991–93 would have only a trivial effect on the estimates.

Key findings

- Five-year survival improved by 3–7% (for patients diagnosed in 1991–93 compared with 1986–90) for seven of the 20 most common cancers. For women, these were breast, rectum, non-Hodgkin lymphoma and all leukaemias combined; for men, prostate, colon, testis and all leukaemias.
- Five-year survival increased by 6–7% for breast cancer in women and for prostate cancer - substantially more than the rise in one-year survival (2% for both cancers).
- Survival from breast and prostate cancers is likely to have improved for three reasons: earlier detection without increased life-span; more effective treatment - both for the cancers detected earlier and for the symptomatic cases; and (for prostate) the detection of non-lethal tumours.
- One-year survival increased by 2–4% for multiple myeloma and cancers of the oesophagus and stomach in men, and for ovarian cancer; five-year survival did not improve.
- Five-year survival from lung cancer showed a small fall (of 1%) but this is likely to be due to improved registration of patients with short survival.
- Survival did not improve for eight cancers: pancreas, larynx, melanoma of the skin, cervix, uterus, bladder, kidney and brain.

ACKNOWLEDGEMENTS

We are grateful for all the work undertaken by the regional cancer registries over the past 30 years and their close co-operation with the National Cancer Intelligence Centre at ONS. We thank Chris Puckey and her team at ONS Titchfield, and John Williams and Pat Pike, and their team at NHSCR Southport, for all their efforts which considerably improved the efficiency of the linkage between cancer registrations and deaths; and we also thank Anita Brock for her assistance in the preparation of this report.

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Report:

Legal abortions in England and Wales 1999

INTRODUCTION

This report provides provisional figures on terminations performed during 1999 under the Abortion Act 1967, on women normally resident in England and Wales. Provisional abortion rates for 1999 are shown in Table 4.2.

KEY OBSERVATIONS:

- Provisional figures for 1999 show a total of 173,696 abortions were performed on residents of England and Wales, a fall of 4,175 (2.3 per cent) compared with 1998.
- The overall abortion rate for women resident in England and Wales in 1999 was 13.6 abortions per 1,000 women aged 14–49, 2.6 per cent lower than in 1998 when the rate was 13.9 per 1,000 (Table 4.2).
- Abortion rates fell in all age groups in 1999. The rate fell by 3 per cent for women under 20, by 2 per cent for women in their twenties and 3 per cent for women aged 30 and over.
- 74 per cent (127,454) of terminations were purchased by the NHS, the same as last year. The percentage of terminations paid for by the NHS varied by the area of the woman's usual residence from over 84 per cent of abortions to women living in Wales, Trent and Northern & Yorkshire regional offices to under 70 per cent of abortions to women living in the South East and London.

- 89 per cent of terminations were performed before 13 weeks of gestation and 10 per cent between 13 and 19 weeks' gestation, both the same as last year.

EXPLANATORY NOTES:

The figures relate to abortion notifications received by 16 March 2000.

Area of usual residence is derived from the woman's usual address of residence. Some women may have stated a temporary residence as their place of usual residence. These figures, therefore, should be treated with caution.

The data in the table relate to the Regional Offices and health authorities of England and Wales in existence on 1 April 1999.

Incomplete forms are returned to practitioners for clarification. Forms relating to 835 abortions in 1999 are still awaiting a reply and have not been fully processed. These abortions are only included in the total number of abortions, the number to residents and the overall abortion rate in Table 4.2. They are not included in Table 1 of the report. It is assumed that these 835 abortions were performed on residents of England and Wales. Incomplete forms are included in provisional abortion statistics for the first time as part of ongoing work to improve the quality of abortion statistics.

Longer term trends are shown in Table 4.2, and the graph on page 6 shows quarterly abortion rates from 1981 to 1999.

Table 1 Legal abortions: Regional Office and health authority of residence by age group, gestation weeks and purchaser, 1999 England and Wales

Place of usual residence	Total*	Age group							Gestation weeks				Purchaser		
		Under 16	16-19	20-24	25-29	30-34	35-44	45+	Under 9	9-12	13-19	20+	NHS	NHS contract	Non-NHS
England and Wales	172,861	3,578	32,679	44,795	38,326	29,000	23,982	498	73,508	80,448	16,465	2,440	84,199	43,255	45,407
England	165,355	3,367	30,952	42,780	36,804	27,903	23,063	483	70,527	76,799	15,671	2,358	79,974	41,043	44,338
Wales	7,506	211	1,727	2,015	1,522	1,097	919	15	2,981	3,649	794	82	4,225	2,212	1,069
Regional Offices and health authorities															
Northern and Yorkshire	16,494	477	3,733	4,457	3,403	2,375	2,006	41	7,152	7,507	1,627	208	12,767	1,185	2,542
Bradford	1,282	31	284	352	285	184	138	8	311	781	169	21	963	53	266
Calderdale and Kirklees	1,604	41	334	399	345	269	212	3	803	619	160	22	429	827	348
County Durham	1,275	40	308	326	267	180	152	2	546	604	114	11	1,137	9	129
East Riding	1,499	42	350	421	303	211	168	4	675	707	102	15	1,296	64	139
Gateshead and South Tyneside	830	28	212	201	174	108	107	-	349	399	73	9	764	3	63
Leeds	2,301	64	458	664	510	345	255	5	721	1,238	302	40	1,637	83	581
Newcastle and North Tyneside	1,531	27	342	467	320	200	174	1	696	650	172	13	1,430	8	93
North Cumbria	734	24	145	194	159	116	95	1	468	214	43	9	705	4	25
North Yorkshire	1,619	39	329	422	321	262	238	8	654	812	126	27	1,196	64	359
Northumberland	683	20	179	173	100	99	109	3	368	247	59	9	633	2	48
Sunderland	865	33	209	255	164	111	93	-	333	429	92	11	762	14	89
Tees	1,536	63	407	414	302	182	164	4	869	507	146	14	1,436	8	92
Wakefield	735	25	176	169	153	108	101	2	359	300	69	7	379	46	310
Trent	13,556	399	3,022	3,560	2,741	2,083	1,712	39	5,391	6,911	1,094	160	10,489	1,307	1,760
Barnsley	541	10	109	152	115	94	60	1	188	297	45	11	378	41	122
Doncaster	952	39	252	237	182	140	98	4	388	469	85	10	130	680	142
Leicestershire	2,702	53	557	737	549	425	370	11	1,146	1,369	155	32	2,123	188	391
Lincolnshire	1,392	47	326	373	272	207	163	4	524	747	102	19	1,229	37	126
North Derbyshire	818	21	183	193	177	129	115	-	409	327	70	12	620	92	106
North Nottinghamshire	828	29	190	211	157	133	108	-	316	434	65	13	688	30	110
Nottingham	1,789	44	353	525	360	285	218	4	652	1,029	99	9	1,496	91	202
Rotherham	696	26	161	180	154	97	75	3	174	413	100	9	548	38	110
Sheffield	1,559	48	341	389	341	234	204	2	447	902	192	18	1,321	27	211
South Humber	934	36	249	238	174	126	108	3	560	282	82	10	848	21	65
Southern Derbyshire	1,345	46	301	325	260	213	193	7	587	642	99	17	1,108	62	175
Eastern	14,430	302	2,836	3,477	3,016	2,476	2,269	54	6,443	6,763	985	239	9,615	1,592	3,223
Bedfordshire	1,860	41	390	464	357	314	290	4	981	708	143	28	1,356	168	336
Cambridgeshire	1,779	34	342	453	358	294	290	8	705	925	114	35	1,448	55	276
East and North Hertfordshire	1,484	33	254	345	330	290	228	4	679	684	103	18	682	365	437
Norfolk	1,713	44	334	418	351	291	267	8	786	768	132	27	1,509	50	154
North Essex	2,352	54	457	525	479	425	399	13	926	1,208	180	38	1,244	403	705
South Essex	2,227	44	456	550	475	351	347	4	951	1,093	138	45	1,392	248	587
Suffolk	1,420	23	311	356	308	223	192	7	572	739	80	29	1,263	11	146
West Hertfordshire	1,595	29	292	366	358	288	256	6	843	638	95	19	721	292	582
London	48,046	520	6,396	12,653	12,558	9,088	6,709	121	21,034	21,409	4,854	749	16,987	14,039	17,020
Barking and Havering	1,632	30	331	416	351	266	234	4	529	922	151	30	661	389	582
Barnet	1,610	17	206	455	377	277	274	4	869	622	104	15	849	131	630
Bexley and Greenwich	1,982	41	334	503	466	351	283	4	634	1,139	178	31	1,096	314	572
Brent and Harrow	3,542	26	412	948	878	743	525	10	2,072	1,129	273	68	111	2,618	813
Bromley	1,077	8	192	226	241	218	189	3	429	547	88	13	410	265	402
Camden and Islington	3,247	26	336	866	955	636	419	9	1,568	1,405	245	29	1,468	619	1,160
Croydon	1,879	33	327	425	440	361	290	3	627	950	267	35	36	1,291	552
Ealing Hammersmith and Hounslow	4,632	45	576	1,199	1,297	853	649	13	1,973	2,015	570	74	1,181	1,470	1,981
East London and The City	5,403	62	726	1,569	1,374	1,019	640	13	1,731	2,920	669	83	3,523	165	1,715
Enfield and Haringey	3,516	33	469	909	896	694	504	11	1,653	1,519	290	54	1,529	782	1,205
Hillingdon	1,152	15	204	302	259	202	167	3	541	490	100	21	294	503	355
Kensington & Chelsea and Westminster	3,038	17	251	867	928	576	394	5	1,875	919	223	21	1,503	293	1,242
Kingston and Richmond	1,233	9	144	283	331	225	237	4	673	449	87	24	504	115	614
Lambeth Southwark and Lewisham	7,727	93	1,042	2,061	2,065	1,467	979	19	3,117	3,460	986	164	1,713	3,710	2,304
Merton Sutton and Wandsworth	3,572	39	482	874	998	689	485	5	1,649	1,527	354	42	1,671	528	1,373
Redbridge and Waltham Forest	2,804	26	364	750	702	511	440	11	1,094	1,396	269	45	438	846	1,520
South East	24,648	499	4,667	6,153	5,173	4,133	3,938	85	11,407	10,636	2,214	391	8,299	8,840	7,509
Berkshire	2,791	65	453	656	663	519	422	13	1,480	1,016	251	44	691	852	1,248
Buckinghamshire	2,077	36	392	515	416	331	379	8	1,086	768	185	38	395	1,083	599
East Kent	1,302	35	269	323	258	218	194	5	535	587	153	27	761	168	373
East Surrey	1,107	15	202	263	207	196	218	6	530	484	76	17	372	379	356
East Sussex Brighton and Hove	2,600	36	469	715	560	410	403	7	890	1,444	242	24	462	1,134	1,004

* Includes cases with age not stated

Table 1
continued

Legal abortions: Regional Office and health authority of residence by age group, gestation weeks and purchaser, 1999

England and Wales

Place of usual residence	Total*	Age group							Gestation weeks				Purchaser		
		Under 16	16-19	20-24	25-29	30-34	35-44	45+	Under 9	9-12	13-19	20+	NHS	NHS contract	Non-NHS
South East continued															
Isle of Wight	211	3	49	47	42	33	37	-	72	128	8	3	122	44	45
North and Mid Hampshire	1,322	21	267	296	283	240	208	7	696	500	105	21	225	435	662
Northamptonshire	1,763	50	374	432	363	274	265	5	665	919	156	23	1,098	155	510
Oxfordshire	1,757	31	311	474	375	297	266	3	909	667	148	33	1,501	29	227
Portsmouth and South East Hampshire	1,533	42	337	390	310	243	210	1	523	810	187	13	1,271	94	168
Southampton and South West Hampshire	1,428	29	312	387	273	215	207	5	694	595	118	21	246	897	285
West Kent	2,894	63	561	702	613	499	445	11	1,510	1,048	276	60	105	2,156	633
West Surrey	1,944	35	324	500	408	314	354	9	1,143	621	145	35	260	1,114	570
West Sussex	1,919	38	347	453	402	344	330	5	674	1,049	164	32	790	300	829
South West	12,014	307	2,570	3,009	2,442	1,884	1,764	38	4,219	6,490	1,165	140	8,326	1,273	2,415
Avon	2,791	63	541	774	597	427	384	5	838	1,536	367	50	1,947	226	618
Cornwall and Isles of Scilly	1,095	31	264	270	208	164	154	4	308	712	68	7	933	64	98
Dorset	1,707	37	378	413	352	267	257	3	614	920	153	20	810	231	666
Gloucestershire	1,431	36	273	357	293	251	216	5	536	746	132	17	1,129	81	221
North and East Devon	977	18	212	256	195	159	131	6	356	552	63	6	921	8	48
Somerset	1,093	35	267	244	223	147	175	2	408	558	115	12	905	67	121
South and West Devon	1,445	49	334	344	275	217	219	7	437	863	136	9	1,321	71	53
Wiltshire	1,475	38	301	351	299	252	228	6	722	603	131	19	360	525	590
West Midlands	16,535	393	3,526	4,173	3,373	2,765	2,243	62	7,110	7,224	1,961	240	3,112	8,884	4,539
Birmingham	4,103	73	845	1,125	851	690	497	22	1,717	1,740	579	67	139	2,759	1,205
Coventry	1,366	27	279	367	294	245	151	3	675	538	132	21	7	1,195	164
Dudley	881	26	211	234	150	138	118	4	300	424	141	16	16	549	316
Herefordshire	386	8	78	110	81	54	54	1	200	156	27	3	332	9	45
North Staffordshire	1,075	25	279	258	213	158	139	3	446	528	88	13	654	118	303
Sandwell	1,066	31	201	260	244	178	150	2	449	443	160	14	27	773	266
Shropshire	1,099	24	243	280	205	183	161	3	468	502	113	16	282	539	278
Solihull	491	7	92	109	97	89	95	2	213	203	66	9	46	179	266
South Staffordshire	1,611	49	376	366	306	277	234	3	727	695	177	12	904	290	417
Walsall	784	22	140	187	171	148	112	4	196	488	92	8	504	36	244
Warwickshire	1,534	39	336	361	324	242	228	4	793	586	126	29	47	1,236	251
Wolverhampton	842	30	173	226	173	147	90	3	278	408	138	18	22	433	387
Worcestershire	1,297	32	273	290	264	216	214	8	648	513	122	14	132	768	397
North West	19,632	470	4,202	5,298	4,098	3,099	2,422	43	7,771	9,859	1,771	231	10,379	3,923	5,330
Bury and Rochdale	1,044	32	205	271	206	193	135	2	502	414	111	17	500	115	429
East Lancashire	1,410	56	312	369	308	197	167	1	718	561	121	10	1,214	9	187
Liverpool	1,972	33	409	580	443	291	212	4	519	1,241	184	28	1,339	215	418
Manchester	1,808	27	327	632	399	253	165	5	846	793	156	13	935	465	408
Morecambe Bay	716	17	143	198	146	112	99	1	208	446	54	8	580	11	125
North Cheshire	1,020	33	241	260	202	160	123	1	403	487	118	12	28	775	217
North West Lancashire	1,225	34	275	331	233	192	159	1	617	463	129	16	105	526	594
Salford and Trafford	1,386	27	282	381	272	246	175	3	604	673	98	11	778	174	434
Sefton	748	9	173	200	145	126	95	-	255	425	62	6	498	67	183
South Cheshire	1,710	36	345	442	343	275	263	6	615	889	175	31	665	679	366
South Lancashire	761	16	159	185	170	109	116	6	309	374	69	9	365	138	258
St Helens and Knowsley	1,019	21	265	238	217	159	118	1	224	694	91	10	704	94	221
Stockport	940	21	209	228	170	177	133	2	465	414	52	9	404	207	329
West Pennine	1,364	31	279	344	309	224	173	4	598	629	118	19	670	135	559
Wigan and Bolton	1,579	51	355	395	363	240	171	4	648	774	134	23	1,024	90	465
Wirral	930	26	223	244	172	145	118	2	240	582	99	9	570	223	137
Wales	7,506	211	1,727	2,015	1,522	1,097	919	15	2,981	3,649	794	82	4,225	2,212	1,069
Bro Taf	2,003	53	434	566	428	278	242	2	721	1,074	189	19	1,484	41	478
Dyfed Powys	1,033	30	227	262	202	159	148	5	421	499	104	9	909	27	97
Gwent	1,450	47	355	392	270	221	163	2	612	652	163	23	409	899	142
Morgannwg	1,257	38	295	326	254	196	147	1	486	634	128	9	1,171	6	80
North Wales	1,763	43	416	469	368	243	219	5	741	790	210	22	252	1,239	272

* Includes cases with age not stated



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