

About the Office for National Statistics

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 the National Statistician and the Registrar General for England and Wales, and the agency administers the 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.

Subscription

Annual subscription, including postage, is £75; single issues are £20.

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

Online

Health Statistics Quarterly and *Population Trends* can be viewed or downloaded as Adobe Acrobat PDF files from the National Statistics website www.statistics.gov.uk/products/p6725.asp (*Health Statistics Quarterly*) or www.statistics.gov.uk/products/p6303.asp (*Population Trends*).

A National Statistics publication

National Statistics are produced to high professional standards set out in the National Statistics Code of Practice. They undergo regular quality assurance reviews to ensure that they meet customer needs. They are produced free from any political interference.

Editorial board

Peter Goldblatt (editor)
David Pearce (editor)
Angela Dale
Paul Hyatt
Graham C Jones
Azeem Majeed
Jil Matheson
Ian R Scott
Judith Walton

Contributions

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

Please send to:

Clare Parrish, executive secretary
Health Statistics Quarterly/Population Trends
Office for National Statistics
B7/06
1 Drummond Gate
London SW1V 2QQ

Tel: 020 7533 5264

Fax: 020 7533 5103

E-mail: clare.parrish@ons.gov.uk

Contact points at ONS

People with enquiries about the statistics published regularly in *Health Statistics Quarterly* and *Population Trends* can contact the following enquiry points.

Topic enquiries

Abortions: 01329 813618

Births: 01329 813758

Conceptions: 020 7533 5113

Expectation of life: 020 7211 2622 (Government Actuary's Department)

Marriages and divorces: 01329 813379

Migration: 01329 813889/813897

Mortality: 01329 813758

Population estimates: 01329 813318

Population projections:

National – 020 7211 2622 (Government Actuary's Department)

Subnational – 01329 813474/813865

General enquiries

National Statistics Information and Library Service

1 Drummond Gate

London SW1V 2QQ

Tel: 0845 601 3034

E-mail: info@statistics.gov.uk

Website: www.statistics.gov.uk

© **Crown copyright 2002**. Published with the permission of the Controller of Her Majesty's Stationery Office (HMSO).

Applications for reproduction should be submitted to HMSO under HMSO's Class Licence:

www.clickanduse.hmso.gov.uk

Alternatively applications can be made in writing to:

HMSO Licensing Division, St Clement's House,

2-16 Colegate, Norwich NR3 1BQ

ISBN 0 11 621533 X

ISSN 1465-1645

Navigate using bookmarks, thumbnails, or links from the Contents list below, or the the List of Tables.
Prevent the printing of these instructions by unchecking 'Annotations' in the Print dialogue box.

To enlarge the view of the Contents list select the HAND tool and click in the area above the list when an ARROW appears on the hand.

Health statistics

Quarterly



Autumn 2002

15

IN THIS ISSUE

In brief

Recent publications

Health indicators

Inequalities in life expectancy by social class 1972–1999

Examines trends in life expectancy by social class based on the ONS Longitudinal Study for England and Wales, over the period 1972 to 1999.

Angela Donkin, Peter Goldblatt and Kevin Lynch

Causes of neonatal deaths and stillbirths: a new hierarchical classification in ICD-10

Presents a hierarchical classification that will be used for deriving a single cause group for stillbirths and neonates in ICD-10 replacing the classifications used in ICD-9.

Nirupa Dattani and Steve Rowan

Epilepsy prevalence and prescribing patterns in England And Wales

Examines trends in the prevalence of treated epilepsy and in use of new anti-epileptic drugs in England and Wales between 1994 and 1998 using the General Practice Research Database.

B Purcell, A Gaitatzis, J W Sander and A Majeed

Tables

List of tables

Tables 1.1–6.3

Notes to tables

Reports:

Sudden infant deaths, 2001

Healthy life expectancy in Great Britain, 1999

Death registrations in England and Wales, 2001: area of residence

Infant and perinatal mortality, 2001: health areas, England and Wales

Annual Update:

Mortality statistics, 2000: injury and poisoning

Page

2

3

4

5

16

23

32

33

54

55

60

64

75

79

in brief

Changes to Health Areas

The first changes to the structure of the NHS in England as part of *Shifting the Balance of Power* came into effect on 1 April 2002. *Shifting the Balance of Power* is the programme of change intended to empower patients and frontline staff in the NHS. It is part of the implementation of the NHS Plan.

The main feature of the changes in structure has been to give some 300 locally based Primary Care Trusts the role of running the NHS and improving health in their areas. This has meant abolishing the previous 95 Health Authorities and creating 28 new ones that serve larger areas and have a more strategic role. The Department of Health (DH) is also refocusing to reflect these changes, including the abolition of its Regional Offices.

At 1 April 1999 there were eight DH Regional Offices. Their functions are being transferred as appropriate to the new health structures, including a DH public health function in each of the nine Government Offices for the Regions (GORs). This transfer is planned over the period from 1 April 2002 to 31 March 2003 when the DH Regional Offices will officially be abolished.

From 1 April 2002 there are four Directorates of Health and Social Care (DHSCs) within the Department of Health. Their responsibilities include the oversight and development of health and social care, the performance management of the new Strategic Health Authorities, the development and succession of senior staff, supporting Ministers through casework etc, and troubleshooting as necessary. The GORs sit within the DHSCs as shown in the table below.

The Office for National Statistics will be changing its outputs for health areas to reflect the new health structures. This process has started in this edition of *Health Statistics Quarterly*. The reference table presenting population estimates for Health Regional Offices areas in England (Table 1.3 in previous editions) has been dropped and subsequent

tables in Section 1 renumbered. The table giving population estimates for GORs (Table 1.4 in previous editions, now Table 1.3) now represents Health as well as Administrative Regions. Similarly, reference Table 6.2 that used to show deaths for Health Regional Office areas in England has been changed to present deaths for GORs.

Further information on *Shifting the Balance of Power* can be found on the DH website: www.doh.gov.uk/shiftingthebalance/index.

Changes in the processing and publication of abortion data

Under the Abortion Act 1967, the Office for National Statistics and its predecessor has undertaken the processing and statistical analysis of abortion notification forms (HSA4) sent to the Chief Medical Officers of England and Wales. From 1 April 2002, the Department of Health has taken over this work and the processing system has been redesigned to improve the quality and timeliness of the data.

A new abortion notification form was also introduced. This took effect from 18 April 2002. It applies to abortions performed in England only (the old version will continue to be used for abortions performed in Wales until such time as new regulations are laid). Much of the content of the form remains the same, but the key changes are:

- a. redesign of the form to allow for scanning in of the document and optical character reading of its content; procedures are being put into place to ensure that optically read data reflect accurately the information provided;
- b. the form encourages the use of patient identification numbers and postcode,

Government Office Regions	Directorates of Health and Social Care
North East North West Yorkshire and the Humber	North
East Midlands West Midlands East	Midlands and Eastern
London	London
South East South West	South

rather than full name and address, so as to improve confidentiality;

- c. collection of self-reported ethnicity data, where available; and
- d. collection of information on whether Chlamydia screening was offered.

Further information about changes to the notification form can be found at www.doh.gov.uk/hsa4/index.htm.

Publication plans by the Department of Health are as follows:

- Provisional figures on the number of abortions performed during the June quarter (1 April – 30 June) 2002 will be published in the usual way in Table 4.2 in *Health Statistics Quarterly* 16.
- Arrangements for publication of September quarter 2002 data and onwards are under consideration.

All enquiries about abortion statistics should from now on be addressed to :

Abortion Statistics
Department of Health
Room 433B
Skipton House
80 London road
London SE1 6LH.

Tel 020 7972 3813
Fax 020 7972 5662
Email: Abortion.Statistics@doh.gsi.gov.uk

Correction to 'Results of the ICD-10 bridge coding study, England and Wales, 1999'

The results of the ICD-10 bridge coding study for England and Wales were published in a report in *Health Statistics Quarterly* 14 on 23 May 2002.

There was an error in Table 2 of that report. On pages 81 and 83 X00-X49 should read X00-X09.

The corrected table now appears in the pdf of the report on the National Statistics website at www.statistics.gov.uk/products/p6725.asp.

Recent Publications

Mortality Statistics: Injury and Poisoning, 2000 Series DH4 no.25 (June, available on the National Statistics website at www.statistics.gov.uk/products/p621.asp)

Population Trends 108 (TSO, £20, June, ISBN 0-11-621536-4)

Mental Health of Carers (TSO, £37.50, June, ISBN 0-11-621554-2)

Carers 2000 (June, available on the National Statistics website at www.statistics.gov.uk/products/p5756.asp)

Smoking related behaviour and attitudes (June, available on the National Statistics website at www.statistics.gov.uk/products/p1638.asp)

All of the above publications from TSO can be ordered on 0870 600 5522 or online at www.tso.co.uk. They can also be downloaded free of charge from the National Statistics website.

Health indicators

England and Wales

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

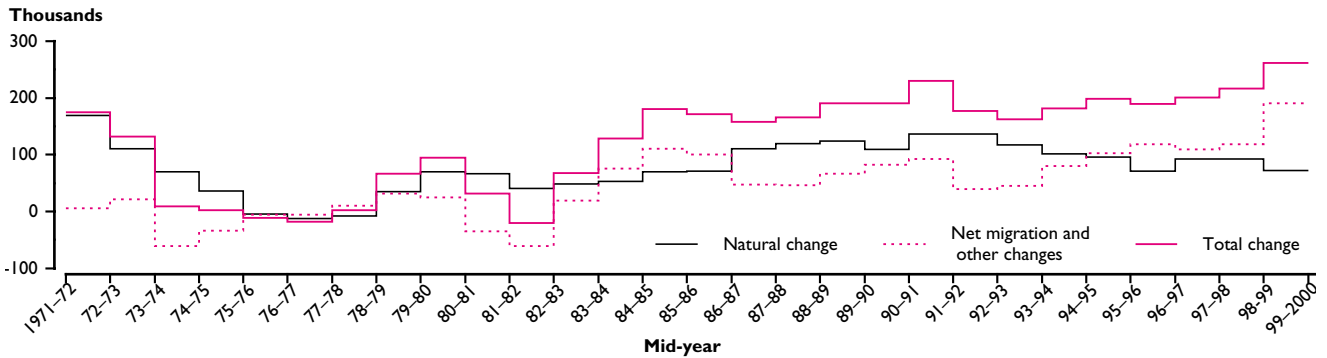
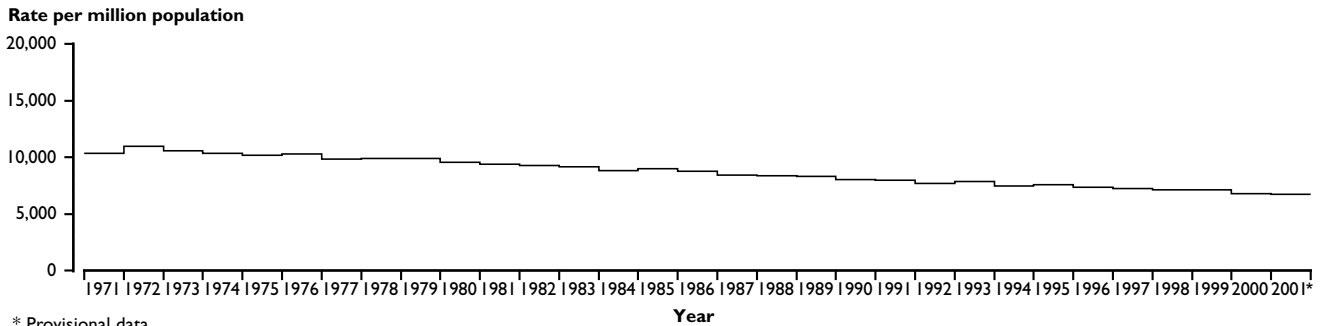
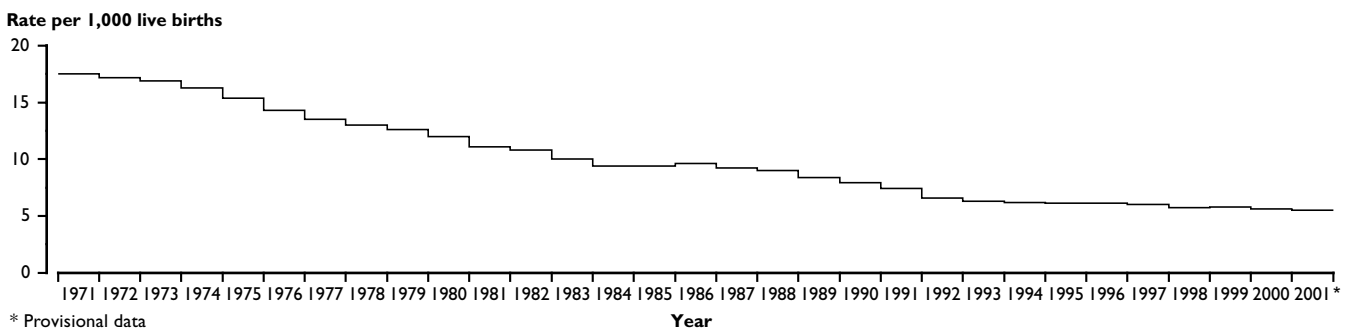


Figure B Age-standardised mortality rate



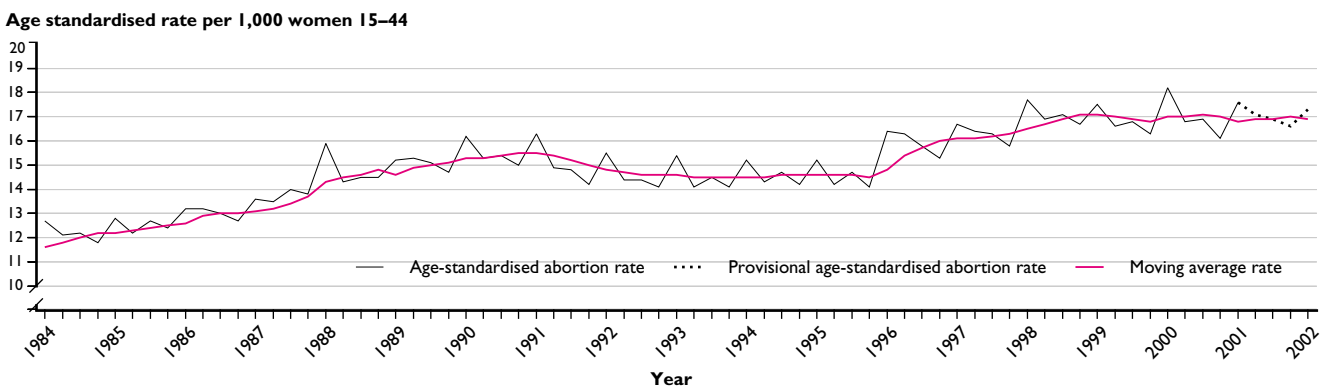
* Provisional data

Figure C Infant mortality (under 1 year)



* Provisional data

Figure D Age-standardised quarterly abortion rates – residents



Inequalities in life expectancy by social class, 1972–1999

Angela Donkin, Peter Goldblatt and Kevin Lynch,
Office for National Statistics

INTRODUCTION

The *Independent Inquiry into Inequalities in Health*, chaired by Sir Donald Acheson,³ highlighted the fact that increases in life expectancy since the 1970s had occurred at different rates across the social classes (Box 1) resulting in a widening of differences between the least and most advantaged group. Following that report, in the NHS Plan, the Government announced its intention to tackle health inequalities.⁴ It has since announced targets for reducing the gap in infant mortality and in life expectancy between areas, as well as in some of the factors associated with health inequalities (smoking, child poverty and teenage pregnancies).

Central to the evidence for widening health inequalities was the calculation of life expectancy by social class based on occupation from the ONS Longitudinal Study (LS).⁵ The method used in these calculations relied predominantly on social class at entry to the study. For most of those now aged thirty and over, this was in 1971. Since the Inquiries' Report, ONS have published figures^{1,2} extending the monitoring of social class difference to 1999. The most recent analysis showed a slight narrowing of the gap between men in Social Class I and V in the 1990s, raising the question of whether this may be partly due to the decreasing relevance to current health of an individual's social class 25 or more years earlier.

Previous findings based on the LS have found an artefactual explanation for some of the widening in inequalities in the period immediately following the recording of occupational class.⁶ This was associated with health related influences in the recording of occupation at the 1971 Census resulting in reduced mortality rates for those in Social Class V. This 'health selection' effect wore off over time, thus resulting in an apparent widening of inequalities.

This paper examines trends in life expectancy by social class, based on the ONS Longitudinal Study (LS) from 1972 to 1999. Figures published previously^{1,2} were based largely on social class at entry to the study from 1971 onwards. By looking at figures based on social class at or after subsequent censuses (in 1981 and 1991), it is confirmed that some of the initial widening in inequalities between Social Classes I and V since 1971 can be attributed to health selection effects. However, average deviation across all social classes, shows a steady widening of the social gradient that is largely unaffected by health selection.

The analyses also suggests that, as an indirect effect of greater longevity, measures of inequality in life expectancy are less reliable when calculated using predominantly 1991 social class than when using 1971 or 1981 social class. This has implications for the use of the new National Statistics Socio-Economic Classification (NS-SEC) for monitoring these inequalities.

The narrowing of differences in male life expectancy between Social Classes I and V in the 1990s was examined. This was due to an above average improvement in the life expectancy of those in Social Class V that began in the early 1990s.

To establish the best method for estimating long-term trends in life expectancy by social class and to explain variations seen, this paper addresses three questions:

- is social class assigned earlier in life as relevant to mortality differences as that based on more recent occupation?
- are trends in life expectancy distorted by health selection effects immediately following the recording of occupation and, if so, what can be done to minimise the impact on trend analysis? and
- when, in the 1990s, did the apparent narrowing of the gap in male life expectancy differences begin?

To achieve this, life expectancy figures are presented based on social class assigned not only at or after 1971, but also at or after 1981 and 1991, and for a number of time periods during follow-up.

This analysis has particular relevance as, from 2001, the Registrar General’s Social Class classification was replaced by the National Statistics Socio-Economic classification (NS-SEC) in official statistics and surveys.⁷ There is limited scope for re-classifying information on occupations that were coded in the 1970s to NS-SEC.

METHODS

Data

The LS is a study of a representative sample of approximately 1 per cent of the population of England and Wales, linking data from censuses from 1971 onwards with birth and death registrations and other life events.⁸ All members of the LS who had entered the study between 1971 and 1999 (through census, birth or as an immigrant) and were traced in the NHS Central Register were eligible for these analyses. Cumulatively approximately 800, 000 people have been included in the study – around 550, 000 at any one time point.

Box one

REGISTRAR GENERAL’S SOCIAL CLASS (BASED ON OCCUPATION)

Class Description	Examples of occupations
Non-manual	
I Professional	Doctors, chartered accountants, professionally qualified engineers
II Managerial and technical/intermediate	Managers, school teachers, journalists
IIIN Skilled non-manual	Clerks, cashiers, retail staff
Manual	
IIIM Skilled manual	Supervisors of manual workers, plumbers, electricians, goods vehicle drivers
IV Partly skilled	Warehousemen, security guards, machine tool operators, care assistants, waiters and waitresses
V Unskilled	Labourers, cleaners and messengers

Assigning social class

To date all life expectancy figures by social class, derived from the LS, were based on categorising people according to their occupation at entry to the study, from 1971 onwards, following Hattersley.^{2,5} They retained their social class at entry throughout the analysis. Thus, in the majority of cases, social class was assigned on the basis of occupation recorded at the 1971 Census.

For this paper new analyses were also carried out, separately assigning social class at or after the 1981 and 1991 Censuses, respectively, rather than at the earliest point at which social class information was available (1971 or subsequently). The method of assigning class to individuals was, in all other respects, the same as that based on 1971. Individuals who entered the study before 1981, but were not found in the 1981 Census were excluded from tabulations showing social class assigned at or after 1981. Figures based on 1991 similarly excluded existing sample members not found in the 1991 Census.

Where possible an individual’s own social class was used. For those with no assigned occupation and for those who had been classified as armed forces, inadequately described, students, retired, permanently sick or housewives an attempt was made to classify them to a social class. If their spouse had a social class this was used. If not, for anyone who had been a child during the study period, their father’s social class was used (or, failing that, their mother’s). For new births the social class of the father, or failing that the mother, was assigned at either at the first census in which they appeared, or if they died, and no census record was not found, at birth. Immigrants were assigned a social class at census, and were not included in the sample unless they were identified as having a census record. If none of this additional information was available, the individual was included in the analysis as ‘unclassified’.

Calculating life expectancy

Life expectancy at birth for a particular social class and time period is an estimate of the number of years a new born baby would survive, were he or she to experience the average age specific mortality rates of the social class in that time period throughout his or her life. Life expectancy at 65 for a social class is an estimate of the number of additional years a person who had reached the age of 65 would survive, were he or she to experience the average age specific mortality rates of the social class in that time period for the remainder of his or her life.

In this analysis, as in previous analyses based on the LS, life expectancy was calculated using abridged life tables for men and women separately.^{9,10} The probability of dying (qx) was calculated using Reed-Merrell tables¹¹ to transform mx to qx. The variance and standard errors of the expectation of life were calculated using Chiang’s method.¹² Expectations of life (e^ox) were produced for each age group in the life table up to age 90 where they were truncated unless otherwise indicated.

Comparing life expectancies

Previous life expectancy publications have presented life expectancies for all social class groups. However discussion has often focused only on the difference between Social Class I and Social Class V, as a measure of inequality. Figure 1 illustrates, for males and females the size of the social class groups. On average just 5 per cent of males and 3 per cent of females fall into Social Class I and around 6 per cent fall into Social Class V. Thus concentrating only on this range makes no use of data for 90 per cent of those allocated to a social class. A further limitation of using a range is that the same weight is given to Social Classes I and V, irrespective of the size of the groups.

The gradient of inequality from Social Class I to V can be calculated using a conventional measure of dispersion, such as the average deviation (AD).¹³ This measure is used here. It has recently been used to compare regional and socio-economic life expectancy figures across Europe.¹⁴ The average deviation provides an indication of the average distance of individual social class groups from the mean of all social classes. When calculating the average deviation each class is weighted by the size of the population used in the calculation of life expectancy for that social class. The mean for all social classes is the weighted average of all life expectancies. The unclassified group were excluded from the analyses presented here.

Life expectancies are also presented for non-manual (I, II and IIIN) and manual (IIIM, IV and V) social classes. For all life expectancies confidence intervals are presented to assist in identifying statistically significant differences between two life expectancy figures.

Standardised Mortality Ratios

Standardised Mortality Ratios (SMRs) are provided for males of all ages, and those aged between 20 and 64. These are included to help explain trends in life expectancy and focus on mortality variations at working ages. The SMR indicates by how much death rates in a social

Table 1 Life expectancy at birth and at age 65 by gender and social class, 1972–97

England and Wales

Social Class	Year											
	1972–76		1977–81		1982–86		1987–91		1992–96		1997–99	
	Life expectancy	95% Confidence interval	Life expectancy	95% Confidence interval	Life expectancy	95% Confidence interval	Life expectancy	95% Confidence interval	Life expectancy	95% Confidence interval	Life expectancy	95% Confidence interval
Males												
At birth												
I	72.0	± 1.4	74.7	± 1.4	75.1	± 1.2	76.7	± 1.1	77.7	± 1.0	78.5	± 1.3
II	71.7	± 0.3	72.4	± 0.6	73.8	± 0.6	74.4	± 0.6	75.8	± 0.5	77.5	± 0.7
IIIN	69.5	± 0.5	70.8	± 0.8	72.2	± 0.8	73.5	± 0.8	75.0	± 0.8	76.2	± 1.0
IIIM	69.8	± 0.3	70.0	± 0.5	71.4	± 0.4	72.4	± 0.4	73.5	± 0.4	74.7	± 0.5
IV	68.4	± 0.4	68.8	± 0.7	70.6	± 0.6	70.4	± 0.6	72.6	± 0.6	72.7	± 0.8
V	66.5	± 0.9	67.0	± 1.1	67.7	± 1.1	67.9	± 1.0	68.2	± 1.2	71.1	± 1.3
Non manual	71.0	± 0.5	72.5	± 0.5	73.5	± 0.4	74.5	± 0.4	75.8	± 0.4	77.3	± 0.5
Manual	68.9	± 0.4	69.9	± 0.4	70.7	± 0.3	71.3	± 0.3	72.6	± 0.3	73.8	± 0.4
All males	69.2	± 0.2	70.0	± 0.3	71.4	± 0.2	72.3	± 0.2	73.9	± 0.2	75.0	± 0.3
At age 65												
I	14.2	± 1.3	15.5	± 1.2	15.4	± 1.0	15.8	± 1.0	16.8	± 0.8	17.5	± 1.0
II	13.3	± 0.1	14.2	± 0.5	14.4	± 0.4	14.8	± 0.4	15.5	± 0.4	16.8	± 0.5
IIIN	12.6	± 0.1	13.3	± 0.6	13.6	± 0.5	14.1	± 0.5	15.1	± 0.6	16.3	± 0.7
IIIM	12.2	± 0.1	12.6	± 0.3	13.0	± 0.3	13.4	± 0.3	14.2	± 0.3	15.1	± 0.4
IV	12.3	± 0.1	12.1	± 0.4	12.6	± 0.4	12.7	± 0.4	13.8	± 0.4	13.8	± 0.6
V	11.6	± 0.1	11.9	± 0.5	11.7	± 0.6	11.8	± 0.6	12.6	± 0.7	13.4	± 0.9
Non manual	13.1	± 0.3	14.0	± 0.3	14.2	± 0.3	14.7	± 0.3	15.6	± 0.3	16.8	± 0.4
Manual	12.3	± 0.2	12.3	± 0.2	12.7	± 0.2	13.0	± 0.2	13.9	± 0.2	14.6	± 0.3
All males	12.3	± 0.04	12.7	± 0.2	13.1	± 0.2	13.5	± 0.2	14.6	± 0.2	15.4	± 0.2
Females												
At birth												
I	79.2	± 2.4	79.9	± 2.2	80.4	± 1.5	80.9	± 1.2	83.4	± 1.2	82.8	± 1.5
II	77.0	± 0.7	78.1	± 0.6	78.5	± 0.6	80.0	± 0.6	81.1	± 0.5	81.5	± 0.7
IIIN	78.0	± 0.9	78.1	± 0.7	78.6	± 0.6	79.4	± 0.6	80.4	± 0.6	81.2	± 0.7
IIIM	75.1	± 0.8	76.1	± 0.6	77.1	± 0.5	77.6	± 0.5	78.8	± 0.5	79.2	± 0.6
IV	75.0	± 0.8	76.1	± 0.7	77.3	± 0.6	77.0	± 0.6	77.7	± 0.6	78.5	± 0.7
V	73.9	± 1.4	74.9	± 1.2	75.3	± 1.1	76.2	± 1.0	77.0	± 1.0	77.1	± 1.3
Non manual	77.5	± 0.5	78.3	± 0.5	78.7	± 0.4	80.5	± 0.4	80.9	± 0.4	81.4	± 0.5
Manual	74.9	± 0.5	75.9	± 0.4	76.9	± 0.4	77.2	± 0.3	78.0	± 0.3	78.6	± 0.4
All females	75.1	± 0.3	76.3	± 0.3	77.1	± 0.2	77.9	± 0.2	79.3	± 0.2	79.7	± 0.3
At age 65												
I	19.3	± 2.4	19.9	± 2.2	18.5	± 1.4	18.7	± 1.0	20.8	± 1.0	20.8	± 1.2
II	17.1	± 0.6	17.7	± 0.5	18.0	± 0.5	18.7	± 0.4	19.5	± 0.4	19.9	± 0.5
IIIN	17.7	± 0.8	17.6	± 0.5	18.0	± 0.5	18.3	± 0.4	18.9	± 0.4	19.6	± 0.5
IIIM	16.3	± 0.7	16.9	± 0.5	16.8	± 0.4	16.8	± 0.4	17.9	± 0.4	17.9	± 0.5
IV	16.8	± 0.6	16.7	± 0.5	17.4	± 0.4	16.9	± 0.4	17.1	± 0.4	17.4	± 0.5
V	16.4	± 0.9	16.3	± 0.8	16.1	± 0.6	16.0	± 0.6	16.4	± 0.6	16.3	± 0.8
Non manual	17.4	± 0.4	17.8	± 0.4	18.0	± 0.3	19.8	± 0.4	19.2	± 0.3	19.8	± 0.3
Manual	16.5	± 0.4	16.7	± 0.3	16.9	± 0.3	16.7	± 0.2	17.3	± 0.2	17.4	± 0.3
All females	16.2	± 0.2	16.7	± 0.2	16.9	± 0.2	17.2	± 0.2	18.0	± 0.2	18.4	± 0.2

class group differ from those for the population as a whole. A value greater than 100 indicates that they are likely to die sooner, a value less than 100 indicates that they likely to live longer.

RESULTS

Trends in life expectancy at birth and at age 65 by social class were published on the National Statistics website for the period 1972 to 1999.¹ These show a consistent gradient of life expectancy, with Social Class I living the longest and Social Class V the least (Table 1). There was a widening gap between Social Classes I and V in the period 1972–76 to 1992–96. However in 1997/99 the gap narrowed for men.

Alternative methods of assigning social class

To investigate the degree to which the method of assigning social class at or after 1971, and the long subsequent duration of follow-up, may have contributed in some way to observed trends in life expectancy by social class, Table 2 presents a comparison of results based on assigning social class at or after the 1971, 1981 and 1991 Censuses, respectively.

A rise in the numbers of deaths not classified to a social class

Figure 1 indicates that the proportion of person years that were not classified to a social class increased the later social class was assigned (up from 6 to 11 per cent for males between 1972–76 and 1992–96 and from 15 to 19 per cent for females). As shown in Table 2, the proportion of deaths not classified to a social class increased even more rapidly the later social class was assigned. Among females, 54 per cent of deaths in 1972–76 were not allocated a social class when this was assigned at or after 1971, rising to 79 per cent in 1992–96 when social class was attached at or after 1991. Among males, 14 per cent of deaths were not allocated to a social class in 1972–76 based on 1971 information, rising to 55 in 1992–96 when based on 1991 information. These increases in those not allocated a social class at census are largely due to an ageing population. Occupation is not recorded at census above age 75. For

deaths the impact of this is heightened over time due to the increase in age at death. The average age at death for women in 1971 was 72.5. This increased to 75 in 1981, to 77.1 in 1991 and by 2000 had reached 78.7, with the most common age at death being 86. The average age at death for males has also increased, although at present it is only 72.5 years. The problem in assigning social class from occupation is, therefore, significantly worse for females. In addition, the 1991 Census question on occupation did not require an answer for someone who had not worked in the previous ten years. This will have further reduced the number for whom social class information was available, particularly at older ages.

In contrast to the increase in unallocated death the later social class is assigned, the number unallocated decreases with length of follow up time. For example, while in 1972–76, 54 per cent of female deaths were unclassified, by 1992–96, just 17 per cent of female deaths were unclassified on the basis of social class assigned at or after 1971. For males 14 per cent of deaths were unclassified in 1972–76, compared to just 5 per cent in 1992–96. This mainly reflects the fact that most of those still alive after lengthy follow-up would have had their social class assigned at working ages or in childhood. It could also reflect health selection effects wearing off (see below).

The combined effect of both of the above can be seen by comparing life expectancy figures for 1997–99. Using social class assigned at or after 1971, 83 per cent of deaths to females in 1997–99 were allocated to a social class. However using social class assigned at 1991, just 28 per cent of deaths in the same time period were allocated a social class. For this reason confidence intervals around life expectancy figures for females based predominantly on 1991 social class are very wide. For males, confidence intervals are wider than when social class was assigned at an earlier time point, although not as wide as for females. For both males and females, the life expectancy calculations for some of the social classes had to be truncated at age 85 due to the lack of deaths assigned to a social class in the 90 and over age group.



Table 2 Life expectancy at birth by social class assigned at or after 1971, 1981 and 1991 Censuses

England and Wales

	Year											
	1972-76	1977-81	1982-86	1987-91	1992-96	1997-99						
Males												
Social class assigned at or after 1971: Life expectancy at birth and (± 95% confidence interval)												
I	72.0	± 1.4	74.7	± 1.4	75.1	± 1.2	76.7	± 1.1	77.7	± 1.0	78.5	± 1.3
V	66.5	± 0.9	67.0	± 1.1	67.7	± 1.1	67.9	± 1.0	68.2	± 1.2	71.1	± 1.3
Unclassified	58.7	± 1.6	63.9	± 1.3	66.3	± 1.3	67.9	± 1.2	71.3	± 1.1	73.7	± 1.1
All males	69.2	± 0.2	70.0	± 0.3	71.4	± 0.2	72.3	± 0.2	73.9	± 0.2	75.0	± 0.3
Summary statistics												
Percentage of deaths unclassified	13.9		10.6		8.2		6.4		6.6		5.3	
Range I-V, years	5.5		7.7		7.4		8.8		9.5		7.4	
Average deviation	1.0		1.3		1.3		1.5		1.5		1.7	
Social class assigned at or after 1981: Life expectancy at birth and (± 95% confidence interval)												
I					76.0	± 1.3	78.0	± 1.1	77.6	± 1.1	78.4	± 1.4
V					69.2	± 1.1	69.5	± 1.1	69.8	± 1.2	71.3	± 1.4
Unclassified					65.5	± 1.2	68.0	± 1.2	69.9	± 1.1	70.8	± 1.5
All males					71.8	± 0.3	72.9	± 0.3	74.1	± 0.3	75.2	± 0.3
Summary statistics												
Percentage of deaths unclassified					17.7		13.2		11.7		9.2	
Range I-V years					6.8		8.5		7.8		7.1	
Average deviation					1.3		1.3		1.5		1.6	
Social class assigned at or after 1991: Life expectancy at birth and (± 95% confidence interval)												
I									79.6	± 1.4	78.7	± 1.9
V									72.1	± 1.5	72.7	± 1.6
Unclassified									68.2	± 1.0	69.2	± 1.3
All males									74.2	± 0.3	75.5	± 0.3
Summary statistics												
Percentage of deaths unclassified									55.3		44.4	
Range I-V years									7.5		6.0	
Average deviation									2.0		1.6	
Females												
Social class assigned at or after 1971: Life expectancy at birth and (± 95% confidence interval)												
I	79.2	± 2.4	79.9	± 2.2	80.4	± 1.5	80.9	± 1.2	83.4	± 1.2	82.8	± 1.5
V	73.9	± 1.4	74.9	± 1.2	75.3	± 1.1	76.2	± 1.0	77.0	± 1.0	77.1	± 1.3
Unclassified	70.3	± 1.5	72.4	± 1.2	73.4	± 0.9	74.2	± 0.9	76.5	± 0.8	78.2	± 1.0
All females	75.1	± 0.3	76.3	± 0.3	77.1	± 0.2	77.9	± 0.2	79.3	± 0.2	79.7	± 0.3
Summary statistics												
Percentage of deaths unclassified	54		45		38		29		22		17	
Range I-V years	5.3		5.0		5.1		4.7		6.4		5.7	
Average deviation	1.4		1.2		0.9		1.3		1.4		1.5	
Social class assigned at or after 1981: Life expectancy at birth and (± 95% confidence interval)												
I					81.9	± 1.9	80.6	± 1.6	82.2	± 1.5	83.4	± 1.8
V					76.6	± 1.2	77.0	± 1.1	78.1	± 1.0	78.0	± 1.3
Unclassified					74.0	± 0.9	75.3	± 0.8	76.3	± 0.8	77.2	± 1.0
All females					77.5	± 0.2	78.5	± 0.2	79.4	± 0.2	79.9	± 0.3
Summary statistics												
Percentage of deaths unclassified					59		50		43		35	
Range I-V years					5.3		3.6		4.1		5.4	
Average deviation					1.0		1.0		1.3		1.5	
Social class assigned at or after 1991: Life expectancy at birth and (± 95% confidence interval)												
I									81.5	± 2.9	86.0	± 2.8
V									79.0	± 3.4	80.3	± 1.4
Unclassified									75.8	± 0.8	77.0	± 1.0
All females									79.5	± 0.2	80.1	± 0.3
Summary statistics												
Percentage of deaths unclassified									79		72	
Range I-V years									2.5		5.7	
Average deviation									1.6		1.0	

Notes:

The data in italics are based on life expectancy tables truncated at age 85 due to small numbers.

L.E. Life expectancy at birth, years

Table 3 Standardised Mortality Ratios, males, Social Classes I, V and unclassified, 1972–99

	Year											
	1972–76		1977–81		1982–86		1987–91		1992–96		1997–99	
Social class assigned at or after 1971												
All ages: SMR (95% confidence interval)												
I	79	72-87	70	63-77	72	66-79	71	65-78	72	66-78	75	67-83
V	114	109-120	116	111-122	123	117-129	130	123-137	136	128-144	132	122-143
Unclassified	128	123-134	131	124-137	126	119-133	124	117-132	112	105-120	100	91-110
Summary statistics												
Percentage of deaths unclassified	13.9		10.6		8.2		6.4		6.6		5.3	
Age 20–64: SMR (95% confidence interval)												
I	82	70-95	64	54-76	67	56-78	61	51-73	61	51-73	61	48-78
V	121	110-133	130	117-144	141	127-157	160	143-178	171	152-191	157	133-184
Unclassified	276	251-302	185	161-210	163	142-187	155	134-178	135	117-155	139	116-165
Summary statistics												
Percentage of deaths unclassified	9.6		5.3		5.2		5.6		6.4		7.2	
Social class assigned at or after 1981												
All ages: SMR (95% confidence interval)												
I					69	62-76	67	60-73	74	67-80	74	66-83
V					115	109-122	125	118-132	125	118-133	126	116-137
Unclassified					121	116-125	115	110-120	116	110-122	116	108-125
Summary statistics												
Percentage of deaths unclassified					17.7		13.2		11.7		9.2	
Age 20–64: SMR (95% confidence interval)												
I					61	50-73	59	48-71	68	56-81	74	58-92
V					133	119-149	143	127-162	148	129-169	160	134-191
Unclassified					217	192-243	182	158-208	169	146-194	178	148-214
Summary statistics												
Percentage of deaths unclassified					7.8		6.2		6.8		7.2	
Social class assigned at or after 1991												
All ages: SMR (95% confidence interval)												
I									63	56-71	71	62-81
V									113	104-123	120	108-133
Unclassified									112	110-115	113	109-116
Summary statistics												
Percentage of deaths unclassified									55.3		44.4	
Age 20–64: SMR (95% confidence interval)												
I									68	56-81	73	58-92
V									125	108-144	150	124-179
Unclassified									210	190-232	218	188-250
Summary statistics												
Percentage of deaths unclassified									14.2		12.2	

95% confidence intervals are based on the assumption of Poisson distribution.

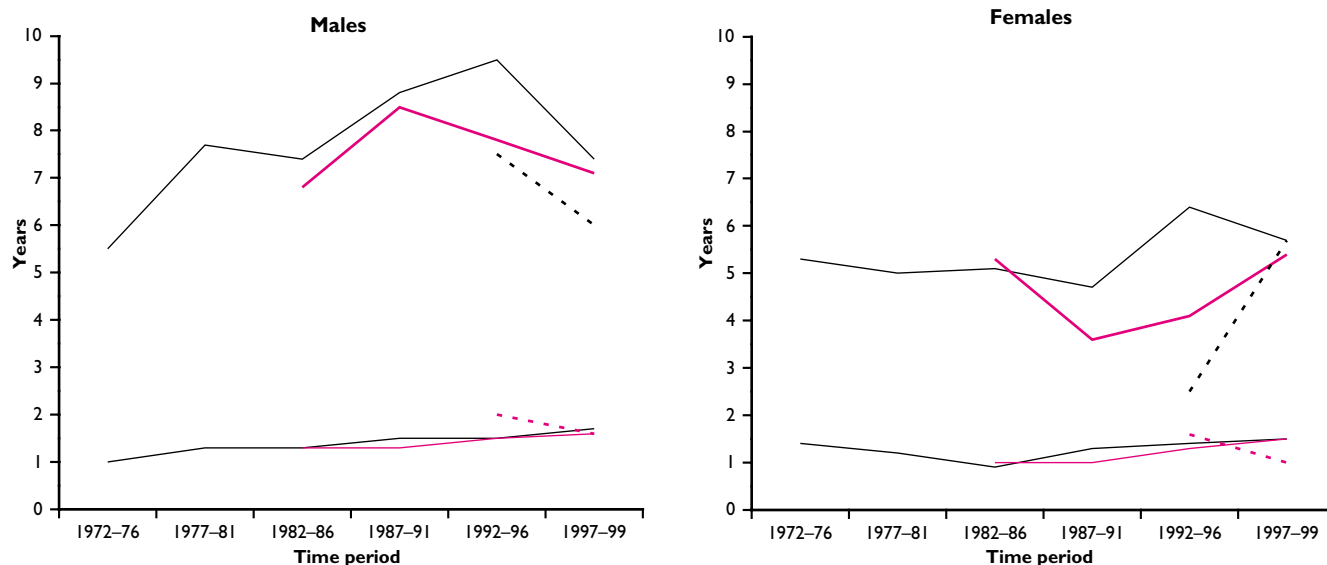
Selection effects

For both men and women, the estimate of life expectancy for the sample as a whole increased the shorter the length of follow-up (Table 2). That is to say the estimates of life expectancy in 1992–76 and 1997–99 were greatest for the sample identified in 1991 and least for the sample identified in 1971. Comparisons in the 1980s indicate a similar relationship between the 1981 and 1971 samples. This reflects our decision to exclude existing study members from tabulations based on 1981 and 1991 if they were not found in these censuses. The group we excluded would, in part, have comprised individuals who, although they had emigrated were not recoded as emigrants at NHSCR. Any deaths abroad to this group are unlikely to have been recorded by NHSCR, resulting in an under-estimation of their death rates.⁹

The extent and direction of the variation in life expectancy by duration of follow-up differed by social class. Life expectancy immediately following the assignment of social class at census appeared to be enhanced, especially for Social Class V. This was accompanied either by a reduction or a very modest increase in the life expectancy of those unclassified. In particular, for males in 1992–96, life expectancy among those assigned to Social Class V at or after 1971 was 68.2 while among those assigned to this class at 1991 it was 72.1. The corresponding figures for the unclassified were 71.3 and 68.2, respectively. In view of the decrease in the numbers of deaths to the unclassified with length of follow up for the 1971, 1981 and 1991 cohorts, these trends may well be due to health selection effects.⁶

Figure 2

Variation in mortality between social classes, 1972–99



Note: Dashed lines are based on at least one life expectancy figure truncated at age 85 and over.

— Range, SC from 1971	— Range, SC from 1981	- - - Range, SC from 1991
— Av. deviation, SC from 1971	— Av. deviation, SC from 1981	- - - Av. deviation, SC from 1991

If present, health selection effects will be most easily identified from standardised mortality ratios for the population of working age (Table 3). Because life expectancy calculations incorporate the age specific mortality rates of study members who are not of working age, the selective effect of current employment on occupational recording is diluted. For social class assigned in 1971 or 1981, those of working age who were unclassified had significantly higher SMRs in the five year period immediately after census, than in the next five years, while the SMRs for those in Social Class V rose. This effect was less evident for SMRs at all ages. It can also be seen from this table that the proportion of deaths at working ages that were unclassified also fell with increased length of follow-up, contributing further to the evidence for the presence of health selection effects.

One consequence of the operation of health selection effects was that the difference in life expectancy between Social Classes I and V was generally narrower immediately after the census at which social class was assigned. This is illustrated in Figure 2. In 1992–96, differences based on 1991 were less than those based on 1971 or 1981 for males and females. A similar pattern held in 1982–86 for males but not females.

Changes in the size and structure of the labour force

One factor contributing to variation in life expectancy according to when social class is attached may be the changes in the size and structure of the labour force over time. It can be argued that grouping individuals according to the Registrar General's classification has become less relevant as the nature of employment has changed. The underlying changes are evident from the distribution of person years in Figure 1. As well as the previously mentioned increase in the unclassified, the proportion of males in Social Classes IIIM and V decreased with an increase in Social Class II. For females, the proportions in Social Classes IIIM and IV decreased with increases in Social Classes II and IIIN. There was little change in the overall proportion in Social Class I (or in Social Class V among females).

Trends

Trends in life expectancy 1972–99

Life expectancies by social class at birth and age 65 for the period 1972 to 1999, as published on the National Statistics website,¹ are shown in Table 1 (with additional figures for manual and non-manual social classes). This table presents life expectancies by social class assigned at entry to the LS, from 1971 onwards. As indicated in the previous section, life expectancy in the years immediately following the census at which social class was assigned were affected by health selection effects. For this reason, the analysis presented in this section focuses mainly on the period from 1977, although figures are presented for the earlier period.

For both men and women there was a social class gradient throughout the period, such that those in Social Class I lived longest and those in Social Class V least. Among women the difference between Social Class I and Social Class V remained relatively constant. The difference in life expectancy at birth was 5 years in 1977–81 and 5.7 years in 1997–99. Among men the difference in life expectancy at birth between Social Class I and Social Class V was 7.7 years in 1977–81. By 1992–96 this difference had increased to 9.5 years but fell back to 7.4 years in 1997–99. This finding is consistent with the SMRs presented in Table 3.

Females in Social Class I consistently had the highest life expectancy at birth and males in Social Class V the lowest. In the years to 1982–86 males in Social Class I had a lower life expectancy than females in Social Class V. However, in the period 1987–91 and beyond the life expectancy of males in Social Class I was greater than that of females in Social Class V.

The comparison between Social Classes I and V over time does not take into account changes in the size of social class groups or the gradient between other social classes. At an aggregate level, the difference in life expectancy between non-manual and manual social classes (Table 1)

widened consistently for males between 1977–81 and 1997–99 (the difference at birth widened from 2.6 to 3.5 years and at age 65 from 1.7 years to 2.2 years). For females there were no consistent trends. Between 1992–96 and 1997–99 the differences at birth between non-manual and manual social classes changed very little. For males there was a small increase, from 3.2 years to 3.5 years (in contrast to the narrowing of the range between Social Classes I and V). For females the differences in 1992–96 and 1997–99 were 2.9 and 2.8 years, respectively.

Among males, whether social class was based on information obtained in 1971, 1981 or 1991, those in the professional social class lived longer than those in the unskilled social class. This result was statistically significant for social class assigned from any of these censuses. For females, those in professional social classes also had a higher life expectancy than those in the unskilled social class. These differences were statistically significant for social class assigned at 1971 and 1981, but not at 1991.

Figure 2 illustrates the change in average deviation across social classes. For life expectancy based on social class at or after the 1971 Census the average deviation in 1977–81 for men was 1.3 years. This increased steadily to reach 1.7 years by 1997–99. For males, basing life expectancy on social class in 1981 or after produced the same average deviation, 1.3, in 1982–86 as assigning social class in 1971. Assigning social class in 1991 or after was associated with an average deviation of 2.0 in 1992–96, considerably greater than the figure of 1.5 using either 1971 or 1981 social class. However by 1997–99, figures for all three start-points were similar (1.7 for 1971-based social class and 1.6 for 1981 and 1991).

For females, when life expectancy was based on social class in 1971 or after, the average deviation narrowed from 1.2 in 1977–81 to 0.9 in 1982–86 and then increased to 1.5 in 1997–99. When based on social class in 1981 or after, the average deviation followed a similar pattern to that based on 1971 social class. Average deviation based on 1991

social class was slightly greater (1.6) in 1992–96 than when based on 1971 (1.4) or 1981 (1.3). However in 1997–99, the average deviation based on 1991 social class had narrowed to 1.0 (compared to the widening to 1.5 based on 1971 and 1981).

In general, the average deviation across social classes provides a more consistent indication of the trend in mortality inequality than the numeric difference between Social Classes I and V. For males there is evidence of a consistent increase in inequality since 1977–81. As noted above, a similarly consistent widening was also seen in the aggregate difference between manual and non-manual social classes.

Trends in mortality rates at working ages

SMRs for males at all ages and at working ages are presented in Table 3, to indicate how the mortality trends underpinning changes in life expectancy varied by age and whether they suggest a different picture to that provided by life expectancy.

Differences in mortality by social class were more marked for men of working ages than at all ages in every time period and whenever social class was assigned (1971, 1981 or 1991). Although the very wide confidence intervals around the SMRs for Social Classes I and V limit the conclusions that can be made about changes over time, it is clear that the relative mortality of Social Class V did worsen until 1996. In particular, all SMRs for this class prior to 1986 were significantly lower than those in 1987/91 and 1992/96. By contrast, SMRs for those in Social Class I were largely constant from 1977/81 onwards.

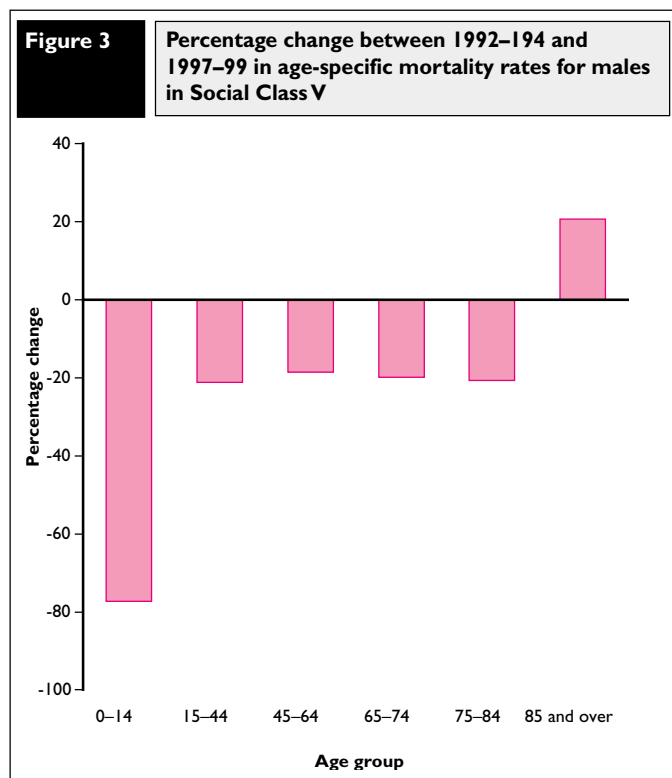
Changes in the range of male life expectancy during the 1990s

Tables 1 and 2 indicate a narrowing of inequalities between men in Social Classes I and V between 1992–96 and 1997–99 when based on social class allocated in 1971 or after (although as noted above there was no narrowing in the average deviation).

Table 4 Life expectancy by social class: three-year rolling averages for males at birth and at age 65, 1992–99

England and Wales

Social Class	Year											
	1992–94		1993–95		1994–96		1995–97		1996–98		1997–99	
	Life expectancy	95% Confidence interval	Life expectancy	95% Confidence interval	Life expectancy	95% Confidence interval	Life expectancy	95% Confidence interval	Life expectancy	95% Confidence interval	Life expectancy	95% Confidence interval
At birth												
I	77.5	1.4	77.6	1.3	77.6	1.4	78.1	1.4	78.7	1.4	78.5	1.3
II	75.6	0.7	75.9	0.7	76.3	0.7	76.3	0.7	76.8	0.7	77.5	0.7
IIIN	74.4	1.0	74.6	1.0	75.0	1.0	75.9	0.9	76.0	0.9	76.2	1.0
IIIM	72.9	0.5	73.2	0.5	73.8	0.5	74.2	0.5	74.6	0.5	74.7	0.5
IV	72.4	0.8	72.4	0.8	72.7	0.9	72.9	0.8	72.8	0.8	72.7	0.8
V	67.3	1.5	68.9	1.4	69.2	1.5	70.3	1.4	70.3	1.4	71.1	1.3
Unclassified	71.1	1.4	71.0	1.4	71.9	1.4	71.9	1.4	72.7	1.5	73.7	0.2
All males	73.3	0.3	73.6	0.3	74.1	0.3	74.4	0.3	74.7	1.2	75.0	0.3
At age 65												
I	16.7	1.2	16.6	1.1	16.9	1.1	17.5	1.0	17.7	1.0	17.5	1.0
II	15.4	0.5	15.6	0.5	16.0	0.5	16.0	0.5	16.6	0.5	16.8	0.5
IIIN	14.9	0.7	15.0	0.7	15.3	0.7	15.7	0.7	16.0	0.7	16.3	0.7
IIIM	14.0	0.4	14.1	0.4	14.4	0.4	14.5	0.4	14.9	0.4	15.1	0.4
IV	13.7	0.5	13.6	0.5	13.9	0.6	13.9	0.6	14.1	0.6	13.8	0.6
V	12.0	0.8	12.3	0.8	13.2	0.9	13.5	0.9	13.3	0.9	13.4	0.9
Unclassified	13.2	1.1	12.9	1.1	13.6	1.2	13.7	1.2	14.5	1.2	15.7	1.3
All males	14.3	0.2	14.4	0.2	14.8	0.2	14.9	0.2	15.3	0.2	15.4	0.2



To provide some insight into the time trends underlying this change in the 1990s, Table 4 presents the figures for males over the decade using three-year rolling averages. This shows that reductions in inequality in life expectancy between Social Classes I and V were due to an improvement in the life expectancy of males in Social Class V, this was particularly marked between 1992–94 and 1993–95. That is to say, the main changes occurred in the middle of 1992–96 and persisted into the period 1997–99. Differences in the trend in life expectancy at age 65 were much less dramatic. This highlights the fact that changes in life expectancy differences were driven by changes in age specific mortality rates at younger ages, as illustrated in Figure 3.

Life expectancy increased by approximately two years in each five-year age band under 65 between 1992–94 and 1997–99. Life expectancy at birth increased by more than three and a half years. Analysis of national infant mortality indicates that babies born within marriage to fathers in Social Class V had lower infant mortality in the 1990s than in the 1970s and 1980s. However these rates have not declined since 1993. In this analysis, if information was not available on the father's social class at birth then mother's social class was used. There is evidence showing that infant mortality to sole registered births has declined since 1993,¹⁵ although this information has not been analysed by social class and gender of child.

DISCUSSION

The results presented here show significant inequalities in both male and female life expectancy when social class was assigned at or after the 1971 and 1981 censuses, and a significant difference in male life expectancy with social class assigned at or after 1991. These broad statements apply both to the difference between Social Classes I and V and to the average deviation across social classes.

The difference between Social Classes I and V initially increased with the length of follow-up from each of the censuses used to assign social class. This, at least in part, reflects the gradual wearing-off of health selection effects operating at the point at which occupation was

recorded at census.⁶ At such points, many of those who are already ill are likely to be out of work due to their health problems. This particularly affects those in less secure employment, such as unskilled manual jobs, who are then recorded as unoccupied at census (eg. those permanently sick or prematurely retired).¹⁶ Health selection has more limited impact on those with more secure employment or whose work is more sedentary and less physically demanding, such as those in professional occupations. By excluding the sick, mortality rates for those assigned to a social class are initially reduced and those of the unclassified increased. The effect is greatest for Social Class V and least for Social Class I. As follow-up progresses, these effects decrease as the sick either die or recover. The proportion in the unclassified group should also decrease, as a result of their much higher death rate. Given these findings when reporting on time trends the recommendation has been made to discount the first five years data after occupation was recorded or to make appropriate adjustments to the figures.^{5,6,16}

There may also be other factors contributing to the narrowing of life expectancy differences associated with re-basing social class to a more recent census. First, social class measured earlier in life may have a more profound long-term effect than that collected at older ages, because health advantage and disadvantage build up over the life course. Social position early in life has been argued by many to cast a long shadow over future attainment and health outcomes. Second, there has been a growing recognition that the Registrar General's Social Class classification became increasingly inappropriate to the measurement of differences in the modern labour force.¹⁷ It was criticised by writers who claimed it had no coherent theoretical base. Its conceptual basis was as a hierarchy in relation to social standing or occupational skill, reflecting a nineteenth century view of social structure. Changes in the labour market, such as the decline in manufacturing and the growth in service-sector employment in the 1980s, finally removed any remaining rationale for any classification based on the differentiation of skills and the manual/non-manual divide. These concerns led to the eventual replacement of all previous occupational socio-economic classifications by NS-SEC in 2001. NS-SEC was constructed^{7,17} to measure employment relations and conditions of occupations, central to the structure of socio-economic positions in modern societies. These help to more clearly explain variations seen in social behaviour and other social phenomena.

Third, hierarchical occupational segregation, however measured, may not have been as marked in the 1990s as it was in 1970s as a result of these shifts in the labour market. Since the results based on assigning social class in 1971 indicate a widening health divide, this explanation would suggest that recent occupationally based classifications provide a less powerful indication of the social determinants of health than in the past.

To see whether the second or third of these explanations has greater relevance, the ideal approach is to compare the differences based on Registrar General's Social Class to those obtained using NS-SEC.¹⁷ However, there are some practical limitations to the inferences that could be drawn from such an approach. NS-SEC is based on a new standard occupational classification, SOC2000 and it is possible to create a version of NS-SEC, known as NS-SEC90, for data coded to the previous classification, SOC90. However this is only an approximation and analysis of dual coded data shows that 10 per cent of death records are not assigned to the same categories in NS-SEC90 and NS-SEC.¹⁸ While it would be possible to create an estimated NS-SEC based on data coded to the 1980 occupational classification, the likelihood of misclassification would increase further. This effectively restricts analysis to comparisons based on 1991 onwards.

Although there were significant differences in male life expectancy if social class was assigned at or after 1991, the confidence intervals were

wider than those based on 1971 or 1981. The reason for this is that an increasing number of deaths could not be allocated to a social class as a result of the combination of the rising age at death and fact that the 1991 Census only collected occupational information for those aged under 75. A similar rule applied in the 2001 Census.

The issues arising from this last point create particular problems in reliably assessing differences in life expectancy for females based on occupation measured at a single point in time. When social class was attached at different censuses, the life expectancy of women varied more markedly than for men. Further work is needed to look at how indicators can be developed across the life course, to provide a more stable basis for comparison of changes in inequalities among women over time. In doing so, consideration needs to be given to the appropriateness of alternatives as other research suggests that indicators based on occupation are less sensitive than those which measure, for example, access to resources and social networks.

From 1991, it is possible to assign social group on the basis of a cohabiting partner's occupation at Census. This has not been done in the analyses presented here to ensure comparability. However doing so would increase the number of those allocated a social status.

The above discussion points to significant challenges in basing ongoing analyses of health inequalities on NS-SEC, particularly in devising a method for reliably rebasing the series presented in this paper, on trends in life expectancy by social class. Further work is therefore required to

Key findings

- Inequalities in male and female life expectancy by social class from the ONS Longitudinal Study have persisted since the study began in the 1970s.
- Inequalities in life expectancy at birth across all social classes, as measured by the Average Deviation, have increased consistently since the study began for both males and females.
- There was a steady increase in the gap between the life expectancy of those in non-manual classes and manual classes in 1971. In 1997–99, life expectancy at birth for men in non-manual classes was 3.5 years longer than for those in manual classes. The comparable difference in 1977–81 was 2.6 years. For women the difference was 2.8 years in 1997–99, up from 2.4 years in 1977–81.
- The difference between the life expectancy at birth of males in Social Classes I and V in 1971 was more volatile over these years. It rose steadily from 7.7 years in 1977–81 to 9.4 years in 1992–96 and was 7.4 years in 1997–99.
- Life expectancy at birth for Social Class V males increased more rapidly than life expectancy for all males during the 1990s reflecting, in particular, a fall in their mortality at younger ages.
- Inequalities in life expectancy persist whether social class is assigned at or after the 1971, 1981 or 1991 Censuses. However, using a more recent census base results in less reliable estimates, particularly for women, as a larger proportion of deaths are not classified to a social class. This has important implications for the introduction of the the National Statistics Socio-Economic Classification for monitoring these health inequalities.

explore the most effective way to monitor socio-economic inequalities in mortality. These will need to take into account the introduction of NS-SEC and the classification difficulties associated with increasing age at death.

A number of alternatives might be considered. For example, refining the comparability of occupational classifications over time – either by developing broad occupational groupings within NS-SEC that have broad equivalents in the earlier classification or developing better methods of mapping earlier occupational classifications to broad NS-SEC groupings. A different approach would be to investigate the robustness over time of non-occupational classifications based on consistently collected census information at the level of the individual (for example, educational attainment), household (for example, housing tenure) or area (for example, area deprivation score).

Consideration will also need to be given to the most appropriate indicator of mortality levels – balancing the increasing instability of indicators (such as life expectancy at birth and working age SMRs) that depend heavily on death rates at younger ages against the poor quality of lifetime socio-economic information at ages at which death rates are higher.

CONCLUSIONS

The evidence presented illustrates that social inequalities in health, as measured using life expectancy by social class in the LS, have persisted since 1977. They are evident whether social class was assigned in 1971 or more recently. Inequality, measured using average deviation has steadily increased for men since 1977. There was a less consistent pattern for women.

As indicated in the discussion, further work is planned to explore the most effective way to monitor inequalities in mortality, taking account of the introduction of NS-SEC and increasing age at death.

REFERENCES

1. Office for National Statistics (2002). Trends in life expectancy by social class 1972-99, <http://www.statistics.gov.uk/statbase/Product.asp?vlnk=8460&More=N>
2. Hattersley L (1999) Trends in life expectancy by social class – an update *Health Statistics Quarterly* 02, 16–24.
3. Acheson D (1998) *Independent inquiry into inequalities in health*, The Stationery Office: London.
4. Department of Health (2000) *NHS Plan*, The Stationery Office: London.
5. Drever F and Whitehead M (eds) (1997) *Health Inequalities*, Series DS no. 15, The Stationery Office: London.
6. Fox A J, Goldblatt P O and Jones D (1985) Social class mortality differentials: artifact, selection or life circumstances. *Journal of Epidemiology and Community Health* 39, 1–8.
7. Office for National Statistics (2002) *The National Statistics Socio-Economic Classification User Manual*, Version No.1, Office for National Statistics: London.
8. Hattersley L and Creeser R (1997) *Longitudinal Study 1971-1991: History, Organisation and Quality of Data*, Series LS no. 7, HMSO: London.
9. Newell C (1994) *Methods and Models in Demography*, John Wiley and Sons: Chichester.
10. Shyrock H S and Siegal J S (1976) *The methods and materials of demography*, Abridged edition, Academic press: New York.
11. Reed L J and Merrell, M (1977) 'A short method for constructing an abridged life table', re-printed in Smith D and Keyfitz N (eds), *Biomathematics Volume 6, Mathematical Demography: Selected paper*, Springer-Verlag: Berlin.

12. Chiang C L (1993) 'The life table and its construction', re-printed in Bogue D J, Arriaga F E and Anderson D L (eds) *Readings in Population Research Methodology*, Volume 2, Mortality Research, United Nations: New York.
13. Healey J F (1996) *Statistics: a tool for social research*, Wadsworth Publishing Company, Belmont: California.
14. Valkonen T (2001) Trends in differential mortality in European countries, in J Vallin, MeslÈ F and Valkonen T (eds), *Trends in mortality and differential mortality*, Council of Europe Publishing: Strasbourg.
15. Macfarlane A and Mugford M (2002) *Birth counts: statistics of pregnancy and childbirth*, The Stationery Office: London.
16. Goldblatt P (1989) Social class mortality 1971–85. *Population Trends* 56, 6–15.
17. Rose D and O'Reilly K (1998) *The ESRC Review of Government Social Classifications*, Economic and Social Research Council/Office for National Statistics: Swindon/London.
18. Donkin A, Lee Y H and Toson B (2002) Implications of changes in the UK social and occupational classifications in 2001 for vital statistics. *Population Trends* 107, 23–29.

Causes of neonatal deaths and stillbirths: a new hierarchical classification in ICD-10

Nirupa Dattani and Steve Rowan,
Office for National Statistics

From January 2001 information on cause of death in England and Wales has been coded to the Tenth Revision of the International Classification of Diseases (ICD-10). Since 1986, a special certificate has been used in England and Wales for certifying stillbirths and neonatal deaths. The format of the certificate makes it impossible to derive a single cause of death.

This article presents a hierarchical classification that will be used for deriving a single cause group for stillbirths and neonates in ICD-10.^{1,2} In developing the classification, fetal and maternal conditions mentioned anywhere on the certificate were taken into account. This was different to the method used in producing the classification in ICD-9. Therefore, to help in the interpretation of time trends, neonatal deaths and stillbirths from 1993 to 1999 have been analysed using the method used in producing the classification in ICD-10.

INTRODUCTION

At the Ninth International Revision Conference on cause of death, it was recommended, where practicable, that statistics in relation to stillbirths and neonatal deaths should be derived from a special certificate (instead of a normal death certificate).³ In 1986, The Office for Population Censuses and Surveys (OPCS), which is now part of Office for National Statistics (ONS) introduced new certificates for registering neonatal deaths (0–27 days after live birth) and stillbirths in England and Wales. This allowed certifiers more flexibility in the completion of the certificate, and the number and ordering of the causes given. However, this made it impossible to either derive a single underlying cause of death (for neonates and stillbirths) or to compare the information available on neonatal deaths with that on postneonatal deaths (ie deaths between 28 days and under one year), as these are certified on the standard death certificate. For this reason, in 1991, OPCS in conjunction with a team of experts in the field developed a hierarchical classification which exploited the range of information that was available on the new certificates to identify a single underlying ‘mechanism’ which led to neonatal death. This classification was derived from that described by Wigglesworth⁴ based on the Ninth Revision of the International Classification of Diseases (ICD-9). A corresponding classification was developed for stillbirths referred to as algorithm A in Table 1. Causes such as immaturity, external (accidents and violence), or an infection which might have been terminal were considered inappropriate for stillbirths. Moreover antepartum deaths with mention of causes associated with asphyxia, anoxia or trauma were separated from those without such mentions, since little was known about their contribution to the stillbirths. This classification was revised in 1995² and all the causes that were previously excluded from the algorithm were now taken into account in producing a single cause for stillbirths. This is referred to as algorithm B in Table 1.

Table 1 Comparison of the two different algorithms in stillbirths in England and Wales

Algorithm A	Algorithm B
Congenital anomalies Antepartum infections	Congenital anomalies Antepartum infections Immaturity related conditions
Asphyxia/anoxia/trauma (intrapartum)	Asphyxia/anoxia/trauma (intrapartum) External conditions
Other specific conditions	Infections Other specific conditions Asphyxia, anoxia or trauma (antepartum)
Remaining antepartum deaths Remaining intrapartum deaths	Remaining antepartum deaths Remaining intrapartum deaths

From January 2001 information on cause of death in England and Wales has been coded to the Tenth Revision of the International Classification of Diseases (ICD-10).^{5,6,7} The Tenth Revision has been introduced on the recommendation of the World Health Organisation (WHO) and superseded the Ninth Revision (ICD-9)^{8,9} which has been in use since 1979. ONS, with experts in the field, has developed a hierarchical classification in ICD-10 for neonatal deaths and stillbirths. In ICD-10, fetal and maternal conditions mentioned under 'Other relevant causes' (ie line e) of the certificate were taken into account in producing the classification in ICD-10. This is different to ICD-9, which did not take into account any of the causes mentioned under 'Other relevant causes' (ie line e) of the certificate. In addition, for stillbirths, the 'immaturity related conditions' category has been removed and 'infections' has been moved to the 'antepartum infections' category. In order to look at the impact of these changes we have analysed data from 1993 to 1999 for deaths coded in ICD-9 both before and after these methodological changes. It was not possible to analyse data prior to 1993 as ONS (formerly OPCS) did not code all the causes mentioned on the stillbirth and neonatal death certificates. Also on the 1st October 1992 the stillbirth definition was altered from a baby born dead after 28 completed weeks gestation or more to one born after 24 completed gestation weeks or more.

To look more closely at changes to ICD-10, the 1999 data have been coded to both ICD-9 and ICD-10 (ie bridge-coded). These data were therefore used to look at the impact of changes in the ONS classification for neonates and stillbirths due to the introduction of ICD-10. This allowed us to quantify the number of deaths assigned to different categories and hence help in the interpretation of time trends.

METHODS

Neonatal and stillbirth classification

As with ICD-9, the classification used for neonates and stillbirths directs any mention of a cause of death to the first appropriate class of mutually exclusive categories. The neonatal hierarchical classification was identified by the categories as follows:

- Before the onset of labour
 1. Congenital anomalies
 2. Antepartum infections
 3. Immaturity related conditions
- In or shortly after labour
 4. Asphyxia, anoxia or trauma
- Postnatal
 5. External conditions
 6. Infections

7. Other specific conditions
9. Sudden infant deaths

- Unclassified
- 0. Other conditions

For each category, ICD-10 codes were grouped together by experts in the field, using the text for each of the conditions mentioned. The classification was tested using the 1999 data, which were coded to ICD-10, and causes were moved to different categories as necessary. Table 2 shows the list of ICD-10 codes for the conditions that constitute each category for neonates.

When the new stillbirth certificate was introduced in 1986 it included for the first time a question on the time of death of the stillbirth, whether before or during labour, or unknown. Since 1995, the stillbirth hierarchical classification has used the following categories:

- Before the onset of labour
 1. Congenital anomalies
 2. Antepartum infections
 3. Immaturity related conditions
- In or shortly before labour
 4. Asphyxia, anoxia or trauma (intrapartum)
 5. External conditions
 6. Infections
 7. Other specific conditions
- Cases of uncertain cause
 - 8a Asphyxia, anoxia or trauma (antepartum)
 - 8b Remaining antepartum deaths
 - 0 Other conditions (intrapartum by exclusion)

In developing the stillbirths classification in ICD-10 it was decided to omit 'immaturity related conditions' as they were considered to be inappropriate for stillbirths and also to move 'infections' to the 'antepartum infections' category. Table 3 shows the list of ICD-10 codes for the conditions that constitute each category for stillbirths.

Box one

NEONATAL AND STILLBIRTHS CAUSE OF DEATH CERTIFICATE

- a. Main diseases or conditions in infant/fetus
- b. Other diseases or conditions in infant/fetus
- c. Main maternal diseases or conditions affecting infant/fetus
- d. Other maternal diseases or conditions affecting infant/fetus
- e. Other relevant causes

In developing the classification in ICD-10, fetal and maternal causes mentioned in line e of the certificate have been taken into account in addition to all fetal and maternal conditions mentioned on lines a,b,c and d (as shown in Box 1), to derive a single cause of the event. In order to look at the impact of the changes in methodology we have analysed data from 1993 to 1999 for deaths coded in ICD-9 using the revised classification for neonates and stillbirths.

Table 2 ONS Classifications of neonatal deaths and associated ICD-10 codes

Group	Description	ICD-10 codes
1	Congenital anomalies	<p>Main or other infant conditions:</p> <p>D550–D589, D610, D640, D66–D682, D691–D694, D70–D721, D740, D750, D760–D761, D800–D899, E700–E859, E880–E889, G120–G129, G600–G609, G700–G719, G800–G809, G900–G909, I340–I379, I420–I425, I440–I459, K740–K746, Q000–Q079, Q200–Q239, Q242–Q249, Q251–Q269, Q271–Q289, Q310–Q313, Q318–Q319, Q320–Q349, Q382–Q459, Q600–Q609, Q610–Q611, Q613–Q619, Q620–Q639, Q641–Q649, Q673–Q676, Q743, Q750–Q759, Q761–Q799, Q800–Q819, Q850–Q939, Q960–Q999</p> <p>Main or other maternal conditions: O350–O352</p>
2	Antepartum infections	<p>Main or other infant conditions:</p> <p>A500–A509, P027, P230–P239, P350–P359, P360–P369, P370–P379</p> <p>Main or other maternal conditions: O353</p>
3	Immaturity related conditions	<p>Main or other infant conditions</p> <p>P010–P011, P018, P070–P073, P220–P229, P250–P258, P270–P279, P280–P289, P520–P524, P578, P590, P77, P964</p> <p>Main or other maternal conditions: O289</p>
4	Asphyxia, anoxia or trauma	<p>Main or other infant conditions:</p> <p>P000, P016–P017, P020–P021, P022, P024–P026, P030–P039, P050–P059, P080–P082, P100–P159, P200–P219, P240–P241, P249, P524–P529, P90, P910–P919</p> <p>Main or other maternal conditions: O100–O16, O363, O365, O430–O439, O440–O469, O48, O620–O689, O690–O699,</p>
5	External conditions	<p>Main or other infant conditions:</p> <p>E40–E441, E46, P242–P248, J690, P800–P809, P810, P830–P831, P833–P839, P920–P929, V01–Y98</p>
6	Infections	<p>Main or other infant conditions:</p> <p>A000–A499, A510–B99, G000–G09, E321, H650–H669, H700–H709, I300–I309, I330–I339, J00–J069, J100–J189, J200–J22, J36, J370–J371, J47, J850–J869, K350–K359, K610–K614, K650–K659, N111, N12, N136, N300, N390, P38, P390–P399</p>
7	Other Specific conditions	<p>Main or other infant conditions:</p> <p>C000–C97, D100–D489, D600–D609, D684, E000–E320, E322–E349, I270, I514, J849, P002, P005–P006, P023, P028–P029, P293, P500–P519, P530–P549, P550–P570, P579, P580–P589, P591–P599, P60–P611, P613–P619, P700–P749, P760–P769, P780–P789, P810–P819, P832, P93, P961–P962</p> <p>Main or other maternal conditions: C000–C97, D100–D369, D370–D489, D600–D609, D684, E000–E320, E322–E349, I130–I139, I470–I499, I514, I710–I719, J450–J459, K529, O240–O249</p>
9	Sudden infant deaths	<p>Main or other infant conditions:</p> <p>R95–R98</p>
0	Other conditions	All other codes

Table 3 ONS Classifications of stillbirths and associated ICD-10 codes

Group	Description	ICD-10 codes
1	Congenital anomalies	<p>Main or other infant conditions:</p> <p>D550–D589, D610, D640, D66–D682, D691–D694, D70–D721, D740, D750, D760–D761, D800–D899, E700–E859, E880–E889, G120–G129, G600–G609, G700–G719, G800–G809, G900–G909, I340–I379, I420–I425, I440–I459, K740–K746, Q000–Q079, Q200–Q239, Q242–Q249, Q251–Q269, Q271–Q289, Q310–Q313, Q318–Q319, Q320–Q349, Q382–Q459, Q600–Q609, Q610–Q611, Q613–Q619, Q620–Q639, Q641–Q649, Q673–Q676, Q743, Q750–Q759, Q761–Q799, Q800–Q819, Q850–Q939, Q960–Q999</p> <p>Main or other maternal conditions: O350–O352</p>
2	Antepartum infections	<p>Main or other infant conditions:</p> <p>A000–B99, G000–G09, E321, H650–H669, H700–H709, I300–I309, I330–I339, J00–J069, J100–J189, J200–J22, J36, J370–J371, J47, J850–J869, K350–K359, K610–K614, K650–K659, N111, N12, N136, N300, N390, P027, P230–P239, P350–P379, P38, P390–P399</p> <p>Main or other maternal conditions: O353</p>
4 and 8a	Asphyxia, anoxia or trauma (intrapartum and antepartum)	<p>Main or other infant conditions:</p> <p>P000, P016–P017, P020–P021, P022, P024–P026, P030–P039, P050–P059, P080–P082, P100–P159, P200–P219, P240–P241, P249, P524–P529, P90, P910–P919</p> <p>Main or other maternal conditions: O100–O16, O363, O365, O430–O439, O440–O469, O48, O620–O689, O690–O699</p>
5	External conditions	<p>Main or other infant conditions:</p> <p>E40–E441, E46, P242–P248, J690, P800–P809, P810, P830–P831, P833–P839, P920–P929, V01–Y98</p>
7	Other specific conditions	<p>Main or other infant conditions:</p> <p>C000–C97, D100–D489, D600–D609, D684, E000–E320, E322–E349, I270, I514, J849, P002, P005–P006, P023, P028–P029, P293, P500–P519, P530–P549, P550–P570, P579, P580–P589, P591–P599, P60–P611, P613–P619, P700–P749, P760–P769, P780–P789, P810–P819, P832, P93, P961–P962</p> <p>Main or other maternal conditions: C000–C97, D100–D369, D370–D489, D600–D609, D684, E000–E320, E322–E349, E349, I130–I139, I470–I499, I514, I710–I719, J450–J459, K529, O240–O249</p>
0 and 8b	Other conditions (intrapartum and antepartum)	All other codes

Bridge-coding

All deaths that were registered in 1999 had already been coded to ICD-9 to produce statistics published in *Childhood, infant and perinatal mortality statistics*, Series DH3 no 32. The text for each of the conditions mentioned was independently coded to ICD-10 using a modified version of the ONS software.

The data were then used to look at the impact of the change in classification from ICD-9 to ICD-10 using the new methodology. This allowed us to quantify the number of deaths assigned to different categories and hence help in the interpretation of time trends.

RESULTS

Neonates

Table 4 shows neonatal deaths between 1993 and 1999 by ONS classification applying old and new methodology to ICD-9 codes. Using the ONS classification as in ICD-9, half of all neonatal deaths were due to 'immaturity related conditions'. The second most common cause of death was 'congenital anomalies' and this accounted for 26 per cent of all neonatal deaths. This was followed by 'asphyxia, anoxia or trauma', which accounted for 13 per cent of all neonatal deaths.

Table 4 Neonatal deaths by ONS classification applying old and new methodology to ICD-9 codes, 1993-99

England and Wales		
ONS cause group	Old methodology 1993-99	New methodology 1993-99
Numbers		
Congenital anomalies	4,805	4,929
Antepartum infections	117	124
Immaturity related conditions	9,051	10,458
Asphyxia, anoxia or trauma	2,290	1,627
External conditions	68	81
Infections	745	361
Other specific conditions	230	131
Sudden infant deaths	278	273
Other conditions	684	284
All causes	18,268	18,268
Livebirths	4,536,684	4,536,684
Rate (per 1,000 live births)		
Congenital anomalies	1.1	1.1
Antepartum infections	0.0	0.0
Immaturity related conditions	2.0	2.3
Asphyxia, anoxia or trauma	0.5	0.4
External conditions	0.0	0.0
Infections	0.2	0.1
Other specific conditions	0.1	0.0
Sudden infant deaths	0.1	0.1
Other conditions	0.2	0.1
All causes	4.0	4.0
Percentage		
Congenital anomalies	26	27
Antepartum infections	1	1
Immaturity related conditions	50	57
Asphyxia, anoxia or trauma	13	9
External conditions	0	0
Infections	4	2
Other specific conditions	1	1
Sudden infant deaths	2	1
Other conditions	4	2
All causes	100	100

When fetal and maternal causes in ICD-9 mentioned on line e of the certificate were taken into account, there were very small changes (1-2 per cent) in the number of deaths in most of the categories except deaths attributed to 'immaturity related conditions' increased by 7 per cent and deaths attributed to 'asphyxia, anoxia or trauma' decreased by 4 per cent.

Table 5 shows neonatal deaths in 1999 bridge-coded to ICD-9 and ICD-10 by ONS classification. On moving from ICD-9 to ICD-10 there were very small changes (1-2 per cent) in the number of deaths in the categories of 'congenital anomalies', 'antepartum infections', and 'sudden infant deaths' but no significant changes in death rates.

Stillbirths

Table 6 shows stillbirths between 1993 and 1999 by ONS revised classification in ICD-9 (ie algorithm B), and by revised methodology. Using the ONS revised classification in ICD-9, 46 per cent of all stillbirths were due to 'remaining antepartum deaths'. Thirty per cent were due to 'asphyxia, anoxia or trauma (antepartum)' and 10 per cent were due to 'congenital anomalies'.

When maternal and fetal conditions mentioned on line e of the certificate were taken into account, the proportion of deaths attributed to 'asphyxia, anoxia or trauma (antepartum)' increased from 30 to 32

Table 5 Neonatal deaths (bridge-coded) using new methodology by ONS classification in ICD-9 and ICD-10, 1999

England and Wales		
ONS cause group	1999 ICD-9	1999 ICD-10
Numbers		
Congenital anomalies	630	604
Antepartum infections	16	65
Immaturity related conditions	1,407	1,407
Asphyxia, anoxia or trauma	220	218
External conditions	15	15
Infections	56	40
Other specific conditions	16	16
Sudden infant deaths	35	39
Other conditions	44	35
All causes	2,439	2,439
Livebirths	621,872	621,872
Rate (per 1,000 live births)		
Congenital anomalies	1.0	1.0
Antepartum infections	0.0	0.1
Immaturity related conditions	2.3	2.3
Asphyxia, anoxia or trauma	0.4	0.4
External conditions	0.0	0.0
Infections	0.1	0.1
Other specific conditions	0.0	0.0
Sudden infant deaths	0.1	0.1
Other conditions	0.1	0.1
All causes	3.9	3.9
Percentage		
Congenital anomalies	26	25
Antepartum infections	1	3
Immaturity related conditions	58	58
Asphyxia, anoxia or trauma	9	9
External conditions	1	1
Infections	2	2
Other specific conditions	1	1
Sudden infant deaths	1	2
Other conditions	2	1
All causes	100	100

Table 6 Stillbirths by ONS classification applying old and new methodology to ICD-9 codes, 1993-99

England and Wales

ONS cause group	Changes made to old methodology with:			New methodology 1993-99
	Old methodology 1993-99	Immaturity removed and infections moved to antepartum infections 1993-99	Inclusion of causes on line e 1993-99	
Numbers				
Congenital anomalies	2,487	2,487	2,534	2,534
Antepartum infections	84	213	85	229
Immaturity related conditions	829	–	890	–
Asphyxia, anoxia or trauma (intrapartum)	1,014	1,152	1,037	1,183
External conditions	4	4	17	18
Infections	106	–	115	–
Other specific conditions	835	855	858	881
Asphyxia, anoxia or trauma (antepartum)	7,606	7,755	7,902	8,078
Remaining antepartum deaths	11,551	11,853	11,118	11,434
Other conditions	463	660	423	622
All causes	24,979	24,979	24,979	24,979
Total births	4,561,663	4,561,663	4,561,663	4,561,663
Rate (per 1,000 total births)				
Congenital anomalies	0.5	0.5	0.6	0.6
Antepartum infections	0.0	0.0	0.0	0.1
Immaturity related conditions	0.2	–	0.2	–
Asphyxia, anoxia or trauma (intrapartum)	0.2	0.3	0.2	0.3
External conditions	0.0	0.0	0.0	0.0
Infections	0.0	–	0.0	–
Other specific conditions	0.2	0.2	0.2	0.2
Asphyxia, anoxia or trauma (antepartum)	1.7	1.7	1.7	1.8
Remaining antepartum deaths	2.5	2.6	2.4	2.5
Other conditions	0.1	0.1	0.1	0.1
All causes	5.5	5.5	5.5	5.5
Percentage				
Congenital anomalies	10	10	10	10
Antepartum infections	0	1	0	1
Immaturity related conditions	3	–	4	–
Asphyxia, anoxia or trauma (intrapartum)	4	5	4	5
External conditions	0	0	0	0
Infections	0	–	0	–
Other specific conditions	3	3	3	4
Asphyxia, anoxia or trauma (antepartum)	30	31	32	32
Remaining antepartum deaths	46	47	45	46
Other conditions	2	3	2	2
All causes	100	100	100	100

per cent. Conversely, the proportion of 'remaining antepartum deaths' decreased from 46 to 45 per cent.

By removing 'immaturity related conditions' and moving 'infections' to the 'antepartum infections' category; the proportion of deaths attributed to 'antepartum infections', 'asphyxia, anoxia or trauma' (intrapartum and antepartum), 'remaining antepartum deaths' and 'other conditions' all increased by 1 per cent compared with the original method.

By combining the two methodological changes introduced to the classification, deaths attributed to 'antepartum infections', 'other specific conditions' and 'asphyxia, anoxia or trauma (intrapartum)' all rose by 1 per cent. Deaths attributed to 'asphyxia, anoxia or trauma (antepartum)' rose by 2 per cent. Other proportions remained constant between methodologies.

Table 7 shows stillbirths by ONS classification in ICD-9 and ICD-10. On moving from ICD-9 to ICD-10, the proportion of 'remaining antepartum deaths' fell from 49 to 44 per cent. Deaths attributed to 'asphyxia, anoxia or trauma (antepartum)' rose from 29 to 31 per cent and deaths attributed to 'other specific conditions' rose from 3 to 7 per cent. Other proportions remained constant between the two classifications.

DISCUSSION

On the stillbirths and neonatal death certificates, line e is provided for the reporting of any other circumstances which the certifier considers to have a bearing on the death but which cannot be described as a disease or condition of the infant or the mother. An example of this might be delivery in the absence of an attendant. Since 1993 ONS has been coding mention of 8 main fetal, maternal and 'Other' conditions for stillbirths and neonatal deaths. Analysis of these data showed there were fetal and maternal conditions also stated on line e of the certificate. Therefore in developing the hierarchical classification in ICD-10, conditions in line e of the certificate were taken into account.

In using the ONS classification as in ICD-9 and by taking into consideration fetal and maternal conditions mentioned on line e of the certificate; the number of neonatal deaths between 1993 to 1999 in England and Wales attributed to 'immaturity related conditions' increased by 7 per cent to 57 per cent. Neonatal deaths attributed to 'congenital anomalies' decreased by 1 per cent to 25 per cent and deaths attributed to 'asphyxia, anoxia or trauma' decreased by 4 per cent to 9 per cent. On moving from ICD-9 to ICD-10 classification for neonates, there were no significant changes in death rates for any of the categories.

Table 7 Stillbirths (bridge-coded) using new methodology by ONS classification in ICD-9 and ICD-10, 1999

England and Wales		
ONS cause group	1999 ICD-9	1999 ICD-10
Numbers		
Congenital anomalies	391	400
Antepartum infections	30	25
Asphyxia, anoxia or trauma (intrapartum)	110	112
External conditions	1	2
Other specific conditions	104	215
Asphyxia, anoxia or trauma (antepartum)	960	1,033
Remaining antepartum deaths	1,631	1,443
Other conditions	78	75
All causes	3,305	3,305
Total births	625,177	625,177
Rate (per 1,000 total births)		
Congenital anomalies	0.6	0.6
Antepartum infections	0.0	0.0
Asphyxia, anoxia or trauma (intrapartum)	0.2	0.2
External conditions	0.0	0.0
Other specific conditions	0.2	0.3
Asphyxia, anoxia or trauma (antepartum)	1.5	1.7
Remaining antepartum deaths	2.6	2.3
Other conditions	0.1	0.1
All causes	5.3	5.3
Percentage		
Congenital anomalies	12	12
Antepartum infections	1	1
Asphyxia, anoxia or trauma (intrapartum)	3	3
External conditions	0	0
Other specific conditions	3	7
Asphyxia, anoxia or trauma (antepartum)	29	31
Remaining antepartum deaths	49	44
Other conditions	2	2
All causes	100	100

For stillbirths, using the ONS classification in ICD-9 and taking into consideration fetal and maternal conditions on line e of the certificate; as well as removing 'immaturity related conditions' (as they were thought to be inappropriate for stillbirths) and moving 'infections' to the 'antepartum infections' category; there was very little change (1–2 per cent) in the proportion of deaths in each of the categories.

On moving from ICD-9 to ICD-10 classification for stillbirths, 'remaining antepartum deaths' fell by 5 per cent. Deaths attributed to 'asphyxia, anoxia or trauma (antepartum)' rose by 2 per cent and deaths attributed to 'other specific conditions' rose by 4 per cent. Other proportions remained constant between the two classifications.

CONCLUSION

The neonatal classification developed in ICD-10 is similar to the ICD-9 classification. Moreover death rates for each of the categories in the ICD-9 classification are similar to those in ICD-10. Therefore it is possible to observe time trends using both the ICD-9 and ICD-10 classifications.

The stillbirths classification developed in ICD-10 is different to the ICD-9 classification. Therefore the analysis presented in this article for 1993 to 1999 stillbirths will have to be used to study time trends in the future.

ACKNOWLEDGEMENTS

We are indebted to Susan Cole and Cleo Rooney for their expert advice and help in producing the neonatal deaths and stillbirths classifications in ICD-10.

Key points

- Cause of death in England and Wales has been coded to the Tenth Revision of the International Classification of Diseases (ICD-10) from January 2001.
- Neonatal deaths (0-27 days after live birth) and stillbirths are registered using a special certificate instead of a normal death certificate. The format of the certificate makes it impossible to derive a single underlying cause of death.
- ONS has developed a hierarchical classification that will be used for deriving a single cause of death for neonates and stillbirths in ICD-10.
- The method used to derive the hierarchical classification in ICD-10 is different to the method used in producing the hierarchical classification in ICD-9. Neonatal deaths and stillbirths from 1993 to 1999 coded in ICD-9 have been analysed using the new method to help in the interpretation of time trends.
- The hierarchical classification for neonates in ICD-9 is similar to the ICD-10 classification whereas the stillbirth hierarchical classification in ICD-10 is different to the ICD-9 classification.

REFERENCES

1. Alberman E, Botting B, Blatchley N and Twidell A (1994) A new hierarchical classification of causes of infant deaths in England and Wales. *Archives of Diseases in Childhood* **70**, 403–409.
2. Alberman E, Blatchley N, Botting B, Schuman S, Dunn A (1997) Medical causes on stillbirth certificates in England and Wales: distribution and results of hierarchical classifications tested by the Office for National Statistics. *British Journal of Obstetrics and Gynaecology* **104**, 1043–49.
3. World Health Organisation (1977) *International Classification of Diseases*, 9th Revision, pp 731–33, World Health Organisation: Geneva.
4. Wigglesworth J S (1980) Monitoring perinatal mortality. A pathophysiological approach. *Lancet* **2**, 684–86.
5. World Health Organisation (1992) *International Statistical Classification of Diseases and Related Health Problems*, Tenth Revision, Volume 1. World Health Organisation: Geneva.
6. World Health Organisation (1993) *International Statistical Classification of Diseases and Related Health Problems*, Tenth Revision. Volume 2: Instruction Manual, World Health Organisation: Geneva.
7. World Health Organisation (1993) *International Statistical Classification of Diseases and Related Health Problems*, Tenth Revision. Volume 3: Alphabetical Index, World Health Organisation: Geneva.
8. World Health Organisation (1977) *International Classification of Diseases*, Ninth Revision. Volume 1, World Health Organisation: Geneva.
9. World Health Organisation (1977) *International Classification of Diseases*, Ninth Revision. Volume 2, Alphabetical Index, World Health Organisation: Geneva.

Epilepsy prevalence and prescribing patterns in England and Wales

B Purcell,
Office for National Statistics,
A Gaitatzis, J W Sander,
Institute of Neurology,
University College London,
A Majeed,
School of Public Policy,
University College London

INTRODUCTION

Although epilepsy is the most common serious neurological disorder worldwide, only a few studies have examined the prevalence of epilepsy in the United Kingdom. Typically, they have examined relatively small populations and have not tried to examine time trends in prevalence.^{1, 2, 3, 4, 5, 6} They have also used differing criteria to define epilepsy. In one of the most recent studies, Wallace found a period prevalence of 5.2 per 1,000 in 1995, after excluding the under five-year olds, from a sample of 2.05 million from the UK General Practice Research Database (GPRD).² Few studies have examined the relationship between the prevalence of epilepsy and social deprivation.⁷

Epilepsy has been neglected as a focus for health services policy, though there have been attempts to redress this recently. A European White Paper on epilepsy was presented to members of the European Parliament in March 2001. A report to the Department of Health in the UK has highlighted the need for research into the effectiveness and value of epilepsy services.⁸ The Department of Health has recently announced that it will develop a new National Service Framework (NSF) for long-term health conditions, with a particular focus on neurological conditions such as epilepsy.⁹

Good treatment of epilepsy leads to a reduction in the frequency of seizures, which is in turn associated with improved psychosocial well being.¹⁰ Until recently, only a limited number of anti-epileptic drugs (AEDs) were available and all had troublesome side effects. There have been several new AEDs launched since 1990. Newer AEDs are mainly used as additional treatment in people whose epilepsy is not well controlled on older AEDs alone. Newer AEDs are promoted as effective as older drugs but with less side effects. However, comparative data on their cost-effectiveness are currently lacking. There are very few

This paper examines trends in the prevalence of treated epilepsy and in use of new anti-epileptic drugs (AEDs) in England and Wales between 1994 and 1998 using the General Practice Research Database. The age-standardised prevalence of epilepsy in 1998 was 7.4 per 1,000 in males and 7.2 per 1,000 in females, and increased by 7 per cent between 1994 and 1998. The percentage of patients prescribed newer AEDs increased from 6.8 per cent to 11.9 per cent in males and from 7.5 per cent to 13.7 per cent in females over the same period. In 1998, the use of newer AEDs was highest in those aged 5 to 15 years and lowest in the elderly. The prevalence of epilepsy was highest in deprived areas. The estimated number of patients with epilepsy in England and Wales in 1998 was 400,000 of which 50,000 (13 per cent) received new AEDs in 1998. The cost of prescribing AEDs in the community has risen from £26 to £86 million in less than 10 years, mainly due to an increase in the costs of prescribing newer AEDs.

comparisons between new drugs, though trials are now being undertaken. These newer drugs are significantly more expensive. For example, carbamazepine costs about £100 per patient per year, whereas the cost of using lamotrigine is £1,000 per year.

To address the lack of population-based information on recent trends in epidemiology and treatment of epilepsy we analysed data from the GPRD to:

- determine the age-specific prevalence of epilepsy in England and Wales between 1994 and 1998;
- explore the association between prevalence and deprivation; and
- examine trends in the treatment of epilepsy with newer AEDs during the same period.

We also used the Department of Health's Prescribing Cost Analysis (PCA) data to examine time trends in prescribing volume and cost between 1991 and 1999.

METHODS

Data sources

The GPRD is the world's largest computerised database of longitudinal general practice patient records, with over 30 million patient-years of data. The comprehensiveness and accuracy of the database have been documented previously.^{11,12} Currently, information is collected prospectively on approximately 2.7 million patients, equivalent to approximately 4.7 per cent of the UK population. It contains anonymised information on practice demographic characteristics, individual medical diagnoses, as well as information on all significant consultations, prescriptions and events leading to withdrawal of a drug, investigations, hospital referrals, admissions and treatment outcomes. In this study we have used data from 1994 to 1998 to calculate the prevalence of epilepsy by age and sex across the whole age spectrum. We also examine the patterns of treatment with new versus old drugs with respect to age and time in England and Wales. Using 1998 mid-year population estimates we also provide estimates of the number of people in England and Wales with epilepsy in 20 age-sex strata.

PACT (prescribing analyses and cost) data are derived from prescriptions issued by general practitioners in England. These include all prescriptions dispensed in the community, i.e. by community pharmacists, dispensing doctors and prescriptions submitted by prescribing doctors for items personally administered in England. The Department of Health Prescription Cost Analysis system uses these data and includes prescriptions written in Wales, Scotland, Northern Ireland and the Isle of Man but dispensed in England. The data do not cover drugs dispensed in hospital or private prescriptions.¹³ The information collected includes the name and cost of the drug and the number of items dispensed (an item is defined as each preparation on the prescription). Drugs are categorised by the section of the *British National Formulary* (BNF) that they fall in. Hence, information is available for individual drugs (such as carbamazepine), for categories of drugs (such as benzodiazepines), or for therapeutic areas (such as antiepileptics). This information is available at individual practice level, health authority level, and national level. We have used data from the Department of Health Prescription Cost Analysis system to map trends in prescribing of individual drugs for epilepsy in England and associated costs from 1991 to 1999.

Participants

Data for the prevalence estimates in this study came from 211 general practices with a total list size of 1.4 million in England and Wales

contributing data to the GPRD. This represents approximately half of all practices registered with the GPRD in 1994. We confined our analysis to those practices that contributed data throughout the period 1994 to 1998 that passed quality checks on its completeness. General practices participating in the GPRD follow agreed guidelines for the recording of clinical and prescribing data, and submit anonymised patient-based clinical records to the database at regular intervals. In this study the practices used either OXMIS or READ codes to code diagnoses. (OXMIS codes are based on ICD 8 and OPCS operation codes. READ codes are based on ICD 9 codes.)

Selection of cases

Patients of all age groups were included in the analysis if they were alive and permanently registered at the practice at 31 December during each year of the study, and had been registered for at least 6 months before that date. This was to ensure that sufficient time was allowed for the relevant information to be recorded on patients included in the analysis. The diagnosis of epilepsy was based on a clinical diagnosis of epilepsy recorded on the general practice computer using a code for epilepsy. In order to confine selection to active cases we only included cases that were prescribed drugs for epilepsy. For each year between 1994 and 1998, all patients who had ever had a diagnosis of epilepsy were identified based on READ and OXMIS codes and those patients who had been prescribed treatment with drugs in BNF section 4.8.1 (control of epilepsy) during the relevant year were selected.

Patients were then classified as having been prescribed a newer AED if they had at least one prescription for such a drug (see Box 1) during the relevant year. Similarly they were classified as having been prescribed an old AED if they had received at least one such prescription during the relevant year. Drug types are not mutually exclusive, i.e. patients can be prescribed both newer and older AEDs concurrently, so patients can appear in more than one drug category of Tables 1 and 2.

Box one

CATEGORIES OF ANTI-EPILEPTIC DRUGS (AEDs)

Established AEDs

Carbamazepine
Ethosuxamide
Phenobarbitone
Methylphenobarbitone
Primidone
Phenytoin
Sodium Valproate
Clonazepam
Clobazam
Acetazolamide

New AEDs

Gabapentin
Vigabatrin
Lamotrigine
Topiramate
Tiagabine

Deprivation

The GPRD does not contain information on the socio-economic status of individual patients and no information is available on where the practice patients live, so practice postcode was used to ascertain which census ward the patient's practice was located in. Data were aggregated for all participating practices in each deprivation category. The deprivation categories were derived using the Townsend Material Deprivation Score.¹⁴

In the analysis presented here the Townsend Scores for all the wards in England and Wales were arranged in ascending order along with the total population of each ward in 1991. The wards were divided into five groups each of which contained 20 per cent of the total population of England and Wales. A range of Townsend Scores describes each of these population quintiles (named Q1, Q2, Q3, Q4, and Q5, where Q1 is the least deprived and Q5 the most deprived). Each general practice was allocated to a quintile on the basis of the Townsend Score of the ward in which it is located.

Statistical methods

We calculated prevalence by age and sex. Directly age-standardised prevalence was calculated by applying the age-specific values, by 5-year age groups up to age 84 (except 10–15 and 16–19) and then 85 and over, to the European Standard Population.

We examined the percentage of patients with epilepsy prescribed new and old AEDs by age and sex. Again we calculated both crude and age-standardised rates. However, here we calculated the age-standardised prescribing rates by applying the prescribing percentages by 5-year age groups (as above) to a different standard population. The standard population used was the estimated number of cases of treated epilepsy in England and Wales between 1994 and 1998. This standard population was calculated by applying prevalence of treated epilepsy in the 211 practices, for males and females combined, to the estimated population of England and Wales in 1994 by the same age groups.

Age- and sex-specific prevalence and prescribing rates were applied to the population of England and Wales in 1998 to estimate the number of cases of treated epilepsy in the population and the number of patients prescribed new AEDs.

Table 1 Age-specific prevalence of treated epilepsy and prescribing rates of anti-epileptic drugs, males, 1994 and 1998

England and Wales

	Age											Age-standardised rate
	0–4	5–15	16–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and over	All ages	
1994												
Prevalence rate per 1,000	2.1	4.2	6.3	7.2	7.2	7.7	9.0	10.9	13.5	16.2	7.2	7.0
Percentage prescribed newer anti-epileptic drugs	10.4	14.8	7.9	10.9	9.2	5.8	3.3	1.6	1.1	1.4	6.9	6.8
Percentage prescribed older anti-epileptic drugs	98.5	99.1	100.0	99.8	99.4	100.0	99.8	100.0	100.0	100.0	99.7	99.8
1998												
Prevalence rate per 1,000	1.9	4.4	6.6	7.9	8.0	8.4	9.5	10.9	13.9	15.1	7.7	7.4
Percentage prescribed newer anti-epileptic drugs	22.2	25.1	18.7	14.6	15.7	10.3	6.1	5.4	1.7	3.3	12.1	11.9
Percentage prescribed older anti-epileptic drugs	96.8	91.8	96.8	99.0	98.6	98.9	98.8	99.0	99.4	98.9	98.1	98.1

Source: General Practice Research Database

Table 2 Age-specific prevalence of treated epilepsy and prescribing rates of anti-epileptic drugs, females, 1994 and 1998

England and Wales

	Age											Age-standardised rate
	0–4	5–15	16–24	25–34	35–44	45–54	55–64	65–74	75–84	85 and over	All ages	
1994												
Prevalence rate per 1,000	1.3	4.0	6.8	7.4	7.1	8.3	9.0	8.9	9.2	10.5	7.1	6.8
Percentage prescribed newer anti-epileptic drugs	31.6	12.5	10.7	11.1	11.0	5.5	3.6	2.6	0.3	0.0	7.3	7.5
Percentage prescribed older anti-epileptic drugs	94.7	98.2	99.4	99.3	98.8	100.0	99.8	99.8	100.0	100.0	99.4	99.4
1998												
Prevalence rate per 1,000	1.8	4.1	6.9	7.9	7.8	8.7	9.0	10.2	9.9	11.0	7.6	7.2
Percentage prescribed newer anti-epileptic drugs	21.8	26.7	25.9	18.4	16.4	12.4	7.5	2.9	2.0	1.1	13.3	13.7
Percentage prescribed older anti-epileptic drugs	94.5	93.0	92.5	95.6	96.5	97.8	98.7	99.6	99.0	99.4	96.9	96.8

Source: General Practice Research Database

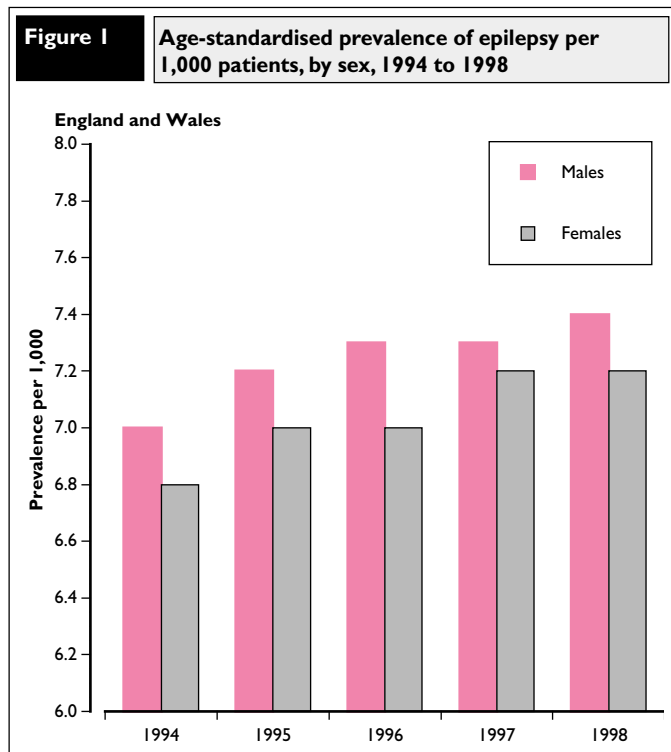
Costs of AEDs

We used PACT data to examine trends in the costs of prescribing AEDs in England between 1991 and 1999. The number of prescription items and the net ingredient cost for all the drugs studied was requested from the Department of Health Statistics Division whose Prescription Cost Analysis system conducts a full analysis of PACT data.

RESULTS

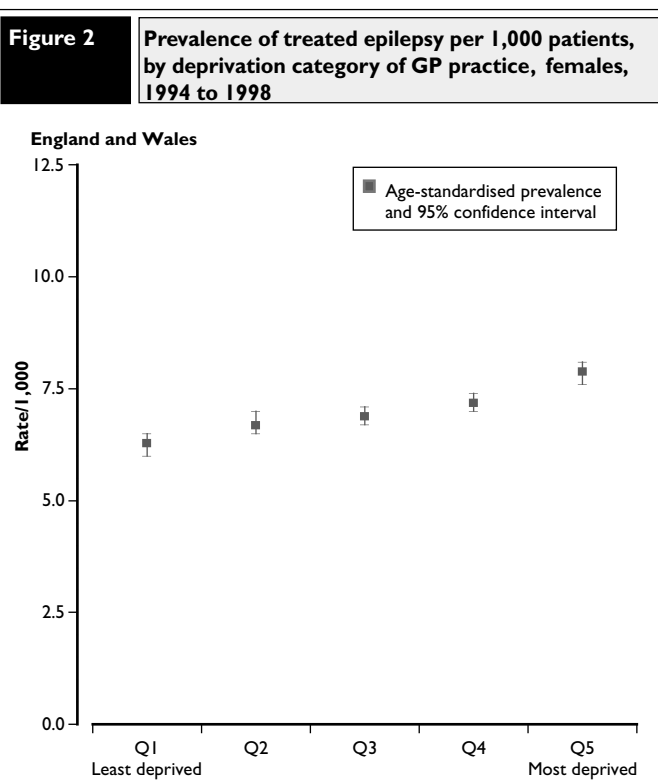
Prevalence of epilepsy

The prevalence of treated epilepsy in 1998 was 7.7 per 1,000 in men (Table 1) and 7.6 per 1,000 in women (Table 2). Age-standardised prevalences were 7.4 per 1,000 in men and 7.2 per 1,000 in women. Prevalence increased with age from less than 2 per 1,000 in under 5 year olds to over 10 per 1,000 in those aged 85 years and over. Age-specific prevalence was similar in men and women in all age groups up to 55 years. Above 55 years the prevalence was higher in men than in women and diverged most in those aged 75 years and over. There was a 7 per cent increase in the age-standardised prevalence of epilepsy in men and in women between 1994 and 1998 (Figure 1). The distribution of the burden of disease varies across different age groups. In 1998, for instance, 20 per cent of cases were under 24 years, 20 per cent over 65 years and 60 per cent aged between 25 and 64 years.

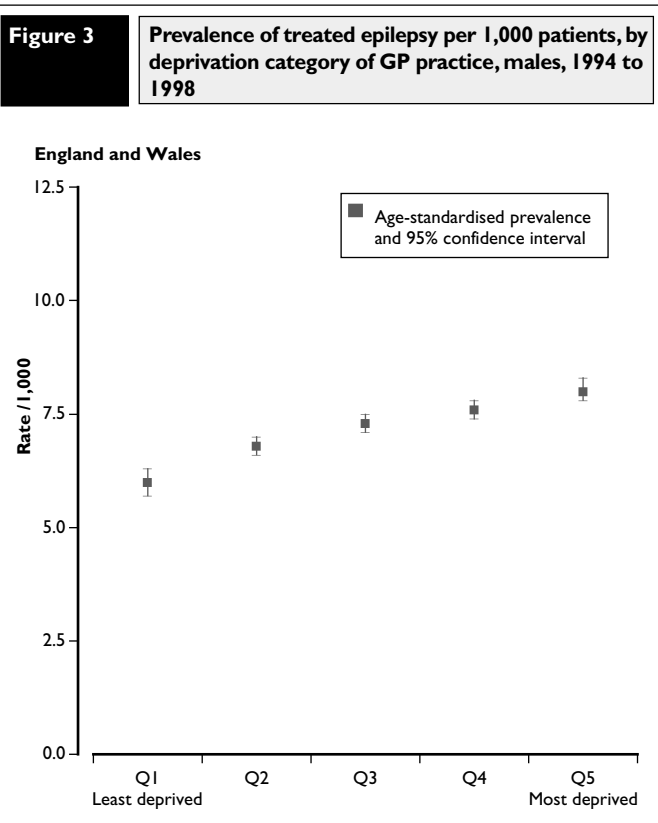


Source: General Practice Research Database

During the period 1994 to 1998, the recorded prevalence of treated epilepsy in the 211 practices shows a clear gradient across the deprivation categories for both males and females (Figures 2 and 3). The prevalence is 6.3 per 1,000 in the least deprived category in females rising to 7.9 per 1,000 in the most deprived; that is a 25 per cent difference in prevalence between the most and the least deprived groups. In males these rates are 6 and 8 per 1,000 respectively, again a 25 per cent difference.



Source: General Practice Research Database



Source: General Practice Research Database

Prescribing trends

GPRD: patterns of AED prescribing

Prescribing of newer AEDs for patients with epilepsy increased between 1994 and 1998. Between 1994 and 1998 the percentage of patients prescribed newer AEDs increased from 6.8 per cent to 11.9 per cent in men (Table 1), and from 7.5 per cent to 13.7 per cent in women

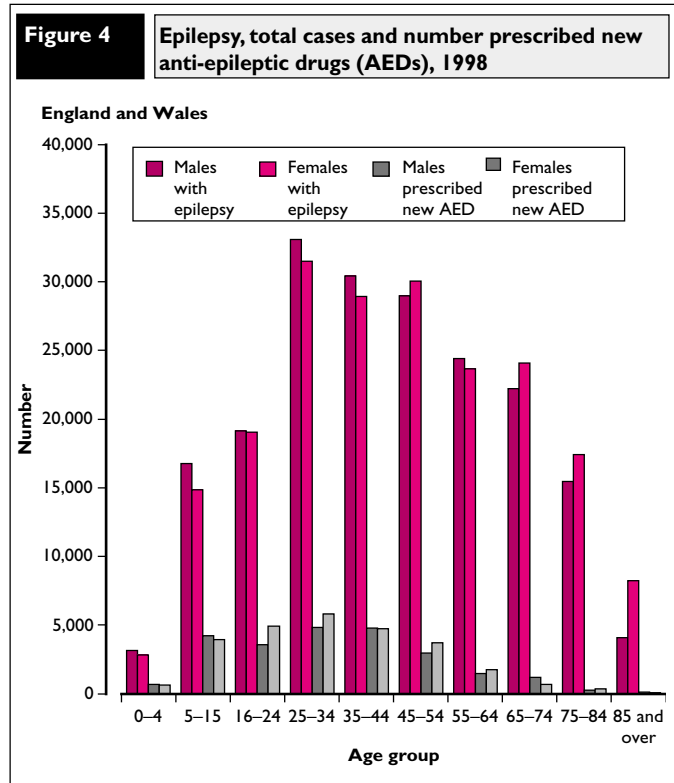
(Table 2). The rate of prescribing of newer AEDs was age dependent. In 1998, 25.1 per cent of boys aged 5–15 years were prescribed newer AEDs compared with 1.7 per cent of men aged 75–84 years. The percentage of women prescribed newer anti-epileptic drugs in 1998 was highest in those aged 5–15 years at 26.7 per cent and lowest in those aged 85 years and over at 1.1 per cent (Figure 4).

By comparison, the use of older AEDs decreased slightly between 1994 and 1998. The percentage of males with epilepsy prescribed older AEDs decreased slightly from 99.8 per cent to 98.1 per cent. The percentage of females prescribed older anti-epileptic drugs also decreased from 99.4 per cent to 96.8 per cent during this period. Prescribing of older AEDs was highest among those over 65 years.

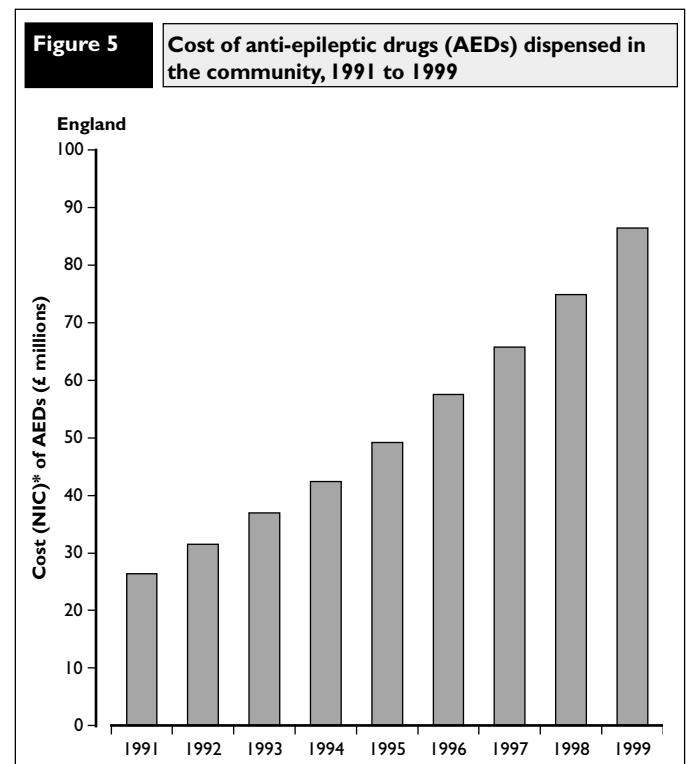
There was no relationship between deprivation category and percentage prescribed newer AEDs, and little variation in prescribing patterns across NHS Regional Office areas as defined in April 1996 (data not shown).

PCA: trends in prescribing volumes and costs

The cost of prescribing AEDs in the community has risen three-fold in the last 10 years, from £26 to £86 million, a yearly increase five times the rate of inflation (Table 3, Figure 5). This is largely explained by a rapid increase in the prescribing of newer AEDs (Table 3, Figure 6). Over the period 1991 to 1999, the number of AED prescription items in England rose by 33 per cent and 42 per cent of this increase was accounted for by increased prescribing of new AEDs. The volume of



Source: General Practice Research Database; ONS population estimates, 1998



* Net ingredient cost

Source: Department of Health Statistics Division, Prescription Cost Analysis system

Table 3 Total community anti-epileptic drug (AED) prescription expenditures and new AED expenditures, 1991 to 1999

England						
Year	All community AED expenditure*		RPI†	New AEDs*		New AED expenditure as percentage of all AED expenditure
	Amount (£ million)	Annual increase (%)**		Amount (£ million)	Annual increase (%)**	
1991	26.4		9.0	3.2		12.1
1992	31.5	19.2	4.1	6.3	96.9	20.0
1993	36.9	17.4	1.7	10.0	58.7	27.1
1994	42.5	14.9	2.5	14.2	42.0	33.4
1995	49.1	15.7	3.3	19.7	38.7	40.1
1996	57.6	17.2	2.9	26.4	34.0	45.8
1997	65.8	14.2	2.8	32.7	23.9	49.7
1998	74.8	13.8	3.3	39.2	19.9	52.4
1999	86.5	15.6	2.4	48.0	22.4	55.5

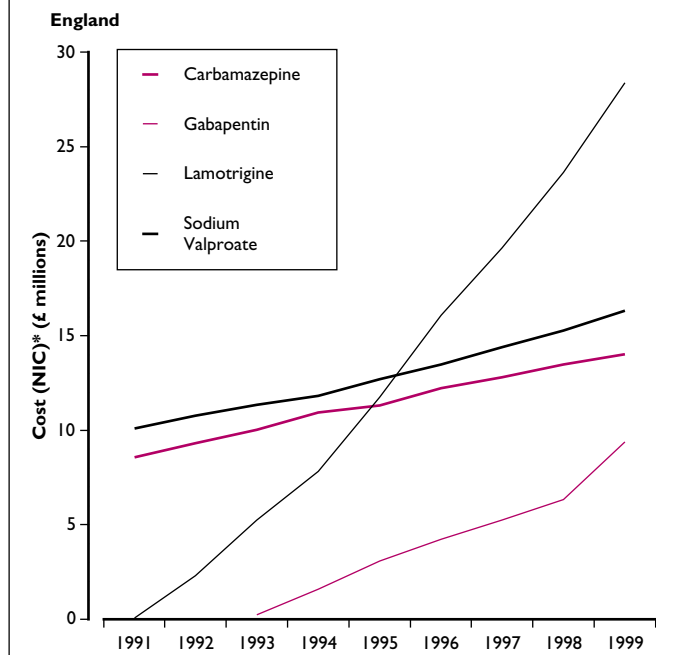
Source: Data are from Department of Health, Statistics Division, Prescription Cost Analysis system

* The net ingredient cost (NIC) is the basic cost of a drug. This cost does not take account of discounts, dispensing costs, fees or prescription charges income.

† The Retail Price Index measures the change in average level of prices of goods and services purchased by most households in the UK. The figures for the 12 months to January are given here.

** The annual increase is the increase from the previous year.

Figure 6 Cost of anti-epileptic drugs dispensed in the community, 1991 to 1999



* Net ingredient cost
Source: Department of Health Statistics Division, Prescription Cost Analysis system

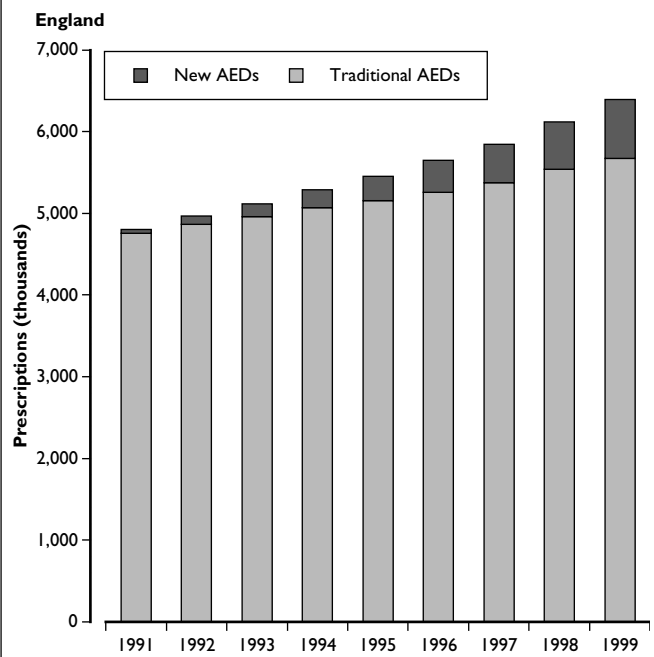
older AEDs prescribed increased from 4.8 million prescription items in 1991 to 5.7 million in 1999, compared with more than a hundred-fold increase in prescribing of new AEDs from 5,400 to 721,000 over the same period (Figure 7). Expenditure on sodium valproate and carbamazepine has kept pace with inflation. However the greatest increase, accounting for approximately a third of the total costs in this class is lamotrigine. Gabapentin, which was launched later, shows a similar trend.

The four drugs that accounted for the highest percentage of these costs are listed in Table 4. This shows that gabapentin and lamotrigine accounted for 44 per cent of the total costs of prescribing of this group of drugs in the community in 1999, despite comprising only nine per cent of the total volume of prescription items.

Epilepsy in England and Wales

The estimated number of patients with treated epilepsy in England and Wales in 1998 was almost 400,000. Of these about 51,000 (13 per cent) were treated with new AEDs in 1998 (Figure 4). Most patients with treated epilepsy are aged 25 to 54 years.

Figure 7 Volume of anti-epileptic drug (AED) community prescribing, 1991 to 1999



Source: Department of Health Statistics Division, Prescription Cost Analysis system

DISCUSSION

Our study is among the largest population-based studies of trends in epidemiology and prescribing for epilepsy that have been carried out in England and Wales. The prevalence of epilepsy in our study is higher than that found by other researchers. Unlike many other studies, our study was large enough to provide robust estimates of the prevalence of epilepsy for men and women separately, and for different age groups. It has also allowed us to explore trends in prevalence and treatment over time.

There has been a change in the management of epilepsy in primary care in recent years as shown by community prescribing data. An increased percentage of patients were prescribed newer anti-epileptic drugs between 1994 and 1998, but this was restricted to younger age groups. We can speculate on possible explanations for these age-dependent prescribing patterns. The older patients in this study may include a cohort that have been maintained on older drugs for many years and are perhaps less likely to be started on newer treatments, especially if they are well controlled. Age-specific side effects, such as liver toxicity from sodium valproate in children, may mean newer AEDs are tried as first line agents. It will be important to monitor these trends as new drugs continue to be made available.

Table 4 Prescribing volume and cost of the four most costly anti-epileptic drugs (and all others combined) dispensed in the community, 1999

England					
Drug	Cost per item (£)	Number of prescriptions (thousands)	Percentage of total volume	Cost (£ million)	Percentage of total cost
Carbamazepine	6.36	2,203	34	14.01	16
Sodium Valproate	11.53	1,415	22	16.31	19
Gabapentin	65.60	143	2	9.38	11
Lamotrigine	66.02	430	7	28.40	33
Others	(av 8.33)	2,204	35	18.36	21
Total		6,395	100	86.45	100

Source: Department of Health, Statistics Division, Prescription Cost Analysis system.

Comparison with previous studies

Because of the large number of cases included, our study provides reliable estimates of the prevalence and treatment of epilepsy, including estimates of prevalence and treatment by age group and sex. We found the prevalence of epilepsy (7.4 per 1,000 males and 7.2 per 1,000 females) to be higher than that reported in earlier epidemiological studies in England and Wales. This included a recent study using the GPRD that found a prevalence of 5.2 per 1,000 among those aged over 5 years.² However, compared with this study, we used more sensitive criteria for selecting cases and more rigorous validity checks to exclude practices that were not coding data accurately. A recent community-based cross-sectional study of 39 practices covering a population of 225,439 based in Bradford, found a prevalence of 7.3 per 1,000 population.¹ This finding was consistent with our own study, although this estimate included 209 (13 per cent) patients not on treatment. If only those cases that met internationally agreed definitions for active epilepsy were included (62 per cent) the prevalence was 4.5 per 1,000; and including all those on treatment (active or in remission), as we have done, the prevalence was 6.4 per 1,000.

The examination of time trends in the prevalence and treatment of epilepsy was an original feature of our study. This suggests that prevalence is increasing, particularly in older people. In view of the size of the study and the trend, this is likely to be a significant finding. We have not explored the reason for this, but it is probably attributable to increased survival of people with cerebrovascular disease, and would suggest that the burden of disease from epilepsy will increase in the future.

Although the relation between ill health and social deprivation has been well documented,¹⁵ few studies have examined the relationship between the prevalence of epilepsy and social deprivation. The association we found between epilepsy and socio-economic deprivation supports the findings of an earlier hospital-based study.⁷ We were not able to explore the reasons for this association. We are also aware that this is an ecological association, and individual patient characteristics are much more powerful predictors of demand than the characteristics of the areas in which patients live.

The rise in prescribing of the newer anti-epileptic drugs for patients with epilepsy found here is consistent with the findings of an earlier study reported by Roberts.¹⁶ They found the number of prescriptions for AEDs in Northern and Yorkshire region rose by 15 per cent between 1992 and 1995, and that a third of this rise was due to prescribing of the new AEDs vigabatrin, lamotrigine and gabapentin. Few previous studies have examined the effect of age on AED prescribing;¹⁷ our demonstration that community prescribing of newer AEDs is age related is new.

The most recent estimates of the total costs of epilepsy in the UK are £600 million per year, with 30 per cent of this attributable to AEDs.¹⁸ Our findings show the costs of prescribing these drugs in the community are currently rising at five times the rate of inflation. Newer drugs, despite making up only a small proportion of total prescriptions, are largely responsible for this rapid increase in costs.

Strengths and weaknesses of study

This study uses information from the GPRD, a large and well-validated general practice derived database. All the practices passed quality checks on the data they supplied to the database. The subset of general practices from the database we used in our study had a combined population of 1.4 million, with a similar age-sex composition to that of England and Wales in 1998. However, relatively few practices contributing information to the GPRD are located in inner city areas,

particularly inner London. In selecting people who had been resident for more than 6 months, infants and the more mobile populations are also under-represented.

The main limitation of this study is that we did not validate the diagnosis, for example, by examining whether patients had their diagnosis confirmed by a specialist. The reason for not doing this is that this would have considerably increased costs and made it unfeasible. Another limitation is that the study only includes diagnosed cases of epilepsy and hence cases that had not come to the attention of a GP would not be included. Thus, there may be unmet need not identified by these estimates.

A commonly accepted clinical definition of epilepsy is at least two unprovoked seizures, but because of the limitations of the general practice coding systems we cannot be certain that all cases recorded here would conform to this definition. However, by including only those patients on treatment it is likely that we have excluded most cases of a single provoked seizure for which treatment with an AED would not normally be started in the UK. Finally, misdiagnosis is an important problem in the management of epilepsy, with as many as 20 per cent of cases inaccurately diagnosed.^{19, 20, 21, 22}

There may also be some deficiencies in the prescribing data. For example, some patients with epilepsy may have their drug monitoring and prescribing carried out entirely in secondary care. Hence, the percentage of patients prescribed newer AEDs in this study may be an under-estimate. However, as most patients will have their ongoing treatment prescribed by their general practitioner, the effect of this is not likely to be great. There is also the difficulty with interpretation in that AEDs are not prescribed exclusively for epilepsy and therefore the PCA data, which are not patient linked, will include these drugs prescribed for other conditions, eg neuropathic pain, trigeminal neuralgia. However, gabapentin was not licensed for pain until after the period of the study and lamotrigine is only licensed for epilepsy.

MEANING OF STUDY

Our study suggests there were about 400,000 patients with epilepsy in England and Wales, of whom about 50,000 (13 per cent) received newer anti-epileptic drugs in 1998. Our study provides baseline figures for the expected prevalence of epilepsy in primary care and the percentage of patients currently prescribed new versus old AEDs. It should provide an important background to policy and planning for services such as the forthcoming NSF on long-term conditions. It will also help in clinical discussions on how appropriately special patient populations such as elderly patients or women of childbearing age are being treated.²³

UNANSWERED QUESTIONS AND FUTURE RESEARCH

Our study gives estimates of the prevalence and treatment of epilepsy in England and Wales, including information on the ratio of new to old drugs. However, some questions remain unanswered. Ideally we would like to measure outcomes, eg reductions in morbidity, reduced seizure frequency, to account for benefit as well as costs of treatment. Karlsson suggested higher prices of newer AEDs (18 per cent of total sales in a district accounted for 70 per cent of the cost) is justified by evidence of improved seizure control.²⁴ However, the benefits of newer therapies cannot be assumed to outweigh the substantially increased costs even when reduction in adverse events is taken into account.²⁵ Future work should aim to establish the cost-effectiveness of new AEDs in different patient populations.

The recent addition of new AEDs has greatly widened the range of therapeutic options for patients, and has contributed to the increases in prescribing of AEDs overall. But given the lack of cost-effectiveness information on these novel drugs, the wider question of how funds should be allocated within a specialty to achieve equitable health gain remains open. Elderly patients, who are known to be less represented in drug trials, appear to have less access to these newer drugs.

ACKNOWLEDGEMENTS

Bernadette Purcell is funded by the North Thames Public Health Medicine Training Scheme. A. Gaitatzis is supported by the National Society for Epilepsy. Azeem Majeed holds a National Primary Care Career Scientist Award and is funded by the NHS Research & Development Directorate. We thank the Morbidity and Health Care Team at the Office for National Statistics and the Department of Health Statistics Division for their help, and the Medicines Control Agency for permission to use data from the GPRD.

Key points

- The age-standardised prevalence of epilepsy in 1998 was 7.4 per 1,000 males and 7.2 per 1,000 females.
- There are about 400,000 people with epilepsy in England and Wales.
- The cost of prescribing drugs for the treatment of epilepsy in the community has risen from £26 million in 1991 to £86 million in 1999.
- Two drugs, gabapentin and lamotrigine, accounted for 44 per cent of the total drug costs for epilepsy in 1999 despite accounting for only nine per cent of drugs by volume of prescribing.

REFERENCES

1. Wright J, Pickard N, Whitfield A and Hakin N (2000) A population based study of prevalence, clinical characteristics and effect of ethnicity in epilepsy. *Seizure* **9**, 309–313.
2. Wallace H, Shorvon S, and Tallis R I (1998) Age-specific incidence and prevalence rates of treated epilepsy in an unselected population of 2,052,922 and age-specific fertility rates of women with epilepsy. *Lancet* **352**, 1970–1973.
3. Cockerell O C, Eckle I, Goodridge D M, Sander J W and Shorvon S D (1995) Epilepsy in a population of 6000 re-examined: secular trends in first attendance rates, prevalence, and prognosis. *J Neuro Neurosurg Psychiatry* **58**, 570–576.
4. Tallis R, Hall G, Craig I and Dean A (1991) How common are epileptic seizures in old age? *Age & Ageing* **20**, 442–448.
5. Goodridge D M and Shorvon S D (1983) Epileptic seizures in a population of 6000. I: Demography, diagnosis and classification, and role of the hospital services. *BMJ* **287**, 641–664.
6. Crombie D, Cross K, Fry J et al (1960) A survey of the epilepsies in general practice. *BMJ* **2**, 416–422.
7. Morgan C L, Ahmed Z and Kerr M (2000) Social deprivation and prevalence of epilepsy and associated health usage. *J Neuro Neurosurg Psychiatry* **69**, 13–17.
8. Kitson A, Shorvon S and Clinical Standards Advisory Group (2000) *Services for patients with epilepsy: a report of a CSAG Committee*, Department of Health: London.
9. Chapman G, Adam S and Stockford D (2001) National Service Frameworks: promoting the public health. *J Epidemiol Community Health* **55**, 373–374.
10. Jacoby A, Baker G A, Steen N, Potts P and Chadwick D W (1996) The clinical course of epilepsy and its psychosocial correlates: findings from a UK Community study. *Epilepsia* **37**, 148–161.
11. Lawson D H, Sherman V and Hollowell J (1998) The General Practice Research Database. *Q J Med* **91**, 445–452.
12. Walley T and Mantgani A (1997) The UK General Practice Research Database. *Lancet* **350**, 1097–1099.
13. Majeed A, Evans N and Head P (1997) What can PACT tell us about prescribing in general practice? *BMJ* **315**, 1515–1519.
14. Townsend P, Philmore P and Beatie A (1988) *Health and Deprivation: Inequalities and the North*, Croom Helm: London.
15. Whitehead M and Drever F (1997) Health Inequalities: Main Findings and implications for the future. In: Drever and Whitehead (eds), *Health Inequalities*, 224–236, TSO: London.
16. Roberts SJ, Feely M and Bateman D N (1998) Prescribing of anti-epileptic drugs in the Northern and Yorkshire region: 1992–1995. *Seizure* **7**, 127–132.
17. Lackner T E, Cloyd J C, Thomas L W and Leppik I E (1998) Anti-epileptic drug use in nursing home residents: effect of age, gender, and comedication on patterns of use. *Epilepsia* **39**, 1083–1087.
18. Cockerell O C, Hart Y M, Sander J W and Shorvon S D (1994) The cost of epilepsy in the United Kingdom: estimation based on the results of two population-based studies. *Epilepsy Research* **18**, 249–260.
19. Bell G S and Sander J W (2001) The epidemiology of epilepsy: the size of the problem. *Seizure* **10**, 306–314.
20. Sander J W and O'Donoghue M F (1997) Epilepsy: getting the diagnosis right. *BMJ* **314**, 158–159.
21. Smith D, Defalla B A and Chadwick D W (1999) The misdiagnosis of epilepsy and the management of refractory epilepsy in a specialist clinic. *Q J Med* **92**, 15–23.
22. Lesser R P (1996) Psychogenic seizures. *Neurology* **46**, 1499–1507.
23. Schater S C (1999) Anti-epileptic drug therapy: general principles and application for special patient populations. *Epilepsia* **40** (Suppl 9), S20–S25.
24. Karlsson H and Lagerstedt C (2000) Five new anti-epileptic agents approved during the 1990's – an observation study on the utilisation of the new preparations in routine clinical practice. *Lakartidningen* **97**, 2208–2210 and 2213–2214.
25. Shakespeare A and Simeon G (1998) Economic analysis of epilepsy treatment: a cost minimisation analysis comparing carbamazepine and lamotrigine in the UK. *Seizure* **7**, 119–125.

This is a blank page.

To enlarge the view of the Tables list select the HAND tool and click in the area above the list when an ARROW appears on the hand.

Tables

		Page
Population		
1.1	International	Selected countries 33
1.2	National	Constituent countries of the United Kingdom 35
1.3	Subnational	Government Office Regions of England 36
1.4	Age and sex	Constituent countries of the United Kingdom 37
1.5	Age, sex and legal marital status	England and Wales 40
Vital statistics		
2.1	Summary	Constituent countries of the United Kingdom 42
2.2	Key demographic and health indicators	Constituent countries of the United Kingdom 44
Live births		
3.1	Age of mother	England and Wales 45
3.2	Outside marriage: age of mother and type of registration	England and Wales 46
Conceptions and abortions		
4.1	Age of women at conception	England and Wales (residents) 47
4.2	Abortions: age and gestation.	England and Wales 48
Expectation of life		
5.1	(In years) at birth and selected age	Constituent countries of the United Kingdom 49
Deaths		
6.1	Age and sex	England and Wales 50
6.2	Subnational	Health Regional Office areas of England 51
6.3	Selected causes and sex	England and Wales 52
Notes to tables		54

StatBase®

Health Statistics Quarterly tables are now available on StatBase® which can be accessed via our website www.statistics.gov.uk

Symbols

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

Table 1.1 Population and vital rates: international

Selected countries														Numbers (thousands)/Rates per thousand													
Year	United Kingdom i	Austria ii	Belgium ii	Denmark ii	Finland ii	France ii	Germany ¹ ii	Greece ii	Irish Republic ii	Italy ii	Luxembourg ii	Netherlands ii	Portugal ii														
Population (thousands)																											
1971	55,928	7,501	9,673	4,963	4,612	51,251	78,313	8,831	2,992	54,073	342	13,194	8,644														
1976	56,216	7,566	9,818	5,073	4,726	52,909	78,337	9,167	3,238	55,718	361	13,774	9,356														
1981	56,357	7,569	9,859	5,121	4,800	54,182	78,408	9,729	3,443	56,502	365	14,247	9,851														
1986	56,859	7,588	9,862	5,120	4,918	55,547	77,720	9,967	3,543	56,596	368	14,572	10,011														
1991	57,814	7,813	10,004	5,154	5,014	57,055	80,014	10,247	3,534	56,751	387	15,070	9,871														
1993	58,198	7,992	10,084	5,189	5,066	57,654	81,156	10,379	3,576	57,049	398	15,290	9,881														
1994	58,401	8,030	10,116	5,206	5,088	57,900	81,438	10,426	3,590	57,204	404	15,383	9,902														
1995	58,612	8,040	10,137	5,216	5,108	57,753	81,539	10,443	3,598	57,269	407	15,424	9,912														
1996	58,807	8,059	10,157	5,263	5,125	58,375	81,915	10,476	3,636	57,397	416	15,530	9,927														
1997	59,014	8,072	10,181	5,285	5,140	58,610	82,034	10,499	3,673	57,512	421	15,611	9,946														
1998	59,237	8,078	10,203	5,304	5,153	58,851	82,047	10,516	3,714	57,588	426	15,707	9,968														
1999	59,501	8,083	10,214	5,314	5,160	58,973	82,037	10,522	3,735	57,613	429	15,760	9,980														
2000	59,756	8,103	10,239	5,330	5,171	58,744	82,164	10,543	3,776	57,680	436	15,864	10,178														
2001	..	8,121	10,263	5,349	5,181	59,040	82,193	10,565	3,781	57,884	441	15,987	10,243														
Population changes (per 1,000 per annum)																											
1971-76	1.0	1.7	3.0	4.4	4.9	6.5	0.1	7.6	16.4	6.1	10.7	8.8	16.5														
1976-81	0.5	0.1	0.8	1.9	3.1	4.8	0.2	12.3	12.7	2.8	2.5	6.9	10.6														
1981-86	1.8	0.5	0.1	0.0	4.9	5.0	-1.8	4.9	5.8	0.3	1.8	4.6	3.2														
1986-91	3.4	5.9	2.9	1.3	3.9	5.4	5.9	5.6	-0.5	0.5	10.2	6.8	-2.8														
1991-96	3.4	5.8	2.7	2.4	3.4	2.4	3.8	3.8	3.6	1.8	10.3	4.7	0.8														
1997-98	3.8	0.7	2.2	3.6	2.5	4.1	0.2	1.6	11.2	1.3	11.9	6.1	2.2														
1998-99	4.5	0.6	1.1	1.9	1.4	2.1	0.1	0.6	5.7	1.4	7.0	3.4	1.2														
1999-2000	4.3	2.5	2.4	3.0	2.1	-3.9	1.5	2.0	11.0	1.2	16.3	6.6	19.8														
2000-01	..	2.2	2.3	3.6	1.9	5.0	0.4	2.1	1.3	2.8	11.5	7.8	6.4														
Live birth rate (per 1,000 per annum)																											
1971-75	14.1	13.3	13.4	14.6	13.1	16.0	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	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	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	9.8	10.6	15.8	9.8	12.2	12.8	11.9														
1991-95	13.1	11.8	12.0	13.1	12.9	12.7	10.9	9.9	14.0	9.6	13.3	12.8	11.4														
1996	12.5	11.0	11.2	12.9	11.8	12.6	9.7	9.6	14.0	9.2	13.7	12.2	11.1														
1997	12.3	10.4	11.3	12.8	11.5	12.4	9.9	9.7	14.3	9.2	13.1	12.3	11.4														
1998	12.1	10.1	11.2	12.5	11.1	12.6	9.6	9.6	14.4	9.0	12.6	12.7	11.4														
1999	11.8	9.7	11.1	12.4	11.1	12.7	9.4	9.6	14.2	9.1	12.9	12.7	11.8														
2000	11.4	9.7	11.3	12.6	11.0	13.2	9.2	9.6	14.4	9.3	13.1	13.0	11.8														
Death rate (per 1,000 per annum)																											
1971-75	11.8	12.6	12.1	10.1	9.5	10.7	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	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	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	11.6	9.3	9.1	9.4	10.5	8.5	9.6														
1991-95	11.0	10.4	10.4	11.9	9.8	9.1	10.8	9.5	8.8	9.7	9.8	8.8	10.4														
1996	10.8	10.0	10.3	11.6	9.6	9.2	10.8	9.6	8.7	9.6	9.4	8.9	10.8														
1997	10.7	9.8	10.2	11.3	9.6	9.0	10.5	9.5	8.6	9.8	9.4	8.7	10.6														
1998	10.6	9.7	10.3	11.0	9.6	9.2	10.4	9.8	8.4	9.9	9.1	8.8	10.5														
1999	10.6	9.7	10.3	11.1	9.6	9.2	10.3	9.8	8.4	9.8	8.8	8.9	10.6														
2000	10.2	9.5	10.3	10.9	9.5	9.1	10.1	9.8	8.2	9.7	8.6	8.8	10.3														
2001	10.1 ^p	..	..	..	..	..	..	..	..	..	..	..	..		

Note: Figures may not add exactly due to rounding.

Population estimated as follows:

- i At 30 June.
- ii Estimated mid-year population at latest available date, as given in Council of Europe report: *Recent Demographic Developments in Europe*.
- iii The European Union consists of 15 member countries (EU15); live birth rates and death rates as given in Eurostat report, *Demographic Statistics*.
- iv At 1 July as given in the *United Nations Demographic Yearbook or United Nations Monthly Bulletin of Statistics*.

1 Including former GDR throughout.

2 Estimates prepared by the Population Division of the United Nations – excludes Hong Kong.

3 Rates are based on births to, or deaths of, Japanese nationals only.

4 Rates are for 1990–1995.

5 Estimates prepared by Eurostat.

6 Including Hong Kong.

7 Including the Indian held part of Jammu and Kashmir, the final status of which has not yet been determined.

.. Figures not available.

Table I.1
continued
Population and vital rates: international

Selected countries											
											Numbers (thousands)/Rates per thousand
Year	Spain ii	Sweden ii	European Union iii	Russian Federation ii	Australia iv	Canada iv	New Zealand iv	China iv	India ⁷ iv	Japan ³ iv	USA iv
Population (thousands)											
1971	34,216	8,098	342,631	130,934	13,067	22,026	2,899	852,290	551,311	105,145	207,661
1976	36,118	8,222	350,598	135,027	14,033	23,517	3,163	937,170 ²	617,248	113,094	218,035
1981	37,741	8,320	356,490	139,225	14,923	24,900	3,195	1,008,460 ²	675,185	117,902	229,958
1986	38,536	8,370	359,570	144,154	16,018	26,204	3,317	1,086,733 ²	767,199	121,672	240,680
1991	38,920	8,617	366,259	147,885	17,284	28,030	3,480	1,170,100 ²	851,900	123,964	252,618
1993	39,086	8,719	369,710	148,146	17,667	28,700	3,550	1,196,400 ²	886,250	124,829	258,080
1994	39,149	8,781	371,011	147,968	17,855	29,040	3,600	1,208,800 ²	903,940	125,178	260,602
1995	39,197	8,816	372,132	147,939	18,072	29,350	3,660	1,220,520 ²	921,990	125,472	263,040
1996	39,270	8,841	373,188	147,373	18,311	29,670	3,710	1,232,460 ²	939,540	127,761	265,460
1997	39,323	8,846	374,163	146,938	18,520	29,990	3,760	1,255,700 ²	995,220	126,070	268,010
1998	39,371	8,851	371,014	146,534	18,730	30,250	3,790	1,256,700 ²	970,930	126,410	270,560
1999	39,394	8,854	375,948	146,328	18,970	30,490	3,810	1,266,840 ²	986,610	126,500 ²	273,130
2000	39,733	8,862	376,579	145,560	19,160	30,750	3,830	1,275,130	1,002,140	126,870	281,420 ²
2001	40,122	8,833	..	144,819	..	..	..	..	..	..	..
Population changes (per 1,000 per annum)											
1971-76	11.1	3.1	4.7	6.3	14.8	13.5	18.2	19.9	23.9	15.1	10.0
1976-81	9.0	2.1	3.4	6.2	12.7	11.8	2.0	15.2	18.8	8.5	10.9
1981-86	4.2	1.2	1.7	7.1	14.7	10.5	7.6	15.5	27.3	6.4	9.3
1986-91	2.0	5.9	3.7	5.2	15.8	13.9	9.8	15.3	22.1	3.8	9.9
1991-96	1.4	4.6	3.2	0.8	9.1	9.4	10.3	8.6	16.5	2.4	8.3
1997-98	1.2	0.6	2.3	-2.7	11.3	8.7	8.0	10.0	16.4	2.7	8.5
1998-99	0.6	0.3	2.5	-1.4	12.8	7.9	5.3	8.1	16.1	0.7	8.8
1999-2000	8.6	0.9	2.1	-5.2	10.0	8.5	5.2	6.5	15.7	2.9	32.0
2000-01	9.8	2.4	..	-5.1	..	..	..	..	..	..	..
Live birth rate (per 1,000 per annum)											
1971-75	19.2	13.5	14.7	..	18.8	15.9	20.4	27.2	35.6	18.6	15.3
1976-80	17.1	11.6	13.1	..	15.7	15.5	16.8	18.6	33.4	14.9	15.2
1981-85	12.8	11.3	12.2	..	15.6	15.1	15.8	19.2	..	12.6	15.7
1986-90	10.8	13.2	12.0	..	15.1	14.8	17.1	..	..	10.6	16.0
1991-95	9.8	13.3	9.7	10.2	..	..	..	18.5 ⁴	..	..	..
1996	9.2	10.8	10.8	8.8	13.9	12.2	15.4	9.8	27.3	9.6	14.7
1997	9.4	10.2	10.8	8.6	13.6	11.9	15.4	9.0 ⁶	..	9.5	14.5
1998	9.3	10.1	10.7 ⁵	8.8	13.3	..	14.6	8.0 ⁶	..	9.5	14.6
1999	9.6	10.0	..	8.3	13.1	..	15.0	7.5 ⁶	..	9.3	14.5
2000	9.9	10.2	..	8.7	13.0	..	14.8	8.0 ⁶	..	9.4	13.9
Death rate (per 1,000 per annum)											
1971-75	8.5	10.5	10.8	..	8.2	7.4	8.4	7.3	15.5	6.4	9.1
1976-80	8.0	10.9	10.6	..	7.6	7.2	8.2	6.6	13.8	6.1	8.7
1981-85	7.7	11.0	10.4	..	7.3	7.0	8.1	6.7	..	6.1	8.6
1986-90	8.2	11.1	10.2	..	7.2	7.3	8.2	..	..	6.4	8.7
1991-95	8.7	10.9	10.0	13.7	..	..	..	..	..	..	..
1996	8.9	10.6	10.0	14.1	7.0	7.1	7.6	5.0	8.9	7.1	8.7
1997	8.9	10.6	9.8	13.8	7.0	7.2	7.3	4.8 ⁶	..	7.2	8.6
1998	9.1	10.5	9.9 ⁵	13.6	6.8	..	6.9	4.9 ⁶	..	7.4	8.6
1999	9.1	10.7	..	14.7	6.8	..	7.4	4.9 ⁶	..	7.8	8.8
2000	9.3	10.5	..	15.3	6.7	..	7.0	4.9 ⁶	..	..	8.4
2001	..	..	..	..	..	..	..	..	..	..	..

Note: Figures may not add exactly due to rounding.

Population estimated as follows:

- i At 30 June.
- ii Estimated mid-year population at latest available date, as given in Council of Europe report: *Recent Demographic Developments in Europe*.
- iii The European Union consists of 15 member countries (EU15); live birth rates and death rates as given in Eurostat report, *Demographic Statistics*.
- iv At 1 July as given in the *United Nations Demographic Yearbook* or *United Nations Monthly Bulletin of Statistics*.

- 1 Including former GDR throughout.

- 2 Estimates prepared by the Population Division of the United Nations – excludes Hong Kong.

- 3 Rates are based on births to, or deaths of, Japanese nationals only.

- 4 Rates are for 1990–1995.

- 5 Estimates prepared by Eurostat.

- 6 Including Hong Kong.

- 7 Including the Indian held part of Jammu and Kashmir, the final status of which has not yet been determined.

- .. Figures not available.

Table 1.2 Population: national

Constituent countries of the United Kingdom		Numbers (thousands) and percentage age distribution					
Mid-year	United Kingdom	Great Britain	England and Wales	England	Wales	Scotland	Northern Ireland
Estimates							
1971	55,928	54,388	49,152	46,412	2,740	5,236	1,540
1976	56,216	54,693	49,459	46,660	2,799	5,233	1,524
1981	56,357	54,815	49,634	46,821	2,813	5,180	1,543
1986	56,859	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
1999	59,501	57,809	52,690	49,753	2,937	5,119	1,692
2000	59,756	58,058	52,943	49,997	2,946	5,115	1,698
of which (percentages)							
0-4	6.0	6.0	6.0	6.0	5.7	5.6	7.0
5-15	14.2	14.1	14.2	14.2	14.4	13.9	17.0
16-44	40.8	40.8	40.7	40.9	38.2	41.4	41.9
45-64M/59F	20.9	21.0	21.0	20.9	21.8	21.0	18.8
65M/60F-74	10.7	10.7	10.7	10.6	11.7	11.3	9.4
75 and over	7.4	7.4	7.5	7.4	8.2	6.8	5.8
Projections¹							
2001	59,987	58,283	53,174	50,225	2,949	5,109	1,705
2006	60,946	59,214	54,136	51,165	2,971	5,078	1,732
2011	61,956	60,197	55,151	52,151	3,000	5,047	1,759
2016	63,038	61,255	56,241	53,207	3,034	5,014	1,783
2021	64,105	62,302	57,329	54,262	3,067	4,973	1,803
of which (percentages)							
0-4	5.5	5.5	5.5	5.5	5.4	5.0	5.8
5-15	11.8	11.8	11.8	11.8	12.0	11.0	13.0
16-44	36.3	36.3	36.4	36.5	35.0	35.3	37.0
45-64 ²	27.2	27.3	27.1	27.2	26.5	28.7	26.9
65-74 ²	10.4	10.4	10.3	10.3	11.5	11.1	9.5
75 and over	8.7	8.8	8.8	8.7	9.7	8.9	7.9

Note: Figures may not add exactly due to rounding.

1 These projections are based on the mid-2000 population estimates.

2 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.

Table 1.3 Population: subnational

Government Office Regions of England ¹									
Numbers (thousands) and percentage age distribution									
Mid-year	North East	North West	Yorkshire and the Humber	East Midlands	West Midlands	East	London	South East	South West
Estimates									
1971	2,679	7,108	4,902	3,652	5,146	4,454	7,529	6,830	4,112
1976	2,671	7,043	4,924	3,774	5,178	4,672	7,089	7,029	4,280
1981	2,636	6,940	4,918	3,853	5,187	4,854	6,806	7,245	4,381
1986	2,601	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
1999	2,581	6,881	5,047	4,191	5,336	5,419	7,285	8,078	4,936
2000	2,577	6,894	5,058	4,208	5,335	5,460	7,375	8,115	4,975
of which (percentages)									
0-4	5.6	5.9	5.9	5.8	6.1	6.0	6.7	5.9	5.5
5-15	14.3	14.7	14.4	14.2	14.6	14.1	13.5	14.1	13.6
16-44	40.0	40.2	40.4	39.8	39.7	39.9	47.3	40.1	38.0
45-64M/59F	21.3	21.1	21.0	21.7	21.4	21.5	18.2	21.4	21.9
65M/60F-74	11.6	10.9	10.9	11.0	11.0	10.9	8.4	10.6	11.8
75 and over	7.2	7.3	7.5	7.5	7.3	7.6	6.0	7.8	9.1
Projections²									
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)⁴									
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 ³	27.7	27.5	27.3	27.4	27.3	27.2	26.3	27.4	27.8
65-74 ³	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

Note: Figures may not add exactly due to rounding.

1 From 1 April 2002 there are four Directorates of Health and Social Care (DHSCs) within the Department of Health. The GORs sit within the DHSCs as follows: North East, North West, Yorkshire and The Humber GORs are within North DHSC, East Midlands, West Midlands and East GORs are within Midlands and Eastern DHSC, London GOR equates to London DHSC and South East and South West GORs are within South DHSC. See 'In brief' for further details of changes to Health Areas.

2 These projections are based on the mid-1996 population estimates and are consistent with the 1996-based national projections produced by the Government Actuary's Department.

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

4 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, and *Population Trends* 95 and 96, which were miscalculated.

Table 1.4 Population: age and sex

Constituent countries of the United Kingdom Numbers (thousands)

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
United Kingdom																
Persons																
1971	55,928	899	3,654	8,916	8,144	6,971	6,512	10,202	3,222	4,764	2,159	358	127	14,257	32,548	9,123
1976	56,216	677	3,043	9,176	8,126	7,868	6,361	9,836	3,131	5,112	2,348	390	147	13,797	32,757	9,663
1981	56,357	730	2,726	8,147	9,019	8,010	6,774	9,540	2,935	5,195	2,677	..	..	12,543	33,780	10,035
1986	56,859	749	2,892	7,161	9,280	8,047	7,719	9,212	3,069	5,020	2,988	..	..	11,676	34,847	10,336
1991	57,814	794	3,094	7,175	8,247	9,057	7,955	9,500	2,888	5,067	3,139	640	258	11,742	35,469	10,602
1995	58,612	734	3,101	7,528	7,448	9,411	7,931	10,445	2,784	5,127	3,055	721	326	12,107	35,849	10,656
1996	58,807	719	3,044	7,596	7,323	9,423	8,093	10,582	2,772	5,058	3,126	729	341	12,099	36,035	10,673
1997	59,014	736	2,976	7,667	7,230	9,360	8,294	10,697	2,781	5,005	3,176	734	358	12,107	36,213	10,693
1998	59,237	715	2,956	7,709	7,190	9,232	8,505	10,820	2,818	4,965	3,205	742	380	12,110	36,397	10,730
1999	59,501	708	2,916	7,763	7,199	9,064	8,746	10,951	2,861	4,929	3,222	750	393	12,114	36,634	10,753
2000	59,756	686	2,890	7,747	7,247	8,889	9,005	11,083	2,884	4,917	3,237	758	404	12,076	36,890	10,789
Males																
1971	27,167	461	1,874	4,576	4,137	3,530	3,271	4,970	1,507	1,999	716	97	29	7,318	17,008	2,841
1976	27,360	348	1,564	4,711	4,145	3,981	3,214	4,820	1,466	2,204	775	101	31	7,083	17,167	3,111
1981	27,412	374	1,400	4,184	4,596	4,035	3,409	4,711	1,376	2,264	922	..	..	6,439	17,646	3,327
1986	27,698	384	1,483	3,682	4,743	4,063	3,872	4,572	1,463	2,206	1,064	..	..	5,998	18,264	3,437
1991	28,248	407	1,588	3,688	4,226	4,591	3,987	4,732	1,390	2,272	1,152	167	47	6,033	18,576	3,639
1995	28,731	376	1,588	3,862	3,824	4,796	3,984	5,201	1,358	2,330	1,148	201	63	6,208	18,780	3,742
1996	28,860	369	1,560	3,897	3,759	4,808	4,073	5,270	1,355	2,310	1,186	206	67	6,206	18,884	3,770
1997	28,992	377	1,526	3,933	3,709	4,782	4,181	5,326	1,360	2,298	1,216	211	72	6,210	18,984	3,798
1998	29,128	366	1,516	3,953	3,687	4,721	4,294	5,387	1,380	2,290	1,237	218	79	6,210	19,094	3,824
1999	29,299	363	1,495	3,980	3,694	4,642	4,425	5,454	1,400	2,284	1,255	223	83	6,211	19,243	3,845
2000	29,459	351	1,481	3,973	3,721	4,565	4,563	5,519	1,411	2,287	1,273	228	87	6,192	19,392	3,875
Females																
1971	28,761	437	1,779	4,340	4,008	3,441	3,241	5,231	1,715	2,765	1,443	261	97	6,938	15,540	6,282
1976	28,856	330	1,479	4,465	3,980	3,887	3,147	5,015	1,665	2,908	1,573	289	116	6,714	15,590	6,552
1981	28,946	356	1,327	3,963	4,423	3,975	3,365	4,829	1,559	2,931	1,756	..	..	6,104	16,134	6,708
1986	29,160	364	1,408	3,480	4,538	3,985	3,847	4,639	1,606	2,814	1,924	..	..	5,678	16,583	6,899
1991	29,566	387	1,505	3,487	4,021	4,466	3,968	4,769	1,498	2,795	1,987	472	210	5,709	16,894	6,963
1995	29,881	358	1,513	3,665	3,624	4,616	3,947	5,244	1,427	2,797	1,907	519	263	5,898	17,068	6,914
1996	29,948	350	1,484	3,699	3,565	4,615	4,020	5,312	1,418	2,748	1,941	523	274	5,893	17,152	6,903
1997	30,022	359	1,450	3,734	3,521	4,579	4,113	5,372	1,421	2,707	1,960	522	286	5,897	17,229	6,896
1998	30,108	349	1,440	3,756	3,503	4,511	4,211	5,433	1,438	2,674	1,968	525	301	5,900	17,302	6,906
1999	30,202	345	1,421	3,783	3,505	4,422	4,321	5,497	1,460	2,645	1,967	527	309	5,903	17,391	6,908
2000	30,297	334	1,409	3,774	3,525	4,334	4,442	5,564	1,473	2,630	1,964	531	317	5,884	17,498	6,914
England and Wales																
Persons																
1971	49,152	782	3,170	7,705	7,117	6,164	5,736	9,034	2,853	4,228	1,926	323	115	12,334	28,710	8,108
1976	49,459	585	2,642	7,967	7,077	6,979	5,608	8,707	2,777	4,540	2,093	351	135	11,973	28,894	8,593
1981	49,634	634	2,372	7,085	7,873	7,086	5,996	8,433	2,607	4,619	2,388	383	157	10,910	29,796	8,928
1986	50,162	655	2,528	6,243	8,134	7,088	6,863	8,136	2,725	4,470	2,673	465	184	10,190	30,759	9,213
1991	51,100	702	2,728	6,281	7,237	8,008	7,056	8,407	2,553	4,506	2,810	576	233	10,303	31,351	9,446
1995	51,820	649	2,739	6,613	6,521	8,329	7,003	9,272	2,458	4,554	2,734	651	297	10,653	31,676	9,491
1996	52,010	636	2,688	6,683	6,411	8,342	7,146	9,397	2,447	4,490	2,800	658	311	10,655	31,851	9,505
1997	52,211	651	2,632	6,751	6,332	8,290	7,325	9,503	2,456	4,440	2,844	661	327	10,672	32,018	9,522
1998	52,428	633	2,615	6,793	6,303	8,177	7,515	9,613	2,490	4,400	2,871	669	348	10,682	32,192	9,554
1999	52,690	628	2,581	6,847	6,318	8,034	7,734	9,730	2,529	4,367	2,885	676	360	10,694	32,421	9,574
2000	52,943	609	2,559	6,837	6,366	7,896	7,970	9,847	2,551	4,356	2,898	684	371	10,668	32,669	9,607
Males																
1971	23,897	402	1,626	3,957	3,615	3,129	2,891	4,414	1,337	1,778	637	86	26	6,334	15,036	2,527
1976	24,089	300	1,358	4,091	3,610	3,532	2,843	4,280	1,304	1,963	690	91	29	6,148	15,169	2,773
1981	24,160	324	1,218	3,639	4,011	3,569	3,024	4,178	1,227	2,020	825	94	32	5,601	15,589	2,970
1986	24,456	336	1,297	3,211	4,156	3,579	3,445	4,053	1,302	1,972	954	115	35	5,236	16,143	3,076
1991	24,995	360	1,401	3,231	3,710	4,065	3,539	4,199	1,234	2,027	1,035	151	43	5,296	16,442	3,257
1995	25,433	333	1,403	3,394	3,348	4,252	3,523	4,626	1,204	2,078	1,032	183	57	5,465	16,619	3,349
1996	25,557	327	1,378	3,430	3,291	4,265	3,602	4,689	1,201	2,059	1,066	188	61	5,466	16,716	3,375
1997	25,684	334	1,350	3,463	3,249	4,243	3,700	4,740	1,206	2,048	1,094	192	66	5,475	16,810	3,399
1998	25,817	324	1,342	3,484	3,233	4,190	3,803	4,795	1,224	2,040	1,113	197	72	5,479	16,915	3,422
1999	25,985	322	1,323	3,511	3,244	4,123	3,923	4,854	1,243	2,034	1,129	202	76	5,484	17,060	3,441
2000	26,142	312	1,311	3,507	3,271	4,059	4,050	4,911	1,253	2,036	1,145	206	80	5,471	17,204	3,468
Females																
1971	25,255	380	1,544	3,749	3,502	3,036	2,845	4,620	1,516	2,450	1,289	236	89	6,000	13,673	5,581
1976	25,370	285	1,284	3,876	3,467	3,447	2,765	4,428	1,473	2,577	1,403	261	106	5,826	13,725	5,820
1981	25,474	310	1,154	3,446	3,863	3,517	2,972	4,255	1,380	2,599	1,564	289	126	5,309	14,207	5,958
1986	25,706	319	1,231	3,032	3,978	3,509	3,418	4,083	1,422	2,498	1,718	349	149	4,953	14,616	6,137
1991	26,104	342	1,328	3,050	3,527	3,943	3,517	4,208	1,319	2,479	1,775	425	191	5,007	14,908	6,189
1995	26,387	316	1,335	3,219	3,172	4,076	3,480	4,646	1,254	2,477	1,702	468	240	5,188	15,058	6,141
1996	26,453	310	1,310	3,253	3,120	4,077	3,544	4,709	1,246	2,430	1,733	471	250	5,188	15,134	6,130
1997	26,527	317	1,282	3,287	3,083	4,046	3,625	4,763	1,250	2,392	1,750	470	262	5,196	15,208	6,123
1998	26,611	309	1,274	3,309	3,070	3,987	3,712	4,819	1,266	2,361	1,758	472	276	5,203	15,277	6,132
1999	26,705	306	1,258	3,336	3,074	3,911	3,811	4,876	1,286	2,334	1,756	474	284	5,210	15,361	6,133
2000	26,801	297	1,248	3,300	3,094	3,837	3,920	4,936	1,298	2,320	1,753	477	291	5,197	15,465	6,139

.. Figures not available.

Table 1.4 continued Population: age and sex

Constituent countries of the United Kingdom Numbers (thousands)

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
England Persons																
1971	46,412	739	2,996	7,272	6,731	5,840	5,421	8,515	2,690	3,976	1,816	306	109	11,648	27,128	7,636
1976	46,660	551	2,491	7,513	6,688	6,599	5,298	8,199	2,616	4,274	1,972	332	127	11,293	27,275	8,092
1981	46,821	598	2,235	6,678	7,440	6,703	5,663	7,948	2,449	4,347	2,249	362	149	10,285	28,133	8,403
1986	47,342	618	2,385	5,885	7,692	6,717	6,484	7,672	2,559	4,199	2,518	438	174	9,608	29,070	8,665
1991	48,208	663	2,574	5,916	6,840	7,599	6,665	7,920	2,399	4,222	2,645	543	220	9,711	29,627	8,870
1995	48,903	615	2,589	6,231	6,158	7,909	6,622	8,738	2,310	4,270	2,568	613	280	10,048	29,946	8,909
1996	49,089	603	2,543	6,298	6,054	7,922	6,761	8,856	2,299	4,210	2,629	620	293	10,053	30,114	8,922
1997	49,284	616	2,490	6,364	5,980	7,873	6,933	8,956	2,308	4,164	2,670	623	308	10,071	30,275	8,939
1998	49,495	599	2,475	6,406	5,954	7,765	7,117	9,060	2,340	4,127	2,694	630	327	10,083	30,443	8,968
1999	49,753	595	2,443	6,459	5,965	7,634	7,329	9,169	2,378	4,098	2,707	637	339	10,097	30,665	8,990
2000	49,997	578	2,422	6,451	6,006	7,506	7,556	9,280	2,398	4,088	2,719	644	349	10,074	30,902	9,021
Males																
1971	22,569	380	1,537	3,734	3,421	2,965	2,733	4,161	1,261	1,671	599	107	25	5,982	14,209	2,377
1976	22,728	283	1,280	3,858	3,413	3,339	2,686	4,031	1,228	1,849	649	85	27	5,798	14,320	2,610
1981	22,795	306	1,147	3,430	3,377	2,856	3,938	1,154	1,902	777	89	30	30	5,280	14,717	2,798
1986	23,086	317	1,224	3,026	3,931	3,392	3,255	3,822	1,224	1,853	900	109	33	4,937	15,254	2,895
1991	23,588	340	1,322	3,043	3,507	3,859	3,344	3,957	1,159	1,900	975	143	41	4,991	15,539	3,058
1995	24,008	315	1,327	3,198	3,160	4,039	3,333	4,360	1,132	1,948	969	173	54	5,155	15,709	3,144
1996	24,129	309	1,304	3,233	3,106	4,051	3,410	4,420	1,129	1,931	1,002	177	58	5,158	15,803	3,167
1997	24,251	316	1,278	3,265	3,067	4,030	3,504	4,468	1,134	1,921	1,027	181	62	5,168	15,893	3,191
1998	24,378	307	1,270	3,285	3,052	3,978	3,603	4,519	1,151	1,913	1,045	186	68	5,172	15,994	3,212
1999	24,543	305	1,252	3,312	3,061	3,918	3,720	4,575	1,169	1,908	1,060	191	72	5,178	16,134	3,231
2000	24,697	296	1,241	3,310	3,087	3,859	3,842	4,630	1,178	1,911	1,074	195	75	5,167	16,275	3,256
Females																
1971	23,843	359	1,459	3,538	3,310	2,875	2,688	4,354	1,429	2,305	1,217	309	85	5,666	12,918	5,259
1976	23,932	269	1,211	3,656	3,275	3,260	2,612	4,168	1,387	2,425	1,323	246	100	5,495	14,968	5,481
1981	24,026	292	1,088	3,248	3,650	3,327	2,807	4,009	1,295	2,445	1,472	273	119	5,004	13,416	5,605
1986	24,257	301	1,161	2,859	3,761	3,325	3,229	3,850	1,335	2,346	1,618	330	141	4,671	13,816	5,770
1991	24,620	324	1,253	2,873	3,333	3,739	3,322	3,964	1,239	2,323	1,670	400	179	4,720	14,088	5,812
1995	24,896	300	1,262	3,033	2,998	3,871	3,289	4,378	1,178	2,322	1,598	441	226	4,893	14,237	5,765
1996	24,960	293	1,239	3,065	2,948	3,872	3,351	4,437	1,170	2,279	1,627	443	235	4,894	14,311	5,755
1997	25,033	300	1,213	3,099	2,913	3,843	3,429	4,488	1,174	2,244	1,643	442	246	4,903	14,382	5,748
1998	25,117	292	1,205	3,120	2,902	3,787	3,514	4,540	1,189	2,214	1,649	444	260	4,911	14,450	5,756
1999	25,210	290	1,191	3,146	2,904	3,716	3,609	4,594	1,209	2,190	1,647	446	267	4,919	14,531	5,760
2000	25,300	282	1,181	3,142	2,919	3,647	3,714	4,651	1,221	2,177	1,644	450	274	4,908	14,627	5,765
Wales Persons																
1971	2,740	43	173	433	386	325	315	519	164	252	110	16	6	686	1,582	472
1976	2,799	33	151	453	388	379	309	509	161	267	121	19	7	680	1,618	501
1981	2,813	36	136	407	434	383	333	485	158	272	139	21	8	626	1,663	525
1986	2,820	37	143	358	441	371	378	464	166	271	155	26	10	582	1,690	548
1991	2,891	39	154	365	397	409	391	486	154	284	165	33	13	592	1,724	576
1995	2,917	35	149	383	363	420	380	534	148	284	166	37	17	605	1,730	581
1996	2,921	34	145	385	357	420	385	541	148	280	171	38	18	602	1,737	580
1997	2,927	35	141	387	352	417	392	547	148	276	174	39	19	601	1,743	583
1998	2,933	34	140	388	349	413	398	553	150	273	177	39	20	599	1,749	585
1999	2,937	33	138	388	353	400	405	561	151	269	178	39	21	597	1,756	584
2000	2,946	31	137	385	360	390	415	567	153	268	179	40	22	593	1,767	586
Males																
1971	1,329	22	89	222	194	164	158	253	76	107	38	6	1	352	827	150
1976	1,361	17	78	233	197	193	157	249	75	114	41	5	2	350	849	162
1981	1,365	18	70	209	221	193	168	240	73	118	48	5	2	321	871	173
1986	1,370	19	73	185	225	187	190	231	79	119	54	7	2	300	889	181
1991	1,407	20	79	188	203	206	195	242	74	128	60	8	2	305	904	199
1995	1,425	18	76	196	188	214	190	266	72	130	62	10	4	310	910	206
1996	1,428	17	74	197	185	214	192	269	72	128	65	10	4	308	913	207
1997	1,433	18	72	198	182	214	196	272	72	127	67	11	4	308	917	208
1998	1,439	17	72	199	181	212	199	275	73	126	68	11	4	307	922	210
1999	1,442	17	71	199	183	206	203	279	74	125	69	12	4	306	926	210
2000	1,445	16	70	197	185	200	208	282	75	125	71	12	4	304	929	212
Females																
1971	1,412	21	85	211	191	161	157	265	88	146	73	16	4	335	755	322
1976	1,438	16	73	220	191	187	153	260	86	152	80	14	6	330	770	339
1981	1,448	18	66	199	213	190	165	246	85	154	91	16	6	305	791	352
1986	1,450	18	70	173	217	184	188	233	87	152	101	20	8	282	800	367
1991	1,484	19	75	177	194	203	195	244	80	156	105	25	11	288	820	377
1995	1,491	17	73	187	175	206	190	268	76	154	104	27	14	295	820	376
1996	1,493	16	71	188	172	206	193	272	76	151	106	28	15	294	824	375
1997	1,494	17	69	189	170	204	196	275	76	148	107	28	15	293	826	375
1998	1,495	16	68	189	168	201	198	278	76	147	109	28	16	292	827	375
1999	1,495	16	67	189	170	195	202	282	77	144	109	27	17	291	831	374
2000	1,501	15	67	188	175	190	207	285	77	143	109	28	17	290	838	374

**Table 1.4
continued****Population: age and sex**

Constituent countries of the United Kingdom

Numbers (thousands)

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
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
1999	5,119	57	238	651	641	771	776	942	259	440	262	58	25	1,008	3,190	921
2000	5,115	54	234	648	641	747	792	952	259	440	264	58	25	1,001	3,190	924
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
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
1999	2,486	29	122	333	327	388	386	462	123	196	98	16	5	516	1,654	315
2000	2,485	28	120	332	327	376	394	467	123	197	99	17	6	512	1,654	318
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
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
1999	2,634	28	116	318	314	383	390	480	136	244	165	41	20	492	1,536	606
2000	2,630	26	114	316	314	370	398	485	137	243	165	42	20	488	1,536	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
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
1999	1,692	23	97	265	241	259	236	279	72	122	75	16	7	411	1,022	258
2000	1,698	22	96	263	240	256	242	283	73	122	75	16	8	408	1,031	259
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
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
1999	829	12	50	136	124	131	116	137	35	54	28	5	2	211	529	89
2000	832	12	49	135	123	130	119	140	35	54	29	5	2	209	533	89
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
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
1999	863	11	47	129	117	128	120	141	38	68	46	12	6	201	493	169
2000	866	11	47	128	117	126	124	143	38	68	46	12	6	199	497	170

Table 1.5 Population: age, sex and legal marital status

England and Wales		Numbers (thousands)									
Mid-year	Total population	Males					Females				
		Single	Married	Divorced	Widowed	Total	Single	Married	Divorced	Widowed	Total
Aged											
16 and over											
1971	36,818	4,173	12,522	187	682	17,563	3,583	12,566	296	2,810	19,255
1976	37,486	4,369	12,511	376	686	17,941	3,597	12,538	533	2,877	19,545
1981	38,724	5,013	12,238	611	698	18,559	4,114	12,284	828	2,939	20,165
1986	39,887	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
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	11,185	1,659	725	20,338	5,415	11,244	1,940	2,808	21,408
1999	41,996	6,936	11,128	1,716	721	20,501	5,539	11,185	2,001	2,771	21,495
2000 ¹	42,275	7,109	11,074	1,770	718	20,672	5,667	11,136	2,063	2,737	21,604
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
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
1999	2,595	1,332	2	0	0	1,334	1,250	11	0	0	1,261
2000	2,571	1,322	2	0	0	1,324	1,237	9	0	0	1,246
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
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
1999	3,085	1,511	68	3	0	1,582	1,328	165	9	0	1,503
2000	3,132	1,541	63	2	0	1,606	1,363	154	8	0	1,525
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
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
1999	3,774	1,426	469	45	0	1,941	1,062	686	84	2	1,833
2000 ¹	3,685	1,429	426	39	0	1,895	1,080	632	75	2	1,790

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

1. There was an error in the mid-2000 marital status estimates by gender that were published in this table in PT 106. The error was due to the incorrect use of deaths data by gender in the processing. Total populations including totals by gender and the estimates of the number of single and divorced people are not affected by the error. There is an apparent difference in single females aged 25-29 but this is small and is purely due to rounding of the recompiled estimates by marital status. The figures supplied in this table are now correct.

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

England and Wales

Numbers (thousands)

Mid-year	Total population	Males					Females				
		Single	Married	Divorced	Widowed	Total	Single	Married	Divorced	Widowed	Total
30-34											
1971	2,897	206	1,244	23	3	1,475	111	1,269	34	8	1,422
1976	3,220	236	1,338	55	3	1,632	118	1,388	75	8	1,588
1981	3,715	318	1,451	97	3	1,869	165	1,544	129	9	1,846
1986	3,341	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
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
1999	4,260	976	1,041	163	2	2,182	652	1,205	216	5	2,078
2000 ¹	4,211	1,016	993	153	2	2,164	675	1,158	209	5	2,047
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
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
1999	7,734	890	2,483	537	14	3,923	570	2,634	579	27	3,811
2000 ¹	7,970	981	2,503	552	14	4,050	635	2,659	600	27	3,920
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
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
1999	12,259	560	4,618	802	117	6,097	340	4,554	875	392	6,162
2000 ¹	12,398	579	4,621	846	117	6,164	353	4,577	920	384	6,234
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
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
1999	8,288	241	2,446	166	587	3,441	336	1,930	237	2,344	4,847
2000 ¹	8,308	240	2,466	177	585	3,468	324	1,948	251	2,318	4,841

See note opposite.

Table 2.1 Vital statistics summary

Constituent countries of the United Kingdom																Numbers (thousands) and rates	
Year and quarter	All live births		Live births outside marriage		Marriages		Divorces		Deaths		Infant mortality ⁵		Neonatal mortality ⁶		Perinatal mortality ⁷		
	Number	Rate ¹	Number	Rate ²	Number	Rate ³	Number	Rate ⁴	Number	Rate ¹	Number	Rate ²	Number	Rate ³	Number	Rate ⁸	
United Kingdom																	
1976	675.5	12.0	61.1	90	406.0	..	135.4	..	680.8	12.1	9.79	14.5	6.68	9.9	12.3	18.0	
1981	730.7	13.0	91.3	125	397.8	49.4	156.4	11.3	658.0	11.7	8.16	11.2	4.93	6.7	8.79	12.0	
1986	754.8	13.3	154.3	204	393.9	43.5	168.2	12.5	660.7	11.6	7.18	9.5	4.00	5.3	7.31	9.6	
1991	792.3	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	
1996	733.2	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	726.6	12.3	267.0	368	310.2	..	161.1	..	629.7	10.7	4.25	5.9	2.81	3.9	6.06	8.3	
1998	716.9	12.1	269.7	376	304.8	..	160.1	..	629.2	10.6	4.08	5.7	2.72	3.8	5.94	8.2	
1999	700.0	11.8	271.6	388	301.1	..	158.7	..	632.1	10.6	4.05	5.8	2.73	3.9	5.79	8.2	
2000	679.0	11.4	268.1	395	305.9 ^P	..	154.6 ^P	..	608.4	10.2	3.79	5.6	2.63	3.9	5.56	8.1	
2001	669.1 ^P	11.2 ^P	268.0 ^P	401 ^P	..	..	..	..	604.4 ^P	10.1 ^P	3.69 ^P	5.5 ^P	2.44 ^P	3.7 ^P	5.39 ^P	8.0 ^P
2000 March	168.2	11.3	66.7	397	35.9 ^P	..	39.9 ^P	..	176.8	11.9	0.97	5.7	0.67	4.0	1.43	8.4	
June	169.2	11.4	65.1	385	84.7 ^P	..	39.4 ^P	..	142.4	9.6	0.94	5.5	0.64	3.8	1.35	7.9	
Sept	173.8	11.6	69.2	398	132.5 ^P	..	37.6 ^P	..	136.1	9.1	0.96	5.5	0.69	4.0	1.43	8.2	
Dec	167.8	11.2	67.1	400	52.9 ^P	..	37.4 ^P	..	153.1	10.2	0.93	5.5	0.63	3.7	1.36	8.1	
2001 March	164.9 ^P	11.2 ^P	65.9 ^P	400 ^P	..	..	..	..	167.6 ^P	11.4 ^P	0.96 ^P	5.8 ^P	0.63 ^P	3.8 ^P	1.37 ^P	8.2 ^P
June	167.0 ^P	11.2 ^P	65.2 ^P	391 ^P	..	..	..	..	146.3 ^P	9.8 ^P	0.87 ^P	5.2 ^P	0.59 ^P	3.5 ^P	1.34 ^P	8.0 ^P
Sept	171.7 ^P	11.4 ^P	69.2 ^P	403 ^P	..	..	..	..	137.6 ^P	9.1 ^P	0.91 ^P	5.3 ^P	0.62 ^P	3.6 ^P	1.31 ^P	7.6 ^P
Dec	165.6 ^P	11.0 ^P	67.7 ^P	409 ^P	..	..	..	..	152.8 ^P	10.1 ^P	0.94 ^P	5.7 ^P	0.61 ^P	3.7 ^P	1.38 ^P	8.3 ^P
2002 March	159.8 ^P	10.8 ^P	64.8 ^P	406 ^P	..	..	..	..	164.0 ^P	11.1 ^P	0.89 ^P	5.5 ^P	0.58 ^P	3.7 ^P	1.35 ^P	8.4 ^P
England and Wales																	
1976	584.3	11.8	53.8	92	358.6	57.7	126.7	10.1	598.5	12.1	8.34	14.3	5.66	9.7	10.5	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	
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	12.1	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	263.5	26.8	144.6	13.0	556.1	10.6	3.62	5.8	2.44	3.9	5.14	8.2	
2000	604.4	11.4	238.6	395	268.0 ^P	26.7 ^P	141.1 ^P	12.7 ^P	535.7	10.1	3.38	5.6	2.34	3.9	4.96	8.2	
2001	594.6 ^P	11.2 ^P	238.1 ^P	400 ^P	..	..	..	..	532.5 ^P	10.1 ^P	3.27 ^P	5.5 ^P	2.15 ^P	3.6 ^P	4.76 ^P	8.0 ^P
2000 March	148.7	11.3	59.0	397	31.5 ^P	12.6 ^P	36.5 ^P	13.3 ^P	155.3	11.8	0.85	5.7	0.59	3.9	1.27	8.5	
June	150.7	11.4	57.9	385	74.1 ^P	29.7 ^P	35.8 ^P	12.9 ^P	125.2	9.5	0.83	5.5	0.57	3.8	1.20	7.9	
Sept	155.0	11.6	61.7	398	116.7 ^P	46.3 ^P	34.4 ^P	12.3 ^P	119.9	9.0	0.86	5.5	0.62	4.0	1.27	8.1	
Dec	150.1	11.3	60.1	400	45.6 ^P	18.1 ^P	34.4 ^P	12.3 ^P	135.3	10.2	0.83	5.6	0.56	3.7	1.22	8.1	
2001 March	145.5 ^P	11.1 ^P	58.0 ^P	398 ^P	28.8 ^P	11.6 ^P	35.9 ^P	13.1 ^P	147.7 ^P	11.3 ^P	0.83 ^P	5.7 ^P	0.53 ^P	3.7 ^P	1.18 ^P	8.1 ^P	
June	148.8 ^P	11.3 ^P	58.1 ^P	391 ^P	70.6 ^P	28.2 ^P	35.7 ^P	12.9 ^P	129.0 ^P	9.8 ^P	0.77 ^P	5.2 ^P	0.51 ^P	3.4 ^P	1.18 ^P	7.9 ^P	
Sept	153.0 ^P	11.5 ^P	61.8 ^P	404 ^P	103.3 ^P	40.8 ^P	35.3 ^P	12.6 ^P	121.0 ^P	9.1 ^P	0.83 ^P	5.4 ^P	0.56 ^P	3.6 ^P	1.17 ^P	7.6 ^P	
Dec	147.4 ^P	11.0 ^P	60.2 ^P	409 ^P	..	..	33.0 ^P	11.8 ^P	134.8 ^P	10.1 ^P	0.85 ^P	5.7 ^P	0.55 ^P	3.7 ^P	1.22 ^P	8.2 ^P
2002 March	142.9 ^P	10.9 ^P	57.7 ^P	404.1 ^P	..	..	..	..	144.8 ^P	11.1 ^P	0.82 ^P	5.7 ^P	0.54 ^P	3.8 ^P	1.13 ^P	8.5 ^P
England																	
1976	550.4	11.8	50.8	92	339.0	..	..	..	560.3	12.0	7.83	14.2	5.32	9.7	9.81	17.6
1981	598.2	12.8	76.9	129	332.2	..	..	..	541.0	11.6	6.50	10.9	3.93	6.6	7.04	11.7
1986	623.6	13.2	133.5	214	328.4	..	146.0	..	544.5	11.5	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	
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	226.7	385	249.5	..	137.1	..	519.6	10.4	3.38	5.7	2.29	3.9	4.86	8.2	
2000	572.8	11.5	223.8	391	253.8 ^P	..	134.0 ^P	..	501.0	10.0	3.18	5.6	2.21	3.9	4.69	8.2	
2001	563.7 ^P	11.3 ^P	223.3 ^P	396 ^P	..	..	..	..	497.9 ^P	10.0 ^P	3.06 ^P	5.4 ^P	2.03 ^P	3.6 ^P	4.51 ^P	8.0 ^P
2000 March	140.8	11.3	55.3	393	29.9 ^P	..	34.5	..	145.4	11.7	0.80	5.7	0.57	3.9	1.20	8.5	
June	142.9	11.5	54.5	381	70.3 ^P	..	34.0 ^P	..	117.0	8.9	0.79	5.5	0.54	3.8	1.14	7.9	
Sept	146.8	11.7	57.8	394	110.3 ^P	..	32.7 ^P	..	111.9	8.4	0.80	5.4	0.58	3.9	1.19	8.1	
Dec	142.3	11.3	56.3	395	43.4 ^P	..	32.8 ^P	..	126.6	9.5	0.79	5.6	0.54	3.8	1.16	8.1	
2001 March	137.8 ^P	11.2 ^P	54.3 ^P	394 ^P	27.4 ^P	..	34.0 ^P	..	138.1 ^P	11.2 ^P	0.78 ^P	5.6 ^P	0.51 ^P	3.7 ^P	1.11 ^P	8.0 ^P	
June	141.1 ^P	11.3 ^P	54.5 ^P	386 ^P	66.8 ^P	..	33.9 ^P	..	120.5 ^P	9.7 ^P	0.73 ^P	5.2 ^P	0.49 ^P	3.4 ^P	1.12 ^P	7.9 ^P	
Sept	145.1 ^P	11.5 ^P	58.0 ^P	400 ^P	97.6 ^P	..	33.5 ^P	..	113.2 ^P	9.0 ^P	0.77 ^P	5.4 ^P	0.53 ^P	3.7 ^P	1.11 ^P	7.7 ^P	
Dec	139.6 ^P	11.1 ^P	56.4 ^P	404 ^P	..	..	31.2 ^P	..	126.0 ^P	10.0 ^P	0.78 ^P	5.6 ^P	0.51 ^P	3.7 ^P	1.16 ^P	8.3 ^P
2002 March	135.5 ^P	11.0 ^P	54.1 ^P	399.5 ^P	..	..	..	..	135.6 ^P	11.0 ^P	0.74 ^P	5.7 ^P	0.52 ^P	3.8 ^P	1.18 ^P	8.6 ^P

Notes: 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. 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.

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. From 1981 births to non-resident mothers in Northern Ireland are excluded from the figures for Northern Ireland, and for the United Kingdom. Figures may not add exactly due to rounding.

Table 2.1
continued
Vital statistics summary

Constituent countries of the United Kingdom

Numbers (thousands) and rates

Year and quarter	All live births		Live births outside marriage		Marriages		Divorces		Deaths		Infant mortality ⁵		Neonatal mortality ⁶		Perinatal mortality ⁷	
	Number	Rate ¹	Number	Rate ²	Number	Rate ³	Number	Rate ⁴	Number	Rate ¹	Number	Rate ²	Number	Rate ³	Number	Rate ⁸
Wales																
1976	33.4	11.9	2.9	86	19.5	..	..	..	36.3	13.0	0.46	13.7	0.32	9.6	0.64	19.0
1981	35.8	12.7	4.0	112	19.8	..	..	..	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
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	14.0	..	7.4	..	35.0	11.9	0.20	6.1	0.13	4.0	0.25	7.7
2000	31.3	10.6	14.8	472	14.1 ^p	..	7.1 ^p	..	33.3	11.3	0.17	5.3	0.11	3.5	0.23	7.2
2001	30.6 ^p	10.4 ^p	14.8 ^p	483 ^p	..	..	..	..	33.2 ^p	11.3 ^p	0.17 ^p	5.5 ^p	0.11 ^p	3.4 ^p	0.23 ^p	7.5 ^p
2000 March	7.8	10.7	3.7	470	1.6 ^p	..	1.9 ^p	..	9.6	13.1	0.04	5.6	0.03	3.8	0.06	8.0
June	7.7	10.5	3.5	452	3.9 ^p	..	1.8 ^p	..	7.9	10.8	0.04	4.9	0.03	3.3	0.05	6.9
Sept	8.1	10.9	3.9	478	6.4 ^p	..	1.7 ^p	..	7.5	10.1	0.05	6.2	0.04	4.3	0.06	7.8
Dec	7.7	10.4	3.8	486	2.2 ^p	..	1.7 ^p	..	8.3	11.2	0.03	4.3	0.02	2.6	0.05	6.3
2001 March	7.7 ^p	10.6 ^p	3.7 ^p	477 ^p	1.4 ^p	..	1.9 ^p	..	9.3 ^p	12.7 ^p	0.05 ^p	5.8 ^p	0.03 ^p	3.4 ^p	0.06 ^p	7.9 ^p
June	7.5 ^p	10.2 ^p	3.6 ^p	473 ^p	3.8 ^p	..	1.8 ^p	..	8.1 ^p	11.1 ^p	0.04 ^p	4.9 ^p	0.03 ^p	3.3 ^p	0.06 ^p	7.8 ^p
Sept	7.7 ^p	10.4 ^p	3.7 ^p	481 ^p	5.7 ^p	..	1.8 ^p	..	7.4 ^p	10.0 ^p	0.04 ^p	5.3 ^p	0.02 ^p	3.0 ^p	0.05 ^p	6.6 ^p
Dec	7.7 ^p	10.3 ^p	3.8 ^p	499 ^p	..	..	1.7 ^p	..	8.4 ^p	11.3 ^p	0.05 ^p	6.0 ^p	0.03 ^p	4.0 ^p	0.06 ^p	7.8 ^p
2002 March	7.3 ^p	10.1 ^p	3.6 ^p	491 ^p	..	..	..	..	8.9 ^p	12.3 ^p	0.03 ^p	4.5 ^p	0.02 ^p	2.6 ^p	0.05 ^p	6.1 ^p
Scotland																
1976	64.9	12.5	6.0	93	37.5	53.8	8.1	6.5	65.3	12.5	0.96	14.8	0.67	10.3	1.20	18.3
1981	69.1	13.4	8.5	122	36.2	47.5	9.9	8.0	63.8	12.3	0.78	11.3	0.47	6.9	0.81	11.6
1986	65.8	12.9	13.6	206	35.8	42.8	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	4.6	0.58	8.6
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	29.9	31.1	11.9	10.8	60.3	11.8	0.28	5.0	0.18	3.3	0.42	7.6
2000	53.1	10.4	22.6	426	30.4	29.5	11.1 ^p	10.3 ^p	57.8	11.3	0.31	5.7	0.21	4.0	0.45	8.4
2001	52.5 ^p	10.3 ^p	22.8 ^p	433 ^p	..	..	..	..	57.4 ^p	11.2 ^p	0.29 ^p	5.5 ^p	0.20 ^p	3.8 ^p	0.45 ^p	8.5 ^p
2000 March	13.7	10.8	5.9	433	3.6	14.0	2.9	10.7	17.2	13.5	0.09	6.3	0.06	4.2	0.11	8.1
June	13.2	10.4	5.5	418	8.4	32.8	3.0	11.0	13.7	10.7	0.07	5.5	0.05	3.8	0.11	8.5
Sept	13.4	10.4	5.7	427	12.4	47.9	2.7	9.9	12.9	10.1	0.08	5.7	0.06	4.1	0.12	8.8
Dec	12.8	10.0	5.5	427	6.0	23.2	2.6	9.7	14.0	10.9	0.07	5.4	0.05	3.8	0.11	8.2
2001 March	13.5 ^p	10.7 ^p	6.0 ^p	445 ^p	3.4 ^p	13.6 ^p	2.6 ^p	9.9 ^p	15.8 ^p	12.5 ^p	0.09 ^p	6.4 ^p	0.06 ^p	4.5 ^p	0.13 ^p	9.6 ^p
June	12.9 ^p	10.1 ^p	5.4 ^p	422 ^p	8.2 ^p	32.7 ^p	2.7 ^p	9.9 ^p	13.8 ^p	10.8 ^p	0.07 ^p	5.7 ^p	0.06 ^p	4.3 ^p	0.11 ^p	8.8 ^p
Sept	13.2 ^p	10.2 ^p	5.6 ^p	427 ^p	11.9 ^p	46.5 ^p	2.6 ^p	9.4 ^p	13.3 ^p	10.3 ^p	0.07 ^p	4.9 ^p	0.04 ^p	3.3 ^p	0.10 ^p	7.3 ^p
Dec	12.9 ^p	10.0 ^p	5.7 ^p	439 ^p	6.1 ^p	24.0 ^p	2.7 ^p	10.0 ^p	14.6 ^p	11.3 ^p	0.06 ^p	4.8 ^p	0.03 ^p	2.6 ^p	0.11 ^p	8.1 ^p
2002 March	12.4 ^p	9.8 ^p	5.5 ^p	447 ^p	3.5 ^p	13.6 ^p	2.4 ^p	9.0 ^p	15.3 ^p	12.1 ^p	0.05 ^p	4.0 ^p	0.03 ^p	2.0 ^p	0.09 ^p	7.0 ^p
Northern Ireland																
1976	26.4	17.3	1.3	50	9.9	..	0.6	..	17.0	11.2	0.48	18.3	0.35	13.3	0.59	22.3
1981	27.2	17.0	1.9	69	9.6	45.4	1.4	4.2	16.3	10.6	0.36	13.2	0.23	8.3	0.42	15.3
1986	28.0	17.8	3.6	127	10.2	..	1.5	..	16.1	10.3	0.36	13.2	0.23	8.3	0.42	15.3
1991	26.0	16.2	5.3	203	9.2	37.7	2.3	6.8	15.1	9.4	0.19	7.4	0.12	4.6	0.22	8.4
1996	24.4	14.6	6.3	260	8.3	..	2.3	..	15.2	9.1	0.14	5.8	0.09	3.7	0.23	9.4
1997	24.1	14.3	6.4	266	8.1	..	2.2	..	15.0	9.0	0.14	5.6	0.10	4.2	0.21	8.6
1998	23.7	14.0	6.7	284	7.8	..	2.5	..	15.0	8.9	0.13	5.6	0.09	3.9	0.20	8.1
1999	23.0	13.6	7.0	303	7.6	..	2.3	..	15.7	9.3	0.15	6.4	0.11	4.8	0.23	10.0
2000	21.5	12.7	6.8	318	7.6	..	2.4	..	14.9	8.8	0.11	5.1	0.08	3.8	0.15	7.3
2001	22.0 ^p	12.9 ^p	7.1 ^p	325 ^p	..	..	..	..	14.5 ^p	8.5 ^p	0.13 ^p	6.1 ^p	0.08 ^p	4.5 ^p	0.19 ^p	8.4 ^p
2000 March	5.8	13.7	1.8	319	0.8	..	0.6	..	4.3	10.2	0.03	4.5	0.02	3.8	0.04	7.6
June	5.3	12.6	1.6	308	2.1	..	0.7	..	3.5	8.3	0.03	5.3	0.02	4.1	0.04	7.3
Sept	5.5	12.7	1.8	326	3.4	..	0.5	..	3.3	7.7	0.03	5.3	0.02	3.9	0.04	7.5
Dec	5.0	11.6	1.6	316	1.3	..	0.5	..	3.8	8.9	0.03	5.2	0.02	3.4	0.03	6.6
2001 March	5.8 ^p	13.8 ^p	1.9 ^p	332 ^p	..	..	..	..	4.1 ^p	9.8 ^p	0.05 ^p	8.5 ^p	0.03 ^p	5.9 ^p	0.06 ^p	9.8 ^p
June	5.3 ^p	12.6 ^p	1.7 ^p	312 ^p	..	..	..	..	3.6 ^p	8.4 ^p	0.03 ^p	5.4 ^p	0.02 ^p	3.9 ^p	0.04 ^p	7.4 ^p
Sept	5.6 ^p	13.0 ^p	1.8 ^p	317 ^p	..	..	..	..	3.3 ^p	7.8 ^p	0.02 ^p	4.0 ^p	0.02 ^p	2.9 ^p	0.04 ^p	7.4 ^p
Dec	5.3 ^p	12.3 ^p	1.8 ^p	341 ^p	..	..	..	..	3.5 ^p	8.2 ^p	0.03 ^p	6.5 ^p	0.03 ^p	5.1 ^p	0.05 ^p	9.1 ^p
2002 March	4.6 ^p	10.9 ^p	1.9 ^p	336 ^p	..	..	..	..	3.9 ^p	9.2 ^p	0.02 ^p	5.3 ^p	0.02 ^p	4.2 ^p	0.04 ^p	9.1 ^p

1 Per 1,000 population of all ages.
 2 Per 1,000 live births.
 3 Persons marrying per 1,000 unmarried population 16 and over.
 4 Persons divorcing per 1,000 married population.
 5 Deaths under 1 year.
 6 Deaths under 4 weeks.
 7 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.
 8 Per 1,000 live births and stillbirths.
 p Provisional.
 .. Figures not available.

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			Age-standardised mortality rate ⁴	Expectation of life (in years) at birth		Infant mortality rate ⁵
				Children ¹	Elderly ²	TFR ³	Outside marriage as percentage of total live births	Mean age of mother at birth (years)		Males	Females	
United Kingdom												
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	730.7	658.0	37.1	29.7	1.82	12.5	26.8	9,506	70.8	76.8	11.2
1986	56,858.5	754.8	660.7	33.5	29.6	1.78	21.4	27.0	8,897	71.9	77.7	9.5
1991	57,813.8	792.3	646.2	33.1	29.9	1.81	29.8	27.7	8,107	73.2	78.8	7.4
1996	58,807.2	733.2	636.0	33.8	29.8	1.72	35.5	28.6	7,522	74.3	79.5	6.1
1997	59,014.0	726.6	629.7	33.8	29.7	1.72	36.8	28.8	7,370	74.6	79.6	5.9
1998	59,237.0	716.9	629.2	33.6	29.6	1.71	37.6	28.9	7,290	74.8	79.8	5.7
1999	59,500.9	700.0	632.1	33.4	29.5	1.69	38.8	28.9	7,255	75.1 ^p	80.0 ^p	5.8
2000	59,755.7	679.0	608.4	..	..	1.64	39.5	29.1	6,913	..	..	5.6
2001	..	669.1 ^p	604.4 ^p	..	..	1.63 ^p	40.1 ^p	29.2 ^p	6,841 ^p	..	..	5.5 ^p
England												
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	72.2	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
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	608.2	519.1	33.6	29.8	1.72	36.7	28.8	7,190	74.9	79.9	5.9
1998	49,494.6	602.1	519.6	33.4	29.6	1.72	37.5	29.0	7,128	75.1	80.0	5.6
1999	49,752.9	589.5	519.6	33.3	29.5	1.69	38.5	29.0	7,062	75.4 ^p	80.2 ^p	5.7
2000	49,997.1	572.8	501.0	..	..	1.65	39.1	29.2	6,738	..	..	5.6
2001	..	563.7 ^p	497.9 ^p	..	..	1.63 ^p	39.6 ^p	29.3 ^p	6,668 ^p	..	..	5.4 ^p
Wales												
1976	2,799.3	33.4	36.3	42.0	30.9	1.78	8.7	26.0	10,858	..	..	13.7
1981	2,813.5	35.8	35.0	37.6	31.6	1.86	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	1.89	32.3	27.0	8,074	73.2	78.9	6.6
1996	2,921.1	34.9	34.6	35.1	33.6	1.82	41.2	27.8	7,664	74.0	79.2	5.6
1997	2,926.9	34.5	34.6	35.0	33.6	1.82	42.8	28.0	7,578	74.4	79.4	5.9
1998	2,933.3	33.4	34.0	34.7	33.5	1.79	44.4	28.0	7,366	74.5	79.5	5.6
1999	2,937.0	32.1	35.0	34.5	33.5	1.74	46.1	28.1	7,532	74.8 ^p	79.7 ^p	6.1
2000	2,946.2	31.3	33.3	..	..	1.70	47.2	28.2	7,071	..	..	5.3
2001	..	30.6 ^p	33.2 ^p	..	..	1.68 ^p	48.3 ^p	28.3 ^p	7,040 ^p	..	..	5.5 ^p
Scotland												
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	1.69	29.1	27.4	9,254	71.4	77.1	7.1
1996	5,128.0	59.3	60.7	32.6	28.6	1.55	36.0	28.5	8,868	72.2	77.8	6.2
1997	5,122.5	59.4	59.5	32.5	28.7	1.58	37.7	28.6	8,623	72.4	77.9	5.3
1998	5,120.0	57.3	59.2	32.3	28.7	1.55	39.0	28.8	8,533	72.6	78.1	5.5
1999	5,119.2	55.1	60.3	32.0	28.8	1.51	41.2	28.9	8,618	72.8 ^p	78.2 ^p	5.0
2000	5,114.6	53.1	57.8	..	..	1.47	42.6	29.0	8,217	..	..	5.7
2001	..	52.5 ^p	57.4 ^p	..	..	1.48 ^p	43.3 ^p	29.2 ^p	8,153 ^p	..	..	5.5 ^p
Northern Ireland⁶												
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	27.2	16.3	50.6	25.3	2.59	7.0	27.5	10,567	69.2	75.5	13.2
1986	1,573.5	28.0	16.1	46.5	24.7	2.44	12.8	27.5	10,071	70.9	77.1	10.2
1991	1,607.3	26.0	15.1	44.0	25.6	2.16	20.3	28.0	8,564	72.6	78.4	7.4
1996	1,669.1	24.4	15.2	42.9	25.2	1.95	26.0	28.8	8,057	73.8	79.2	5.8
1997	1,680.3	24.1	15.0	42.3	25.1	1.92	26.7	29.0	7,810	74.2	79.5	5.6
1998	1,688.6	23.7	15.0	41.6	24.9	1.89	28.5	29.0	7,438	74.3	79.5	5.6
1999	1,691.8	23.0	15.7	40.8	25.0	1.85	30.3	29.0	7,672	74.5 ^p	79.6 ^p	6.4
2000	1,697.8	21.5	14.9	..	..	1.74	31.8	29.2	7,242	..	..	5.1
2001	..	22.0 ^p	14.5 ^p	..	..	1.79 ^p	32.5 ^p	29.4 ^p	7,027 ^p	..	..	6.1 ^p

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

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.

From 1981 births to non-resident mothers in Northern Ireland are excluded from the figures for Northern Ireland, and the United Kingdom.

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

3 TFR (total fertility rate) is the number of children that would be born to a woman if current patterns of fertility persisted throughout her childbearing life. It is sometimes called the TPF (total period fertility rate).

4 Per million population. The age-standardised mortality rate makes allowances for changes in the age structure of the population. See Notes to tables.

5 Deaths under one year, per 1,000 live births.

6 Northern Ireland data have been revised to take account of changed Northern Ireland population estimates from 1981.

p Provisional.

.. Figures not available.

Table 3.1 Live births: age of mother

England and Wales

Numbers (thousands), rates, mean age and TFRs

Year and quarter	Age of mother at birth							Age of mother at birth							Mean age (years)	TFR ¹
	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 ²								
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) ¹	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) ¹	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	110.7	181.9	185.3	81.3	14.3	57.6	30.8	73.7	99.2	89.2	39.8	8.1	29.0	1.70
2000	604.4	45.8	107.7	170.7	180.1	85.0	15.1	55.7	29.2	70.6	95.4	88.0	40.5	8.3	29.1	1.66
2001 ^p	594.6	44.2	108.8	159.9	178.9	86.5	16.3	54.6	27.8	69.9	93.3	88.4	40.7	8.6	29.2	1.64
1997 March	158.1	11.5	29.8	50.4	45.7	17.7	3.1	59.6	31	77	105	88	38	7	28.7	1.70
1997 June	163.3	11.3	29.5	51.6	48.4	19.2	3.3	60.9	30	76	107	92	40	8	28.9	1.75
1997 Sept	164.9	11.8	30.3	52.1	48.1	19.3	3.3	60.8	30	78	107	90	40	8	28.8	1.78
1997 Dec	156.8	11.8	29.0	48.7	45.4	18.7	3.2	57.8	30	75	101	86	38	7	28.8	1.70
1998 March	155.8	11.7	27.8	47.9	46.2	18.8	3.3	58.7	31	74	102	89	39	8	28.9	1.68
1998 June	158.6	11.4	27.5	48.6	48.1	19.7	3.3	59.1	29	73	103	92	40	8	29.0	1.71
1998 Sept	166.1	12.7	29.8	50.6	48.9	20.7	3.6	61.2	32	79	107	93	41	8	28.9	1.81
1998 Dec	155.4	12.4	28.5	46.1	45.4	19.6	3.4	57.3	31	75	98	86	39	8	28.9	1.70
1999 March	152.1	12.0	27.1	45.0	45.1	19.6	3.4	57.1	31	73	99	88	39	8	28.9	1.69
1999 June	157.3	11.8	27.2	46.2	48.0	20.5	3.6	58.4	30	73	101	92	40	8	29.1	1.72
1999 Sept	160.1	12.5	28.7	46.8	47.5	20.9	3.7	58.8	32	75	102	91	41	8	29.0	1.74
1999 Dec	152.4	12.0	27.8	43.9	44.8	20.3	3.6	56.0	30	72	96	86	39	8	29.0	1.66
2000 March	148.7	11.4	26.4	42.5	44.1	20.6	3.6	55.1	29	70	96	87	40	8	29.1	1.64
2000 June	150.7	11.1	26.0	42.8	45.7	21.4	3.7	55.9	29	69	96	90	41	8	29.2	1.66
2000 Sept	154.9	11.8	27.8	43.6	46.2	21.7	3.9	56.8	30	73	97	90	41	8	29.1	1.69
2000 Dec	150.1	11.5	27.5	41.8	44.1	21.4	3.9	55.0	29	72	93	86	41	9	29.1	1.64
2001 March ^p	144.5	11.0	26.5	39.8	43.3	21.0	4.0	54.4	28	69	94	87	40	9	29.2	1.63
2001 June ^p	148.8	10.8	26.4	40.3	45.5	21.7	4.0	54.8	27	67	95	90	41	9	29.3	1.65
2001 Sept ^p	153.0	11.4	28.1	41.0	46.4	22.0	4.1	56.3	28	71	97	93	42	9	29.2	1.70
2001 Dec ^p	147.4	11.1	27.8	38.9	43.7	21.8	4.2	53.7	27	70	92	86	41	9	29.2	1.62
2002 March ^p	142.9	10.4	26.4	37.3	43.0	21.6	4.1	53.4	27	69	87	86	41	9	29.3	1.60

Note: The rates for women of all ages, under 20, and 40 and over are based upon the populations of women aged 15–44, 15–19, and 40–44 respectively.
 1 TFR (total fertility rate) is the number of children that would be born to a woman if current patterns of fertility persisted throughout her childbearing life. It is sometimes called the TFR (total period fertility rate). During the post Second World War period the TFR reached a maximum in 1964 and a minimum in 1977.
 2 Births per 1,000 women in the age-group; all quarterly age-specific fertility rates are adjusted for days in the quarter. They are not adjusted for seasonality, and therefore have been revised from those previously published.
 p Provisional.

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

England and Wales		Numbers (thousands), mean age and percentages																	
Year and quarter	Age of mother at birth								Mean age	Age of mother at birth								Registration ¹	
	All ages	Under 20	20–24	25–29	30–34	35–39	40 and over	All ages (years)		Under 20	20–24	25–29	30–34	35–39	40 and over	Joint		Sole	
	Live births outside marriage (numbers)									Percentage of total live births in age-group								Same address ²		Different address^{2}	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	26.0	33.9	86.6	53.3	27.4	20.4	22.0	26.2	58.1	20.1	21.8	
1996	232.7	39.3	71.1	62.3	40.5	16.2	3.2	26.1	35.8	88.0	56.5	29.5	21.7	23.4	26.7	58.1	19.9	21.9	
1997	238.2	41.1	69.5	63.4	42.2	18.2	3.7	26.2	37.0	88.7	58.6	31.3	22.5	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	67.5	61.2	45.0	20.8	4.3	26.4	38.9	89.0	61.0	33.6	24.3	25.6	30.2	61.8	18.2	19.9	
2000	238.6	41.1	67.5	59.1	43.9	22.3	4.7	26.5	39.5	89.7	62.6	34.6	24.4	26.2	31.0	62.7	18.2	19.2	
2001 ^p	238.1	39.5	68.1	56.8	45.2	23.3	5.1	26.7	40.0	89.5	62.6	35.5	25.3	26.9	31.6	63.2	18.4	18.4	
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	
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	
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	
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	
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	
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	
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	61.7	34.1	24.7	25.6	29.3	62.2	18.1	19.6	
Dec	60.2	10.6	17.0	14.9	11.1	5.3	1.1	26.4	39.5	88.4	61.2	34.0	24.8	26.2	30.8	62.0	18.4	19.5	
2000 March	59.0	10.2	16.5	14.8	10.9	5.4	1.2	26.5	39.7	89.7	62.6	34.8	24.7	26.1	31.7	62.5	18.1	19.5	
June	57.9	10.0	16.1	14.4	10.9	5.5	1.1	26.6	38.5	89.7	61.9	33.5	23.8	25.7	30.6	62.9	17.8	19.2	
Sept	61.7	10.6	17.6	15.3	11.3	5.7	1.2	26.5	39.8	89.7	63.3	35.0	24.5	26.5	30.4	62.7	18.1	19.2	
Dec	60.1	10.3	17.3	14.7	10.9	5.7	1.2	26.5	40.0	89.5	62.8	35.2	24.7	26.6	31.4	62.6	18.6	18.8	
2001 March ^p	58.0	9.9	16.7	13.9	10.8	5.7	1.1	26.5	39.8	90.4	63.0	34.9	24.8	26.9	28.0	62.5	18.7	18.8	
June ^p	58.1	9.6	16.3	14.1	11.2	5.7	1.3	26.7	39.1	89.0	61.5	34.9	24.5	26.4	32.2	63.3	18.6	18.6	
Sept ^p	61.8	10.2	17.6	14.7	12.0	6.0	1.3	26.7	40.4	89.5	62.6	35.9	25.8	27.2	32.2	63.5	18.4	18.2	
Dec ^p	60.2	9.9	17.5	14.1	11.3	5.9	1.4	26.7	40.9	89.2	63.1	36.4	25.9	27.2	33.9	63.4	18.6	18.0	
2002 March ^p	57.7	9.3	16.7	13.6	10.9	6.0	1.3	26.7	39.7	85.3	63.0	34.1	25.1	28.5	32.0	63.1	18.4	18.1	

¹ Births outside marriage can be registered by both the mother and father (joint) or by the mother alone (sole).

² Usual address(es) of parents.

^p Provisional.

Table 4.1 Conceptions: age of woman at conception

England and Wales (residents)

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

Year and quarter	Age of woman at conception								
	All ages	Under 16	Under 18	Under 20	20-24	25-29	30-34	35-39	40 and over
(a) numbers (thousands)									
1991	853.7	7.5	40.1	101.6	233.3	281.5	167.5	57.6	12.1
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	797.0	8.5	44.1	101.6	163.3	232.4	201.4	82.9	15.4
1999	774.0	7.9	42.0	98.8	157.6	218.5	197.1	86.0	16.0
2000 ^p	766.4	8.1	41.3	97.6	158.8	209.2	195.2	88.6	17.0
1999 March	191.5	1.9	10.4	24.9	39.6	54.3	48.4	20.6	3.8
June	190.4	2.0	10.5	24.4	39.1	53.8	47.9	21.2	4.1
Sept	194.0	2.0	10.4	24.1	38.4	54.7	50.7	22.1	4.1
Dec	198.0	2.1	10.8	25.4	40.5	55.6	50.2	22.2	4.1
2000 March ^p	193.1	2.0	10.5	25.1	40.4	53.2	48.3	21.9	4.2
June ^p	188.7	2.1	10.4	24.3	39.3	51.5	47.5	21.8	4.3
Sept ^p	190.0	2.1	10.0	23.5	38.4	52.0	49.7	22.2	4.2
Dec ^p	194.7	2.0	10.4	24.7	40.8	52.6	49.7	22.7	4.3
2001 March ^p	189.2	1.9	10.2	24.3	40.4	50.0	47.8	22.3	4.4
June ^p	187.0	2.1	10.2	23.9	39.7	48.7	47.6	22.8	4.4
(b) rates (conceptions per thousand women in age-group)									
1991	77.7	8.9	44.6	64.1	120.2	135.1	90.1	34.4	6.6
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	74.0	9.0	47.0	64.9	108.5	123.0	96.0	41.8	8.9
1999	71.7	8.3	45.0	62.9	104.9	119.2	94.9	42.1	9.1
2000 ^p	70.6	8.3	43.8	62.2	104.1	116.9	95.3	42.2	9.3
1999 March	72.0	8.0	45.2	64.3	106.8	118.8	94.1	41.3	8.8
June	70.8	8.6	44.9	62.3	104.3	117.3	92.4	41.7	9.2
Sept	71.2	8.1	44.1	60.9	101.1	118.8	96.9	42.7	9.1
Dec	72.6	8.5	45.6	64.1	106.4	121.3	96.3	42.7	9.1
2000 March ^p	71.7	8.5	45.1	64.4	107.0	118.4	94.4	42.5	9.3
June ^p	70.0	8.5	44.5	62.3	103.9	115.3	93.1	42.0	9.5
Sept ^p	69.6	8.3	42.0	59.6	99.8	116.2	96.7	41.9	9.2
Dec ^p	71.3	7.9	43.5	62.2	105.6	118.7	97.0	42.8	9.3
2001 March ^p	70.5	7.7	43.2	62.4	106.0	116.3	95.3	42.8	9.6
June ^p	68.9	8.4	42.6	60.5	102.4	113.3	94.2	43.0	9.3
(c) percentage terminated by abortion									
1991	19.4	51.1	39.9	34.5	22.2	13.4	13.7	22.0	41.6
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	52.4	42.0	37.8	27.8	17.1	14.9	21.5	37.9
1999	22.6	52.6	43.0	38.6	28.5	17.5	14.7	21.2	37.0
2000 ^p	22.7	54.0	44.2	39.4	29.2	17.7	14.5	20.5	35.4
1999 March	22.3	51.4	41.9	38.0	27.9	17.2	14.7	21.6	36.2
June	23.0	52.9	43.5	38.6	28.6	18.0	15.5	21.5	37.8
Sept	22.1	52.7	43.1	38.7	28.5	17.2	14.1	20.6	37.3
Dec	22.8	53.5	43.6	39.1	29.2	17.7	14.7	21.2	36.6
2000 March ^p	22.9	53.8	44.3	39.6	29.6	17.7	14.5	20.4	35.3
June ^p	23.2	55.1	44.4	39.2	29.7	18.1	15.1	20.9	35.1
Sept ^p	22.0	53.2	43.8	38.7	28.2	17.4	14.0	19.8	35.4
Dec ^p	22.8	53.9	44.1	39.8	29.3	17.5	14.5	20.8	35.9
2001 March ^p	23.4	54.3	44.9	40.1	29.8	18.5	14.8	20.6	34.9
June ^p	23.8	58.7	47.0	41.1	30.4	18.6	15.3	21.0	36.0

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

Rates for women of all ages, under 16, under 18, under 20 and 40 and over are based on the population of women aged 15-44, 13-15, 15-17, 15-19 and 40-44 respectively.

For a quarterly analysis of conceptions under 18 for local authority areas see the National Statistics website, www.statistics.gov.uk.

p Provisional.

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

England and Wales

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

Year and quarter	All women (residents)											Gestation weeks (percentages)			
	All ages			Age group							Gestation weeks (percentages)				
	All ¹ women	Residents ¹	Non- ¹ residents	Under 16	16-19	20-24	25-29	30-34	35-44	45 and over	Under 9	9-12	13-19	20 and over	
Numbers (thousands)											Percentages				
1971	126.8	94.6	32.2	2.3	18.2	24.5	17.3	14.2	15.9	0.5	16.6	57.9	21.8	1.0	
1976	129.7	101.9	27.8	3.4	24.0	23.6	19.3	14.6	14.7	0.5	24.8	55.8	15.0	1.1	
1981	162.5	128.6	33.9	3.5	31.4	34.3	21.9	18.7	17.6	0.6	31.0	53.4	13.5	1.3	
1986	172.3	147.6	24.7	3.9	33.8	45.3	28.7	18.0	17.5	0.4	33.4	53.8	11.5	1.4	
1991	179.5	167.4	12.1	3.2	31.1	52.7	38.6	23.4	17.9	0.4	35.2	52.9	10.6	1.2	
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	25.2	44.9	38.1	25.5	19.2	0.4	40.5	48.4	9.9	1.2	
1995	163.6	154.3	9.3	3.3	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	23.8	0.5	41.4	47.6	9.7	1.3	
1999	183.2	173.7	9.5	3.6	32.8	45.0	38.5	29.1	24.1	0.5	42.5	46.5	9.5	1.4	
2000	185.4	175.5	9.8	3.7	33.2	47.1	37.9	28.7	24.4	0.5	43.3	45.0	10.3	1.5	
2001 ^p	186.2 ²	176.3 ²	9.9	3.6	33.4	48.2	36.5	28.7	25.2	0.5	42.8	45.0	10.6	1.6	
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	6.2	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	47.5	45.2	2.4	0.9	8.7	11.8	10.0	7.5	6.1	0.1	40.1	48.2	10.3	1.5
	June	45.3	42.9	2.4	0.9	8.0	11.1	9.6	7.2	5.9	0.1	42.3	46.9	9.3	1.4
	Sept	45.8	43.4	2.4	0.9	8.2	11.2	9.5	7.3	6.1	0.1	43.1	46.1	9.3	1.4
	Dec	44.6	42.3	2.4	0.9	7.9	10.9	9.4	7.0	6.0	0.1	44.7	44.7	9.2	1.4
2000	March	49.5	46.9	2.6	1.0	9.1	12.5	10.2	7.5	6.4	0.1	38.9	47.9	11.6	1.6
	June	45.8	43.4	2.5	0.9	8.2	11.8	9.2	7.1	6.0	0.1	42.2	46.0	10.3	1.4
	Sept	46.1	43.6	2.5	1.0	8.1	11.5	9.5	7.3	6.1	0.1	44.5	44.0	10.1	1.4
	Dec	43.9	41.7	2.2	0.9	7.8	11.2	8.9	6.8	5.9	0.1	47.8	41.7	9.0	1.4
2001	March ^p	47.9	45.3	2.5	0.9	8.7	12.4	9.4	7.3	6.4	0.1	40.6	46.3	11.6	1.6
	June ^p	46.7	44.1	2.5	0.9	8.3	12.1	9.2	7.2	6.3	0.1	42.0	45.7	10.6	1.6
	Sept ^p	46.2	43.7	2.4	1.0	8.2	11.8	9.1	7.3	6.3	0.1	43.2	44.7	10.6	1.6
	Dec ^p	45.3	42.9	2.4	0.9	8.2	11.8	8.9	6.9	6.2	0.1	45.7	43.1	9.6	1.5
2002	March ^p	47.1	44.6	2.5	0.9	8.5	12.5	9.1	7.2	6.4	0.1	39.0	47.4	12.0	1.6
Rates (per thousand women residents)															
		ASR ³	Crude rate ²												
		(women 15-44)	(women 15-44)												
1971		9.9	10.1	2.3	13.9	13.1	10.7	10.0	5.6	0.3					
1976		10.2	10.5	2.9	16.9	14.2	10.4	9.2	5.3	0.3					
1981		11.9	12.4	3.0	19.4	18.6	13.1	10.1	5.9	0.4					
1986		13.0	13.5	3.7	22.0	21.9	15.5	10.8	5.1	0.3					
1991		15.0	15.2	3.8	24.0	27.1	18.5	12.6	5.1	0.3					
1992		14.6	14.8	3.5	22.4	25.9	18.4	12.5	5.2	0.3					
1993		14.5	14.7	3.4	22.0	25.5	18.4	12.6	5.5	0.3					
1994		14.6	14.6	3.5	22.0	25.4	18.6	12.6	5.6	0.2					
1995		14.5	14.4	3.5	21.7	25.5	18.6	12.4	5.5	0.2					
1996		16.0	15.6	3.9	24.3	28.6	19.9	13.4	6.0	0.2					
1997		16.3	15.8	3.7	24.5	29.0	20.8	13.7	6.1	0.3					
1998		17.1	16.5	4.0	26.5	30.4	21.4	14.5	6.4	0.3					
1999		16.8	16.1	3.8	26.0	29.9	21.0	14.0	6.3	0.3					
2000		17.0	16.2	3.8	26.7	30.9	21.1	14.0	6.2	0.3					
2001 ^p		17.0	16.2	3.7	26.1	30.6	21.5	14.2	6.3	0.3					
1997	March	16.7	16.2	3.8	25.4	29.8	21.2	13.9	6.2	0.2					
	June	16.4	15.9	3.6	24.1	29.3	21.0	13.7	6.2	0.3					
	Sept	16.3	15.9	3.8	24.4	28.7	20.8	13.9	6.3	0.3					
	Dec	15.8	15.3	3.5	24.0	28.0	20.1	13.2	5.9	0.3					
1998	March	17.7	17.1	4.2	28.0	31.6	21.9	14.7	6.4	0.3					
	June	16.9	16.3	3.8	26.0	30.2	21.3	14.4	6.3	0.3					
	Sept	17.1	16.5	4.1	26.4	30.1	21.3	14.5	6.6	0.3					
	Dec	16.7	16.1	3.9	25.8	29.3	20.9	14.4	6.3	0.3					
1999	March	17.5	16.7	3.9	27.7	31.4	21.5	14.5	6.5	0.3					
	June	16.6	15.9	3.6	25.5	29.6	20.9	13.9	6.2	0.3					
	Sept	16.8	16.1	3.7	26.1	29.7	20.9	14.1	6.4	0.3					
	Dec	16.3	15.6	3.8	25.1	28.8	20.7	13.6	6.2	0.3					
2000	March	18.2	17.3	4.2	29.1	33.1	22.6	14.6	6.6	0.3					
	June	16.8	16.0	3.6	26.1	30.9	20.6	13.9	6.2	0.3					
	Sept	16.9	16.1	4.0	26.0	30.1	21.3	14.2	6.2	0.3					
	Dec	16.1	15.3	3.6	24.9	29.1	20.4	13.4	5.9	0.2					
2001	March ^p	17.6	16.7	3.6	27.5	32.0	21.7	14.5	6.5	0.3					
	June ^p	17.1	16.2	3.7	26.1	30.9	21.5	14.2	6.3	0.3					
	Sept ^p	16.9	16.1	3.8	25.5	29.9	21.5	14.6	6.3	0.3					
	Dec ^p	16.6	15.7	3.5	25.4	29.7	21.2	13.8	6.1	0.2					
2002	March ^p	17.3	16.4	3.6	26.2	31.1	22.0	14.4	6.4	0.2					

1 Includes cases with not stated age and/or gestation week.

2 Includes incomplete forms that have been returned to practitioners.

3 Rates for all women residents age-standardised to the European population for ages 15-44.

4 The denominators used to calculate rates are population projections (1998-based). Rates for Under 16 and 45 and over are based on female populations aged 13-15 and 45-49 respectively.

p Provisional

Table 5.1 Expectation of life at birth and selected age

Constituent countries of the United Kingdom									Years								
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 Kingdom¹																	
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
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	6.7	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
1998	74.8	70.4	55.7	46.1	27.4	19.0	11.9	6.8	1998	79.8	75.3	60.4	50.6	31.5	22.6	14.8	8.6
1999 ^p	75.1	70.7	55.9	46.4	27.7	19.2	12.1	6.9	1999 ^p	80.0	75.5	60.6	50.8	31.7	22.8	14.9	8.6
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
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	11.9	6.8	1997	79.8	75.3	60.5	50.7	31.6	22.7	14.8	8.6
1998	75.1	70.7	55.9	46.4	27.6	19.1	12.0	6.9	1998	80.0	75.5	60.6	50.8	31.7	22.8	14.9	8.6
1999 ^p	75.4	70.9	56.2	46.6	27.9	19.3	12.2	7.0	1999 ^p	80.2	75.7	60.8	51.0	31.9	23.0	15.0	8.7
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
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
1998	75.1	70.7	56.0	46.4	27.6	19.1	12.0	6.9	1998	80.0	75.5	60.6	50.8	31.7	22.8	14.9	8.6
1999 ^p	75.4	71.0	56.2	46.7	27.9	19.4	12.2	7.0	1999 ^p	80.2	75.7	60.8	51.0	31.9	23.0	15.0	8.7
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
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	6.8	1997	79.4	74.9	60.0	50.2	31.1	22.4	14.6	8.5
1998	74.5	70.1	55.4	45.9	27.1	18.7	11.7	6.8	1998	79.5	75.0	60.1	50.3	31.2	22.4	14.6	8.5
1999 ^p	74.8	70.4	55.7	46.2	27.4	19.0	12.0	6.9	1999 ^p	79.7	75.1	60.3	50.5	31.4	22.6	14.7	8.6
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
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	6.3	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	6.4	1997	77.9	73.4	58.6	48.8	29.9	21.3	13.8	7.9
1998	72.6	68.1	53.5	44.1	25.7	17.7	11.1	6.4	1998	78.1	73.5	58.7	48.9	29.9	21.3	13.8	7.9
1999 ^p	72.8	68.4	53.7	44.3	25.9	17.9	11.3	6.5	1999 ^p	78.2	73.7	58.8	49.1	30.1	21.4	13.9	7.9
Northern Ireland¹																	
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
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	14.6	8.4
1998	74.3	69.8	55.1	45.6	26.9	18.5	11.6	6.6	1998	79.5	75.0	60.2	50.4	31.3	22.4	14.5	8.3
1999 ^p	74.5	70.0	55.4	45.9	27.2	18.7	11.7	6.6	1999 ^p	79.6	75.1	60.3	50.5	31.4	22.5	14.6	8.3

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.

¹ United Kingdom and Northern Ireland data has been revised to take account of changed Northern Ireland population estimates from 1981.

^p Provisional.

Table 6.1 Deaths: age and sex

England and Wales														Numbers (thousands) and rates	
Year and quarter	All ages	Age group													
		Under 1 ¹	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85 and over	
Numbers (thousands)															
Males															
1976	300.1	4.88	0.88	0.68	0.64	1.66	1.66	3.24	5.93	20.4	52.0	98.7	80.3	29.0	
1981	289.0	4.12	0.65	0.45	0.57	1.73	1.58	3.18	5.54	16.9	46.9	92.2	86.8	28.5	
1986	287.9	3.72	0.57	0.32	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	
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	264.3	2.08	0.41	0.22	0.28	0.90	1.27	3.85	5.93	13.6	28.7	64.3	90.4	52.3	
2000	255.5	1.89	0.34	0.22	0.28	0.87	1.22	3.76	6.05	13.4	27.9	60.6	87.2	51.9	
2001 ^p	253.6	1.82	0.33	0.19	0.32	0.93	1.28	3.83	6.18	13.4	27.6	57.6	87.2	52.8	
Females															
1976	298.5	3.46	0.59	0.45	0.42	0.62	0.67	1.94	4.04	12.8	29.6	67.1	104.7	72.1	
1981	288.9	2.90	0.53	0.30	0.37	0.65	0.64	1.82	3.74	10.5	27.2	62.8	103.6	73.9	
1986	293.3	2.59	0.49	0.25	0.27	0.56	0.67	1.65	3.83	8.8	25.8	58.4	106.5	83.6	
1991	292.5	2.19	0.44	0.25	0.22	0.46	0.64	1.73	3.70	8.4	21.3	54.2	103.3	95.7	
1996	291.5	1.69	0.32	0.18	0.20	0.43	0.51	1.85	3.66	8.9	18.2	50.2	96.7	108.7	
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	291.8	1.55	0.30	0.17	0.22	0.39	0.47	1.67	3.79	9.0	18.0	45.1	93.9	117.2	
2000	280.1	1.49	0.25	0.16	0.18	0.38	0.47	1.69	3.87	9.1	17.6	42.2	89.3	113.4	
2001 ^p	278.9	1.45	0.27	0.20	0.17	0.39	0.47	1.67	3.86	9.0	17.6	40.6	89.0	114.2	
Rates (deaths per 1,000 population in each age group)															
Males															
1976	12.5	16.2	0.65	0.34	0.31	0.88	0.96	0.92	2.09	6.97	19.6	50.3	116.4	243.2	
1981	12.0	12.6	0.53	0.27	0.29	0.82	0.83	0.89	1.83	6.11	17.7	45.6	105.2	226.5	
1986	11.8	11.0	0.44	0.21	0.23	0.71	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	
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	0.31	0.12	0.16	0.54	0.80	0.93	1.51	3.93	10.9	31.6	80.1	187.9	
2000	9.8	6.1	0.26	0.12	0.16	0.52	0.76	0.93	1.49	3.84	10.4	29.8	76.1	181.3	
2001 ^p	9.7	6.0	0.25	0.11	0.18	0.56	0.79	0.94	1.53	3.86	10.3	28.3	76.2	184.4	
2000 March	11.6	6.3	0.33	0.12	0.19	0.56	0.78	1.00	1.59	4.25	12.0	34.7	92.2	228.4	
June	9.3	6.3	0.25	0.11	0.17	0.50	0.73	0.88	1.48	3.80	10.1	28.8	71.9	167.4	
Sept	8.6	5.8	0.20	0.12	0.15	0.46	0.73	0.88	1.41	3.51	9.3	26.8	66.7	153.1	
Dec	9.5	6.0	0.24	0.15	0.14	0.57	0.80	0.94	1.50	3.81	10.1	28.8	73.9	177.3	
2001 March ^p	10.8	6.3	0.28	0.10	0.21	0.58	0.77	0.97	1.57	4.08	11.1	31.3	85.1	211.9	
June ^p	9.5	5.7	0.28	0.09	0.17	0.56	0.74	0.91	1.48	3.82	10.1	27.6	74.9	177.2	
Sept ^p	8.9	5.7	0.21	0.13	0.14	0.48	0.80	0.90	1.48	3.66	9.7	26.2	68.7	162.2	
Dec ^p	9.7	6.2	0.23	0.12	0.21	0.60	0.86	0.99	1.59	3.88	10.2	28.2	76.1	187.0	
2002 March ^p	10.6	6.5	0.30	0.13	0.17	0.51	0.81	0.90	1.52	3.84	10.6	30.0	84.3	214.9	
Females															
1976	11.8	12.2	0.46	0.24	0.21	0.35	0.40	0.56	1.46	4.30	10.1	26.0	74.6	196.6	
1981	11.3	9.4	0.46	0.19	0.19	0.32	0.35	0.52	1.26	3.80	9.5	24.1	66.2	178.2	
1986	11.4	8.0	0.40	0.17	0.17	0.29	0.33	0.47	1.12	3.23	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	
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	0.31	0.43	0.99	2.60	6.7	19.3	53.5	154.8	
2000	10.5	5.1	0.20	0.09	0.11	0.24	0.31	0.44	0.99	2.61	6.4	18.2	50.9	147.6	
2001 ^p	10.4	5.0	0.22	0.12	0.10	0.25	0.31	0.43	0.98	2.58	6.4	17.5	50.8	148.6	
2000 March	12.8	5.4	0.21	0.09	0.12	0.27	0.30	0.46	1.07	2.82	7.2	21.3	62.3	190.5	
June	9.7	4.8	0.23	0.09	0.09	0.22	0.26	0.45	0.96	2.56	6.2	17.4	47.7	132.6	
Sept	9.1	5.1	0.16	0.08	0.10	0.25	0.34	0.45	0.95	2.50	5.9	16.5	44.1	123.7	
Dec	10.2	4.9	0.19	0.12	0.12	0.25	0.33	0.40	0.98	2.56	6.3	17.6	49.9	144.5	
2001 March ^p	11.9	5.0	0.27	0.14	0.11	0.27	0.32	0.46	1.03	2.67	6.7	19.6	57.8	174.8	
June ^p	10.1	4.6	0.22	0.10	0.08	0.26	0.31	0.43	0.96	2.58	6.4	17.1	49.4	141.4	
Sept ^p	9.3	5.1	0.17	0.10	0.10	0.20	0.26	0.41	0.97	2.47	6.0	15.8	45.3	129.5	
Dec ^p	10.4	5.3	0.23	0.13	0.11	0.26	0.36	0.44	0.97	2.60	6.5	17.6	50.9	149.1	
2002 March ^p	11.6	4.8	0.16	0.11	0.13	0.27	0.28	0.40	0.99	2.53	6.6	18.3	56.6	175.0	

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.

1 Rates per 1,000 live births.

p Provisional registrations.

Table 6.2 Deaths: subnational

Government Office Regions of England ¹										Rates
Year and quarter	North East	North West	Yorkshire and the Humber	East Midlands	West Midlands	East	London	South East	South West	
Total deaths (deaths per 1,000 population of all ages)										
1995	11.7	11.7	11.1	10.7	10.9	10.4	9.6	10.8	11.9	
1996	11.6	12.0	11.0	10.6	10.6	10.2	9.2	10.6	11.5	
1997	11.5	11.4	10.9	10.4	10.5	10.1	8.9	10.5	11.5	
1998	11.8	11.5	11.0	10.7	10.5	10.1	8.6	10.2	11.3	
1999	11.5	11.3	10.7	10.6	10.6	10.1	8.6	10.3	11.5	
2000	10.7	10.5	10.1	9.9	10.2	9.8	8.0	9.7	11.2	
2001 ^p	11.0	10.9	10.3	10.1	10.1	9.8	7.9	9.8	10.9	
2000	March	12.2	11.9	11.6	11.3	12.2	11.7	9.7	11.2	13.6
	June	9.9	9.9	9.5	9.5	9.7	9.2	7.5	9.2	10.7
	Sept	9.7	9.5	9.0	8.7	9.1	8.6	7.1	8.6	9.7
	Dec	10.9	10.7	10.2	10.0	9.9	9.6	7.9	9.7	10.7
2001	March ^p	12.4	12.1	11.4	11.4	11.5	10.8	9.0	10.8	12.0
	June ^p	10.4	10.7	10.1	9.9	9.8	9.5	7.7	9.6	10.7
	Sept ^p	10.1	9.7	9.2	9.1	9.2	8.9	7.2	9.0	9.9
	Dec ^p	11.2	11.0	10.5	10.1	10.1	9.9	7.9	9.8	11.0
2002	March ^p	12.1	12.0	11.3	11.2	11.1	11.0	8.5	11.0	12.1
Infant mortality (deaths under 1 year per 1,000 live births)										
1995	6.7	6.5	6.9	5.7	7.1	5.2	6.4	5.2	5.3	
1996	6.2	6.3	6.5	6.3	6.8	5.3	6.3	5.3	5.5	
1997	5.8	6.7	6.5	5.7	7.0	4.8	5.8	5.0	5.8	
1998	5.0	6.3	6.9	5.6	6.5	5.0	6.0	4.4	4.8	
1999	5.6	6.5	6.3	6.0	6.9	4.6	6.0	4.8	4.7	
2000	6.5	6.2	7.3	5.4	6.8	4.4	5.4	4.4	4.7	
2001 ^p	5.6	5.9	5.8	5.0	6.4	4.5	6.1	4.2	5.4	
2000	March	6.2	6.2	8.0	4.6	6.7	4.3	5.6	5.0	5.2
	June	7.4	6.5	7.8	5.2	6.9	4.4	5.0	4.1	4.3
	Sept	6.4	6.3	6.3	5.5	7.6	4.5	5.5	4.1	3.5
	Dec	5.8	5.8	7.2	6.2	5.8	4.4	5.6	4.5	5.7
2001	March ^p	6.6	5.8	6.4	4.5	6.8	4.1	6.4	4.5	6.1
	June ^p	5.6	6.2	5.6	5.8	6.8	4.5	4.7	3.8	4.6
	Sept ^p	5.8	5.7	4.8	5.1	5.9	4.6	6.5	4.2	5.0
	Dec ^p	4.4	5.9	6.6	4.3	6.2	5.1	6.7	4.2	5.9
2002	March ^p	4.3	7.1	6.6	6.6	6.5	4.2	5.7	4.9	4.9
Neonatal mortality (deaths under 4 weeks per 1,000 live births)										
1995	4.7	4.2	4.8	3.8	5.3	3.4	4.3	3.6	3.7	
1996	4.1	4.0	4.2	4.2	4.9	3.5	4.4	3.5	3.8	
1997	3.7	4.3	4.4	3.7	5.0	3.3	3.7	3.4	3.9	
1998	3.1	4.1	4.5	3.7	4.8	3.4	4.1	2.9	3.3	
1999	4.1	4.4	4.1	4.3	4.8	3.0	4.1	3.2	3.2	
2000	4.4	4.3	5.0	4.1	5.0	3.0	3.7	3.1	3.0	
2001 ^p	3.7	3.8	3.3	3.4	4.4	2.9	4.2	2.9	3.7	
2000	March	4.1	4.4	5.6	3.3	4.6	2.9	4.1	3.3	3.1
	June	4.2	4.2	5.2	4.3	5.1	3.2	3.3	2.9	2.8
	Sept	5.6	4.6	4.3	4.1	5.9	3.1	3.8	2.9	2.3
	Dec	3.7	3.8	4.7	4.6	4.4	2.8	3.6	3.2	3.8
2001	March ^p	3.4	3.4	3.9	2.8	4.8	2.6	4.3	3.2	4.3
	June ^p	4.2	4.0	3.2	4.0	4.5	2.9	3.2	2.8	2.9
	Sept ^p	3.9	3.6	2.5	3.5	4.1	3.0	4.7	3.4	3.4
	Dec ^p	3.3	4.3	3.6	3.3	4.3	3.3	4.3	2.2	4.0
2002	March ^p	2.5	4.4	4.2	4.8	5.0	3.1	3.6	3.3	3.4
Perinatal mortality (stillbirths and deaths under 1 week per 1,000 total births)²										
1995	10.5	8.1	9.2	8.5	10.1	7.7	9.7	7.7	7.4	
1996	9.2	8.6	8.3	8.7	10.2	7.5	9.6	7.8	7.5	
1997	8.0	8.9	8.3	7.7	9.6	7.3	9.0	7.3	8.7	
1998	8.2	8.7	9.2	8.0	9.3	7.4	9.0	6.8	7.3	
1999	8.2	8.7	8.3	7.8	9.9	7.0	9.0	6.9	7.8	
2000	8.5	8.6	9.6	7.8	9.6	7.1	9.0	6.6	6.6	
2001 ^p	7.9	8.8	7.6	7.9	9.0	7.0	8.9	6.8	7.2	
2000	March	9.0	8.8	9.8	6.2	9.8	7.1	10.0	7.6	6.6
	June	8.1	8.4	10.8	8.2	9.6	6.0	7.9	6.5	6.7
	Sept	8.9	8.4	8.3	7.8	9.5	7.5	9.5	6.5	6.0
	Dec	7.9	8.7	9.5	9.1	9.4	7.7	8.7	5.7	7.2
2001	March ^p	7.9	7.7	9.3	6.9	9.9	7.0	9.4	6.3	7.5
	June ^p	7.8	9.1	7.5	8.7	8.5	7.2	8.9	6.3	7.0
	Sept ^p	8.1	8.6	6.1	7.6	8.9	7.2	8.4	7.5	5.6
	Dec ^p	7.7	9.6	7.5	8.5	8.9	6.6	9.1	6.9	8.7
2002	March ^p	6.3	8.7	10.3	9.2	11.4	7.2	9.0	7.7	6.8

Note: Figures represent the numbers of deaths occurring in each year with the exception of provisional data which relate to registrations.

1. The regions presented in this table have changed from the Regional Offices of the Department of Health to the Government Office Regions. See 'In brief' for details.

2. 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.

p Provisional registrations.

Table 6.3

Deaths: selected causes (International Classification)¹ and sex

This table is spread over 2 pages. Altogether there is 1 spread (2 pages).

England and Wales Number(thousands) and rate for all deaths and age-standardised rates² per million population for selected causes

Year and quarter	All deaths		All causes (age - standardised per million population ²)	Malignant neoplasms									
				Oesophagus	Stomach	Colon	Rectosigmoid junction, rectum, and anus	Trachea, bronchus and lung	Melanoma of skin	Other malignant neoplasms of skin	Breast ³	Cervix uteri	Ovary
	Number (thousands)	Crude rate per 100,000 population	A00-R99 V01-Y89	(C15)	(C16)	(C18)	(C19-C21)	(C33-C34)	(C43)	(C44)	(C50)	(C53)	(C56)
Males													
1971	288.4	1,207	13,466	76	317	187	144	1,066	10	12	4	:	:
1981	289.0	1,196	12,189	90	251	181	135	1,028	17	9	3	:	:
1991	277.6	1,111	10,232	117	185	193	117	842	23	10	3	:	:
1993	279.6	1,109	10,027	123	162	188	106	766	25	8	3	:	:
1994	267.6	1,058	9,503	128	162	182	101	743	24	9	3	:	:
1995	274.4	1,079	9,582	126	148	181	99	712	26	9	3	:	:
1996	268.7	1,051	9,268	126	145	174	99	681	25	8	2	:	:
1997	264.9	1,031	9,020	125	136	174	93	649	25	7	2	:	:
1998	264.7	1,025	8,894	128	131	168	94	641	26	8	3	:	:
1999	264.3	1,017	8,779	127	126	160	90	609	27	7	2	:	:
2000	255.5	978	8,353	127	117	157	89	590	28	6	2	:	:
2001 ^p	253.6	970	8,283	131	113	157	89	579	26	7	3	:	:
2000 March	73.0	1,123	9,562	133	114	155	90	591	28	6	2	:	:
June	60.5	931	7,975	124	110	155	91	584	27	7	2	:	:
Sept	57.7	879	7,527	121	120	161	89	577	28	7	3	:	:
Dec	64.3	979	8,357	131	123	158	85	610	29	6	2	:	:
2001 March ^p	69.4	1,076	9,170	136	115	166	88	593	24	8	3	:	:
June ^p	61.7	947	8,080	130	111	155	87	567	28	7	3	:	:
Sept ^p	58.4	885	7,579	125	114	156	88	562	25	6	2	:	:
Dec ^p	64.2	974	8,320	132	112	152	93	592	28	7	3	:	:
2002 March ^p	68.1	1,048	8,911	125	114	151	90	571	28	7	3	:	:
Females													
1971	278.9	1,104	8,189	40	149	176	79	183	14	6	379	83	126
1981	288.9	1,134	7,425	42	111	157	74	252	16	5	405	69	121
1991	292.5	1,120	6,397	49	74	146	61	300	18	4	401	54	118
1993	299.2	1,140	6,347	51	66	137	53	294	22	3	376	47	115
1994	285.6	1,086	6,040	50	66	135	51	296	22	4	370	42	114
1995	295.2	1,119	6,128	52	61	130	49	294	20	4	359	42	115
1996	291.5	1,102	5,993	51	55	125	49	292	20	3	343	41	121
1997	290.4	1,095	5,926	51	57	121	48	285	20	3	336	37	115
1998	290.3	1,091	5,874	49	54	116	47	291	21	3	327	35	116
1999	291.8	1,093	5,859	52	50	115	46	289	20	3	318	33	111
2000	280.1	1,045	5,589	51	47	107	44	285	21	3	310	33	109
2001 ^p	278.9	1,041	5,532	49	47	103	44	285	20	3	309	31	113
2000 March	82.3	1,235	6,460	53	44	108	43	287	22	2	311	33	111
June	64.7	971	5,254	48	48	105	45	278	21	2	319	30	108
Sept	62.1	922	5,027	51	50	106	44	279	20	3	303	35	111
Dec	71.0	1,054	5,620	51	47	107	45	296	22	4	306	35	107
2001 March ^p	78.4	1,186	6,205	48	54	104	45	294	21	3	306	31	118
June ^p	67.2	1,006	5,380	48	47	106	42	281	20	3	309	30	112
Sept ^p	62.7	928	4,992	49	43	102	45	270	19	3	306	31	108
Dec ^p	70.6	1,045	5,564	49	42	101	45	295	20	3	316	32	112
2002 March ^p	76.8	1,153	5,966	53	44	99	44	287	19	3	302	30	110

1. The Ninth Revision of the International Classification of Diseases, 1975, came into operation in England and Wales on 1 January 1979. The Tenth Revision of the International Classification of Diseases, 1992, came into operation in England and Wales on 1 January 2001. The cause descriptions and codes relate to ICD-10.
 2. Directly age-standardised to the European Standard Population. See Notes to Tables.
 3. For changes to this table compared with that in the previous three editions see 'in brief'.
 p. Provisional registrations.

Notes: Between 1 January 1984 and 31 December 1992, ONS applied its own interpretation of the International Classification of Diseases Section Rule 3 in the coding of deaths where terminal events and other 'modes of dying' such as cardiac arrest, cardiac failure, certain thrombembolic disorders, and unspecified pneumonia and bronchopneumonia, were stated by the certifier to be the underlying cause of death and other major pathology appeared on the certificate. In these cases ONS Rule 3 allowed the terminal event to be considered a direct sequel to the major pathology and that primary condition was selected as the underlying cause of death. Prior to 1984 and between 1 January 1993 and 31 December 2000, such certificates were coded to the terminal event. National Statistics also introduced automated coding of cause of death in 1993, which may also affect comparisons of deaths by cause from 1993. Further details can be found in the annual volumes Mortality statistics: Cause 1984, Series DH2 no. 11, and Mortality statistics: Cause 1993 (revised) and 1994, Series DH2 no. 21.
 From 1 January 2001, under ICD-10, Rule 3 has again been changed - for details see the article in Health Statistics Quarterly no. 13. This has resulted in a fall in the death rates from respiratory diseases, notably pneumonia, and consequently slight rises in the rates for other causes eg. strokes. For details of the major changes between ICD-9 and ICD-10, see the articles in Health Statistics Quarterly 08, 13 and 14.

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

England and Wales

Age-standardised rates² per million population for selected causes

Malignant neoplasms			Diabetes mellitus	Ischaemic heart disease	Cerebrovascular diseases	Pneumonia	Bronchitis, emphysema and other chronic obstructive pulmonary disease	Asthma	Gastric and duodenal ulcer	Diseases ³ of the liver	Land transport accidents ³	Intentional self harm and events of undetermined intent	Year and quarter
Prostate	Bladder	Leukaemia ³											
(C61)	(C67)	(C91-C95)	(E10-E14)	(I20-I25)	(I60-I69)	(J12-J18)	(J40-J44)	(J45-J46)	(K25-K27)	(K70-K76)	(V01-V89)	(X60-X84, Y10-Y34, excl.Y33.9)	
													Males
198	124	74	82	3,801	1,541	920	944	21	107	41	209	124	1971
214	121	74	82	3,664	1,141	1,053	683	28	90	58	119	151	1981
302	121	76	130	2,981	939	390	605	31	73	76	123	158	1991
296	114	70	100	2,829	794	759	566	24	67	76	95	149	1993
295	109	69	97	2,595	755	679	494	23	67	83	91	148	1994
296	111	71	100	2,535	754	753	524	20	63	92	87	146	1995
287	104	65	96	2,410	743	725	480	19	63	97	92	137	1996
277	100	66	94	2,261	714	741	475	19	61	102	92	140	1997
274	98	66	93	2,200	699	708	460	18	59	114	83	147	1998
270	93	67	93	2,082	666	759	471	17	64	117	84	145	1999
257	92	66	87	1,946	615	724	414	17	59	117	84	135	2000
277	94	70	95	1,876	699	391	408	16	56	139	85	137	2001 ^P
259	91	65	104	2,192	703	1,104	602	19	69	119	91	145	2000 March
251	90	63	80	1,905	583	604	348	15	54	108	85	138	June
254	91	70	75	1,717	555	514	305	17	54	115	84	132	Sept
265	94	66	90	1,971	619	677	400	16	58	125	74	122	Dec
297	93	71	103	2,165	793	504	533	16	72	144	81	133	2001 March ^P
271	93	63	96	1,887	667	381	397	16	52	128	86	127	June ^P
260	91	73	89	1,680	628	288	320	14	51	132	80	135	Sept ^P
282	99	74	94	1,859	708	393	385	17	50	150	92	154	Dec ^P
280	90	72	97	2,011	788	509	521	18	59	153	87	122	2002 March ^P
													Females
:	32	47	89	1,668	1,352	624	193	25	44	31	82	84	1971
:	35	47	66	1,601	1,012	740	155	30	57	43	41	81	1981
:	34	44	95	1,404	809	324	211	30	46	49	45	51	1991
:	34	43	73	1,330	711	569	223	27	45	48	35	48	1993
:	34	42	69	1,222	677	499	202	24	43	50	34	44	1994
:	32	41	72	1,179	677	553	227	24	42	55	30	46	1995
:	31	41	67	1,126	667	534	220	21	43	57	30	44	1996
:	31	43	65	1,060	639	559	225	23	41	61	29	45	1997
:	31	40	64	1,042	634	533	225	22	40	64	28	43	1998
:	30	45	64	975	618	578	240	22	39	66	28	45	1999
:	31	39	62	897	566	533	216	20	41	68	24	44	2000
:	29	41	62	874	615	301	219	20	39	78	25	43	2001 ^P
:	30	40	73	1,017	646	853	331	26	51	69	27	48	2000 March
:	30	36	58	862	538	423	177	16	36	63	22	48	June
:	32	42	55	801	502	358	153	17	36	65	23	42	Sept
:	31	38	62	909	579	502	202	22	40	74	25	39	Dec
:	29	41	68	1,010	701	418	290	25	46	83	24	40	2001 March ^P
:	31	41	61	863	582	271	206	19	39	75	28	43	June ^P
:	28	43	55	766	554	215	163	16	34	77	25	42	Sept ^P
:	29	40	64	861	1,025	304	220	19	37	77	24	45	Dec ^P
:	30	45	68	916	667	430	306	22	43	81	25	38	2002 March ^P

See notes opposite.

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.

The reference table presenting population estimates for Health Regional Offices areas in England (Table 1.3 in previous editions) has been dropped and subsequent population tables renumbered. The table giving population estimates for Government Offices for the Regions (Table 1.4 in previous editions, now Table 1.3) now represents Health as well as Administrative Regions. More details may be found in *Health Statistics Quarterly* 15, page 2.

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.

From issue 15 of *Health Statistics Quarterly* onwards Table 6.2 will present deaths for Government Offices for the Regions rather than deaths for Health Regional Office areas in England. More details may be found in *Health Statistics Quarterly* 15, page 2.

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.

Improvements to National Statistics on abortions performed in England and Wales were published in *Health Statistics Quarterly* 11. The revised figures are presented in Table 4.2. These changes include an improvement in the calculation of quarterly abortion rates. The mid-quarter population estimates, used to calculate these rates, were produced by linear interpolation as follows:

March quarter	$7.5/12*(P2-P1)+P1$
June quarter	$10.5/12*(P2-P1)+P1$
September quarter	$1.5/12*(P3-P2)+P2$
December quarter	$4.5/12*(P3-P2)+P2$

Where P1 = mid-year population estimate of previous year;

P2 = mid-year population estimate of year being calculated;

P3 = population projection for next year.

For example

March quarter 2000 = $7.5/12*(pop2000-pop1999)+pop1999$;

September quarter 2000 = $1.5/12*(pop2001-pop2000)+pop2000$.

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. The fact that a marriage or divorce has taken place in England and Wales does not mean that either one or both parties are resident there.

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 (eg 123.4); where appropriate, for small figures (below 10.0), two decimal places are given (eg 7.62). Figures which are provisional or estimated are given in less detail (eg 123 or 7.6 respectively) if their reliability does not justify giving the standard amount of detail. Where, 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.

Report:

Sudden infant deaths

2001

This report presents provisional statistics on sudden infant deaths in England and Wales that occurred in 2001. It also compares the number of sudden infant deaths by sex, age at death and month of occurrence with data from 1997 to 2000.

There were 231 sudden infant deaths that occurred in England and Wales in 2001, compared with 245 in 2000, a decrease of 6 per cent. The sudden infant death rate fell from 0.41 per 1,000 live births in 2000 to 0.39 in 2001.

KEY FINDINGS FOR THE PERIOD 1997–2001

- In the period 1997–2001, 61 per cent of all sudden infant deaths occurred amongst boys, who comprised 51 per cent of all live births.
- In the same period, 89 per cent of sudden infant deaths occurred in babies aged less than 6 months and 59 per cent occurred in babies aged less than three months.
- Also in this period, there were 24 per cent more sudden infant deaths in the three months from January to March compared with the three months from July to September.

KEY FINDINGS FOR 2001

- The sudden infant death rate was highest for babies weighing less than 1,500 grams at birth and it decreased with increasing birthweight. The rate for babies weighing under 1,500 grams (1.61 per 1,000 live births) was over seven times that for babies weighing 3,500 grams and over (0.22 per 1,000 live births).
- The sudden infant death rate was highest for babies of mothers aged under 20 at the time of the child's birth (1.06 per 1,000 live births). The rate fell as mother's age increased.
- There were 27 sudden infant deaths (12 per cent) where mothers were born outside the United Kingdom compared to 97,882 live births (16 per cent).
- The sudden infant death rate for babies born outside marriage, where only the mother registered the birth (1.28 per 1,000 live births), was six times higher than the rate for babies born inside marriage (0.20 per 1,000 live births).

- The rate for babies born inside marriage to mothers who had either one no previous births was 63 per cent lower than the overall sudden infant death rate. Whereas the rate where mothers had 3 or more previous children was 37 per cent higher.
- Within each social class, the sudden infant death rate was generally higher for births outside marriage than for those inside marriage.
- For manual social classes, the rates inside and outside marriage (0.23 and 0.58 per 1,000 live births respectively) were markedly higher than those for non-manual social classes (0.13 and 0.14 per 1,000 live births respectively).

EXPLANATORY NOTES:

Definition

The statistics given in this report are based on any mention of 'sudden infant death', 'cot death', 'SIDS', 'crib death', or some similar term mentioned anywhere on the death certificate.

When Social Classes I, II, IIIN are combined, they are defined as non-manual social classes.

Similarly, when Social Classes IIIM, IV, V are combined, they are defined as manual social classes.

Future changes to the data

The statistics for 2001 given in this report relate to our database as at 13 June 2002. Therefore these figures may differ slightly from those published elsewhere.

Differences in tables

Tables 1 to 4 include data for years 1997 to 2001 and relate to number of occurrences in each year.

Tables 5 to 9 present statistics on sudden infant deaths that occurred in 2001 and which have been linked to their corresponding birth records. In 2001, six records were not linked and hence are not included in these tables. Information about parents, which was collected at birth registration, can then be used to enable analysis of the data according to certain risk factors. The risk factors presented here include birthweight (Table 5), mother's age at birth of child (Table 6), mother's country of birth (Table 7), marital status and parity (Table 8), and father's social class based on his occupation (Table 9).

Table 1 Sudden infant deaths by sex and age at death, 1997–2001

England and Wales										Numbers and rates
Year	Boys			Girls			All babies			
	Neonatal deaths	Postneonatal deaths	Infant deaths	Neonatal deaths	Postneonatal deaths	Infant deaths	Neonatal deaths	Postneonatal deaths	Infant deaths	
Numbers										
1997	23	221	244	22	127	149	45	348	393	
1998	20	144	164	15	107	122	35	251	286	
1999	28	146	174	12	94	106	40	240	280	
2000	21	126	147	20	78	98	41	204	245	
2001	16	125	141	12	78	90	28	203	231	
Rates per 1,000 live births										
1997	0.07	0.67	0.74	0.07	0.41	0.48	0.07	0.54	0.61	
1998	0.06	0.44	0.49	0.05	0.35	0.40	0.05	0.39	0.45	
1999	0.09	0.46	0.55	0.04	0.31	0.35	0.06	0.39	0.45	
2000	0.07	0.41	0.47	0.07	0.26	0.33	0.07	0.34	0.41	
2001	0.05	0.41	0.46	0.04	0.27	0.31	0.05	0.34	0.39	

Table 2 Sudden infant deaths by age at death, 1997–2001

England and Wales									Numbers and percentage distribution
Year	Age at death								
	Under 28 days	28 days and over but less than 2 months	2 completed months	3 completed months	4 completed months	5 completed months	between 6 and 11 completed months	All babies	
Numbers									
1997	45	95	76	49	50	31	47	393	
1998	35	85	54	38	31	21	22	286	
1999	40	63	62	30	29	17	39	280	
2000	41	62	52	27	18	17	28	245	
2001	28	69	37	34	16	21	26	231	
Percentages of all sudden infant deaths under 1 year									
1997	11.5	24.2	19.3	12.5	12.7	7.9	12.0	100.0	
1998	12.2	29.7	18.9	13.3	10.8	7.3	7.7	100.0	
1999	14.3	22.5	22.1	10.7	10.4	6.1	13.9	100.0	
2000	16.7	25.3	21.2	11.0	7.4	6.9	11.4	100.0	
2001	12.1	29.9	16.0	14.7	6.9	9.1	11.3	100.0	

Table 3 Sudden infant deaths by month of occurrence, 1997–2001

England and Wales													Numbers
Year	Month												
	January	February	March	April	May	June	July	August	September	October	November	December	Total
1997	39	28	37	37	31	29	32	26	34	29	32	39	393
1998	28	24	20	17	23	21	20	16	21	29	24	43	286
1999	40	16	36	19	23	17	22	27	20	18	16	26	280
2000	20	23	16	27	20	18	21	18	13	24	21	24	245
2001	23	26	22	20	19	16	17	15	19	15	22	17	231

Table 4 Sudden infant deaths by quarter of occurrence and Health Regional Office, 2001

Year	Quarter ending	Numbers and rates									
		England and Wales	Northern and Yorkshire	Trent	Eastern	London	South East	South West	West Midlands	North West	Wales
Number											
2001	March	71	11	6	5	8	9	9	5	13	5
	June	55	5	5	6	7	7	5	6	11	3
	September	49	6	2	6	12	7	5	2	4	5
	December	54	5	3	7	9	7	6	10	4	3
Rates per 1,000 live births											
2001	March	0.5	0.7	0.5	0.3	0.3	0.4	0.8	0.3	0.7	0.6
	June	0.4	0.3	0.4	0.4	0.3	0.3	0.4	0.4	0.6	0.4
	September	0.3	0.3	0.1	0.4	0.4	0.3	0.4	0.1	0.2	0.6
	December	0.4	0.3	0.2	0.5	0.3	0.3	0.5	0.7	0.2	0.4

Table 5 Live births and sudden infant deaths by birthweight, 2001

England and Wales		Numbers and rates						
Birthweight (grams)	Numbers				Rates ¹			
	Births	Deaths			Neonatal	Postneonatal	Infant	
		Live births	Neonatal	Postneonatal				Infant
All	594,537	27	198	225	0.05	0.33	0.38	
< 1500	7,472	0	12	12	0.00	1.61	1.61	
1500-1999	9,024	1	10	11	0.11	1.11	1.22	
2000-2499	28,611	4	22	26	0.14	0.77	0.91	
2500-2999	100,447	8	43	51	0.08	0.43	0.51	
3000-3499	212,127	8	64	72	0.04	0.30	0.34	
3500 and over	235,989	6	47	53	0.03	0.20	0.22	
Not Stated	867	0	0	0	0.00	0.00	0.00	

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

Table 6 Live births and sudden infant deaths by mother's age, 2001

England and Wales		Numbers and rates						
Mother's age	Numbers				Rates ¹			
	Births	Deaths			Neonatal	Postneonatal	Infant	
		Live births	Neonatal	Postneonatal				Infant
All	594,537	27	198	225	0.05	0.33	0.38	
Under 20	44,189	2	45	47	0.05	1.02	1.06	
20-24	108,838	12	51	63	0.11	0.47	0.58	
25-29	159,894	1	40	41	0.01	0.25	0.26	
30-34	178,897	10	35	45	0.06	0.20	0.25	
35-39	86,469	1	19	20	0.01	0.22	0.23	
40 and over	16,250	1	8	9	0.06	0.49	0.55	

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

Table 7 Live births and sudden infant deaths by mother's country of birth, 2001

England and Wales								Numbers and rates
Country of birth	Numbers				Rates ¹			
	Births	Deaths			Neonatal	Postneonatal	Infant	
		Live births	Neonatal	Postneonatal				Infant
All	594,537	27	198	225	0.05	0.33	0.38	
United Kingdom	496,655	24	174	198	0.05	0.35	0.40	
England and Wales	486,089	23	173	196	0.05	0.36	0.40	
Scotland	7,781	1	1	2				
Northern Ireland	2,458	0	0	0				
Irish Republic	3,835	0	0	0				
Other European Union	10,941	1	3	4				
Rest of Europe	7,649	0	1	1				
Australia, Canada and New Zealand	3,695	0	2	2				
New Commonwealth	50,029	2	15	17				
Bangladesh	8,162	0	1	1				
India	6,595	1	3	4				
Pakistan	14,586	0	4	4				
East Africa	3,744	0	2	2				
Southern Africa	2,235	0	0	0				
Rest of Africa	6,991	1	1	2				
Far East	1,364	0	0	0				
Mediterranean	1,099	0	0	0				
Caribbean	3,082	0	3	3				
Rest of the New Commonwealth	2,171	0	1	1				
Rest of World and not stated	21,733	0	3	3				

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

Note: Where no data are shown, this indicates that the number of deaths in each category is too small to make the publication of rates meaningful.

Table 8 Live births and sudden infant deaths by marital status, parity (within marriage) and type of registration (outside marriage), 2001

England and Wales								Numbers and rates
Marital status	Numbers				Rates ¹			
	Births	Deaths			Neonatal	Postneonatal	Infant	
		Live births	Neonatal	Postneonatal				Infant
All	594,537	27	198	225	0.05	0.33	0.38	
Inside Marriage								
All	356,504	10	60	70	0.03	0.17	0.20	
0	143,012	6	14	20	0.04	0.10	0.14	
1	131,797	0	19	19	0.00	0.14	0.14	
2	52,642	2	14	16	0.04	0.27	0.30	
3 and over	29,053	2	13	15	0.07	0.45	0.52	
Outside Marriage								
All	238,033	17	138	155	0.07	0.58	0.65	
Joint regn/same address	150,393	11	57	68	0.07	0.38	0.45	
Joint regn/diff address	43,924	4	27	31	0.09	0.61	0.71	
Sole registration	43,716	2	54	56	0.05	1.24	1.28	

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

Table 9 Live births¹ and sudden infant deaths by social class (based on father's occupation at death registration),² 2001

England and Wales		Numbers and rates					
Social class	Numbers				Rates ³		
	Births	Deaths			Neonatal	Postneonatal	Infant
		Live births ¹	Neonatal	Postneonatal				Infant
All ⁴	55,140	25	144	169	0.05	0.26	0.31
Inside Marriage							
All ⁵	35,609	10	60	70	0.03	0.17	0.20
I	3,713	1	1	2	0.03	0.03	0.05
II	12,148	1	17	18	0.01	0.14	0.15
IIIN	3,678	3	3	6	0.08	0.08	0.16
IIIM	8,897	1	15	16	0.01	0.17	0.18
IV	4,251	2	9	11	0.05	0.21	0.26
V	1,094	1	5	6	0.09	0.46	0.55
Other	1,828	1	9	10	0.05	0.49	0.55
Outside Marriage joint registration							
All ⁵	19,531	15	84	99	0.08	0.43	0.51
I	709	1	1	2	0.14	0.14	0.28
II	4,008	1	3	4	0.02	0.07	0.10
IIIN	1,563	0	3	3	0.00	0.19	0.19
IIIM	6,775	5	31	36	0.07	0.46	0.53
IV	3,699	4	16	20	0.11	0.43	0.54
V	1,542	3	11	14	0.19	0.71	0.91
Other	1,235	1	16	17	0.08	1.30	1.38

1 Figures for live births are a 10 per cent sample coded for father's occupation.

2 Information on the father's occupation is not collected for births outside marriage if the father does not attend the registration of the baby's birth.

3 Neonatal, postneonatal and infant deaths per 1,000 live births.

4 Inside marriage and outside marriage/joint registration only, including cases where father's occupation was not stated.

5 Includes cases where father's occupation was not stated.

Report:

Healthy life expectancy in Great Britain, 1999

This report presents healthy life expectancy data for 1999. The methodology used to calculate healthy life expectancy was reported in detail in the article 'Healthy life expectancy in Great Britain, 1980-1996, and its use as an indicator in United Kingdom Government strategies' in *Health Statistics Quarterly* 07.¹ This issue also contained a report on healthy life expectancy in 1997.

It was not possible to calculate healthy life expectancy (HLE) for the year 1998 since the method uses a three-year moving average and the British General Household Survey (GHS) was not conducted in either 1997 or 1999. The 1999 data point is therefore the next available point in the time series and was calculated using GHS data from 1998 and 2000.

ONS produces two measures of healthy life expectancy: in self-perceived good or fairly good general health and free from limiting long-standing illness (LLI). The ill-health rates used in the calculation of these measures are derived from responses to the two GHS questions shown in Box 1.

Box one

GENERAL HOUSEHOLD SURVEY QUESTIONS USED TO CALCULATE ILL-HEALTH RATES

- (1) Over the last 12 months would you say your health has on the whole been good, fairly good, or not good?
- (2) Do you have any long-standing illness, disability or infirmity? By long-standing I mean anything that has troubled you over a period of time or that is likely to affect you over a period of time.

If 'Yes':

- a) What is the matter with you?
- b) Does this illness or disability (do any of these illnesses or disabilities) limit your activities in any way?

Table 1 shows the 1999 figures for life expectancy and healthy life expectancy in Great Britain.

Table 1 Life expectancy and healthy life expectancy, 1999

Great Britain				
Sex	Age	Life Expectancy	HLE (in good or fairly good general health)	HLE (free from LLI)
Males	At birth	75.1	66.6	60.4
	At age 65	15.4	11.6	8.8
Females	At birth	80.0	68.9	62.3
	At age 65	18.7	13.1	9.8

HLE IN GOOD OR FAIRLY GOOD HEALTH

For males, there has been a slight decrease since 1997 in the number of years they can expect to live in good or fairly good health. At birth, there was a decrease from 66.9 years to 66.6 years and from 11.7 to 11.6 years at age 65.

Females show a slight increase in HLE at birth, from 68.7 years in 1997 to 68.9 years in 1999. HLE at age 65 decreased slightly, from 13.2 to 13.1 years.

HLE FREE FROM LIMITING LONG-STANDING ILLNESS

The number of years a person can expect to live free from limiting long-standing illness increased for both males and females between 1997 and 1999.

For males, the increase is greatest at birth, with HLE rising from 58.9 to 60.4 years (an increase of 1.5 years). At age 65, HLE increased from 8.3 to 8.8 years.

For females, the trend is very similar with HLE at birth rising from 60.4 to 62.3 years (an increase of 1.9 years). At age 65, HLE increased from 9.3 to 9.8 years.

TRENDS OVER TIME

HLE at birth

Figure 1 shows that in Great Britain, between the years 1981 and 1999, life expectancy at birth for males increased continuously, from 70.9 to 75.1 years. The number of years newborn males can expect to live in good or fairly good general health increased from 64.4 years in 1981 to 66.6 years in 1999.

Life expectancy free from limiting long-standing illness increased for newborn males from 58.1 years in 1981 to 60.4 years in 1999.

Figure 2 shows that life expectancy at birth for females increased continuously between the years 1981 and 1999, from 76.8 to 80.0 years. Over this same period, the number of years a newborn female could expect to live in good or fairly good general health also increased, from 66.7 to 68.9 years.

Between 1981 and 1999, life expectancy free from limiting long-standing illness for females at birth also showed a small increase, from 60.8 to 62.3 years.

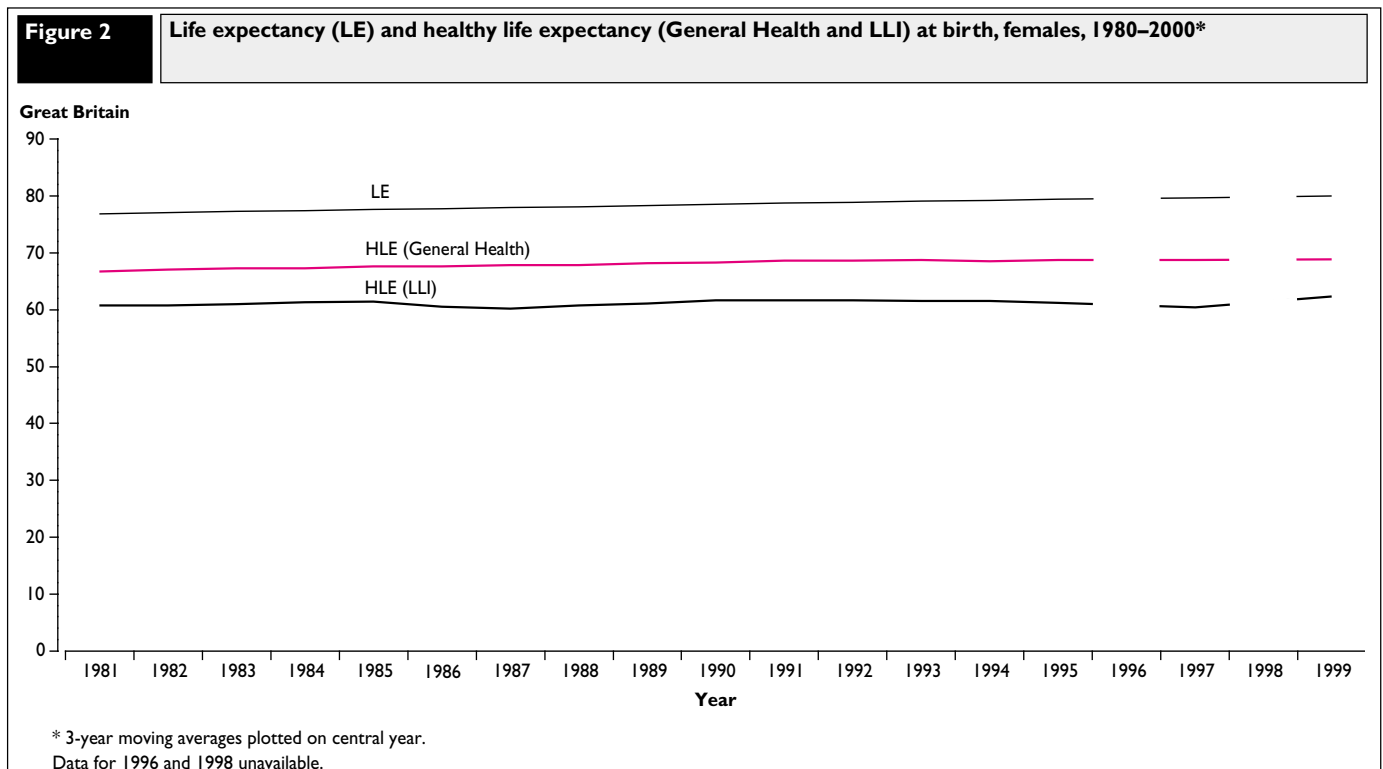
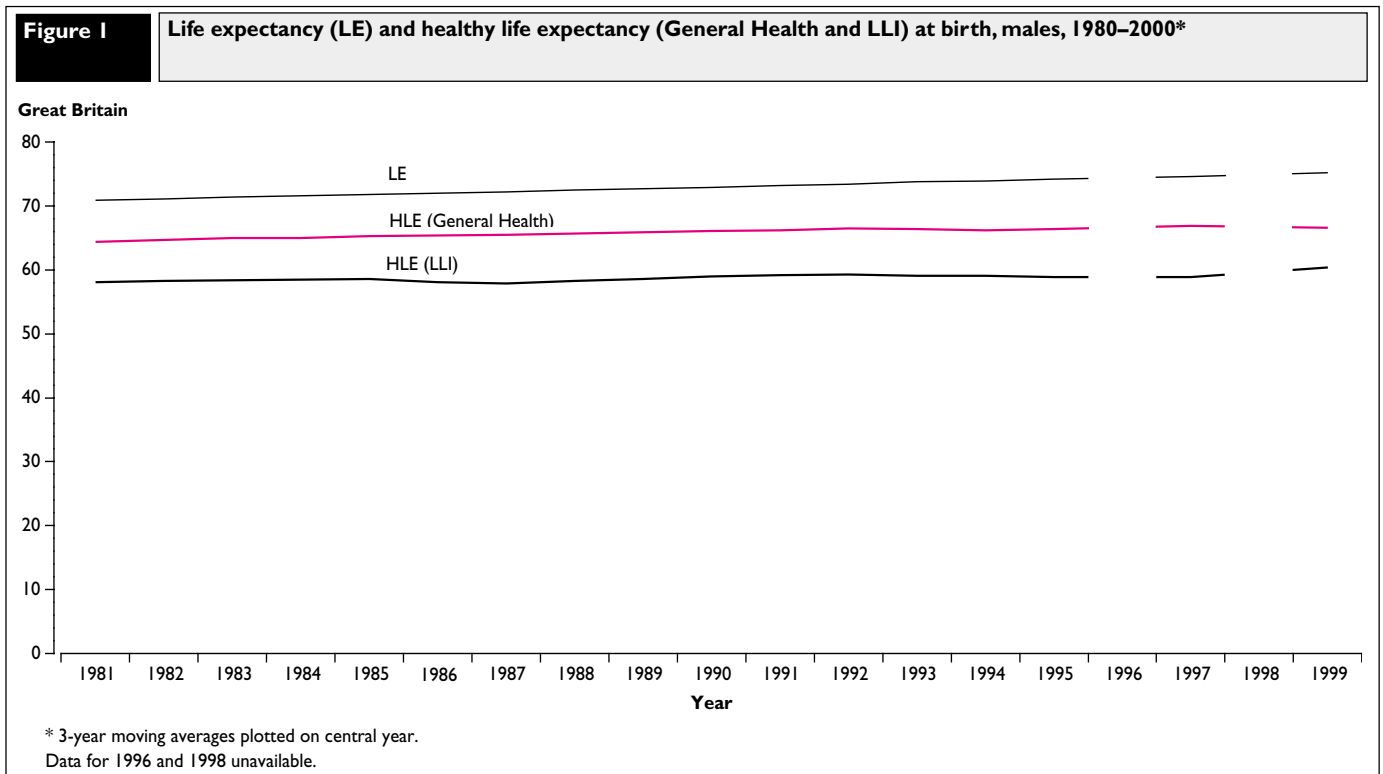


Figure 3 Life expectancy (LE) and healthy life expectancy (General Health and LLI) at age 65, males, 1980–2000*

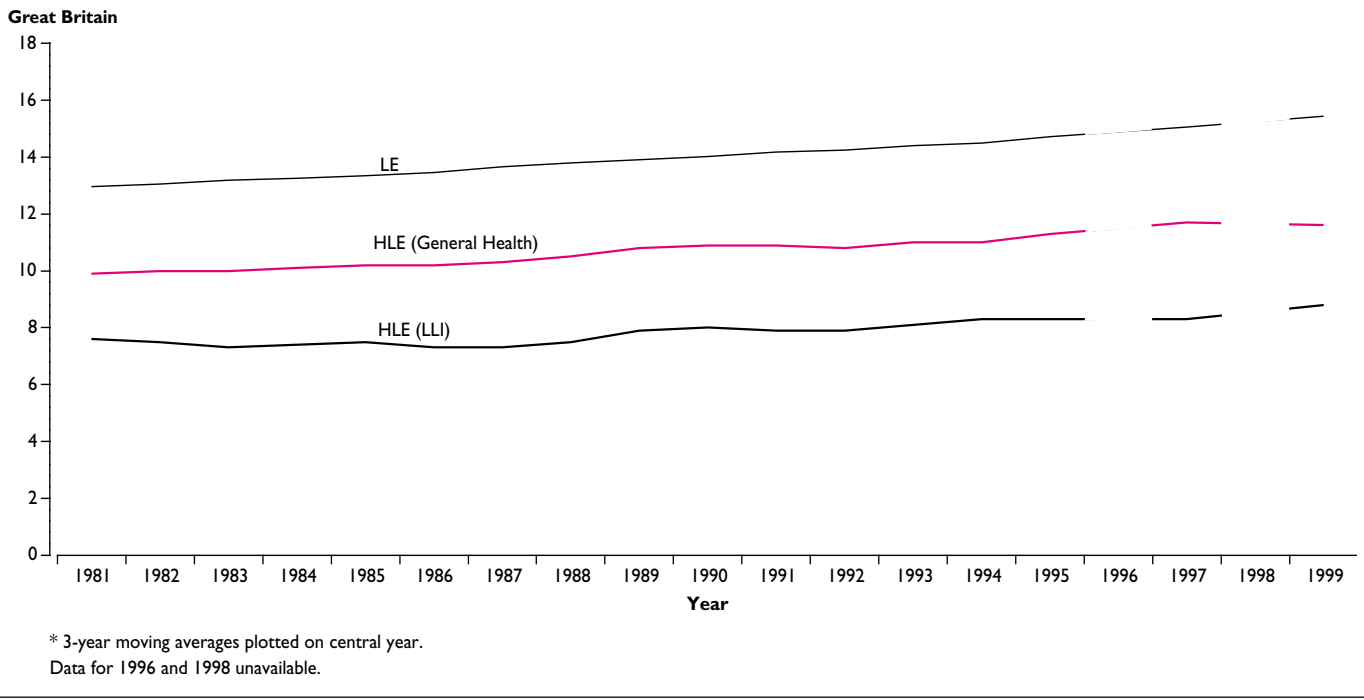
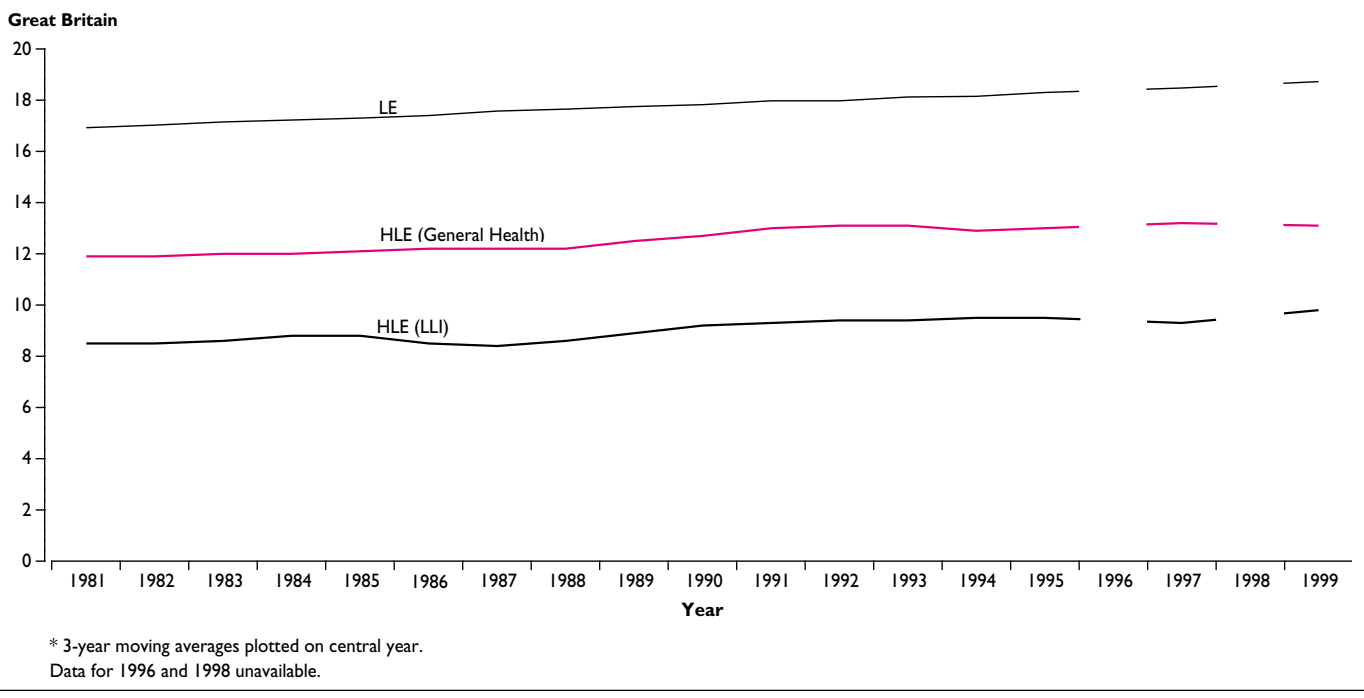


Figure 4 Life expectancy (LE) and healthy life expectancy (General Health and LLI) at age 65, females, 1980–2000*



HLE at age 65

Figure 3 shows trends from 1981 to 1999 in life expectancy and healthy life expectancy for men at age 65. Life expectancy increased continuously over the time period, from 13.0 to 15.4 years. The number of years a man aged 65 could expect to live in good or fairly good general health increased from 9.9 years in 1981 to 11.6 years in 1999.

Male life expectancy free from limiting long-standing illness at age 65 increased from 7.6 years in 1981 to 8.8 years in 1999.

The trends for women at age 65 are the same as for men at age 65, as shown in Figure 4. Life expectancy increased continuously from 16.9 to 18.7 years and the number of years expected in good or fairly good general health increased from 11.9 to 13.1 years. Life expectancy free from limiting-long standing illness increased from 8.5 to 9.8 years.

All these results show that total life expectancy continues to increase steadily and at a faster rate than HLE meaning that people, despite living longer, can also expect to live more years in poor health.

FUTURE DEVELOPMENTS

Prior to the 2000 survey, the GHS underwent an extensive review. It is now being conducted annually, with further reviews every five years. This should ensure no further breaks in the time series, at least for the next few years. The revised version for the first time asked the general health question of respondents under the age of 16. The 0–15 age group has to date been allocated the same ill-health rates as 16- to 19-year-olds in our HLE calculations. This revision should enable a more accurate analysis of the healthy life expectancy of this age group from 2001 onwards.

The GHS is a survey of private households only and therefore a crude adjustment, based on data collected in the 1991 Census, has been made to the calculation of HLE to encompass those living in communal establishments. This adjustment is believed to overestimate the

communal dwelling population as, following the Community Care Act (1990), more people are living and being cared for in the community and would therefore already be included in the GHS sample. 2001 Census data will be available for the next healthy life expectancy update. This will enable us to review and, if necessary, revise the current communal establishment adjustment figures based on 1991 Census data.

The 2001 Census also included for the first time a question on self-perceived general health, identical to the one asked in the GHS. This will allow us to calculate more accurate ill-health rates for residents of communal establishments and indeed for the whole population. In the current methodology, rates of 'not good' general health for residents of communal establishments are assumed to be equal (in the absence of other major data sources) to rates of limiting long-standing illness derived from 1991 Census data.

Thus the availability of 2001 Census data will allow us to review and examine various aspects of our current methodology. The need to carry out this review, in order to ensure best quality estimates, may result in a delay to the publication of the next data point for HLE.

An article on the feasibility of producing sub-national estimates of HLE for England, using the GHS, was published in *Health Statistics Quarterly* 14.² A further article, comparing the use of two different survey instruments (GHS and Health Survey for England) in calculating sub-national estimates, will be published in *Health Statistics Quarterly* 16.

REFERENCES

1. Kelly S, Baker A and Gupta S (2000) Healthy life expectancy in Great Britain, 1980–96, and its use as an indicator in United Kingdom Government strategies. *Health Statistics Quarterly* 07, 32–37.
2. Bissett B (2002) Healthy life expectancy in England at subnational level. *Health Statistics Quarterly* 14, 21–29.

Report:

Death registrations in England and Wales, 2001: area of residence

This report gives the numbers of deaths from all causes **registered** in England and Wales in 2001 by area of usual residence of the deceased and the standardised mortality ratios (SMRs) by area. Table 1 presents the data by administrative areas and Table 2 by the health areas relevant in 2001. Deaths registered in England and Wales in 2001 were allocated to areas using an improved method of spatial referencing compared with previous years. See 'In Brief' in this edition for summary details and the article in *Population Trends* 107¹ for full details.

KEY OBSERVATIONS

Among the Government Office Regions, the highest level of mortality in 2001 was in the North East (SMR of 112), while the lowest was in the South West (92). Within the regions, mortality levels were highest in Halton UA (131) and in the local authority districts of Liverpool (130) and Knowsley (130). The lowest levels of mortality were in the City of London (50), though this is based on small numbers, followed by the London Boroughs of Kensington and Chelsea (71) and Westminster (71).

For males, the highest mortality level was in Manchester (136), while the lowest occurred in the City of London (53) and in the Isles of Scilly (66). However, both of the latter districts' SMRs are based on very low numbers; the next lowest were Kensington and Chelsea (73) and Westminster (73).

For females, the highest mortality level was in the district of Watford (147), while the lowest were in the City of London (47), Kensington and Chelsea (69), Westminster (69) and Epsom and Ewell (69).

The highest and lowest levels of mortality among health authorities were in the same areas as those for the local authorities – Liverpool, Manchester, Kensington and Chelsea and Westminster. This is not surprising given that for these areas the local and health authority boundaries coincide. The health authority with the next highest level of mortality was St Helens and Knowsley (123) and the second lowest was Dorset (86).

Figures for 2001 death registrations by age and sex, and for selected causes of death, were published in a Report in *Health Statistics Quarterly* 14 on 23 May 2002.

EXPLANATORY NOTES

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. However, we take two annual extracts:²

- The first 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 the cause based Report in *Health Statistics Quarterly*, as well as VS tables, and the Compendium of Clinical and Health Indicators.
- The second extract is produced in the September following the year to which it relates, 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.

Standardised mortality ratios

Comparison of the level of mortality between different areas is difficult if no account is taken of differences in their population structure. In Tables 1 and 2 this is done by using standardised mortality ratios (SMRs). For each area, the ratio is derived by comparing the number of deaths actually occurring in it with the number which would have been expected if the sex and age mortality rates for England and Wales applied to the area's population distribution. If local mortality rates are high compared with national rates, the number of deaths observed will be greater than the expected number, and the SMR greater than 100; and vice versa for areas with low mortality rates. More details can be found in ONS annual reference volumes.³ Note that in Tables 1 and 2, SMRs for males and females are not directly comparable with each other and that the SMRs are provisional because they are based on mid-2000 population estimates. Care is needed when comparing SMRs presented here with those published for earlier years as evidence of trends. Changes in SMRs from year to year may reflect growing numerator-denominator discrepancies over the inter-censal period.

REFERENCES

1. McVey E and Baker A (2002) Improving ONS spatial referencing – the impact on 2000 births and deaths data. *Population Trends* 107, 14–22.
2. Office for National Statistics (2001) *Mortality statistics: cause 2000*, series DH2 no. 27, section 2.2.
3. Office for National Statistics (2000) *Mortality statistics: general 1999*, series DH1 no. 32, section 2.7.

Table 1 Deaths by area of usual residence, numbers and standardised mortality ratios (SMRs) by sex, 2001 registrations

England, Wales and elsewhere, government office regions, unitary authorities/counties/districts and London boroughs

Area of usual residence	Number of deaths			Standardised mortality ratios		
	Persons	Males	Females	Persons	Males	Females
England, Wales and elsewhere	532,498	253,608	278,890	100	100	100
England	497,878	237,017	260,861	99	99	99
Wales	33,249	15,714	17,535	104	104	105
Elsewhere	1,371	877	494	:	:	:
NORTH EAST	28,391	13,750	14,641	112	115	110
Darlington UA	1,209	575	634	112	115	110
Hartlepool UA	1,014	512	502	119	124	114
Middlesbrough UA	1,437	704	733	111	117	107
Redcar and Cleveland UA	1,507	704	803	113	112	113
Stockton-on-Tees UA	1,809	882	927	119	116	121
Durham County	5,540	2,677	2,863	112	113	112
Chester-le-Street	534	232	302	104	89	119
Derwentside	1,069	518	551	120	130	112
Durham	833	396	437	102	100	103
Easington	1,070	544	526	125	127	122
Sedgefield	994	487	507	120	122	119
Teesdale	289	133	156	94	88	100
Wear Valley	751	367	384	105	113	99
Northumberland	3,459	1,672	1,787	106	106	107
Alnwick	317	157	160	87	88	87
Berwick-upon-Tweed	327	144	183	89	79	98
Blyth Valley	826	420	406	124	130	118
Castle Morpeth	552	254	298	95	94	96
Tynedale	675	313	362	104	97	111
Wansbeck	762	384	378	123	129	117
Tyne and Wear	12,416	6,024	6,392	113	117	110
Gateshead	2,318	1,125	1,193	119	119	119
Newcastle upon Tyne	2,940	1,419	1,521	111	116	107
North Tyneside	2,241	1,009	1,232	105	104	105
South Tyneside	1,756	905	851	109	120	99
Sunderland	3,161	1,566	1,595	120	125	115
NORTH WEST	74,965	35,392	39,573	110	111	110
Blackburn with Darwen UA	1,341	608	733	116	112	120
Blackpool UA	2,124	1,031	1,093	118	123	113
Halton UA	1,222	606	616	131	130	132
Warrington UA	1,855	871	984	109	106	112
Cheshire County	6,988	3,308	3,680	100	99	102
Chester	1,241	587	654	95	93	97
Congleton	884	429	455	94	95	93
Crewe and Nantwich	1,218	578	640	114	110	119
Ellesmere Port and Neston	751	366	385	97	98	96
Macclesfield	1,677	765	912	98	96	101
Vale Royal	1,217	583	634	103	102	104
Cumbria	5,647	2,685	2,962	102	100	103
Allerdale	1,131	542	589	104	107	102
Barrow-in-Furness	818	418	400	121	124	119
Carlisle	1,207	564	643	107	104	109
Copeland	713	354	359	109	108	110
Eden	504	234	270	87	82	91
South Lakeland	1,274	573	701	89	85	93
Greater Manchester	27,003	12,843	14,160	113	116	111
Bolton	2,704	1,271	1,433	108	108	107
Bury	1,878	861	1,017	110	108	112
Manchester	4,470	2,259	2,211	126	136	117
Oldham	2,237	1,064	1,173	112	116	109
Rochdale	2,173	1,012	1,161	119	116	121
Salford	2,648	1,248	1,400	117	121	114
Stockport	2,973	1,397	1,576	98	100	96
Tameside	2,409	1,165	1,244	119	124	114
Trafford	2,158	1,021	1,137	98	98	98
Wigan	3,353	1,545	1,808	122	120	124

Note: SMR's are based on mid-2000 population estimates with 2000 livebirths (used for under 1 year).

**Table 1
continued****Deaths by area of usual residence, numbers and standardised mortality ratios (SMR's) by sex, 2001 registrations**

England, Wales and elsewhere, government office regions, unitary authorities/counties/districts and London boroughs

Area of usual residence	Number of deaths			Standardised mortality ratios		
	Persons	Males	Females	Persons	Males	Females
Lancashire County	12,660	5,854	6,806	106	105	107
Burnley	970	420	550	113	103	121
Chorley	1,007	449	558	108	106	110
Fylde	1,037	464	573	91	92	91
Hyndburn	915	429	486	124	122	125
Lancaster	1,568	776	792	101	108	95
Pendle	930	428	502	118	111	125
Preston	1,384	651	733	110	110	110
Ribble Valley	584	257	327	97	86	109
Rossendale	698	306	392	115	108	122
South Ribble	1,036	502	534	107	108	106
West Lancashire	1,184	558	626	108	109	107
Wyre	1,347	614	733	97	96	98
Merseyside	16,125	7,586	8,539	115	118	113
Knowsley	1,536	749	787	130	131	129
Liverpool	5,245	2,495	2,750	130	133	127
St Helens	1,968	932	1,036	118	118	118
Sefton	3,572	1,631	1,941	104	106	102
Wirral	3,804	1,779	2,025	105	109	101
YORKSHIRE AND THE HUMBER	51,976	24,833	27,143	102	103	101
East Riding of Yorkshire UA	3,411	1,600	1,811	97	95	99
Kingston upon Hull, City of UA	2,570	1,301	1,269	104	111	99
North East Lincolnshire UA	1,681	856	825	103	111	95
North Lincolnshire UA	1,636	793	843	103	101	104
York UA	1,844	886	958	94	97	92
North Yorkshire County	6,127	2,886	3,241	91	90	92
Craven	634	263	371	94	85	102
Hambleton	817	394	423	87	86	89
Harrogate	1,582	729	853	92	92	92
Richmondshire	445	223	222	94	94	94
Ryedale	529	266	263	77	81	74
Scarborough	1,387	638	749	93	93	93
Selby	733	373	360	99	97	102
South Yorkshire	13,594	6,509	7,085	105	106	104
Barnsley	2,476	1,201	1,275	111	114	109
Doncaster	3,017	1,450	1,567	111	109	113
Rotherham	2,540	1,222	1,318	105	106	103
Sheffield	5,561	2,636	2,925	101	102	99
West Yorkshire	21,113	10,002	11,111	106	107	105
Bradford	4,747	2,219	2,528	107	108	106
Calderdale	2,027	926	1,101	106	106	107
Kirklees	3,979	1,857	2,122	106	107	106
Leeds	7,018	3,368	3,650	101	103	99
Wakefield	3,342	1,632	1,710	115	117	114
EAST MIDLANDS	42,580	20,447	22,133	100	99	102
Derby UA	2,296	1,101	1,195	100	99	100
Leicester UA	2,778	1,349	1,429	108	109	107
Nottingham UA	2,827	1,409	1,418	109	114	105
Rutland UA	295	139	156	84	77	91
Derbyshire County	7,998	3,811	4,187	105	103	106
Amber Valley	1,237	596	641	95	98	93
Bolsover	822	387	435	111	106	116
Chesterfield	1,191	556	635	117	110	125
Derbyshire Dales	837	378	459	95	94	96
Erewash	1,164	558	606	105	103	106
High Peak	868	414	454	104	109	99
North East Derbyshire	1,082	528	554	102	101	103
South Derbyshire	797	394	403	113	108	119

**Table 1
continued****Deaths by area of usual residence, numbers and standardised mortality ratios (SMR's) by sex, 2001 registrations**

England, Wales and elsewhere, government office regions, unitary authorities/counties/districts and London boroughs

Area of usual residence	Number of deaths			Standardised mortality ratios		
	Persons	Males	Females	Persons	Males	Females
Leicestershire County	5,544	2,600	2,944	91	86	97
Blaby	655	316	339	84	79	90
Charnwood	1,441	647	794	90	83	98
Harborough	723	341	382	92	89	93
Hinckley and Bosworth	944	441	503	90	86	93
Melton	459	221	238	98	90	107
North West Leicestershire	820	399	421	99	98	99
Oadby and Wigston	502	235	267	91	83	100
Lincolnshire	7,320	3,605	3,715	99	99	99
Boston	688	319	369	102	96	109
East Lindsey	1,711	865	846	97	99	96
Lincoln	840	432	408	99	108	92
North Kesteven	1,025	463	562	96	90	101
South Holland	987	498	489	104	104	103
South Kesteven	1,180	583	597	94	96	92
West Lindsey	889	445	444	104	100	108
Northamptonshire	5,554	2,696	2,858	97	97	98
Corby	485	249	236	109	109	108
Daventry	595	300	295	95	94	97
East Northamptonshire	719	335	384	98	93	103
Kettering	777	375	402	96	95	98
Northampton	1,703	818	885	100	101	98
South Northamptonshire	623	303	320	87	87	87
Wellingborough	652	316	336	96	97	95
Nottinghamshire County	7,968	3,737	4,231	103	100	107
Ashfield	1,256	615	641	116	116	116
Bassetlaw	1,201	593	608	109	107	111
Broxtowe	1,097	510	587	98	91	104
Gedling	1,065	470	595	88	83	93
Mansfield	1,075	519	556	112	108	115
Newark and Sherwood	1,203	553	650	111	108	114
Rushcliffe	1,071	477	594	94	89	98
WEST MIDLANDS	54,116	26,209	27,907	103	104	103
Herefordshire, County of UA	1,874	911	963	91	91	92
Stoke-on-Trent UA	2,691	1,297	1,394	111	116	107
Telford and Wrekin UA	1,349	648	701	114	113	116
Shropshire County	3,055	1,443	1,612	95	93	97
Bridgnorth	553	279	274	103	103	104
North Shropshire	603	275	328	91	88	95
Oswestry	432	193	239	107	108	106
Shrewsbury and Atcham	955	449	506	89	87	91
South Shropshire	512	247	265	93	87	98
Staffordshire County	8,179	3,883	4,296	105	102	108
Cannock Chase	807	413	394	116	118	113
East Staffordshire	1,169	590	579	112	119	106
Lichfield	977	409	568	106	93	119
Newcastle-under-Lyme	1,266	598	668	99	98	99
South Staffordshire	1,000	450	550	94	86	102
Stafford	1,295	600	695	97	91	104
Staffordshire Moorlands	1,044	504	540	107	103	112
Tamworth	621	319	302	127	130	123
Warwickshire	5,157	2,438	2,719	101	96	106
North Warwickshire	627	315	312	110	110	110
Nuneaton and Bedworth	1,187	594	593	117	118	116
Rugby	900	425	475	99	92	106
Stratford-on-Avon	1,222	543	679	95	85	105
Warwick	1,221	561	660	93	89	97

**Table 1
continued****Deaths by area of usual residence, numbers and standardised mortality ratios (SMR's) by sex, 2001 registrations**

England, Wales and elsewhere, government office regions, unitary authorities/counties/districts and London boroughs

Area of usual residence	Number of deaths			Standardised mortality ratios		
	Persons	Males	Females	Persons	Males	Females
West Midlands	26,205	12,961	13,244	105	109	101
Birmingham	9,825	4,919	4,906	107	113	102
Coventry	2,932	1,451	1,481	99	103	95
Dudley	3,192	1,571	1,621	103	107	101
Sandwell	3,340	1,618	1,722	119	123	115
Solihull	1,877	908	969	91	90	91
Walsall	2,543	1,223	1,320	100	101	99
Wolverhampton	2,496	1,271	1,225	106	111	100
Worcestershire County	5,606	2,628	2,978	99	96	102
Bromsgrove	970	430	540	104	96	112
Malvern Hills	908	418	490	94	88	100
Redditch	633	303	330	97	95	99
Worcester	869	423	446	97	101	93
Wychavon	1,137	548	589	94	90	98
Wyre Forest	1,089	506	583	110	108	111
EAST	53,361	25,287	28,074	95	93	98
Luton UA	1,563	759	804	116	112	120
Peterborough UA	1,486	717	769	112	108	117
Southend-on-Sea UA	2,211	943	1,268	103	97	108
Thurrock UA	1,160	571	589	110	113	107
Bedfordshire County	3,295	1,588	1,707	98	96	100
Bedford	1,336	625	711	100	97	104
Mid Bedfordshire	933	467	466	88	89	88
South Bedfordshire	1,026	496	530	107	104	109
Cambridgeshire County	4,860	2,379	2,481	90	89	90
Cambridge	900	422	478	79	80	79
East Cambridgeshire	621	338	283	85	90	80
Fenland	1,073	535	538	112	113	112
Huntingdonshire	1,212	599	613	94	93	95
South Cambridgeshire	1,054	485	569	80	74	87
Essex County	13,029	6,090	6,939	95	92	98
Basildon	1,413	681	732	92	93	91
Braintree	1,364	596	768	107	98	117
Brentwood	681	298	383	94	80	109
Castle Point	837	374	463	98	88	108
Chelmsford	1,286	646	640	86	90	83
Colchester	1,421	675	746	94	93	94
Epping Forest	1,198	568	630	95	93	97
Harlow	636	305	331	94	90	98
Maldon	576	256	320	95	89	101
Rochford	731	358	373	84	83	85
Tendring	2,203	1,027	1,176	98	99	98
Uttlesford	683	306	377	98	87	110
Hertfordshire	9,462	4,379	5,083	95	90	99
Broxbourne	720	372	348	97	98	95
Dacorum	1,218	590	628	93	93	93
East Hertfordshire	1,043	490	553	92	89	96
Hertsmere	987	390	597	95	81	106
North Hertfordshire	1,312	592	720	104	98	110
St Albans	1,057	482	575	81	74	87
Stevenage	651	320	331	107	103	110
Three Rivers	784	366	418	78	78	78
Watford	774	335	439	126	107	147
Welwyn Hatfield	916	442	474	93	93	93
Norfolk	9,105	4,425	4,680	91	90	93
Breckland	1,375	695	680	92	93	91
Broadland	1,302	599	703	95	85	104
Great Yarmouth	1,140	525	615	103	100	105
King's Lynn and West Norfolk	1,649	832	817	97	98	97
North Norfolk	1,355	652	703	85	83	87
Norwich	1,162	571	591	85	92	79
South Norfolk	1,122	551	571	85	81	88

**Table 1
continued****Deaths by area of usual residence, numbers and standardised mortality ratios (SMR's) by sex, 2001 registrations**

England, Wales and elsewhere, government office regions, unitary authorities/counties/districts and London boroughs

Area of usual residence	Number of deaths			Standardised mortality ratios		
	Persons	Males	Females	Persons	Males	Females
Suffolk	7,190	3,436	3,754	94	92	96
Babergh	852	413	439	90	88	93
Forest Heath	518	260	258	104	101	107
Ipswich	1,226	551	675	101	95	105
Mid Suffolk	867	422	445	87	89	85
St Edmundsbury	964	463	501	96	94	98
Suffolk Coastal	1,352	638	714	91	88	94
Waveney	1,411	689	722	95	95	95
LONDON	58,583	28,526	30,057	95	98	93
Inner London	20,064	10,286	9,778	96	102	90
Camden	1,541	798	743	93	102	85
City of London	34	20	14	50	53	47
Hackney	1,306	685	621	96	101	90
Hammersmith and Fulham	1,078	543	535	92	98	87
Haringey	1,484	712	772	96	97	96
Islington	1,344	728	616	101	109	93
Kensington and Chelsea	992	491	501	71	73	69
Lambeth	1,834	988	846	98	109	88
Lewisham	2,134	1,045	1,089	109	117	102
Newham	1,701	922	779	111	120	101
Southwark	1,793	913	880	102	104	100
Tower Hamlets	1,391	775	616	110	122	97
Wandsworth	2,068	963	1,105	98	99	97
Westminster	1,364	703	661	71	73	69
Outer London	38,519	18,240	20,279	95	96	95
Barking and Dagenham	1,697	835	862	115	126	106
Barnet	2,816	1,269	1,547	89	84	94
Bexley	2,059	994	1,065	95	96	94
Brent	1,801	937	864	100	99	101
Bromley	2,955	1,364	1,591	92	93	90
Croydon	2,675	1,243	1,432	95	93	98
Ealing	2,244	1,123	1,121	96	97	95
Enfield	2,392	1,092	1,300	93	95	92
Greenwich	1,993	941	1,052	108	110	105
Harrow	1,633	775	858	81	83	79
Havering	2,336	1,114	1,222	99	99	99
Hillingdon	2,087	996	1,091	91	90	91
Hounslow	1,684	822	862	97	99	95
Kingston upon Thames	1,336	603	733	98	92	103
Merton	1,514	728	786	93	98	89
Redbridge	2,113	1,004	1,109	95	95	96
Richmond upon Thames	1,452	668	784	78	80	77
Sutton	1,782	788	994	103	102	103
Waltham Forest	1,950	944	1,006	105	113	99
SOUTH EAST	79,574	36,949	42,625	93	92	95
Bracknell Forest UA	762	370	392	95	94	96
Brighton and Hove UA	2,765	1,329	1,436	95	101	90
Isle of Wight UA	1,755	818	937	93	93	93
Medway UA	2,166	1,050	1,116	112	113	111
Milton Keynes UA	1,478	692	786	107	103	110
Portsmouth UA	1,954	896	1,058	103	101	104
Reading UA	1,164	569	595	91	97	87
Slough UA	968	513	455	121	129	113
Southampton UA	1,898	919	979	91	92	90
West Berkshire UA	1,148	554	594	92	89	96
Windsor and Maidenhead UA	1,299	614	685	99	94	103
Wokingham UA	1,024	516	508	92	89	94
Buckinghamshire County	4,152	2,001	2,151	95	92	98
Aylesbury Vale	1,339	614	725	104	95	113
Chiltern	844	424	420	83	87	79
South Bucks	632	298	334	97	93	102
Wycombe	1,337	665	672	94	92	95

**Table 1
continued****Deaths by area of usual residence, numbers and standardised mortality ratios (SMR's) by sex, 2001 registrations**

England, Wales and elsewhere, government office regions, unitary authorities/counties/districts and London boroughs

Area of usual residence	Number of deaths			Standardised mortality ratios		
	Persons	Males	Females	Persons	Males	Females
East Sussex County	6,846	3,065	3,781	91	91	90
Eastbourne	1,422	669	753	91	102	82
Hastings	1,162	483	679	107	103	110
Lewes	1,153	520	633	87	85	89
Rother	1,478	643	835	86	86	87
Wealden	1,631	750	881	87	85	89
Hampshire County	11,523	5,350	6,173	91	88	94
Basingstoke and Deane	1,111	524	587	93	88	98
East Hampshire	1,064	456	608	95	88	102
Eastleigh	995	465	530	97	95	100
Fareham	1,050	479	571	89	84	93
Gosport	802	391	411	110	115	106
Hart	558	271	287	79	78	80
Havant	1,282	608	674	95	91	99
New Forest	1,890	865	1,025	79	76	82
Rushmoor	704	329	375	104	106	102
Test Valley	1,015	488	527	95	94	96
Winchester	1,052	474	578	85	81	89
Kent County	14,047	6,467	7,580	94	92	96
Ashford	917	465	452	88	93	83
Canterbury	1,630	705	925	87	81	92
Dartford	836	378	458	115	111	119
Dover	1,270	584	686	93	93	94
Gravesham	849	415	434	97	97	97
Maidstone	1,324	637	687	95	94	97
Sevenoaks	993	464	529	82	79	85
Shepway	1,278	569	709	98	98	98
Swale	1,213	542	671	104	94	114
Thanet	1,818	845	973	100	101	98
Tonbridge and Malling	920	448	472	93	95	92
Tunbridge Wells	999	415	584	87	77	95
Oxfordshire	5,115	2,480	2,635	90	89	91
Cherwell	1,116	531	585	101	97	106
Oxford	1,021	510	511	82	86	78
South Oxfordshire	1,132	571	561	91	93	88
Vale of White Horse	936	454	482	84	83	84
West Oxfordshire	910	414	496	95	87	102
Surrey	10,117	4,608	5,509	89	86	92
Elmbridge	1,177	516	661	89	81	96
Epsom and Ewell	660	349	311	79	91	69
Guildford	1,025	480	545	78	76	80
Mole Valley	853	384	469	84	81	87
Reigate and Banstead	1,407	629	778	108	102	114
Runnymede	768	358	410	90	89	91
Spelthorne	815	384	431	83	80	86
Surrey Heath	668	321	347	92	90	94
Tandridge	790	348	442	88	85	90
Waverley	1,192	493	699	88	81	94
Woking	762	346	416	96	89	103
West Sussex	9,393	4,138	5,255	93	90	97
Adur	729	316	413	88	82	94
Arun	2,316	1,006	1,310	93	88	98
Chichester	1,434	652	782	87	87	87
Crawley	788	366	422	101	93	108
Horsham	1,164	563	601	86	84	89
Mid Sussex	1,335	558	777	101	94	106
Worthing	1,627	677	950	99	101	98

Table 1
continued

Deaths by area of usual residence, numbers and standardised mortality ratios (SMR's) by sex, 2001 registrations

England, Wales and elsewhere, government office regions, unitary authorities/counties/districts and London boroughs

Area of usual residence	Number of deaths			Standardised mortality ratios		
	Persons	Males	Females	Persons	Males	Females
SOUTH WEST	54,332	25,624	28,708	92	91	92
Bath and North East Somerset UA	1,635	806	829	81	85	77
Bournemouth UA	2,273	1,009	1,264	94	95	93
Bristol, City of UA	3,831	1,858	1,973	97	100	95
North Somerset UA	2,251	1,012	1,239	94	93	95
Plymouth UA	2,481	1,187	1,294	96	97	95
Poole UA	1,522	710	812	85	85	84
South Gloucestershire UA	1,867	866	1,001	85	78	91
Swindon UA	1,586	786	800	104	105	103
Torbay UA	1,913	840	1,073	96	96	96
Cornwall and the Isles of Scilly	5,918	2,813	3,105	93	93	94
Caradon	902	415	487	92	88	95
Carrick	1,051	488	563	85	85	85
Kerrier	1,056	502	554	95	96	95
North Cornwall	953	469	484	92	93	91
Penwith	827	386	441	97	96	98
Restormel	1,109	543	566	100	101	99
Isles of Scilly	20	10	10	77	66	92
Devon County	8,602	4,051	4,551	90	90	91
East Devon	1,938	942	996	86	88	84
Exeter	1,080	498	582	94	96	93
Mid Devon	732	365	367	89	90	88
North Devon	1,086	507	579	94	92	96
South Hams	908	406	502	85	80	90
Teignbridge	1,512	708	804	90	88	91
Torridge	741	346	395	102	97	107
West Devon	605	279	326	91	90	93
Dorset County	4,836	2,314	2,522	84	84	84
Christchurch	686	337	349	80	84	76
East Dorset	1,019	490	529	77	75	80
North Dorset	640	306	334	80	80	80
Purbeck	481	226	255	80	77	83
West Dorset	1,233	586	647	85	85	85
Weymouth and Portland	777	369	408	106	109	104
Gloucestershire	5,843	2,773	3,070	94	94	94
Cheltenham	1,148	549	599	91	96	87
Cotswold	902	440	462	90	94	87
Forest of Dean	846	416	430	100	101	99
Gloucester	1,004	492	512	101	99	103
Stroud	1,177	520	657	96	91	99
Tewkesbury	766	356	410	87	84	90
Somerset	5,552	2,620	2,932	90	89	92
Mendip	1,070	493	577	97	94	101
Sedgemoor	1,194	581	613	94	95	93
South Somerset	1,676	783	893	87	84	90
Taunton Deane	1,106	536	570	88	94	84
West Somerset	506	227	279	85	77	93
Wiltshire County	4,222	1,979	2,243	94	91	96
Kennet	650	302	348	80	78	81
North Wiltshire	1,146	556	590	96	97	96
Salisbury	1,196	552	644	93	89	98
West Wiltshire	1,230	569	661	100	95	105

**Table 1
continued****Deaths by area of usual residence, numbers and standardised mortality ratios (SMR's) by sex, 2001 registrations**

England, Wales and elsewhere, government office regions, unitary authorities/counties/districts and London boroughs

Area of usual residence	Number of deaths			Standardised mortality ratios		
	Persons	Males	Females	Persons	Males	Females
WALES	33,249	15,714	17,535	104	104	105
Blaenau Gwent	894	425	469	120	121	119
Bridgend	1,402	637	765	102	97	105
Caerphilly	1,840	898	942	120	121	119
Cardiff	2,943	1,423	1,520	97	99	95
Carmarthenshire	2,339	1,127	1,212	111	112	109
Ceredigion	747	336	411	84	79	89
Conwy	1,659	761	898	96	98	95
Denbighshire	1,241	563	678	101	99	103
Flintshire	1,445	683	762	104	100	107
Gwynedd	1,339	608	731	94	95	93
Isle of Anglesey	797	370	427	101	99	104
Merthyr Tydfil	655	308	347	123	124	123
Monmouthshire	941	479	462	93	99	89
Neath Port Talbot	1,728	804	924	113	115	111
Newport	1,479	727	752	107	109	105
Pembrokeshire	1,375	696	679	108	110	107
Powys	1,519	747	772	97	97	98
Rhondda, Cynon, Taff	2,590	1,223	1,367	114	114	114
Swansea	2,586	1,190	1,396	101	97	103
Torfaen	975	460	515	114	110	117
The Vale of Glamorgan	1,295	595	700	102	95	107
Wrexham	1,460	654	806	112	106	118

Table 2 Deaths by area of usual residence, numbers and standardised mortality ratios (SMRs) by sex, 2001 registrations

England, Wales and elsewhere, NHS regional offices and health authorities

Area of usual residence	Number of deaths			Standardised mortality ratios		
	Persons	Males	Females	Persons	Males	Females
England, Wales and elsewhere	532,498	253,608	278,890	100	100	100
England	497,878	237,017	260,861	99	99	99
Wales	33,249	15,714	17,535	104	104	105
Elsewhere	1,371	877	494	:	:	:
NORTHERN AND YORKSHIRE	67,011	32,119	34,892	106	107	105
Bradford	4,747	2,219	2,528	107	108	106
Calderdale and Kirklees	6,006	2,783	3,223	106	106	106
County Durham and Darlington	6,749	3,252	3,497	112	114	111
East Riding and Hull	5,981	2,901	3,080	100	101	99
Gateshead and South Tyneside	4,074	2,030	2,044	115	120	110
Leeds	7,018	3,368	3,650	101	103	99
Newcastle & North Tyneside	5,181	2,428	2,753	108	111	106
North Cumbria	3,555	1,694	1,861	103	102	104
Northumberland	3,459	1,672	1,787	106	106	107
North Yorkshire	7,971	3,772	4,199	92	92	92
Sunderland	3,161	1,566	1,595	120	125	115
Tees	5,767	2,802	2,965	115	117	114
Wakefield	3,342	1,632	1,710	115	117	114
TRENT	53,641	25,770	27,871	102	101	103
Barnsley	2,476	1,201	1,275	111	114	109
Doncaster	3,017	1,450	1,567	111	109	113
Leicestershire	8,617	4,088	4,529	96	92	99
Lincolnshire	7,320	3,605	3,715	99	99	99
North Derbyshire	4,242	1,994	2,248	107	104	110
North Nottinghamshire	4,417	2,136	2,281	111	109	112
Nottingham	6,378	3,010	3,368	101	100	102
Rotherham	2,540	1,222	1,318	105	106	103
Sheffield	5,561	2,636	2,925	101	102	99
Southern Derbyshire	5,756	2,779	2,977	101	101	101
South Humber	3,317	1,649	1,668	103	106	100
EASTERN	53,361	25,287	28,074	95	93	98
Bedfordshire	4,858	2,347	2,511	103	101	106
Cambridgeshire	6,346	3,096	3,250	94	93	95
Hertfordshire	9,462	4,379	5,083	95	90	99
Norfolk	9,105	4,425	4,680	91	90	93
North Essex	9,367	4,379	4,988	96	94	98
South Essex	7,033	3,225	3,808	98	94	102
Suffolk	7,190	3,436	3,754	94	92	96
LONDON	58,583	28,526	30,057	95	98	93
Barking & Havering	4,033	1,949	2,084	105	109	102
Barnet, Enfield & Haringey	6,692	3,073	3,619	92	91	94
Bexley, Bromley & Greenwich	7,007	3,299	3,708	97	98	95
Brent & Harrow	3,434	1,712	1,722	90	91	89
Camden & Islington	2,885	1,526	1,359	97	106	88
Croydon	2,675	1,243	1,432	95	93	98
Ealing, Hammersmith & Hounslow	5,006	2,488	2,518	95	98	93
East London and The City	4,432	2,402	2,030	105	113	96
Hillingdon	2,087	996	1,091	91	90	91
Kensington & Chelsea and Westminster	2,356	1,194	1,162	71	73	69
Kingston and Richmond	2,788	1,271	1,517	87	86	87
Lambeth, Southwark and Lewisham	5,761	2,946	2,815	103	110	97
Merton, Sutton and Wandsworth	5,364	2,479	2,885	98	100	96
Redbridge and Waltham Forest	4,063	1,948	2,115	100	103	97

Table 2 Deaths by area of usual residence, numbers and standardised mortality ratios (SMRs) by sex, 2001 registrations

England, Wales and elsewhere, NHS regional offices and health authorities

Area of usual residence	Number of deaths			Standardised mortality ratios		
	Persons	Males	Females	Persons	Males	Females
SOUTH EAST	85,128	39,645	45,483	94	92	95
Berkshire	6,365	3,136	3,229	97	97	97
Buckinghamshire	5,630	2,693	2,937	98	95	101
East Kent	7,144	3,283	3,861	93	92	93
East Surrey	4,344	2,009	2,335	90	89	91
East Sussex, Brighton and Hove	9,611	4,394	5,217	92	94	90
Isle of Wight, Portsmouth & South East Hampshire	7,437	3,440	3,997	98	96	100
Northamptonshire	5,554	2,696	2,858	97	97	98
North and Mid Hampshire	4,515	2,098	2,417	90	87	93
Oxfordshire	5,115	2,480	2,635	90	89	91
Southampton and South West Hampshire	5,178	2,445	2,733	87	86	88
West Kent	9,069	4,234	4,835	99	96	102
West Surrey	5,773	2,599	3,174	88	83	92
West Sussex	9,393	4,138	5,255	93	90	97
SOUTHWEST	54,332	25,624	28,708	92	91	92
Avon	9,584	4,542	5,042	91	91	91
Cornwall and Isles of Scilly	5,918	2,813	3,105	93	93	94
Dorset	8,631	4,033	4,598	86	87	86
Gloucestershire	5,843	2,773	3,070	94	94	94
North and East Devon	5,993	2,860	3,133	92	91	92
Somerset	5,552	2,620	2,932	90	89	92
South and West Devon	7,003	3,218	3,785	93	92	93
Wiltshire	5,808	2,765	3,043	96	95	98
WEST MIDLANDS	54,116	26,209	27,907	103	104	103
Birmingham	9,825	4,919	4,906	107	113	102
Coventry	2,932	1,451	1,481	99	103	95
Dudley	3,192	1,571	1,621	103	107	101
Herefordshire	1,874	911	963	91	91	92
North Staffordshire	5,001	2,399	2,602	107	108	106
Sandwell	3,340	1,618	1,722	119	123	115
Shropshire	4,404	2,091	2,313	100	98	102
Solihull	1,877	908	969	91	90	91
South Staffordshire	5,869	2,781	3,088	106	102	109
Walsall	2,543	1,223	1,320	100	101	99
Warwickshire	5,157	2,438	2,719	101	96	106
Wolverhampton	2,496	1,271	1,225	106	111	100
Worcestershire	5,606	2,628	2,978	99	96	102
NORTH WEST	71,706	33,837	37,869	111	112	110
Bury and Rochdale	4,051	1,873	2,178	114	112	117
East Lancashire	5,438	2,448	2,990	114	108	121
Liverpool	5,245	2,495	2,750	130	133	127
Manchester	4,470	2,259	2,211	126	136	117
Morecambe Bay	3,660	1,767	1,893	100	102	98
North Cheshire	3,077	1,477	1,600	117	115	119
North-West Lancashire	5,892	2,760	3,132	105	107	104
St Helens and Knowsley	3,504	1,681	1,823	123	124	122
Salford and Trafford	4,806	2,269	2,537	108	110	106
Sefton	3,572	1,631	1,941	104	106	102
South Cheshire	6,988	3,308	3,680	100	99	102
South Lancashire	3,227	1,509	1,718	108	108	108
Stockport	2,973	1,397	1,576	98	100	96
West Pennine	4,942	2,368	2,574	115	120	111
Wigan and Bolton	6,057	2,816	3,241	115	114	116
Wirral	3,804	1,779	2,025	105	109	101
WALES	33,249	15,714	17,535	104	104	105
North Wales	7,941	3,639	4,302	101	99	103
Dyfed Powys	5,980	2,906	3,074	102	102	103
Morgannwg	5,716	2,631	3,085	104	102	106
Bro Taf	7,483	3,549	3,934	105	105	105
Gwent	6,129	2,989	3,140	111	112	110

Report:

Infant and perinatal mortality 2001: health areas, England and Wales

This report gives provisional statistics of live births, stillbirths and infant deaths registered in 2001 in England and Wales, for each health authority and NHS regional office.

LIVE BIRTHS AND BIRTHWEIGHT

In 2001 there were 594,634 live births in England and Wales (Table 1) compared with 604,441 in 2000, a decrease of 1.6 per cent. Table 2

gives the number of births and the proportions of low and very low birthweight babies for England and Wales and each health area in 2001. Of those live births in 2001 with a stated birthweight, 7.6 per cent weighed less than 2,500 grams (low birthweight), the same proportion as in 2000, and 1.3 per cent were under 1,500 grams (very low birthweight) a slight increase from 1.2 per cent in 2000.

Table 1 Live births, stillbirths and infant deaths,¹ 1976–2001

England and Wales

Year	Live births	Stillbirths ¹	Deaths			
			Under 1 week	Under 4 weeks	4 weeks – 1 year	Under 1 year
Numbers						
1976	584,270	5,709	4,761	5,663	2,671	8,334
1981	634,492	4,207	3,356	4,226	2,795	7,021
1986	661,018	3,549	2,823	3,489	2,824	6,313
1991	699,217	3,254	2,396	3,052	2,106	5,158
1993	671,224	3,866	2,178	2,796	1,446	4,242
1994	664,256	3,816	2,142	2,749	1,371	4,120
1995	648,001	3,597	2,104	2,698	1,284	3,982
1996	649,489	3,539	2,066	2,645	1,314	3,959
1997	643,095	3,439	1,941	2,517	1,282	3,799
1998	635,901	3,417	1,844	2,418	1,207	3,625
1999	621,872	3,305	1,833	2,435	1,186	3,621
2000	604,441	3,203	1,760	2,335	1,064	3,399
2001	594,634	3,159	1,600	2,148	1,119	3,267
Rates						
		Stillbirth ²	Mortality			
			Perinatal ²	Neonatal ³	Postneonatal ³	Infant ³
1976		9.7	17.7	9.7	4.6	14.3
1981		6.6	11.8	6.7	4.4	11.1
1986		5.3	9.6	6.3	4.3	9.6
1991		4.6	8.0	4.4	3.0	7.4
1993		5.7	9.0	4.2	2.2	6.3
1994		5.7	8.9	4.1	2.1	6.2
1995		5.5	8.7	4.2	2.0	6.1
1996		5.4	8.6	4.1	2.0	6.1
1997		5.3	8.3	3.9	2.0	5.9
1998		5.3	8.2	3.8	1.9	5.7
1999		5.3	8.2	3.9	1.9	5.8
2000		5.3	8.2	3.9	1.8	5.6
2001		5.3	8.0	3.6	1.9	5.5

¹ Numbers of deaths shown are based on annual occurrences for years 1993 to 1999, and on annual registrations for all other years.

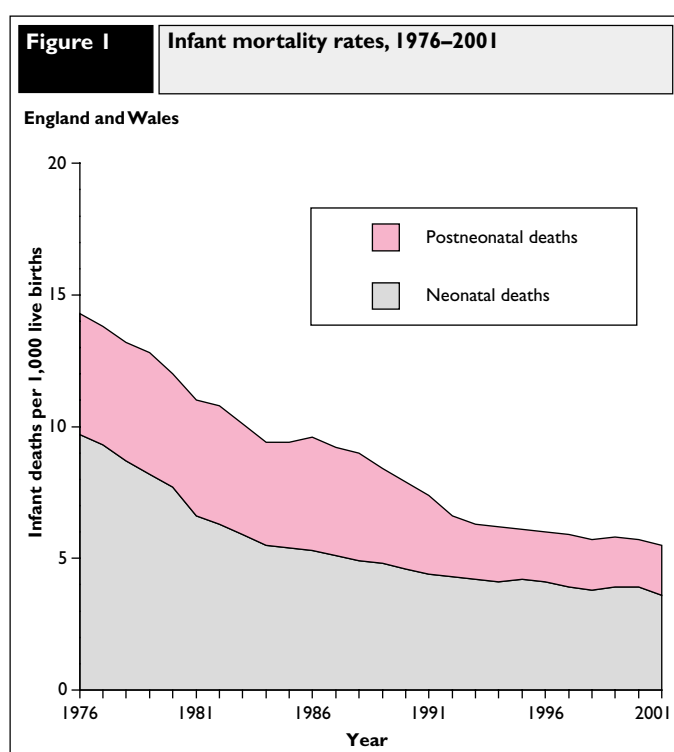
² Per 1,000 live births and stillbirths.

³ Per 1,000 live births.

PERINATAL AND INFANT MORTALITY

There were 3,159 stillbirths in England and Wales in 2001, and 1,600 deaths at ages under seven days (Table 1). The perinatal mortality rate was 8.0 per thousand live and stillbirths. Altogether there were 3,267 infant deaths in England and Wales in 2001, giving an infant mortality rate of 5.5 deaths per thousand live births. This continues the long-term downward trend to the lowest figure ever recorded for England and Wales. However, as Table 2 shows, there was considerable variation in this rate across health authorities.

Neonatal deaths (at ages under 28 days) numbered 2,148 in 2001. The neonatal mortality rate was 3.6 deaths per thousand live births, a slight decrease from 3.9 per thousand live births in 2000. *Postneonatal deaths* (at ages between 28 days and one year) numbered 1,119, giving a postneonatal mortality rate of 1.9 deaths per thousand live births. This was slightly higher than the rate of 1.8 in 2000.



NEONATAL AND POSTNEONATAL MORTALITY 1976–2001

The separate contributions of neonatal and postneonatal deaths to the fall in infant mortality rates over the period 1976–2001 are illustrated in Figure 1.

Over this period the infant mortality rate fell by 62 per cent. While the neonatal and postneonatal rates fell by 63 per cent and 59 per cent respectively. However, these declines were not uniform over the quarter century.

Between 1976 and 1988 the decline was greater for neonatal deaths, the rate falling by 49 per cent. Over the same period the decline in the postneonatal rate was only 11 per cent.

This pattern reversed between 1988 and 2001. Over this period the neonatal rate fell by only 27 per cent, but the postneonatal rate decreased by 54 per cent. A major reason for the large fall in postneonatal mortality since 1988 is the reduction in the number of sudden infant deaths. Provisional statistics on the latter are shown in the Report 'Sudden infant deaths 2001' in this publication.

NOTES

Statistics in the Report

Numbers of live births given here correspond to those in the Report on 2001 births in *Population Trends* 108. These numbers are based on births occurring in 2001, while the mortality data here are based on deaths registered in 2001. However, in line with ONS practice in publishing mortality data, final mortality statistics (including rates) will be based on deaths occurring in the year, but will not be available until later in 2002.

Note also that in Table 1 numbers of deaths for 1995 to 2000 are based on occurrences in these years, while numbers for years prior to 1993 are based on registrations in each year.

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

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

Health authority boundary changes

In Table 2 the figures shown are for health authorities and NHS regional offices as on 1 April 2001. However, there are some boundary differences between these areas and earlier regional and district health authorities. Thus it is not possible in every case to compare the statistics directly with those in the corresponding Reports in *Health Statistics Quarterly* 03, 07 and 11, and in earlier Monitors in the DH3 series.

Recording of birthweight

Since 1975 ONS (formerly OPCS) has obtained the birthweight of a baby from information provided to the registrar of births and deaths by the local health services. By 1986 birthweight was recorded for 99.9 per cent of all live births; in 2001 it was recorded for 99.9 per cent.

Legal definition of stillbirths

On 1 October 1992 the legal definition of a stillbirth was changed, from a baby born dead after 28 or more weeks completed gestation to one born dead after 24 or more weeks completed gestation. This means that perinatal and stillbirth data for 2001 can be compared with data only from 1993 onwards.

General

More details on the above, and on other aspects of stillbirth and infant mortality data, may be found in the ONS annual volume *Mortality statistics: childhood, infant and perinatal* 1999, series DH3 no 32, published in March 2001.

Table 2 Births, perinatal and infant mortality statistics 2001, NHS regional office and health authority of usual residence

England and Wales

Area	Numbers					Mortality rates				Percentage of live births with a stated birthweight	
	Births		Deaths			Perinatal ¹	Neonatal ²	Post-neonatal ²	Infant ²	Under 1,500g	Under 2,500g
	Live births	Still-births	Under 1 week	Under 4 weeks	Under 1 year						
England, Wales and Elsewhere³	594,634	3,159	1,600	2,148	3,267	8.0	3.6	1.9	5.5	1.3	7.6
England	563,744	2,991	1,521	2,030	3,063	8.0	3.6	1.8	5.4	1.3	7.6
Northern and Yorkshire	67,435	343	165	229	379	7.5	3.4	2.2	5.6	1.3	7.8
Bradford	7,205	55	23	30	63	10.7	4.2	4.6	8.7	1.6	9.6
Calderdale and Kirklees	7,298	33	23	28	48	7.6	3.8	2.7	6.6	1.6	9.0
County Durham and Darlington	5,846	23	16	21	40	6.6	3.6	3.3	6.8	1.3	7.2
East Riding and Hull	5,649	20	12	20	31	5.6	3.5	1.9	5.5	1.5	7.8
Gateshead and South Tyneside	3,474	25	10	13	19	10.0	3.7	1.7	5.5	1.1	7.3
Leeds	7,831	48	14	22	40	7.9	2.8	2.3	5.1	1.2	8.1
Newcastle & North Tyneside	4,824	19	11	15	20	6.2	3.1	1.0	4.1	1.1	7.2
North Cumbria	2,961	14	4	7	10	6.1	2.4	1.0	3.4	1.4	6.6
Northumberland	2,881	19	3	6	10	7.6	2.1	1.4	3.5	1.0	6.1
North Yorkshire	7,261	26	10	14	21	4.9	1.9	1.0	2.9	0.7	5.9
Sunderland	2,853	16	7	9	13	8.0	3.2	1.4	4.6	1.2	7.7
Tees	6,071	34	23	32	43	9.3	5.3	1.8	7.1	1.4	8.5
Wakefield	3,281	11	9	12	21	6.1	3.7	2.7	6.4	1.0	8.2
Trent	54,009	293	148	195	294	8.1	3.6	1.8	5.4	1.3	7.7
Barnsley	2,226	8	5	5	12	5.8	2.2	3.1	5.4	1.4	7.3
Doncaster	3,225	18	3	6	16	6.5	1.9	3.1	5.0	1.1	8.3
Leicestershire	10,503	65	31	41	55	9.1	3.9	1.3	5.2	1.3	8.0
Lincolnshire	6,020	28	10	15	24	6.3	2.5	1.5	4.0	1.0	6.9
North Derbyshire	3,420	22	6	9	13	8.1	2.6	1.2	3.8	1.3	6.9
North Nottinghamshire	3,939	13	9	11	20	5.6	2.8	2.3	5.1	1.3	7.9
Nottingham	6,725	29	26	34	49	8.1	5.1	2.2	7.3	1.4	8.0
Rotherham	2,730	11	8	9	14	6.9	3.3	1.8	5.1	1.3	7.7
Sheffield	5,679	39	19	24	34	10.1	4.2	1.8	6.0	1.2	8.2
Southern Derbyshire	6,302	42	20	27	33	9.8	4.3	1.0	5.2	1.4	7.6
South Humber	3,240	18	11	14	24	8.9	4.3	3.1	7.4	1.3	7.8
Eastern	60,090	291	133	177	273	7.0	2.9	1.6	4.5	1.0	6.7
Bedfordshire	7,335	51	21	25	43	9.7	3.4	2.5	5.9	1.1	8.3
Cambridgeshire	7,916	33	20	25	44	6.7	3.2	2.4	5.6	1.3	7.1
Hertfordshire	12,694	66	30	40	57	7.5	3.2	1.3	4.5	0.9	6.3
Norfolk	7,405	35	19	26	31	7.3	3.5	0.7	4.2	1.1	6.8
North Essex	9,685	41	17	27	41	6.0	2.8	1.4	4.2	1.1	6.2
South Essex	8,099	40	10	17	29	6.1	2.1	1.5	3.6	0.8	6.2
Suffolk	6,956	25	16	17	28	5.9	2.4	1.6	4.0	1.1	6.5
London	104,162	620	315	432	633	8.9	4.1	1.9	6.1	1.5	8.1
Barking & Havering	4,789	23	7	10	15	6.2	2.1	1.0	3.1	1.5	6.8
Barnet, Enfield & Haringey	11,640	86	32	46	61	10.1	4.0	1.3	5.2	1.5	7.8
Bexley, Bromley & Greenwich	9,250	51	25	35	48	8.2	3.8	1.4	5.2	1.1	7.6
Brent & Harrow	6,498	37	27	33	46	9.8	5.1	2.0	7.1	1.8	8.8
Camden & Islington	5,292	34	16	19	30	9.4	3.6	2.1	5.7	1.3	7.4
Croydon	4,401	26	9	12	20	7.9	2.7	1.8	4.5	1.4	8.8
Ealing, Hammersmith and Hounslow	9,891	53	33	46	67	8.6	4.7	2.1	6.8	1.5	7.8
East London and The City	12,599	76	44	57	83	9.5	4.5	2.1	6.6	1.4	9.9
Hillingdon	3,244	16	10	13	21	8.0	4.0	2.5	6.5	1.6	7.7
Kensington & Chelsea and Westminster	4,708	27	13	18	30	8.4	3.8	2.5	6.4	1.2	7.6
Kingston and Richmond	4,181	25	8	13	18	7.8	3.1	1.2	4.3	1.1	6.3
Lambeth, Southwark and Lewisham	12,113	81	48	65	100	10.6	5.4	2.9	8.3	1.7	9.4
Merton, Sutton and Wandsworth	8,936	39	15	25	39	6.0	2.8	1.6	4.4	1.3	6.9
Redbridge and Waltham Forest	6,620	46	28	40	55	11.1	6.0	2.3	8.3	1.5	8.5
South East	95,894	446	205	272	396	6.8	2.8	1.3	4.1	1.1	6.9
Berkshire	10,020	48	34	40	54	8.1	4.0	1.4	5.4	1.3	7.5
Buckinghamshire	8,293	44	38	44	53	9.8	5.3	1.1	6.4	1.3	7.3
East Kent	6,152	23	15	17	26	6.2	2.8	1.5	4.2	1.1	6.9
East Surrey	4,592	15	8	9	13	5.0	2.0	0.9	2.8	1.0	6.1
East Sussex, Brighton and Hove	7,395	31	13	20	31	5.9	2.7	1.5	4.2	0.9	6.5

1 Per 1,000 live and stillbirths.

2 Per 1,000 live births.

3 Including births and deaths to persons normally resident outside England and Wales.

**Table 2
continued****Births, perinatal and infant mortality statistics 2001, NHS regional office and health authority of usual residence**

England and Wales

Area	Numbers					Mortality rates				Percentage of live births with a stated birthweight	
	Births		Deaths			Perinatal ¹	Neonatal ²	Post-neonatal ²	Infant ²	Under 1,500g	Under 2,500g
Live births	Still-births	Under 1 week	Under 4 weeks	Under 1 year							
Isle of Wight, Portsmouth and South											
East Hampshire	6,874	49	12	25	36	8.8	3.6	1.6	5.2	1.4	7.6
Northamptonshire	7,384	37	12	14	25	6.6	1.9	1.5	3.4	1.4	7.2
North and Mid Hampshire	6,206	22	11	17	28	5.3	2.7	1.8	4.5	1.0	6.1
Oxfordshire	7,019	34	14	16	28	6.8	2.3	1.7	4.0	0.9	6.8
Southampton and South West Hampshire	5,516	26	11	18	26	6.7	3.3	1.5	4.7	1.5	7.1
West Kent	11,520	62	20	24	35	7.1	2.1	1.0	3.0	1.1	7.0
West Surrey	7,170	19	10	15	23	4.0	2.1	1.1	3.2	0.9	6.3
West Sussex	7,753	36	7	13	18	5.5	1.7	0.6	2.3	0.9	6.9
South West	48,747	211	140	179	264	7.2	3.7	1.7	5.4	1.1	6.7
Avon	10,909	43	33	44	67	6.9	4.0	2.1	6.1	1.2	6.7
Cornwall and Isles of Scilly	4,477	14	12	15	23	5.8	3.4	1.8	5.1	1.1	6.5
Dorset	6,170	25	19	22	30	7.1	3.6	1.3	4.9	1.2	6.7
Gloucestershire	5,782	31	14	20	27	7.7	3.5	1.2	4.7	1.1	6.8
North and East Devon	4,399	19	13	18	29	7.2	4.1	2.5	6.6	1.0	6.1
Somerset	4,732	14	14	19	26	5.9	4.0	1.5	5.5	1.3	6.5
South and West Devon	5,444	24	12	15	21	6.6	2.8	1.1	3.9	1.1	6.4
Wiltshire	6,834	41	23	26	41	9.3	3.8	2.2	6.0	1.1	7.2
West Midlands	60,818	337	216	268	390	9.0	4.4	2.0	6.4	1.4	8.6
Birmingham	14,426	93	67	83	126	11.0	5.8	3.0	8.7	1.7	9.9
Coventry	3,614	21	14	15	26	9.6	4.2	3.0	7.2	1.7	8.8
Dudley	3,313	20	5	8	13	7.5	2.4	1.5	3.9	1.5	7.8
Herefordshire	1,591	9	4	4	4	8.1	2.5	0.0	2.5	0.8	6.7
North Staffordshire	4,723	22	21	24	31	9.1	5.1	1.5	6.6	1.5	8.3
Sandwell	3,694	23	9	14	25	8.6	3.8	3.0	6.8	1.8	10.6
Shropshire	4,504	28	18	20	28	10.2	4.4	1.8	6.2	1.2	7.2
Solihull	1,959	13	6	8	10	9.6	4.1	1.0	5.1	1.0	6.9
South Staffordshire	6,079	34	18	26	33	8.5	4.3	1.2	5.4	1.2	8.1
Walsall	3,199	17	11	12	19	8.7	3.8	2.2	5.9	1.4	9.7
Warwickshire	5,254	18	9	15	24	5.1	2.9	1.7	4.6	1.3	7.3
Wolverhampton	2,900	16	18	20	26	11.7	6.9	2.1	9.0	1.5	10.2
Worcestershire	5,562	23	16	19	25	7.0	3.4	1.1	4.5	1.2	7.6
North West	72,589	450	199	278	434	8.9	3.8	2.1	6.0	1.3	8.0
Bury and Rochdale	4,620	36	17	21	24	11.4	4.5	0.6	5.2	1.1	9.0
East Lancashire	6,508	46	19	28	52	9.9	4.3	3.7	8.0	1.2	9.6
Liverpool	4,915	26	16	22	31	8.5	4.5	1.8	6.3	1.5	8.4
Manchester	5,496	44	19	28	51	11.4	5.1	4.2	9.3	1.6	8.2
Morecambe Bay	2,948	16	13	19	26	9.8	6.4	2.4	8.8	1.0	7.0
North Cheshire	3,588	16	9	10	14	6.9	2.8	1.1	3.9	1.0	6.2
North-West Lancashire	4,610	31	14	18	24	9.7	3.9	1.3	5.2	1.2	8.4
St Helens and Knowsley	3,586	22	13	14	26	9.7	3.9	3.3	7.3	1.6	8.3
Salford and Trafford	4,902	27	14	18	30	8.3	3.7	2.4	6.1	1.2	7.5
Sefton	2,640	11	7	7	9	6.8	2.7	0.8	3.4	1.0	7.6
South Cheshire	6,921	47	10	20	30	8.2	2.9	1.4	4.3	1.0	6.6
South Lancashire	3,252	8	7	10	15	4.6	3.1	1.5	4.6	1.1	7.8
Stockport	2,903	14	12	14	21	8.9	4.8	2.4	7.2	1.5	6.8
West Pennine	5,875	39	9	16	31	8.1	2.7	2.6	5.3	1.4	9.1
Wigan and Bolton	6,517	42	15	22	36	8.7	3.4	2.1	5.5	1.3	8.5
Wirral	3,308	25	5	11	14	9.0	3.3	0.9	4.2	1.2	6.7
Wales	30,616	155	76	105	169	7.5	3.4	2.1	5.5	1.2	7.5
Bro Taf	7,890	39	17	28	42	7.1	3.5	1.8	5.3	1.3	7.8
Dyfed Powys	4,588	18	7	13	24	5.4	2.8	2.4	5.2	1.0	7.1
Gwent	6,038	31	17	20	35	7.9	3.3	2.5	5.8	1.3	8.0
Morgannwg	5,179	28	14	19	32	8.1	3.7	2.5	6.2	1.4	7.4
North Wales	6,921	39	21	25	36	8.6	3.6	1.6	5.2	1.1	6.9

1 Per 1,000 live and stillbirths.

2 Per 1,000 live births.

3 Including births and deaths to persons normally resident outside England and Wales.

Annual update:

Mortality statistics 2000: injury and poisoning

The ONS annual reference volume *Mortality statistics: injury and poisoning 2000* (series DH4 no 25) was published in June 2002. It contains statistical information on deaths resulting from external causes of injury and poisoning in England and Wales during 2000. These deaths are coded according to the Ninth Revision of the International Classification of Diseases¹ (ICD 9) and are assigned code numbers in the range E800-E999. They are also coded to the World Health Organisation classification by nature of injury, in the range 800-999.

The volume provides more detail on deaths from external causes than can be found in other ONS publications. For instance, it presents data on accidental deaths by place of occurrence; deaths for external causes by month of occurrence; deaths in transport accidents by place and by whether the person killed was a driver or passenger; and deaths analysed by Coroner's inquest verdict and underlying cause.

Some general findings from *Mortality statistics: injury and poisoning 2000* are given below. In addition, articles on recent trends in drug-related deaths,² homicides,³ road traffic deaths⁴ and paracetamol related deaths⁵ have been published in *Health Statistics Quarterly*.

MAIN CAUSES OF DEATH FROM INJURY AND POISONING

There were 16,526 accidental and violent deaths in England and Wales in 2000. The majority of these (63 per cent) were among males.

The most common cause of accidental or violent death for males was suicide at 35 per cent (using the amended definition introduced in 1996; see below), followed by transport accidents at 22 per cent (Table 1). By contrast, the most common cause for females was accidental falls (42 per cent) and then suicides (21 per cent)

Deaths from external causes are also analysed by nature of injury. More than a quarter of female deaths resulted from fracture of the lower limb, which is related to the high proportion of deaths from falls. More than a fifth of external cause deaths for males resulted from an injury in the category 'other and unspecified effects', which includes drownings, deaths from hypothermia, asphyxiation and strangulation. More than three-quarters of these deaths from 'other and unspecified effects' were suicides, mostly by hanging ie asphyxiation and strangulation.

SELECTED CAUSES BY AGE

Figures 1 and 2 show the distribution within age groups of deaths from selected external causes. The main cause of death from external causes for both sexes in the age groups 15-34, 35-54 and 55-74 was from suicide (using the amended definition); it accounted for over a third of all deaths in these groups, other than in females aged 55-74. Motor vehicle traffic accidents (MVTAs) accounted for just over a quarter of external cause deaths to females aged under 15 and 15-34 and around a third for males. For both males and females in the 15-34 age group MVTAs and suicides combined accounted for more than two thirds of deaths from external causes.

Accidental falls accounted for more than two thirds of deaths from external causes to females aged 75 and over and more than half of deaths to males of the same age. Among those aged 55-74 the proportion was just under a quarter for both sexes. The younger age groups have relatively small proportions of deaths from accidental falls.

Homicides and injury undetermined whether accidentally or purposely inflicted with inquest verdict 'pending' decrease proportionately with age. Males and females aged under 15 although relatively low in numbers have the highest proportions of external cause deaths (15 and 23 per cent respectively) from homicide. Deaths from homicide for the age-group 75 and over account for less than one per cent.

The proportions of external cause deaths from accidental poisonings, at six per cent or less, were low for males and females aged under 15 and over 55. For the 15-34 and 35-54 age groups around 10 per cent of injury and poisoning deaths were from accidental poisoning

TRENDS

Mortality statistics have been coded to ICD-9 since January 1979 and the year 2000 is the last data year to use the Ninth Revision: the Tenth Revision was introduced into cause coding in January 2001. Since 1979, the death rate from all external causes has declined by just over a quarter (Table 3 of annual volume). Figure 3 shows the death rates for selected causes from 1979 to 2000. Deaths due to transport accidents (E800-E848) have declined substantially, from 125 per million

Table 1 Deaths from external causes of injury and poisoning: external cause, nature of injury and sex, 2000

ICD-9 code		Number of deaths			Percentage of all external cause deaths		
		Persons	Males	Females	Persons	Male	Female
<i>External cause</i>							
E800-E999	All external causes	16,526	10,413	6,113	100	100	100
E800-E949	Accidents and adverse effects	10,794	6,187	4,607	65.3	59.4	75.4
E800-E848	Transport accidents	3,032	2,274	758	18.3	21.8	12.4
E810-E819	Motor vehicle traffic accidents	2,837	2,114	723	17.2	20.3	11.8
E810-E829	Road Transport Accidents	2,940	2,193	747	17.8	21.1	12.2
E850-E869	Accidental poisoning	1,064	762	302	6.4	7.3	4.9
E880-E888	Accidental falls	4,281	1,732	2,549	25.9	16.6	41.7
E890-E899	Accidents caused by fire and flames	347	197	150	2.1	1.9	2.5
E910-E915	Accidents caused by submersion, suffocation and foreign bodies	624	397	227	3.8	3.8	3.7
E950-E959	Suicide and self-inflicted injury	3,480	2,669	811	21.1	25.6	13.3
E960-E969	Homicide	380	252	128	2.3	2.4	2.1
E950-E959,	Suicide and self-inflicted injury; and	4,968	3,690	1,278	30.1	35.4	20.9
E980-E989 with	injury undetermined whether accidentally						
'open' verdict	or purposely inflicted, with 'open' verdict						
E960-E969,	Homicide; and injury undetermined whether	764	536	228	4.6	5.1	3.7
E980-E989 with	accidentally or purposely inflicted, with						
'pending' verdict	'pending' verdict						
<i>Nature of injury</i>							
800-999	All external causes	16,526	10,413	6,113	100	100	100
800-804	Fracture of skull	643	461	182	3.9	4.4	3.0
805-809	Fracture of spine and trunk	569	297	272	3.4	2.9	4.4
820-829	Fracture of lower limb	2,290	656	1,634	13.9	6.3	26.7
850-854	Intracranial injury, excluding those with skull fracture	2,225	1,450	775	13.5	13.9	12.7
860-869	Internal injury of chest, abdomen and pelvis	2,374	1,781	593	14.4	17.1	9.7
930-939	Effects of foreign body entering through orifice	308	151	157	1.9	1.5	2.6
940-949	Burns	253	141	112	1.5	1.4	1.8
960-979	Poisoning by drugs, medicaments and biological substances	2,143	1,354	789	13.0	13.0	12.9
980-989	Toxic effects of substances chiefly nonmedicinal as to source	949	701	248	5.7	6.7	4.1
990-995	Other and unspecified effects of external causes	3,070	2,348	722	18.6	22.5	11.8
996-999	Complications of surgical and medical care not elsewhere classified	387	190	197	2.3	1.8	3.2

Source: ARV DH4 Tables 4 and 5.

population in 1979 to 57 per million population in 2000. The information originally published for 1981 for transport accidents has been excluded from Figure 1, because industrial action by Registrars in that year meant that additional information normally supplied by Coroners was not available. This resulted in more deaths than usual being assigned to unspecified categories' and transport categories being significantly understated.⁶

The death rate for accidental falls declined by 14 per cent overall from 1979 to 2000. It reached its lowest point of 64 deaths per million population in 1992. Since then there has been a rise in both the number and rates, but this is related to the methods of recording deaths where the certifier mentions both an accidental fall and osteoporosis on the death certificate.⁷

During the 1980s death rates for accidental poisonings declined slightly from 15 deaths per million in 1979 to 11 per million in 1987, 1988 and 1989. From 1990 rates have risen and in 2000 there were 20 deaths per million population. The overall rate for suicides declined by 22 per cent between 1979 and 2000.

THE LATE EXTRACT OF REGISTRATION

A major change in the handling of vital events by ONS was introduced in 1993 that has enabled annual extracts to be made of all the deaths occurring in a year, rather than rely simply on annual counts of registrations. A 'standard' extract is taken in the September following

each data year, when there are few registrations still outstanding. However, this does not take account of subsequent changes made for some deaths that are registered and assigned a temporary cause code (which happens when further legal proceedings are to take place).

Account is taken of the more up-to-date information obtained in this way by taking a late extract, many months after the 'standard' extract. A late extract is taken annually for the most recent year and the three preceding years. These extracts were first analysed in the 1996 annual DH4 volume.⁸ Since then they have been used for two purposes:

- To obtain up-to-date information on seasonal mortality from external causes (Table 7 in the annual volume).
- To obtain up-to-date information on external cause deaths, where the Coroner's inquest had been adjourned, and later details subsequently became available (Tables 27 and 28 in the annual volume).

The most recent late extract was taken in April 2002 for the data years 1997 to 2000, and for each of these years Table 2 shows the differences between numbers in this extract and numbers in the standard extract taken earlier. For 1997 the standard extract was taken in September 1998 and over the three and a half years between then and April 2002 there was an increase of 544 external cause deaths. The distribution by major cause of most of these are shown in the table.

Table 2 Deaths from external causes, using standard and late extracts: selected causes, 1997–2000

ICD-9 code	External cause		Year of occurrence			
			1997	1998	1999	2000
E800–E999	All external causes	Standard extract	16,311	16,201	16,517	16,526
		Late extract	16,855	16,815	17,217	17,093
		Change	544	614	700	567
		% change	3.3	3.8	4.2	3.4
E810–E819	Motor vehicle traffic accidents	Standard extract	3,112	2,878	2,942	2,837
		Late extract	3,281	3,065	3,153	3,042
		Change	169	187	211	205
		% change	5.4	6.5	7.2	7.2
E850–E869	Accidental poisonings	Standard extract	1,058	1,044	1,029	1,064
		Late extract	1,087	1,079	1,085	1,109
		Change	29	35	56	45
		% change	2.7	3.4	5.4	4.2
E880–E888	Accidental falls	Standard extract	3,885	3,865	3,993	4,281
		Late extract	3,946	3,937	4,074	4,341
		Change	61	72	81	60
		% change	1.6	1.9	2.0	1.4
E950–E959, E980–E989 with verdict 'open'	Suicide; injury undetermined, with inquest verdict 'open'	Standard extract	5,018	5,184	5,218	4,968
		Late extract	5,133	5,335	5,413	5,104
		Change	115	151	195	136
		% change	2.3	2.9	3.7	2.7
E960–E969, E980–E989 with verdict 'pending'	Homicide; and injury undetermined with inquest verdict 'pending'	Standard extract	610	649	653	764
		Late extract	692	714	712	790
		Change	82	65	59	26
		% change	13.4	10.0	9.0	3.4
E980–E989	Injury undetermined whether accidentally or purposely inflicted	Standard extract	1,914	1,933	1,887	1,872
		Late extract	1,809	1,773	1,812	1,826
		Change	-105	-160	-75	-46
		% change	-5.5	-8.3	-4.0	-2.5

Note: The annual 'standard' extract is usually taken about nine months after the end of a data year; for instance the standard extract for 1999 was taken in September 2000. The 'late' extracts given here were taken in April 2002, for each of the four years shown.

Source: ARV DH4 Table 27.

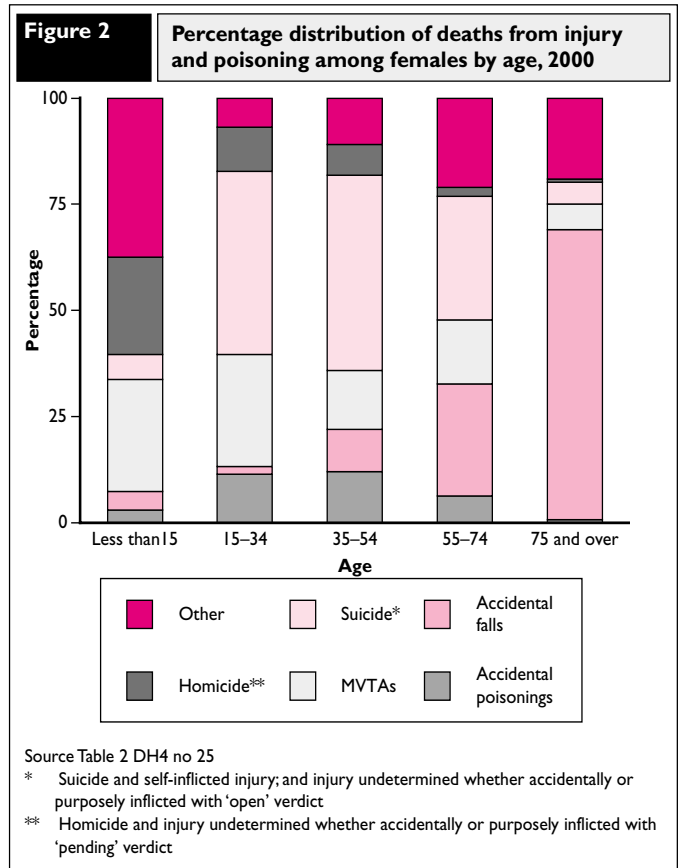
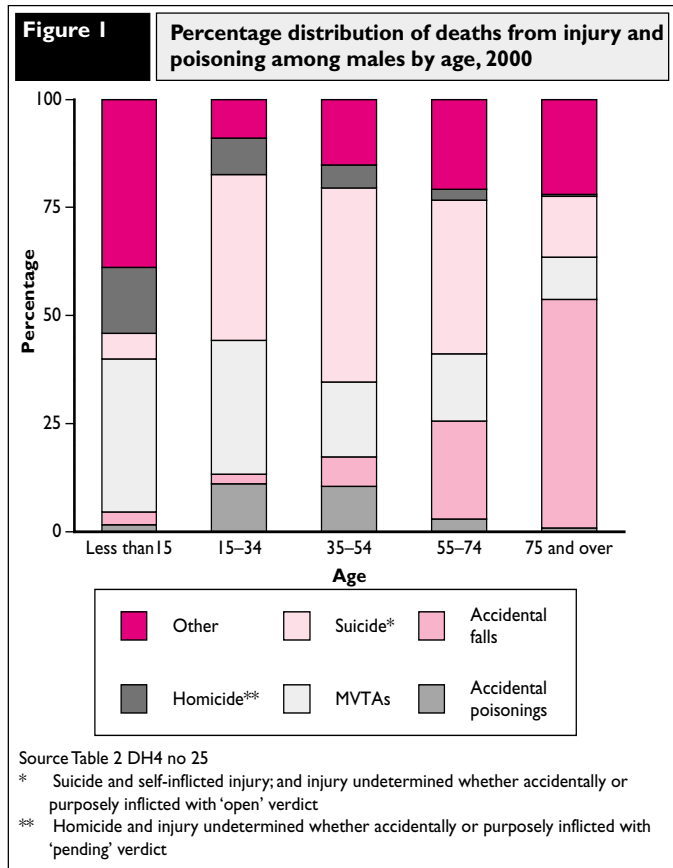
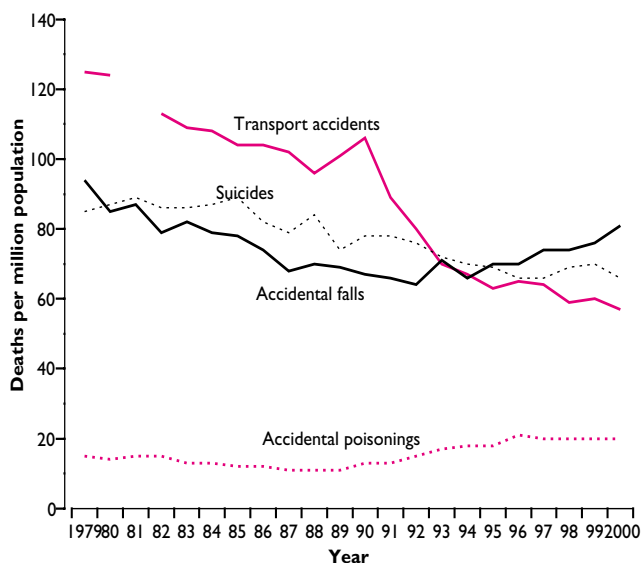


Figure 3 Deaths from selected external cause, 1979–2000

Source Table 2 DH4 no 25

Overall, the latest extract contains about 3 to 4 per cent more deaths than the standard extract in each year. Numbers for many cause groups change little, except for homicides where using the latest figure results in an increase of up to 13 per cent on the standard. The reasons for this are related to the procedures associated with accelerated registration; more details can be found in the equivalent Report for 1998 in *Health Statistics Quarterly 07* or in section 3.5 of the annual volume. Associated with this relatively large increase is a reduction in the number of deaths assigned to the category of injury with undetermined intent. The number of deaths in motor vehicle traffic accidents also increased, by up to 7 per cent. These changes result from both the inclusion of late registrations, and the amendment of assigned cause of death in the light of new information supplied following the completion of legal proceedings.

SUICIDES AND HOMICIDES

A few years ago, ONS developed improved methods of estimating annual numbers of suicides and of homicides, making use of the information supplied by verdicts from Coroners' inquests. These methods were described in some detail in the equivalent Report from 1998 in *Health Statistics Quarterly 07*. Information can also be found in sections 3.5 and 3.6 of the annual volume. Figures based on the improved methods are used throughout the annual publication.

REFERENCES

1. World Health Organisation (1977) *Manual of the International Statistical Classification of Diseases, Ninth Revision*, Volume 1, WHO: Geneva.
2. Office for National Statistics (2002) Report: Deaths related to drug poisoning: England and Wales, 1993–2000. *Health Statistics Quarterly 13*, 76–82.
3. Rooney C and Devis T (1999) Recent trends in death from homicide in England and Wales. *Health Statistics Quarterly 03*, 5–13.
4. Christopherson O, Dix D and Rooney C (1999) Road traffic deaths: trends and comparisons with DETR figures. *Health Statistics Quarterly 03*, 14–23.
5. Atcha Z and Majeed A (2000) Paracetamol related deaths in England and Wales 1993–97. *Health Statistics Quarterly 07*, 5–9.
6. Office of Population Censuses and Surveys (1983) *Mortality Statistics: cause 1981*, p v, HMSO: London.
7. Office of Population Censuses and Surveys (1996) *Mortality Statistics: cause 1993 (revised) and 1994*, p xxvii, HMSO: London.
8. Office for National Statistics (1998) *Mortality statistics: injury and poisoning 1996*, series DH4 no 21, TSO: London.

Other population and health articles, publications and data

Population Trends 109

Publication 26 September 2002

- Planned articles:**
- Rebasing the annual mid-year population estimates for England and Wales
 - Variant population projections for the United Kingdom and its constituent countries
 - Local marriage markets in Great Britain: how diverse?
 - Level and tempo of childbearing
 - One-parent families
- Reports:**
- Internal migration estimates for local and health authorities in England and Wales, 2001
- Annual Update:**
- Marriages and divorces during 2000 and adoptions during 2001, England and Wales

Forthcoming Annual Reference Volumes

Title	Planned publication
Abortion Statistics, 2000 AB no.28	September 2002
Mortality Statistics, 2000: general DHI no.33	September 2002

* Available through the National Statistics website only www.statistics.gov.uk

Health Statistics Quarterly 16

Publication 07 November 2002

- Planned articles:**
- Prevalence and treatment of osteoporosis in general practice in England and Wales, 1994–98
 - Crohn's Disease and Ulcerative Colitis: divergent trends in hospital admission rates 1989/90 to 1999/2000
 - Healthy life expectancy at Health Authority level: comparing estimates from the General Household Survey and the Health Survey for England
 - Prevalence of treated hypertension in general practice in England and Wales, 1994–98
- Report:**
- Infant and perinatal mortality by and social and biological factors, 2001
- Annual Updates:**
- Mortality statistics, 2000: general, England and Wales
 - Legal abortions in England and Wales, 2001
 - Congenital anomalies statistics: notifications, 2001, England and Wales

Vital Statistics data – annual data for each Health and Local Authority in England and Wales

VS1 Births and mortality summary data:

Population, births and deaths, fertility and mortality rates, comparisons with the region, and with England and Wales.

VS2 Births data

Births by age of mother; number of previous children, place of confinement and birthweight.

VS3 Mortality data by cause

Deaths by cause, sex and age.

VS3sc Mortality data by cause

Deaths by cause, sex and age.

VS4 Births and mortality by ward

Live births, stillbirths and deaths (by age).

VS4D Mortality by selected causes by ward

Deaths for wards in local authorities by 14 selected causes.

VS5 Infant and perinatal mortality data

Live births, stillbirths and infant deaths. Numbers and rates.

Live births and stillbirths by birthweight.

Stillbirths by gestation period.

How to order:

Most Vital Statistics data are available on paper and CD-ROM for each year 1993–2001. Prices range from £15. To order contact:

Vital Statistics Outputs Branch
Room 1300
Office for National Statistics
Segensworth Road
Titchfield
Hampshire PO15 5RR
Tel: 01329 813758