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ISBN 0 11 621182 2 ISSN 0307-4463

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Autumn 2000

in brief

Causes of death will be coded in ICD-10 from January 2001

The causes of deaths in England and Wales have been coded to the Ninth Revision of the International Classification of Diseases (ICD-9) since 1979. However, this is due to change in 2001 when we will move to the tenth revision (ICD-10). This will bring mortality data into line with data from the NHS, cancer registries and other sources of morbidity statistics.

All deaths occurring from the first of January 2001 onwards will be coded only to ICD-10. Deaths which happen in 2000, but are registered in 2001 will be coded to both revisions, so that complete annual statistics based on year of registration (including the public health common data set) and on year of death (most National Statistics publications) can be produced. Statistics on deaths up to the end of 2000 will still be based on ICD-9, and will be published around the usual dates in 2001 and 2002. All outputs based on 2001 deaths will be in ICD-10. This will include the public health mortality files and weekly deaths from January 2001.

ICD-10 represents the biggest change in the ICD since the sixth revision half a century ago. The range of codes has been expanded considerably, the codes are now alpha-numeric and the classification of many conditions has been changed to reflect current medical knowledge. However, the change that will have the greatest effect on mortality rates from particular causes is in the rules used to select the underlying cause of death from the death certificate. In order to understand and interpret mortality rates across the change in revisions, ONS plans to carry out a bridge coding study. 1999 deaths will be coded to both ICD-9 and ICD-10 and the results compared. This will enable us to produce 'comparability ratios' which measure how much of the apparent change is due to the change in classification. The comparability ratios can then be used to adjust older data and produce consistent up to date trends in rates.

An article will appear in *Health Statistics Quarterly* 08 in November giving more detail about IDC-10, mortality statistics and bridge coding. It will also lay out the timetable for publishing mortality outputs in ICD-10 and the results of the bridge coding study. Information will be enclosed with future routine mortality outputs, to inform customers about the changes, and update them on progress.

Enquiries about the implementation of ICD-10 for cause of death coding in England and Wales mortality data should be directed to: ICD-10.mortality@ons.gov.uk, or telephone 01329 813282.

Cancer trends 1950 –1999

Cancer is a major public health issue and the volume, *Cancer Trends 1950-1999*, brings together for the first time a large amount of information on cancer incidence (the number of newly diagnosed cases in a particular period), deaths from cancer, prevalence (the number of people who have been diagnosed with cancer in a particular period and are still alive at the end of it) and survival from cancer.

- Two in five people in England and Wales will develop a cancer some time in their life, and cancer causes one in four deaths. There are 220,000 new cases of cancer registered every year, and 145,000 deaths from cancer. The 620,000 people diagnosed with cancer in the past 10 years who are still alive represent just over one per cent of the total population.
- Since 1950, deaths from major causes such as heart disease, stroke and infectious diseases have all declined dramatically but cancer mortality has remained fairly stable in both men and women.
- Since the 1970s, five-year survival has improved for some cancers - particularly for those of the large bowel, melanoma of skin, breast, bladder and testis, and for Hodgkin's disease, non-Hodgkin's lymphoma and childhood leukaemia - but not for some of the most common and highly fatal ones such as cancers of the lung, oesophagus, pancreas, liver and pleura which represent about one third of cancers in men and one fifth in women.
- There is overwhelming evidence that cancer survival is generally lower among patients in the most deprived groups than for the

affluent. And for the vast majority of cancers (the exceptions are testicular cancer, the lymphomas and childhood leukaemia) survival in England and Wales, and in Scotland, is well below the rates in other western European countries.

 Cancer, together with heart disease, has been given high priority by the government. A National Cancer Director has been appointed. The cost of cancer treatment amounts to over £1 billion each year, accounting for about six percent of all NHS expenditure. Support for research into cancer is currently about £260 million each year.

A summary chapter draws together information on trends in the incidence of and mortality from all malignant cancers and for the most important individual cancers; the prevalence of major cancers; and an outline of survival trends over time and variations by age, sex and socio-economic deprivation. More detailed results on incidence, mortality, prevalence and survival are then presented in 20 separate chapters for each of the main cancers which together constitute around 88 percent of all malignancies in men and in women. There is also a chapter on the main childhood cancers (which in total account for about 0.5 per cent of all cancers).

Each of the cancer-specific chapters starts with a brief description of the epidemiology of the

particular cancer, including its global significance, known or suspected causes and risk factors, histological sub-types, and treatment. The trends in incidence and mortality are then described together. Information on incidence covers the period 1971–1997; the results for the latest three years are provisional, but are reliable, being based on complete and validated data from five of the nine regional cancer registries in England and Wales. These results are given in a Report in this issue, pages 71-82. Mortality data cover the period 1950-1999. For both incidence and mortality there are charts showing the rates by (usually ten year) age group, and an overall (directly) agestandardised rate which allows for differences in the size and age structure of the population of males and females, and for changes in the age structure of the population over time.

Trends in incidence and mortality are presented both by year of diagnosis or death, and by year of birth. The variation of incidence and mortality by region in England and Wales is illustrated; and the overall rates for England and Wales are compared with those for selected countries in all continents of the world. The prevalence of cancer is illustrated in charts showing the numbers and proportions of people alive at the beginning of 1993 who had been diagnosed with cancer in the preceding three years and in the preceding ten years. The information presented on survival comprises trends for cases diagnosed over the period 1971 to 1993 and followed up to the end of 1998; five-year relative survival by sex and age group for patients diagnosed in 1991-93; one- and five-year survival by socioeconomic deprivation (based on Carstairs' deprivation measure); and comparisons with other countries in Europe and the USA.

The appendices contain key statistics about the UK; population estimates for 1971, 1981, 1991 and 1999; detailed tables of cancer incidence for England and Wales in 1994 and provisional results for 1995 to 1997; trends in incidence from 1971 to 1997; detailed tables of cancer mortality for 1999; trends in mortality from 1950 to 1999; and tables of cancer registration data quality indicators. Other appendices include a brief history of the cancer registration system which also outlines the role of the National Cancer Intelligence Centre at National Statistics, and details of the United Kingdom Association of Cancer Registries; a full description of the data and a survey of potential problems in the interpretation of cancer registration data; and descriptions of the methods used for calculating incidence rates, mortality, prevalence and survival.

This volume will be an essential resource for anyone with an interest in cancer patterns.

The book should be available in late September. To order copies contact The Stationery Office Publications Centre.

Recent Publications

Social Inequalities (The Stationery Office, May, £30, ISBN 0 11 621269 1) Child Health statistics pocketbook (National Statistics, June, Free, ISBN 1 85774 383 0) National Diet and Nutrition Survey: young people aged 4 to 18 years Volume 1: Report of the diet and nutrition survey (The Population Trends 100 (The Stationery Office, June, £20, ISBN 0 11 Stationery Office, June, £65, ISBN 0 11 621265 9) 621177 6) National Diet and Nutrition Survey: young people aged 4 to 18 Survey of the health and well-being of homeless people in years Volume 2: Report of the oral health survey (The Stationery Glasgow (National Statistics, July, Free, ISBN 1 85774 379 2) Office, June, £35, ISBN 0 11 621266 7) The mental health of children and adolescents in Great Britain: Social Focus on Young People (The Stationery Office, June, £30, ISBN 0 summary booklet (National Statistics, July, Free, ISBN 1 85774 384 9) 11 621366 3)

Health indicators

England and Wales



Paracetamol related deaths in England and Wales, 1993–97

INTRODUCTION

There are about 2,500 deaths from overdose and poisoning in England and Wales every year.¹ Many of these deaths are likely to be preventable and hence action aimed at reducing such deaths could bring significant public health benefits. The most common cause of non-opiate related deaths is paracetamol, which can cause fatal liver disease if taken either intentionally or unintentionally in too high a dose (Box one). Intentional overdosage of paracetamol is thought to cause about 100–200 deaths per year in England and Wales.^{2,3}

In *Our Healthier Nation*, the Department of Health set a target to reduce the death rate from suicide and undetermined injury by 20 per cent by 2010.⁴ Many people who commit suicide do so by taking a drug overdose, for example, an analgesic such as paracetamol. To try to limit the number of people who use an overdose of paracetamol as the method of suicide, in November 1998 the Medicines Control Agency restricted the quantity of paracetamol that can be bought in one purchase.⁵ The effect this intervention has had on deaths from paracetamol is not yet known.

Previous estimates of deaths caused by paracetamol have been based on local studies which may not give the true national picture or national studies which are based on data which have had a number of limitations.^{6,7} Until 1992, figures on deaths from overdose and poisoning in England and Wales were extracted manually from the registration forms received by the Office of Population Censuses and Surveys. This was a very cumbersome process and was made even more difficult because drugs were listed exactly as they were recorded on the coroner's certificate. Hence, drugs could be listed under either their trade or brand name. Many drugs are also part of compound preparations. This made it difficult to ensure that all deaths due to a

Zakyeya Atcha, Somerset Health Authority, and Azeem Majeed, National Statistics

Paracetamol can cause fatal liver disease if taken, either intentionally or unintentionally in too high a dose. Using a newly developed database of deaths from overdose and poisoning, we examined the mortality associated with paracetamol in England and Wales between 1993-97. In total, there were 2,499 deaths during this period in which preparations containing paracetamol were among the drugs taken, an average of about 500 deaths per year and about 20 per cent of all deaths from overdose and poisoning. Paracetamol was the only drug taken in 873 deaths, an average of about 175 deaths per year; this figure probably provides a better estimate of the true mortality associated with paracetamol than all deaths from overdose and poisoning in which paracetamol was taken. There were 488 deaths in which liver failure was specifically mentioned. The most commonly used preparations of paracetamol were paracetamol alone (1,451 deaths) and coproxamol (991 deaths). The study confirms that paracetamol is one of the important causes of deaths from overdose and poisoning and shows the value of the new database for monitoring trends in these deaths.

specific drug had been identified. This was particularly a problem for paracetamol which is sold under many different brand names and is also found in several different compound preparations.

Box one

WHY PARACETAMOL CAN BE DANGEROUS

Taken in its normal dosage, paracetamol is a safe and effective painkiller. It can also reduce the temperature of children and adults with fever, and is commonly used for this purpose. Taken in too high a dose, however, paracetamol can be dangerous and can cause fatal liver disease. Metabolites of paracetamol have a toxic effect on the cells of the liver (hepatocytes). This toxic effect may be caused by as few as twelve tablets of paracetamol. However it may take several days before symptoms develop. The widespread availability of paracetamol makes it a commonly used means of committing suicide. In addition, a lack of awareness of the potential dangers of exceeding the recommended dose means that accidental poisoning is also an important cause of death from paracetamol.

CLINICAL FEATURES OF PARACETAMOL POISONING

Initial symptoms after taking more than the recommended dosage are often no more than mild nausea and vomiting. As liver damage develops over the following days, right sided abdominal pain may be experienced. If no treatment is given to halt or reverse the liver failure then a build up of toxins in the body can lead to confusion, jaundice, an inability to clot blood, swelling of the brain and subsequent death. Because paracetamol by itself does not immediately cause drowsiness or unconsciousness, and the delay in developing serious symptoms, both reduce the likelihood of help being sought at an early stage. Establishing paracetamol poisoning as early as possible is vital because it is possible to prevent liver damage by administering an antidote. If treatment is given within six hours of taking paracetamol, death can usually be prevented.

TREATMENT

The first aim of treatment is to prevent paracetamol from being absorbed from the digestive system. If the person arrives at the hospital within an hour of taking the overdose, a special activated charcoal in liquid form can be swallowed and stop the tablets being absorbed into the body. An antidote is also available to halt or reverse the damaging effects of paracetamol on the liver. This works by stopping toxic metabolites of paracetamol from attaching to liver proteins and thus causing damage to liver cells. This treatment should be started as early as possible and ideally within the first six hours. If liver failure cannot be reversed or halted, liver transplantation remains the only option available. However this option is not suitable for every-one and will depend on the clinical condition of the patient and will depend on the availability of a liver from a suitable donor. Further information on the treatment of paracetamol poisoning is available from the National Poison's Unit at Guy's Hospital in London.

From 1993 onwards, data from the registration forms have been stored electronically with the relevant drugs stored as a textual entry. Since 1993, it has been possible to perform electronic searches of the information transcribed from the registration form. This has simplified the identification of deaths from overdose and poisoning but does not overcome the problem of ensuring that all the different brand names of a drug such as paracetamol are identified. To overcome this problem, all drugs on the electronic record have been coded to British National Formulary (BNF) categories. All preparations containing paracetamol have also been identified. These developments now allow information on the number of deaths associated with a specific drug to be extracted more easily than in the past. Information can also be extracted on deaths where more than one drug was used. The new database also makes it possible to look at deaths from overdose and poisoning in relation to other factors such as age, sex and other diagnoses recorded on the death certificate.

A further problem which is specific to paracetamol-related deaths is how we define these deaths. Ideally, only deaths where liver disease occurred after ingesting paracetamol would be included in the definition of paracetamol-related deaths. A broader definition would include deaths in which paracetamol has been mentioned on the registration form or detected either alone or in combination with other drugs on toxicological analysis regardless of whether or not liver disease was noted.

Because of the difficulties in obtaining accurate national data on deaths associated with paracetamol, there have been only a few national studies and none which have been carried out recently.^{2.7} In this article, we use the newly-enhanced database of deaths from overdose and poisoning to examine the epidemiology of deaths associated with the ingestion of paracetamol, and compare the results with those published previously by other researchers.

METHODS

Definition of deaths from overdose and poisoning

Deaths which are not due to natural causes or where the cause of death is not known must be referred to the coroner for further investigation.8 In such cases, the coroner may order a post-mortem and then hold an inquest. Any sudden, unexpected deaths in which a drug is involved fall into this category; in virtually all of such deaths the coroner orders an inquest and carries out a post-mortem. The coroner uses information from the post-mortem and any additional information available to decide the cause of death and to give a verdict. The coroner then certifies the death and sends a certificate to the registrar of births and deaths who completes a registration form. Part V of the certificate issued by the coroner provides details about the circumstances surrounding accidental deaths. This section must be completed compulsorily for accidental deaths and may also be filled in for nonaccidental deaths.9 The registrar then sends information on the registration form and Part V of the coroner's certificate to the Office for National Statistics for coding.

The underlying cause of death in all people dying in England and Wales is classified using the Ninth Revision of the International Classification of Diseases (ICD9). With two exceptions, deaths from overdose and poisoning are coded by the Office of National Statistics to a number of ICD9 codes (Box two). The first exception is deaths due to an adverse reaction from a drug used for therapeutic purposes (i.e. deaths from the side-effects of a drug). Information on these deaths is collected and monitored by the Medicines Control Agency. The second exception is deaths due to tobacco or alcohol, which are not classified as drugrelated. The presence of alcohol is however noted on the database of deaths from overdose and poisoning if it has been mentioned on the coroner's certificate.

Table 2

Box two

ICD9 CODES USED TO CLASSIFY DEATHS FROM OVERDOSE AND POISONING

ICD9 code	Description
304	Drug dependence
305.2 - 305.9	Non-dependent abuse of drugs
E850 - 858	Accidental poisoning by drugs, medicaments and biologicals
E950.0 - E950.5	Suicide and self-inflicted poisoning by solid or liquid substances
E962.0	Assault by poisoning
E980.0 - E980.5	Poisoning by solid or liquid substances, undetermined whether accidentally or purposely inflicted

After classification as a death from overdose and poisoning, information on these deaths is entered onto an Access database, using data from both the registration form and the coroner's certificate. The information recorded includes administrative data such as age, sex and postcode; the cause of death; and any intermediate causes of death mentioned on the death certificate (such as respiratory or liver failure). Additional information recorded on the database includes the name of any drug mentioned on the registration form or on the coroner's certificate, the BNF codes of the drugs taken, and whether any of the drugs taken contained paracetamol or aspirin. Information is now available on the database for all deaths from overdose and poisoning between 1993–97.

Definition of paracetamol-related deaths

Paracetamol–related deaths were defined as any deaths in which paracetamol, or a compound preparation containing paracetamol, was mentioned as one of the drugs taken in a drug-related death. Paracetamol may have been the only drug taken; it may have been part of a compound preparation; or it may have been taken with one or more other drugs.

A text search of the database was undertaken to identify any paracetamol related deaths associated with liver disease (defined as liver failure, liver necrosis, hepatic failure, hepatic necrosis, fatty change in liver, hepatorenal failure and multi-organ failure). There is considerable variation in the terminology used for death certification and a certain number of deaths may not be included had the analysis been based on a manual search for deaths. Deaths from alcoholic liver disease were excluded from the analysis because we were interested only in acute or recent changes to the liver which may be ascribed to the ingestion of paracetamol rather than the chronic or long term changes caused by the ingestion of excess alcohol over a long period of time. Using the information available on the database, we examined the demographic characteristics of deaths associated with the ingestion of paracetamol in terms of the presence or absence of liver disease. We then compared deaths involving paracetamol as the only drug with deaths in which paracetamol was taken either in combination with at least one other drug or as part of a compound preparation.

RESULTS

There were 2,499 paracetamol-related deaths during the period 1993– 97, an average of about 500 deaths per year and about 20 per cent of all deaths from overdose and poisoning during this period. The most commonly used preparations were paracetamol (1,451 deaths) and coproxamol (991 deaths) (Table 2). Of the other commonly available compound preparations containing paracetamol, cocodamol was associated with 44 deaths and codydramol with 35 deaths. Paracetamol was the only drug taken in 873 deaths, an average of about 175 deaths per year (Table 1). This figure of 175 deaths per year is likely to be a better estimate of the true mortality associated with paracetamol than the figure based on all deaths where paracetamol was one of the drugs taken.

Table IParacetamol-related1993-97	deaths in England and Wales
	Number of deat
Paracetamol taken alone or with one or more other	r drugs or in compound 2,449
Paracetamol taken as an opiate-based compound c	only 875
Paracetamol taken alone	873
Paracetamol taken with one or more other drugs a	and liver disease 488
Paracetamol taken alone and liver disease	449
Paracetamol taken in a compound preparation with	h no other drugs and

Preparations of paracetamol taken in paracetamol associated deaths

Preparation	Prescription only	Number of deaths
Paracetamol	No	1,451
Coproxamol	Yes	991
Paracetamol (325mg) and Dextropropoxyphene (32.5mg) E.g.: Distalgesic, Fortagesic		
Co-codamol Paracetamol (500mg; 1000mg) and Codeine (8mg; 30mg; 60mg) E.g.: Kapake; Migraleve; Tylex; Solpadol; Solpadeine.	Yes	44
Co-dydramol Paracetamol (500mg) and Dihydrocodeine Tartrate (10mg; 20 mg, 30mg) E.g.: Paramol; ¹ Remedeine	Yes	35

¹Paramol (paracetamol 500mg and dihydrocodeine 7.46mg) can be bought without a prescription.

The number of paracetamol associated deaths per year increased from 463 in 1993 to 562 in 1997. The number of deaths was similar in men and women and differs from deaths from overdose and poisoning overall in which the deaths in men exceed the deaths in women by a ratio of 2:1. The mean age of death overall is 47 years with deaths occurring at a younger age in males (44 years) than in females (50 years). The number of paracetamol related deaths was highest in people aged 30–44 years (751 deaths) followed by the age group 45–59 years (563 deaths) and lowest in people aged 75 years and over (excluding children aged 0–14 years). However using age group specific mortality rates, people aged over 75 years have the highest rate of death in women and the second highest rates of death in men (Table 3).

There were 488 deaths associated with liver disease or liver failure (Table 4). In over 90 per cent (449) of these deaths, paracetamol was taken alone. More female deaths have a record of liver disease than males (280 versus 208). Overall the mean age of these deaths was 44 years. There was little difference in the age of death in males (44.0 years) and females (44.2 years). The age group with the highest number of deaths associated with documented liver failure were 30–44 years olds.

Table 3

Numbers of paracetamol related deaths and annual death rates by age and sex in England and Wales, 1993–97

			1	
	M	ales	Females	
Age group	Number	Rate per million	Number	Rate per million
0-14	3	0.12	9	0.37
15–29	290	10.65	214	8.26
30-44	437	15.36	314	11.29
45–59	292	12.66	271	11.70
60–74	169	10.30	241	12.92
75 and over	84	13.17	175	14.51
Total	1,275	10.03	1,224	9.28

The verdicts on intent following the inquest into paracetamol-related deaths are shown in Table 5. Of these deaths, 78 per cent were either of undetermined intent or suicide, the two categories usually used to define suicide. In about 20 per cent of deaths, the verdict was accidental poisoning. For deaths where paracetamol was the only drug taken, about 74 per cent were either suicide or of undetermined intent. Where liver disease or liver failure was mentioned, 65 per cent of paracetamol related deaths were due to either suicide or undetermined intent.

Table 4	Numbers of paracetamol related deaths associated with liver disease and annual rates by age and sex in England and Wales, 1993–97
---------	---

	М	ales	Females	
Age group	Number	Rate per million	Number	Rate per million
0–14	2	0.08	3	0.12
15-29	34	1.25	65	2.51
30-44	77	2.71	94	3.38
45–59	59	2.56	54	2.33
60–74	26	1.58	43	2.30
75 and over	10	1.57	21	1.74
Total	208	1.64	280	2.12

DISCUSSION

This study confirms that paracetamol-associated deaths are an important cause of mortality. Paracetamol is an easily available drug and can be bought as an 'over the counter' medicine. Is ready availability may explain the frequency of its use in deaths from overdose and poisoning. The Medicines Control Agency reduced the maximum number of tablets of paracetamol that can be bought in one purchase to 32 in November 1998 but it remains too early to examine the effect of this on paracetamol-associated deaths. This will be investigated once the data for 1999 are available for analysis.

The average annual number of deaths from paracetamol varies considerably, depending on how the death is defined, ranging from 500 deaths per year for all deaths from overdose and poisoning in which paracetamol was mentioned, to 175 deaths per year where paracetamol was the only drug taken, and to about 90 deaths per year when liver disease has been documented and paracetamol was the only drug taken. The true mortality associated with paracetamol is likely to be around the 175 deaths per year where paracetamol was the only drug taken. Paracetamol-only preparations are the most commonly named drugs

Table 5Deaths by category of intent associated with the
ingestion of paracetamol

ICD 9 code	Intent	Total number of deaths	Percentage of total paracetamol related deaths	Deaths with liver disease	Percentage of total paracetamol related deaths	
E980	Undetermined Intent	1,119	44.8	184	7.36	
E950	Suicide	831	33.3	134	5.36	
E850-85	8 Accidental	503	20.1	158	6.32	
304	Drug dependence	14	0.6	2	0.08	
305	Non–dependent abuse	31	1.3	10	0.40	
962	Homicide	I	0.04	-	-	
	Total	2,499	100.0	488	19.5	

associated with these deaths. The most commonly taken compound preparation of paracetamol is co-proxamol, which is made up of paracetamol and dextropropoxythene. Either of these two components can cause death; paracetamol causes a long-drawn out death whereas dextropropoxythene causes rapid death.

The number of deaths involving paracetamol in men and women is similar. This differs from deaths from overdose and poisoning overall where approximately two-thirds of the deaths occur in males. The highest number of deaths occur in the age group 30–44 years in both men and women. In women, the age specific mortality rate is highest in those over 75 years age. More women are reported as having died with liver disease than men but there is little difference in their respective mean ages.

The verdict after inquest is slightly more likely to be suicides in males (46 per cent of male deaths as opposed to 43 per cent of female deaths). By contrast slightly more women are given an open verdict than men (35 per cent versus 32 per cent). In the majority of these deaths the coroner's verdict is either suicide or undetermined intent. In contrast the majority of deaths with liver disease have a verdict of either undetermined or accidental intent. The relative risk of deaths from accidental intent in the people with liver failure was 1.90 (95% CI =1.62-2.24). This may reflect the delay in seeking medical assistance and a lack of awareness of the potential danger of exceeding the stated dose of paracetamol.

Strengths and weaknesses of the study

The number of deaths associated with paracetamol varies according to how the death is defined. There is a five-fold difference in the number of deaths between the strictest definition when there is liver disease and paracetamol is the only drug recorded, and the broadest definition of a paracetamol-related death, where paracetamol may be found alone, as part of a compound preparation or in the presence of one or more other drugs. It is therefore important when monitoring deaths from paracetamol that the definition of a paracetamol-related death is precise.

There are variations that exist in the amount of additional information available on deaths from overdose and poisoning.⁹ They include variability in drug testing in hospitals and in the information noted and recorded on the coroner's certificate. Not every unexpected death will be tested for the presence of drugs and where testing is undertaken, testing for one specific drug is often encouraged. Where more than one drug is identified at the time of death it can be difficult to ascribe the primary cause of death to one particular drug. There is also considerable variability in the drug names recorded in the database of deaths from overdose and poisoning. This is firstly an indication of the many different paracetamol-containing compounds are available on prescription and over the counter. Secondly, it indicates the variation in information recorded and transcribed from the death certificate and registration documents and the coroners certificate.

Despite these concerns, previously unused information about deaths from overdose and poisoning is now available and accessible from the new database. There is no upper limit to the number of drugs recorded for each death and at present, seven is maximum number of drugs recorded on the database. Data can be extracted using a range of variables including specific drug names, BNF code, age, sex, and geographical area. The database provides comprehensive information on deaths from overdose and poisoning for the whole of England and Wales and enables districts and regions to make comparisons to the national data. Information is currently available for five consecutive years and hence a more precise calculation of mortality rates is feasible than the local studies previously undertaken. Information from the coroner's inquest ensures that as much as possible of the details surrounding the death are accessible from the database to allow more accurate recording of drugs present at the time of death and the circumstances surrounding the death. Additional information on the dose of drug taken would also be useful as this would help establish how safe paracetamol is in therapeutic doses and in patients who may be predisposed to liver damage, such as those taking enzyme inducing drugs or who are malnourished.

Comparison with other studies

There is little current data available on deaths from overdose and poisoning in the published literature with the most recent articles using data from before 1990. Hence, the data described here are the most recent available. The most common ranges for the number of deaths attributable to paracetamol is 100–200 deaths per year. This study shows the mean annual number of deaths of deaths ranges from 90 to 500 deaths per year, depending on how a paracetamol-related death is defined.

Harvey and Spooner analysed deaths relating to paracetamol in 1978.¹⁰ They found the number of deaths in which paracetamol is identified as the cause of death alone or with other drugs is 212. Of these deaths, 105 were associated with paracetamol alone. Their final figure for deaths definitely due to paracetamol is 64, thirty percent of the deaths thought initially to be related to paracetamol. This definition of a death caused by paracetamol includes only those deaths where liver disease has occurred. A more recent analysis by the same authors looking at paracetamol deaths in 1990 identify 547 deaths from coroners returns in which paracetamol has been mentioned.² Of these, 150 deaths were considered to be caused as a result of acute liver failure following the ingestion of paracetamol.

By comparison, over the five years for which data are available on the database of deaths from overdose and poisoning, an average of about 290 deaths per year were associated with paracetamol alone or with paracetamol in a combined preparation. Of these deaths, paracetamol alone was recorded in about 175 deaths per year and liver disease recorded as the cause of death in about 92 deaths per year.

Unanswered questions and future research

Monitoring deaths associated with taking paracetamol provides an indication of the level of problem and a means of assessing the impact of interventions and policies aimed at reducing deaths by suicide or accidental poisoning. An accurate estimate of the deaths due to paracetamol is required to do this. As discussed earlier, there is a lack of clarity about how a paracetamol-related death should be defined. The data now available will help improve how such deaths are defined and allow an assessment of the impact of restricting sales of paracetamol on deaths from accidental and intentional overdose. Annual updating of deaths from overdose and poisoning on the database provides a powerful tool to monitor trends in all deaths from overdose and poisoning which have been investigated by coroners' offices.

Key points

- Paracetamol can cause fatal liver disease if taken, either intentionally or unintentionally, in too high a dose.
- Between 1993–1997, there were 2,499 deaths in which preparations containing paracetamol were among the drugs taken, an average of about 500 deaths per year.
- Paracetamol was the only drug taken in 873 deaths, an average of about 175 deaths per year; this figure probably provides the best estimate of the true mortality associated with paracetamol overdosage and poisoning.
- There were 488 deaths associated with paracetamol in which liver failure was mentioned.
- The most commonly used preparations of paracetamol were paracetamol alone (1,451 deaths) and coproxamol (991 deaths).

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Trends in hospital admissions for fractures in England, 1989–90 to 1997–98

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The objectives of this study were to examine recent trends in admission rates for fractures in England and to estimate future trends for people aged 45 years and over. The study confirmed that fractures remain an important cause of ill-health and mortality, particularly among the elderly. Age-standardised rates of admissions for fractures increased from 1989-90 to 1997-98. Most of the increase occurred in the first three to five years of the study and may be mainly due to improvements in the completeness of coding of hospital admissions data. Admission rates for fractures changed little between 1994-95 to 1997-98. Because there will be a large increase in the number of elderly people in the population, if steps are not taken to tackle their underlying causes, fractures will impose an increasing burden on the public, society and the NHS. In line with recommended practice, efforts need to be focused on reducing fall-related injuries in the elderly, preventing and treating osteoporosis, and encouraging people to adopt healthier lifestyles including participation in regular exercise.

INTRODUCTION

Osteoporosis is a major public health problem. Its main clinical manifestation is through fractures, often precipitated by minimal or very minor trauma, such as a fall from a standing height (see Box one). For example, about 70 per cent of fractures in women aged 45 and over are thought to be due to underlying osteoporosis.¹ Consequently, osteoporosis-induced fractures impose a considerable burden on individuals, carers, and health and social services. These fractures cause a large numbers of admissions to NHS hospitals and reduce the quality of life of patients. Osteoporosis is particularly common in the elderly and because of the increasing number of elderly in the population, the burden of disease on society caused by osteoporosis will increase further unless action is taken to prevent this.

Most of the previous research on disease caused by osteoporosis has examined fractures of the hip, and to a lesser extent, fractures of the wrist and vertebrae (spine), as these are the commonest sites for osteoporotic fractures. For these sites, Melton and colleagues estimated a lifetime risk of fracture of 40 per cent in women and 13 per cent in men.² This ignores the impact of other fractures and hence underestimates the true lifetime risk of suffering a fracture. A few other studies have estimated the incidence of fractures in defined populations in Britain in the last two decades. Donaldson and colleagues used data from outpatients and inpatients to estimate the incidence of fractures in Leicester from 1980–82.³ More recently, Singer and colleagues report data from accident and emergency departments in Edinburgh for 1992-3.⁴ Johansen and colleagues estimated the incidence of all fractures in England and Wales by extrapolating data for 1994-95 from the Accident and Emergency Department in Cardiff.⁵ They estimated the overall all-ages annual incidence of fractures to be 21 per 1,000. All of these previous studies have noted an increase in fracture rates from the fourth decade onwards in women and in later life in men, resulting in a decrease with age in the ratio of male to female fracture rates.

None of these previous studies tried to measure the number of hospital admissions caused by fractures. The costs of inpatient care are a major component of the total costs of fractures to the NHS. Moreover, additional costs may be generated from delays in discharging elderly patients who have suffered a fracture because of problems in arranging multidisciplinary community care services for older people. The National Priorities Guidance from the Department of Health aims for a reduction in delayed discharges in people aged over 75 years to 11 per cent in 2000-01 and 9 per cent in 2002-03.6 Hence, it is important to examine trends in admissions for fractures among older patients to help plan the medical and rehabilitation services required. Furthermore, because many fractures are caused by a simple fall,⁷ the government's public health strategy, Our Healthier Nation, has highlighted deaths from falls in elderly people as a major part of the strategy to reduce deaths from accidents.8 Hence, it is important to also establish trends in falls that lead to admissions for fractures in this group. In this paper, we use routine hospital admissions data to describe trends in hospital admissions for fractures and related falls, and estimate the future number of admissions from these conditions.

METHODS

Hospital episode statistics have been collected since the 1987–88 financial year and are collected on all admissions to NHS hospitals.⁹ Before this, routine hospital data were available as the Hospital Inpatient Enquiry, which was based on a 10 per cent sample of admissions. The unit of measurement for inpatient activity is the finished consultant episode, which relates to the care given under one hospital consultant. Because patients may be transferred from the care of one consultant to another during one admission, each admission can generate several episodes. However, 95 per cent of admissions generate only one episode. During each episode, up to seven diagnoses can be recorded, one main diagnosis and up to six secondary diagnoses. Other information, such as address, age, sex, place of discharge and length of stay are also recorded. Diagnoses were coded using the Ninth Revision of the International Classification of Diseases (ICD–9) until 1994–95, and the Tenth Revision (ICD–10) from 1995–96 onwards.

We obtained information on all admissions due to fractures or and falls leading to a fracture in people aged 45 years and over in England from 1989–90 to 1997–98 (the latest year for which data were available) from the Department of Health. We started our study in the 1989–90 financial year to avoid inaccuracies arising from the change from the Hospital Inpatient Enquiry system to the Hospital Episode Statistics system. We collected data on broad anatomical categories of fractures, as this would reduce the errors due to misclassification between fracture sites and also from random variation for sites with a relatively small number of fractures. Grimley Evans and colleagues have documented misclassification relating to hip and other femoral fractures.¹⁰ It is likely that misclassification also happens with fractures at other sites. Hence, we grouped the ICD-9 diagnoses into all fractures (codes 800–829), upper limb fractures (810–819), spine and trunk fractures (805–809) fractures of the lower limb excluding femur (822– 829), and fractures of the femur (820–821). The corresponding ICD–10 codes are: all fractures (all following codes and S02); upper limb fractures (T10, T023, T024, S42, S52, S62); spine and trunk fractures (T08, S12, S22, S32), fractures of the lower limbs excluding femur (T12, T023, T025, S82, S92), and fractures of the femur (S72).

We collected information on patients aged 45 and above as osteoporosis is rare in earlier age groups. We restricted our data to the first episode in each admission. Thus, the number of episodes can be used as a measure of the number of admissions. We used only the first diagnosis in each episode to minimise the effect of readmissions for a prior fracture. We also obtained information on whether the fracture was associated with a fall as many fractures in the elderly are preceded by a fall.

Using National Statistics population estimates for England, we calculated age specific fracture admission rates. We also calculated age standardised admission rates, standardised to the 1997 population to adjust for changes in the age and sex structure of the population between 1989–90 and 1997–98. We then estimated the number of admissions for the years 2011–12 and 2021–22, based on current admission rates, using National Statistics population projections.

RESULTS

Admissions for all fractures

There were 89,488 admissions in women and 32,408 admissions in men to NHS hospitals in England in 1997–98 for all fractures (excluding skull) in people aged 45 years and over. Between 1989–90 and 1997– 98, age–standardised admission rates increased from 63 to 88 per 10,000 in women and from 29 to 37 per 10,000 in men. This increase mainly took place between 1989–90 to 1993–94 and there was relatively little change in the following four years other than for a decrease in rates in 1995–96. Similar trends were seen for admission rates for each fracture site. Admission rates were similar in men and women aged 45–64 years and then increased rapidly with age in both sexes but more rapidly in women than in men (Table 1).

 Table I
 Admission rates for all fractures per 10,000 population, England 1989–90 to 1997–98: age specific and age-standardised rates

	Year								
Age	1989–90	1990–91	1991–92	1992–93	1993–94	1994–95	1995–96	1996–97	1997–98
Women									
45–64	19.5	24.6	25.1	26.1	28.1	27.1	25.1	26.2	25.1
65–74	51.1	59.7	66.1	69.7	73.5	73.6	69.1	74.6	71.1
75–84	131.5	155.4	173.6	183.6	192.7	187.8	176.9	189.4	185.9
85 and over	291.3	338.9	372.6	399.1	403.0	389.8	379.8	420.4	418.8
45 and over total	62.7	74.4	81.3	86.0	89.7	87.5	82.9	89.5	87.5
Men									
45–64	20.9	24.3	24.9	26.2	27.5	26.1	22.3	23.3	23.8
65–74	22.7	27.3	30.0	31.0	33.5	31.1	29.3	30.5	31.0
75–84	53.5	61.6	70.5	70.9	79.8	78.5	69.1	71.9	72.7
85 and over	143.1	164.7	179.0	193.2	199.8	188.2	175.3	233.1	239.1
45 and over total	28.5	33.2	35.6	37.1	39.7	37.8	33.5	36.4	37.1

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Table 2
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Admissions for fractures of the femur per 10,000 population, England 1989–90 to 1997–98: age specific and age-standardised rates

	Year									
Age	1989–90	1990-91	1991–92	1992–93	1993–94	1994–95	1995–96	1996–97	1997–98	
Women					•		•			
45–64	3.8	4.6	4.6	4.4	4.4	4.0	3.7	4.0	4.0	
65–74	20.4	23.4	26.1	26.6	27.4	27.7	25.3	27.9	26.8	
75–84	74.9	89.5	100.4	104.1	107.7	104.1	98.6	105.3	104.9	
85 and over	197.5	228.2	253.0	271.1	269.7	258.2	253.6	276.6	275.6	
45 and over total	31.9	37.4	41.4	43.2	43.9	42.4	40.5	43.8	43.4	
Men										
45–64	2.5	3.0	2.9	2.8	3.0	2.9	2.8	2.9	2.8	
65–74	8.5	10.1	10.9	11.7	12.3	11.5	11.7	11.7	12.0	
75–84	29.5	34.4	40.2	41.0	45.5	44.5	40.3	41.5	43.4	
85 and over	93.0	71.1	119.6	129.8	132.4	124.9	118.7	135.3	142.3	
45 and over total	9.5	10.1	12.2	12.8	13.6	13.0	12.3	13.0	13.4	



Fractures of the femur

There were 44,456 admissions in women and 11,753 admissions in men to NHS hospitals in England in 1997–98 for fractures of the femur in people aged 45 years and over. Between 1989–90 and 1997–98, age– standardised admission rates increased from 32 to 43 per 10,000 in women and from 10 to 13 per 10,000 in men. Admission rates were higher in women than in men in all age–groups and increased more rapidly with age in both women (Figure 1) and men (Figure 2) than for fractures at any other site. In 1997–98, age–standardised admission rates were over three times as high in women than in men (Table 2).

Fractures of the lower limb excluding femur

There were 14,085 admissions in women and 7,031 admissions in men to NHS hospitals in England in 1997–98 for fractures of the lower limb (excluding femoral fractures) in people aged 45 years and over. Between 1989–90 and 1997–98, age-standardised admission rates increased from 10 to 14 per 10,000 in women and from 6 to 8 per 10,000 in men (Table 3). Admission rates were higher in women and increased more rapidly with age than in men (Figure 1).



Fractures of the upper limb

There were 21,741 admissions in women and 8,044 admissions in men to NHS hospitals in England in 1997–98 for fractures of the upper limb in people aged 45 years and over. Between 1989–90 and 1997–98, age-standardised admission rates increased from 13 to 21 per 10,000 in women and from 5 to 9 per 10,000 in men (Table 4). Admission rates were higher in women than in men in all age–groups and increased more rapidly with age in women (Figure 1) than in men (Figure 2).

Fractures of the spine and trunk

There were 9,289 admissions in women and 5,584 admissions in men to NHS hospitals in England in 1997–98 for fractures of the spine and trunk in people aged 45 years and over. Between 1989–90 and 1997–98, age-standardised admission rates increased from 7 to 9 per 10,000 in women and from 5 to 6 per 10,000 in men (Table 5). Admission rates were higher in men than in women among 45–64 year olds and similar in 65–74 year olds. Among older patients, admission rates were higher in women.

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Table 3
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Admission rates for lower limb fractures (excluding femur) per 10,000 population, England 1989–90 to 1997–98: age specific and age-standardised rates

	Year									
Age	1989–90	1990-91	1991–92	1992–93	1993–94	1994–95	1995–96	1996–97	1997–98	
Women										
45–64	6.5	8.4	8.5	9.2	10.2	9.8	9.1	9.6	9.2	
65–74	10.6	12.9	14.2	14.7	15.8	15.3	14.9	15.4	15.3	
75–84	14.5	17.4	18.6	19.9	21.7	20.8	19.9	21.5	20.4	
85 and over	18.4	20.5	24.0	25.7	26.9	24.2	23.7	29.6	30.3	
45 and over total	9.5	11.7	12.4	13.2	14.4	13.7	13.1	14.1	13.8	
Men										
45–64	6.9	8.1	8.1	8.4	8.7	8.2	8.0	8.4	8.2	
65–74	4.5	5.6	6.1	6.4	6.9	6.4	6.3	6.3	6.2	
75–84	5.7	7.1	7.7	7.2	8.5	8.4	7.5	7.9	7.2	
85 and over	8.7	11.5	12.2	11.0	11.4	11.9	10.3	24.4	22.8	
45 and over total	6.3	7.5	7.8	7.9	8.4	7.9	7.7	8.3	8.0	

Table 4

Admissions for upper limb fractures per 10,000 population, England 1989–90 to 1997–98: age specific and agestandardised rates

	Year								
Age	1989–90	990–9	1991–92	992–93	1993–94	1994–95	1995–96	996–97	1997–98
Women				1	1		1	1	1
45–64	5.9	7.8	8.2	8.8	9.6	9.5	9.7	10.0	9.3
65–74	14.2	17.1	19.0	20.9	22.7	23.3	23.0	25.4	23.1
75–84	26.3	30.3	33.8	37.5	40.8	40.5	39.8	42.7	41.1
85 and over	38.4	47.0	51.6	54.7	57.0	61.0	58.9	68.6	66.4
45 and over total	13.2	16.1	17.6	19.1	20.7	21.0	20.8	22.6	21.2
Men									
45–64	4.6	5.4	5.8	6.6	7.4	7.1	7.3	7.8	8.2
65–74	3.8	4.6	5.2	5.3	6.0	6.1	5.9	6.9	7.0
75–84	6.8	7.5	8.3	9.1	10.4	10.7	10.2	11.1	10.5
85 and over	14.7	17.6	18.3	19.0	21.5	21.1	21.6	42.7	43.4
45 and over total	5.0	5.8	6.3	7.0	7.8	7.7	7.8	8.9	9.2

Table 5

Admission rates for spine and trunk fractures per 10,000 population, England 1989–90 to 1997–98: age specific and age-standardised rates

Age	Year											
	1989–90	1990-91	1991–92	1992–93	1993–94	1994–95	1995–96	1996–97	1997–98			
Women												
45–64	2.3	2.5	2.6	2.5	2.7	2.6	2.5	2.6	2.6			
65–74	4.7	5.1	5.6	6.3	6.3	6.0	5.9	5.9	5.9			
75–84	13.7	15.8	18.0	19.1	19.6	19.9	18.6	19.9	19.5			
85 and over	34.0	39.3	40.2	43.4	44.9	42.4	43.5	45.5	46.5			
45 and over total	6.8	7.7	8.3	8.8	9.0	8.8	8.6	9.0	9.0			
Men												
45–64	3.9	4.4	4.3	4.5	4.7	4.5	4.2	4.4	4.5			
65–74	4.3	5.1	5.4	5.4	6.0	5.2	5.4	5.6	5.9			
75–84	9.0	9.9	11.4	10.8	12.2	11.9	11.1	11.4	11.6			
85 and over	21.7	23.3	23.2	27.8	28.5	25.5	24.7	30.6	30.6			
45 and over total	5.1	5.7	5.9	6.1	6.5	6.1	5.8	6.2	6.4			

Falls associated with a fracture

There were 67,923 admissions in women and 20,723 admissions in men to NHS hospitals in England in 1997–98 for falls that led to a fracture in people aged 45 years and over. Between 1989–90 and 1997–98, agestandardised admission rates increased from 38 to 66 per 10,000 in women and from 13 to 23 per 10,000 in men. Admission rates increased rapidly with age and were over twice as high in women as in men (Table 6). In women, rates increase exponentially with age from age 45–49 years onwards (Figure 1) whereas in men the increase in rates accelerates from age 65–69 years onwards (Figure 2). The percentage of fractures associated with a fall increased with age in both men and women and was consistently higher in women than in men (Figure 3).

Projected number of admissions

The number of admissions for 1997–98 for all fractures and for fractures associated with a fall are shown in Table 7 along with the projected number of admissions for 2011–12 and 2021–22 if there is no change in age–specific admission rates. The number of admissions to NHS hospitals in England for fractures among people aged 45 years and over is projected to increase in men from 32,408 in 1997–98 to 39,613 in 2011–12 (+22 per cent) and to 45,610 in 2021–22 (+41 per cent). In women, the number of admissions is projected to increase from 89,488 in 1997–98 to 96,779 in 2011–12 (+8 per cent) and to 107,851 in 2021–22 (+21 per cent).



Table 6 Admissions for falls leading to a fracture per 10,000 population, England 1989–90 to 1997–98: age specific and agestandardised rates

Age	Year											
	1989–90	1990–91	1991–92	1992–93	1993–94	1994–95	1995–96	1996–97	1997–98			
Women							·					
45–64	9.8	12.9	15.1	15.8	18.5	19.3	14.9	17.8	16.7			
65–74	29.5	35.1	44.4	46.8	54.2	58.6	45.8	55.9	52.8			
75–84	82.4	95.2	124.6	131.4	147.7	155.8	123.4	146.0	143.4			
85 and over	190.7	218.5	276.8	292.9	319.9	334.6	274.9	336.2	335.3			
45 and over total	38.0	44.8	56.7	59.8	67.4	71.1	56.6	68.2	66.4			
Men												
45–64	7.5	9.6	11.0	11.9	13.6	14.2	10.1	12.1	12.1			
65–74	11.3	13.9	17.8	18.5	22.1	22.1	17.1	20.0	20.5			
75–84	30.6	34.7	46.7	46.8	57.9	60.6	45.3	52.1	52.3			
85 and over	90.1	100.0	127.9	139.6	151.0	156.7	125.8	174.6	181.3			
45 and over total	13.3	16.0	19.9	20.9	24.4	25.3	18.9	23.0	23.3			



Projections for 2011–2 and 2021–2: number of admissions in England for fractures and admissions related to a fall leading to a fracture

		Admissions for fractures	S		Admissions for falls leading to a fracture Falls projections			
		All fractures projections	5					
Age	1997–98	2011-12	2021–22	-	1997–98	2011-12	2021–22	
Women								
45–64	14,184	17,619	18,046		9,445	11,872	12,159	
65–74	15,948	17,357	20,923		11,857	12,960	15,622	
75–84	30,543	29,801	34,683		23,552	22,973	26,736	
85 and over	28,813	32,001	34,200		23,069	25,606	27,365	
45 and over total	89,488	96,779	107,851		67,923	73,410	81,882	
Men								
45–64	13,325	16,387	17,135		6,762	8,393	8,776	
65–74	5,801	6,701	8,188		3,831	4,412	5,391	
75–84	7,470	8,533	10,388		5,373	6,160	7,499	
85 and over	5,812	7,992	9,899		4,407	6,023	7,461	
45 and over total	32,408	39,613	45,610		20,373	24,988	29,127	
Total	121,896	136,392	153,462		88,296	98,398	111,009	

DISCUSSION

This study confirms that fractures are an important cause of morbidity among the elderly and that admissions for fractures impose a considerable burden on the NHS. Age-standardised admission rates for fractures and for falls related to fractures and osteoporosis increased in both men and women between 1989–90 to 1997–8. However, most of this increase occurred in the first five years of the study period, between 1989–90 to 1993–94. There was then a marked decrease in admission rates in 1995–96 which was probably due to the change to using ICD-10 instead of ICD-9 to code diagnostic data.

This study provides important baseline admission rates for groups of fractures. The data on falls gives an indication of the number of fractures that may have been caused by a fall. Of note is that admission rates for fractures in women start to increase from age 45 years onwards for most fracture groups. Although osteoporosis is viewed traditionally as an older women's disease, this finding suggests that attention must also be paid to detecting and treating osteoporosis even in this relatively young age group. In men, admission rates begin to increase more rapidly from age 65–69 years onwards when osteoporosis may start to have a greater impact. The fall in admissions for upper limb, spine and trunk, and lower limb fractures (excluding femur) before this age in men may relate to the decline with age in road traffic accident related fractures.

One strength of this study is that it uses data for the whole of England. By combining fractures at individual sites into larger groups, we will also have minimised coding errors between fractures at different sites, for example the miscoding of hip fractures as fractures of the femur. This is also the first comprehensive national analysis of admissions for fractures and hence the study provides important baseline information on the burden of disease caused by fractures and on the impact at a population level of the various initiatives aimed at reducing this burden.

Hospital episode statistics do have some limitations and these should be borne in mind when interpreting the results of the study. Firstly, the data only relate to hospital admissions and hence ignore fractures treated only in accident and emergency and then in outpatient departments. As fractures of the femur are almost invariably admitted to hospital, admissions for this diagnosis give a measure of the fracture incidence rate but for other groups of fractures, this is not the case. For example, Garraway and colleagues found that only 24 per cent of patients with limb fractures were admitted to hospital.¹¹ Moreover, only 35 per cent of vertebral fractures are clinically diagnosed, and only about 8 per cent will result in a hospital admission.¹² However, there are already several studies describing fracture incidence in various areas in Britain^{3-5, 13} but there has been less work on admissions for fractures and thus our study addresses this gap.

Secondly, there may be coding inaccuracies in routine data such as hospital episode statistics. For example, during the early years of the system, coding may not have been 100 per cent complete. This may be the reason why we have found a consistent increase in the standardised rate of admissions which occurred mainly in the first three to five years of the study. Thirdly, there was a change from ICD-9 to ICD-10 in 1995–96. We found that this change was associated with a consistent decrease in admission rates for fractures in this year which may be due to this coding change. Another inconsistency which may relate to this coding change is the sharp increase in fractures of the upper limb in the 90 and over age group in both males and females in 1996–7 and 1997–8. These changes appear to be isolated, and thus may not reflect a true increases in rates. Finally, we only used first episodes and the main diagnosis in these episodes. This means that episode rates are a good

measure of admission rates (because second and subsequent episodes are not included) and that we have minimised readmissions (because only the main diagnosis was used to identify cases). This may have resulted in the number of admissions being under-estimated but the effect of this is not likely to be large.

A key finding of this study is that age adjusted rates of admissions for fractures in people aged 45 years and above have stabilised over the last five years. There is already some evidence that the rate of admissions for fracture of the femur in England and Wales may be stabilising.¹⁴ Other reasons for the lack of change in admission rates must also be considered. It may be that there are small changes in admission rates which are not apparent with the time-scale of the study. Also, increases in rates in some fractures in the same group, thus producing no net secular change. However this is unlikely to produce the consistent findings of a stable rate in the last five years within all our groups of fractures.

The finding that the rise in fracture admissions in women precedes the average age of the menopause concurs with the incidence rates for fractures reported in previous studies.^{4, 5, 11} Similar patterns of the age related increases in men have also been seen in these studies. Age dependent increases in hospital admission relate in part to changes in the incidence and severity of the primary illness requiring admission but also to other factors. Issues such as support available at home, comorbidity and concurrent medication are also important. The largest age dependent increase in fracture admission rates is for fractures of the femur, where admissions are most likely to approximate to incidence and where changes relating to age such as osteoporosis, neuromuscular deterioration and risk of falling are most marked.

We have also documented the association of falls with age and admissions. Winner and colleagues have also shown an age related increases in falls consistent with patterns of distal forearm fracture in women, but they noted a decrease in incidence rates in the age group 55–59 to 70–74.¹⁵ By contrast, our data show a consistent rise in admissions with age. Hospital discharge data from Finland show an increase in falls to 1995.¹⁶ Our rates of admissions from falls in England are lower than that in Finland, but their data relate to all admissions from falls and not just those that result in a fracture.

The projections for the future number of admissions from fractures show that fractures will continue to be an increasing burden on inpatient services. There is evidence that exercise and home assessments can reduce the risk of falls in older people.⁷ Regular exercise can also help reduce osteoporosis and fractures among the elderly.¹⁷ There have been a number of steps taken by government agencies to tackle this problem. The Department of Trade and Industry has set out practical steps in their campaign to reduce falls in the elderly.⁸ Department of Health guidelines outline strategies for osteoporosis prevention and treatment.¹⁸ The Our Healthier Nation strategy has also targeted the prevention of falls in the elderly.⁸

It remains important to focus efforts on the prevention of injuries due to falls and osteoporosis in primary care to reduce this burden on the public, society and the NHS. In line with recommended practice, attention must also be paid to effecting lifelong changes in physical activity and the adoption of healthier lifestyles in addition to any measures by health services or other partnership organisations in health improvement programmes. Finally, the in–hospital care of patients admitted with fractures also needs to be a priority, particularly among elderly patients who have the greatest risk of admission and the highest death rates from fractures.

Box one

OSTEOPOROSIS

What is osteoporosis?

Osteoporosis is a disease that thins and weakens bones to the point where they break easily, especially bones in the hip, spine, and wrist. Osteoporosis is called the "silent disease" because people with it may not notice any symptoms. People can lose bone over many years but not know they have osteoporosis until a bone breaks. Osteoporosis and the fractures it leads to impose a considerable burden on people's health, society and the NHS. The causes of osteoporosis are not fully understood. We do know that when women go through menopause, levels of the female hormone oestrogen drop. Lower hormone levels can lead to bone loss and osteoporosis. Other causes of bone loss and osteoporosis include a diet too low in calcium and not getting enough exercise.

Who gets osteoporosis?

About one out of every two women and one in eight men over age 50 years will have an osteoporosis-related fracture. Women who have a family history of osteoporosis, an early menopause, or who have small body frames are at greatest risk. Men have less risk of getting osteoporosis because they do not have the same kinds of hormone losses as women. Osteoporosis can occur at any age but the risk increases with age.

How is osteoporosis diagnosed?

Losing height or breaking a bone may be the first sign of osteoporosis. Doctors use several different tests to find osteoporosis. The dual energy x-ray absorptiometry (DEXA) scan is the most exact way to measure bone density in the wrist, hip, and lower spine.

How is osteoporosis prevented?

Osteoporosis is preventable. A diet that is rich in calcium and vitamin D and a lifestyle that includes regular weight-bearing exercise are the best ways to prevent osteoporosis.

How is osteoporosis treated?

Treatment of osteoporosis aims to stop bone loss and prevent falls. Falls often cause broken bones that can result in an admission to hospital or a long-term disabling condition. Doctors sometimes prescribe oestrogen to replace the hormones lost during menopause in women and to slow the rate of bone loss. This treatment is called hormone replacement therapy (HRT). Other groups of drugs used to treat osteoporosis include bone modifying agents such as the biphosphonate agent Alendronate (Fosomax).

Key Findings

- Age standardised admission rates for fractures have changed little between 1994–95 to 1997–98. Because of the increasing number of elderly in the population, if steps are not taken to tackle the underlying causes of fractures and reduce admission rates, fractures will impose an increasing burden on society and the NHS.
- The number of admissions to NHS hospitals in England for fractures among people aged 45 years and over is projected to increase in men from 32,408 in 1997–98 to 45,610 in 2021–22 (+41%). In women, the number of admissions is projected to increase from 89,488 in 1997–98 to 107,851 in 2021–22 (+21 per cent).
- Admission rates for fractures and falls in women rise exponentially with age from age 45 years onwards except for fractures of the spine and trunk, where there is a more gradual increase until age 70– 74 years.
- Admission rates in men for upper limb, lower limb excluding femur and spine and trunk fractures decrease slightly from age 45–49 to 65–69 years. Rates of admissions for fractures of the femur in men rise from age 45–49 years onwards, with a more rapid increase after age 65–69.

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Geographic inequalities in mortality in the United Kingdom during the 1990s

INTRODUCTION

This article previews work which is currently being completed to update the Decennial Supplement series on area mortality. The forthcoming Decennial Supplement will be broader in its focus than its predecessor *Mortality and Geography*¹, covering not only mortality, but also fertility, congenital anomalies and cancer incidence. This article summarises the work on all-cause mortality in the 1990s.

There has been a long-standing interest in geographic inequalities in mortality and reducing such inequalities is high on the current Government's agenda. In July 1999 the White Paper *Saving Lives: Our Healthier Nation*² was published. It has a commitment to 'improve the health of everyone and the worst-off in particular'. The report to the Prime Minister by the Cabinet Office, entitled *Sharing the Nation's Prosperity*³, produced in December 1999, also focused on inequalities and drew attention to a north-south divide in mortality - with higher mortality in the north of England, Wales, Scotland and Northern Ireland, and lower mortality in the south of England - but also pointed out that within each region and country there are local authorities which have mortality levels that are higher than the United Kingdom average and local authorities with lower than average mortality.

Drever and Whitehead⁴ and Charlton⁵ showed that within England and Wales, local authorities that had the highest mortality tended to be urban areas, particularly those with purpose-built inner city estates and deprived industrial areas. Both rural and prosperous areas tended to be the most healthy, and also made the biggest health gains during the 1980s.

Recent work from the New Policy Institute and the Joseph Rowntree Foundation⁶ found that of all the local authorities within Great Britain with mortality rates more than 10 per cent greater than the Great Justine Fitzpatrick, Clare Griffiths and Mike Kelleher, National Statistics

This article examines geographic inequalities in mortality by country, region and local authority within the United Kingdom between 1991 and 1997 using age-standardised allcause mortality rates. It begins with an overview of inequalities between countries and government office regions (GORs) of England and then examines variations between local authorities (LAs) both across the United Kingdom as a whole and within Scotland, Wales and Northern Ireland and the government office regions of **England. This article** concentrates on comparisons of mortality at all ages and mortality among those aged 15-44, for males and females separately. The ONS classification of local authorities is used as an indicator of the characteristics of areas and as a measure of identifying the similarity between areas.

Britain rate, more than a quarter were in Scotland, just under half in the north of England and just under a quarter in London. None were located in the south of England (outside London). Shaw and colleagues⁷ have used parliamentary constituencies to illustrate inequalities in mortality by area. They found that the six constituencies within Great Britain with the highest mortality under age 65 are located in Glasgow, and only one from the highest 15 was outside Scotland or the north of England. Of the 15 areas with the lowest under-65 mortality rates, only one, Sheffield Hallam, was located outside the south of England.

Reid and Harding⁸ found that although mortality of those aged 20–64 in England and Wales was highest in the north and lowest in the south between 1991 and 1997, the death rate of the most deprived individuals (defined as having at least three of the following four characteristics - being in Social Class IV or V, living in rented accommodation, having no access to a car and being unemployed) was more than twice that of the least deprived individuals (defined as being in Social Class I, II or III, living in owner occupied housing, having car access and being employed) in both the north and in the south. They also found that the death rates of the most deprived individuals had not declined in the 1990s, whereas those of the least deprived individuals had declined substantially. In another paper⁹, they found that adjusting for differences in long-term disadvantage did not explain the north-south divide in mortality.

This article provides further evidence of geographic inequalities in mortality at country, government office region (GOR) and local authority (LA) level during the 1990s, expanding on previous work by extending its focus to include the whole of the United Kingdom. It looks at the patterns in both males and females separately and focuses specifically on mortality in younger adults aged 15–44. It also uses the recently revised ONS classification of local and health authorities to provide an indicator of the characteristics of areas and provides mortality rates for groups of authorities with similar characteristics.

Inequalities between countries of the United Kingdom and regions of England

Tables 1 and 2 show mortality rates for males and females respectively, over the period 1991 to 1997 for countries of the United Kingdom and regions of England. All-cause mortality increases dramatically with age and males have higher mortality than females in every age group. For both males and females, there is substantial geographic variation in mortality, between both the countries of the United Kingdom and the regions of England.

Males in Scotland, Wales and Northern Ireland have higher mortality than males in England in all age groups (Table 1). For male children, the pattern of country-level variation is the same as in the other age groups, but only Northern Ireland's rate is significantly different from the United Kingdom's. Among females, Scotland has substantially higher mortality than the UK at all ages, including childhood (Table 2). Wales and Northern Ireland have higher mortality than the United Kingdom for all ages, 45–64, and 65 plus. England has lower mortality than the United Kingdom as a whole for all ages and all the adult age groups.

For both males and females, within England, there is evidence of a clear north-south divide in mortality with regions in the north having high mortality and regions in the south having low mortality for all ages, 45–64 and 65 plus year olds. The North East and the North West are the regions with the highest mortality and the South East, South West and East of England the regions with the lowest mortality in these age groups. The only major exception to this general pattern is that males in London, who have lower mortality than the United

Table I Age-standardised mortality rates for all causes of death by country and GOR, males, United Kingdom, 1991–97

Γ					
		. Kat	es per 100,0	00	
	All ages ¹	I-14	15-44	45–64 ¹	65 and over
United Kingdom	980	23	113	810	6500
Great Britain	980	22	112	800	6500
England and Wales	960~	22	109~	780~	6400~
England	960~	22	109~	780~	6400~
North East	1100*	24	108~	950 *	7300*
North West	1060*	25 *	124 *	920 *	7000*
Yorkshire and the Humber	· 1000*	25 *	105~	820 *	6600*
East Midlands	950~	22	103~	750~	6400
West Midlands	1000*	23	105~	810	6700*
East	870~	20~	93~	650~	6000~
London	970~	22	129*	830*	6300~
South East	870~	19~	97~	670~	5900~
South West	870~	20	103~	670~	5800~
Wales	1000*	24	117*	830 *	6600*
Scotland	1140*	25	44 *	1050*	7300*
Northern Ireland	1070*	26*	125 *	870 *	7100*
Country inequality†	1.19	1.16	1.33	1.35	1.14
Region inequality†	1.26	1.31	1.38	1.46	1.26

rounded to the nearest 10.

² rounded to the nearest 100.

95% confidence interval excludes and is higher than the UK rate.

 $\sim~95\%$ confidence interval excludes and is lower than the UK rate.

† ratio between the rate in the country of the UK or region of England with the highest rate and that with the lowest rate.
Source: ONS. GRO Scotland, GRO Northern Ireland

Table 2 Age-standardised mortality rates for all causes of death by country and GOR, females, United Kingdom, 1991–97

		Rat	es per 100,0	00	
	All ages ¹	1-14	15-44	45–64 ¹	65 and over ²
United Kingdom	620	17	60	490	4200
Great Britain	620	17	60	490	4200
England and Wales	610~	17	59~	480~	4200~
England	610~	17	59~	470~	4100~
North East	700 *	18	58	580 *	4700*
North West	680 *	18	66 *	550 *	4600*
Yorkshire and the Humber	640 *	20*	60	500	4300*
East Midlands	620~	17	59	480~	4200~
West Midlands	630 *	17	60	490	4300*
East	570~	16	53~	420~	3900~
London	600~	17	61	480~	4000~
South East	570~	4~	54~	410~	3900~
South West	550~	16	56~	420~	3800~
Wales	630 *	17	63	510*	4300*
Scotland	730*	19*	74 *	620 *	4900*
Northern Ireland	660 *	20	59	520 *	4500*
Country inequality†	1.20	1.19	1.25	1.32	1.20
Region inequality†	1.27	1.38	1.24	1.41	1.24

rounded to the nearest 10.

rounded to the nearest 100.

* 95% confidence interval excludes and is higher than the UK rate.

~ 95% confidence interval excludes and is lower than the UK rate.

† ratio between the rate in the country of the UK or region of England with the highest rate and that with the lowest rate.

Source: ONS, GRO Scotland, GRO Northern Ireland

Kingdom as a whole at all-ages and at ages 65 plus, have higher than average mortality at ages 45–64. For male and female children, Yorkshire and the Humber has the highest mortality rate. For the 15– 44 age group there are a number of exceptions to the north-south pattern, discussed in more detail in the next section. All-age mortality in Scotland is 1.19 times greater for males and 1.20 times greater for females than in England. The English region with the highest all-age mortality is the North East, which has a rate 1.26 times greater than the South West for males and 1.27 times greater for females.

Adults aged 45–64 have the widest inequality in mortality between countries and regions, in both males and females, with mortality in Scotland being 1.35 times greater for males and 1.32 times greater for females than mortality in England. Within England, mortality in this age group in the North East is 1.46 times greater than in the East of England for males and 1.41 times greater than in the South East for females.

Younger adults (15-44 year olds)

For younger adults there is a different pattern of mortality than for all age mortality, with the north-south divide within England not as clearly visible. For males, the North West and London have higher mortality rates than the United Kingdom for the 15–44 age group and all the

other regions have lower rates. London has the highest rate, which is 1.38 times higher than the rate in the East of England, which has the lowest rate. For females, the North West is the only region with a significantly higher mortality rate than the United Kingdom rate.

The North East, which has the highest mortality at older ages, has lower mortality than the United Kingdom as a whole for the 15–44 age group for both males and females, although for females the rate does not differ significantly from the United Kingdom rate.

For males, the country-level pattern is the same as for all-ages, with all countries except England having higher mortality than the United Kingdom rate. For females, Scotland is the only country to have a rate significantly higher than the United Kingdom rate.

Figure 1 shows excess deaths per year for 15–44 year old males generated by this mortality pattern. Box one provides a definition of





Source: ONS, GRO Scotland, GRO Northern Ireland

Box one

DEFINITION OF EXCESS DEATHS

The number of excess deaths in any particular area is the difference between the observed number of deaths in that area and the number that would be expected if the area had the same age-specific mortality rates as the United Kingdom. It is a measure of the number of deaths that would not have occurred if the area had the same death rates as the United Kingdom as a whole.

The number of excess deaths in an area is affected by both the mortality rates and the number of people in the area. So an area with a large population and the same mortality rate as an area with a smaller population would have more excess deaths.

excess deaths. Scotland has about 350 excess deaths from all causes in a year, London about 270 and the North West about 160. The South East and East of England have far fewer deaths than expected, about 260 and 220 less per year, respectively. England as a whole has about 430 fewer deaths than would be expected. Figure 2 shows the pattern for females. Scotland has just under 150 more deaths per year, and the North West about 75 more per year than would be expected if these areas had the same mortality rate as the United Kingdom in 15–44 year olds. The East of England and South East have markedly fewer deaths than would be expected.

Inequalities between local authorities across the United Kingdom

The following sections examine the variation in mortality by local authority (LA) in the United Kingdom between 1991 and 1997, for all ages and for those aged 15–44. We have concentrated on those aged 15–44 as mortality rates in this age group show a different geographical pattern to all-age mortality. Patterns for other age groups are broadly similar to those at all ages.

Data for England, Wales and Scotland are presented for local authorities as they existed at April 1999. Data for Northern Ireland are presented for local authorities as they existed at the time of death registration. There was one boundary change in Northern Ireland during the period of analysis (Rathfriland ward moved from Newry and Mourne to Banbridge local authority in 1993). Data for England, Wales and Scotland refer to residents of these countries only. Data for Northern Ireland include approximately 90 deaths per year to non-residents. Deaths to nonresidents are allocated to the district of occurrence. Rates are not presented for the City of London and the Isles of Scilly as the population of these areas is relatively small making mortality rates unreliable.

Map 1 presents the variation in age-standardised mortality rates for males by LA across the United Kingdom. Box two describes how these maps have been constructed. For all ages, there is a general pattern of high mortality in the majority of authorities in Scotland, the south and west of Northern Ireland, the north of England and south Wales. There are also high rates in some authorities in London, in contrast to the mortality rates for the region as a whole (Table 1).

Areas with 'very high' mortality rates (shaded dark green in Map 1) tend to be found in urban and early industrial areas. Within Great Britain, we have used the ONS classification of local authorities as an

Box two

GUIDE TO THE MAPS

As the number of deaths in any given local authority, in a particular age group is small, we have attached 90% confidence intervals to all mortality rates. These maps are constructed using the values for these confidence intervals. An authority is:

- Shaded green if the confidence interval around the mortality rate excludes and is higher than the confidence interval around the United Kingdom mortality rate. Therefore, all authorities shaded green have higher mortality than the United Kingdom. Those shaded green are divided into two groups with an equal number of authorities in each. Those shaded dark green have the highest rates.
- Shaded grey if the confidence interval around the mortality rate excludes and is lower than the confidence interval around the United Kingdom mortality rate. Therefore, all authorities shaded grey have lower mortality than the United Kingdom. Those shaded grey are divided into two groups with an equal number of authorities in each. Those shaded dark grey have the lowest rates.
- Unshaded if the confidence interval around the mortality rate includes the United Kingdom mortality rate. These authorities either have similar mortality rates to the United Kingdom as a whole, or have large confidence intervals attached to their rates as the number of deaths in the authority is small.

indicator of the characteristics of areas^{10,11}. Box three briefly describes the classification. Map 2 shows the fifteen classification Groups by local authority. Outside London and Northern Ireland there are 60 authorities with very high mortality rates. Forty nine of these authorities are classified as *Coalfields, Manufacturing Centres* or *Ports and Industry*. The characteristics of these areas include; high unemployment, a large proportion of the population in Social Class IV and V, a high proportion of terraced housing and local authority rented accommodation and a large proportion of the population with a limiting long term illness. Two island councils in Scotland, the Shetland Islands and Eilean Siar also have very high mortality. These are classified as *Remoter Rural.* No *Remoter Rural* areas outside Scotland have very high mortality rates.

There is a general pattern of low mortality in authorities throughout the rest of England, particularly in the south and east. Authorities with 'very low' mortality rates (shaded dark grey in Map 1) are located away from major urban areas. Many different types of areas have very low mortality rates including: *Growth Areas, Most Prosperous, Rural Amenity* and *Remoter Rural*. Only three authorities in Scotland, East Renfrewshire, Aberdeenshire and the Scottish Borders have low mortality rates. Areas with very high mortality rates surround these authorities.

The pattern of mortality across the United Kingdom for all-age mortality for females is similar to that seen for males (Map 3).

Map I Age-standardised mortality rates for all causes of death by local authority Males all ages, 1991–97



Source: ONS, GRO Scotland, GRO Northern Ireland





However there are some notable exceptions. The Shetland and Orkney Islands do not have high all-age mortality rates for females. East Renfrewshire, Aberdeenshire and the Scottish Borders do not have low rates. In Scotland, slightly more authorities are in the 'very high' category for females than for males (18 and 16 respectively). Although the general pattern of all-age mortality in London is very similar for the two sexes, fewer authorities are in the 'very high' category for female mortality than for male mortality. Hammersmith and Fulham has very high mortality for males but a similar female mortality rate to the United Kingdom as a whole. Camden has high mortality rates for males, but low rates for females.

Figures 3 and 4 show all-age mortality rates for males and females by the 15 classification Groups. The *Ports and Industry* Group has the

highest mortality rates for both males and females, followed by the *East Inner London, Manufacturing Centres* and *Coalfields* Groups which all have much greater mortality rates than Great Britain as a whole. The *Most Prosperous, Growth Areas* and *Rural Amenity* Groups have the lowest mortality rates for both males and females.

Inequalities between local authorities across the United Kingdom by age group

The general pattern described above for all-ages was found to be similar for people aged 45–64 and aged 65 plus. For males aged 15–44, however, fewer authorities have mortality levels that differ significantly from the United Kingdom values (Map 4). This is expected given the fact that the number of deaths in this age group in a single authority is small.



Source: ONS, GRO Scotland



Source: ONS, GRO Scotland

Map 3 Age-standardised mortality rates for all causes of death by local authority Females all ages, 1991–97



Source: ONS, GRO Scotland, GRO Northern Ireland

Map 4 Age-standardised mortality rates for all causes of death by local authority Males aged 15–44, 1991–97



Source: ONS, GRO Scotland, GRO Northern Ireland

In addition, there are some other notable differences between the patterns of mortality rates for males of all ages, and for those aged 15–44. The authorities with the most favourable mortality are more geographically concentrated and are located in a band around the periphery of London. Some isolated authorities on the south coast of England have high mortality rates e.g. Brighton and Hove, Bournemouth, Torbay and Hastings, whereas there are no authorities with high all-age mortality anywhere on this coast. However, as for all ages, the majority of authorities with very high rates outside London and Northern Ireland (15 out of 20 authorities) are classified as *Coalfields, Manufacturing Centres* or *Ports and Industry*.

For females aged 15–44 fewer authorities differ significantly from the average mortality level (Map 5). As for males, there are a few authorities on the south coast of England with high mortality rates e.g.

Hastings and Christchurch. One authority, Hammersmith and Fulham has high mortality for males in this age group, but low mortality for females. One authority, Bassetlaw has high mortality for females in this age group, but low mortality for males. Sixteen authorities outside London and Northern Ireland have high mortality rates. Half of these are classified as *Coalfields, Manufacturing Centres* and *Ports and Industry*. However, a further six are classified as *Coast and Country Resorts* or *Established Service Centres*. This is a much larger proportion in these two groups than for males and females of all-ages. For males aged 15–44, however, a large number of authorities in these groups have mortality rates in the 'high' category (shaded light green in Map 4). Characteristics of these areas include: high employment in agriculture, small household size, high proportion of houses that are owner occupied or private rented and a high proportion of households with no central heating.



Source: ONS, GRO Scotland



Source: ONS, GRO Scotland

Map 5 Age-standardised mortality rates for all causes of death by local authority Females aged 15–44, 1991–97



Source: ONS, GRO Scotland, GRO Northern Ireland

Figures 5 and 6 show mortality rates for males and females aged 15–44 by classification Group. For males aged 15–44, although the same Groups as for all-ages have low mortality rates, the *West Inner London* Group has the highest mortality rates, followed closely by the *East Inner London* Group. For females aged 15–44 the West Inner London Group does not show high mortality rates although the rest of the pattern is very similar to that for males in this age group.

INEQUALITIES BETWEEN LOCAL AUTHORITIES WITHIN COUNTRIES OF THE UNITED KINGDOM AND WITHIN REGIONS OF ENGLAND

Tables 3 and 4 identify the local authorities with the highest and lowest rates in every country and region, for males and females, for all ages and those aged 15–44. They also measure the differential or inequality in mortality rates within each country and region by the ratio of the highest rate for a local authority to the lowest rate. For authorities with the highest or lowest rate in a particular country or region, the number

of excess deaths per year is also shown in this table. Box one provides a definition of excess deaths.

These tables show substantial geographic inequalities in mortality rates between local authorities within countries of the United Kingdom and within regions of England. For all-age male and female mortality, Glasgow, the local authority with the highest rate in the UK has twice the mortality of East Dorset the local authority with the lowest rate. Compared with what would be expected given the age-specific mortality rates in the United Kingdom, there are 1,300 excess deaths each year for males in Glasgow and 1,040 each year for females.

For all-age mortality Wales, Scotland and Northern Ireland all have a differential of between 1.3 and 1.5 for males and 1.3 and 1.4 for females. At regional level within England, for all-age mortality, the ratio between the region with the highest and lowest rates is 1.26 for males and 1.27 for females (Tables 1 and 2). Within the regions of England the ratio between local authorities varies between 1.4 and 1.5

Table 3

Local authorities with the highest and lowest all-age mortality rates by country and GOR, 1991-97

	Highest LA	Highest rate ¹	Number of deaths 1991–97	Excess deaths per year ^ı	Lowest LA	Lowest rate ¹	Number of deaths 1991–97	Excess deaths per year ¹	Inequality*
Males all ages		1	•	1	1 1		•	1	
England	Manchester	1.280	17.877	580	East Dorset	700	3.474	-180	1.8
North East	Derwentside	1.220	4.061	120	Berwick-upon-Tweed	880	1,169	-20	1.4
North West	Manchester	1,280	17.877	580	South Lakeland	830	4,137	-100	1.5
Yorkshire and the Humber	Barnsley	1,100	9,299	150	Rvedale	800	2.046	-60	1.4
East Midlands	Nottingham	1,080	10.840	140	Oadby and Wigston	790	1,616	-50	1.4
West Midlands	Stoke-on-Trent	1,140	10.356	230	South Shropshire	800	1.654	-50	1.4
East	Thurrock	1,070	4.307	50	South Norfolk	770	3,913	-140	1.4
London	Tower Hamlets	1,200	6,182	160	Barnet	830	9,694	-240	1.4
South East	Dartford	1,060	2,903	30	Chiltern	750	2,708	-120	1.4
South West	Swindon	1,000	5,581	10	East Dorset	700	3,474	-180	1.4
Wales	Merthyr Tydfil	1.200	2.544	70	Monmouthshire	870	3,180	-50	1.4
Scotland	Glasgow City	1,420	29,613	1,300	East Renfrewshire	920	2,646	-30	1.5
Northern Ireland	Dungannon	1,150	1,576	30	North Down	850	2,380	-50	1.4
Females all ages									
England	Easington	780	4,271	110	East Dorset	440	3,348	-180	1.8
North East	Easington	780	4,271	110	Berwick-upon-Tweed	620	1,322	0	1.3
North West	Knowsley	770	5,602	150	South Lakeland	550	4,986	-70	1.4
Yorkshire and the Humber	Barnsley	690	9,416	120	Ryedale	540	2,151	-40	1.3
East Midlands	Corby	720	1,671	20	Rutland	530	1,050	-20	1.4
West Midlands	Stoke-on-Trent	690	10,251	100	South Shropshire	520	1,703	-40	1.3
East	Brentwood	640	3,035	30	Three Rivers	490	2,784	-100	1.3
London	Newham	700	6,692	60	Harrow	520	7,264	-170	1.3
South East	Medway Towns	660	7,867	60	Guildford	500	4,121	-140	1.3
South West	Swindon	620	5,617	0	East Dorset	440	3,348	-180	1.4
Wales	Merthyr Tydfil	750	2,719	60	Monmouthshire	560	3,231	-50	1.3
Scotland	Glasgow City	860	31,923	1,040	East Renfrewshire	620	3,227	10	1.4
Northern Ireland	Derry	760	2,767	70	Cookstown	560	809	-10	1.4

¹ rounded to the nearest 10.

* ratio between the rate in the LA with the highest rate and the rate in the LA with the lowest rate. Source: ONS, GRO Scotland, GRO Northern Ireland. Table 4

Local authorities with the highest and lowest age 15-44 mortality rates by country and GOR, 1991-97

				1	1		1	1	
	Highest LA	Highest rate ¹	Number of deaths 1991–97	Excess deaths per year ⁱ	Lowest LA	Lowest rate ¹	Number of deaths 1991–97	Excess deaths per year ¹	Inequality*
Males aged 15–44					· · · · ·				
England	Hammersmith and F	ulham 220	591	40	Hertsmere	70	93	-10	3.2
North East	Easington	150	199	10	Alnwick	80	35	0	1.8
North West	Manchester	180	1.173	60	Eden	90	62	0	2.0
Yorkshire and the Humber	Scarborough	130	178	0	Richmondshire	80	61	0	1.6
East Midlands	Corby	160	125	10	Melton	70	48	Ő	2.3
West Midlands	Wolverhampton	130	467	10	Bromsgrove	80	98	-10	1.7
East	Great Yarmouth	130	161	0	Hertsmere	70	93	-10	1.9
London	Hammersmith and Fulh	am 220	591	40	Bexley	80	265	-20	2.8
South East	Brighton and Hove	170	677	30	Wokingham	70	156	-20	2.5
South West	Bournemouth	140	318	10	Purbeck	80	45	0	1.9
Wales	Merthyr Tydfil	150	124	0	Ceredigion	90	92	0	1.6
Scotland	Glasgow City	210	1,949	130	East Renfrewshire	e 80	108	-10	2.6
Northern Ireland	Moyle	190	43	0	Castlereagh	80	74	0	2.4
Females aged 15–44									
England	Lincoln	90	106	0	East Dorset	30	36	0	2.6
North East	Easington	80	101	0	Durham	40	57	0	1.8
North West	Manchester	90	524	20	South Ribble	50	75	0	1.8
Yorkshire and the Humber	Ryedale	70	43	0	Selby	50	55	0	1.4
East Midlands	Lincoln	90	106	0	Rushcliffe	40	61	0	2.2
West Midlands	Cannock Chase	70	92	0	South Staffordshire	40	66	0	1.6
East	Maldon	70	49	0	Uttlesford	40	38	0	1.8
London	Southwark	80	313	10	Harrow	50	140	-10	1.9
South East	Hastings	90	97	0	Fareham	40	55	0	2.3
South West	Christchurch	80	40	0	East Dorset	30	36	0	2.5
Wales	Merthyr Tydfil	80	65	0	Ceredigion~	50	51	0	1.4
Scotland	Dundee City	100	229	10	East Renfrewshire	e 50	60	0	2.3
Northern Ireland	Moyle	90	18	0	Banbridge	40	22	0	2.3

¹ rounded to the nearest 10.

* ratio between the rate in the LA with the highest rate and the rate in the LA with the lowest rate.

~ 90% confidence interval does not exclude the confidence interval for Merthyr Tydfil.

Source: ONS, GRO Scotland, GRO Northern Ireland.

for males and 1.3 to 1.4 for females (Table 3 and 4). Inequalities between local authorities within regions of England and countries of the UK are therefore slightly greater than inequalities between regions and countries themselves.

INEQUALITIES BETWEEN LOCAL AUTHORITIES WITHIN COUNTRIES OF THE UNITED KINGDOM AND REGIONS OF ENGLAND BY AGE-GROUP

Geographic inequalities in mortality rates between LAs for males and females aged 15–44 are generally greater than inequalities in all-age mortality, for every country and every region. This also applies to inequalities in mortality rates between countries and regions (Tables 1 and 2) as discussed earlier.

For males aged 15–44, Hammersmith and Fulham (the local authority with the highest rate in the United Kingdom) has 3.2 times the mortality rate of Hertsmere (the local authority with the lowest rate) (Table 3). There are 40 more deaths each year for males aged 15–44 in Hammersmith and Fulham than would be expected if it had the same age-specific mortality rates as the United kingdom. Dundee has the highest rate in the United Kingdom for females aged 15–44. Again this rate is over three times the rate of the local authority with the lowest rate, East Dorset. There are 10 excess deaths each year among females aged 15–44 in Dundee (Table 4).

Unlike the picture for all-ages, for ages 15–44 some regions within England experience greater inequalities in mortality than countries of the United Kingdom. For males aged 15–44, London is the region with the largest differential. Hammersmith and Fulham (the local authority in London with the highest rate) has 2.8 times the mortality rate of Bexley (the authority with the lowest rate). This differential is greater than that in Scotland, Wales and Northern Ireland. For females aged 15–44, the South West has the largest differential of 2.5, which is greater than that in Scotland, Wales and Northern Ireland for this age group.

CONCLUSIONS

The analysis of mortality by country shows Wales, Scotland and Northern Ireland to have higher mortality than England, for most age groups. This analysis also confirms findings from other studies of a north-south divide in mortality rates within England. However, high mortality rates within the north of England tend to be concentrated in particular local authorities, often alongside authorities with low mortality rates. Authorities with high mortality rates tend to be located in urban and industrial areas and have characteristics indicating low socio-economic status.

This analysis will be discussed in more detail in the forthcoming Decennial Supplement on *Geographic Inequalities in Health* to be

Key findings

- The analysis of mortality by country show Wales, Scotland and Northern Ireland to have higher mortality than England, for most age groups.
- There is a north-south divide in all-age mortality at regional level within England, with higher mortality rates in the northern regions of England than in the southern regions of England.
- For mortality for males aged 15–44 the north-south divide is less marked and only the North West region and London have higher mortality rates than the United Kingdom.
- Local authorities with the highest levels of mortality tend to be located in urban and industrial areas. Outside London and Northern Ireland, the majority of these areas can be classified as *Coalfields*, *Manufacturing Centres* and *Ports and Industry*.
- There is a two fold differential in all-age male and female mortality by local authority within the United Kingdom. Glasgow, the local authority with the highest rate in the United Kingdom has twice the mortality rate of East Dorset, the local authority with the lowest rate, for both sexes.
- Geographic inequalities in mortality rates in the United Kingdom are greater at younger ages. For males aged 15-44, Hammersmith and Fulham (the local authority with the highest rate in the United Kingdom) has 3.2 times the mortality rate of Hertsmere (the local authority with the lowest rate in the United Kingdom) and 2.8 times the rate for Bexley (the local authority with the lowest rate in London).
- Inequalities between the regions of England appear to be greater than that between the countries of the United Kingdom at all age groups examined. In addition to this, inequalities within the regions of England is greater than that between the regions themselves.

published early next year. In particular, we will examine the contribution of different causes of death, Social Class and deprivation to these inequalities.

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Box three

'The ONS classification of local and health authorities: revised for authorities in 1999' is a general purpose summary indicator of the characteristics of local authorities in Great Britain. Based on 37 socioeconomic and demographic variables from the 1991 Census it groups authorities into Families, Groups and Clusters by measuring similarities across the classification variables. Details of the methods used and the allocation of local authorities to Families, Groups and Clusters can be found elsewhere^{9,10} or on our website at www.statistics.gov.uk.

Healthy life expectancy in Great Britain, 1980–96, and its use as an indicator in United Kingdom Government strategies

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There has been a dramatic increase in life expectancy over the last century, but are the extra years gained lived in good health? Health expectancy is a single index, that combines mortality and morbidity, which can be used to help answer this question. This article presents time trends for Great Britain using two different measures of health expectancy, and compares them to trends in life expectancy. Both life expectancy and healthy life expectancy increased between 1980 and 1996. However, healthy life expectancy did not increase by as much as total life expectancy with the result that both men and women are living more years in poor health or with a limiting long-standing illness.

INTRODUCTION

Over the last 100 years there has been a substantial increase in life expectancy. In the earlier part of this period a large part of the increase was due to decreases in infant mortality. More recently there have been significant falls in death rates among the older population. A question has therefore arisen over the quality of life – are the additional years of life spent in good health or in a prolonged state of illness and dependency? This is an important question for both individuals and also for government policies on social and health services provision for the elderly. It is one that has been heavily debated over the last two decades.

Life expectancy has traditionally been used as a measure of improvement in the health of the population. However, because it takes no account of the quality of life, it has its limitations as a global health measure, particularly with the ageing of the population. Health expectancy uniquely combines mortality and morbidity into a single index such that it is independent of the particular age structure of the population to which it is applied. There are as many health expectancies as there are health concepts or measures. The two health expectancies used in this article define health as in good or fairly good self-perceived general health, or free from limiting long-standing illness, and we will refer to these as healthy life expectancies. These can be used to help address the above question.

Healthy life expectancy, defined as expected years of life in good or fairly good general health, is being used as an indicator in three government strategies which were published last year – the strategy for tackling poverty and social exclusion¹; the strategy for sustainable development²; and the public health strategy for England³.

A detailed review of health expectancy in Great Britain was published in 1995⁴. This included calculations of health expectancy at birth and at age 65, for selected years between 1976 and 1992, for England and Wales. Subsequently, Bebbington and Darton⁵ extended the analyses for England and Wales to include data for 1994. Both these analyses calculated health expectancy from survey questions on limiting longstanding illness (at various ages) and activities of daily living (for the population aged 65 and over).

This article explains the methods we used to calculate healthy life expectancy for Great Britain from survey questions on self-perceived general health and limiting long-standing illness, and presents time trends in healthy life expectancy. It also describes the assessment and use of a healthy life expectancy measure as an indicator of health improvement in key government strategies.

METHODS

Our source of morbidity data was the British General Household Survey (GHS). This is a continuous nationally representative interview survey of private households, including each year about 25,000 individuals of whom around 4,000 are aged 65 and over. Results are produced annually. There is a regular short section on health and use of health services. Responses to two questions (see Box one) asked every year in the GHS from 1980 to 1996 were used to provide ill-health rates.

For the general health question (1), an ill-health rate was calculated from those responding that their health was "Not good". For question (2) the ill-health rate was calculated from those responding positively to both the main question and part (b), that is based on respondents with a limiting long-standing illness. We then calculated two different measures of healthy life expectancy - expected years of life in good or fairly good health, and expected years of life free from limiting long-standing illness.

The GHS covers only residents of private households. Since residents of communal establishments (institutions) represent a significant proportion of the elderly and of those with ill-health, we adjusted our calculations to reflect this, as follows. The 1991 Census included a question on limiting long-standing illness (LLI), similar to that used in the GHS, which was asked of everyone, including people living in communal establishments. This was used to derive an ill-health rate

Box one

GENERAL HOUSEHOLD SURVEY QUESTIONS USED TO CALCULATE ILL-HEALTH RATES

- "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?"

which was applied to residents of communal establishments in every year of our analysis, and for the two different measures of ill-health (LLI and poor general health). Communal establishment populations were taken from the 1981 and 1991 Censuses with linear interpolation and extrapolation used to estimate these populations for the other years.

Life expectancy free of limiting long-standing illness was calculated in five year age-groups to age 84 and then for the population aged 85 and over. The general health question of the GHS has not, to date, been asked of under 16s, therefore calculations of healthy life expectancy in this case were produced for 16-19 year olds and then for five year age-groups to age 84, then 85 and over. However, policy needs required us to calculate healthy life expectancy at birth based on the general health question. Following comparison with other data sources and consultation with paediatric specialists, we made the assumption that the ill-health rate for 0-15 year olds (for the general health question only) was the same as for 16-19 year olds.

Analyses were carried out for Great Britain, to match the national coverage of the GHS, and for England only, to provide indicators for the strategies mentioned in the Introduction. The Sullivan method of calculation was used⁶ (see Box two), with three-year interim life tables. Data for 1980–1996 were used to calculate results on a three-year moving average basis. We compared the trends in our two healthy life expectancy (HLE) measures with trends in total life expectancy.

RESULTS

Although analyses were carried out for both Great Britain and England, in this article we focus on the results for Great Britain. However, very similar trends were observed for England, but with both life expectancy and healthy life expectancy being slightly higher in England than in Great Britain.

HLE at birth

Figure 1 shows that in Great Britain, between 1981 and 1995, life expectancy at birth for males increased continuously, from 70.9 to 74.2 years. Over the same period, the number of years newborn males could expect to live in good or fairly good health also increased, from 64.4 to 66.4 years (representing 89.6 per cent of total life expectancy, compared with 90.9 per cent in 1981). However, the rate of increase in this measure of healthy life expectancy was slower than for total life expectancy. This resulted in the expected number of years lived in poor health rising from 6.4 in 1981 to 7.7 in 1995.

Figure 1 also shows a small increase, between 1981 and 1995, in life expectancy free of limiting long-standing illness for males at birth, from 58.1 to 58.9 years (representing 79.4 per cent of total life expectancy). By 1995 the number of years a newborn male could expect to live with a limiting long-standing illness had increased to 15.2 years, 2¹/₂ years more than in 1981. The lower healthy life expectancy figures obtained using the limiting long-standing illness measure, as opposed to the general health measure, are as we would expect. People can have a limiting long-standing illness and still say that their general health has been good or fairly good. Figures from the GHS for 1993–95 show that 24 per cent of men aged 16–64 reporting that they had a limiting long-standing illness said that over the last 12 months their health on the whole had been 'good', and a further 32 per cent said their general health had been 'fairly good'. The corresponding figures for men aged 65 and over were 15 per cent and 38 per cent.

Figure 2 shows the time trends in life expectancy and healthy life expectancy at birth for females, between 1981 and 1995. Over this





period female life expectancy at birth increased continuously, from 76.8 to 79.4 years; and (as for males) the number of years they could expect to live in good or fairly good health also increased, but not by as much as total life expectancy, from 66.7 to 68.7 years (86.5 per cent of total life expectancy). This meant that by 1995 the number of years a newborn female could expect to spend living in poor health had increased to 10.7 years, from 10.1 years in 1981, representing a much smaller change than for males.

Between 1981 and 1995 life expectancy free of limiting long-standing illness, for newborn females, increased only very slightly from 60.8 to 61.2 years (77.1 per cent of total life expectancy). As for males, the rate of increase in this measure of healthy life expectancy was slower than for both total life expectancy and life expectancy in good or fairly good health. By 1995 newborn females could expect to live 18.2 years of their life with a limiting long-standing illness, compared with 16.0 years in 1981.

All these results show that although newborn females can expect to both live longer and spend more years in good health, they can also expect to live a slightly higher proportion of their lives in poor health than newborn males (13 per cent compared to 10 per cent in 1995) or with a limiting long-standing illness (23 per cent compared to 21 per cent in 1995).

HLE at age 65

Figure 3 shows trends from 1981 to 1995 in life expectancy and healthy life expectancy at age 65 for men in Great Britain. Life expectancy for men at age 65 increased continuously, from 13.0 to 14.7 years. The number of years a man aged 65 could expect to live in good or fairly good health also increased continuously, but not by as much, from 9.9 to 11.3 years (representing 76.9 per cent of total life expectancy). This resulted in the number of years a man aged 65 could expect to live in poor health increasing from 3.0 years in 1981, to 3.4 years in 1995. Life expectancy free of limiting long-standing illness for men aged 65 increased at a slower rate, from 7.6 to 8.3 years (56.6 per cent of total life expectancy at that age). This resulted in the expected number of years lived with a limiting long-standing illness rising from 5.4 in 1981, to 6.4 in 1995.

Similar trends were found for women aged 65. Figure 4 shows that, between 1981 and 1995, life expectancy at age 65 increased continuously, from 16.9 to 18.3 years; and the number of years women aged 65 could expect to live in good or fairly good health also increased, but not by as much, from 11.9 to 13.0 years (representing 71.1 per cent of total life expectancy). Thus, by 1995,





women aged 65 could expect to live 5.3 years of their remaining life in poor health, compared with 5.0 years in 1981. Life expectancy free of limiting long-standing illness for women at age 65 increased by an even smaller amount, from 8.5 to 9.5 years (51.8 per cent of total life expectancy).

DISCUSSION

The great advantage of using ill-health rates from the General Household Survey is that we have been able to calculate a long time series of results for healthy life expectancy, to compare with the routinely available figures on total life expectancy. Sullivan's method is recognised to be highly suitable for calculating long term trends, provided that any changes in morbidity and remission rates have been smooth and relatively regular over the longer term⁷ - which is the assumption we have made.

As we found for Great Britain, in most European countries life expectancy and healthy life expectancy are longer for females, and women at age 65 can expect to live a greater proportion of their remaining years with disability than men^{8,9}. Disability-free life expectancy at birth, all disability levels combined, increased for both males and females from the early 1980s in France¹⁰, Germany¹¹, Netherlands¹² and the USA¹³. However, the increases were slower than for total life expectancy, as we found in our estimates of life expectancy free from limiting long-standing illness.

Similarly to Great Britain, there has been an increase in life expectancy with perceived good health for men aged 16 in Denmark between 1987 and 1994¹⁴. However, unlike in Great Britain, life expectancy in Denmark has remained stable since the early 1980s, and health expectancy for women aged 16 has decreased since 1987. At age 66 life expectancy with perceived good health has increased in Denmark, as we found at age 65 in Great Britain. Figures for the Netherlands¹⁵ show similar trends to those we found for healthy life expectancy at birth based on self-perceived general health, namely a slight decline in the proportion of life spent in good perceived health, and women spending a smaller proportion of their lives in good health than men.

Use of cross-sectional data from the General Household Survey means that our healthy life expectancy measures represent what we would expect to happen if the age-specific ill-health rates experienced by an individual throughout his/her lifetime are the same as current average rates. Without a national longitudinal health survey we are obliged to use cross-sectional survey data and Sullivan's method of calculation. This means that we can take no account of transitions into and out of various health states over time, as other researchers have done^{16,17,18,19,20}. This multistate approach has the advantage over Sullivan's method of providing health expectancy estimates based on current rather than historical morbidity incidence rates. Multistate life tables also provide a better basis on which to predict service needs⁴. We are also not able to distinguish between severe and lesser levels of disability. Others have demonstrated that estimates of active life expectancy are sensitive to the disability scale used²¹. However, Great Britain is by no means alone in using self-perceived health measures to calculate healthy life expectancy, due to such data being widely available (e.g. Netherlands, Denmark and Bulgaria). However, it has to be remembered when using such measures that levels of selfreported health can change over time simply due to changes in individuals' expectations rather than a true deterioration or improvement in the population's health. Also, self-reported health varies between different subgroups of the population. 'Good health' will mean different things to different people depending on their age, sex and socio-economic circumstances. The same issues of perception and interpretation do not apply to total life expectancy.

Some researchers have calculated health expectancy just for the noninstitutionalised population as this is the only population covered by their health/disability surveys; others have considered all residents of health-related communal establishments to be disabled; whilst others have been able to take account of disability rates for the communal establishment population due to the availability of data from surveys and censuses. Some authors^{4,5} have highlighted the importance of an adjustment, even if only crude, to health expectancy calculations, to take account of the health status of the communal establishment population when the primary source of morbidity data is a survey of private households. This is particularly important when making comparisons over time or between countries. In our calculations, we used actual data on residents of all communal establishments from the 1991 Census of Great Britain. The 1991 Census is the only one in this country to date to have included a health question (on limiting longstanding illness [LLI]) and we made the crude assumption that the LLI rate in 1991 for residents of communal establishments applied in all other years of our analyses, which is very unlikely to be the case. The other limitation to our adjustment was that we based our communal establishment population numbers on just the 1981 and 1991 Census figures, using linear interpolation and extrapolation to obtain figures for all the other years. Bebbington and Darton⁵ used a much broader range of data sources to produce more reliable estimates of the intercensal communal establishment population in their health expectancies for England and Wales. We will be able to reassess our adjustments once the results of the 2001 Census become available.

One final comment on the communal establishment adjustment is that the 1991 Census only included a question on LLI, and not on selfperceived general health. Therefore, we used estimates of LLI rates for residents of communal establishments in both our measures of healthy life expectancy. The effect of this was to slightly underestimate healthy life expectancy based on self-perceived general health.

Healthy life expectancy is a useful measure for monitoring policy and predicting future demand for health and social services, and has been used to indicate the likely future demand for long-term care²². One of the three key priorities for older people in the Government's strategy for tackling poverty and social exclusion¹ is "improving opportunities
for older people to live secure, fulfilling and active lives". An increase in healthy life expectancy (based on self-rated general health) at age 65 in England is one of the indicators of success for this aim. The Government's strategy for sustainable development^{2,23} has as an objective to improve the health of the population overall, and uses healthy life expectancy at birth (based on self-rated general health) in Great Britain as an indicator of progress. One of the main reasons for using this measure is because poor self-perceived general health has been found to predict subsequent mortality even after adjustment for physical disability and other factors associated with reduced mortality^{24,25} (Idler and Benyamini²⁶ give a recent review). Also, self-rated general health measures health in a positive as well as negative sense; that is to say that it is more than just the absence of illness (as is the case for the limiting long-standing illness measure).

Work by the Department of Health has shown a high degree of correlation between various ill-health measures in the Health Survey for England, including acute sickness, limiting long-standing illness, self-reported general health, Euro-Qol and SF36. Self-reported general health has been found to correlate with service use²⁷. In making use of a health expectancy indicator, the Department of Health does not wish to discount certain measures, but rather to have a package of possible measures of healthy life expectancy for policy evaluation. The public health strategy for England, *Saving Lives: Our Healthier Nation*³, includes a commitment to review and publish changes at national level to healthy life expectancy every three years.

CONCLUSIONS

Our data sources mean that we have the unique advantage of being able to produce a long time series of health expectancies which show increases in both life expectancy and healthy life expectancy since the early 1980s, although healthy life expectancy has not increased by as much as total life expectancy. Both life expectancy and healthy life expectancy are higher for women than men, but women can expect to live a larger number of their remaining years, and a larger proportion of years, in poor health or with a limiting long-standing illness, than men.

Healthy life expectancy at age 65 will be monitored for the Government strategy on tackling poverty and social exclusion, and healthy life expectancy at birth will be monitored for the strategies on public health and sustainable development. Headline indicators will use the self-perceived general health measure, rather than limiting long-standing illness, as it correlates with other separate measures of health and is a good predictor of mortality. Future areas for development may include breakdowns by region, social class and ethnic group, particularly in view of the Government's aim to reduce health inequalities^{3,28}.

ACKNOWLEDGEMENTS

We acknowledge the contributions of colleagues in both ONS and the Department of Health to earlier work on this project and the most recent analysis. We also thank Dr Carol Jagger for her advice and support.

Box two

SULLIVAN'S METHOD FOR CALCULATING HEALTHY LIFE EXPECTANCY

I. For each age/sex group obtain the life table schedules I_x and the expectation of life e_x for the year of interest.

Calculate:

$$L_{x} = e_{x} I_{x} - e_{x+n} I_{x+n}$$

 ${}_{n}L_{x}$ is the conventional life table measure of the average number of person years lived in the age interval x to x+n.

2. Obtain the ill-health rate dx in each age-group observed in a survey or census. If they are excluded, add the numbers in communal establishments catering for the sick and disabled. Calculate the average number of persons aged x to x+n living without ill-health in each age/sex group as

$$LWD_x = L_x (1 - d_x)$$

3. Calculate life expectancy without ill-health as

 $HLE_{v} = (\sum_{n} LWD_{v})/I_{v}$

where the summation is from age x upwards.

Key findings

- Both life expectancy and healthy life expectancy increased between 1981 and 1995; but healthy life expectancy did not increase by as much as life expectancy, with the result that both men and women are living more years in poor health or with a limiting long-standing illness.
- Between 1981 and 1995 life expectancy at birth for males increased from 70.9 to 74.2 years, whilst the number of years a newborn male could expect to live in good or fairly good health increased from 64.4 to 66.4 years.
- Life expectancy at birth for females increased from 76.8 to 79.4 years between 1981 and 1995, whilst the number of years a newborn female could expect to live in good or fairly good health increased from 66.7 to 68.7 years.
- Both life expectancy and healthy life expectancy are higher for women than men, but women can expect to live a larger number of their remaining years, and a larger proportion of years, in poor health or with a limiting long-standing illness, than men.
- Healthy life expectancy is being used as an indicator of improvement in the health of the population in government strategies for sustainable development; tackling poverty and social exclusion; and public health.

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Deaths England and Wales Age and sex England and Wales Subnational Health Regional Office areas of England Selected causes and sex England and Wales

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Notes to tables

Changes to tables

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

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

Population

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

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

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

Live births

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

Perinatal mortality

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

Expectation of life

The life tables on which these expectations are

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

Deaths

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

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

Age-standardised mortality

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

Abortions

Figures relate to numbers occurring in a period.

Marriages and divorces

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

Government Office Regions

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

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

Health Regional Office areas

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

Sources

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

Rounding

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

Latest figures

Figures for the latest quarters and years may be provisional (see note above on rounding) and will be updated in future issues when later information becomes available. Where figures are not yet available, cells are left blank. Population estimates and rates based on them may be revised in the light of results from future censuses of populations.

I

Population and vital rates: international

					-	-								
Year	United	Austria	Belgium	Denmark	Finland	France	Germany	Germany	Greece	Irish	Italy	Luxem-	Nether-	Portugal
	Kingdom (1)	(2)	(2)	(2)	(2)	(2)	(Fed. Rep (2))*	(2)†	(2)	Republic (2)	(2)	bourg (2)	lands (2)	(2)
Denvelotion	(4)													
ropulation	(unousanus)	7 501	9 (7 2	4.942	4412	51.251	41.202	70 252	0 0 2 1	2 979	E4 074	242	12 105	9 (4 4
19/1	55,928	7,501	9,673	4,963	4,612	51,251	61,302	78,352	8,831	2,978	54,074	342	13,195	8,644
1976	56,216	7,566	9,811	5,073	4,726	52,909	61,531	78,321	9,167	3,228	55,718	361	13,774	9,355
1981	56,357	7,569	9,859	5,122	4,800	54,182	61,682	78,419	9,729	3,443	56,510	365	14,247	9,851
1986	56,859	7,588	9,862	5,121	4,918	55,547	61,066	//,694	9,967	3,541	56,596	368	14,572	10,011
1991	57,814	7,818	10,005	5,154	5,014	57,055	64,074	80,014	10,247	3,526	56,/51	387	15,070	9,871
1992	58,013	7,915	10,045	5,170	5,042	57,373	64,865	80,624	10,322	3,557	56,859	393	15,184	9,867
1993	58,198	7,989	10,085	5,189	5,066	57,654	65,534	81,156	10,380	3,574	57,049	398	15,290	9,881
1994	58,401	8,028	10,116	5,205	5,089	57,899	65,858	81,438	10,426	3,587 ‡	57,204	404	15,383	9,902
1995	58,612	8,047	10,137	5,228	5,108	58,137 :	‡ 66,715	81,678	10,454	3,605 ‡	57,301	410	15,459	9,917
1996	58,807	8,059	10,157	5,262	5,125	58,374 :	‡	82,07 I	10,475	3,626 ‡	57,397	416	15,531	9,927
1997	59,014	8,072	10,170	5,284	5,140	58,607	‡		10,485 ‡	3,661 ‡	57,523	418	15,604	9,934 ‡
1998	59,237													
Population	changes (per	1,000 per	annum)											
1971-76	1.0	1.7	2.9	4.4	4.9	6.5	0.7	-0.1	7.6	16.8	6. I	10.7	8.8	16.5
197681	0.5	0.1	1.0	1.9	3.1	4.8	0.5	0.3	12.3	13.3	2.8	2.5	6.9	10.6
1981-86	1.8	0.5	0.1	0.0	4.9	5.0	-2.0	-1.8	4.9	5.7	0.3	1.8	4.6	3.2
1986–91	1.7	6.1	2.9	1.3	3.9	5.4	9.9	6.0	5.6	-0.8	0.5	10.2	6.8	-2.8
1991-92	3.4	12.3	4.1	3.2	5.6	5.6	12.3	7.6	7.3	8.8	1.9	13.9	7.6	-0.4
1992-93	3.2	9.3	3.9	3.7	4.8	4.9	10.3	6.6	5.6	4.8	3.4	14.3	7.0	1.4
1993–94	3.5	4.9	3.1	3.0	4.4	4.2	4.9	3.5	4.5	3.9 ±	2.7	14.3	6.1	2.2
1994-95	3.6	2.4	2.1	4.4	3.7	4.1 :	± 13.0	2.9	2.7	5.0 ±	1.7	14.6	4.9	1.4
1995-96	3.3	1.6	1.9	6.4	3.3	4.1 :	t	4.8	2.0	5.8 ±	1.7	14.4	4.6	1.1
1996–97	3.5	1.6	1.3	4.3	3.0	4.0 :	t		1.0	9.6 ±	2.2	5.8	4.7	0.7
1997–98	3.8													
Live birth I	rate (per 1,000) per annu	m)											
1971-75	14.1	13.3	13.4	14.6	13.1	16.0	10.8	10.5	15.8	22.2	16.0	11.6	14.9	20.3
1976-80	12.5	11.5	12.5	12.0	13.6	[4.]	9.7	10.5	15.6	21.3	12.6	11.2	12.6	17.9
1981-85	12.9	12.0	12.0	10.2	13.4	14.2	9.8	10.7	13.3	19.2	10.6	11.6	12.2	14.5
1986-90	13.6	11.6	12.1	11.5	12.7	13.8	10.9		10.6	15.8	9.8	12.2	12.8	11.9
1991	13.7	12.1	12.6	12.5	13.0	13.3	11.3	10.4	10.1	15.0	9.9	12.9	13.2	11.8
1992	13.5	12.1	12.4	13.1	13.3	13.0	11.1	10.1	10.1	14.4	9.7	13.1	13.0	11.6
1993	13.1	119	120+	13.0	12.8	12.3	11.0	99	9.8	13.8	9.6	13.4	12.8	11.5
1994	12.9	11.5	115 +	13.4	12.8	12.3	10.5	9.5	10.0	134 +	93	13.5	12.0	11.0
1995	12.5	110	114+	13.4	12.3	12.5	+ 10.2	9.4	97	135 +	92 +	13.2	12.3	10.8
1996	12.5	110	114+	129+	11.8	12.6	+ 106+	97 +	96 +	139 +	92 +	13.7	12.2	
1997	12.3	10.4	114 +	12.8 +	115+	12.4	++	···· Ŧ	97 +	143 +	92 +	131	122+	114
1998	12.5	10.1	+	12.0 +	11.5 +	12.11	r		··· +	1.0.5	··- +	15.1	12.2 +	
1999	11.8‡													
Death rate	(per 000 pe	r annum)												
1971-75	118	12.6	2	101	9.5	107	119	12.3	86	110	98	12.2	83	11.0
1976-80	119	12.3	116	10.5	93	10.2	117	12.2	8.8	10.2	97	11.5	8 1	101
1981-85	11.7	12.0	4		9.3	10.2	11.6	12.2	9.0	94	9.5	11.2	8.3	9.6
1986-90	114		10.8	115	9.8	95	113	. 2.0	93	91	9.4	10.5	85	9.6
1991	113	10.7	10.5	11.6	9.8	9.2	11.5	4	93	8.9	97	97	8.6	10.5
1992	11.0	10.5	10.3	11.8	9.9	9.1	10.7	11.0	9.5	8.7	9.6	10.2	8.6	10.2
1993	113	10.3	107+	121	10.1	90	10.9		94	87	97	9.8	9.0	10.7
1994	10.7	10.0	104+	117	94	9.0	10.7	10.9	94	86 +	97+	94	87	10.0
1995	10.9	101	105+	121	9.6	91	+ 10.6	10.8	9.6	9.0 +	95+	93	8.8	10.4
1996	10.9	10.0	104+	116+	9.6	92	+ 10.7	10.8	9.6	88+	95+	9.4	89+	10.8
1997	10.8	9.8	102 +	113+	9.6	91	+ 10.7		9.6	86 +	96+	94	87+	10.5
1998	10.6		7	·· Ŧ						···- T			7	

* Excluding former GDR throughout.

10.6 ‡

(1) Population estimated at 30 June each year.

† Including former GDR throughout.

‡ Provisional.

1999

Average of estimated at 55 junc each year. EU as constituted I January 1986 and including countries subsequently admitted. (2)

(3)

(4)

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

+ Rates are for 1990–95.

(5) (6)

Population estimated at 1 June each year. Population estimated at 31 December each year. Population estimated at 31 December each year.

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

Note: Figures may not add exactly due to rounding.

Table I. continue	l Popu ed	lation and vi	ital rates: inte	ernational						Selected	countries
0		-		A 11							
Spain (2)	Sweden (2)	European Union (3)	Russian Federation (2)	Australia (I)	(4)	New Zealand (5)	(5)	India (6)	Japan (7)	(I)	Year
										Population (thousands)
34,190	8,098	342,631		13,067	22,026	2,899	852,290	551,311	105,145	207,661	1971
35,937	8,222	350,384		14,033	23,517	3,163	943,033 ≠	617,248	113,094	218,035	1976
37,742	8,321	356,511	139,422	14,923	24,900	3,195	1,011,219 ≠	676,218	117,902	230,138	1981
38,537	8,370	359,543	144,475	16,018	26,204	3,317	1,086,733 ≠	/6/,199	121,672	240,680	1986
38,920 39,008	8,617 8,668	366,256 368,033	148,624 148,689	17,284	28,120 28,542	3,450	1,170,052 ≠ 1,183,617 ≠	851,661 867,818	123,102	252,177 255,078	1991
39.086	8719	369 706 +	148 520	17 667	28 947	3 556	I 190 360 ≠	833 910	123 788	257 783	1993
39,150	8.781	371.005 ±	148.336	17,855	29.256	3,604	1,208.841 ≠	918.570 ≠	124.069	260.341	1994
39.210	8.827	372.122 ±	148,141	18.072	29.615	3.658	1,221,462 ≠	935.744 ≠	124.299	262.755	1995
39,270	8,841	373,331 ±	147,739	18,311	29,964 ±	3,716	1,232,083 ≠	936,000 ≠	124,709	265,284	1996
39,323	8,847			18,530							1997
								-		(1770
10.2	2.1	4 5	E /	14.0	13 5	10.2	10.0	Pop	ulation change	s (per 1,000 p	er annum)
10.2	3.1 2.4	4.5	5.0 0 E	14.0	13.5	10.2	17.7	23.7	15.1	10.0	17/1-/0
42	2.7	3.5	8.5 7.2	12.7	10.5	2.0	15.2	273	6.5	93	1981_86
2.0	5.9	3.7	5.7	15.8	14.6	8.0	15.3	22.0	2.4	9.6	1986-91
2.3	5.9	4.9 ‡	0.4	12.2	15.0	19.0	11.6	19.0	3.0	11.5	1991-92
2.0	5.8	4.5 ‡	-1.1	9.9	14.2	11.5	5.7	18.5	2.5	10.6	1992–93
1.6	7.1	3.5 ‡	-1.2	10.6	10.7	13.5	15.5	39.2	2.3	9.9	1993–94
1.5	5.3	3.0 ‡	-1.3	12.2	12.3	15.0	10.4	18.7	1.9	9.3	1994–95
1.5	1.6		-2.7	13.2	11.8 ‡	15.8	8.7		3.3	9.6	1995–96
1.3	0.7			12.0							1996–97 1997–98
									Live birth rat	e (per 1,000 p	er annum)
19.2	13.5	14.7		18.8	15.9	20.4	27.2	35.6	18.6	15.3	1971-75
17.1	11.6	13.1		15.7	15.5	16.8	18.6	33.4	14.9	15.2	1976-80
12.8	11.3	12.2		15.6	15.1	15.8	19.2		12.6	15.7	1981-85
10.8	13.2	13.3	12.1	13.1	14.8	17.1		20 F	10.6	16.0	1986-90
10.2	14.3	11.7	12.1	14.9	14.0	17.4		29.0	9.7	16.0	1991
9.9	13.5	11.2 ±	9.3	14.7	13.4	17.1	8.3+	28.7	9.5	15.5	1993
9.5	12.8	10.9 ‡	9.5	14.5	13.2	16.4		28.7	9.9	15.2	1994
9.3 ‡	11.7	10.7 ‡	9.2	14.2	12.8	16.3		28.3	9.5	14.8	1995
9.1 ‡	10.8		8.8	13.9					9.6 ‡	14.8 ‡	1996
9.2 ‡	10.2		8.6								1997
											1998
											1777
	10.5						7.5		Death rat	e (per 1,000 p	er annum)
8.5	10.5	10.8		8.2	7.4	8.4	/.3	15.5	6.4	9.1	19/1-/5
8.0 7 7	10.9	10.6		7.0	7.2	0.2	0.0 4 7	13.0	6.1	0./	17/0-00
22	11.0	10.4		7.3	7.0	0.1 9.2	0.7		6.1	8.0	1986_90
8.6	11.0	10.2	114	6.9	7.0	7.8		9.8	67	8.6	1991
8.5	10.9	10.0	12.2	7.1	6.9	7.9		10.1	6.9	8.5	1992
8.7	11.1	10.2 ‡	14.3	6.8	7.1	7.7	7.2+	9.3	7.0	8.8	1993
8.6	10.5	9.9 ‡	15.5	7.1	7.1	7.5		9.3	7.0	8.7	1994
8.8 ‡	10.6	10.0 ‡	14.9	6.9	7.1	7.6		9.0	7.4	8.8	1995
8.9 ‡	10.6		14.1	7.0	7.2	7.6			7.1	8.8 ‡	1996
8.9 ‡	10.5		13.7								1997
											1998
											1777

See notes opposite.

Population: national Table I.2

Numbers (thousands) and percentage age distribution

Constituent countries of the United Kingdom

Mid-year		United	Great	England	England	Wales	Scotland	Northern
,		Kingdom	Britain	and Wales	0			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	I,648
1995		58,612	56,957	51,820	48,903	2,917	5,137	I,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	I,680
1998		59,237	57,548	52,428	49,495	2,933	5,120	1,689
of	f which (percentages)							
0-	-4	6.2	6.2	6.2	6.2	5.9	5.9	7.2
5-	-15	14.2	14.2	14.2	14.2	14.5	13.9	16.5
16	5-44	40.8	40.8	40.7	40.9	38.2	41.6	42.8
45	5–64M/59F	20.6	20.7	20.7	20.6	21.4	20.6	18.3
65	5M/60F-74	10.8	10.8	10.8	10.7	11.9	11.3	9.4
75	5 and over	7.3	7.3	7.4	7.4	8.0	6.7	5.8
Projections	5≠							
2001		59,954	58,246	53,137	50,187	2,950	5,109	1,708
2006		60,860	59,119	54,021	51,052	2,969	5,098	1,742
2011		61,773	60,002	54,915	51,922	2,993	5,087	1,771
2016		62,729	60,930	55,853	52,83 I	3,021	5,078	1,799
2021		63,642	61,820	56,763	53,715	3,047	5,058	1,821
of	f which (percentages)							
0-	-4	5.6	5.6	5.6	5.6	5.5	5.3	5.9
5-	-15	12.2	12.1	12.1	12.1	12.2	11.8	13.3
16	5-44	35.9	35.9	36.0	36.0	34.8	34.9	37.0
45	5–64†	27.1	27.2	27.1	27.1	26.3	28.3	26.6
65	5–74†	10.4	10.5	10.4	10.4	11.4	10.9	9.4
75	5 and over	8.7	8.8	8.8	8.7	9.7	8.8	7.8

These projections are based on the mid-1998 population estimates.
 Between 2010 and 2020, state retirement age will change from 65 years for men and 60 years for women, to 65 years for both sexes.
 Note: Figures may not add exactly due to rounding.

Health Regional Office areas of England*

	Numbers (thousands) and	percentage age c	listribution					
Mid-year	North Yor	nern and Tre kshire	nt Easte	rn London	South East	South West	West Midlands	North West
Estimates								
971	6	,723 4,48	4,38	0 7,750	7,136	4,132	5,146	6,662
976	6	,729 4,55	57 4,44	B 7,307	7,378	4,299	5,178	6,588
981	6	,718 4,60	8 4,78	1 7,018	7,621	4,300	5,187	6,488
986	6	.692 4.63	4 4.93	8 7.013	7.892	4,910	5,197	6,397
991	6	.285 5.03	5 5.15	0 6.890	8.266	4,718	5,266	6.600
992	6	.309 5,06	5,17	5 6,905	8,302	4,746	5,278	6,603
993	6	,323 5,08	31 5,19	3 6,933	8,329	4,768	5,290	6,617
994	6	,332 5,09	6 5,22	3 6,968	8,379	4,798	5,295	6,616
995	6	.337 5.10	9 5.25	7 7.007	8,446	4,827	5,306	6.614
996	6	,338 5,12	5,29	3 7,074	8,500	4,842	5,317	6,605
997	6	.336 5.12	.8 5.33	4 7.122	8.569	4.876	5.321	6.598
998	6	,339 5,13	5,37	7 7,187	8,620	4,901	5,333	6,604
of which	(percentages)							
0-4		6.0 6	.0 6.1	2 7.0	6.1	5.7	6.3	6.1
5-15		14.4 14	.I 13.	9 13.7	14.0	13.6	14.6	14.9
16-44		40.3 40	.1 40.3	2 46.2	40.3	38.3	39.9	40.2
45-64M/59	9F	20.8 21	.1 21.3	2 18.2	21.2	21.3	21.1	20.7
65M/60F-	' 4	.3	.3 10.	9 8.7	10.6	12.0	11.0	10.9
75 and ove	r	7.2 7	.4 7.	5 6.2	7.8	9.1	7.1	7.2
rojections≠								
001	6	,365 5,18	34 5,44	8 7,215	8,757	4,977	5,343	6,582
006	6	,382 5,23	5,58	2 7,337	8,985	5,097	5,358	6,553
011	6	,405 5,27	7 5,70	2 7,470	9,191	5,213	5,372	6,530
016	6	,435 5,32	24 5,82	3 7,608	9,396	5,333	5,391	6,521
021	6	,464 5,37	71 5,94	1 7,736	9,594	5,452	5,411	6,515
of which	(percentages)()							
0-4		5.5 5	.4 5.	5 6.4	5.5	4.9	5.7	5.7
5-15		12.2 11	.9 12.	I I 2.5	12.1	11.2	12.5	12.5
16-44		35.5 35	.2 34.	5 41.5	34.9	32.8	34.9	35.6
45-64†		27.4 27	.5 27.	2 26.3	27.4	27.8	27.3	27.4
65–74†		10.9 10	.9 11.2	2 7.7	10.9	12.4	10.7	10.5
75 and ove	r	8.5 9	0 9	5 56	92	10.8	89	83

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

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

T between 2010 and 2020, state retirement age will change fr Note: Figures may not add exactly because of rounding.

 Table I.3
 Population: subnational

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 *Heath Statistics Quarterly* numbers 01, 02 and 03, which were miscalculated.

Numbers (thousands) and percentage age distribution

Population: subnational

Table I.4

Government Office Regions of England

Mid-year		North East	North West*	Yorkshire and the Humber	East Midlands	West Midlands	East	London	South East	South West
Estimates										
1971		2.679	7.108	4,902	3.652	5.146	4.454	7.529	6.830	4.112
1976		2.671	7.043	4.924	3.774	5,178	4.672	7.089	7.029	4.280
1981		2,636	6,940	4,918	3,853	5,187	4,854	6,806	7,245	4,381
1986		2,601	6,852	4,906	3,919	5,197	5,012	6,803	7,492	4,560
1991		2,603	6,885	4,983	4,035	5,265	5,150	6,890	7,679	4,718
1992		2,609	6,890	5,002	4,062	5,278	5,175	6,905	7,712	4,746
1993		2,612	6,903	5,014	4,083	5,290	5,193	6,933	7,737	4,768
1994		2,610	6,902	5,025	4,102	5,295	5,223	6,968	7,784	4,798
1995		2,605	6,900	5,029	4,124	5,306	5,257	7,007	7,847	4,827
1996		2,600	6,891	5,036	4,141	5,317	5,293	7,074	7,895	4,842
1997		2,594	6,885	5,037	4,156	5,321	5,334	7,122	7,959	4,876
1998		2,590	6,891	5,043	4,169	5,333	5,377	7,187	8,004	4,901
of wh	ich (percentages)									
04		5.9	6.1	6.2	6.0	6.3	6.2	7.0	6.1	5.7
5–15		14.4	14.8	14.5	14.2	14.6	13.9	13.7	13.9	13.6
16-44		40.2	40.1	40.5	40.1	39.9	40.2	46.2	40.3	38.3
45–64	M/59F	20.8	20.8	20.6	21.3	21.1	21.2	18.2	21.1	21.3
65M/6	0F-74	11.7	11.0	11.0	11.1	11.0	10.9	8.7	10.7	12.0
75 and	l over	7.0	7.2	7.3	7.3	7.1	7.5	6.2	7.8	9.1
Projections [≠]										
2001		2,579	6,871	5,071	4,234	5,343	5,448	7,215	8,134	4,977
2006		2,555	6,843	5,098	4,312	5,358	5,582	7,337	8,344	5,098
2011		2,536	6,820	5,130	4,384	5,372	5,702	7,470	8,534	5,213
2016		2,521	6,813	5,165	4,455	5,391	5,823	7,609	8,722	5,333
2021		2,509	6,808	5,200	4,523	5,411	5,941	7,736	8,905	5,452
of wh	ich (percentages) \Diamond									
0-4		5.4	5.7	5.6	5.4	5.7	5.5	6.4	5.4	4.9
5–15		12.1	12.4	12.2	12.0	12.5	12.1	12.5	12.1	11.2
16-44		35.1	35.4	35.9	35.1	34.9	34.5	41.5	34.9	32.8
45-64	†	27.7	27.5	27.3	27.4	27.3	27.2	26.3	27.4	27.8
65-74	†	11.2	10.6	10.6	.	10.7	11.2	7.7	10.9	12.4
/5 and	1 over	8.4	8.4	8.4	9.0	8.9	9.5	5.6	9.3	10.8

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

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

 These projections are based on the initial 1976 population estimates and are consistent with the 1976 based national projections produced by the Government Actuary's Department 4 the 1976 based national projections produced by the Government Actuary's Department 4 the 1976 based national projections produced by the Government Actuary's Department 4 the 1976 based national projections produced by the Government Actuary's Department 4 the 1976 based national projections produced by the Government Actuary's Department 4 the 1976 based national projections produced by the Government Actuary's Department 4 the 1976 based national projections produced by the Government Actuary's Department 4 the 1976 based national projections produced by the Government Actuary's Department 4 the 1976 based national projections produced by the Government Actuary's Department 4 the 1976 based national projections produced by the Government Actuary's Department 4 the 1976 based national projections produced by the Government Actuary's Department 4 the 1976 based national projections produced by the Government 4 the 1976 based national projections produced by the Government Actuary's Department 4 the 1976 based national projections produced by the Government Actuary's Department 4 the 1976 based national projections produced by the Government 4 the 1976 based national projections produced by the Government 4 the 1976 based national projections produced by the Government 4 the 1976 based national projections produced by the Government 4 the 1976 based national projections produced by the Government 4 the 1976 based national projections produced by the Government 4 the 1976 based national projections produced by the Government 4 the 1976 based national projections produced by the Government 4 the 1976 based national projections produced by the Government 4 the 1976 based national projections produced by the Government 4 the 1976 based national projections produced by the Government 4 the 1976 based national projections produc 02 and 03, which were miscalculated.

Table 1.5

Population: age and sex Numbers (thousands)

Constituent countries of the United Kingdom

								٨٥	group							
Midwar	All agos	Lindor I	1_4	5_14	15_24	25_34	35_44	45_59	60_64	65_74	75_94	85_89	90 and	Undor	16	65/60
r iid-yeai	All ages	Olider 1	1-7	J-14	13-24	23-34	33-11	-5-57	10-01	05-74	75-04	05-07	over	16	64/59	and over
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 7 7 2 9	9,057	7,755 7 707	9,500	2,888	5,067	3,139	6 4 0 200	258	11,742	35,467	10,602
1994	58,401	758	3.116	7,484	7,555	9.376	7,836	10,070	2,807	5,223	2,954	704	309	12.075	35.691	10,634
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	/15	2,956	7,709	7,190	9,232	8,505	10,820	2,818	4,965	3,205	/42	380	12,110	36,397	10,730
Males																
19/1	27,167	461	1,8/4	4,576	4,137	3,530	3,271	4,970	1,507	1,999	/16	9/	29	7,318	17,008	2,841
19/6	27,360	348 374	1,564	4,711	4,145	3,981 4 035	3,214	4,820	1,466	2,204	922	101	31	7,083	17.16/	3,111
1986	27.698	384	1,100	3.682	4,743	4.063	3.872	4.572	1,370	2,201	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
1993	28,477	388	1,603	3,808	3,968	4,723	3,903	5,016	1,373	2,333	1,118	187	56	6,140	18,644	3,693
1994	28,595	389	1,596	3,841	3,880	4,769	3,928	5,118	1,363	2,363	1,097	193	59	6,194	18,689	3,712
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	6/ 72	6,206	18,884	3,770
1998	29,128	366	1,516	3,953	3,687	4,721	4,294	5,387	1,380	2,290	1,210	218	79	6,210	19,094	3,824
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	29,366	387	1,505	3, 4 87 3,609	3 76 1	4,466	3,968	4,769	1,498	2,795	1,987	472	210	5,709	16,894	6,963
1994	29.805	369	1,520	3.644	3.675	4.608	3,908	5,159	1,105	2,861	1,856	505	250	5,881	17.002	6.923
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
1770	30,108	347	1,440	3,730	3,503	4,511	4,211	5,435	1,430	2,074	1,700	525	301	5,700	17,302	6,706
England and Wale Persons	ès															
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,/25	4,470	2,6/3	465	184	10,190	30,759	9,213
1991	51,100	670	2,728	6,281	6 768	8,008	7,056 6,887	8,407 8,929	2,553	4,506	2,810	623	233	10,303	31,351	9,446 9.480
1994	51.621	671	2,752	6,568	6.612	8.293	6.925	9,118	2,307	4.644	2,642	636	281	10.618	31,530	9,473
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	7,613	2,490	4,400	2,871	667	348	10,682	32,192	7,554
Males	72 007	402	1 624	2 057	3415	3 1 20	2 001	4114	דכנן	770	627	0/	24	6 224	15 024	2 5 7 7
1976	24.089	300	1,820	4.091	3,610	3,532	2,843	4,280	1,337	1,778	690	91	20 29	6.148	15,169	2,327
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
1993	25,198	343	1,416	3,341	3,476	4,184	3,456	4,458	1,218	2,082	1,004	170	51	5,397	16,495	3,306
1994	25,304	344	1,410	3,371	3,396	4,225	3,475	4,551	1,209	2,109	985	1/5	53	5,448 5.465	16,533	3,323
1996	25,557	327	1,405	3,430	3,291	4.265	3,602	4.689	1,204	2,070	1,052	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
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
17/6	25,370	285	1,284	3,8/6	3, 4 6/ 3 04 7	3, 44 / 3 5 1 7	2,765	4,428 4 255	1,4/3	2,5//	1, 4 03	261	106	5,826	13,725	5,820
1986	25, 4 /4 25,704	319	1,154	3, 11 6 3,032	3,003	3,509	2,7/2	4,200 4,083	1,380	2,377 2,498	1,504	207	149	5,509 4,953	14,207	5,758
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
1993	26,241	326	1,348	3,163	3,293	4,035	3,431	4,471	1,289	2,514	1,700	453	218	5,117	14,950	6,173
1994	26,317	327	1,342	3,197	3,216	4,069	3,449	4,567	1,270	2,536	1,656	461	228	5,170	14,997	6,150
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
1776 1997	26,453	310 317	1,310	3,253 3 297	3,120	4,077 4,077	3,544 3,625	4,/09 4 763	1,246	2,430 2 292	1,/33	4/1 470	250	5,188	15,134	6,130
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
								-								

.. Figures not available.

Table 1.5 continued

Population: age and sex Numbers (thousands) Constituent countries of the United Kingdom

								Ag	e group							
Mid-year	All ages	Under I	I4	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				<u> </u>	<u> </u>			I	1		1	1	1			
Persons	44.410	700	2.007	7 0 7 0	(72)	5.040	F 401	0.515	2 (00	2.07/	1.017	207	100	11 (10	27.120	7 / 2 /
19/1	46,412	/39	2,996	7,272	6,/31	5,840	5,421	8,515	2,690	3,976	1,816	306	109	11,648	27,128	7,636
19/6	46,660	221	2,491	/,513	0,000	6,377	5,298	8,199	2,616	4,2/4	1,972	332	127	11,293	27,275	8,092
1981	40,821	278	2,235	6,678 5 005	7,440	6,703	5,663 4 404	7,948	2,449	4,347	2,249	36Z 120	149	9 4 0 9	28,133	8,403
1991	49 209	663	2,303	5,005	6 840	7 5 9 9	6 6 6 5	7,072	2,337	4 000	2,310	543	220	9,000	29,070	8,005
1993	49 5 3 3	633	2,374	6 1 2 5	6 3 9 4	7,377	6,005	9.415	2,377	4 308	2,073	597	220	9,711	29,027	8,870
1994	48 707	634	2,011	6 186	6 246	7,003	6 545	8 593	2,330	4 355	2,341	600	255	10012	29,720	8 893
1995	48 903	615	2,001	6 2 3 1	6 1 5 8	7,075	6 6 2 2	8 738	2,327	4 270	2,101	613	280	10,012	29,005	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
Males	22 549	380	1 5 3 7	3 734	3 4 2 1	2 945	2 7 2 2	4 16 1	1 261	1 671	599	107	25	5 982	14 209	2 377
1974	22,307	300	1,337	2 0 5 0	2 4 1 2	2,703	2,733	4 02 1	1,201	1,0/1	2/0	05	23	5,702	14 220	2,377
1981	22,720	306	1,200	3,000	3,790	3,337	2,000	3 938	1,220	1,047	777	89	30	5 280	14717	2,010
1986	23,086	317	1,11/	3.026	3,931	3,392	3,255	3,822	1,131	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 1 5 9	1,000	975	143	41	4 991	15,231	3 058
1993	23,782	325	1.338	3,146	3.282	3.974	3.267	4.202	1,145	1.951	945	160	48	5.089	15.590	3,103
1994	23,882	326	1,332	3,175	3,207	4,012	3,286	4,289	1,136	1,977	926	166	50	5,137	15,626	3,119
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
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
1993	24,751	309	1,2/3	2,979	3,111	3,829	3,241	4,212	1,211	2,357	1,597	427	205	4,824	14,131	5,796
1994	24,825	309	1,268	3,010	3,039	3,862	3,259	4,304	1,193	2,378	1,555	434	214	4,8/4	14,177	5,774
1995	24,876	300	1,262	3,033	2,998	3,871	3,289	4,378	1,178	2,322	1,578	441	226	4,893	14,237	5,765
1990	25,000	273	1,237	2,005	2,270	2 0 1 2	2 1 2 0	7,757 A AQQ	1,170	2,279	1,027	442	235	4 902	14,311	5,755
1998	25,117	292	1,215	3,120	2,913	3,843	3,514	4,400	1,174	2,244	1,649	442	246	4,903	14,382	5,756
Wales																
rersons	2 740	42	172	422	20/	225	215	E 1 0	144	252	110	17	,	(0)	1 500	470
1974	2,740	73	1/3	452	200	270	200	500	141	252	110	10	7	400	1,302	501
1981	2,777	36	136	407	434	383	323	485	158	207	139	21	8	626	1,010	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
1993	2,906	36	153	379	375	416	379	514	151	288	163	36	15	602	1.725	580
1994	2,913	36	151	382	367	420	379	525	149	289	161	36	16	606	1,727	580
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	582
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
Males 1971	1,329	22	89	222	194	164	158	253	76	107	38	6	I	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	I,407	20	79	188	203	206	195	242	74	128	60	8	2	305	904	199
1993	1,417	19	78	195	193	210	189	256	73	131	60	9	3	309	905	203
1994	1,422	19	77	196	190	213	189	262	72	131	60	10	3	311	907	204
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		4	308	917	208
1998	1,439	17	72	199	181	212	199	275	/3	126	68	11	4	307	922	210
Females	1412	21	OF	211	101	121	157	24F	00	1.42	75	12	A	225	700	222
17/1	1,412	21 16	85 73	211	171	101	15/	265	88	146	/ 3	16	4	220	755	322
1001	0 L 1 4 0	10	13	220	171	10/	122	200	00	152	00	14	0	320	770	337
1986	1,450	10	00 70	177	213	170	100	240 222	00 07	154	71	20	0	202	200	352
1991	484	19	75	175	194	202	195	233	07 80	154	101	20	0	202	800 820	307
1993	1,10-1	18	75	185	191	205	190	258	78	157	103	25	13	200	819	377
1994	1,491	18	74	186	177	207	190	263	77	158	101	20	13	295	820	376
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	I,495	16	68	189	168	201	198	278	76	147	109	28	16	292	827	375

Table 1.5 continued

Population: age and sex Numbers (thousands) Constituent countries of the United Kingdom

								Ag	e group							
Mid-year		Under I	1_4	5-14	15-24	25-34	35-44	45-59	60-64	65-74	75-84	85-89	90 and	Under	16-	65/60
r na year	7 th ages	onder 1		5	15 21	25 51	55 11				/3 01		over	16	64/59	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	П	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	65/	8/0	/42	665	849	2/3	435	251	41	15	1,063	3,171	889
1993	5 120	64	257	648	705	825	694	888	263	451	239	52	21	1,023	3 176	912
1994	5,132	63	261	651	690	829	703	902	260	456	243	53	21	1,032	3,183	911
1995	5,137	61	261	649	677	827	715	911	258	450	250	55	22	1,036	3,187	914
1996	5,128	59	255	647	663	821	728	919	256	446	255	56	23	1,028	3,185	915
1997	5,123	60	247	649	651	809	744	924	255	443	259	56	24	1,021	3,185	917
1770	3,120	50	243	030	645	775	760	752	237	772	200	57	27	1,014	3,100	720
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, 4 95 2 474	35	128	400	445	364	298	424	118	194	// 86	8	3	610 545	1,603	282
1991	2,470	34	133	325	385	407	348	415	127	192	91	12	3	524	1,646	203
1993	2,479	33	133	332	360	415	345	434	123	197	88	13	4	528	1,648	302
1994	2,486	32	133	333	353	418	350	441	122	200	86	14	4	531	1,651	304
1995	2,489	31	133	332	346	416	356	446	121	198	90	14	4	530	1,653	307
1996	2,486	30	130	331	339	413	362	450	121	19/	92	15	4	526	1,651	309
1998	2,484	30	120	332	329	399	378	457	121	197	96	15	5	519	1,651	314
	2,.01				027										1,002	
Females													_			
1971	2,720	42	174	445	387	311	313	485	160	254	122	20	7	701	1,455	563
19/6	2,716	32	142	380	398 430	345	301	468	154	267	137	23	8	639 579	1,468	589
1986	2,649	32	126	320	425	368	334	439	146	250	165	32	12	518	1,500	606
1991	2,637	32	126	309	369	402	351	437	141	249	168	37	16	499	1,528	611
1993	2,642	32	127	316	345	409	349	454	139	254	161	39	17	504	1,528	609
1994	2,646	31	128	318	337	412	353	461	138	256	157	40	17	507	1,532	607
1996	2,647	29	120	316	324	408	366	469	136	232	160	40	10	508	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
Northorn Iroland																
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	200	227	71	115	64 69			423	917	234
1993	1,638	25	105	265	256	249	200	252	70	120	69	14	6	419	969	250
1994	1,648	24	103	266	253	254	209	256	69	123	69	15	6	419	978	250
1995	1,655	24	102	265	250	255	213	261	69	123	71	15	7	418	985	252
1996	1,669	24	100	266	249	260	218	266	69	123	72	15	7	417	999	253
1998	1,660	23	70 98	267	247	261	225	270	70	122	73	16	8	413	1,010	255
	.,			200			200	2.0					•		.,	207
Males																
1971	755	16	64	152	127	95	81	116	36	45	19	2	1	246	441	67
1976	754 757	13	58 54	157	127	102	81	109	34	47 50	21	3	0	242	442 454	70 75
1986	768	14	55	134	142	102	95	110	33	50	23			217	474	77
1991	783	13	54	133	131	119	100	118	32	53	26	4	Ĩ.	213	487	83
1993	801	13	54	136	132	124	102	123	32	54	26	4	I.	215	501	85
1994	805	12	53	136	131	126	104	126	32	54	26	4		215	506	85
1995	809	12	52	136	129	127	106	128	32	54 54	26	4	2	214	516	85 87
1997	823	12	50	130	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
F																
remales	784	15	67	147	110	QE	Q٨	124	20	41	20	5	р	227	411	120
1976	769	13	53	149	116	96	81	120	38	64	33	6	2	229	398	43
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
1773	842 842	12	50	129	123	125	103	וצא וצו	38 37	67 69	44 43		5	205	468 472	165
1995	846	12	50	129	121	128	107	133	36	69	44	ii ii	5	204	476	166
1996	853	11	49	129	121	130	110	135	36	69	45	11	5	203	483	167
1997	857	12	48	130	119	129	114	137	37	68	45	11	6	202	487	168
1998	861	12	48	130	118	129	117	139	37	68	46	12	6	202	491	168

Table 1.6

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

England and Wales

	Total			Males					Females		
Mid-year	population	Single	Married	Divorced	Widowed	Total	Single	Married	Divorced	Widowed	Total
Aged						•				·	
16 and over 1971 1976 1981 1986 1991 1993 1994 1995 1996 1997 1998	36,818 37,486 38,724 39,887 40,796 40,925 41,003 41,167 41,356 41,540 41,746	4,173 4,369 5,013 5,673 6,024 6,147 6,221 6,345 6,482 6,622 6,768	12,522 12,511 12,238 11,886 11,745 11,580 11,492 11,415 11,339 11,256 11,185	187 376 611 919 1,200 1,342 1,413 1,480 1,543 1,604 1,659	682 686 698 695 731 732 730 729 728 726 725	17,563 17,941 18,559 19,173 19,699 19,801 19,855 19,968 20,091 20,209 20,338	3,583 3,597 4,114 4,613 4,822 4,906 4,958 5,058 5,171 5,292 5,415	12,566 12,538 12,284 11,994 11,838 11,661 11,583 11,488 11,406 11,319 11,244	296 533 828 1,164 1,459 1,610 1,684 1,754 1,819 1,882 1,940	2,810 2,877 2,939 2,943 2,978 2,976 2,922 2,878 2,870 2,838 2,808	19,255 19,545 20,165 20,714 21,097 21,124 21,147 21,199 21,265 21,331 21,408
16–19 1971 1976 1981 1986 1991 1993 1994 1995 1995 1996 1997 1998	2,666 2,901 3,310 3,144 2,680 2,421 2,360 2,374 2,436 2,517 2,578	1,327 1,454 1,675 1,601 1,372 1,242 1,212 1,220 1,251 1,291 1,322	34 28 20 10 8 4 3 3 2 2 2 2	0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0	1,362 1,482 1,694 1,611 1,380 1,246 1,215 1,222 1,253 1,293 1,324	1,163 1,289 1,523 1,483 1,267 1,157 1,131 1,139 1,171 1,212 1,242	142 129 93 49 32 18 14 13 12 11 11	0 0 1 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0	1,305 1,419 1,616 1,533 1,300 1,175 1,145 1,145 1,183 1,224 1,254
20-24 1971 1976 1981 1986 1991 1993 1994 1995 1995 1996 1997 1998	3,773 3,395 3,744 4,203 3,966 3,770 3,625 3,495 3,329 3,177 3,084	1,211 1,167 1,420 1,794 1,764 1,742 1,699 1,658 1,597 1,536 1,500	689 557 466 322 249 182 152 152 105 87 76	3 4 10 14 12 8 7 6 5 4 3	0 0 0 0 0 0 0 0 0 0 0 0	1,904 1,728 1,896 2,130 2,025 1,933 1,858 1,791 1,707 1,628 1,579	745 725 1,007 1,382 1,421 1,432 1,416 1,404 1,369 1,333 1,314	1,113 925 811 658 490 381 330 282 238 204 180	9 16 27 32 29 23 20 17 15 12 10	2 2 1 1 1 0 0 0 0	1,869 1,667 1,847 2,072 1,941 1,838 1,767 1,703 1,622 1,549 1,505
25-29 1971 1976 1981 1986 1991 1993 1994 1995 1996 1997 1997	3,267 3,758 3,372 3,724 4,246 4,220 4,168 4,094 4,045 3,972 3,883	431 533 588 841 1,183 1,263 1,293 1,326 1,368 1,401 1,422	1,206 1,326 1,057 956 894 807 754 696 639 577 520	16 39 54 79 85 80 76 70 64 58 51	 2 	1,654 1,900 1,700 1,877 2,163 2,152 2,124 2,092 2,071 2,037 1,994	215 267 331 527 800 880 908 936 977 1,014 1,047	1,367 1,522 1,247 1,204 1,158 1,062 1,011 947 887 818 750	29 65 89 113 123 124 122 116 109 101 91	4 5 4 2 2 2 2 2 2 2 2 2 2 2 2 2	1,614 1,859 1,671 1,847 2,069 2,044 2,002 1,975 1,935 1,889
30–34 1971 1976 1981 1986 1991 1993 1994 1995 1996 1997 1998	2,897 3,220 3,715 3,341 3,762 3,999 4,126 4,235 4,296 4,318 4,294	206 236 318 356 535 662 732 799 855 903 938	1,244 1,338 1,451 1,200 1,206 1,194 1,187 1,177 1,155 1,125 1,085	23 55 97 125 160 174 179 182 181 177 171	3 3 2 2 2 2 2 2 2 3 3 3	1,475 1,632 1,869 1,683 1,903 2,032 2,100 2,160 2,194 2,207 2,196	111 118 165 206 335 418 467 518 560 598 627	1,269 1,388 1,544 1,292 1,330 1,338 1,340 1,333 1,316 1,287 1,247	34 75 129 154 189 205 213 218 221 222 219	8 9 6 5 5 5 5 5 5 5 5 5 5	1,422 1,588 1,846 1,658 1,859 1,967 2,025 2,075 2,103 2,111 2,098
35–44 1971 1976 1981 1986 1991 1993 1994 1995 1996 1997 1998	5,736 5,608 5,996 6,863 7,056 6,887 6,925 7,003 7,146 7,325 7,515	317 286 316 397 482 522 556 601 657 725 802	2,513 2,442 2,519 2,743 2,658 2,500 2,463 2,446 2,449 2,458 2,467	48 104 178 293 388 423 444 464 483 503 520	13 12 12 12 12 12 12 12 12 13 13 13	2,891 2,843 3,024 3,444 3,539 3,456 3,475 3,523 3,602 3,700 3,803	201 167 213 280 316 343 374 414 459 510	2,529 2,427 2,540 2,816 2,760 2,612 2,587 2,568 2,575 2,593 2,612	66 129 222 350 444 473 491 509 527 545 563	48 42 41 39 34 31 29 29 28 28 28 27	2,845 2,765 2,972 3,419 3,517 3,431 3,449 3,480 3,544 3,544 3,625 3,712

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

Tat	ble	1.6
con	tin	ueo

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

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England and Wales
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	Total			Males					Females		
	population –	0	M			. .	<u> </u>		Di l		
Mid-year		Single	Married	Divorced	Widowed	lotal	Single	Married	Divorced	Widowed	lotal
45-64											
1971	11,887	502	4,995	81	173	5,751	569	4,709	125	733	6,136
1976	11,484	496	4,787	141	160	5,583	462	4,568	188	683	5,901
1981	11,040	480	4,560	218	147	5,405	386	4,358	271	620	5,635
1986	10,860	461	4,423	332	141	5,356	326	4,221	388	569	5,504
1991	10,960	456	4,394	456	127	5,433	292	4,211	521	503	5,527
1993	11,436	479	4,532	544	122	5,677	297	4,376	615	471	5,759
1994	11,596	489	4,564	587	120	5,759	300	4,422	659	456	5,837
1995	11,730	500	4,581	630	119	5,830	305	4,452	703	440	5,900
1996	11,844	512	4,587	673	118	5,890	310	4,473	746	425	5,954
1997	11,959	524	4,590	715	117	5,946	318	4,494	789	412	6,013
1998	12,103	541	4,604	758	117	6,019	328	4,523	832	401	6,085
65 and over											
1971	6,592	179	1,840	17	492	2,527	580	1,437	32	2,016	4,065
1976	7,119	197	2,033	33	510	2,773	569	1,579	60	2,138	4,347
1981	7,548	216	2,167	54	534	2,971	533	1,692	90	2,263	4,578
1986	7,752	223	2,233	76	539	3,070	475	1,754	127	2,325	4,681
1991	8,127	231	2,337	99	589	3,257	427	1,858	153	2,433	4,870
1993	8,191	237	2,360	113	596	3,306	405	1,873	170	2,436	4,885
1994	8,203	239	2,368	121	595	3,323	393	1,879	179	2,429	4,880
1995	8,237	241	2,385	128	595	3,349	382	1,893	190	2,422	4,887
1996	8,259	242	2,401	137	594	3,375	370	1,904	201	2,410	4,884
1997	8,272	242	2,417	147	593	3,399	358	1,912	213	2,390	4,873
1998	8,288	242	2,432	156	592	3,422	347	1,921	225	2,372	4,866

See note opposite.

Vital statistics summary

Numbers (thousands) and rates

Table 2.I

Constituent countries of the United Kingdom

Year and quarter	All li birt	ve hs	Live bi outside m	rths arriage	Marria	ages	Divo	rces	Dea	ths	Infar mortali	nt ty ^{****}	Neon mortali	atal ty†††	Per moi	inatal tality
	Number	Rate*	Number	Rate†	Number	Rate**	Number	Rate††	Number	Rate*	Number	Rate†	Number	Rate†	Number	Rate††††
United Kingdom 1971 1976 1981 1986 1991	901.6 675.5 730.8 755.0 792.5	16.1 12.0 13.0 13.3 13.7	73.9 61.1 91.3 158.5 236.1	82 90 125 210 298	459.4 406.0 397.8 393.9 349.7	 49.4 43.5 36.0	79.6 35.4 56.4 68.2 73.5	 .3 2.5 3.0	645.1 680.8 658.0 660.7 646.2	1.5 2. 1.7 1.6 1.3	16.2 9.79 8.16 7.18 5.82	7.9 4.5 1.2 9.5 7.4	10.8 6.68 4.93 4.00 3.46	12.0 9.9 6.7 5.3 4.4	20.7 12.3 8.79 7.31 6.45	22.6 18.0 12.0 9.6 8.1
1993 1994 1995 1996 1997 1998 1999	761.7 750.7 732.0 733.4 726.8 717.1 700.2‡	3. 2.9 2.5 2.5 2.3 2.1 1.8‡	241.8 240.1 245.7 260.4 267.0 269.7 271.6‡	318 320 336 355 367 376 388‡	341.6 331.2 322.3 317.5 310.2 304.8‡	 	180.0 173.6 170.0 171.7 161.1 160.1‡	 	658.5 627.6 645.5 636.0 629.7 629.2 629.4‡	11.3 10.7 11.0 10.8 10.7 10.6 10.6‡	4.83 4.63 4.52 4.50 4.25 4.08 4.06‡	6.3 6.2 6.1 5.9 5.7 5.8‡	3.18 3.09 3.05 3.00 2.81 2.71 2.73‡	4.2 4.1 4.2 4.1 3.9 3.8 3.9‡	6.73 6.74 6.52 6.41 6.06 5.94 5.79‡	8.8 9.0 8.9 8.7 8.3 8.2 8.2‡
1998June Sept Dec	78.9 87. 75.0	2. 2.5 1.7	65.5 70.7 67.7	366 378 387	85.6‡ 125.5‡ 56.0‡	 	40.4‡ 40.8‡ 38.0‡	 	5 .7 43. 67.7	10.3 9.6 11.2	0.97 0.98 1.11	5.4 5.2 6.3	0.65 0.68 0.71	3.6 3.6 4.0	1.45 1.44 1.54	8.0 7.7 8.7
l 999 March June Sept Dec	171.9‡ 177.0‡ 180.3‡ 170.9‡	.7‡ .9‡ 2.0‡ .4‡	66.5‡ 67.1‡ 70.5‡ 67.4‡	387‡ 379‡ 391‡ 394‡	36.9‡ 83.2‡		40.0‡ 39.3‡ 40.1‡	 	184.2‡ 143.5‡ 139.2‡ 162.7‡	12.6‡ 9.7‡ 9.3‡ 10.9‡	1.06‡ 1.02‡ 0.99‡ 0.98‡	6.2‡ 5.8‡ 5.5‡ 5.8‡	0.68‡ 0.69‡ 0.72‡ 0.65‡	3.9‡ 3.9‡ 4.0‡ 3.8‡	1.50‡ 1.47‡ 1.46‡ 1.37‡	8.7‡ 8.2‡ 8.0‡ 7.9‡
2000 March	168.2‡	11.3‡	66.7‡	397‡					183.2‡	12.4‡	1.0‡	5.9‡	0.68‡	4.1‡	1.43‡	8.4‡
England and Wal 1971 1976 1981 1986 1991	es 783.2 584.3 634.5 661.0 699.2	15.9 11.8 12.8 13.2 13.7	65.7 53.8 81.0 141.3 211.3	84 92 128 214 302	404.7 358.6 352.0 347.9 306.8	69.0 57.7 49.6 43.5 35.6	74.4 126.7 145.7 153.9 158.7	5.9 10.1 11.9 12.9 13.5	567.3 598.5 577.9 581.2 570.0	1.5 2.1 1.6 1.6 1.2	3.7 8.34 7.02 6.3 5.16	17.5 14.3 11.1 9.6 7.4	9.11 5.66 4.23 3.49 3.05	11.6 9.7 6.7 5.3 4.4	17.6 10.5 7.56 6.37 5.65	22.3 17.7 11.8 9.6 8.0
1993 1994 1995 1996 1997 1998 1999	673.5 664.7 648.1 649.5 643.1 635.9 621.9‡	3. 2.9 2.5 2.5 2.3 2.1 1.8‡	216.5 215.5 219.9 232.7 238.2 240.6 241.9‡	322 324 339 358 370 378 389‡	299.2 291.1 283.0 279.0 272.5 267.3‡	33.9 32.6 31.0 30.0 28.7 27.7‡	165.0 158.2 155.5 157.1 146.7 145.2‡	14.2 13.7 13.6 13.8 13.0 12.9‡	578.8 553.2 569.7 560.1 555.3 555.0 553.5‡	11.3 10.7 11.0 10.8 10.6 10.6 10.6‡	4.24 4.10 3.98 3.99 3.80 3.63 3.64‡	6.3 6.1 6.1 5.9 5.7 5.8‡	2.80 2.74 2.70 2.68 2.52 2.42 2.44‡	4.2 4.1 4.2 4.1 3.9 3.8 3.9‡	6.03 5.95 5.70 5.62 5.38 5.26 5.14‡	8.9 8.9 8.8 8.6 8.3 8.2 8.2 \$.2
1998June Sept Dec	58.6 66. 55.4	2. 2.6 1.8	58.4 63.2 60.5	368 381 389	75.0‡ 110.2‡ 48.7‡	31.2‡ 45.3‡ 20.0‡	36.6‡ 37.1‡ 34.4‡	13.1‡ 13.1‡ 12.2‡	33.4 25.8 48.9	10.2 9.5 11.3	0.83 0.86 1.00	5.3 5.2 6.5	0.56 0.60 0.64	3.6 3.6 4.1	1.28 1.26 1.38	8.0 7.5 8.8
1999 March June Sept Dec	152.1‡ 157.2‡ 160.1‡ 152.5‡	.7‡ 2.0‡ 2. ‡ .5‡	59.0‡ 59.8‡ 62.9‡ 60.2‡	388‡ 380‡ 393‡ 395‡	32.5‡ 73.1‡ 109.1‡	13.6‡ 30.3‡ 44.8‡	36.4‡ 35.7‡ 36.6‡	13.2‡ 12.8‡ 13.0‡	161.7‡ 126.1‡ 122.4‡ 143.3‡	12.5‡ 9.7‡ 9.3‡ 10.8‡	0.96‡ 0.89‡ 0.91‡ 0.87‡	6.3‡ 5.7‡ 5.7‡ 5.7‡	0.62‡ 0.60‡ 0.66‡ 0.57‡	4.1‡ 3.8‡ 4.1‡ 3.7‡	1.34‡ 1.28‡ 1.32‡ 1.20‡	8.7‡ 8.1‡ 8.2‡ 7.9‡
2000 March	148.6‡	11.3‡	58.9‡	396‡					161.4‡	12.4‡	0.89‡	6.0‡	0.60‡	4.0‡	I.28‡	8.5‡
England 1971 1976 1981 1986 1991	740.1 550.4 598.2 623.6 660.8	15.9 11.8 12.8 13.2 13.7	62.6 50.8 76.9 133.5 198.9	85 92 129 214 301	382.3 339.0 332.2 328.4 290.1	 	 146.0 150.1	 	532.4 560.3 541.0 544.5 534.0	11.5 12.0 11.6 11.5 11.2	12.9 7.83 6.50 5.92 4.86	17.5 14.2 10.9 9.5 7.3	8.58 5.32 3.93 3.27 2.87	11.6 9.7 6.6 5.2 4.3	16.6 9.81 7.04 5.98 5.33	22.1 17.6 11.7 9.5 8.0
1993 1994 1995 1996 1997 1998 1999	636.5 629.0 613.2 614.2 608.2 602.1 589.5‡	13.1 13.0 12.5 12.5 12.3 12.2 11.8‡	203.6 202.7 206.8 218.2 223.4 225.7 227.0‡	320 322 337 355 367 375 385‡	283.3 275.5 268.3 264.2 258.0 253.1‡	- - - -	56. 49.6 47.5 48.7 38.7 37.4‡	 	541.1 517.6 532.6 524.0 519.1 519.6 517.1‡	. 0.6 0.9 0.7 0.5 0.5 0.4‡	4.00 3.83 3.74 3.74 3.60 3.39 3.38‡	6.3 6.1 6.1 5.9 5.6 5.7‡	2.65 2.57 2.55 2.53 2.37 2.29 2.29‡	4.2 4.1 4.2 4.1 3.9 3.8 3.9 3.9	5.70 5.58 5.41 5.36 5.09 4.97 4.86‡	8.9 8.8 8.7 8.3 8.2 8.2
1998June Sept Dec	50. 57.3 47.2	2.2 2.6 1.8	54.8 59.3 56.7	365 377 385	71.0‡ 104.4‡ 46.1‡	 	34.6‡ 35.1‡ 32.6‡	 	24.8 7.6 39.7	9.6 8.9 10.6	0.77 0.79 0.95	5.1 5.0 6.5	0.53 0.56 0.62	3.5 3.6 4.2	1.20 1.18 1.31	8.0 7.5 8.9
1999 March June Sept Dec	44. ‡ 49.0‡ 51.7‡ 44.7‡	.7‡ 2.0‡ 2.1‡ .5‡	55.4‡ 56.1‡ 59.0‡ 56.5‡	384‡ 377‡ 389‡ 390‡	30.8‡ 69.2‡ 103.1‡	 	34.5‡ 33.8‡ 34.8‡	 	5 .0‡ 7.7‡ 4.3‡ 34.1‡	12.4‡ 9.0‡ 8.6‡ 10.1‡	0.90‡ 0.84‡ 0.84‡ 0.81‡	6.2‡ 5.6‡ 5.6‡ 5.6‡	0.58‡ 0.56‡ 0.62‡ 0.53‡	4.0‡ 3.8‡ 4.1‡ 3.6‡	1.26‡ 1.23‡ 1.24‡ 1.12‡	8.7‡ 8.2‡ 8.2‡ 7.7‡
2000 March	I 40.8‡	11.3‡	55.2‡	392‡					151.1‡	12.3‡	0.84‡	5.9‡	0.57‡	4.I‡	1.21‡	8.5‡

† **

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

†† ‱

Deaths under I year.

 †††
 Deaths under 4 weeks.

 Stillbirths and deaths under 1 week. In October 1992 the legal definition of a stillbirth
 was charged, from baby born dead after 28 completed weeks of gestation or more, to one born dead after 24 completed weeks of gestation or more.

++++ Per 1,000 live births and stillbirths.
+ Provisional.



Vital statistics summary Numbers (thousands) and rates

Constituent countries of the United Kingdom

Year and	All li	ve	Live bi	irths	Marri	ages	Divo	rces	Dea	ths	Infai	nt N****	Neon	atal	Peri	natal
qual tel	Number	Rate*	Number	Rate†	Number	Rate**	Number	Rate††	Number	Rate*	Number	Rate†	Number	Rate†	Number	Rate++++
Wales 1971 1976 1981 1986 1991	43.1 33.4 35.8 37.0 38.1	15.7 11.9 12.7 13.1 13.2	3.1 2.9 4.0 7.8 12.3	71 86 112 211 323	22.4 19.5 19.8 19.5 16.6	 	 7.9 8.6	 	34.8 36.3 35.0 34.7 34.1	12.7 13.0 12.4 12.3 11.8	0.79 0.46 0.45 0.35 0.25	18.4 13.7 12.6 9.5 6.6	0.53 0.32 0.29 0.21 0.16	12.3 9.6 8.1 5.6 4.1	1.07 0.64 0.51 0.38 0.30	24.4 19.0 14.1 10.3 7.9
1993 1994 1995 1996 1997 1998 1999	36.6 35.4 34.5 34.9 34.5 33.4 32.1‡	12.6 12.2 11.8 11.9 11.8 11.4 10.9‡	12.9 12.7 13.1 14.4 14.8 14.8 14.8	352 360 381 412 428 444 461‡	15.9 15.5 14.7 14.8 14.6 14.2‡	 	8.9 8.6 8.0 8.4 8.0 7.8‡	 	35.9 33.9 35.6 34.6 34.6 34.0 34.9‡	12.4 11.6 12.2 11.8 11.8 11.6 11.9‡	0.20 0.22 0.20 0.20 0.20 0.19 0.21‡	5.5 6.1 5.9 5.6 5.9 5.6 6.4‡	0.12 0.14 0.13 0.13 0.13 0.12 0.13‡	3.3 4.1 3.9 3.6 3.9 3.6 4.1‡	0.30 0.33 0.27 0.26 0.27 0.27 0.25‡	8.2 9.3 7.9 7.5 7.9 8.0 7.8‡
1998 June Sept Dec	8.4 8.8 8.0	.4 .8 0.9	3.6 3.9 3.8	428 444 468	4.0‡ 5.8‡ 2.6‡	 	2.0‡ 2.0‡ 1.8‡	 	8.2 7.8 8.9	.2 0.6 2.	0.05 0.05 0.05	5.6 5.9 6.0	0.03 0.04 0.02	3.9 4.0 3.0	0.07 0.07 0.06	8.7 8.2 6.9
1999 March June Sept Dec	7.9‡ 8.2‡ 8.3‡ 7.7‡	10.9‡ 11.2‡ 11.1‡ 10.4‡	3.6‡ 3.6‡ 3.9‡ 3.7‡	454‡ 445‡ 470‡ 475‡	1.6‡ 3.9‡ 6.0‡		1.9‡ 1.8‡ 1.9‡	 	10.3‡ 8.1‡ 7.7‡ 8.9‡	14.2‡ 11.1‡ 10.4‡ 12.0‡	0.05‡ 0.05‡ 0.05‡ 0.06‡	6.3‡ 5.5‡ 6.3‡ 7.8‡	0.03‡ 0.03‡ 0.03‡ 0.04‡	4.0‡ 3.5‡ 3.6‡ 5.2‡	0.06‡ 0.05‡ 0.07‡ 0.07‡	8.0‡ 5.7‡ 8.2‡ 9.4‡
2000 March	7.8‡	10.7‡	3.7‡	470‡					10.0‡	13.7‡	0.04‡	5.6‡	0.03‡	3.8‡	0.06‡	7.9‡
Scotland 1971 1976 1981 1986 1991	86.7 64.9 69.1 65.8 67.0	16.6 12.5 13.4 12.9 13.1	7.0 6.0 8.5 13.6 19.5	81 93 122 206 291	42.5 37.5 36.2 35.8 33.8	64.1 53.8 47.5 42.8 38.7	4.8 8.1 9.9 12.8 12.4	3.9 6.5 8.0 10.7 10.6	61.6 65.3 63.8 63.5 61.0	11.8 12.5 12.3 12.4 12.0	1.72 0.96 0.78 0.58 0.47	9.9 4.8 1.3 8.8 7.	1.17 0.67 0.47 0.34 0.29	13.5 10.3 6.9 5.2 4.4	2.15 1.20 0.81 0.67 0.58	24.5 18.3 11.6 10.2 8.6
1993 1994 1995 1996 1997 1998 1999	63.3 61.7 60.1 59.3 59.4 57.3 55.1‡	12.4 12.0 11.7 11.6 11.6 11.2 10.8‡	19.9 19.2 20.3 21.4 22.4 22.3 22.7‡	3 3 3 2 337 360 377 389 4 2‡	33.4 31.5 30.7 30.2 29.6 29.7	37.6 35.1 33.7 32.8 31.7 31.2	12.8 13.1 12.2 12.3 12.2 12.4	11.0 11.4 10.7 10.9 11.0 11.2	64.0 59.3 60.5 59.5 59.2 60.2‡	12.5 11.6 11.8 11.8 11.6 11.6 11.8	0.41 0.38 0.37 0.32 0.32 0.27‡	6.5 6.2 6.2 6.2 5.3 5.5 5.0‡	0.25 0.25 0.24 0.23 0.19 0.20 0.18‡	4.0 4.0 3.9 3.2 3.5 3.3‡	0.61 0.56 0.58 0.55 0.47 0.49 0.42‡	9.6 9.0 9.2 7.8 8.5 7.5‡
1998 June Sept Dec	14.2 14.8 14.1	.2 .5 0.9	5.4 5.7 5.7	382 384 404	8.4 11.9 5.9	35.4 49.8 24.7	3.2 3.1 3.0	.5 . 0.8	4.4 3.8 5.2	.3 0.7 .8	0.09 0.09 0.08	6.4 5.7 5.9	0.06 0.06 0.05	4.0 4.1 3.2	0.12 0.13 0.12	8.5 9.0 8.3
1999 March June Sept Dec	13.9‡ 13.9‡ 14.1‡ 13.3‡	11.0‡ 10.9‡ 10.9‡ 10.3‡	5.7‡ 5.6‡ 5.7‡ 5.7‡	411‡ 402‡ 406‡ 430‡	3.6‡ 8.1‡ 11.9‡ 6.3‡	15.4‡ 34.4‡ 49.7‡ 26.3‡	2.9‡ 3.1‡ 2.9‡ 2.9‡	10.8‡ 11.2‡ 10.5‡ 10.4‡	17.7‡ 13.7‡ 13.3‡ 15.6‡	14.0‡ 10.7‡ 10.3‡ 12.1‡	0.06‡ 0.09‡ 0.05‡ 0.08‡	4.4‡ 6.4‡ 3.5‡ 5.8‡	0.04‡ 0.06‡ 0.04‡ 0.05‡	2.5‡ 4.2‡ 2.5‡ 4.0‡	0.10‡ 0.12‡ 0.09‡ 0.11‡	7.4‡ 8.3‡ 6.2‡ 8.2‡
2000 March	13.7‡	10.8‡	5.9‡	433‡					17.2‡	13.5‡	0.09‡	6.3‡	0.06‡	4.2‡	0.11‡	7.8
Northern Ireland 1971 1976 1981 1986 1991	31.8 26.4 27.3 28.2 26.3	20.7 17.3 17.8 18.0 16.5	1.2 1.3 1.9 3.6 5.3	38 50 70 127 202	12.2 9.9 9.6 10.2 9.2	 45.4 37.7	0.3 0.6 1.4 1.5 2.3	 4.2 6.8	17.6 17.0 16.3 16.1 15.1	12.8 11.2 10.6 10.3 9.4	0.72 0.48 0.36 0.36 0.19	22.7 18.3 13.2 13.2 7.4	0.51 0.35 0.23 0.23 0.12	5.9 3.3 8.3 8.3 4.6	0.88 0.59 0.42 0.42 0.22	27.2 22.3 15.3 15.3 8.4
1993 1994 1995 1996 1997 1998 1999	24.9 24.3 23.9 24.6 24.3 23.9 23.2‡	15.3 14.9 14.5 14.8 14.5 14.2 13.7‡	5.5 5.4 5.5 6.4 6.4 6.8 7.0‡	219 220 231 259 266 283 301‡	9.0 8.7 8.6 8.3 8.1 7.8	 	2.2 2.3 2.3 2.3 2.2 2.5	 	15.6 15.1 15.3 15.2 15.0 15.0 15.7‡	9.6 9.2 9.3 9.1 9.0 8.9 9.3‡	0.18 0.15 0.17 0.14 0.14 0.13 0.15‡	7.1 6.1 7.1 5.8 5.6 5.6 6.4‡	0.12 0.10 0.13 0.09 0.10 0.09 0.11‡	4.9 4.2 5.5 3.7 4.2 3.9 4.8‡	0.22 0.24 0.25 0.23 0.21 0.20 0.23‡	8.8 9.7 10.4 9.4 8.6 8.1 10.0‡
1998 June Sept Dec	6.1 6.2 5.5	14.5 14.7 13.0	1.7 1.8 1.6	273 285 294	2.2 3.4 1.4		0.6 0.6 0.6	 	3.8 3.5 3.6	9.1 8.2 8.5	0.04 0.03 0.02	7.1 5.5 4.0	0.03 0.02 0.02	4.4 3.5 3.3	0.05 0.05 0.05	7.7 8.0 8.2
1999 March June Sept Dec	6.0‡ 5.9‡ 6.1‡ 5.2‡	14.3‡ 14.0‡ 14.3‡ 12.2‡	1.8‡ 1.8‡ 1.8‡ 1.6‡	302‡ 297‡ 303‡ 303‡	0.9‡ 2.2‡		0.7‡ 0.6‡ 0.5‡ 0.5‡	 	4.7‡ 3.7‡ 3.4‡ 3.8‡	11.3‡ 8.7‡ 8.1‡ 8.9‡	0.03‡ 0.04‡ 0.04‡ 0.03‡	5.7‡ 7.4‡ 5.9‡ 6.5‡	0.02‡ 0.03‡ 0.03‡ 0.03‡	4.0‡ 5.8‡ 4.4‡ 5.2‡	0.06‡ 0.07‡ 0.05‡ 0.05‡	10.2‡ 11.5‡ 8.2‡ 10.1‡
2000 March	5.8‡	13.8‡	1.8‡	317‡					4.7‡	11.2‡	0.03‡	4.5‡	0.02‡	3.8‡	0.04‡	7.4‡

Notes: I. Rates for the most recent quarters will be particularly subject to revision, even

A facts 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.

3. From 1972 figures for England and figures for Wales each exclude events for persons usually resident outside England and Wales. These events are however included in the totals for England and Wales combined, and for the United Kingdom.

Table 2.2

Key demographic and health indicators Numbers (thousands), rates, percentages, mean age Constituent countries of the United Kingdom

				Dependen	cy ratio		Live births			Expect life (ir at l	cation of n years) birth	
	Population	Live births	Deaths	Children*	Elderly†	TFR**	Outside marriage as percentage of total live births	Mean age of mother at birth (years)	Age- standardised mortality rate††	Males	Females	Infant mortality rate ^{%%}
United Kingdom 1971 1976 1981 1986 1991 1993 1994 1995 1996 1997 1998 1999	55,928.0 56,216.1 56,357.5 56,858.5 57,813.8 58,197.7 58,400.8 58,611.7 58,807.2 59,014.0 59,237.0	901.6 675.5 730.8 755.0 792.5 761.7 750.7 730.7 732.0 733.4 726.8 717.1 700.2‡	645.1 680.8 658.0 660.7 646.2 658.5 627.6 645.5 636.0 629.7 629.2 629.4 ‡	43.8 42.1 37.1 33.5 33.1 33.3 33.6 33.8 33.8 33.8 33.8 33.6 33.4	28.0 29.5 29.7 29.6 29.9 29.9 29.9 29.9 29.8 29.7 29.6 29.5	2.41 1.74 1.82 1.78 1.82 1.76 1.74 1.71 1.72 1.72 1.72	8.2 9.0 12.5 21.0 29.8 31.8 32.0 33.6 35.5 36.7 37.6 38.8‡	26.2 26.4 26.8 27.0 27.6 28.1 28.4 28.5 28.6 28.8 28.9	10,448 10,486 9,506 8,897 8,107 8,037 7,622 7,706 7,522 7,370 7,290 7,274‡	68.8 69.6 70.8 71.9 73.2 73.7 73.9 74.1 74.3 74.6‡	75.0 75.2 76.8 77.7 78.8 79.1 79.2 79.4 79.5 79.6‡	17.9 14.5 11.2 9.5 7.4 6.3 6.2 6.2 6.1 5.9 5.7 ‡ 5.8 ‡
England 1971 1976 1981 1988 1991 1993 1994 1995 1996 1997 1998	46,411.7 46,659.9 46,820.8 47,342.4 48,208.1 48,532.7 48,707.5 48,903.4 49,089.1 49,284.2 49,494.6	740.1 550.4 598.2 623.6 636.5 629.0 613.2 614.2 608.6 602.5 589.5‡	532.4 560.3 541.0 544.5 534.0 541.1 517.6 532.6 524.0 519.1 519.6 517.1‡	42.9 41.4 36.4 33.1 32.8 33.1 33.4 33.6 33.6 33.4 33.3	28.1 29.7 29.9 29.8 29.9 30.0 29.9 29.8 29.8 29.6 29.5	2.37 1.70 1.79 1.81 1.76 1.74 1.71 1.73 1.72 1.72 1.69‡	8.5 9.2 12.9 21.4 30.1 32.0 32.2 33.7 35.5 36.7 37.5 38.5‡	26.4 26.8 27.0 27.7 28.1 28.4 28.6 28.7 28.8 29.0 29.0‡	10,278 10,271 9,298 8,694 7,941 7,825 7,440 7,526 7,333 7,190 7,128 7,079 ‡	71.1 72.0 73.4 74.0 74.1 74.4 74.6 74.9‡	77.0 77.9 79.0 79.3 79.4 79.6 79.7 79.9‡	17.5 14.2 10.9 9.5 7.3 6.1 6.1 6.1 5.9 5.6 5.7
Wales 1971 1976 1981 1988 1991 1993 1994 1995 1996 1997 1998	2,740.3 2,799.3 2,813.5 2,819.6 2,891.5 2,906.5 2,913.0 2,916.8 2,921.1 2,926.9 2,933.3	43. 33.4 35.8 37.0 38. 36.6 35.4 34.5 34.9 34.5 33.4 32. ‡	34.8 36.3 35.0 34.7 34.1 35.9 33.9 35.6 34.6 34.6 34.6 34.0 34.9‡	43.4 42.0 37.6 34.4 34.6 34.9 35.1 35.0 34.7 34.5	29.8 30.9 31.6 32.5 33.4 33.6 33.6 33.6 33.6 33.5 33.5	2.44 1.79 1.87 1.86 1.88 1.84 1.79 1.78 1.82 1.82 1.79 1.73‡	7.2 8.7 11.2 21.1 32.3 36.0 38.1 41.2 42.8 44.4 46.1‡	26.0 26.6 26.5 27.0 27.4 27.7 27.8 27.8 27.8 28.0 28.0 28.0 28.1 ‡	11,175 10,858 9,846 9,012 8,074 8,227 7,753 7,953 7,664 7,578 7,366 7,548‡	70.4 71.6 73.2 73.5 73.5 73.8 74.0 74.4‡	76.4 77.6 78.9 79.0 79.0 79.2 79.2 79.4‡	18.4 13.7 12.6 9.5 6.6 5.5 6.1 5.8 5.6 5.9 5.6 5.9 5.6 4.4 2
Scotland 1971 1976 1981 1986 1991 1993 1994 1995 1996 1997 1998	5,235,6 5,233,4 5,180,2 5,123,0 5,107,0 5,120,2 5,132,4 5,132,6 5,128,0 5,122,5 5,120,0	86.7 64.9 65.8 67.0 63.3 61.7 60.1 59.3 59.4 57.3 55.1‡	61.6 65.3 63.8 63.5 61.0 64.0 59.3 60.5 60.7 59.5 59.2 60.2‡	48.2 44.7 38.2 33.5 32.2 32.3 32.5 32.6 32.5 32.5 32.0	27.1 28.4 28.4 28.0 28.7 28.7 28.7 28.6 28.7 28.6 28.7 28.8	2.53 1.80 1.84 1.67 1.70 1.62 1.58 1.55 1.55 1.55 1.57	8.1 9.3 12.2 20.6 29.1 31.3 31.2 33.7 36.0 37.7 38.9 41.2‡	26.0 26.3 26.6 27.4 27.9 28.2 28.4 28.5 28.6 28.8	11,444 11,675 10,849 10,135 9,254 9,529 8,840 8,867 8,868 8,663 8,863 8,533 8,652‡	67.3 68.2 69.1 70.2 71.4 71.7 71.9 72.1 72.2 72.4‡	73.7 74.4 75.3 76.2 77.1 77.3 77.4 77.6 77.8 77.9‡	19.9 14.8 11.3 8.8 7.1 6.5 6.2 6.2 6.2 5.3 5.5 ‡ 5.0 ‡
Northern Ireland 1971 1976 1981 1986 1991 1993 1994 1995 1995 1996 1997 1998	+++ 1,540.4 1,523.5 1,543.0 1,573.5 1,607.3 1,638.3 1,648.0 1,654.9 1,669.0 1,680.3 1,688.6	31.8 26.4 27.3 28.2 26.3 24.9 24.3 23.9 24.6 24.3 23.9 24.6 24.3 23.9 23.2‡	17.6 17.0 16.3 16.1 15.1 15.6 15.1 15.3 15.2 15.0 15.0 15.7 ‡	56.6 56.1 50.6 46.5 44.0 43.6 43.3 42.9 42.3 41.6 40.8	24.0 25.3 25.3 24.7 25.6 25.4 25.4 25.4 25.2 25.1 24.9 25.0	3.13 2.70 2.60 2.46 2.18 2.01 1.95 1.91 1.95 1.93 1.91	3.8 5.0 7.0 12.7 20.2 21.9 22.0 23.1 25.9 26.6 28.3 30.1‡	27.4 27.6 27.6 28.0 28.4 28.6 28.8 28.8 29.0 29.1	11,607 11,746 10,567 10,071 8,564 8,600 8,255 8,057 7,810 7,438 7,726 ±	67.6 67.5 69.2 70.9 72.6 73.0 73.1 73.5 73.8 74.2‡	73.7 73.8 75.5 77.1 78.4 78.7 78.6 78.9 79.2 79.5‡	22.7 18.3 13.2 10.2 7.4 7.1 6.1 7.1 5.8 5.6 5.6 5.6 5.6 6.4 <u>±</u>

Provisional. **‡** *

Percentage of children under 16 to working population (males 16-64 and females 16-59).

Deaths under one year per I,000 live births.
 Northern Ireland data has been revised to take account of changed Northern Ireland population estimates from 1981.
 Notes: I. Some of these indicators are also in other tables. They are brought together to

Percentage of males 65 and over and females 60 and over to working population (males t 16-64 and females 16-59).

TFR (the total fertility rate) is the number of children that would be born to a woman if current patterns of fertility persisted throughout her childbearing life. It is sometimes called the TPFR (the total period fertility rate). Per million population. The age-standardised mortality rate makes allowances for changes in the age structure of the population. See Notes to tables. **

††

make comparison easier. 2. Figures for England and Wales represent the number of deaths registered in each year up to 1992, and the number of deaths occurring in each year from 1993.

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

England and Wales

	Γ			Age o	fmother	at birth]		Age of	f mother a	at birth			Mean	TFR†
Year and quarter		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	(years)	
				Total liv	ve births (n	umbers)					Age-spec	ific fertility	rates*				
1961		811.3	59.8	249.8	248.5	152.3	77.5	23.3	89.2	37.3	172.6	176.9	103.1	48. I	15.0	27.6	2.77
1964(max))†	876.0	76.7	276.1	270.7	153.5	75.4	23.6	92.9	42.5	181.6	187.3	107.7	49.8	13.7	27.2	2.93
1966		849.8	86.7	285.8	253.7	136.4	67.0	20.1	90.5	47.7	176.0	174.0	97.3	45.3	12.5	26.8	2.75
1971		783.2	82.6	285.7	247.2	109.6	45.2	12.7	83.5	50.6	152.9	153.2	77.1	32.8	8.7	26.2	2.37
1976		584.3	57.9	182.2	220.7	90.8	26.1	6.5	60.4	32.2	109.3	118.7	57.2	18.6	4.8	26.4	1.71
1977(min)	†	569.3	54.5	174.5	207.9	100.8	25.5	6.0	58. I	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.I	152.0	236.0	171.1	58.8	10.5	62.6	31.0	82.7	4.	87.0	34.1	6.2	28.1	1.76
1994		664.7	42.0	140.2	229.1	179.6	63.I	10.7	61.9	29.0	79.4	112.1	88.7	35.8	6.4	28.4	1.75
1995		648.I	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.I	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	59.1	30.7	75.4	102.6	89.9	39.9	7.8	28.9	1.72
1999‡		621.9	48.4	110.7	181.9	185.3	81.3	14.3	57.5	30.6	73.1	99.4	89.1	39.9	8.1	29.0	1.70
1997 N	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
J	une	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
S	Sept	164.9	11.8	30.3	52.I	48.1	19.3	3.3	60.8	30	78	107	90	40	8	28.8	1.78
E	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 1	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
J	une	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
S	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
0	Dec	155.4	12.4	28.5	46. I	45.4	19.6	3.4	57.3	31	75	98	86	39	8	28.9	1.70
1999 1	March‡	152.1	12.0	27.1	45.0	45.1	19.6	3.4	57.1	31	73	98	88	39	8	28.9	1.68
J	une ‡	157.2	11.8	27.2	46.2	48.0	20.5	3.6	58.4	30	72	101	92	40	8	29.1	1.72
S	ept ‡	160.1	12.5	28.7	46.8	47.5	20.9	3./	58.7	31	/5 70	102	91	41	8	29.0	1./4
L	Jec ‡	132.5	12.0	27.8	43.8	44.8	20.3	3.6	55.8	30	72	76	86	39	8	29.0	1.66
2000 1	March‡	148.6	11.4	26.4	42.5	44.1	20.6	3.7	55.1	29	69	95	86	40	8	29.1	1.64

* 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.

† TFR (the total fertility rate) is the number of children that would be born to a woman if current patterns of fertility persisted throughout her childbearing life. It is sometimes called the TPFR (the total period fertility rate). During the post Second World War period the TFR reached a maximum in 1964 and a minimum in 1977.

‡ Provisional.

Note:

The rates for women of all ages, under 20, and 40 and over are based upon the populations of women aged 15-44, 15-19, and 40-44 respectively.

Table 3.2

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

England and Wales

			Age of	mother	at birth						Age of	mother	at birth			R	egistratio	n*
Year and quarter	All	Under 20	20–24	25–29	30–34	35–39	40 and over	Mean age	All ages	Under 20	20–24	25–29	30–34	35–39	40 and over		oint	Sole
								(years)	0							Same address	Differen address	1t †
		Live	births out	side marri	age (numb	ers)				Pe	ercentage	of total liv	e births			As a p	ercentage	of all
											in age-	group				births o	outside m	arriage
1971	65.7	21.6	22.0	.5	6.2	3.2	1.1	23.7	8.4	26.1	7.7	4.7	5.7	7.0	9.0	45	i.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	5	.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	3.2	41.8
1986	141.3	39.6	54.1	27.7	13.1	5.7	1.1	23.8	21.4	69.0	28.2	12.1	10.1	12.6	14.7	46.6	19.6	33.8
1991	211.3	43.4	77.8	52.4	25.7	9.8	2.1	24.8	30.2	82.9	44.9	21.1	16.0	18.3	21.3	54.6	19.8	25.6
1992	215.2	40.1	77.1	55.9	28.9	10.9	2.3	25.2	31.2	83.7	47.2	22.8	17.3	19.3	22.9	55.4	20.7	23.9
1993	216.5	38.2	75.0	57.5	31.4	11.9	2.5	25.4	32.2	84.8	49.4	24.4	18.4	20.2	23.5	54.8	22.0	23.2
1994	215.5	35.9	71.0	58.5	34.0	13.4	2.7	25.8	32.4	85.5	50.6	25.5	18.9	21.2	25.2	57.5	19.8	22.7
1995	219.9	36.3	69.7	59.6	37.0	14.4	3.0	25.9	33.9	86.6	53.3	27.4	20.4	22.0	26.2	58.1	20.1	21.8
1996	232.7	39.3	71.1	62.3	40.5	16.2	3.2	26.0	35.8	88.0	56.5	29.5	21.7	23.4	26.7	58.I	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
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	26.4	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	1/./	16.0	11./	5.4	1.1	26.4	39.3	88./	61./	34.1	24./	25.6	29.3	62.2	18.1	19.6
Dec‡	60.1	10.6	17.0	14.9	11.1	5.3	1.1	26.4	39.4	88.4	61.2	34.0	2 4 .8	26.2	30.8	62.0	18.4	19.5
2000 March‡	58.9	10.2	16.5	14.8	10.9	5.4	1.2	26.5	39.6	89.7	62.6	34.7	24.7	26.1	31.7	62.5	18.1	19.4

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

Table 4.1

Conceptions: age of woman at conception Numbers (thousands) and rates; and percentage terminated by abortion England and Wales (residents)

					Age	of woman at cor	ception			
Year a	nd quarter	All ages	Under 16	Under 18	Under 20	20–24	25–29	30–34	35–39	40 and over
		(a) numbers (th	nousands)							
1990		871.5	8.1	44.8	113.3	244.5	284.2	161.4	56.0	12.0
1991		853.7	7.5	40.1	101.6	233.3	281.5	167.5	57.6	2.1
1992		828.0	7.2	37.6	93.4	215.9	274.9	172.0	59.6	12.2
1993		819.0	7.3	35.8	87.2	203.6	271.7	181.0	63.0	12.6
1994		801.6	7.8	36.1	85.4	190.4	261.8	185.0	66.2	12.9
1995		790.3	8.1	37.9	86.6	181.1	250.3	190.3	68.7	13.2
1996		816.9	8.9	43.5	94.9	179.8	252.6	200.0	75.5	4.
1997		800.4	8.3	43.4	96.0	167.3	242.6	200.9	78.9	14.7
1998‡		795.9	8.4	44.1	101.5	163.0	232.2	201.1	82.7	15.4
1996	March	206.3	2.3	10.9	24.2	47.3	64.0	49.2	18.3	3.4
	June	200.8	2.3	10.9	23.7	44.6	61.9	48.7	18.2	3.6
	Sept	202.6	2.1	10.5	22.6	43.1	63.2	50.8	19.2	3.6
	Dec	207.2	2.1	11.2	24.2	44.9	63.5	51.2	19.8	3.6
1997	March	194.1	2.0	10.6	23.2	41.6	59.4	47.7	18.6	3.6
	June	198.5	2.2	11.0	23.9	41.8	59.9	49.8	19.5	3.8
	Sept	199.2	2.0	10.4	23.3	40.4	60.7	51.2	19.9	3.6
	Dec	208.6	2.1	11.4	25.6	43.5	62.6	52.2	20.8	3.8
1998	March‡	196.6	2.1	11.2	25.3	41.2	57.7	48.9	19.9	3.6
	June‡	195.9	2.1	11.0	25.3	40.5	56.8	49.0	20.5	3.8
	Sept‡	200.7	2.1	10.7	24.7	40.0	59.1	51.9	21.1	3.9
	Dec‡	202.7	2.1	11.1	26.2	41.4	58.7	51.3	21.2	4.0
1999	March‡	191.5	1.9	10.4	24.9	39.6	54.3	48.4	20.6	3.8
	June‡	190.3	2.0	10.4	24.4	39.0	53.8	47.9	21.2	4.1
		(b) rates (con	ceptions per thou	isand women in a	ge-group)					
1990		79.2	9.5	47.7	68.0	124.0	138.0	89.7	33.6	6.6
1991		77.7	8.9	44.6	64.I	120.2	135.1	90.1	34.4	6.6
1992		76.3	8.4	43.6	61.9	114.0	131.7	89.9	35.1	6.9
1993		76.1	8.1	42.5	59.9	110.8	131.4	92.0	36.5	7.4
1994		74.7	8.3	42.0	58.9	107.8	128.1	91.3	37.5	7.6
1995		73.7	8.6	42.0	58.9	106.3	125.0	91.7	37.9	7.9
1996		76.1	9.5	46.4	63.3	110.9	127.9	95.1	40.4	8.4
1997		74.4	8.9	45.9	62.6	108.0	125.4	95.2	41.0	8.7
1998‡		73.9	8.9	47.0	64.9	108.3	122.9	95.9	41.7	8.9
1996	March	77.3	10.0	47.5	65.6	115.1	129.6	94.6	39.8	8.1
	June	75.2	9.8	46.9	63.9	109.8	125.9	93.4	39.4	8.6
	Sept	75.0	9.1	44.4	59.9	106.3	127.7	96.1	40.8	8.5
	Dec	76.7	9.0	47.3	63.8	112.0	128.9	96.7	41.6	8.5
1997	March	73.2	8.6	45.5	61.9	107.1	123.6	91.7	39.6	8.5
	June	74.1	9.4	46.8	62.6	107.5	123.8	94.6	40.8	8.9
	Sept	73.5	8.5	43.9	60.2	103.8	124.9	96.3	41.0	8.3
	Dec	76.9	8.9	47.8	65.6	112.7	129.6	98.4	42.4	8.9
1998	March‡	74.1	9.1	48.3	66.0	109.7	122.7	94.3	41.3	8.5
	June‡	73.0	9.0	47.1	65.0	107.5	120.1	93.7	41.7	8.9
	Sept‡	/3.9	8.9	45.4	62.6	105.3	124.6	98.3	42.1	9.0
1000	Dec‡	/4.6	8.8	46.9	66.1	108.8	124./	97.3	41.9	9.1
1999	March	72.1	8.0	45.1	64.1	106.7	119.6	94.3	41.4	8.8
	June‡	70.9	8.6	44.8	61.9	104.1	118.5	92.7	41.8	9.3
1000		(c) percentage	e terminated by a	bortion	25.7	22.2	12 5	0 6 1	22 1	د د/
1970		17.7	50.0	1.1 200	33.7	∠∠.3 22.2	13.5	13.0	23.1 22 A	41 L
1771		17.4	21.1 49.4	39.7	22.5	22.2	13.4	13./	22.0	
1993		19.5	49.9	39.7	33.7	22.3	13.7	13.7	22.2	40.2
1994		17.2	50.2	39.2	24.7	22.0	142	12.4	21.5	40.2
1995		19.5	47 K	39.0	34.6	23.T 74.7	14.9	13.0	21.1	20.7 28 U
1996		20.8	49.2	40.0	36.2	27.2	15.6	14.1	20.7	37.6
1997		20.8	49.7	40.6	36.2	25.7	16.4	142	21.2	32.0
1998‡		22.3	52.5	42.0	37.8	27.9	17.1	14.9	21.6	38.0
1996	March	21.0	47 0	39 5	36 1	25.5	159	44	21.8	37 1
0	lune	21.0	49.2	40.7	36.6	26.5	160	44	21.0	38.2
	Sept	197	504	291	25.0	20.5	149	122	21.0	30.2
	Dec	211	50.7	40.8	37.0	263	15.8	140	20.2	37.9
1997	March	21.1	48.4	39.7	36.0	26.5	16.6	145	21.0	38.6
	lune	21.7	49 5	40 3	36.7	20.0	16.8	46	21.0	39 1
	Sept	20.5	48 1	40.6	36.6	25.8	15.8	13.5	20.7	36.4
	Dec	21.6	52.5	41.6	37.6	27.2	16.5	14.3	20.6	37.8
1998	March±	22.3	51.4	41.2	37.3	27.7	17.3	15.2	21.7	37.0
	lune+	22.8	52.7	42.2	38.2	28.4	17.6	15.3	22.0	38.9
	Sept [±]	21.7	52.5	42.2	37.9	27.3	16.6	14.4	21.3	37.6
	Dec‡	22.3	53.3	42.4	37.9	28.1	17.1	14.8	21.1	38.5
1999	March‡	22.3	51.4	41.9	38.0	27.8	17.2	14.7	21.6	36.2
	June‡	22.9	52.8	43.4	38.6	28.6	18.0	15.4	21.4	37.6

‡ Provisional
 \$\$ Provisional
 \$\$ Notes: I. Conceptions are estimates derived from birth registrations and abortion notifications.
 \$\$ 2. Rates for women of all ages, under 16, under 18, under 20 and 40 and over are based on the population of women aged 15–44, 13–15, 15–17, 15–19 and 40–44 respectively.

Table 4.2

Abortions: residents and non-residents; age and gestation (residents only) Numbers (thousands) and rates; and percentages for gestation weeks

England and Wales

									All women	(residents)			
		All ages					Age group				Gest	ation weel	s (percent	tages)
Year and quarter	All** women	Residents**	Non-** 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)							•		Percent	ages		
1971 1976 1981 1986 1991	126.8 129.7 162.5 172.3 179.5	94.6 101.9 128.6 147.6 167.4	32.2 27.8 33.9 24.7 12.1	2.3 3.4 3.5 3.9 3.2	18.2 24.0 31.4 33.8 31.1	24.5 23.6 34.3 45.3 52.7	17.3 19.3 21.9 28.7 38.6	14.2 14.6 18.7 18.0 23.4	15.9 14.7 17.6 17.5 17.9	0.5 0.5 0.6 0.4 0.4	16.6 24.8 31.0 33.4 35.2	57.9 55.8 53.4 53.8 52.9	21.8 15.0 13.5 11.5 10.6	1.0 1.1 1.3 1.4 1.2
1992 1993 1994 1995 1996 1997 1998 1999	172.1 168.7 166.9 163.6 177.5 179.7 187.4 183.2	160.5 157.8 156.5 154.3 167.9 170.1 177.9 173.7	11.6 10.9 10.3 9.3 9.6 9.6 9.5 9.5	3.0 3.1 3.2 3.2 3.6 3.4 3.8 3.6	27.6 25.8 25.1 24.9 28.8 29.9 33.2 32.7	49.0 46.8 44.9 43.4 46.4 45.0 45.8 44.8	38.4 38.1 37.3 39.3 40.2 40.4 38.3	23.9 24.7 25.5 25.8 28.2 28.9 30.4 29.0	18.1 18.8 19.1 19.2 21.1 22.3 23.7 24.0	0.5 0.4 0.5 0.4 0.5 0.5 0.5 0.5	36.8 39.2 40.5 41.9 40.0 41.2 41.4 42.5	51.8 49.7 48.4 47.3 48.7 47.9 47.6 46.5	10.3 9.9 9.6 10.1 9.6 9.7 9.5	1.2 1.2 1.2 1.3 1.2 1.3 1.2 1.3 1.4
1996 March June Sept Dec	45.7 45.5 44.0 42.4	43.2 42.9 41.6 40.1	2.4 2.5 2.4 2.2	0.9 0.9 0.9 0.9	7.4 7.3 7.1 7.0	2.4 .9 .2 0.8	10.2 10.1 9.8 9.3	7.2 7.2 7.0 6.8	5.2 5.4 5.4 5.2	0.1 0.1 0.1 0.1	38.0 38.9 40.0 43.1	50.5 49.3 48.3 46.3	10.2 10.5 10.3 9.3	.2 .4 .4 .3
1997 March June Sept Dec	46.2 45.2 45.1 43.3	43.6 42.8 42.7 41.0	2.5 2.4 2.4 2.3	0.9 0.8 0.9 0.8	7.7 7.4 7.5 7.4	.8 .4 . 0.7	10.3 10.2 10.0 9.6	7.3 7.2 7.3 7.0	5.5 5.6 5.8 5.4	0.1 0.1 0.1 0.1	37.4 41.3 42.0 44.5	50.2 48.0 47.2 46.0	. 9.4 9.6 8.3	.3 .2 .2 .2
1998 March June Sept Dec	48.4 46.4 46.9 45.7	45.9 44.0 44.5 43.5	2.5 2.4 2.4 2.2	1.0 0.9 1.0 0.9	8.7 8.1 8.3 8.1	12.0 11.4 11.3 11.0	10.5 10.1 10.0 9.8	7.7 7.6 7.6 7.5	5.8 5.8 6.1 5.9	0.1 0.1 0.1 0.1	37.5 40.8 42.5 44.9	50.4 48.3 46.7 45.0	10.8 9.5 9.5 8.9	.3 .4 .2 .2
1999‡March June Sept Dec	47.0 44.5 45.3 44.0	44.7 42.2 42.9 41.6	2.4 2.4 2.4 2.4	0.9 0.9 0.9 0.9	8.6 7.9 8.1 7.8	.7 0.9 . 0.7	9.8 9.4 9.4 9.3	7.5 7.1 7.2 6.9	6.0 5.8 6.0 5.9	0.1 0.1 0.1 0.1	40.2 42.5 43.3 44.6	48.1 46.7 46.1 44.8	10.3 9.2 9.3 9.2	.4 .4 .4 .4
2000‡ March	48.4	45.9	2.6	1.0	8.9	12.3	10.0	7.4	6.3	0.1	39.0	48.0	11.6	1.6
Rates (per thousa 1971 1976 1981 1986 1991	nd women I : : : :	4–49) 8.4 8.9 10.6 11.7 13.1	:	3.5 4.4 4.5 5.4 5.6	13.9 16.9 19.4 22.0 24.0	13.1 14.2 19.1 21.9 27.2	10.7 10.4 13.3 15.5 18.6	10.0 9.2 10.3 10.9 12.7	5.6 5.3 5.9 5.1 5.1	0.3 0.3 0.4 0.3 0.3				
1992 1993 1994 1995 1996 1997 1998 1999‡*	: : : : : : : : : : : : : : : : : : : :	12.5 12.3 12.2 12.0 13.0 13.3 13.9 13.6		5.4 5.3 5.2 5.8 5.5 6.1 5.6	22.4 22.0 22.0 21.7 24.3 24.5 26.5 25.7	25.9 25.5 25.4 25.5 28.6 29.0 30.4 29.6	18.4 18.6 18.6 19.9 20.8 21.4 20.9	12.5 12.6 12.6 12.4 13.4 13.7 14.5 14.0	5.2 5.5 5.6 5.5 6.0 6.1 6.4 6.3	0.3 0.2 0.2 0.2 0.3 0.3 0.3				
1996 March June Sept Dec	: : :	13.5 13.4 12.8 12.4	: : :	5.7 5.9 5.9 5.8	25.0 24.9 24.0 23.5	30.7 29.6 27.5 26.5	20.7 20.6 19.7 18.7	3.8 3.7 3.3 2.9	5.9 6.1 6.1 5.8	0.2 0.2 0.2 0.3				
1997 March June Sept Dec	: : :	13.8 13.4 13.2 12.7	: : :	5.7 5.4 5.7 5.3	25.5 24.1 24.3 24.0	30.8 29.6 28.3 27.4	21.7 21.1 20.6 19.7	4. 3.8 3.8 3.	6.2 6.2 6.3 5.9	0.2 0.3 0.3 0.3				
1998 March June Sept Dec	: : :	14.6 13.8 13.8 13.5	: : :	6.4 5.8 6.1 5.9	28.2 26.0 26.2 25.7	32.4 30.4 29.9 29.1	22.4 21.4 21.1 20.5	4.9 4.5 4.4 4.3	6.4 6.3 6.6 6.3	0.3 0.3 0.3 0.3				
1999‡*March June Sept Dec	: : :	3.9 3.2 3.4 3.0	:	5.8 5.4 5.5 5.7	27.2 24.9 25.5 24.4	30.8 28.9 29.3 28.4	21.5 20.6 20.6 20.3	4.3 3.7 3.9 3.4	6.3 6.1 6.3 6.2	0.3 0.3 0.3 0.3				
2000‡*March	<u> </u>	14.3	:	6.0	27.9	31.9	22.5	14.4	6.4	0.3				

Provisional. ‡

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 14–15 and 45–49

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

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Table 5.1
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Expectation of life (in years) at birth and selected age

Constituent countries of the United Kingdom

				Ma	les								Fema	les			
Year	At birth			At	age				Year	At			At	age			
		5	20	30	50	60	70	80			5	20	30	50	60	70	80
United Kingdom	*																
1971	68.8	65.3	50.9	41.3	23.0	15.3	9.5	5.5	1971	75.0	71.4	56.7	47.0	28.3	19.8	12.5	6.9
1976	69.6	66.0	51.4	41.9	23.4	15.7	9.6	5.6	1976	75.2	72.0	57.3	47.5	28.7	20.3	12.9	7.2
1981	70.8	66.9	52.3	42.7	24.1	16.3	10.1	5.8	1981	76.8	72.7	57.9	48.1	29.2	20.8	13.3	7.5
1986	71.9	67.8	53.2	43.6	24.9	16.8	10.5	6.0	1986	77 7	73 5	58.7	48.9	29.8	212	13.8	79
1991	73.2	68.9	54.3	44.7	26.0	17.7	11.1	6.4	1991	78.8	74.4	59.6	49.7	30.7	21.9	14.4	8.4
1993	73.7	69.3	54.6	45.I	26.4	18.0	11.3	6.5	1993	79.1	74.6	59.8	50. I	30.9	22.1	14.5	8.4
1994	73.9	69.5	54.8	45.2	26.5	18.1	11.3	6.5	1994	79.2	74.7	59.9	50. I	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. I	50.3	31.2	22.4	14.6	8.5
1996	74.3	69.9	55.2	45.7	26.9	18.5	11.6	6.6	1996	79.5	75.0	60. I	50.3	31.2	22.4	14.6	8.5
1997‡	74.6	70.2	55.5	45.9	27.2	18.8	11.8	6.7	1997‡	79.6	75.1	60.3	50.5	31.4	22.6	14.7	8.5
England and Wal	es																
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.I	48.3	29.4	20.9	13.4	7.5
1986	72.1	68.0	53.4	43.8	25.0	16.9	10.6	6.1	1986	77.9	73.6	58.9	49.0	30.0	21.4	13.9	7.9
1991	73.4	69.1	54.5	44.9	26.2	17.9	11.2	6.4	1991	79.0	74.6	59.8	49.9	30.8	22.1	14.5	8.4
1993	74.0	69.6	54.9	45.3	26.5	18.2	11.4	6.5	1993	79.3	74.8	60.0	50.2	31.1	22.3	14.6	8.5
1994	74.1	69.7	55.0	45.4	26.7	18.3	11.4	6.5	1994	79.4	74.9	60. I	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. I	27.4	18.9	11.8	6.8	1997‡	79.8	75.3	60.5	50.7	31.6	22.7	14.8	8.6
England																	
1981	71.1	67.1	52.5	42.9	24.3	16.4	10.1	5.8	1981	77.0	72.9	58.2	48.4	29.4	20.9	13.4	7.5
1986	72.2	68.1	53.4	43.8	25.1	17.0	10.6	6.1	1986	77.9	73.7	58.9	49.1	30.0	21.4	13.9	7.9
1991	73.4	69.1	54.5	44.9	26.2	17.9	11.2	6.4	1991	79.0	74.6	59.8	49.9	30.9	22.1	14.5	8.4
1993	74.0	69.6	54.9	45.3	26.6	18.2	11.4	6.5	1993	79.3	74.9	60.0	50.2	31.1	22.3	14.6	8.5
1994	/4.1	69.7	55.0	45.5	26.7	18.3	11.4	6.6	1994	/9.4	/4.9	60.1	50.3	31.2	22.4	14.6	8.5
1995	/4.4	/0.0	55.3	45.7	27.0	18.5	11.6	6.6	1995	/9.6	/5.1	60.3	50.5	31.4	22.5	14./	8.6
1996 1997+	74.6 74 9	70.2 70 5	55.5 55.7	45.9 46.2	27.2 27.4	18.7 18.9	11.7	6.7 6.8	1996 1997+	79.7 79.9	75.2 75.4	60.4 60.5	50.6 50.7	31.4 31.6	22.6 22.7	14.7 14.8	8.6 8.6
								0.0						01.0			0.0
Wales	70.4	66 5	519	42.2	23.6	15.8	97	55	1981	76.4	72 3	575	47 7	28.9	20.4	131	74
1986	71.6	67.5	52.9	43.3	23.0	16.6	10.4	6.0	1986	77.6	72.3	58.5	48.7	20.7	20.1	13.1	7.8
1991	73.2	68.9	54.2	44.6	25.9	17.6	11.0	6.4	1991	78.9	74.4	59.6	49.8	30.7	21.9	14.4	8.4
1993	73 5	69	54 4	44 9	26	178	112	6.6	1993	79.0	74 5	59 7	49 9	30.8	22.0	144	84
1994	73.5	69 1	54.4	44 9	26.2	17.0	111	6.5	1994	79.0	74 5	59.7	49.8	30.8	22.0	144	84
1995	73.8	69.4	547	45.2	26.5	181	113	6.6	1995	79.2	74.7	59.8	50.0	30.9	22.0	145	85
1996	74.0	69.5	54.8	45.4	26.6	183	11.3	6.5	1996	79.2	74 7	59.8	50.0	31.0	22.2	14.5	85
1997±	74.4	69.9	55.2	45.7	27.0	18.6	11.6	6.7	1997±	79.4	74.9	60.0	50.2	31.1	22.4	14.6	8.5
Scotland																	
971	47 2	64 0	40 ⊑	ا∆	22.0	144	Q I	51	1971	72 7	70 I	55 /	4 5 ∠	27.2	100	110	67
17/1	67.3	64.0	47.5	40.1	22.0	14.0	7.1	5.4	17/1	75.7	70.1	55.4	40.0	27.2	17.0	11.7	0./
1970	201	45.2	T7.7	41.1	22.5	17.7	7.Z	5.5	1001	75.7	70.0	55.7	44.7	27.0	17.7	12.7	7.0
1701	70.2	65.2	50.6	41.1	22.7	15.4	7.5	5.5	1701	75.5	71.2	50.4	40.7	27.7	17.7	12.7	7.2
1991	70.2	67.1	52.5	43.0	23.5	15.6	10.4	5.7 6.1	1986	76.2	72.6	57.8	47.5	20.4 29.1	20.1	13.4	7.8
1993	717	673	527	42.2	24 R	16.8	10.5	60	1993	77 २	72.8	58.0	48.2	29.2	20.7	134	78
1994	71.0	67.5 47 F	52.7	13.Z	2.1.0 21.0	12.0	10.5	2.0	1004	77.5	72.0	50.0 EQ 1	/0.∠ ⊿0 ⊃	27.3	20.7	13.7	7.0
1005	ל.ו/ ורק	07.5 477	52.0 52 I	42.4	∠ 1 .7 25.2	10.7	10.0	0.1 ∠ ว	1 774	77.4	72.7	JO.I	-10.3 10 4	∠7.4 20.4	20.8	13.5	7.0 7.0
1773	72.1	6/./	53.1	43.0	25.2	17.2	10.8	0.Z	1775	//.0 77.0	/ 3.Z	50.3 50.4	40.0 10 7	27.0 20.7	21.0	13./	7.7
1770	72.4	0/.ð	53.1	42.0	23.3	17.5	10.7	0.2	1770	//.ö	73.Z	50.4	40./	27./	21.1	13./	7.7
1997‡	72.4	67.9	53.3	43.9	25.5	17.5	11.0	6.3	1997‡	//.9	/3.4	58.6	48.8	29.9	21.3	13.8	7.9
Northern Ireland	d* دەت	65 1	50 0	415	22.2	154	07	50	1991	75 5	714	56 0	47 1	202	20.0	120	7 2
1701	70.2	۰ ۵	50.7	-11.J	23.2	0.0	7.7	5.0	1701	/ J.J 	71.0	50.0	40.2	20.3	20.0	12.0	7.5
1986	/0.9	66.8	52.2	42./	24.2	16.4	10.4	6.2	1986	//.1	/2.9	58.1	48.3	29.3	20.8	13.4	7.8
1991	72.6	68.2	53.6	44.1	25.5	17.3	11.0	6.4	1991	78.4	74.0	59.2	49.4	30.3	21.6	14.2	8.3
1993	73.0	68.6	54.0	44.6	25.8	17.6	11.1	6.5	1993	78.7	74.3	59.4	49.6	30.6	21.8	14.3	8.4
1994	73.1	68.8	54.2	44.7	26.0	17.8	11.2	6.6	1994	78.6	74.2	59.4	49.6	30.6	21.9	14.3	8.4
1995	73.5	69.1	54.5	45.0	26.3	18.0	11.3	6.6	1995	78.9	74.5	59.6	49.8	30.8	22.0	14.4	8.4
1996	73.8	69.4	54.7	45.2	26.5	18.2	113	6.6	1996	79.2	74.7	59.9	50.0	30.9	22.1	4.4	8.4
1997+	74.0	69.7	55.0	45 5	26.8	183	115	6.6	1997+	79.5	75.0	60.2	50.3	31.2	22.4	145	84
· · · · · +	, I.Z	····	55.0		20.0			0.0	+		,	00.2	20.0	J 1.4			U . I

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

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

Table 6.1

Deaths: age and sex** Numbers (thousands) and rates

England and Wales

								Age group)					
Year and quarter	All ages	Under I*	I-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 (thousa	unds)													
Males 1971 1976 1981 1986 1991	288.4 300.1 289.0 287.9 277.6	7.97 4.88 4.12 3.72 2.97	1.23 0.88 0.65 0.57 0.55	0.92 0.68 0.45 0.32 0.34	0.69 0.64 0.57 0.38 0.35	1.54 1.66 1.73 1.43 1.21	1.77 1.66 1.58 1.75 1.76	3.05 3.24 3.18 3.10 3.69	6.68 5.93 5.54 5.77 6.16	21.0 20.4 16.9 14.4 13.3	55.7 52.0 46.9 43.6 34.9	89.8 98.7 92.2 84.4 77.2	71.9 80.3 86.8 96.2 95.8	26.1 29.0 28.5 32.2 39.3
1993 1994 1995 1996 1997 1998 1999‡	279.6 267.6 274.4 268.7 264.9 264.7 263.2	2.41 2.37 2.31 2.27 2.14 2.07 2.08	0.51 0.43 0.39 0.44 0.41 0.41 0.41	0.28 0.28 0.27 0.24 0.27 0.24 0.22	0.34 0.33 0.34 0.29 0.33 0.29 0.29	0.91 0.84 0.91 0.93 0.95 0.88 0.91	1.60 1.55 1.53 1.41 1.44 1.29 1.27	3.81 4.07 4.04 4.06 3.94 4.01 3.98	5.78 5.77 5.88 5.84 5.71 5.90 5.92	13.4 12.9 13.5 13.6 13.5 13.6 13.6	33.3 31.3 31.0 30.1 28.9 29.1 28.5	78.9 76.3 75.0 71.0 68.0 66.1 64.0	93.8 88.2 92.3 90.7 90.2 90.5 90.0	44.5 43.2 47.1 47.8 49.1 50.4 52.0
Females 1971 1976 1981 1986 1991	278.9 298.5 288.9 293.3 292.5	5.75 3.46 2.90 2.59 2.19	0.98 0.59 0.53 0.49 0.44	0.57 0.45 0.30 0.25 0.25	0.42 0.42 0.37 0.27 0.22	0.63 0.62 0.65 0.56 0.46	0.79 0.67 0.64 0.67 0.64	1.84 1.94 1.82 1.65 1.73	4.53 4.04 3.74 3.83 3.70	13.3 12.8 10.5 8.8 8.4	30.8 29.6 27.2 25.8 21.3	64.0 67.1 62.8 58.4 54.2	95.0 104.7 103.6 106.5 103.3	60.4 72.1 73.9 83.6 95.7
1993 1994 1995 1996 1997 1998 1999‡	299.2 285.6 295.2 291.5 290.4 290.3 290.4	1.84 1.75 1.68 1.69 1.66 1.56 1.56	0.37 0.36 0.33 0.32 0.30 0.31 0.31	0.19 0.19 0.20 0.18 0.18 0.18 0.18	0.25 0.20 0.21 0.20 0.21 0.19 0.22	0.39 0.36 0.38 0.43 0.43 0.41 0.40	0.58 0.54 0.50 0.51 0.49 0.48 0.48	1.80 1.77 1.86 1.85 1.72 1.72 1.71	3.63 3.67 3.64 3.66 3.74 3.68 3.77	8.6 8.7 9.0 8.9 9.0 9.1 9.0	20.4 19.0 18.9 18.2 18.0 17.9 17.9	55.2 53.9 53.0 50.2 48.3 46.9 45.0	100.9 94.2 97.2 96.7 95.5 94.7 93.4	105.0 101.0 108.4 108.7 110.9 113.2 116.5
Rates (deaths per	r 1,000 popu	Ilation in ea	ch age gro	oup)										
Males 1971 1976 1981 1986 1991	2. 2.5 2.0 1.8 1.2	19.8 16.2 12.6 11.0 8.3	0.76 0.65 0.53 0.44 0.40	0.44 0.34 0.27 0.21 0.21	0.37 0.31 0.29 0.23 0.23	0.90 0.88 0.82 0.71 0.69	0.93 0.96 0.83 0.82 0.86	0.97 0.92 0.89 0.87 0.94	2.31 2.09 1.83 1.67 1.76	7.07 6.97 6.11 5.27 4.62	20.1 19.6 17.7 16.6 13.8	50.5 50.3 45.6 42.9 38.5	3.0 6.4 05.2 0 .1 93.6	231.8 243.2 226.5 214.8 197.1
1993 1994 1995 1996 1997 1998 1999	11.1 10.6 10.8 10.5 10.3 10.3 10.2	7.0 6.9 7.0 6.5 6.4 6.5	0.36 0.31 0.28 0.32 0.31 0.31 0.31	0.16 0.15 0.13 0.15 0.14 0.12	0.21 0.20 0.21 0.18 0.19 0.17 0.17	0.59 0.55 0.58 0.58 0.58 0.53 0.53	0.83 0.83 0.86 0.83 0.89 0.82 0.80	0.91 0.96 0.95 095 0.93 0.96 0.95	1.67 1.66 1.67 1.62 1.54 1.55 1.56	4.24 3.99 4.08 4.02 3.94 3.94 3.95	3.3 2.4 2.3 2.0 1.5 1.3 1.1	37.9 36.2 36.1 34.5 33.2 32.4 31.4	93.3 89.5 89.4 85.1 82.5 81.2 80.8	202.3 188.6 196.0 192.1 190.3 187.2 192.9
1998 June 1998 Sept 1998 Dec	10.0 9.3 10.8	6.1 5.6 7.2	0.30 0.29 0.28	0.14 0.13 0.12	0.17 0.16 0.13	0.55 0.51 0.51	0.87 0.78 0.70	0.99 0.92 0.94	1.58 1.51 1.53	3.88 3.82 3.97	. 0.5 .7	31.5 29.6 33.8	78.9 73.4 86.3	77.8 62. 207.
1999 March‡ 1999 June‡ 1999 Sept‡ 1999 Dec‡	.8 9.4 9.1 0.5	7.1 6.2 6.4 6.4	0.36 0.24 0.30 0.33	0.11 0.13 0.12 0.14	0.20 0.15 0.15 0.18	0.59 0.49 0.56 0.55	0.80 0.82 0.79 0.80	0.94 0.97 0.87 1.02	1.66 1.53 1.52 1.52	4.23 3.80 3.68 4.10	12.0 10.8 10.4 11.3	35.9 29.5 28.1 32.2	95.1 74.4 71.1 82.9	239.0 168.2 161.9 203.1
2000 March‡	11.9	6.4	0.33	0.13	0.15	0.54	0.96	0.96	1.72	4.23	12.7	35.0	95.8	245.6
Females 1971 1976 1981 1986 1991	.0 .8 .3 .4 .3	15.1 12.2 9.4 8.0 6.4	0.63 0.46 0.46 0.40 0.33	0.29 0.24 0.19 0.17 0.16	0.24 0.21 0.19 0.17 0.15	0.39 0.35 0.32 0.29 0.28	0.42 0.40 0.35 0.33 0.33	0.60 0.56 0.52 0.47 0.45	1.59 1.46 1.26 1.12 1.06	4.32 4.30 3.80 3.23 2.91	10.0 10.1 9.5 9.2 8.1	26.1 26.0 24.1 23.4 22.0	73.6 74.6 66.2 62.5 58.6	185.7 196.6 178.2 171.0 163.8
1993 1994 1995 1996 1997 1998 1999‡	11.4 10.9 11.2 11.0 10.9 10.9 10.9	5.6 5.4 5.3 5.4 5.3 5.0 5.1	0.28 0.27 0.25 0.24 0.23 0.24 0.24	0.12 0.11 0.12 0.10 0.10 0.11 0.10	0.16 0.13 0.12 0.13 0.12 0.13 0.12 0.13	0.27 0.25 0.26 0.29 0.28 0.26 0.25	0.31 0.30 0.29 0.31 0.32 0.32 0.32	0.45 0.44 0.46 0.45 0.42 0.43 0.43	1.06 1.05 1.03 1.03 0.99 1.02	2.73 2.68 2.72 2.62 2.63 2.62 2.61	7.9 7.3 7.3 7.1 6.9 6.8 6.8	22.0 21.3 21.4 20.7 20.2 19.9 19.0	59.4 56.9 57.1 55.8 54.6 53.9 53.1	156.5 146.6 153.1 150.8 151.8 151.5 155.9
1998 June 1998 Sept 1998 Dec	10.4 9.7 11.7	4.4 4.7 5.7	0.24 0.20 0.29	0.10 0.08 0.11	0.10 0.10 0.13	0.26 0.28 0.22	0.30 0.29 0.32	0.47 0.42 0.40	0.95 1.00 1.01	2.67 2.48 2.73	6.7 6.3 7.2	19.1 18.0 20.8	51.8 47.9 57.6	42.8 32. 65.9
1999 March‡ 1999 June‡ 1999 Sept‡ 1999 Dec‡	3.2 9.9 9.5 1.2	5.5 5.1 4.9 5.0	0.29 0.24 0.19 0.25	0.12 0.07 0.10 0.11	0.17 0.11 0.11 0.14	0.31 0.21 0.24 0.26	0.35 0.33 0.28 0.33	0.47 0.41 0.40 0.43	1.06 1.00 0.95 1.06	2.79 2.53 2.47 2.63	7.3 6.5 6.5 7.1	22.1 17.5 17.1 19.5	64.1 48.1 46.2 54.3	198.1 136.8 129.2 160.1
2000 March‡	13.0	5.5	0.23	0.10	0.13	0.28	0.32	0.45	1.11	2.85	7.6	21.1	62.9	197.9

* Rates per 1,000 live births. ‡ Provisional registrations.
 ** 1998 deaths figures for England and Wales in *Health Statistics Quarterly* 03 and 04 were incorrectly shown as being final when they were still provisional. The final 1998 figures are those shown here.
 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.

Path 6.2 Desth: subnational** Net and Vorking: Text is upper loss of England Year and quarter Working: Iteret Vorking: Eastern London South East South Wear Wear Wear 1933 1.1.8 1.1.4 10.4 9.9 10.9 11.9 10.9 11.1 1934 1.1.8 10.4 9.9 10.9 11.3 10.9 11.3 1935 1.1.2 10.9 10.2 9.2 10.6 11.3 10.3 11.4 1936 1.1.2 10.9 10.2 9.2 10.6 11.3 10.3 11.4 1936 1.1.2 10.9 10.2 8.4 10.2 9.4 10.3 11.3 1937 10.9 10.8 10.2 8.6 10.2 9.4 10.3 11.3 1938 10.2 8.6 10.2 9.1 10.3 10.3 1939 10.7 12.9 12.7 12.3 12.4 10.3 10.3									
Tor. and quarter Torent Vortabline Trent Eastorn London South East West West Mest Mest Torel deaths (deaths per 1,000 population of all ges) 1994 10.4 9.4 10.4 11.4 10.5 11.5 1994 11.3 10.8 10.1 9.4 10.4 11.4 10.5 11.5 1995 11.3 10.8 10.1 2.9 10.4 11.4 10.5 11.5 1997 11.0 10.8 10.1 2.9 10.4 11.3 10.5 11.5 1998 11.3 10.0 10.1 2.9 10.2 10.5 11.5 1998 10.2 8.4 10.3 11.5 10.6 11.3 1998 10.9 10.8 2.2 7.9 7.4 10.6 6.6 10.3 1998 10.9 9.8 9.3 7.9 7.4 10.6 6.6 10.3 1999 10.4 11.2 10.4	Table 6.2	Deaths: subnation Rates	onal**				Hec	lth Regional Office	areas of England*
Image: Constraints Image:	Year and quarter	Northern and Yorkshire	Trent	Eastern	London	South East	South West	West Midlands	North West
1093 11.3 1.0 0.4 9.4 0.0 11.4 10.5 11.5 1995 11.3 1.0 0.4 9.4 0.0 11.9 0.0 11.4 1995 11.3 1.0 0.4 9.4 0.0 11.5 0.0.5 11.4 1997 11.3 1.0 0.1 8.4 0.0 11.5 0.0.5 11.3 1998 10.0 9.4 9.2 7.9 9.7 0.2 9.4 10.3 1998 10.0 9.4 9.2 7.9 9.7 10.2 9.4 10.3 1998 10.4 1.2 0.7 7.5 9.1 10.6 11.6 10.2 11.6 1999 10.4 1.2 0.4 9.1 0.6 11.6 11.2 10.3 1999 10.4 1.2 0.4 9.1 0.2 1.6 12.8 11.3 1999 10.4 1.2 0.4 9.1 9.4 9.3 1.6 1.2 11.3 1999 10.4	T ()) () ()				1				1
1994 112 10.8 0.1 9.4 10.4 11.4 10.5 11.5 1995 11.3 10.0 10.4 9.2 10.4 11.5 10.5 11.4 1997 11.0 10.8 10.1 8.6 10.4 11.5 10.5 11.4 1998 10.7 10.8 10.2 8.6 10.3 11.5 10.5 11.4 1998 11.9 10.7 10.8 10.2 8.6 10.3 11.5 10.5 11.4 1998 11.9 12.1 10.9 9.2 9.7 10.6 11.5 10.6 11.5 10.6 11.5 10.6 11.5 10.6 11.5 10.6 11.5 10.6 11.5 10.6 11.5 10.6 11.5 10.6 11.5 10.6 11.5 10.6 11.5 10.6 11.5 10.6 11.5 10.6 11.5 10.6 11.5 10.6 11.5 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6	lotal deaths (dea	aths per 1,000 popula	tion of all ages)	10.4	9.9	10.9	12.0	11.0	12.1
1995 11.3 11.0 10.4 9.6 10.7 1.9 10.9 11.6 1997 11.3 10.0 10.1 8.6 10.2 11.3 10.5 11.5 1998 11.3 10.0 10.1 8.6 10.2 11.3 10.5 11.5 1998 10.0 3.6 2.2 7.9 9.2 10.2 13.5 10.6 11.3 1998 10.0 3.6 2.2 7.9 9.2 10.2 13.5 10.6 11.3 1999 11.0 10.1 10.2 12.7 13.5 12.6 13.6 10.3 1999 11.4 11.2 10.4 9.7 9.9 10.2 13.5 12.6 13.6 10.3 1999 11.4 11.2 10.4 10.4 10.4 10.6 9.4 10.3 <	1994	11.2	10.8	10.1	9.4	10.4	11.4	10.5	11.5
1996 11.3 10.9 10.2 9.2 10.6 11.5 10.6 11.5 1997 10.9 10.8 10.2 8.6 10.3 11.5 10.6 11.5 1998 10.9 10.8 10.2 8.6 10.3 11.5 10.6 11.3 1998 10.9 10.8 10.2 8.6 10.3 11.5 10.6 11.3 1999 12.1 10.9 9.2 7.7 9.2 10.7 11.3 12.3 12.4 13.5 12.6 13.6 13.6 13.6 13.6 13.6 13.6 13.6 19.9 19.9 11.7 11.3 12.3 12.6 10.0 13.6 14.6 13.6 </td <td>1995</td> <td>11.3</td> <td>11.0</td> <td>10.4</td> <td>9.6</td> <td>10.7</td> <td>11.9</td> <td>10.9</td> <td>11.6</td>	1995	11.3	11.0	10.4	9.6	10.7	11.9	10.9	11.6
1998 113 110 101 8.6 102 113 105 113 1998 10.9 16.8 10.2 8.6 102 11.3 105 11.3 1998 10.9 12.1 10.9 9.2 10.7 11.7 11.3 12.3 1998 12.2 10.0 9.4 9.2 10.7 11.7 11.3 12.4 1999 10.0 9.4 9.3 7.9 9.4 10.4 9.1 10.3 1999 11.4 11.2 10.4 9.1 10.4 9.1 10.4 9.1 10.3 1999 11.4 11.2 10.4 10.2 12.6 10.4 9.5 11.4 11.2 11.3 10.4 9.1 10.3 10.4 9.1 10.3 10.4 9.1 10.3 10.4 9.1 10.4 10.4 9.1 10.4 11.5 10.3 10.5 10.3 10.5 10.3 10.5 10.5 10.5 10.7 10.5 10.5 10.5 10.5 10.5 10.5	1996	11.2	10.9	10.2	9.2	10.6	11.5	10.6	11.5
1999; 10.9 10.9 10.2 8.6 10.3 11.5 10.6 11.3 1998 Dec: 11.9 12.1 10.9 9.2 10.2 11.5 10.6 11.3 1998 Dec: 11.9 12.1 10.9 9.2 10.2 10.2 9.4 10.3 12.3 1999 Marcht; 12.9 12.9 12.4 10.4 9.1 10.2 12.6 13.6 12.6 13.6 12.6 13.6 19.7 10.0 19.9 10.0 19.9 10.0 11.3 10.0	1998	11.0	10.8	10.1	0.7 8.6	10.4	11.5	10.5	11.4
1998 Spert 10.0 9.4 9.2 7.2 9.2 10.7 11.3 12.3 1999 Murch‡ 12.9 12.2 9.3 7.3 9.4 10.4 9.5 10.3 1999 Murch‡ 12.0 12.3 13.3 12.4 13.5 12.4 10.1 11.3 10.3 1999 Dect 11.4 11.2 10.4 9.1 10.6 11.6 11.2 11.3 1999 Dect 11.4 11.2 10.4 9.1 10.6 11.6 11.2 11.3 1999 Dect 11.4 11.2 10.4 10.2 12.6 12.6 12.6 1999 Dect 6.3 6.3 5.3 6.3 5.4 5.5 6.8 6.7 1998 Dect 5.1 5.4 6.6 4.5 5.5 5.9 5.6 7.7 7.6 1998 Dect 5.1 5.4 6.6 5.7 5.9 5.6 7.2 7.8 1999 Dect 7.7 5.7 4.6 6.0 4.3 3.9 6.0 6.0	1999‡	10.9	10.8	10.2	8.6	10.3	11.5	10.6	11.3
1989 Dick 1.9 1.2 0.9 9.2 0.7 1.7 1.3 1.3 1999 Murcht 1.0 1.2 1.2 9.3 7.9 1.2 1.6 1.6 1.6 1999 Murcht 1.0 1.2 1.0 1.0 1.6 1.6 1.2 1.00 1999 Durcht 1.2 1.0 1.0 1.6 1.6 1.2 1.00 1999 Durcht 1.2 1.2 1.0 1.0 1.6 1.2 1.00 1999 Durcht 1.2 1.2 1.0 1.0 1.6 1.2 1.00 1999 Durcht 6.8 7.0 5.4 6.4 5.8 7.0 6.5 1994 6.6 6.4 5.2 6.4 5.0 6.0 4.9 6.6 6.7 6.7 1997 6.1 6.0 6.0 4.9 4.6 6.9 6.6 6.7 6.6 6.7 6.6 7.1 6.0 4.5 5.5 5.9 5.6 7.2 7.8 7.7 6.0 4.3 3.1 <t< td=""><td>1998 Sept</td><td>10.0</td><td>9.6</td><td>9.2</td><td>7.9</td><td>9.2</td><td>10.2</td><td>9.4</td><td>10.3</td></t<>	1998 Sept	10.0	9.6	9.2	7.9	9.2	10.2	9.4	10.3
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	1998 Dec	11.9	12.1	10.9	9.2	10.7	11.7	11.3	12.3
1999 unct. 0.0 9.8 9.3 7.9 9.4 0.6 9.6 0.3 1999 Dect. 1.1.4 1.1.2 10.4 9.1 10.6 11.6 11.2 11.3 2000 Marcht 1.2.9 12.6 12.1 10.2 12.5 14.0 12.5 13.0 1997 Dect. 1.4 1.2.2 10.0 12.5 14.0 12.5 14.0 12.5 14.0 12.5 14.0 12.5 14.0 12.5 14.0 12.5 14.0 12.5 14.0 12.5 14.0 12.5 14.0 12.5 14.0 12.5 14.0 12.5 14.0 12.5 14.0 12.5 14.0 12.5 14.0 12.5 14.0 12.5 14.0 14.5	1999 March‡	12.9	12.9	12.2	9.9	12.2	13.5	12.6	13.6
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	1999 June‡	10.0	9.8	9.3	7.9	9.4	10.6	9.6	10.3
Northip 12.9 12.6 12.1 10.2 12.5 14.0 12.5 12.8 Informatiality (deaths under I year per 1,000 live births) 1994 6.8 7.2 5.3 6.3 5.4 5.5 6.8 6.4 1995 6.3 6.3 5.3 5.4 5.5 6.8 6.4 1997 6.2 5.9 4.8 5.8 5.0 5.8 7.0 6.7 1998 6.1 6.0 5.0 6.0 4.5 4.8 6.5 6.6 1998 Sept 5.1 5.4 4.6 6.1 4.4 4.3 4.1 7.8 5.7 1999 Duct 5.7 5.7 5.6 7.2 7.8 5.7 1999 Duct 5.7 5.7 5.7 7.8 5.7 5.7 7.8 5.7 1999 Duct 5.7 5.7 5.7 7.4 6.0 4.7	1999 Dec‡	1.4	11.2	10.4	7.5 9.1	10.6	11.6	11.2	11.3
Instanct lify (deaths under I year per 1,000 live births) 1999 6.6 70 5.4 6.3 79 5.3 7.2 6.2 1995 6.3 6.3 5.3 6.3 5.4 5.4 5.4 5.5 6.8 6.4 1997 6.2 5.9 4.8 5.8 5.0 5.8 7.0 6.7 1999 6.1 6.0 5.0 6.0 4.9 4.6 6.5 6.3 1999 6.1 6.0 5.9 7.5 5.5 5.1 6.8 7.1 1999 1.6 6.0 4.5 5.5 5.9 5.1 6.8 6.0 1999 1.0 6.1 4.6 6.0 4.7 4.9 6.6 6.0 1999 1.0 6.1 4.6 6.0 4.7 4.9 6.6 6.0 1999 1.00 6.1 4.6 6.0 4.7 4.9 6.8 6.0 1999 1.00 4.1 4.2 5.1 7.0 7.1 6.0	2000 March‡	12.9	12.6	12.1	10.2	12.5	14.0	12.5	12.8
1993 6.8 7.0 5.4 6.4 5.4 5.8 7.0 6.5 1995 6.6 6.4 5.2 6.3 6.3 6.4 5.2 5.3 7.1 6.6 1997 6.2 5.3 6.3 5.3 6.4 5.5 5.8 7.0 6.7 1997 6.1 5.0 6.0 4.5 5.8 7.2 6.7 1998 5.4 6.6 6.0 4.5 5.5 5.1 6.8 6.7 1998 5.4 6.6 5.5 5.7 5.6 7.2 7.8 1999 1999 6.1 6.1 4.6 6.4 4.8 3.9 6.0 6.0 1999 5.7 5.7 5.7 5.7 5.6 7.2 7.8 5.7 1999 5.9 5.7 5.7 4.6 6.0 4.7 4.9 6.0 6.0 1999 1.7 6.0 4.3 5.7 5.2 5.1 7.3 6.2 1999 1.4 4.6 <td>Infant mortality</td> <td>(deaths under I year</td> <td>per 1,000 live bir</td> <td>ths)</td> <td></td> <td></td> <td></td> <td></td> <td></td>	Infant mortality	(deaths under I year	per 1,000 live bir	ths)					
1994 6.8 1.2 3.3 6.3 4.9 5.3 1.2 6.2 1995 6.6 6.3 5.3 5.4 5.2 5.5 6.6 6.7 1997 6.1 6.0 4.8 5.4 5.5 5.8 6.6 6.7 1998 6.1 6.0 4.6 6.0 4.9 4.6 6.9 6.0 1999 5.1 5.4 4.6 5.5 5.9 5.6 7.2 7.8 1999 0.1 6.1 6.1 4.9 6.1 4.3 3.1 7.3 5.7 1999 0.4 6.1 6.1 4.9 6.1 4.3 7.1 7.8 7.7 1999 0.4 4.6 6.0 4.7 4.9 6.8 6.0 1999 0.4 4.7 3.7 4.5 5.7 5.7 7.7 7.8 1999 0.4 4.7 3.7 4.5 3.7 5.7 7.7 7.8 7.7 1999 0.4 4.7 3.7	1993	6.8	7.0	5.4	6.4	5.4	5.8	7.0	6.5
1996 23 23 23 23 23 24 25 168 24 1997 62 55 48 58 50 58 70 67 1998 61 60 50 60 45 48 65 63 1999 990 6.0 6.1 4.6 60 4.9 4.6 6.9 6.0 1998 59 5.1 5.4 4.6 6.0 4.9 4.6 6.8 7.1 1999 10xct 6.1 6.1 4.3 5.7 5.5 5.1 6.8 7.1 1999 Sept 4.9 6.4 4.6 6.4 4.8 3.9 6.0 6.9 1999 57 5.7 5.7 5.7 4.6 6.0 4.9 4.8 6.0 6.9 2000 Marcht 7.7 6.0 4.3 5.7 5.2 5.1 7.3 6.2 Jost Jost 3.7 4.5 3.7 3.7 4.8 4.	1994	6.8 6.6	1.2	5.3	6.3 6.4	4.9	5.3	7.2	6.2
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	1996	6.3	6.3	5.3	6.3	5.4	5.5	6.8	6.4
1998 6.1 6.0 5.0 6.0 4.5 4.8 6.5 6.3 1998 Sept 5.1 5.4 4.6 5.0 4.0 4.9 4.6 6.9 6.0 1998 Dec 6.3 6.9 5.9 7.5 5.5 5.1 6.8 7.1 1999 Dec 6.1 6.1 4.1 4.9 5.9 5.6 7.2 7.8 1999 Sept 4.9 6.4 4.6 6.4 4.8 3.9 6.0 6.0 1999 Dect 5.7 5.7 4.6 6.0 4.7 4.9 6.8 6.0 2000 Marcht 7.7 6.0 4.3 5.7 5.2 5.1 7.3 6.2 1993 Dect 4.2 4.7 3.7 4.5 3.7 3.3 3.4 5.4 3.9 1993 Lett 4.5 4.5 3.5 4.4 3.5 3.7 5.3 4.1 3.9 4.1 3.9 4.1 3.9 4.1 3.9 4.1 3.9 4.1 3.9 4.1 3.9	1997	6.2	5.9	4.8	5.8	5.0	5.8	7.0	6.7
1977 6.0 6.1 4.5 6.0 4.7 4.6 6.7 6.0 1998 Sept 5.1 5.4 4.6 5.0 4.0 4.9 5.1 6.8 7.1 1999 Marcht 7.1 6.0 4.5 5.5 5.9 5.6 7.2 7.8 1999 Junet 6.1 6.1 4.9 6.1 4.3 4.1 7.8 5.7 1999 Dect 5.7 5.7 4.6 6.0 4.7 4.9 6.8 6.0 2000 Marcht 7.7 6.0 4.3 5.7 5.7 4.6 6.0 4.7 4.9 6.8 6.0 2000 Marcht 7.7 6.0 4.3 5.7 5.7 4.6 6.0 4.7 4.9 6.8 6.0 1993 Dect 5.7 5.7 4.6 6.0 4.7 4.9 6.8 6.0 1994 4.2 4.7 3.7 4.5 3.7 3.7 4.8 4.0 1994 4.5 4.3 3.6 3.4 3.9 5.0 <td>1998</td> <td>6.1</td> <td>6.0</td> <td>5.0</td> <td>6.0</td> <td>4.5</td> <td>4.8</td> <td>6.5</td> <td>6.3</td>	1998	6.1	6.0	5.0	6.0	4.5	4.8	6.5	6.3
1998 Dec. 5.1 5.4 4.6 5.0 4.0 4.9 5.9 5.0 1999 March‡ 7.1 6.0 4.5 5.5 5.9 5.6 7.2 7.8 1999 Junc‡ 6.1 6.1 4.9 6.1 4.3 5.7 6.0 4.7 4.9 6.0 1999 Dec‡ 5.7 5.7 4.6 6.0 4.7 4.9 6.8 6.0 2000 March‡ 7.7 6.0 4.3 5.7 5.2 5.1 7.3 6.2 2000 March‡ 7.7 6.0 4.3 5.7 5.2 5.1 7.3 6.2 2000 March‡ 7.7 6.0 4.3 5.7 5.2 5.1 7.3 6.2 1993 Sept 4.2 4.7 3.7 4.5 3.7 5.3 3.7 5.3 4.9 1993 Sept 4.1 4.2 3.3 3.6 3.4 3.8 4.1 1997 Lec 4.1 4.2 3.4 4.1 2.9 3.3 4.8 4.1 1997 Lec<	1999‡	6.0	6.1	4.6	6.0	4.9	4.6	6.9	6.6
1970 Otect 6.3 6.7 5.7 7.3 5.3 5.1 6.0 7.1 1999 March‡ 7.1 6.0 4.5 5.5 5.9 5.6 7.2 7.8 1999 Spet‡ 4.9 6.1 4.9 6.1 4.3 3.1 7.8 5.7 1999 Dec‡ 5.7 5.7 4.6 6.0 4.7 4.9 6.8 6.0 2000 March‡ 7.7 6.0 4.3 5.7 5.2 5.1 7.3 6.2 Neonatal mortality (deaths under 4 weeks per 1,000 live births) 1993 4.2 4.7 3.7 4.5 3.7 3.7 4.8 4.0 1994 4.5 5.0 3.4 4.2 3.3 3.4 3.9 3.3 4.2 4.4 3.9 3.7 5.3 4.2 1995 4.5 4.5 3.4 4.1 2.9 3.3 4.8 4.9 4.1 1997 4.1 3.9 3.3 3.6 3.4 3.9 5.0 4.3 1998 A.	1998 Sept	5.1	5.4	4.6	5.0	4.0	4.9	5.9	6.0
1999 Marcht, 7.1 6.0 4.5 5.5 5.9 5.6 7.2 7.8 1999 Linet, 6.1 6.1 4.9 6.1 4.3 3.9 6.0 6.9 1999 Dect, 5.7 5.7 4.6 6.0 4.7 4.9 6.8 6.0 2000 Marcht, 7.7 6.0 4.3 5.7 5.2 5.1 7.3 6.2 Nemather weeks per 1,000 live birts. 1993 4.2 4.7 3.7 4.5 3.7 5.3 3.7 5.3 4.2 1994 4.5 5.0 3.4 4.3 3.5 3.7 5.3 4.2 1995 4.5 4.5 3.4 4.3 3.6 3.8 4.9 4.1 1997 4.1 3.9 3.3 3.6 3.4 3.9 5.0 4.3 1997 4.1 3.9 3.3 3.6 3.4 3.9 5.0 4.3 1997 4.1 3.9 3.7 5.1 3.4	1776 Dec	0.5	0.7	5.7	7.5	5.5	5.1	0.0	7.1
1777 0.1 4.3 4.1 7.2 0.1 4.3 4.1 7.2 0.1 4.3 4.1 7.2 0.1 4.3 1.1 7.2 0.1 4.3 1.1 7.3 0.1 6.8 6.0 1999 Dect 5.7 5.7 5.7 4.6 6.0 4.7 4.9 6.8 6.0 2000 Marcht 7.7 6.0 4.3 5.7 5.2 5.1 7.3 6.2 Neonatal mortality (deaths under 4 weeks per 1,000 live births) 7 3.7 4.5 3.7 3.7 4.8 4.0 1993 4.2 4.7 3.7 4.5 3.3 3.4 5.4 3.9 1995 4.1 4.2 3.5 3.4 4.3 3.5 3.7 5.3 4.2 1996 4.1 4.2 3.5 4.4 3.6 3.8 4.9 4.1 1997 4.1 3.9 3.3 3.6 3.2 3.2 4.8 4.4 1998 5.0 4.4 4.1 2.9 3.3 <td< td=""><td>1999 March‡</td><td>7.1</td><td>6.0</td><td>4.5</td><td>5.5</td><td>5.9</td><td>5.6</td><td>7.2</td><td>7.8</td></td<>	1999 March‡	7.1	6.0	4.5	5.5	5.9	5.6	7.2	7.8
1000 Marcht10	1999 June	6.1 4.9	6.1	4.9	6.1	4.3	4.1	7.8	5.7
2000 March‡ 7.7 6.0 4.3 5.7 5.2 5.1 7.3 6.2 Neonatal mortality (death-under 4 weeks per 1,000 live births) 1994 4.2 4.7 3.7 4.5 3.7 3.7 4.8 4.0 1994 4.5 5.0 3.4 4.2 3.3 3.4 5.4 3.9 1995 4.5 3.4 4.2 3.3 3.4 5.4 3.9 1996 4.1 4.2 3.5 4.4 3.6 3.8 4.9 4.1 1997 4.1 3.9 3.3 3.6 3.4 3.9 5.0 4.3 1998 3.8 4.2 3.4 4.1 2.9 3.3 4.8 4.1 1999 March‡ 4.0 4.4 3.0 4.0 3.2 3.2 4.8 4.4 1999 March‡ 4.8 4.3 2.7 2.6 5.6 3.7 1999 March‡	1999 Dec‡	5.7	5.7	4.6	6.0	4.7	4.9	6.8	6.0
Neonatal mortality (death-sunder 4 weeks per 1,000 live births) 1993 4.2 4.7 3.7 4.5 3.7 3.7 4.8 4.0 1994 4.5 5.0 3.4 4.2 3.3 3.4 5.3 4.2 1995 4.5 3.4 4.3 3.5 3.7 5.3 4.2 1996 4.1 4.2 3.5 4.4 3.6 3.8 4.9 4.1 1997 4.1 3.9 3.3 3.6 3.4 3.9 5.0 4.3 1998 3.8 4.2 3.4 4.1 2.9 3.3 4.8 4.1 1999 4.0 4.4 3.0 4.0 3.2 3.2 4.8 4.4 1998 bect 3.1 3.8 3.4 3.8 2.8 3.4 5.0 4.3 1999 March‡ 4.8 4.3 2.8 3.6 3.5 3.7 4.9 4.8 1999 Dect; 3.4	2000 March‡	7.7	6.0	4.3	5.7	5.2	5.1	7.3	6.2
1993 1.1 4.2 4.7 3.7 4.5 3.7 3.7 4.8 4.0 1994 4.5 5.0 3.4 4.2 3.3 3.4 5.4 3.9 1995 4.5 4.5 3.4 4.3 3.5 3.7 5.3 4.2 1996 4.1 4.2 3.5 4.4 3.6 3.8 4.9 4.1 1997 4.1 3.9 3.3 3.6 3.4 3.9 5.0 4.3 1998 3.8 4.2 3.4 4.1 2.9 3.3 4.8 4.1 1999 4.0 4.4 3.0 4.0 3.2 3.2 4.8 4.4 1998 Sept 3.1 3.8 3.4 3.8 2.8 3.4 4.2 4.3 1999 Junc‡ 4.8 4.3 2.8 3.6 3.5 3.7 4.9 4.8 1999 Junc‡ 4.2 4.3 3.7 2.6 5.6 3.7 1999 Junc‡ 4.2 4.	Neonatal mortal	lity (deaths under 4 w	veeks per 1,000 liv	ve births)					
19944.55.03.44.23.33.45.43.919954.54.53.44.33.53.75.34.219964.14.23.54.43.63.84.94.119974.13.93.33.63.43.95.04.319983.84.23.44.12.93.34.84.119994.04.43.04.03.23.24.84.41998 Sept3.13.83.43.82.83.44.24.31998 Dec4.24.33.75.13.43.45.04.31999 March‡4.84.32.83.63.53.74.94.81999 Ine‡4.24.72.94.02.92.65.63.71999 Sept3.45.13.64.83.72.64.44.71999 Dec‡3.93.52.83.82.94.04.24.32000 March‡5.24.33.04.23.33.04.74.6Perinatal mortality (stillbirths and deaths under I week per 1,000 total births)?19939.38.98.19.57.67.910.69.219949.29.17.89.57.67.910.69.219959.59.37.79.77.57.410.18.6 </td <td>1993</td> <td>4.2</td> <td>4.7</td> <td>3.7</td> <td>4.5</td> <td>3.7</td> <td>3.7</td> <td>4.8</td> <td>4.0</td>	1993	4.2	4.7	3.7	4.5	3.7	3.7	4.8	4.0
1773 $+3$ $+3$ 5.7 $+3$ 5.3 5.7 5.3 5.7 4.1 19964.13.93.33.63.43.9 5.0 4.319983.84.23.44.12.93.34.84.119994.04.43.04.03.23.24.84.41998 Sept3.13.83.43.82.83.44.24.31998 Dec4.24.33.75.13.43.45.04.31999 March‡4.84.32.83.63.53.74.94.81999 June‡4.24.72.94.02.92.65.63.71999 Sept‡3.45.13.64.83.72.64.44.71999 Dec‡3.93.52.83.82.94.04.24.32000 March‡5.24.33.04.23.33.04.74.6Perinatal mortality (stillbirths and deaths under I week per I,000 total births);19939.38.98.19.57.67.910.69.219949.29.17.89.57.67.910.69.219959.59.37.79.77.57.410.18.619968.58.77.59.67.87.510.28.719978.27.97.38.97.38.	1994	4.5	5.0	3.4	4.2	3.3	3.4	5.4	3.9
19974.13.93.33.63.43.95.04.319983.84.23.44.12.93.34.84.119994.04.43.04.03.23.24.84.41998 Sept3.13.83.43.82.83.44.24.31998 Dec4.24.33.75.13.43.45.04.31999 March‡4.84.32.83.63.53.74.94.81999 Jone‡4.24.72.94.02.92.65.63.71999 Sept‡3.45.13.64.83.72.64.44.71999 Dec‡3.93.52.83.82.94.04.24.32000 March‡5.24.33.04.23.33.04.74.6Perinatal mortality (stillbirths and deaths under 1 week per 1,000 total births)#19939.38.98.19.57.67.99.98.919949.29.17.89.57.67.910.69.219959.59.37.79.77.57.410.18.619968.58.77.59.67.87.510.28.719978.27.97.38.97.38.79.68.819988.68.77.49.06.87.39.38.8	1996	4.1	4.2	3.5	4.4	3.6	3.8	4.9	4.1
1998 3.8 4.2 3.4 4.1 2.9 3.3 4.8 4.1 1999± 4.0 4.4 3.0 4.0 3.2 3.2 4.8 4.4 1998 Sept 3.1 3.8 3.4 3.8 2.8 3.4 4.2 4.3 1998 Dec 4.2 4.3 3.7 5.1 3.4 3.4 5.0 4.3 1999 March‡ 4.8 4.3 2.8 3.6 3.5 3.7 4.9 4.8 1999 June‡ 4.2 4.7 2.9 4.0 2.9 2.6 5.6 3.7 1999 Sept‡ 3.4 5.1 3.6 4.8 3.7 2.6 4.4 4.7 1999 Dec‡ 3.9 3.5 2.8 3.8 2.9 4.0 4.2 4.3 2000 March‡ 5.2 4.3 3.0 4.2 3.3 3.0 4.7 4.6 Perinatal mortality (stillbirths and deaths under I week per I,000 total births)† 1993 9.3 8.9 8.1 9.5 7.6 7.9	1997	4.1	3.9	3.3	3.6	3.4	3.9	5.0	4.3
1999 1998 1998 1998 Dec4.04.03.23.24.84.41998 1998 Dec3.13.83.43.82.83.44.24.31999 1990 1999 1990 1990 1999 1990 1990 1992 1990 1992 1990 1992 1992 1992 1992 1992 1992 1992 1992 1992 1992 1992 1992 1992 1992 1992 1993 1993 	1998	3.8	4.2	3.4	4.1	2.9	3.3	4.8	4.1
1998 Sept 3.1 3.8 3.4 3.8 2.8 3.4 4.2 4.3 1998 Dec 4.2 4.3 3.7 5.1 3.4 3.4 5.0 4.3 1999 March‡ 4.8 4.3 2.8 3.6 3.5 3.7 4.9 4.8 1999 June‡ 4.2 4.7 2.9 4.0 2.9 2.6 5.6 3.7 1999 Sept‡ 3.4 5.1 3.6 4.8 3.7 2.6 4.4 4.7 1999 Dec‡ 3.9 3.5 2.8 3.8 2.9 4.0 4.2 4.3 2000 March‡ 5.2 4.3 3.0 4.2 3.3 3.0 4.7 4.6 Perinatal mortality (stillbirths and deaths under I week per I,000 total births)† 1993 9.3 8.9 8.1 9.5 7.6 7.9 9.9 8.9 1994 9.2 9.1 7.8 9.5 7.6 7.9 9.0 8.9 1994 9.2 9.1 7.8 9.5 7.6 7.9	1999‡	4.0	4.4	3.0	4.0	3.2	3.2	4.8	4.4
1998 Dec 4.2 4.3 3.7 5.1 3.4 3.4 5.0 4.3 1999 March‡ 4.8 4.3 2.8 3.6 3.5 3.7 4.9 4.8 1999 June‡ 4.2 4.7 2.9 4.0 2.9 2.6 5.6 3.7 1999 Sept‡ 3.4 5.1 3.6 4.8 3.7 2.6 4.4 4.7 1999 Dec‡ 3.9 3.5 2.8 3.8 2.9 4.0 4.2 4.3 2000 March‡ 5.2 4.3 3.0 4.2 3.3 3.0 4.7 4.6 Perinatal mortality (stillbirths and deaths under I week per I,000 total births)† V V V 9.9 8.9 1993 9.3 8.9 8.1 9.5 7.6 7.9 9.9 8.9 1994 9.2 9.1 7.8 9.5 7.6 7.9 9.9 8.9 1995 9.5 9.3 7.7 9.7 7.5 7.4 10.1 8.6 1996 8.5 8.7 <	1998 Sept	3.1	3.8	3.4	3.8	2.8	3.4	4.2	4.3
1999 March‡ 4.8 4.3 2.8 3.6 3.5 3.7 4.9 4.8 1999 June‡ 4.2 4.7 2.9 4.0 2.9 2.6 5.6 3.7 1999 Sept‡ 3.4 5.1 3.6 4.8 3.7 2.6 4.4 4.7 1999 Dec‡ 3.9 3.5 2.8 3.8 2.9 4.0 4.2 4.3 2000 March‡ 5.2 4.3 3.0 4.2 3.3 3.0 4.7 4.6 Perinatal mortality (stillbirths and deaths under I week per I,000 total births)† V V V 9.9 8.9 1994 9.2 9.1 7.8 9.5 7.6 7.9 9.9 8.9 1995 9.5 9.3 7.7 9.7 7.5 7.4 10.1 8.6 1996 8.5 8.7 7.9 9.6 7.8 7.5 10.2 8.7 1997 8.2 7.9 7.3 8.9 7.3 8.7 9.6 8.8 1996 8.6 8.7 <td>1998 Dec</td> <td>4.2</td> <td>4.3</td> <td>3.7</td> <td>5.1</td> <td>3.4</td> <td>3.4</td> <td>5.0</td> <td>4.3</td>	1998 Dec	4.2	4.3	3.7	5.1	3.4	3.4	5.0	4.3
1777 June: 1999 Sept: 1999 Sept: 3.94.24.72.74.02.92.65.65.73.71999 Dect: 1999 Dect:3.93.52.83.82.94.04.24.32000 March: Perinatal mortality (stillbirths and deaths under I week per I,000 total births)† 3.0 4.23.33.04.74.6Perinatal mortality (stillbirths and deaths under I week per I,000 total births)†19939.38.98.19.57.67.99.98.919949.29.17.89.57.67.910.69.219959.59.37.79.77.57.410.18.619968.58.77.59.67.87.510.28.719978.27.97.38.97.38.79.68.819988.68.77.49.06.87.39.38.8	1999 March‡	4.8	4.3	2.8	3.6	3.5	3.7	4.9	4.8
1999 Dect 3.9 3.5 2.8 3.8 2.9 4.0 4.2 4.3 2000 March‡ 5.2 4.3 3.0 4.2 3.3 3.0 4.7 4.6 Perinatal mortality (stillbirths and deaths under I week per I,000 total births)† 1993 9.3 8.9 8.1 9.5 8.4 7.9 9.9 8.9 1994 9.2 9.1 7.8 9.5 7.6 7.9 10.6 9.2 1995 9.5 9.3 7.7 9.7 7.5 7.4 10.1 8.6 1996 8.5 8.7 7.5 9.6 7.8 7.5 10.2 8.7 1997 8.2 7.9 7.3 8.9 7.3 8.7 9.6 8.7 9.3 8.8 1998 8.6 8.7 7.4 9.0 6.8 7.3 9.3 8.8	1999 Sept+	+. 2 3 4	4 ./ 5.1	2.7	4.0	2.7 3.7	2.6	5.0 4.4	5.7 4.7
2000 March‡ 5.2 4.3 3.0 4.2 3.3 3.0 4.7 4.6 Perintal mortality (stillbirths and deaths under I week per I,000 total births)† 1993 9.3 8.9 8.1 9.5 8.4 7.9 9.9 8.9 1994 9.2 9.1 7.8 9.5 7.6 7.9 10.6 9.2 1995 9.5 9.3 7.7 9.7 7.5 7.4 10.1 8.6 1996 8.5 8.7 7.5 9.6 7.8 7.5 10.2 8.7 1997 8.2 7.9 7.3 8.9 7.3 8.7 9.6 8.7 1998 8.6 8.7 7.4 9.0 6.8 7.3 9.3 8.8	1999 Dec‡	3.9	3.5	2.8	3.8	2.9	4.0	4.2	4.3
Perinatal mortality (stillbirths and deaths under I week per I,000 total births)† 1993 9.3 8.9 8.1 9.5 8.4 7.9 9.9 8.9 1994 9.2 9.1 7.8 9.5 7.6 7.9 10.6 9.2 1995 9.5 9.3 7.7 9.7 7.5 7.4 10.1 8.6 1996 8.5 8.7 7.5 9.6 7.8 7.5 10.2 8.7 1997 8.2 7.9 7.3 8.9 7.3 8.6 8.7 7.4 9.0 6.8 7.3 9.3 8.8 1998 8.6 8.7 7.4 9.0 6.8 7.3 9.3 8.8	2000 March‡	5.2	4.3	3.0	4.2	3.3	3.0	4.7	4.6
1973 9.3 8.9 8.1 9.5 8.4 7.9 9.9 8.9 1994 9.2 9.1 7.8 9.5 7.6 7.9 10.6 9.2 1995 9.5 9.3 7.7 9.7 7.5 7.4 10.1 8.6 1996 8.5 8.7 7.5 9.6 7.8 7.5 10.2 8.7 1997 8.2 7.9 7.3 8.9 7.3 8.7 9.6 8.8 1998 8.6 8.7 7.4 9.0 6.8 7.3 9.3 8.8	Perinatal mortal	ity (stillbirths and de	aths under I wee	k per 1,000 total bi	rths)†	<u>.</u>	7.0		
1995 9.5 9.3 7.7 9.7 7.5 7.4 10.1 8.6 1996 8.5 8.7 7.5 9.6 7.8 7.5 10.1 8.6 1997 8.2 7.9 7.3 8.9 7.3 8.7 9.6 8.8 1998 8.6 8.7 7.4 9.0 6.8 7.3 9.3 8.8	1993	7.3 9.2	8.9 9 I	8.1 7.8	7.5 9.5	8.4 7.6	7.9 7.9	9.9	8.9 9.2
1996 8.5 8.7 7.5 9.6 7.8 7.5 10.2 8.7 1997 8.2 7.9 7.3 8.9 7.3 8.7 9.6 8.8 1998 8.6 8.7 7.4 9.0 6.8 7.3 9.3 8.8	1995	9.5	9.3	7.7	9.7	7.5	7.4	10.1	8.6
199/ 8.2 7.9 7.3 8.9 7.3 8.7 9.6 8.8 1998 8.6 8.7 7.4 9.0 6.8 7.3 9.3 8.8	1996	8.5	8.7	7.5	9.6	7.8	7.5	10.2	8.7
יייי 0.0 0.1 יד 7.0 0.0 /.3 7.3 8.8	1997	8.2	/.9	7.3 7 4	8.9	/.3	8.7 7 0	9.6	8.8
1999± 8.3 8.1 7.1 8.9 6.9 7.8 9.9 8.6	1999‡	8.3	8.1	7.1	8.9	6.9	7.8	9.9	8.6

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

8.4 9.9

9.0 9.0 8.5 9.1

10.0

6.4 8.6

7.0 7.5 6.9 6.9

7.1

6.9 7.5

7.9 6.4 6.8 6.7

7.7

7.6 8.2

8.5 7.1 7.8 8.0

6.4

8.0 9.4

10.6 10.7 9.9 8.5

9.9

7.0 9.7

8.5 7.8 9.3 8.8

8.9

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

7.0 8.8

9.6 9.0 7.6 7.0

10.0

8.8 8.5

9.0 8.6 8.9 6.2

6.8

1998 Sept 1998 Dec

1999 March‡ 1999 June‡ 1999 Sept‡ 1999 Dec‡

2000 March‡

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

Table 6.3

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

								Malignant ı	neoplasms				
Year and quarter	All d	eaths Rate**	All causes	Oesophagus	Stomach	Colon, rectum, rectosigmoid junction and anus	Trachea, bronchus and lung	Melanoma of skin	Other neoplasm of skin	Breast	Cervix uteri	Ovary and other uterine	Prostate
	(thousands)			(150)	(151)	(153,154)	(162)	(172)	(173)	(174)	(180)	(183)	(185)
Malac				1]
1971	200 1	1 207	12 464	74	217	221	1.044	10	12				100
17/1	200.4	1,207	13,404	76	202	220	1,000	10	12				170
1981	289.0	1,240	12 200	90	251	316	1,028	17	9	•			211
1986	287.9	1,170	11 349	101	221	313	949	18	9				217
1991	277.6	1,121	10,234	117	185	310	841	23	10	:	:	:	302
1993	279.6	1,109	10,010	123	162	294	766	25	8	:	:	:	296
1994	267.6	1,057	9,502	128	162	283	743	24	9	:	:	:	295
1995	274.4	1,079	9,582	126	148	281	712	26	9	:	:	:	296
1996	268.7	1,051	9,271	126	145	272	681	25	8	:	:	:	287
1997	264.9	1,031	9,019	125	136	267	649	25	7	:	:	:	277
1998	264.7	1,025	8,895	128	131	262	641	26	8	:	:	:	274
1999‡	263.2	1,019	8,850	128	128	252	614	27	7	:	:	:	273
1998 Jun	64.1	996	8,646	127	127	256	621	26	8	:	:	:	272
1998 Sept	60.6	931	8,089	131	133	259	634	26	6	:	:	:	271
1998 Dec	70.4	1,082	9,375	129	134	262	654	26	9	:	:	:	280
1999 Mar‡	75.1	1,180	10,209	125	137	255	618	24	7	:	:	:	273
1999 Jun‡	60.8	944	8,208	126	127	248	607	26	6	:	:	:	264
1999 Sept‡	59.0	906	7,891	126	119	245	609	29	8	:	:	:	266
1999 Dec‡	68.3	1,050	9,115	134	129	261	624	30	7	:	:	:	289
2000 Mar‡	75.7	1,180	10,222	138	119	255	613	29	7	:	:	:	271
Females													
1971	278.9	1,104	8,186	40	149	255	183	14	6	379	83	127	:
1976	298.5	1,176	8,303	43	136	262	219	16	6	393	78	125	:
1981	288.9	1,134	7,433	42	111	231	252	16	5	405	69	122	:
1986	293.3	1,141	6,947	47	89	220	285	19	4	420	69	121	:
1991	292.5	1,127	6,399	49	/4	207	300	18	4	401	54	118	:
1993	299.2	1,140	6,347	51	66	190	294	22	3	376	47	116	:
1994	285.6	1,085	6,039	50	66	187	298	22	4	370	42	114	:
1995	295.2	1,119	6,128	52	61	179	294	20	4	359	42	116	:
1996	291.5	1,102	5,995	51	55	174	292	20	3	343	41	122	:
1997	290.4	1,095	5,925	51	57	169	285	20	3	336	37	115	:
1998	290.3	1,091	5,874	49	54	163	291	21	3	327	35	117	:
1999‡	290.4	1,091	5,852	52	50	161	289	20	3	319	33	112	:
1998 Jun	69.3	1,044	5,651	48	57	161	276	18	3	312	34	113	:
1998 Sept	65.3	973	5,303	50	57	167	285	22	3	325	35	118	:
1998 Dec	78.5	1,170	6,261	52	50	168	311	23	3	340	35	117	:
1999 Mar‡	86.6	1,319	6,897	53	51	163	287	19	3	326	33	115	:
1999 Jun‡	65.4	985	5,353	55	49	157	286	20	3	315	33	109	:
1999 Sept‡	63.4	946	5,176	50	50	165	282	21	2	313	33	115	:
1999 Dec‡	75.0	1,118	5,998	50	52	160	301	18	3	321	33	110	:
2000 Mar‡	85.6	1,294	6,775	54	45	156	293	23	2	322	34	113	:

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

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

** Per 100,000 population.

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

Notes I. Between I January 1984 and 31 December 1992, ONS applied the International Classification of Diseases Selection Rule 3 in the coding of deaths where terminal events and other 'modes of dying' such as cardiac arrest, cardiac failure, certain thromboembolic disorders, and unspecified pneumonia and bronchopneumonia, were stated by the certifier to be the underlying cause of death and other major pathology appeared on the certificate. In these cases Rule 3 allows the terminal event to be considered a direct sequel to the major pathology and that primary condition was selected as the underlying cause of death. Prior to 1984 and from 1993 onwards, such certificates are coded to the terminal event. 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 may be found in the annual volumes *Mortality statistics*: Cause 1984, Series DH2 no.11, and *Mortality statistics*: Cause 1993 (*revised*) and 1994, Series DH2 no.21.

2 On I January 1986 a new certificate for deaths within the first 28 days of life was introduced. It is not possible to assign one underlying cause of death from this certificate. The 'cause' figures for 1986 onwards therefore exclude deaths at ages under 28 days.

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

[‡] Provisional registrations.

Table 6.3 continued

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

Malignant	neoplasms												
Bladder	Leukaemia	Diabetes mellitus	lschaemic heart disease	Cerebro- vascular disease	Pneumonia	Bronchitis, emphysema and allied conditions	Asthma	Gastric, duodenal and peptic ulcers	Chronic liver disease and cirrhosis	Chronic renal failure	Motor vehicle traffic accidents	Suicides and undeter- mined deaths	Year and quarter
(188)	(204-208)	(250)	(410-414)	(430-438)	(480-486)	(490-492, 496)	(493)	(531-533)	(571)	(585)	(E810-E819)	(E950-E959, E980-E989 exc. E9888)	
													Males
124	74	82	3.801	1.541	920	944	21	107	35	48	198	124	1971
128	76	91	3,930	1,357	1,237	852	17	108	45	61	170	135	1976
121	74	82	3,664	1,141	1,054	683	28	90	49	44	113	151	1981
120	75	134	3,463	1,071	460	725	33	85	56	38	130	154	1986
121	76	130	2,981	939	390	605	31	73	70	24	117	158	1991
114	69	100	2 829	794	759	566	24	67	67	21	90	149	1993
109	68	97	2,525	755	679	494	23	67	67	20	86	148	1994
111	70	100	2,575	754	753	524	20	63	75	21	83	146	1995
104	65	96	2,410	743	725	480	19	63	88	19	87	137	1996
100	66	94	2,261	714	741	475	19	61	95	17	86	140	1997
98	66	93	2,200	699	709	460	18	59	105	17	79	147	1998
93	67	94	2,097	674	760	471	18	65	110	18	82	149	1999±
													·
100	64	86	2,149	681	673	421	18	55	106	18	84	155	1998 Jun
97	66	85	1,945	624	537	354	17	55	106	16	76	145	1998 Sept
100	70	104	2,328	745	797	513	19	64	102	19	77	129	1998 Dec
94	67	105	2.418	788	1.121	686	20	80	107	23	81	142	1999 Mar±
90	66	88	1,990	640	577	373	14	57	103	17	85	146	1999 lun±
96	66	83	1.829	580	538	342	19	55	110	15	71	154	1999 Sept±
93	68	101	2,156	688	807	488	19	67	118	19	89	152	1999 Dec‡
97	67	109	2,364	748	1,226	664	20	75	121	20	82	147	2000 Mar‡
22	47	00	1.770	1 252	(22	102	25	44	24	20	90	04	remaies
32	40	07	1,000	1,352	023	173	25	44	20	30	60	0 1	17/1
33	40	01 44	1,774	1,212	024 741	103	20	47	27	33	20	01	17/0
36	46	100	1,601	930	349	194	30	52	38	20	49	67	1986
34	43	95	1,404	809	324	211	30	46	45	13	44	51	1991
34	43	73	1,330	711	569	223	27	45	43	12	34	48	1993
34	42	69	1,222	677	499	202	24	43	46	12	33	44	1994
32	41	72	1,179	677	553	227	24	42	49	11	29	46	1995
31	40	67	1,126	667	534	220	21	43	52	10	29	44	1996
31	43	65	1,060	639	559	225	23	41	55	9	28	45	1997
31	40	64	1,042	634	533	225	22	40	58	11	27	43	1998
30	44	64	970	617	5/1	237	22	39	62	9	27	45	1999‡
32	34	61	1,019	616	489	197	20	41	55	11	26	46	1998 Jun
32	40	60	923	572	376	156	19	34	55	9	28	42	1998 Sept
29	45	69	1,092	664	625	262	25	42	65	П	24	35	1998 Dec
20	AC	73	1 1 25	710	000	252	24		(2	12	77	<i>A</i> 1	
27	- 1 0 ⊿∩	/ S 4 I	1,135	/17 500	200 ⊿ว⊑	172	∠0 7	- 11 27	40	12	2/	וד כ⊿	1999 hunt
30	-1U 21	57	212	540	-123 272	1/2	20	37	60	/ 0	27	د ا 7⊿	1999 Saatt
21	- 11 ∡Ω	45	0 4 0 004	5 4 2 676	5/2	262	20	20	63	7	27	47	1999 Doct
51	-10	05	777	020	707	203	23	37	00	10	20	77	1777 Dect
30	41	75	1,083	671	928	357	29	53	64	9	30	42	2000 Mar‡

Report: Infant and perinatal mortality 1999: health areas, England and Wales

This report gives provisional statistics of live births, stillbirths and infant deaths registered in 1999 in England and Wales, for each health authority and regional office.

LIVE BIRTHS AND BIRTHWEIGHT

In 1999 there were 621,872 live births in England and Wales (Table 1),

compared to 635,901 in 1998, a decrease of 2.2 per cent. Of live births in 1999 with a stated birthweight, 7.6 per cent weighed less than 2,500 grams (low birthweight), compared with 7.5 per cent in 1998. Also, 1.3 per cent of live births with a stated birthweight were under 1,500 grams (very low birthweight), a slight increase from 1.2 per cent in 1998. Table 2 gives the proportions of low and very low birthweight babies for each health area in 1999.

Live births, stillbirths and infant deaths, † 1973-99 Table I

England and Wales

				Dea	ths	
Year	Live births	Stillbirths+	Under I week	Under 4 weeks	4 weeks – I year	Under I year
Numbers						
1973 1978 1983 1988	675,953 596,418 629,134 693,577	7,936 5,108 3,631 3,382	6,438 4,242 2,951 2,701	7,528 5,187 3,682 3,421	3,879 2,694 2,699 2,849	,407 7,88 6,38 6,270
1992 1993 1994	689,656 671,224 664,256	2,944 3,866 3,816	2,294 2,178 2,142	2,955 2,796 2,749	1,584 1,446 1,371	4,539 4,242 4,120
1995 1996 1997 1998 1999	648,001 649,489 643,095 635,901 621,872	3,597 3,539 3,439 3,417 3,305	2,104 2,066 1,941 1,835 1,837	2,698 2,645 2,517 2,418 2,439	1,284 1,314 1,282 1,207 1,196	3,982 3,959 3,799 3,625 3,635
		Cattle to a large		Moi	rtality	
Rates		Stilibirth*	Perinatal *	Neonatal**	Postneonatal**	Infant**
1973 1978 1983 1988		11.6 8.5 5.7 4.9	21.0 15.5 10.4 8.7	11.1 8.7 5.9 4.9	5.7 4.5 4.3 4.1	16.9 13.2 10.1 9.0
1992 1993 1994		4.3 5.7 5.7	7.6 9.0 8.9	4.3 4.2 4.1	2.3 2.2 2.1	6.6 6.3 6.2
1995 1996 1997 1998 1999		5.5 5.4 5.3 5.3 5.3	8.7 8.6 8.3 8.2 8.2	4.2 4.1 3.9 3.8 3.9	2.0 2.0 1.9	6.1 6.1 5.9 5.7 5.8

Per 1,000 live births and stillbirths.

Per 1,000 live births. Excluding the 216 stillbirths of 24-27 weeks' gestation which occurred between 1.10.92 and 31.12.92.

Numbers of deaths shown are based on annual occurrences for years 1993 to 1998, and on annual registrations for all other years. t

PERINATAL AND INFANT MORTALITY

In 1999 there were 3,305 stillbirths in England and Wales, and 1,837 deaths at ages under seven days (Table 1). The perinatal mortality rate was 8.2 per thousand live births and stillbirths, the same as in 1998. In 1999 there were also 3,635 infant deaths in England and Wales, with an infant mortality rate of 5.8 per thousand. This slight increase from a rate of 5.7 per thousand in 1998 was a small deviation from the long-term downward trend.

Neonatal deaths (at ages under 28 days) numbered 2,439 in 1999. The neonatal mortality rate was 3.9 per thousand live births, slightly up from 3.8 in 1998. *Postneonatal deaths* (at ages between 28 days and one year) numbered 1,196 in 1999. The postneonatal mortality rate was 1.9 per thousand live births, the same as in 1998.

NEONATAL AND POSTNEONATAL MORTALITY 1974-99

The separate contributions of neonatal and postneonatal deaths to the fall in infant mortality rates over 1974–99 are illustrated in Figure 1.



Over this period the infant mortality rate fell by 64 per cent, while the neonatal and postneonatal rates fell by 65 per cent and 64 per cent, respectively. However, these declines were not uniform over the quarter century.

Between 1974 and 1988 the decline was greater for neonatal deaths, falling by 55 per cent. Over the same period the decline in the postneonatal rate was only 23 per cent.

This pattern reversed between 1988 and 1999. Over this period the neonatal rate fell by only 20 per cent, but the postneonatal rate decreased by 54 per cent. A major reason for the large fall in postneonatal mortality since 1988 has been the reduction in the number of sudden infant deaths. Provisional statistics on the latter are shown in the Report on page 66–70.

Notes

Statistics in the Report

Numbers of live births given here correspond to those in the Report on 1999 births in the recent issue of *Population Trends* 100. These numbers are based on births registered in 1999, while the mortality data here are based on deaths registered in 1999. However, in line with ONS practice in publishing mortality data, final mortality statistics (including rates) will be based on deaths occurring in the year, and will not be available until later in 2000.

Note also that in Table 1 numbers of deaths for 1993 to 1998 are based on occurrences in these years, while numbers for years up to 1992 are based on registrations in each year.

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 regional offices.

Health authority boundary changes

In Table 2 the figures shown are for health authorities and regional offices as on 1 April 1999. 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 Report in *Health Statistics Quarterly* 03, 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 1999 it was recorded for 99.7 per cent.

Legal definition of stillbirths

On 1 October 1992 the legal definition of a stillbirth was altered, 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 1999 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* 1998, series DH3 no 31, published in March 2000.

Table 2

Births, perinatal and infant mortality statistics 1999, health regional office and health authority of usual residence

England and Wales

			Numbers				Mortali	ty rates		Percent live birt	tage of hs with ted
	Birt	ths		Deaths						birthw	veight
Area	Live births	Still births	Under I week	Under 4 weeks	Under I year	Perinatal*	Neonatal**	Post- neonatal* *	Infant**	Under 1,500g	Under 2,500g
England, Wales and Elsewhere***	621,872	3,305	1,837	2,439	3,635	8.2	3.9	1.9	5.8	1.3	7.6
England	589,468	3,128	1,733	2,288	3,379	8.2	3.9	1.9	5.7	1.3	7.6
Northern and Yorkshire	71,183	378	214	288	424	8.3	4.0	1.9	6.0	1.2	8.1
Bradford	7,157	58	25	33	59	11.5	4.6	3.6	8.2	1.6	10.3
Calderdale and Kirklees	7,546	38	26	32	55	8.4	4.2	3.0	7.3	1.3	9.0
County Durham	6,450	33	24	32	46	8.8	5.0	2.2	7.1	1.3	8.3
East Riding Gateshead and South Tyneside	6,026 3,752	25	15	23	34 21	6.6 8.5	3.8 2.9	1.8 2.7	5.6 5.6	0.7	7.9 7.4
Leeds	8,170	40	23	31	50	7.7	3.8	2.3	6.1	1.3	8.8
Newcastle and North Tyneside	4,885	26	9	15	18	7.1	3.1	0.6	3.7	1.2	7.5
North Cumbria	3,205	21	12	18	22	10.2	5.6	1.2	6.9	0.9	6.6
Northumberland NorthYorkshire	3,077 7,697	35	16 20	23 27	25 36	8.7 7.1	7.5 3.5	0.6 1.2	8.1 4.7	1.6 1.0	7.3 6.5
Sunderland	2111	17		0	14	7.4	2.4	24	E I		77
Tees	6,464	35	22	25	26	8.8	3.9	0.2	40	1.1	81
Wakefield	3,643	17	6	10	16	6.3	2.7	1.6	4.4	1.0	8.8
Trent	57,161	277	192	253	347	8.2	4.4	1.6	6.1	1.4	8.1
Barnsley	2,397	17	5	6	10	9.1	2.5	1.7	4.2	1.2	7.8
Doncaster	3,307	18	7		21	7.5	3.3	3.0	6.4	1.3	8.7
	6 3 5 5	34	47	27	41	83	5.6 4.2	1.5	7.0	1.4	8.3 7.2
North Derbyshire	3,763	19	12	15	19	8.2	4.0	1.1	5.0	1.1	7.3
North Nottinghamshire	4,196	13	10	13	19	5.5	3.1	1.4	4.5	1.4	8.1
Nottingham	7,097	28	17	24	40	6.3	3.4	2.3	5.6	1.6	8.5
Rotherham	2,966	9	11	14	19	6.7	4.7	1.7	6.4	1.3	9.7
Sheffield	5,914	34	28	34	41	10.4	5.7	1.2	6.9	1.5	8.4
South Humber	3,389	14	13	16	18	7.9	4.7	0.6	5.3	1.4	7.5
Eastern	62,685	308	137	190	291	7.1	3.0	1.6	4.6	1.1	6.7
Bedfordshire	7,460	54	22	32	49	10.1	4.3	2.3	6.6	1.4	7.8
Cambridgeshire	8,269	40	18	23	39	7.0	2.8	1.9	4.7	0.9	6.9
East and North Hertfordshire	6,309	25	7	16	25	5.1	2.5	1.4	4.0	0.9	6.2
North Essex	8,026 10,290	32 51	26	26 37	38 52	6.2 7.4	3.2 3.6	1.5	4.7 5.1	1.0	7.1 6.4
South Erroy	0 440	20	12	17	20	6.0	2.0	15	2 5	1.0	4 1
Suffolk	7,240	35	22	24	35	7.8	3.3	1.5	48	1.0	7.0
West Hertfordshire	6,629	32	12	15	23	6.6	2.3	1.2	3.5	1.0	6.4
London	105,545	624	324	426	636	8.9	4.0	2.0	6.0	1.5	8.0
Barking and Havering	4,843	20	19	21	26	8.0	4.3	1.0	5.4	1.2	6.8
Barnet	4,211	15	1/	20	25	7.6	4./	1.2	5.9	1.5	/.8
Bexley and Greenwich Brent and Harrow	5,736	28 46	25	37	26 56	10.7	3.Z 5.6	1.2	4.4	1.3	7.7 93
Bromley	3,583	16	9	10	13	6.9	2.8	0.8	3.6	1.2	6.7
Camden and Islington	5,280	31	21	28	42	9.8	5.3	2.7	8.0	1.7	7.9
Croydon	4,599	24	24	29	36	10.4	6.3	1.5	7.8	1.5	7.6
Ealing, Hammersmith and Hounslow	10,282	56	32	37	55	8.5	3.6	1.8	5.3	1.3	8.1
Enfield and Haringey	7,456	39	43 21	29	90 47	8.0	4.6 3.9	2.7	6.3	1.5	9.8 7.9
Hillingdon	3 329	22	5	6	11	81	18	15	33	3	74
Kensington & Chelsea and	4.420	22	5		10	0.0		1.5	4.5		
vvestminster Kingston and Richmond	4,438 1 277	32	8	 	19	8.9	2.5	1.8	4.3 2.7	1.2	6.6 5 7
Lambeth, Southwark and Lewisham	2.465	87	42	57	89	10.3	4.6	2.6	2./ 7.1	1.1	5.7 9.4
Merton, Sutton and Wandsworth	9,192	47	23	29	42	7.6	3.2	1.4	4.6	1.3	6.7
Redbridge and Waltham Forest	6,616	52	17	31	47	10.3	4.7	2.4	7.1	1.8	7.9
South East	101,127	459	245	326	497	6.9	3.2	1.7	4.9	1.2	6.8
Berkshire	10,746	46	34	47	62	7.4	4.4	1.4	5.8	1.2	7.1
Buckinghamshire	8,758	35	21	24	34	6.4	2.7	1.1	3.9	1.2	7.0

per 1,000 live and stillbirths.
 per 1,000 live births.
 including births and deaths to persons normally resident outside England and Wales.

Table 2 continued

Births, perinatal and infant mortality statistics 1999, health regional office and health authority of usual residence

England and Wales

			Numbers				Mortalit	y rates		Percentage of live births with a stated	
-	Bir	ths		Deaths		-				birthw	eight
Area	Live births	Still births	Under I week	Under 4 weeks	Under I year	Perinatal*	Neonatal**	Post- neonatal**	Infant**	Under 1,500g	Under 2,500g
East Surrey East Sussex, Brighton and Hove	4,915 7,735	32 36	6 20	 26	15 43	7.7 7.2	2.2 3.4	0.8 2.2	3.1 5.6	1.0 1.4	6.5 7.0
Isle of Wight	1,137	8	3	5	6	9.6	4.4	0.9	5.3	0.8	6.8
North and Mid Hampshire	6,901	36	20	24	38	8.1	3.5	2.0	5.5	1.1	6.4
Northamptonshire	7,481	33	24	31	49	7.6	4.1	2.4	6.5	1.4	7.4
Portsmouth and South East Hampshire	7,354 6,024	30	16	28	44 29	6.2 7.8	3.8 3.7	1.2	6.0 4.8	1.2	6.7
Southampton and South West Hampshire	5,868	26	16	17	27	7.1	2.9	1.7	4.6	1.4	7.1
West Kent	12,153	56	25	33	58	6.6	2.7	2.1	4.8	1.3	6.6
West Surrey West Sussex	7,603 7,993	24 36	13	20 17	31 29	4.9 6.4	2.6 2.1	1.4 1.5	4.1 3.6	1.0 1.0	6.4 6.7
South West	52,075	279	131	167	240	7.8	3.2	1.4	4.6	1.1	6.8
Avon	11.459	71	31	40	56	88	3.5	14	49	10	6.8
Cornwall and Isles of Scilly	4,896	23	15	16	23	7.7	3.3	1.4	4.7	1.2	6.5
Dorset	6,445	40	19	23	31	9.1	3.6	1.2	4.8	1.1	6.8
Gloucestershire	6,240	35	17	19	32	8.3	3.0	2.1	5.1	1.0	6.8
North and East Devon	4,687	16	13	16	26	6.2	3.4	2.1	5.5	1.0	6.2
Somerset	5,021	27	15	19	23	8.3	3.8	0.8	4.6	1.3	6.6
South and West Devon Wiltshire	5,939 7,388	29 38	6	3 2	23 26	5.9 7 I	2.2 2.8	1.7 0.7	3.9 3.5	1.1	7.0 7.2
West Midlands	63,466	391	243	304	440	9.9	4.8	2.1	6.9	1.4	8.5
Birmingham	14.491	109	66	78	119	12.0	54	28	82	16	99
Coventry	3,727	27	12	16	28	10.4	4.3	3.2	7.5	1.5	8.1
Dudley	3,451	16	13	19	32	8.4	5.5	3.8	9.3	1.6	8.6
Herefordshire North Staffordshire	1,729 4.976	7 32	5 23	7 27	8 42	6.9 11.0	4.0 5.4	0.6 3.0	4.6 8.4	1.5 1.4	6.9 8.4
Sandwall	2 054	20	14	10	25	110	47	1.0	4 5	14	10.7
Shropshire	4,918	17	10	18	18	5.5		1.8	3.7	1.0	6.3
Solihull	2,114	17	7	9	ii	11.3	4.3	0.9	5.2	0.9	6.1
South Staffordshire	6,355	48	24	34	41	11.2	5.4	1.1	6.5	1.2	7.5
Walsall	3,342	15	17	21	29	9.5	6.3	2.4	8.7	1.6	9.9
Warwickshire	5,514	19	15	20	28	6.1	3.6	1.5	5.1	1.4	7.2
Wolverhampton	3,039	16	13	17	27	9.5	5.6	3.3	8.9	2.0	10.3
VVorcestershire	5,954	38	22	26	32	10.0	4.4	1.0	5.4	1.1	7.6
North West	76,226	412	247	334	504	8.6	4.4	2.2	6.6	1.3	7.8
Bury and Rochdale	4,872	34	3	20	38	9.6	4.1	3.7	7.8	1.4	8.3
East Lancashire	6,683	28	23	30	48	7.6	4.5	2.7	7.2	1.3	8.6
Liverpool Manchester	5,121	32	20	23	34 52	10.1	4.5	2.1	6.6 9.2	1.2	8.U 9.8
Morecambe Bay	3,086	8	9	11	15	5.5	3.6	1.3	4.9	1.1	6.7
North Cheshire	3.879	П	П	16	18	5.7	4.1	0.5	4.6	1.2	6.4
North West Lancashire	4,807	31	12	17	29	8.9	3.5	2.5	6.0	1.5	8.4
St Helen's and Knowsley	3,871	28	12	15	28	10.3	3.9	3.4	7.2	1.1	7.2
Salford and Trafford Sefton	5,265 2,738	28 13	15 17	21 22	25 26	8.1 10.9	4.0 8.0	0.8 1.5	4.7 9.5	1.0 1.6	8.2 7.0
	7004		10				2.7		- /		
South Cheshire	7,294	36	18	27	41	7. 4 9.8	3.7	1.9	5.6 7.7	1.1	6.4 6.9
Stockport	3,158	ii	9	13	19	6.3	4.1	1.5	6.0	1.2	6.6
West Pennine	6,079	34	15	20	37	8.0	3.3	2.8	6.1	1.4	8.6
Wigan and Bolton Wirral	6,814 3.506	41 24	23 8	32 10	45 23	9.3 9.1	4.7 2.9	1.9 3.7	6.6 6.6	1.2 1.3	8.5 7.0
Wales	32,111	155	97	131	207	7.8	4.1	2.4	6.4	1.3	7.4
Bro Taf	8,371	40	26	34	53	7.8	4.1	2.3	6.3	1.4	7.6
Dyfed Powys	4,844	24	18	25	33	8.6	5.2	1.7	6.8	1.5	6.8
Gwent Morgannug	6,390	31	17	22	41	7.5	3.4	3.0	6.4	1.5	8.3
North Wales	5, 404 7,102	34	17	∠5 25	36 44	7.7	4.0 3.5	2.0	6.7	1.4	6.5
	.,	2.									

per 1,000 live and stillbirths.
 per 1,000 live births.
 including births and deaths to persons normally resident outside England and Wales.

Report: Sudden infant deaths 1999

This report presents provisional statistics on sudden infant deaths in England and Wales which occurred in 1999. It also compares the number of sudden infant deaths by sex, age at death and month of occurrence with data from 1995 to 1998.

There were 279 sudden infant deaths which occurred in England and Wales in 1999, compared with 286 in 1998, a decrease of two per cent. The sudden infant death rate remained the same as in 1998, at 0.45 per 1,000 live births.

Key findings for the period 1995–99:

- Sudden infant deaths are more common amongst boys than girls. In the period 1995–99, 60 per cent of all sudden infant deaths occurred amongst boys, whilst boys comprised 51 per cent of all live births.
- In the period 1995-99, 88 per cent of sudden infant deaths occurred in the postneonatal period (ie deaths at ages 28 days and over).
- In the period 1995–99 there were 31 per cent more sudden infant deaths in the three month period January to March compared with the three month period July to September.

Key findings for 1999:

- The sudden infant death rate was highest for babies weighing 1,500-1,999 grams and then it decreased with increasing birthweight. The rate for babies weighing 1,500-1,999 grams was seven times higher than that for babies weighing 3,500 grams and over.
- The sudden infant death rate was highest for children of mothers aged under 20 compared to all other age groups at the time of the child's birth.
- There were only 21 infant deaths (eight per cent) whose mothers were born outside the United Kingdom compared to 89,014 (14 per cent) of live births.

- The sudden infant death rate was lowest for babies born inside marriage. The sudden infant death rate for babies born outside marriage where only the mother registered the birth was over five times higher compared to babies born inside marriage.
- The rate for babies born inside marriage to mothers who had no previous births was 64 per cent lower than the overall sudden infant death rate.
- For births inside marriage, the babies of fathers in social class V had the highest sudden infant death rate compared to babies of fathers in the other social classes. In all social classes babies born outside marriage had higher sudden infant death rates than babies born inside marriage.

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.

Future changes to the data

The 1999 statistics given in this report relate to our database as at 10 June 2000. Therefore these figures may differ slightly from those published elsewhere.

The 1998 figures have been revised and are based on our database as at 28 October 1999.

Differences in tables

Tables I to 4 include data for years 1995 to 1999 and relate to number of **occurrences** in each year.

Tables 5 to 9 present statistics on sudden infant deaths which occurred in 1999 and which have been linked to their corresponding birth records. 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 I	Sudden inf
	Numbers on

en infant deaths by sex and age at death, 1995–99 ers and rates

England and Wales

Year		Boys			Girls			All babies		
	Neonatal deaths	Postneonatal deaths	Infant deaths	Neonatal deaths	Postneonatal deaths	Infant deaths	Neonatal deaths	Postneonatal deaths	Infant deaths	
	Numbers									
1995	24	217	241	24	133	157	48	350	398	
1996	24	227	251	29	144	173	53	371	424	
1997	23	221	244	22	127	149	45	348	393	
1998	20	144	164	15	107	122	35	251	286	
1999	27	147	174	12	93	105	39	240	279	
	Rates per I,	000 live births								
1995	0.07	0.65	0.73	0.08	0.42	0.50	0.07	0.54	0.61	
1996	0.07	0.68	0.75	0.09	0.46	0.55	0.08	0.57	0.65	
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	0.08	0.46	0.55	0.04	0.31	0.35	0.06	0.39	0.45	



Table 3	Sudde Numbe	e n infant de ers	aths by mo	onth of o	currence	e, 1995–99						England and	d Wales
Year							Ma	nth					
	January	February	March	April	May	June	July	August	September	October	November	December	Total
1995	32	35	50	28	32	34	34	25	30	31	27	40	398
1996	43	43	54	26	31	26	41	24	29	28	35	44	424
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	21	27	20	18	16	26	279

Table 4	Sudden i Numbers	Sudden infant deaths by quarter of occurrence and Health Regional Office, 1999 Numbers and rates												
Year	Quarter	England	Northern	Trent	Anglia and	North	South	South and	West	North	Wales			
	ending	and vvales	and forkshire		Oxford	Inames	Thames	vvest	Inidiands	vvest				
	Number													
1999	March	92	11	9	7	9	16	9	7	16	8			
	June	59	7	5	4	11	5	6	12	5	4			
	September	68	12	3	5	8	9	6	11	8	6			
	December	60	10	4	5	6	12	5	7	6	5			
	Rates per I	000 live birth	5											
1999	March	0.6	0.6	0.6	0.5	0.4	0.6	0.7	0.4	0.9	1.0			
	June	0.4	0.4	0.3	0.3	0.4	0.2	0.5	0.8	0.3	0.5			
	September	0.4	0.7	0.2	0.3	0.3	0.3	0.4	0.7	0.4	0.7			
	December	0.4	0.6	0.3	0.3	0.2	0.5	0.4	0.4	0.3	0.6			

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Table 5
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Live births and infant deaths by birthweight, 1999 Numbers and rates

England and Wales

Birthweight (grams)		Numl	bers	Rates*			
	Births		Deaths				
·	Live births	Neonatal	Postneonatal	Infants	Neonatal	Postneonatal	Infant
All	621,767	38	235	273	0.06	0.38	0.44
0 < 1500	7,978	0	12	12	-	1.50	1.50
1500-1999	9,666	2	15	17	0.21	1.55	1.76
2000-2499	29,509	5	36	41	0.17	1.22	1.39
2500-2999	104,432	12	52	64	0.11	0.50	0.61
3000-3499	222,646	10	70	80	0.04	0.31	0.36
3500 and over	245,704	9	50	59	0.04	0.20	0.24
Not Stated	1.832	0	0	0	-	-	-

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

Table 6 Live births and infant deaths by mother's age, 1999 England and Wales Numbers and rates England and Wales

Mother's age		Num	bers			Rates*	
	Births		Deaths				
	Live births	Neonatal	Postneonatal	Infants	Neonatal	Postneonatal	Infant
All	621,767	38	235	273	0.06	0.38	0.44
Under 20	48,375	9	62	71	0.19	1.28	1.47
20–24	110,711	10	72	82	0.09	0.65	0.74
25–29	181,898	8	39	47	0.04	0.21	0.26
30–34	185,281	8	37	45	0.04	0.20	0.24
35–39	81,261	3	22	25	0.04	0.27	0.31
40 and over	14,241	0	3	3	-	0.21	0.21

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

Table 7

Live births and infant deaths by mother's country of birth, 1999 Numbers and rates

England and Wales

Country of birth		Numb	bers		Rates*			
	Births		Deaths					
	Live births	Neonatal	Postneonatal	Infants	Neonatal	Postneonatal	Infant	
All	621,767	38	235	273	0.06	0.38	0.44	
United Kingdom	532,753	37	215	252	0.07	0.40	0.47	
England and Wales	521,172	36	212	248	0.07	0.41	0.48	
Scotland	8,596	1	3	4				
Northern Ireland	2,642	0	0	0				
Irish Republic	4,468	0	4	4				
Rest of Europe	5,637	0	I	I				
Australia, Canada, New Zealand	3,533	0	3	3				
New Commonwealth	46,197	0	8	8				
Bangladesh	7,374	0	2	2				
Pakistan	13,478	0	0	0				
East Africa	4,159	0	1	I.				
Rest of Africa	6,128	0	I	I.				
Caribbean	2,534	0	I	I				
Rest of World and not stated	18,340	0	3	3				

* Neonatal, postneonatal and infant deaths per I,000 live births. Note: Where no data is shown indicates that the number of deaths in each category is too small to make the publication of rates meaningful.

Table 8Live births and Numbers and rate	infant deaths b s	y marital stat	us, parity (with	in marriage) ai	nd type of regis	tration (outside I E	marriage), 1999 Ingland and Wales	
Marital status		Numb	pers			Rates*		
-	Births		Deaths					
Parity/type of registration	Live births	Neonatal	Postneonatal	Infants	Neonatal	Postneonatal	Infant	
All	621,767	38	235	273	0.06	0.38	0.44	
Inside marriage								
All	379,953	12	67	79	0.03	0.18	0.21	
0	152,479	3	21	24	0.02	0.14	0.16	
I	139,006	3	23	26	0.02	0.17	0.19	
2	56,995	3	9	12	0.05	0.16	0.21	
3 and over	31,473	3	14	17	0.10	0.44	0.54	
Outside marriage								
All	241,814	26	168	194	0.11	0.69	0.80	
Joint registration/same address	149,558	12	82	94	0.08	0.55	0.63	
Joint registration/different address	44,106	5	28	33	0.11	0.63	0.75	
Sole registration	48,150	9	58	67	0.19	1.20	1.39	

 * Neonatal, postneonatal and infant deaths per I ,000 live births.

Table 9

Live births* and infant deaths by social class (based on father's occupation at death registration)^{\dagger}, 1999

Numbers and rates

England and Wales

Social class		Numb	pers		Rates**			
	Births		Deaths					
	Live births*	Neonatal	Postneonatal	Infants	Neonatal	Postneonatal	Infant	
All††	57,405	29	177	206	0.05	0.31	0.36	
Inside Marriage								
All***	38,071	12	67	79	0.03	0.18	0.21	
I	3,954	I	3	4	0.03	0.08	0.10	
II	12,441	4	14	18	0.03	0.11	0.14	
IIIN	3,988	0	7	7	-	0.18	0.18	
IIIM	9,771	3	19	22	0.03	0.19	0.23	
IV	4,701	3	11	14	0.06	0.23	0.30	
V	1.271	1	6	7	0.08	0.47	0.55	
Other	1,945	0	4	4	-	0.21	0.21	
Outside Marriage joint registration								
All***	19,334	17	110	127	0.09	0.57	0.66	
1	640	0	1	1	-	0.16	0.16	
Ш	3,701	3	13	16	0.08	0.35	0.43	
IIIN	1,527	0	8	8	-	0.52	0.52	
IIIM	6,982	5	35	40	0.07	0.50	0.57	
IV	3.765	2	21	23	0.05	0.56	0.61	
V	1,584	5	9	14	0.32	0.57	0.88	
Other	1,135	l l	18	19	0.09	1.59	1.67	

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

rightes for the births are a to ber cent sample code for father's occupation.
 Neonatal, postneonatal and infant deaths per 1,000 live births.
 Includes cases where father's occupation was not stated.
 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.
 Excludes births outside marriage, sole registration.

Report: Registrations of cancer diagnosed in 1994–1997, England and Wales

This Report gives final data on the number of cancers diagnosed in 1994¹ and provisional data on registrations in 1995–97 in England and Wales. It updates the provisional results for 1994–96 which were published in November 1999.² Cancer registration statistics for England and Wales are compiled by ONS from information on individual cases of cancer collected by regionally based cancer registries. The ONS cancer registration system is a person-based database. Information for 1994 is drawn from the national database

which is validated and complete for all registries in England and Wales. Figures for years 1995 to 1997 are based on the complete submission of records for five of the nine registries in England and Wales (just over 40 per cent of the total): for the four registries for which data were not available, it was assumed that the age and sex specific incidence rates changed (compared with the previous year) by the same amount as the average change in those regions for which data were available.


Table 1 contains the numbers of newly diagnosed cases of cancer by five year age group and sex for 1994. Table 2 gives the crude and age specific rates per 100,000 population for 1994. Table 3 gives the provisional numbers of newly diagnosed cases of cancer by age group and sex for years 1995 to 1997. Table 4 gives the crude and age specific rates per 100,000 for years 1995 to 1997. Table 5 presents the directly age standardised rates, using the European standard population, for years 1988 to 1997.

In 1994 there were 224,000 registrations of malignant neoplasms (excluding non-melanoma skin cancer (NMSC)³), 112,000 in both

males and in females. For both males and females just three of the cancer sites (different ones for each sex) constituted over half the total registrations. The top three cancers for males were lung (ICD10 C33-C34), prostate (C61) and colorectal (C18-C21); and for females were breast (C50), colorectal and lung (**Table 1**). The numbers of registrations for the major cancer sites are illustrated in **Figure 1** (corresponding numbers in **Table 1**). The registrations for the fifteen major sites (counting lip and mouth, colorectal cancer and leukaemias each as one) for males represent 89 per cent of the total, and for the sixteen major sites for females, 87 per cent.

Table I

Registrations of newly diagnosed cases of cancer: major sites, sex and age, England and Wales, 1994

								Age grou	ıp (years)				
ICD (10th Revision) number	Site description		All ages	Under I	I-4	5–9	10-14	15–19	20–24	25–29	30–34	35–39	40-44
C00-C97	All malignant neoplasms	м	112,145	76	249	193	176	244	468	699	966	1,127	1,685
xC44		F	112,175	60	219	164	156	183	459	891	1,642	2,381	3,711
C00-C14	All lip & mouth	IMI F	2,364	0	3	0	1	/	3	13	16	4/	93
CIE	Malianant nagalages of a secondary	г	1,300	0	0	2	4	3	6	10	13	24	22
CIS	manghant neoplasm of desophagus	E	3,337	0	0	0	0	0	0	4	° 2	20	22
C14	Malianant nagalague of standah	г	2,444	1	0	0	0	0	1	0	15	т Эс	22
	manghant neoplasm of stomach	E	2 500	0	0	0	0	0	2	0 2	15	20	40
C10	Malignant peoplesm of colon	м	3,377 0 720	0	0	0	0	0	2	14	25	41	72
C10	Frangmant neoplasm of colon	F	0,727	0	0	0	2	1	3	10	17	54	82
	Malignant pooplasm of roctum	м	6 0 8 2	0	0	0	2	1	,	6	19	43	80
C17-C21	r langhant neoplasti of rectum	F	4518	0	0	0	0	0	3	7	14	22	56
C25	Malignant neoplasm of pancreas	M	2 846	0	0	0	Ő	0	0	2	6	14	34
C25	r langhant neoplasin of particleas	F	3 1 7 0	0	0	0	0	2	i i	2	2	9	29
C32	Malignant neoplasm of larvny	M	1714	0	Ő	0	0	0	0	1	1	9	38
C33-C34	Malignant neoplasm of trachea	м	23 3 4	ĩ	õ	õ	ő	ĩ	4	10	25	49	173
000 001	bronchus & lung	F	12.297	i	2	õ	ő	i	2	4	18	44	122
C43	Malignant melanoma	M	1.909	0	0	4	4	II	29	48	87	100	127
0.0		F	2.816	0	0	5	3	13	79	148	169	156	194
C50	Malignant neoplasm of breast	F	31.671	3	0	Ĩ	0	5	22	163	538	1.070	1.899
C53	Malignant neoplasm of cervix uteri	F	3.173	0	0	0	- I	1	55	190	369	356	329
C54	Malignant neoplasm of corpus uteri	F	4.044	0	0	0	0	0	0	6	5	36	70
C56-C57	Malignant neoplasm of ovary	F	5.349	0	1	5	7	10	27	53	78	112	195
C61	Malignant neoplasm of prostate	М	19,399	1	4	0	0	0	1	I	1	4	6
C62	Malignant neoplasm of testis	М	1,381	4	8	I	4	29	140	247	307	207	146
C64-C66,	Malignant neoplasm of kidney	М	2,985	5	22	8	3	1	7	7	17	41	78
C68		F	1,781	3	35	10	5	1	5	4	18	21	33
C67	Malignant neoplasm of bladder	М	8,516	I	2	0	0	4	9	12	14	40	77
		F	3,286	0	I	0	0	0	3	I	8	9	27
C71	Malignant neoplasm of brain	М	1,986	6	39	48	33	30	38	46	71	84	101
		F	1,516	6	33	47	30	24	24	39	58	54	59
C82-C85,	Non-Hodgkin's lymphoma	М	3,919	3	11	16	27	26	43	65	110	147	151
C91.4, C96	5	F	3,352	2	7	12	11	11	24	40	50	70	91
C88-C90	Multiple myeloma	М	1,442	0	0	0	I	0	1	5	I	9	16
		F	I,436	0	0	1	0	0	0	1	3	5	13
C91-C95	All leukaemias	М	2,506	12	85	43	41	24	30	24	39	35	63
xC91.4		F	3,053	13	98	72	52	45	37	51	55	54	60
D05	Carcinoma in situ of the breast	F	1,715	0	0	0	0	0	0	6	27	54	113
D06	Carcinoma in situ of the cervix	F	19,611	0	0	I	0	270	3,045	5,307	4,344	2,685	1,549

The age distribution of all cancers are given in **Figure 2**. The peak in the age distributions occurred in the 70–74 age group for both males and females. Only 5 per cent of all cancers in males and 9 per cent in females occurred in the under 45s. There were 1,300 cancers in children (under 15s), accounting for just 0.6 per cent of the total; of these childhood cancers, leukaemia accounted for one third.



			Ą	ge group (ye	ears)						
45–49	50–54	55–59	60–64	65–69	70–74	75–79	80–84	85 and over		Site description	ICD (10th Revision) number
3,162	4,714	7,643 8 545	11,686	17,110	22,412	16,684	14,125	8,726	M	All malignant neoplasms	C00-C97
175	248	292	312	344	348	209	15,270	96	M	All lip & mouth	C00-C14
76	63	108	138	174	176	150	155	149	F	/ in the of the data	
114	188	278	450	567	687	481	402	285	M	Malignant neoplasm of oesophagus	C15
38	73	118	176	263	426	411	450	459	F		
135	226	374	655	984	1,300	945	881	494	М	Malignant neoplasm of stomach	C16
50	71	129	249	366	565	625	704	759	F	5	
220	331	565	941	1,399	1,791	1,372	1,185	753	М	Malignant neoplasm of colon	C18
192	318	543	798	1,151	1,584	1,425	1,653	1,738	F		
189	318	539	774	989	1,216	832	680	394	М	Malignant neoplasm of rectum	C19-C21
120	192	283	409	576	817	623	704	681	F		
92	129	233	325	409	546	444	370	241	М	Malignant neoplasm of pancreas	C25
54	93	128	281	389	567	481	561	571	F		
76	149	178	246	297	344	176	134	65	М	Malignant neoplasm of larynx	C32
485	907	1,622	2,607	4,153	5,307	3,709	2,750	1,511	М	Malignant neoplasm of trachea,	C33-C34
312	477	728	1,287	2,144	2,819	1,875	1,439	1,022	F	bronchus & lung	
184	177	208	191	202	204	145	112	76	М	Malignant melanoma	C43
301	231	212	214	244	256	211	202	178	F		
3,255	3,499	3,411	3,518	3,062	3,629	2,622	2,515	2,459	F	Malignant neoplasm of breast	C50
292	220	204	213	209	271	191	160	112	F	Malignant neoplasm of cervix uteri	C53
173	340	510	639	596	580	444	356	289	F	Malignant neoplasm of corpus uteri	C54
353	465	549	653	724	774	522	476	345	F	Malignant neoplasm of ovary	C56-C57
42	211	633	1,457	2,777	4,472	3,823	3,558	2,408	М	Malignant neoplasm of prostate	C61
110	50	49	15	20	15	10	13	6	M	Malignant neoplasm of testis	C62
146	201	302	412	503	518	328	254	132	M	Malignant neoplasm of kidney	C64-C66,
83	94	139	210	240	293	216	206	165	F		C68
167	320	573	911	1,355	1,756	1,319	1,207	749	M	Malignant neoplasm of bladder	C67
51	96	141	266	391	599	541	5/4	578	F		
152	161	191	244	244	247	142	/8	31	M	Malignant neoplasm of brain	C/I
103	91	128	166	170	195	14/	96	46	F	NI 11 11. VI 1	600 60F
248	298	3/2	436	4/1	590	415	306	184	M	Non-Hodgkin's lymphoma	C82-C85,
162	207	256	340	388	5/8	44/	3/6	280	F	MILEI	C91.4, C96
55	/4	119	152	216	293	19/	1//	126	M	Multiple myeloma	C88-C90
36	4/	80	139	1//	264	229	253	188	F	All locales and a	
88	73	115	16/	244	326	321	348	408	1 ^M	All leukaemias	CA1-CA2
114	125	181	268	368	464	365	57/	234	F	Consistence in situ of the human	XC91.4
19/	400	310	308	111	72	4 1 20	41	12	г с	Carcinoma in situ of the comits	D05
1,001	400	406	289	128	57	28	14	I	г	Carcinoma in situ of the cervix	D06

The crude rate for 1994 for each of the major cancer sites are given in **Table 2** and in **Table 4** for years 1995 to 1997. The crude rate in 1994 for all cancers was 443 per 100,000 for males and 426 for females. However these overall rates mask considerable variations between the sexes and across age groups for the individual cancer sites. The rates in each age group are shown in **Figure 3**. The rates in females between the ages of 25 and 59 were higher than those for males. This is mainly because cancers of the breast and cervix, which constitute a high proportion of the cancer burden in females, tend to occur more frequently in younger age groups than do the major cancers in males.



Table 2

Rates per 100,000 population of newly diagnosed cases of cancer: major sites, sex and age, England and Wales, 1994

							Age grou	ıp (years)				
ICD (10th Revision) number	Site description	All ages	Under I	I4	5–9	10-14	15–19	20–24	25–29	30–34	35–39	40-44
C00-C97 xC44	All malignant neoplasms excluding NMSC*	M 443.2 F 426.3	22.1 18.4	17.7 16.3	.2 0.0	10.7	5.9 2.6	25.2 26.0	32.9 43.6	46.0 81.1	63.2 135.0	99.6 220.1
C00-C14	All lip & mouth	M 9.3	0.0	0.2	0.0	0.1	0.5	0.2	0.6	0.8	2.6	5.5
		F 5.0	0.0	0.0	0.1	0.3	0.2	0.3	0.5	0.6	1.4	3.3
CIS	Malignant neoplasm of oesophagus	M 14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	1.1	3.1
CIV	Mall-mant manalasma of atomical	F 9.3	0.3	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	1.3
C16	Malignant neoplasm of stomach	IM 24.2	0.0	0.0	0.0	0.0	0.1	0.1	0.4	0.7	1.5	4.1
C10	Malignant papelasm of colon	F 13.7	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	1.2	2.5
010	Planghant neoplasti of colon	F 364	0.0	0.0	0.0	0.1	0.1	0.2	0.8	0.8	2.3	49
C19-C21	Malignant neoplasm of rectum	M 24.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.0	2.4	47
	ranghane neoplasm of rectam	F 17.2	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.7	19	3.3
C25	Malignant neoplasm of pancreas	M 11.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.8	2.0
		F 12.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.5	1.7
C32	Malignant neoplasm of larynx	M 6.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	2.2
C33-C34	Malignant neoplasm of trachea,	M 92.1	0.3	0.0	0.0	0.0	0.1	0.2	0.5	1.2	2.7	10.2
	bronchus & lung	F 46.7	0.3	0.1	0.0	0.0	0.1	0.1	0.2	0.9	2.5	7.2
C43	Malignant melanoma	M 7.5	0.0	0.0	0.2	0.2	0.7	1.6	2.3	4.1	5.6	7.5
		F 10.7	0.0	0.0	0.3	0.2	0.9	4.5	7.2	8.3	8.8	11.5
C50	Malignant neoplasm of breast	F 120.3	0.9	0.0	0.1	0.0	0.3	1.2	8.0	26.6	60.7	112.6
C53	Malignant neoplasm of cervix uteri	F 12.1	0.0	0.0	0.0	0.1	0.1	3.1	9.3	18.2	20.2	19.5
C54	Malignant neoplasm of corpus uteri	F 15.4	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	2.0	4.2
C56-C57	Malignant neoplasm of ovary	F 20.3	0.0	0.1	0.3	0.4	0.7	1.5	2.6	3.9	6.4	11.6
C61	Malignant neoplasm of prostate	M 76.7	0.3	0.3	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.4
C62	Malignant neoplasm of testis	M 5.5	1.2	0.6	0.1	0.2	1.9	7.5	11.6	14.6	11.6	8.6
C64-C66,	Malignant neoplasm of kidney	M 11.8	1.5	1.6	0.5	0.2	0.1	0.4	0.3	0.8	2.3	4.6
C68	MIR I ALLI	F 6.8	0.9	2.6	0.6	0.3	0.1	0.3	0.2	0.9	1.2	2.0
C6/	Malignant neoplasm of bladder	M 33.7	0.3	0.1	0.0	0.0	0.3	0.5	0.6	0.7	2.2	4.6
C71	Mellimont and a leave of husin	F 12.5	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.4	0.5	1.6
C/I	Manghant neoplasm of brain	F E 0	1.7	2.0	2.0	2.0	2.0	2.0	2.2	2.4	4./	0.0
C82_C85	Non-Hodgkin's lymphoma	M 15.5	0.9	2.5	0.9	1.7	1.7	23	31	5.2	82	3.5
C914 C96	Non-Hodgkin's lymphoma	F 12.7	0.5	0.5	0.7	0.7	0.8	1.5	2.0	2.5	40	5.4
C88-C90	Multiple myeloma	M 57	0.0	0.0	0.0	0.1	0.0	01	0.2	0.0	0.5	0.9
		E 5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.8
C91-C95	All leukaemias	M 9.5	3.7	6.3	2.6	2.6	1.7	1.7	1.2	1.9	2.0	3.7
xC91.4		F 12.1	3.8	7.0	4.2	3.2	2.9	2.0	2.4	2.6	3.0	3.5
D05	Carcinoma in situ of the breast	F 6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.3	3.1	6.7
D06	Carcinoma in situ of the cervix	F 74.5	0.0	0.0	0.1	0.0	18.6	172.4	259.7	214.5	152.2	91.9

* Non-melanoma skin cancer.²

PREVALENCE

The incidence of cancer is the measure of the number or rate of new cases occurring in a population. In contrast, cancer prevalence is the number of cases in a population alive on a given date, having been diagnosed with a particular cancer within a specified period of time. It is affected by both the incidence and the survival rates of the disease.

It is estimated that just over 1 per cent of the population of England and Wales who were alive on 1 January 1993 had been diagnosed with cancer (excluding NMSC) in the previous ten years.² Almost 650,000 people were diagnosed with cancer in the three years 1990–92 in England and Wales. Of these cases, 46 per cent of males were alive on 1 January 1993, compared with 58 per cent of females (**Figure 4**). This proportion for females is greater than for males because of the nature and mix of cancers diagnosed in each sex. Breast cancer is the most common cancer in women and has a relatively high survival rate of 74 per cent five years after diagnosis. Lung cancer is the most common cancer in men and has a very low survival rate of just 5 per cent.⁴



			A	ge group (ye	ars)						
45–49	50–54	55–59	60–64	65–69	70–74	75–79	8084	85 and over		Site description	ICD (10th Revision) number
175.1	329.5	581.7	966.8	1,541.9	2,243.4	2,870.1	3,496.3	3,812.1	м	All malignant neoplasms	C00-C97
343.8	501.0	042.7	860.0	1,036.8	1,317.9	1,515.7	1,735.0	1,856.2	F		XC44
9.7	17.3	22.2	25.8	31.0	34.8	36.0	38.9	41.9		All lip & mouth	C00-C14
63	т.т S	21.2	37.2	511	68.8	82.7	20.3	124.5	M	Malignant neoplasm of oesophagus	C15
21	51	89	139	21.0	33.2	46 1	58.8	66.7	F	r langhant neoplasm of desophagus	CIJ
7.5	15.8	28.5	54.2	88.7	130 1	162.6	2181	215.8	M	Malignant neoplasm of stomach	CI6
2.8	5.0	97	19.6	29.2	44 1	70 1	92.0	110.3	F	r langharte neoplastit or scothaetr	010
12.2	23.1	43.0	77.9	126.1	179.3	236.0	293.3	329.0	M	Malignant neoplasm of colon	C18
10.6	22.2	40.8	62.9	91.8	123.5	159.9	216.0	252.5	F		0.0
10.5	22.2	41.0	64.0	89.1	121.7	143.1	168.3	172.1	M	Malignant neoplasm of rectum	C19-C21
6.6	13.4	21.3	32.2	46.0	63.7	69.9	92.0	98.9	F		
5.1	9.0	17.7	26.9	36.9	54.7	76.4	91.6	105.3	М	Malignant neoplasm of pancreas	C25
3.0	6.5	9.6	22.1	31.0	44.2	54.0	73.3	82.9	F	0 1 1	
4.2	10.4	13.5	20.4	26.8	34.4	30.3	33.2	28.4	М	Malignant neoplasm of larynx	C32
26.9	63.4	123.4	215.7	374.2	531.2	638.I	680.7	660.I	М	Malignant neoplasm of trachea,	C33-C34
17.3	33.3	54.8	101.4	171.1	219.9	210.4	188.1	148.5	F	bronchus & lung	
10.2	12.4	15.8	15.8	18.2	20.4	24.9	27.7	33.2	М	Malignant melanoma	C43
16.7	16.1	15.9	16.9	19.5	20.0	23.7	26.4	25.9	F		
180.3	244.2	256.5	277.1	244.3	283.I	294.2	328.7	357.2	F	Malignant neoplasm of breast	C50
16.2	15.4	15.3	16.8	16.7	21.1	21.4	20.9	16.3	F	Malignant neoplasm of cervix uteri	C53
9.6	23.7	38.4	50.3	47.6	45.2	49.8	46.5	42.0	F	Malignant neoplasm of corpus uteri	C54
19.6	32.5	41.3	51.4	57.8	60.4	58.6	62.2	50.1	F	Malignant neoplasm of ovary	C56-C57
2.3	14.8	48.2	120.5	250.2	447.6	657.7	880.7	1,052.0	M	Malignant neoplasm of prostate	C61
6.1	3.5	3.7	1.2	1.8	1.5	1.7	3.2	2.6	M	Malignant neoplasm of testis	C62
8.1	14.1	23.0	34.1	45.3	51.9	56.4	62.9	57.7	M	Malignant neoplasm of kidney	C64-C66,
4.6	6.6	10.5	16.5	19.1	22.9	24.2	26.9	24.0	F		C68
9.2	22.4	43./	/5.4	122.1	1/5.8	226.9	298.8	327.2	M	Malignant neoplasm of bladder	C67
2.8	6.7	10.6	21.0	31.2	46.7	60.7	/5.0	84.0	F	Mill I fill	671
8.4	11.3	14.5	20.2	22.0	24.7	24.4	19.3	13.5	M	Malignant neoplasm of brain	C/1
5.7	6.4	9.6	13.1	13.6	15.2	16.5	12.5	6.7	F	New Heddin's house haven	C02 C05
13.7	20.8	28.3	36.1	42.4	59.1	71.4	/5./	80.4		Non-Hodgkins lympnoma	C82-C85,
9.0	14.4	19.3	26.8	31.0	45.1	30.2	49.1	40.7	Г	Multiple multiple	C91.4, C96
2.0	3.2	7.1	12.6	17.5	27.3	33.9 25.7	8. د ۳ رود	33.U 27.2	F	riulupie myeloma	00-070
2.0	3.3 4 F	0.0	10.9	14.1	20.6	23./	33.I 45 5	27.3	Г		
4.7	0.5	0.0	13.2	17.5	25.4 16 4	30.U	40.0 00 0	37.3	E 19	Aii ieukaemias	U71-U75
0.0	0.7 27 0	13.0	24.2	ے۔ 20	40.4 7 0	02.0 م 2	70.3 5 /	102.2	F	Carcinoma in situ of the breast	XC71.4
555	27.7	20.5	27.3 22.9	0.7	1.2	0.F	1.0	2.2		Carcinoma in situ of the corriv	D03
55.5	33.7	50.5	22.8	10.2	4.4	3.1	1.8	0.1	Г	Carcinoma in situ or the cervix	000

CUMULATIVE RISK OF CANCER

The cumulative risk of a person being registered with a malignant neoplasm can be estimated by applying sex- and age-specific incidence rates to the person years at risk derived from the numbers of survivors from a cohort based on an England and Wales life table.

For example, for males aged 65–69 there would be 396,048 person years at risk. The all cancer rate in 1997 for this age group was 1,479.3 per 100,000. Thus one would expect there to be

 $396,048 \ge 1,479.3 / 100,000 = 5,859$ registrations or 5.9 per cent of the original cohort.

These age-specific percentages, and the cumulative percentages, of risk are shown in **Figure 5**. It can be seen that 41 per cent of the cohort for males and 38 per cent of the female cohort would eventually be registered with some form of malignancy. However, only 10 per cent of the male cohort and 14 per cent of the female cohort would be registered at the ages below 65. Almost one third of new cases of cancer in males are diagnosed below the age of 65, compared with two fifths of cases in females.

Table A and Figure 6 present the risk in 1997 of developing one of the main cancers for males and females.

Table 3

Registrations* of newly diagnosed cases of cancer (provisional): major sites, sex and age, England and Wales, 1995-97

			a) 1995							b) 1996			
					A	ge group (ye	ars)				Age	group (yea	rs)
ICD (10th Revision) number	Site description		All ages	Under 15	15-44	45–54	55–64	65–74	75 and over	All Ages	Under 15	15-44	45–54
C00-C97	All malignant neoplasms	M F	109,700	690 580	5,420 9,150	7,850	18,700 18,400	38,200 29,100	38,800 39,400	110,000	660 570	5,260 9.090	7,910 14,300
C00-C14	All lip & mouth	Μ	2,340	10	190	410	630	630	480	2,440	10	200	430
		F	1,290	10	100	180	270	310	430	1,330	10	100	180
C15	Malignant neoplasm of oesophagus	Μ	3,380	0	70	320	690	1,230	1,080	3,530	0	70	320
		F	2,380	0	30	110	280	600	1,350	2,540	0	30	130
C16	Malignant neoplasm of stomach	Μ	6,010	0	130	370	1,000	2,270	2,240	5,860	0	120	350
		F	3,400	0	80	130	380	850	1,970	3,230	0	70	120
C18	Malignant neoplasm of colon	Μ	8,620	0	200	590	1,550	3,130	3,160	8,900	0	220	570
		F	9,410	0	160	510	1,200	2,620	4,920	9,940	0	200	570
C19-C21	Malignant neoplasm of rectum	M	5,680	0	120	430	1,160	2,120	1,850	6,240	0	130	530
C 25		F	4,120	0	80	290	640	1,170	1,930	4,610	0	100	370
C25	Malignant neoplasm of pancreas	IMI F	2,800	0	60	260	510	980	1,000	2,830	0	60	240
C22	Malianant na salaan of lammu	г	2,970	0	40	140	370	920	1,500	3,220	0	50	150
C32 C34	Malignant neoplasm of traches	M	22 300	0	230	1 300	4 030	8 760	7 970	22 300	0	240	1 370
C33-C34	bronchus & lung	F	12,500	0	210	840	1,030	4 990	4 6 2 0	12,000	0	230	950
C43	Malignant melanoma	M	1 910	0	430	340	420	390	330	1 890	0	390	340
		F	2 770	10	770	460	380	560	600	2 600	10	720	500
C50	Malignant neoplasm of breast	F	31.000	10	3.560	6,790	6.470	6.510	7,710	32,000	0	3,760	7,460
C53	Malignant neoplasm of cervix uteri	F	3.030	0	1.220	510	360	480	470	2.850	0	1,160	490
C54	Malignant neoplasm of corpus uteri	F	3.910	0	120	500	1.090	1.170	1.040	4.000	0	100	470
C56-C57	Malignant neoplasm of ovary	F	5,780	20	470	890	1,300	1.650	1.460	5.810	20	480	880
C61	Malignant neoplasm of prostate	М	18,700	0	10	230	2,100	6,810	9,560	19,200	10	10	270
C62	Malignant neoplasm of testis	Μ	1,520	10	1,170	190	70	50	30	1,540	20	1,190	210
C64-C66,	Malignant neoplasm of kidney	Μ	3,130	30	150	400	700	1,110	750	3,080	30	160	380
C68		F	1,780	40	70	160	320	540	650	1,860	40	90	170
C67	Malignant neoplasm of bladder	Μ	8,620	0	160	510	1,420	3,200	3,330	8,580	0	170	480
		F	3,290	0	70	130	470	1,020	1,600	3,340	0	50	170
C71	Malignant neoplasm of brain	Μ	1,960	130	380	290	420	490	240	1,900	120	340	310
		F	1,560	110	250	200	340	360	290	1,580	120	230	210
C82-C85,	Non-Hodgkin's lymphoma	Μ	3,840	60	530	510	720	1,040	990	3,940	50	490	590
C91.4, C96		F	3,310	30	320	360	540	870	1,180	3,380	20	320	400
C88-C90	Multiple myeloma	Μ	1,620	0	40	130	320	530	600	1,550	0	40	150
		F	1,430	0	20	90	220	430	670	1,360	0	30	70
C91-C95	All leukaemias	M	3,210	250	320	230	480	940	980	3,000	250	290	240
xC91.4	. .	F	2,420	190	240	160	270	570	990	2,530	180	240	170
D05	Carcinoma in situ of the breast	F	1,750	0	200	620	610	200	110	1,800	0	190	650
D06	Carcinoma in situ of the cervix	F	20,540	0	18,040	1,590	700	170	40	19,700	0	17,370	1,480

* Provisional numbers of registrations up to 10,000 have been rounded to the nearest 10; above this to the nearest 100.

† Non-melanoma skin cancer.²



b) 1996

c) 1997

55_64 65_74 75 and All Under 15_44 45_54 55_64 65_74 75 and Site description	ICD (10th Revision) number
over Ages 15	
18,800 37,100 40,300 108,600 720 5,490 8,100 18,500 36,500 39,300 M All malignant neoplasms 18,100 28,500 41,300 112,900 530 9,360 14,700 19,000 28,200 41,100 F excluding NMSC†	C00-C97 xC44
690 570 540 2,380 10 200 410 590 650 520 M All lip & mouth	C00-C14
300 300 440 1,440 0 120 180 290 360 490 F	
690 1,240 1,200 3,560 0 /0 3/0 680 1,220 1,220 M Malignant neoplasm of oesophagus	CIS
270 660 1,460 2,500 0 30 120 250 660 1,430 F	CIK
250 2,120 2,570 3,670 0 150 550 750 2,110 2,270 11 11angnair neopiasin di stomatin 250 700 1.910 3.280 0 90 120 330 950 1.920 F	010
550 3100 3450 8,890 0 210 580 1540 3050 3510 M Malienant neoplasm of colon	C18
1.300 2.630 5.240 9.420 0 180 560 1.270 2.430 4.970 F	010
1,290 2,250 2,040 6,020 0 170 480 1,190 2,230 1,960 M Malignant neoplasm of rectum	C19-C21
720 I,310 2,110 4,530 0 120 340 720 I,180 2,170 F	
510 980 1,040 2,740 0 60 240 510 960 980 M Malignant neoplasm of pancreas	C25
410 900 1,720 2,990 0 40 170 390 820 1,560 F	
410 490 410 1,530 0 50 200 430 500 360 M Malignant neoplasm of larynx	C32
3,910 8,510 8,230 21,000 0 260 1,330 3,700 7,870 7,800 M Malignant neoplasm of trachea,	C33-C34
2,040 4,950 4,730 12,300 0 210 920 1,950 4,600 4,630 F bronchus & lung	
390 400 370 2,020 0 400 370 430 430 380 M Malignant melanoma	C43
350 470 550 2,670 10 660 510 450 510 540 F	
6,310 6,160 8,280 33,100 10 3,820 7,620 6,860 6,490 8,260 F Malignant neoplasm of breast	C50
320 430 450 2,850 0 1,210 460 310 410 460 F Malignant neoplasm of cervix uteri	C53
1,120 1,190 1,120 4,000 0 130 530 1,170 1,120 1,050 F Malignant neoplasm of corpus uteri	C54
1,300 1,600 1,530 6,130 20 520 930 1,310 1,660 1,700 F Malignant neoplasm of ovary	C56-C57
2,330 6,890 9,710 18,300 0 10 310 2,170 6,720 9,080 M Malignant neoplasm of prostate	C61
60 30 30 1,440 10 1,130 180 60 40 30 M Malgnant neoplasm of tests	C62
680 1,050 /90 3,090 30 140 400 660 1,010 840 M Malignant neoplasm of kidney	C64-C66,
310 370 680 1,770 50 70 170 310 320 650 F	C68
1,410 3,040 3,470 6,530 0 170 490 1,340 3,020 3,500 P1 Praignant neopiasm of bladder	C67
10 7/0 i,/10 3,530 0 50 100 110 i,050 F	C71
700 410 310 1480 100 250 190 310 360 280 F	C/I
270 1050 990 4110 70 540 560 820 1050 1080 M Non-Hodskinklymphoma	C82-C85
600 840 1200 3 530 30 330 380 570 930 1300 F	C914 C96
290 510 560 1.480 0 40 140 270 500 540 M Multiple myeloma	C88-C90
200 400 660 1.390 0 20 90 200 410 680 F	
430 870 940 2,920 230 340 210 450 780 920 M All leukaemias	C91-C95
280 610 1,050 2,340 180 240 180 270 480 990 F	xC91.4
600 240 120 2,010 0 190 760 710 240 110 F Carcinoma in situ of the breast	D05
650 150 40 17,860 0 15,730 1,340 590 150 40 F Carcinoma in situ of the cervix	D06

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Table A
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Risk of being diagnosed with cancer by age 65 and over a lifetime, England and Wales*

				-			
		Males				Females	
	% of co develo	hort who p cancer	Lifetime risk		% of col develop	nort who o cancer	Lifetime risk
Site	by age 65	over lifetime		Site	by age 65	over lifetime	
Lung	1.7	8.0	l in 13	Breast	5.6	10.9	l in 9
Prostate	0.9	7.3	l in I4	Colorectal	1.1	4.9	l in 20
Colorectal	1.4	5.7	l in 18	Lung	0.4	4.3	l in 23
Bladder	0.7	3.3	I in 30	Ovary	0.9	2.1	l in 48
Stomach	0.5	2.3	I in 44	Uterus	0.6	1.4	l in 73
Oesophagus	0.4	1.3	l in 75	Bladder	0.2	1.3	l in 79
Kidney	0.4	1.1	l in 89	Stomach	0.2	1.2	l in 86
Leukaemia	0.4	1.1	l in 94	Pancreas	0.2	1.1	l in 95
Pancreas	0.3	1.0	l in 96	Cervix	0.6	0.9	l in II6

* Based on cancers diagnosed in 1997.

Table 4

Rates per 100,000 population of newly diagnosed cases of cancer (provisional): major sites, sex and age, England and Wales, 1995–97

		a) 1995							b) 1996			
					Aş	ge group (ye	ars)				Age	group (yea	rs)
ICD (10th Revision) number	Site description		All ages	Under 15	15-44	45–54	55–64	65–74	75 and over	All Ages	Under 15	15-44	45–54
C00-C97 xC44	All malignant neoplasms excluding NMSC*	M F	431.3 416.9	3.5 .9	48.7 85.3	237.5 404.9	739.2 709.8	1,840.7 1,173.7	3,052.4 1,634.8	430.4 423.0	2.8 .8	47.1 84.6	234.2 421.8
C00-C14	All lip & mouth	M	9.2	0.2	1.7	12.5	24.7	30.1	37.9	9.6	0.2	1.8	12.8
CIE	Malignant papplage of accorbague	F M	4.9	0.2	1.0	5.4	10.3	12.3	۱/./ ۵۸ ۶	5.0	0.2	0.9	5.2
CIS	ranghant neoplasm of desophagus	F	9.0	0.0	0.0	3.7	10.8	57. 4 24.2	56 1	9.6	0.0	0.7	7.4
C16	Malignant neoplasm of stomach	M	23.6	0.0	1.2	11.3	39.4	109.3	176.0	22.9	0.0	1.1	10.2
	5	F	12.9	0.0	0.8	3.8	14.7	34.1	81.6	12.2	0.0	0.7	3.4
C18	Malignant neoplasm of colon	Μ	33.9	0.0	1.8	17.9	61.3	150.6	248.4	34.8	0.1	2.0	16.8
		F	35.7	0.1	1.5	15.3	46.3	105.6	204.2	37.6	0.1	1.8	16.8
C19-C21	Malignant neoplasm of rectum	М	22.3	0.0	1.1	13.0	46.0	102.0	145.3	24.4	0.0	1.2	15.7
005		F	15.6	0.0	0.8	8.7	24.8	47.2	80.2	17.4	0.0	1.0	11.0
C25	Malignant neoplasm of pancreas	M	11.0	0.0	0.5	/./	20.2	4/.1	/8.8	11.1	0.0	0.5	7.1
CD	Malignant neoplasm of lawyny	г	4.2	0.0	0.4	4.3 7 0	14.4	37.1	201	12.2	0.0	0.4	4.5
C32 C34	Malignant neoplasm of traches	M	87.6	0.0	21	395	159.4	421.4	626 5	87 1	0.0	2.7	40.5
C77-C74	bronchus & lung	F	47.7	0.1	2.1	25.5	74.5	201.3	1916	48.8	0.0	2.2	28
C43	Malignant melanoma	M	7.5	0.0	3.9	10.3	16.7	18.5	26.2	7.4	0.1	3.5	10.0
	·····o	F	10.5	0.1	7.1	14.0	14.8	22.5	24.9	9.8	0.2	6.7	14.8
C50	Malignant neoplasm of breast	F	117.7	0.1	33.2	205.4	249.6	262.6	319.8	120.9	0.1	35.0	220.6
C53	Malignant neoplasm of cervix uteri	F	11.5	0.0	11.3	15.4	13.9	19.5	19.3	10.8	0.0	10.8	14.3
C54	Malignant neoplasm of corpus uteri	F	14.8	0.0	1.1	15.0	42.1	47.2	43.I	15.1	0.0	1.0	13.8
C56-C57	Malignant neoplasm of ovary	F	21.9	0.3	4.3	26.8	50.1	66.8	60.4	21.9	0.3	4.5	26.0
C61	Malignant neoplasm of prostate	М	73.6	0.1	0.1	6.9	83.2	327.9	751.9	75.2	0.1	0.1	7.9
C62	Malignant neoplasm of testis	М	6.0	0.3	10.5	5.9	2.6	2.2	2.4	6.0	0.3	10.7	6.2
C64-C66,	Malignant neoplasm of kidney	M	12.3	0.7	1.3	12.0	27.8	53.2	58.9	12.1	0.6	1.4	11.2
C68		F	6.7	0.7	0.6	5.0	12.3	22.0	26.8	7.0	0.8	0.9	5.0
C6/	Malignant neoplasm of bladder	M	33.9	0.0	1.4	15.3	56.3	154.0	261.7	33.6	0.1	1.5	14.3
C71	Malianana na alama af kusin	F M	12.5	0.0	0.6	4.0	18.2	41.1	66.2	12.0	0.0	0.4	5.1
C/I	Malignant neoplasm of brain		7.7	2.6	3.4 2.4	8.8	16./	23.8	17.1	7.4	2.3	3.1	9.2
C82-C85	Non-Hodekin's lymphoma	м	5.7	2.5	2. 4 4.7	15.5	283	49.9	77.6	15.4	2.5	2.2 4.4	176
C91 4, C96	Non Hodgkins lymphoma	F	12.5	0.6	3.0	11.0	20.5	35.3	48.8	12.8	0.5	2.9	12.0
C88-C90	Multiple myeloma	M	6.4	0.0	0.3	4.0	12.7	25.4	47.5	6.1	0.0	0.3	4.4
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	F	5.4	0.0	0.2	2.7	8.4	17.4	27.8	5.2	0.0	0.3	2.0
C91-C95	All leukaemias	М	12.6	4.9	2.9	7.0	19.2	45.4	77.4	11.7	4.8	2.6	7.0
xC91.4		F	9.2	3.8	2.3	4.9	10.3	23.1	40.9	9.6	3.8	2.2	4.9
D05	Carcinoma in situ of the breast	F	6.6	0.0	1.9	18.8	23.6	8.2	4.7	6.8	0.0	1.8	19.1
D06	Carcinoma in situ of the cervix	F	77.8	0.0	168.2	48.0	26.8	6.7	1.7	74.5	0.0	161.7	43.8

* Non-melanoma skin cancer.²



b) 1996

c) 1997

					Ag	e group (yea	urs)					
55–64	65–74	75 and over	All Ages	Under 15	15-44	45–54	55–64	65–74	75 and over		Site description	ICD (10th Revision) number
747.0 702.8	,802.9 ,174.2	3,062.6 1,684.5	422.8 425.6	13.9 10.9	49.0 87.1	236.6 429.6	732.0 735.3	,782. ,177.6	2,909.6 1,656.4	M F	All malignant neoplasms excluding NMSC*	C00-C97 xC44
27.4	27.8	41.2	9.3	0.2	1.8	11.9	23.4	31.6	38.7	M	All lip & mouth	C00-C14
27.5	60.4	91.5	13.8	0.0	0.6	10.9	26.9	59.6	90.0	M	Malignant neoplasm of oesophagus	C15
10.6 37.2	27.0 103.1	59.3 177.5	9.4 22.7	0.0 0.0	0.3 1.2	3.4 10.3	9.5 37.6	28.2 103.2	57.6 169.5	F M	Malignant neoplasm of stomach	C16
13.7 61.9	31.9 150.6	78.0 262.5	12.4 34.6	0.0 0.0	0.8 1.9	3.8 16.8	12.8 60.8	35.7 149.0	75.7 260.0	F M	Malignant neoplasm of colon	C18
50.7 51.3	108.3 109.3	2 3.3 55.	35.5 23.4	0.1 0.0	1.7 1.5	6.3 4.0	49.2 47.1	101.6 108.9	200.4 144.8	F M	Malignant neoplasm of rectum	C19-C21
27.9 20.4	53.9 47.7	85.8 78.8	17.1 10.7	0.0 0.0	1.1 0.5	9.9 6.9	27.9 20.3	49.2 46.9	87.6 72.4	F M	Malignant neoplasm of pancreas	C25
15.9	36.9	70.1	11.3	0.0	0.4	5.0	15.2	34.1	62.9	F		
16.4	23.8 413.2	31.5 625.6	5.9 81.6	0.0	0.4 2.3	5.7 38.9	17.2	24.2 384.3	26.3 576.9	M	Malignant neoplasm of larynx Malignant neoplasm of trachea,	C32 C33-C34
79.4 15.4	203.6 19.6	192.7 27.8	46.4 7.8	0.1	1.9 3.6	26.8 10.9	75.4 17.0	192.5 21.0	186.5 28.0	F M	bronchus & lung Malignant melanoma	C43
13.6	19.5	22.3	10.0	0.1	6.1	14.9	17.2	21.2	21.6	F		
245.1 12.4	253.6 17.9	337.6 18.2	124.6 10.7	0.1 0.0	35.5	222.4 3.5	265.3	271.3	333.0 8.6	F	Malignant neoplasm of breast Malignant neoplasm of cervix uteri	C50 C53
43.4	49.1	45.4	15.1	0.0	1.2	15.4	45.2	47.0	42.2	F	Malignant neoplasm of corpus uteri	C54
50.5 92.6	65.7 334.5	62.5 738.6	71.2	0.3	4.8 0.1	27.1 8.9	50.7 86.0	69.4 327.9	68.4 672.2	F M	Malignant neoplasm of ovary Malignant neoplasm of prostate	C61
2.5 26.9	l.6 50.8	2.4 59.8	5.6 12.0	0.3 0.7	10.1 1.3	5.3	2.3 26.1	1.8 49.3	2.1 62.1	M M	Malignant neoplasm of testis Malignant neoplasm of kidnev	C62 C64-C66.
12.0	23.5	27.5	6.8	0.9	0.8	5.0	12.1	21.9	26.4	F	Malignant neoplasm of bladder	C68
16.0	39.9	71.0	13.4	0.0	0.5	5.2	16.0	44.9	73.6	F		671
17.1	17.0	18.3	8.0 5.6	2.6	3.2	9.7 5.5	17.4	24.9 14.8	11.2	M F	Malignant neoplasm of brain	C/I
30.7 23.2	50.9 34.6	75.5 48.9	16.0 13.3	1.3 0.7	4.8 3.0	16.5 11.0	32.5 22.0	51.4 38.7	79.6 52.3	M F	Non-Hodgkin's lymphoma	C82-C85, C91.4, C96
11.6 7.8	24.9 16.6	42.8 26.9	5.8 5.2	0.0 0.0	0.3 0.2	4.0 2.5	10.7 7.8	24.2 16.9	40.0 27.4	M F	Multiple myeloma	C88-C90
16.9	42.2	71.2	11.4	4.5	3.0 2.2	6.1 5.3	17.8	38.0	67.9	M F	All leukaemias	C91-C95
23.4	9.7	5.0	7.6	0.0	1.8	22.1	27.4	10.0	4.6	F	Carcinoma in situ of the breast	D05
25.2	6.3	1.8	67.3	0.1	146.3	39.1	22.9	6.4	1.6	F	Carcinoma in situ of the cervix	D06

TRENDS IN CANCER INCIDENCE

Over the period 1971 to 1997, the numbers of new cases of cancer increased from 76,000 to 109,000 (43 per cent) in males and from 73,000 to 113,000 (55 per cent) in females. The comparison of age standardised rates (1971=100 for each sex) in **Figure 7**, which take into account the changing age structure of the population, show the upward trends, particularly since the mid-1980s, in both sexes. In 1997, levels in males were 13 per cent higher than in 1971, while in females they were 34 per cent higher.



 Table 5
 Directly age standardised rates* for the major cancer sites, England and Wales, 1988–97 (provisional for years 1995 onwards)

			Rate per 100,000 population											
ICD (10th Revision) number	Site description		1988	1989	1990	1991	1992	1993	1994	1995	1996	1997		
C00-C97	All malignant neoplasms	М	391.4	383.8	384.5	386.7	398.3	394.2	400.8	388.4	385.6	377.4		
xC44	excluding NMSC [†]	F	314.4	316.1	316.5	322.7	331.7	322.0	327.0	319.0	322.1	325.8		
C00-C14	All lip & mouth	М	8.3	7.8	8.0	8.5	8.9	8.6	9.1	8.9	9.2	8.8		
		F	3.6	3.5	3.7	3.5	4.0	3.7	3.8	3.9	4.0	4.3		
C15	Malignant neoplasm of oesophagus	М	11.5	11.2	11.6	11.7	12.4	12.5	12.8	12.1	12.5	12.5		
		F	5.3	5.5	5.4	5.4	5.7	5.5	5.9	5.6	6.0	5.8		
CI6	Malignant neoplasm of stomach	М	25.8	24.7	23.5	22.6	22.9	21.3	21.6	21.1	20.3	20.1		
	o	F	10.2	10.0	9.3	9.2	8.9	8.4	8.3	7.9	7.4	7.6		
C18	Malignant neoplasm of colon	М	29.2	29.8	29.8	29.8	31.2	31.6	31.0	30.4	31.0	30.5		
	o	F	24.1	23.6	23.6	23.8	25.0	23.5	23.8	23.0	24.4	23.0		
C19-C21	Malignant neoplasm of rectum	М	22.2	21.9	22.1	21.9	23.5	22.4	22.0	20.3	22.2	21.1		
	0 1	F	12.3	12.4	11.9	11.8	12.4	12.1	11.8	10.7	12.1	11.8		
C25	Malignant neoplasm of pancreas	M	11.5	110	11.3	112	110	10.7	10.2	10.0	10.0	9.6		
	0 1 1	F	8.0	83	8.0	8.0	79	7.8	7.7	7.2	7.8	7.3		
C32	Malignant neoplasm of larynx	M	6.7	6.3	6.3	61	6.3	6.0	6.4	59	5.8	5.6		
C33-C34	Malignant neoplasm of trachea.	M	98.0	93.8	91.5	90 1	89.7	83.7	82.6	78 1	77	72.0		
	bronchus & lung	F	33.4	32.8	32.7	32.8	33.9	33.2	33.7	34.4	35.6	33.7		
C43	Malignant melanoma	M	6.3	5.7	6.0	5.9	6.4	74	7.3	7.2	71	7.5		
	0	F	9.0	8.4	75	77	8.4	95	9.4	91	85	8.8		
C50	Malignant neoplasm of breast	F	89.9	95.2	98.4	105.1	107.6	1014	104.7	101.8	104.0	107.0		
C53	Malignant neoplasm of cervix uteri	F	165	15.1	15.4	12.8	12.0	11.6	110	10 3	9.7	9.6		
C54	Malignant neoplasm of corpus uteri	F	10.5	12.2	12.3	12.0	12.0	12.7	12.8	12.3	12.5	12.6		
C56-C57	Malignant neoplasm of ovary	F	17.2	171	16.7	17.4	17.5	171	17.0	183	18.2	19.0		
C61	Malignant neoplasm of prostate	M	45.8	46.0	47.4	49.8	54.5	58.9	66 1	63.2	64.4	60.7		
C62	Malignant neoplasm of testis	м	5.0	5 1	4.8	5.2	53	53	5.2	5.6	5.7	5 4		
C64-C66	Malignant neoplasm of kidney	м	9.2	10.1	10.0	9.8	10.5	10.7	111	11.5	11.2	111		
C68		F	43	4 5	47	4.9	4.9	4.8	5.2	51	53	5.1		
C67	Malignant neoplasm of bladder	M	314	30.4	30.8	30.4	30.8	30.7	30.2	30.2	29.7	29.1		
		F	87	8.8	81	81	87	87	8.0	8.2	81	8.6		
C71	Malignant neoplasm of brain	M	7.2	74	73	74	8.0	7.6	77	7.5	7.2	77		
0.1		F	5.0	5.0	4.9	4.8	5.4	53	5.1	5.3	53	5.0		
C82-C85	Non-Hodgkin's lymphoma	M	12.5	12.5	1.0	13.6	14 1	14.0	14.7	14 1	14.4	14.9		
C914 C96	Non Hougkins lymphoma	5	0.7	0 4	0.4	9.1	95	9.5	0.0	9.4	0 0	10.1		
C88-C90	Multiple myeloma	M	0.7	5.0	0.7	7.1 5.4	7.5	7.J	5.7	5.0	7.7	50.1		
00-070		E	3.5	2.1	2.1	J.T 2 4	2.0	2.5	3.2	3.0	3.5	3.2		
C91-C95	All Jaukaamias	M	3.5	3.5	3.5	3. 4	3.5	0.0	3.7	3.7	5. 4	3.5		
vC914		E	11.3	10.7	10.7	۲۱. ۹	10.7	11.0	7.0	11.0	7.0	10.5		
D05	Carcinoma in situ of the broast	E	0.7	0.0	0.0	6.5	0.0	0.0	/.0	0.0	7.0	0.J 7 0		
D06	Carvix in situ	Г С	3.8 71.3	3.0 47.4	4.0 90 I	0.∠ 72.2	0.7	6.7	0.7 72 E	0.7	7.0	/.0 47 5		
200		Г	/1.3	67.6	80.1	/ 3.3	67./	67.9	/3.5	//.1	/3.7	67.5		

* Using the European Standard population.

† Non-melanoma skin cancer.²

Registrations for the four cancer sites described below contribute around half of the total registrations for both males and females.

The incidence of lung cancer in males showed a long term decline since the early 1980s, and was closely matched by the fall in mortality. In 1997, the age standardised rate was 33 per cent lower than in 1985. Amongst females, the incidence of lung cancer rose between 1971 and the mid-1980s, after which the rate stabilised at around 33 per 100,000. In 1997, the incidence rate was estimated to be almost 34 per 100,000. The pattern for males reflects the trend in smoking, which has shown a decrease for the last 20 years. Smoking amongst women has also decreased, albeit at a far slower rate.⁶

The incidence of colorectal cancer in males showed a long term rise from the early 1970s to peak in 1992 at 54.7 per 100,000. After 1992, incidence in males showed a small overall decline of 6 per cent. The incidence of colorectal cancer in females remained at around 36 per 100,000 throughout the 1980s and 1990s. Mortality fell gradually in both sexes from the late 1970s.

The incidence of breast cancer increased throughout the 1980s, to peak in 1992. The rise from 1988 occurred principally in women aged 50 to 64 years and was associated with the national screening programme. With the bulk of the prevalent round of screening completed, incidence was 5 per cent lower in 1993 than at its peak in 1992. The age standardised incidence then fluctuated between 101 and 105 per 100,000 until 1995, before rising to 107 per 100,000 in 1997 (5 per cent rise) - resuming the prescreening rise in breast cancer incidence. Breast cancer mortality rose to a peak in the mid-1980s, but it fell gradually in the 1990s. By 1999, overall mortality was 32 per 100,000, a fall of 18 per cent since 1990.

In 1993, the age standardised rate of prostate cancer first exceeded that of colorectal cancer to become the second most common cancer in men. The increase in incidence in the 1980s may have partly resulted from the detection of latent carcinoma following operations for enlarged prostate or at post-mortem in men who have died from other causes. In more recent years, the availability of PSA testing probably accounts for the very sharp rise in prostate cancer of 33 per cent from 1991 to 1994, to peak at 66 per 100,000. Similar rises have occurred in Scotland and elsewhere; in the USA between 1989 and 1990, the incidence rate rose by 16 per cent.⁵ However, from 1994 to 1997 incidence in England and Wales fell by 8 per cent. Prostate cancer mortality fell by 7 per cent between 1995 and 1999 after a consistent rise through the 1980s and early 1990s.



Key findings

- There were 224,000 registrations of new cases of cancer in 1994, 112,000 in both men and in women.
- The total number of new cases are estimated to remain at around this level for the next three years.
- Men and women have a 40 per cent chance of developing some form of cancer during their lifetime.
- About Iper cent of the population in England and Wales have been diagnosed with cancer in the past ten years.
- The top three cancers in men are lung, prostate and colorectal cancers and in women they are breast, lung and colorectal cancers. These cancers account for over 50 per cent of cases in both men and women.
- Lung cancer in men has been falling since the early 1980s and is estimated to fall by a further 13 per cent between 1994 and 1997.
- Lung cancer in women has remained stable over the past decade at around 34 per 100,000 population.
- The incidence rate of breast cancer in women increased by 5 per cent between 1995 and 1997, while mortality from breast cancer has fallen by 11 per cent since 1995.
- Prostate cancer became the second most common cancer in men in 1993, exceeding that of colorectal cancer in men. This may be partly due to the detection of latent carcinomas.
- The incidence rate of prostate cancer has decreased since 1994 by 8 per cent.
- Prostate cancer mortality fell by 7 per cent between 1995 and 1997 after a consistent rise through the 1980s and early 1990s.
- Cervical cancer incidence fell by 42 per cent between 1988 and 1997. This fall is directly related to the cervical screening programme.⁷
- The incidence of cancer of the kidney and non-Hodgkin's lymphoma have increased by around 20 per cent for both males and females in the last 10 years, whilst stomach cancer incidence has fallen by over 20 per cent in the same time period for both sexes.

ACKNOWLEDGEMENTS

We are grateful for all the work undertaken by the regional cancer registries over the past 30 years and their close co-operation with the national registry at ONS.

Dr MJ Quinn, Director, National Cancer Registration Bureau Dr PJ Babb, Senior Cancer Epidemiologist Miss EA Kirby, Cancer Epidemiologist Miss A Brock, Research Assistant

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Report:

Deaths related to drug poisoning: results for England and Wales, 1994–98

INTRODUCTION

In 1999 the Office for National Statistics (ONS) developed a database to facilitate research into deaths related to drug poisoning and to aid the identification of specific substances involved in these deaths. The first results from this database were published for the years 1993 to 1997 in *Health Statistics Quarterly* 05.¹

Data for 1998 has now been added to the database and this report gives results for 1994 to 1998. In the previous report the database was referred to as the 'drug-related deaths database'. However as almost all deaths on the database are the result of drug-related poisonings, it is referred to accordingly in this report. Where drugs are indirectly responsible for a death it is generally the direct cause, HIV infection or road traffic accident for example, that is selected as the underlying cause of death. These deaths are not included in the database. A very small number of deaths resulting from infection, where the underlying cause of death is coded to drug dependence or nondependent abuse of drugs, are included however.

THE DATABASE

The database currently contains all deaths in England and Wales between 1993 and 1998 where the underlying cause of death is regarded as resulting from drug-related poisoning, according to the current National Statistics (NS) definition.² These are deaths coded according to the International Classification of Diseases, Ninth Revision, (ICD9) listed in Box One :

The database covers accidents and suicides involving drugs, as well as poisonings due to drug abuse and drug dependence, but not other adverse effects of drugs. The range of substances it contains is wide, including legal and illegal, prescribed substances and over the counter medications. For each death the database includes every mention of a substance recorded on the death certificate or mentioned by the coroner.

Box one

ICD9 Underlying	Description
cause code	
292	drug psychoses
304	drug dependence
305.2-305.9	non dependent abuse of drugs
E850-E858	accidental poisoning by drugs,
	medicaments and biologicals
E950.0-E950.5	suicide and self-inflicted
	poisoning by solid or liquid
	substances
E980.0-E980.5	poisoning by solid or liquid
	substances, undetermined
	whether accidentally or
	purposely inflicted
E962.0	assault by poisoning – drugs and
	medicaments

Almost all deaths on the database had a coroner's inquest.

The underlying cause of death is recorded as well as other information about the deceased, as described in Box Two.

A fuller description of the database is given in *Health Statistics Quarterly* 05.¹

It is not always possible to identify specific substances using ICD9 codes as many cover a broad group of drugs. For example, E950.0 covers suicidal poisoning by analgesics, antipyretics and antirheumatics and includes deaths from opiates such as heroin and methadone, as well as 'over the counter' painkillers such as paracetamol. A substance can also be coded to one of several ICD9 codes depending on the circumstances

Box two

For each death the database of poisonings related to drugs includes :

The underlying cause of death. Every mention of a substance recorded on the death certificate or mentioned by the coroner. An indicator to show if alcohol is mentioned. Other information recorded at death registration such as age, sex, marital status, occupation and place of usual residence.

of death, and the combination of drugs involved. Temazepam, for example, can be classified using one of 12 ICD9 codes.²

Previous figures on substance-related deaths, produced by the Home Office and ONS, were based on the cause of death section of the coroner's certificate of cause of death. The new database includes additional information from Part V of the coroner's certificate. The main effect of this is to increase the proportion of deaths where alcohol was also mentioned and to give additional information on other substances. For example where morphine or paracetamol toxicity is given in the cause of death section, the additional coroner's text section may refer to heroin injection or co-proxamol overdose, respectively, thus confirming the origin of the substance detected at post mortem. Figures from the database therefore differ slightly from figures released before it was developed.

RESULTS

Table I

Number of deaths from drug-related poisoning by underlying cause

Table 1 gives the total numbers of deaths on the database for each year from 1994 to 1998, presented by their underlying cause. Each death is assigned an underlying cause of death which reflects the verdict of the coroner and the wording on the coroner's certificate. Verdicts of homicide or suicide are coded to an underlying cause of ICD E962 or E950, respectively. Mention of 'drug dependence' or 'nondependent abuse of drugs', with no mention of suicide or homicide, will normally result in an underlying cause code of 304 or 305 respectively. Most other deaths are coded to E850-E858 or E980 depending on whether an accidental or open verdict is given.² ONS routinely includes deaths with an open verdict with suicide statistics.³

Table 1 shows that the total number of deaths on the database rose from 2,404 in 1994 to 2,922 in 1998, an increase of twenty two per cent. Numbers due to drug dependence or nondependent abuse doubled for men during this period, and more than doubled for women. Deaths due to accidents or suicides (including open verdicts) rose from 2,048 in 1994 to 2,196 in 1998 - an increase of seven per cent.

Number of deaths from drug-related poisoning where selected substances were mentioned on the death certificate, including with other drugs or alcohol

Table 2 gives numbers of deaths where specific substances were mentioned on the death certificate. These figures need to be interpreted with some caution. In around ten per cent of deaths on the database only a general description, such as 'drug overdose', is recorded on the coroner's certificate of death. These deaths do not contribute to the count of any specific substances. Where a number of drugs are mentioned on the death certificate, it is not always possible to tell which of them was primarily responsible for the death. Some deaths may also be counted more than once in Table 2. For example, if heroin and cannabis are recorded on the death certificate, the death will be recorded once under heroin and once under cannabis.

As heroin breaks down in the body into morphine, the latter may be detected at post mortem and recorded on the death certificate. Therefore a combined figure for deaths where heroin and/or morphine were mentioned on the death certificate is included in Table 2, as well as counts for heroin and morphine separately. As heroin and morphine are sometimes both mentioned on the death certificate, the combined heroin and/or morphine figures are always less than adding the separate heroin and morphine figures together.

During 1994 to 1998, 21 per cent of deaths mentioned more than one drug, and 22 per cent of deaths contained a mention of alcohol. Some substances were particularly likely to be mentioned with other substances, such as cannabis (94 per cent of such deaths) and temazepam (69 per cent). Substances least likely to be mentioned with another drug include co-proxamol (16 per cent) and heroin (23 per cent).

The increase shown in Table 1, in deaths with an underlying cause of drug dependence or abuse, is reflected in Table 2 by a marked rise in those deaths where substances associated with drug abuse were mentioned. For heroin and/or morphine, for example, there was an increase from 276 in 1994 to 632 in 1998. Deaths with a mention of antidepressants or paracetamol show a much less marked increase, reflecting the lower increase in deaths with verdicts of accidents and suicides in Table 1.

Numbers of deaths from drug-related poisoning by underlying cause, England and Wales, 1994–98

		[1		1
		1994	1995	1996	1997	1998	1994–98	% of Total
Total	Males	1,529	1,643	,8	1.932	1,944	8.859	100
	Females	875	920	910	926	978	4,609	100
Drug dependence/non dependent abuse	Males	301	375	432	491	599	2,198	25
304, 305.2-9	Females	48	70	96	84	120	418	9
Accident	Males	507	537	612	612	595	2,863	32
E850-E858	Females	215	187	225	209	246	1,082	24
Suicide & Undetermined	Males	718	725	757	826	746	3,772	43
E950.0-5, E980.0-5	Females	608	661	582	629	609	3,089	67
Drug psychoses/assault	Males	3	6	10	3	4	26	0
292, E962.0	Females	4	2	7	4	3	20	0

Table 2

Numbers of deaths where selected substances were mentioned on the death certificate, including with other or alcohol, England and Wales, 1994–98

		1994			1995			1996			1997			1998			1994–98	
	Total mention	Mention with other drug	Mention with alcohol	Total mention	Mention with other drug	Mention with alcohol	Total mention	Mention with other drug	Mention with alcohol	Total mention	Mention with other drug	Mention with alcohol	Total mention	Mention with other drug	Mention with alcohol	Total mention	Mention with other drug	Mention with alcohol
All Deaths	2,404	(496)	(493)	2,563	(529)	(516)	2,721	(558)	(612)	2,858	(592)	(630)	2,922	(634)	(689)	13,468	(2,809)	(2,940)
All mentions of Her	roin																	
and Morphine	276	(78)	(61)	355	(93)	(83)	464	(3)	(120)	445	(112)	(109)	632	(164)	(167)	2,172	(560)	(540)
Heroin	127	(31)	(26)	162	(33)	(33)	241	(5I)	(62)	255	(47)	(56)	407	(93)	(105)	1,192	(255)	(282)
Morphine	176	(51)	(40)	231	(68)	(61)	281	(74)	(72)	255	(78)	(68)	313	(83)	(88)	1,256	(354)	(329)
Methadone	269	(110)	(57)	310	(130)	(58)	368	(Ì4Í)	(87)	421	(152)	(102)	363	(165)	(82)	1,731	(698)	(386)
Cocaine	24	(12)	(4)	19	(10)	(2)	18	(8)	(5)	38	(21)	(5)	65	(40)	(18)	164	(91)	(34)
All amphetamines MDMA/Ecstasy	46 27	(21) (12)	(6) (3)	48 10	(24) (4)	(6) (1)	47 16	(22) (8)	(10) (4)	50 	(20) (8)	(3) (1)	64 15	(30) (6)	(5) (2)	255 79	(117) (38)	(30) (11)
Cannabis	18	(1)	(0) (3)	17	(1)	(0) (5)	11	(1)	(0) (7)	13	(1)	(1) (2)	5	(1)	(0) (2)	4 64	(4) (60)	(1)
Temazepam Diazepam Nitrazepam Barbiturates	163 72 18 46	(95) (64) (12) (10)	(50) (32) (4) (4)	138 76 17 46	(102) (68) (10) (8)	(43) (26) (2) (0)	98 97 11 30	(67) (91) (8) (10)	(28) (44) (3) (7)	104 122 14 20	(78) (111) (7) (6)	(39) (56) (2) (1)	110 109 6 35	(82) (105) (2) (12)	(36) (36) (2) (5)	613 476 66 177	(424) (439) (39) (46)	(196) (194) (13) (17)
All antidepressants Dothiepin Amitriptyline	476 261 138	(135) (58) (51)	(79) (44) (22)	489 235 145	(133) (56) (32)	(81) (39) (31)	540 279 168	(149) (60) (54)	(89) (47) (26)	539 262 177	(158) (60) (61)	(98) (41) (37)	502 244 183	(161) (60) (68)	(102) (47) (36)	2,546 1,281 811	(736) (294) (266)	(449) (218) (152)
Paracetamol includi	ng																	
Compounds Paracetamol Co-proxamol Aspirin	468 284 187 53	(146) (106) (40) (19)	(100) (49) (49) (10)	526 323 189 50	(161) (126) (30) (21)	(106) (44) (54) (5)	480 284 188 56	(145) (112) (30) (24)	(106) (55) (44) (8)	562 345 214 51	(152) (118) (30) (17)	(129) (71) (57) (6)	517 312 208 41	(159) (122) (31) (13)	(130) (57) (70) (6)	2,553 1,548 986 251	(763) (584) (161) (94)	(571) (276) (274) (35)





Age distribution of deaths from selected substances

Year

94

Deaths resulting from drug-related poisoning have a younger age distribution than for many other causes of death. The previous report¹ indicated that death rates were highest for men in their twenties. However the age distribution varies between substances and between males and females.

Figure 1 presents death rates for both sexes by age-groups for certain key substances. In the age-groups below 45, death rates for males were higher for heroin and/or morphine and methadone than for other substances. Above age 45 rates were higher for paracetamol and antidepressants. The highest rates among males for methadone and amphetamines were at ages 15-24. For the other substances shown the peak rates occur among 25-44 year olds. While death rates for some substances, particularly heroin and/or morphine, methadone and amphetamines, decline very steeply at older ages, for other substances, particularly paracetamol, there is a much more gradual decline.

For females death rates were highest at each age-group for paracetamol and antidepressants. For amphetamine, methadone and heroin and/or morphine-related deaths, rates were higher at ages 15-24 than among older women. Deaths with mentions of temazepam or paracetamol both show increasing rates with age, with the highest rates for the over 65s.

European age standardised death rates from selected substances

Figure 2 shows the trend in mortality rates from drug-related poisoning for both sexes and for selected key substances from 1994 to 1998.

Male rates show the largest changes over time during this period. The greatest increase among men was for deaths with a mention of heroin and/or morphine where the death rate more than doubled. While there was a fall in the methadone-related death rate between 1997 and 1998, heroin and/or morphine-related death rates rose from 14 to 20 per million population.

Year

For none of the key substances examined do the female death rates show such dramatic changes. Antidepressant and paracetamol remain the substances with the highest death rates throughout this period. The rate for heroin and/or morphine-related deaths also increased for females in 1998 but at 3.5 per million population this is only a small increase from the previous peak of 2.7 in 1996.

Further details about the database and its uses for research and other purposes are available from :

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Report: Death registrations in England and Wales, 1999: area of residence

This report gives (in Table 1) the numbers of deaths from all causes **registered** in England and Wales in 1999 by area of usual residence of deceased. The table also shows standardised mortality ratios (SMRs) by area.

The areas include both local and health authorities, as well as health regions and Government Office regions.

In 1999, levels of mortality were at their highest in the North East region (SMR of 112) and were lowest in the South West (92). Among local authorities, mortality levels were highest in Halton UA (128), Merthyr Tydfil UA (125) and Blaenau Gwent UA (124). Dorset (83) had the lowest level. For females, the highest mortality level was in Halton UA (137), and the lowest in Reading UA (81). For males, the highest level was in Merthyr Tydfil UA (129) and the lowest in Dorset (82).

The highest levels of mortality among health authorities were in Manchester (127) and Liverpool (126), and the lowest in Kensington, Chelsea and Westminster (77).

Figures for 1999 death registrations by age and sex, and for selected causes of death, were published in a Report in *Health Statistics Quarterly* 06 on 6 June 2000.

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. We also reviewed our production of deaths data by period of occurrence or registration, and decided to take two annual extracts. The main reason for this is the

considerable number of late registrations, particularly for deaths from external causes¹.

The first annual extract from our deaths database, produced in April following the data year, comprises **registrations** in that year. Outputs produced using this extract include this Report and a cause based Report in *Health Statistics Quarterly*, VS tables, and the Public Health Common Dataset. The second extract is produced in the following September, and comprises **occurrences** in the data year. This extract forms the basis for annual mortality publications, with the exception of the outputs mentioned above. These new arrangements began in 1996, for annual extracts of 1995 data.

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 Table 1 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 to 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 may be found in ONS annual reference volumes². Note that in Table 1 SMRs for males and females are not directly comparable with each other.

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Table I

Deaths by area of usual residence, numbers and standardised mortality ratios (SMR's), by sex, 1999 registrations

England,Wales and elsewhere, government office regions, unitary authorities, counties, former counties, regional offices and health authorities

		Number of death	s	Stand	lardised mortality ra	tios
Area of usual residence	Persons	Males	Females	Persons	Males	Females
England, Wales and elsewhere	553,532	263,166	290,366	100	100	100
England	517,119	245,602	271,517	99	99	99
Wales	34,929	16,646	18,283	105	106	105
Elsewhere	1,484	918	566	:	:	:
NORTH EAST	29,364	13,969	15,395	112	112	112
Darlington UA	1,224	572	652	109	110	108
Hartlepool UA	1,024	490	534	115	115	116
Middlesbrough UA	1,414	708	706	105	113	99
Redcar and Cleveland UA	1,582	/28	854	115	113	118
Stockton-on- lees OA	1,770	032	710	114	110	117
Durham County	5,748	2,777	2,971	112	114	111
Northumberland	3,679	1,695	1,984	110	105	115
Tyne and Wear	12,923	6,147	6,776	112	114	111
Tees Valley '	7.014	3.350	3.664		112	112
Tees Valley less Darlington ²	5,790	2,778	3.012	112	112	113
Former County of Durham 3	6,972	3,349	3,623	112	113	111
NORTHWEST	77,946	36,825	41,121	109	ш	109
Blackburn with Damuon LIA	1 509	490	910	120	110	122
Blackbool UA	2 109	976	1 133	110	110	125
Halton UA	1.225	562	663	128	119	137
Warrington UA	1,856	898	958	105	105	106
Chashira County	7 54	3 397	3 757	100	99	101
Cumbria County	5,879	2,776	3,103	100	101	101
Greater Manchester	28.232	13.313	4,9 9	112	114	111
Lancashire County	13,168	6,226	6,942	105	107	104
Merseyside	16,815	7,988	8,827	114	119	111
Former County of Cheshire ⁴	10,235	4,857	5,378	104	102	105
Former County of Lancashire 5	16,785	7,891	8,894	107	109	106
YORKSHIRE AND THE HUMBER	SIDE 53,872	25,740	28,132	102	103	101
East Riding of Yorkshire UA	3,632	1,677	1,955	101	98	104
Kingston upon Hull UA	2,776	1,397	1,379	107	113	101
North East Lincolnshire UA	1,736	820	916	103	103	103
North Lincolnshire UA	1,640	830	810	101	104	98
York UA	1,766	801	965	87	85	89
North Yorkshire County	6,424	2,945	3,479	93	90	95
South Yorkshire	14,273	6,889	7,384	105	107	104
West Yorkshire	21,625	10,381	11,244	103	106	101
The Humber ⁶	9 784	4 774	5 060	103	104	102
Former County of North Yorkshire ⁷	8,190	3,746	4,444	92	89	94
EAST MIDLANDS	44,254	21,620	22,634	101	101	101
Derby UA	2,469	1,237	1,232	102	106	98
Leicester UA	2,994	1,475	1,519	109	112	105
Nottingham UA	2,964	1,470	1,494	108	113	104
Rutland UA	297	147	150	85	81	87
Derbyshire County	8,110	3,930	4,180	103	103	103
Leicestershire County	5,735	2,826	2,909	93	92	94
Lincolnshire	7,474	3,690	3,784	99	99	99
Northamptonshire	6,051	2,887	3,164	102	100	104
Nottinghamshire County	8,160	3,958	4,202	103	102	103
Former County of Derbyshire ⁸	10,579	5,167	5,412	103	104	102
Former County of Leicestershire 9	9,026	4,448	4,578	97	97	97
Former County of Nottinghamshire ¹⁰	11,124	5,428	5,696	104	105	103

Note: SMR's are based on mid-1998 population estimates

The areas shown in italics and numbered (in superscript) are explained in Appendix 1 on page 84

Table I Continued

Deaths by area of usual residence, numbers and standardised mortality ratios (SMR's), by sex, 1999 registrations

England, Wales and elsewhere, government office regions, unitary authorities, counties, former counties, regional offices and health authorities

		Number of death	s	Stan	dardised mortality r	atios
Area of usual residence	Persons	Males	Females	Persons	Males	Females
WEST MIDLANDS	56,494	27,365	29,129	104	104	103
Herefordshire County of UA	1 910	931	979	92	91	97
Stoke-on-Trent UA	2,923	1.452	1.471	115	123	109
Telford and Wrekin UA	1,339	659	680	III	112	III
Shropshire County	3,194	1,475	1,719	97	92	101
Staffordshire County	8,424	3,952	4,472	106	102	109
West Midlands	2,315	2,560	2,755	101	98	104
Worcestershire County	5,561	2,626	2,935	97	94	99
Herefordshire and Worcestershire "	7,471	3,557	3,914	96	93	97
Former County of Shropshire 12	4,533	2,134	2,399	101	97	103
Former County of Staffordshire	11,347	5,404	5,943	108	107	109
EAST	54,747	26,081	28,666	96	93	97
Luton UA	1,483	743	740	107	106	106
Peterborough UA	1,432	716	716	106	104	107
Southend-on-Sea UA	2,152	961	1,191	96	95	98
Thurrock UA	1,231	623	608	113	118	108
Bedfordshire County	3,350	1,599	1,751	98	96	100
Cambridgeshire County	5,002	2,339	2,663	91	85	95
Essex County	13,497	6,459	7,038	96	95	96
Hertfordshire	9,748	4,529	5,219	95	91	99
Nortolk	9,492	4,618	4,8/4	93	91	94
SUTTOIK	7,360	3,494	3,866	94	91	76
Former County of Bedfordshire 14	4,833	2,342	2,491	101	99	102
Former County of Cambridgeshire 15	6,434	3,055	3,379	94	89	97
Former County of Essex 16	16,880	8,043	8,837	97	96	97
LONDON	61,716	29,641	32,075	95	97	94
Inner London	21,386	10.806	10.580	97	102	92
Outer London	40,330	18,835	21,495	95	95	95
SOUTH EAST	82,609	38,195	44,414	93	91	95
Bracknell Forest UA	836	368	468	100	91	109
Brighton and Hove UA	2,952	1,288	1,664	94	92	96
Isle of Wight UA	1,811	849	962	92	92	92
Medway UA	2,253	1,105	1,148	112	115	111
Milton Keynes UA	1,506	762	744	108	112	105
Portsmouth UA	2,122	1.017	1.105	105	108	103
Reading UA	I,148	565	583	86	91	81
Slough UA	919	460	459	110	111	109
Southampton UA	2,164	1,067	1,097	98	101	95
West Berkshire UA	1,152	552	600	90	86	93
Windsor and Maidenhead UA	1.297	636	661	95	94	96
Wokingham UA	1,101	525	576	97	89	103
Ruckinghamshira County	1 749	2011	2 257	05	90	99
East Sussex County	6.916	3.081	3.835	87	88	87
Hampshire County	11,996	5,518	6,478	93	89	97
Kent County	14,772	6,723	8,049	95	93	98
Oxfordshire	5,336	2,560	2,776	91	89	93
Surrey	0.621	4.897	5,724	90	87	92
West Sussex	9,439	4,211	5,228	91	89	92
Former County of Barkshira 17	6 452	3 104	3 347	05	03	97
Former County of Buckinghamshire ¹⁸	5.774	2.773	3.001	98	95	100
Former County of East Sussex ¹⁹	9,868	4,369	5,499	89	89	89
Former County of Hampshire 20	16,282	7,602	8,680	95	92	97
Former County of Kent 21	17,025	7,828	9,197	97	95	100

Note: The areas shown in italics and numbered (in superscript) are explained in Appendix 1 on page 84

Table I Continued

Deaths by area of usual residence, numbers and standardised mortality ratios (SMR's), by sex, 1999 registrations

England,Wales and elsewhere, government office regions, unitary authorities, counties, former counties, regional offices and health authorities

		Number of death	IS	Stan	dardised mortality ra	atios
Area of usual residence	Persons	Males	Females	Persons	Males	Females
SOUTHWEST	56,117	26,166	29,951	92	90	92
Bath and North East Somerset	UA 1.841	846	995	87	86	88
Bournemouth UA	2.419	1.056	1.363	93	94	93
Bristol. City of UA	4.022	1,994	2.028	96	101	91
North Somerset UA	2,229	996	1,233	91	90	92
Plymouth LIA	2 532	1 224	1 308	95	97	93
Poole LIA	1 674	731	943	89	84	94
South Gloucestershire LIA	2 000	933	1 067	91	83	97
Swindon LIA	1,632	761	871	104	101	107
Torbay UA	1,854	801	1,053	89	88	90
Cornwall and the Islas of Scilly 22	6 094	2 888	3 206	94	92	94
Deven County	8 866	4 158	4 708	90	89	91
Derect County	4 897	2 3 1 3	2 584	83	82	94
Gloucostorshiro	4,077	2,313	2,304	95	93	97
Gloucestersnine	0,007	2,020	5,207	,,,	75	//
Somerset	5,777	2,661	3,116	92	88	94
Wiltshire County	4,193	1,984	2,209	91	88	92
Bristol/Bath area 23	10,092	4,769	5,323	92	92	92
Former County of Devon 24	13,252	6,183	7,069	91	91	91
Former County of Dorset 25	8,990	4,100	4,890	87	85	88
Former County of Wiltshire 26	5,825	2,745	3,080	94	92	96
WALES	34,929	16,646	18,283	105	106	105
Blaenau Gwent	980	451	529	124	120	128
Bridgend	1,532	747	785	107	109	105
Caerphilly	1,925	943	982	119	120	119
Cardiff	3,193	1,505	1,688	100	101	101
Carmarthenshire	2,304	1,126	1,178	105	108	102
Ceredigion	841	425	416	92	96	88
Conwy	1,767	792	975	97	97	97
Denbighshire	1,350	625	725	105	106	104
Flintshire	1,520	745	775	105	104	105
Gwynedd	1,487	710	777	99	105	95
Isle of Anglesey	842	403	439	103	104	102
Merthyr Tydfil	722	343	379	125	129	124
Monmouthshire	940	471	469	91	94	87
Neath Port Talbot	1,766	831	935	109	114	106
Newport	١,53١	733	798	107	107	107
Pembrokeshire	1,422	695	727	109	107	110
Powys	1,431	712	719	90	90	89
Rhondda, Cynon, Taff	2,812	1,309	1,503	17	117	119
Swansea	2,686	1,230	1,456	100	97	103
Torfaen	1,102	512	590	122	117	127
The Vale of Glamorgan	1,312	656	656	102	103	100
Wrexham	1,464	682	782	108	107	110
NORTHERN AND YORKSHIRE	69,363	32,953	36,410	105	106	105
Bradford	5,017	2,374	2,643	106	110	104
Calderdale and Kirklees	5,986	2,868	3,118	101	105	99
County Durham	6,972	3,349	3,623	112	113	111
East Riding	6,408	3,074	3,334	103	104	103
Gateshead and South Tyneside	4,257	2,063	2,194	114	117	113
Leeds	7,292	3,546	3,746	99	102	96
Newcastle and North Tyneside	5,384	2,557	2,827	106	111	104
North Cumbria	3,776	1,783	1,993	106	104	108
Northumberland	3,679	1,695	1,984	110	105	115
North Yorkshire	8,190	3,746	4,444	92	89	94
Sunderland	3,282	1,527	1,755	119	117	121
lees	5,790	2,778	3,012	112	112	113
VVakefield	3,330	1,593	1,737		110	113

Note: The areas shown in italics and numbered (in superscript) are explained in Appendix 1 on page 84

Table I Continued

Deaths by area of usual residence, numbers and standardised mortality ratios (SMR's), by sex, 1999 registrations

England, Wales and elsewhere, government office regions, unitary authorities, counties, former counties, regional offices and health authorities

	Number of deaths		Stand	Standardised mortality ratios			
Area of usual residence	Persons	Males	Females	Persons	Males	Females	
TRENT	55,551	27,131	28,420	102	103	101	
Barnsley	2.557	1.240	1.317	109	112	107	
Doncaster	3,207	1,568	1,639	114	113	114	
Leicestershire	9,026	4,448	4,578	97	97	97	
Lincolnshire	7,474	3,690	3,784	99	99	99	
North Derbyshire	4,272	2,028	2,244	105	103	107	
North Nottinghamshire	4,395	2,168	2,227	108	108	108	
Nottingham	6,729	3,260	3,469	102	103	101	
Rotherham	2,642	1,330	1,312	105	112	100	
Sheffield	5,867	2,751	3,116	100	101	100	
Southern Derbyshire	6,006	2,998	3,008	102	105	99	
South Humber	3,376	1,650	1,726	102	103	100	
EASTERN	54,747	26,081	28,666	96	93	97	
Bedfordshire	4,833	2,342	2,491	101	99	102	
Cambridgeshire	6,434	3,055	3,379	94	89	97	
East and North Hertfordshire	4,662	2,191	2,471	96	92	100	
Norfolk	9,492	4,618	4,874	93	91	94	
North Essex	9,511	4,538	4,973	95	94	95	
South Essex	7,369	3,505	3,864	100	99	100	
Suffolk	7,360	3,494	3,866	94	91	96	
West Hertfordshire	5,086	2,338	2,748	95	89	99	
LONDON	61,716	29,641	32,075	95	97	94	
Barking and Havering	4,248	2,013	2,235	106	108	106	
Barnet	2,860	1,242	1,618	88	81	94	
Bexley and Greenwich	4,176	1,973	2,203	99	100	99	
Brent and Harrow	3,643	1,820	1,823	91	93	88	
Bromley	3,022	1,373	1,649	89	90	89	
Camden and Islington	3,007	1,552	1,455	95	102	89	
Croydon	2,858	1,361	1,497	97	97	97	
Ealing, Hammersmith and Hounslow	5,353	2,626	2,727	96	99	94	
East London and The City	4,821	2,575	2,246	108	115	99	
Enfield and Haringey	4,163	2,009	2,154	95	101	91	
Hillingdon	2,188	1,058	1,130	91	91	90	
Kensington & Chelsea and Westminste	er 2,568	1,237	1,331	77	76	77	
Kingston and Richmond	2,927	1,276	1,651	86	83	89	
Lambeth, Southwark and Lewisham	6,043	3,030	3,013	102	107	97	
Redbridge and Waltham Forest	5,597 4,242	2,556	2,302	95	97 96	95	
SOUTH EAST	88.660	41.082	47.578	94	92	96	
	,		,				
Berkshire Bucking descention	6,453	3,106	3,347	95	93	97	
Buckinghamshire	5,//4	2,773	3,001	98	95	100	
East Kent	/,+0/	3,362	4,105 2,429	90	72	75	
East Sussex, Brighton and Hove	9,868	4,369	5,499	89	89	89	
			0.5				
Isle of Wight	1,811	849 2 007	962	92	92	92	
North and Mid Hampshire	0,USI 4 700	2,887	3,104 2514	102	100	10 4 QE	
Oxfordshire	5 226	2,100	2,510	91	00 29	93	
Portsmouth and South East Hampshire	e 5,790	2,680	3,110	98	96	101	
Southampton and South Mart Llow-	Nimo E 700	2 724	2 054	05	60	97	
West Kent	וויפ כ,/۶U 9 ג גע	2,736 4466	3,U34 5,097	101	73 92	201	
West Surrey	6.128	2.842	3,286	90	87	92	
West Sussex	9.439	4.211	5,228	91	89	92	
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Table I Continued

Deaths by area of usual residence, numbers and standardised mortality ratios (SMR's), by sex, 1999 registrations

England,Wales and elsewhere, government office regions, unitary authorities, counties, former counties, regional offices and health authorities

		Number of death	IS	Stand	lardised mortality ra	itios
Area of usual residence	Persons	Males	Females	Persons	Males	Females
SOUTHWEST	56,117	26,166	29,951	92	90	92
Avon	10,092	4,769	5,323	92	92	92
Cornwall and Isles of Scilly	6,094	2,888	3,206	94	92	94
Dorset	8,990	4,100	4.890	87	85	88
Gloucestershire	6,087	2.820	3.267	95	93	97
North and East Devon	6,101	2,845	3,256	91	88	92
Somerset	5.777	2.661	3.116	92	88	94
South and West Devon	7 5	3 3 3 8	3813	91	93	90
Wiltshire	5 825	2 745	3 080	94	92	96
vindin e	5,025	2,715	3,000		72	,,,
WEST MIDLANDS	56,494	27,365	29,129	104	104	103
Birmingham	10,287	5,032	5,255	106	109	103
Coventry	3,268	1,622	1,646	105	109	101
Dudley	3,359	1,610	1,749	104	105	104
Herefordshire	1,910	931	979	92	91	92
North Staffordshire	5,355	2,594	2,761	110	112	108
Sandwell	3.466	1.693	1.773	116	121	112
Shropshire	4 533	2 1 3 4	2 399	101	97	103
Solibull	1,880	931	949	89	90	88
South Staffordshire	5 992	2 810	3 182	106	102	110
Walsall	2,817	1,435	1,382	107	114	100
MA	5.215	2.570	3.755	101	00	104
vvarwicksnire	5,315	2,560	2,755	101	98	104
Wolverhampton	2,751	1,387	1,364	111	115	106
vvorcestershire	5,561	2,626	2,935	97	94	99
NORTHWEST	74,471	35,183	39,288	109	111	109
Bury and Rochdale	4,301	1,977	2,324	115	113	118
East Lancashire	5,809	2,714	3,095	115	113	117
Liverpool	5,484	2,635	2,849	126	132	123
Manchester	4.805	2,388	2.417	127	135	120
Morecambe Bay	3,760	1,749	2,011	98	97	99
North Cheshire	3 081	1 460	1 621	113	110	117
North West Lancashire	6.086	2 880	3 206	104	108	101
St Helens and Knowsley	3 570	1 742	1 828	120	100	119
Salford and Trafford	5,047	2 373	2 674	107	109	105
Sefton	3,786	1,746	2,040	104	109	102
	7 15 4	2 207	2 757	100	00	101
South Langeshing	7,154	3,37/	3,/5/	100	78	101
South Lancashire	3,233	1,541	1,692	104	107	102
Stockport	3,021	1,365	1,656	94	94	96
vvest Pennine	5,183	2,429	2,754	114	116	113
Wigan and Bolton	6,176	2,922	3,254	112	115	111
Wirral	3,975	1,865	2,110	103	109	100
WALES	34,929	16,646	18,283	105	106	105
North Wales	8,430	3.957	4,473	102	104	102
Dyfed Powys	5 998	2 958	3,040	100	101	98
Morgannwg	5 984	2,808	3,176	104	105	105
Bro Taf	8.039	3,813	4,226	108	108	108
Gwent	6 478	3 1 10	3,368	112	112	113
	3, 17 5	-,	2,000	1		

Report: Healthy life expectancy in Great Britain, 1997

The article, *Healthy life expectancy in Great Britain, 1980-96, and its use as an indicator in United Kingdom Government strategies,* in this journal¹ presents time trends for Great Britain using two measures of health expectancy, and compares them to trends in life expectancy. This report presents the next available data point in these time series.

The methodology for the calculation of healthy life expectancy is described fully in the article. ONS are unable to calculate healthy life expectancy (HLE) for 1996 because there was no General Household Survey (GHS) in 1997. As the method uses a three-year moving average, the GHS data available would be from 1995 and 1996 only. These data have already been used in calculating the data points for 1995. The next point in these series is therefore for 1997, using data from the GHS in 1996 and 1998.

Table 1 shows the 1997 data for life expectancy and healthy life expectancy (both in self-perceived good or fairly good general health and separately, free from limiting long-standing illness, LLI).

Table ILife expectancy and healthy life expectancy, Great Britain, 1997						
Sex		Life Expectancy	HLE (in good or fairly good general health)	HLE (free from LLI)		
Males	At birth	74.6	66.9	58.9		
	At age 65	15.1	11.7	8.3		
Females	At birth	79.6	68.7	60.4		
	At age 65	18.5	13.2	9.3		

HLE IN GOOD OR FAIRLY GOOD HEALTH

The number of years a person can expect to live in good or fairly good health has increased since 1995. The largest increase was for males at birth, from 66.4 to 66.9 years, and at age 65 there was an increase from 11.3 to 11.7 years. For females, there was an increase at age 65 from 13.0 to 13.2 years, and at birth HLE remained at 68.7 years. Total life expectancy has continued to increase steadily and at a faster rate than HLE in all cases.

This means that the proportion of life men and women can expect to spend in poor health has also increased. Figure 1 shows that the number



of years an adult aged 65 can expect to spend in poor health has remained fairly constant in the period between 1981 and 1997, showing only a slight overall increase. However, for newborn babies there has been a relatively large increase in the number of years expected to be spent in poor health, particularly since 1992.

This increase in the mid-1990s may be an artefact of the methodology used in calculating HLE. The method uses data from the GHS which only surveys private households in Great Britain. Therefore a crude adjustment is made for people living in communal establishments. This adjustment is based on data collected in the 1991 Census. However, the NHS and Community Care Act (1990), which was phased in over a three-year period, would mean that a proportion of those persons who would previously have been resident in communal establishments would, in the mid-1990s, be living and cared for in the community, and as such would be represented in the GHS sample. The method is able to cope with these changes from the community aspect, but not with the resulting parallel changes in communal establishment populations. Despite this legislative change and other such changes, it is still important to make an adjustment for communal establishments in the calculation of HLE. It will not be possible to assess these adjustments until the results of the 2001 Census become available.

HLE FREE FROM LIMITING LONG-STANDING ILLNESS

For males, both at birth and at age 65, HLE free from limiting longstanding illness has remained static since 1995, at 58.9 and 8.3 years respectively. For females, this measure of HLE has decreased since 1995, from 61.2 to 60.5 at birth, and from 9.5 to 9.3 years at age 65.

Figure 2 shows that these changes, together with the increases in overall life expectancy, mean that the number of years expected to be spent with a limiting long-standing illness has increased since 1995, continuing the general trend since 1981.



As with expected years in poor health, the number of years an individual at birth can expect to live with LLI seems to have shown a fairly rapid increase since 1992. At age 65, there has been a slight increase since 1992. Again, this might be due to an artefact of the methodology. The Community Care Act (1990) was applied across all age-groups, so we would expect to see an increased effect on the measures at birth, while at age 65 the effect would not be as marked.

Other mechanisms for the changes in HLE are considered in an article published in *Health Statistics Quarterly 6* earlier this year.² This reviews indicators for mortality, morbidity, health services use and patterns in health related behaviours for people aged 55–64. The trends illustrated there all impact on HLE. Although HLE is increasing, it is not doing so by as much as total life expectancy, leading to the conclusion in that article that "those in the pre-retirement age-group can look forward to a longer but not necessarily healthier retirement".

FUTURE DEVELOPMENTS

In the period 1996–2000, the GHS was only carried out every two years. Thus, as for 1996, healthy life expectancy for 1998 cannot be calculated. The GHS has undergone an extensive review and will be carried out annually in revised form from 2000, with further reviews every five years. This will allow data points to be calculated for 1999 onwards. The 1999 point is the next one to be published, using data from the 1998 and 2000 GHS, and should be available in summer 2002. ONS will continue to monitor healthy life expectancy. Further developments of the measures (for example, breakdowns by subnational area, ethnic group and socio-economic class), are also being investigated, particularly in view of Government policies and strategies which include healthy life expectancy as an indicator of progress.

REFERENCES

- ¹ Kelly S, Baker A and Gupta S. Healthy life expectancy in Great Britain, 1980-96, and its use as an indicator in United Kingdom Government strategies. *Health Statistics Quarterly 07* (2000), 33–38.
- ² Dunnell K and Dix D. Are we looking forward to a longer and healthier retirement? *Health Statistics Quarterly 06* (2000), 18–25.

Annual Update: Mortality statistics 1998: injury and poisoning

INTRODUCTION

The ONS annual reference volume *Mortality statistics: injury and poisoning 1998* (series DH4 no 23) was published in July 2000. It contains statistical information on deaths resulting from external causes of injury and poisoning in England and Wales during 1998. These deaths are coded according to the Ninth Revision of the International Classification of Diseases¹ and are assigned code numbers in the range E800–E999. They are also coded to the WHO 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 from 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.

Two main changes have been made in the 1998 edition. First, the analysis of seasonal mortality presented in Table 7 of the volume is now based on a late registration extract (see later item). This enables ONS to allow for the prolonged delays in registering some deaths from external causes, which was not possible using the standard extract. Also, the amended definitions introduced last year for deaths from suicide and from homicide have been further elaborated with an analysis of recent trends in suicide deaths (section 3.6 of the Introduction). This allows a better estimate of suicides over the years 1995 to 1998.

Some general findings from *Mortality statistics: injury and poisoning 1998* are given below. In addition, a recent Report in this journal analysed information from the ONS drug-related deaths database from 1993 to 1997². Articles on recent trends in homicides³ and for road traffic deaths⁴ were published last year in *Health Statistics Quarterly*.

MAIN CAUSES OF DEATH FROM INJURY AND POISONING

There were 16,201 deaths from external causes in England and Wales in 1998, a slight decrease from the 1997 total of 16,311. The majority of these external cause deaths were among males (64 per cent).

Among female deaths from external causes in 1998, nearly 40 per cent resulted from accidental falls (Table 1), and one in five were suicides

(using the amended definition described below). A further 14 per cent were from road traffic accidents. By contrast, 38 per cent of corresponding male deaths were suicides and 20 per cent resulted from road traffic accidents. Using the recently introduced method for estimating numbers of homicides (see below), about 4 per cent of external cause deaths could be assigned to this cause, for both males and females.

Analysed by nature of injury in external cause deaths, a quarter of female deaths resulted from fracture of lower limb, related to the high proportion of deaths in falls. And nearly one fifth of external cause deaths for all persons (3,100) resulted from an injury in the category 'other and unspecified effects', which includes drownings, deaths from hypothermia and deaths from asphyxiation and strangulation. Within this group about three quarters (2,345) were suicides, mostly by hanging ie asphyxiation and strangulation.

LONG TERM TRENDS

Over the past century, death rates from all external causes have nearly halved (Table 3 of annual volume). Difficulties in interpreting coding revisions in the early years of the century present problems in assessing trends for particular types of accidental or violent death⁵, but Figure 1 shows those categories where it is possible to construct series. Thus, mortality levels from accidental poisoning were low over the period 1911–35 but rose sharply to the 1960's, since when they have returned to the level of one hundred years ago. However, mortality in accidental falls, separately identified only from 1941, reached a peak in the early sixties but then declined to about half this level by the early nineties. The rise since then is related to the methods of recording deaths where the certifier mentions both an accidental fall and osteoporosis on the death certificate⁶.

Mortality in motor vehicle traffic accidents increased steadily in the first third of the century, peaking in 1936–40. Its later decline was presumably related to fuel shortages and low car ownership following the Second World War, but a subsequent rise in the sixties was followed by a steady decline, to levels now less than half those of 1961–65. Mortality arising from fires has declined steadily over the century, with the transition from open fires and candles to gas and electricity. The latest levels are only one eighth of those one hundred years ago. Finally, recent trends in homicide deaths are misleading in that the

apparent decline at the end of the 1970's and into the 1980's resulted from the introduction of accelerated registrations in 1978³. The definitions used elsewhere in this Update allow for this change.

THE LATE EXTRACT OF REGISTRATIONS

A major recent change in the handling of ONS events data 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 registration extract, many months after the 'standard' extract. A late extract is taken annually for the most recent year possible, and the three preceding years. These extracts were first analysed in the 1996 annual DH4 volume⁷. Since then they have been used for two purposes:

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

The most recent late extract was taken in April 2000 for the data years 1995 to 1998, and table 2 shows for each of these years the differences between numbers in this extract and numbers in the standard annual extract, taken earlier. Thus, for 1995 the standard extract was taken in September 1996. For 1995 the overall increase of 441 external cause deaths, distributed as shown, took place over the three and a half year period from then up to last April.

Overall, the late extract contains about 3 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 12 per cent on the standard. Reasons for this are described below. Associated with this relatively large increase is a reduction in the number of deaths assigned to the category of injury with undetermined intention. The number of deaths in motor vehicle

Table I

Deaths from external causes of injury and poisoning: external cause, nature of injury and sex, 1998

ICD9 code		Number of de	aths		Percentage of all external cause deaths			
		persons	males	females	persons	males	females	
Extern	al cause				+			
E800-E999	All external causes	16.201	10.338	5.863	100	100	100	
F800-F949	Accidents and adverse effects	10.370	5.952	4,418	64.0	57.6	75.4	
F800-F848	Transport accidents	3,103	2,273	830	19.2	22.0	14.2	
F810_F819	Motor vehicle traffic accidents	2 878	2,083	795	17.8	201	13.6	
E850_E869	Accidental poisoning	1 044	732	312	6.4	71	5 3	
E880_E888	Accidental falls	3 865	1 533	2 3 2 2 2	23.9	14.8	39.8	
E890_E899	Accidents caused by fire and flames	3,005	1,555	149	23.7	2.2	2.5	
	Accidents caused by me and names	372	422	220	2.3	4.2	2.5	
E710-E715	suffocation and foreign bodies	032	732	220	4.0	4.2	5.0	
E950–E959	Suicide and self-inflicted injury	3,614	2,826	788	22.3	27.3	13.4	
E960-E969	Homicide	286	180	106	1.8	1.7	1.8	
E950–E959, E980–E989 with	Suicide and self inflicted injury; and injury undetermined whether accidentally or	5,184	3,951	1,233	32.0	38.2	21.0	
E960–E969, E980–E989 with pending' verdict	Homicide; and injury undetermined whether accidentally or purposely inflicted, with pending' verdict	649	436	213	4.0	4.2	3.6	
Nature	e of injury							
800-999	All external causes	16,201	10,338	5,863	100	100	100	
800-804	Fracture of skull	687	475	212	4.2	4.6	3.6	
805-809	Fracture of spine and trunk	543	287	256	3.4	2.8	4.4	
820-829	Fracture of lower limb	2,194	645	1,549	13.5	6.2	26.4	
850–854	Intracranial injury, excluding those with skull fracture	2,019	1,315	704	12.5	12.7	12.0	
860–869	Internal injury of chest, abdomen and pelvis	2,242	1,680	562	13.8	16.3	9.6	
930–939	Effects of foreign body entering through orifice	318	171	147	2.0	1.7	2.5	
940–949	Burns	278	171	107	1.7	1.7	1.8	
960-979	Poisoning by drugs, medicaments	2.219	1.354	865	13.7	13.1	14.8	
	and biological substances	_,	.,					
980–989	Toxic effects of substances chiefly	1,109	864	245	6.8	8.4	4.2	
990_995	Other and unspecified effects of	3 100	2 442	458	191	22.6	112	
	external causes	5,100	<i>2</i> , 1 1 <i>2</i>	000	17.1	23.0	11.2	
996–999	Complications of surgical and medical care not elsewhere classified	287	128	159	1.8	1.2	2.7	

Source: ARV DH4Tables 4 and 5.



Table 2

Deaths from external causes, using standard and late registration extracts: selected causes, 1995–98

			Year of occurrence					
ICD 9 code	External cause		1995	1996	1997	1998		
E800-E999	All external causes	Standard extract	16,049	16,061	16,311	16,201		
		Late extract	16,490	16,484	16,829	16,692		
		Change	441	423	518	491		
		% change	2.7	2.6	3.2	3.0		
E810-E819	Motor vehicle traffic accidents	Standard extract	3,063	3,134	3,112	2,878		
		Late extract	3,243	3,292	3,278	3,041		
		Change	180	158	166	163		
		% change	5.9	5.0	5.3	5.7		
E850-E869	Accidental poisonings	Standard extract	936	1.089	1.058	1.044		
	6	Late extract	959	1.112	1.086	1.067		
		Change	23	23	28	23		
		% change	2.5	2.1	2.6	2.2		
E880-E888	Accidental falls	Standard extract	3.602	3.637	3.885	3.865		
		Late extract	3,641	3,677	3,945	3,928		
		Change	39	40	60	63		
		% change	1.1	1.1	1.5	1.6		
E950-E959	Suicide: and injury undetermined.	Standard extract	5,185	4.925	5.018	5.184		
plus E980–E989	with induest verdict 'open'	Late extract	5.253	5.020	5,127	5,302		
excl E988.8 'open'		Change	68	95	109	118		
		% change	1.3	1.9	2.2	2.3		
sulg 6960–F969	Homicide: and injury undetermined	Standard extract	686	631	610	649		
F988 8 'pending'	with inquest verdict 'pending'	l ate extract	749	676	681	694		
Li colo policing	inter inquese ter arec penang	Change	63	45	71	45		
		% change	9.2	7.1	11.6	6.9		
F980_F989	Injury undetermined whether	Standard extract	1 948	1 798	1914	1 933		
2/00 2/0/	accidentally or purposely inflicted	l ate extract	1,786	1,669	1.819	1,233		
	accounting of purposely inneted	Change	-162	-129	-95	-96		
		% change	-8.3	-7.2	-5.0	-5.0		

Note: the annual 'standard' extract is usually taken about nine months after the end of a data year, for instance the standard extract for 1996 was taken in September 1997. The 'late' extracts given here were taken in April 2000, for each of the four years shown. Source: ARV DH4 Table 27.





traffic accidents is also increased, by over 5 per cent. As explained below, these changes result from both the inclusion of late returns, and the amendment of assigned cause of death in the light of new information supplied.

SEASONAL MORTALITY

Table 7 in the annual volume analyses seasonal mortality, using the late registration extract (see above). Table 7 is based on an aggregate of five years data, from 1994 to 1998, and is summarised in Figure 2 and 3, using annualised monthly rates ⁷.

In the years 1994–98, male deaths from external causes were most likely in the months November to January, and also peaked in August. They were least likely in May. To a large extent this pattern is duplicated for male deaths from accidental falls (highest in December-February, lowest in May-June), and in accidents caused by fire and flames (November-March and June, respectively). However, there is little seasonal pattern for male suicides. Only in January was there any marked excess (5 per cent above average) but in no other month was the deviation from the annual average more than 3 per cent. For motor vehicle traffic accidents there was a minor peak from October to December, but otherwise no consistent pattern.

For females there was a more pronounced peak of external cause deaths over the months of November to February, and a marked trough of almost constant levels between May and September. As accidental falls comprise two fifths of female deaths in this ICD chapter it is unsurprising that they show a very marked peak from December to February, months with relatively little daylight.

SUICIDES AND HOMICIDES

ONS has recently 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 are described in sections 3.5 and 3.6 of the annual volume, and figures based on them are used throughout the publication.

As noted above, deaths subject to a coroner's inquest provide extra information to assess the numbers of suicides and homicides. Where an inquest is opened and then adjourned because legal proceedings are to be initiated - generally for a trial on a charge of murder or manslaughter - the coroner notifies the local registrar, and ONS then assigns the cause of death code E988.8. ONS also codes inquest verdict where appropriate, and in these cases the verdict is regarded as 'pending', until a verdict is notified. When legal proceedings are completed the coroner re-opens the inquest and then notifies the registrar of the findings, including the verdict reached. This information usually results in the cause of death code being amended to homicide (ICD code E969–E969), but in a few cases it may be assigned to a motor vehicle traffic accident - for instance, manslaughter caused by dangerous driving. Occasionally no further information is supplied to ONS, in which case the death remains in a 'pending' category.

ONS uses this information to produce better estimates of homicide deaths, as shown in Table 3. An earlier method used the combination of deaths coded to E960–E969 and E988.8 (row(4) of Table 3), but as some of the latter include deaths with an 'open' verdict there is an overestimate. Using only 'pending' cases produces a better estimate (row(5)). The new estimates for homicide deaths thus combine deaths coded to E960–E969 with those coded to E988.8 having a 'pending' status. The latter may also be described as deaths coded to E980–E989 with 'pending'.

Box One

CAUSE OF DEATH CODES AND CLASSIFICATIONS USED IN THIS UPDATE

ICD9 code

E800-E999	External causes of injury and poisoning
E810-E829 E810-E819	Road transport accidents Motor vehicle traffic accidents
E850–E869 E880–E888 E890–E899 E910–E915	Accidental poisoning Accidental falls Accidents caused by fire and flames Accidents caused by submersion, suffocation and foreign bodies
E950-E959 E960-E969	Suicide and self inflicted injury Homicide and injury purposely inflicted by others
E980-E989 E988.8	Injury undetermined whether accidentally or purposely inflicted Injury by other specified means, undetermined whether accidentally or purposely inflicted
E950-E959; plus E980-E989 with verdict 'open'	Suicide and self inflicted injury; and injury undetermined whether accidentally or purposely inflicted, with inquest verdict 'open'
E960-E969; plus E980-E989 with verdict 'pending'	Homicide; and injury undetermined whether accidentally or purposely inflicted, with inquest verdict 'pending

Taking a late extract means that many deaths not previously registered are included as possible homicides (row (6)). For instance, in Table 3 the apparent increase in numbers of homicides in 1997 from 610 to 681 is formed of new registrations.

For suicides, it was found some years ago that most deaths assigned to injury of undetermined intention (E980–E989) could be included with deaths coded to suicide (E950–E959) to give a better global estimate⁹. A qualification was that deaths coded to E988.8 should be omitted from the former grouping, for reasons outlined above (shown in row (1) of Table 3). The refinement introduced in 1996 was to include in the global figure any deaths which had been assigned to code E988.8 but which had an 'open' inquest verdict. These new estimates are shown in Table 3 (row (2)). Here the late extract figures (row (3)) are only a small increase on those in the standard extract, and are nearly all new (or late) registrations.

Ta	b	e	3

Estimated numbers of suicides and homicides, 1995–98

				Year of	occurrence	
	Definition	Extract source	1995	1996	1997	1998
	Suicides					
(1)	E950–E959, E980–E989 excl E988.8	Standard	5,157	4,893	4,981	5,155
(2)	E950–E959, E980–E989 with inquest verdict 'open'	Standard	5,185	4,925	5,018	5,184
(3)	E950–E959, E980–E989 with inquest verdict 'open'	Late	5,253	5,020	5,127	5,302
	Homicides					
(4)	E960–E969, E988.8	Standard	714	663	647	678
(5)	E960–E969, E980–E989 with inquest verdict 'pending'	Standard	686	631	610	649
(6)	E960–E969, E980–E989 with inquest verdict 'pending'	Late	749	676	681	694

Note: the annual 'standard' extract is usually taken about nine months after the end of a data year; for instance the standard extract for 1996 was taken in September 1997. The 'late' extracts given here were taken in April 2000, for each of the four years shown. Source: ARV DH4 text Tables H and I.

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Population Trends 101 Publication 12 September 2000

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