

The Registrar General's Annual Review
of Demographic Trends
151st Edition

SCOTLAND'S POPULATION 2005

(Laid before the Scottish Parliament pursuant to Section 1(4) of the Registration of Births, Deaths and Marriages (Scotland) Act 1965)

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ANNUAL REPORT

of the **REGISTRAR GENERAL**
of **BIRTHS, DEATHS AND MARRIAGES**
for **SCOTLAND 2005**

151st Edition

To Scottish Ministers

I am pleased to let you have my Annual Report for the year 2005, which will be laid before the Scottish Parliament pursuant to Section 1(4) of the Registration of Births, Deaths and Marriages (Scotland) Act 1965.

Duncan Macniven
Registrar General for Scotland
July 2006

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INTRODUCTION

In this Annual Report, my colleagues and I have highlighted for a wide audience the trends and issues affecting Scotland's population.

Over the past 3 years, Scotland's population has been rising – against the previous trend of slow decline from the early 1970s. The birth rate has been rising, which is unusual in developed countries and which may (or may not!) be a short term phenomenon. Over the last 3 years, too, in-migration has significantly exceeded out-migration – a picture radically different from Scotland of the 1960s and 1970s, and even the 1980s. This report casts light on these facets of Scotland's demography. But there are still many points where we can observe demographic changes without having a clear view of why they occur. The Scottish Executive and the Economic and Social Research Council have funded a 2 year £300,000 project to investigate three key aspects of Scotland's demography – migration, fertility and the impact of an ageing population – and we will soon know the results.

The most interesting question, which this report does not answer, is whether these recent trends will continue. Whether they do or not, Scotland's demography will throw down some interesting challenges for the future.

Each year, we pick a 'special subject' for the report. This year, we have chosen to focus on causes of death. Scotland's death rate has been steadily falling for many years: it stood at 11 deaths per 1,000 population in 2005, compared to 11.9 only ten years ago. Chapter 2 of this Report looks back to 1855 (when the present system of death registration began) and analyses changes in the causes of death. It points to the dramatic decline in deaths from infectious diseases such as typhoid, smallpox, measles, whooping cough and tuberculosis – which killed thousands of people in the mid-19th century but which are rare causes of death nowadays. It gives special attention to trends in the 3 main causes of death in Scotland today – cancer, heart disease and stroke – and shows that modern medical practice is continuing to reduce the death toll. But it also highlights causes of death which are increasing – such as cancer of the oesophagus, cirrhosis of the liver and other causes of death which are often linked to excessive alcohol consumption. Making an impact on these causes of death is one of the challenges modern Scottish society faces.

To keep the report to a manageable size, I could not include every statistic about Scotland's population. There is a wealth of other demographic information on our main website (www.gro-scotland.gov.uk). Our Statistics Customer Services team are always happy to help: they can be contacted at customer@gro-scotland.gsi.gov.uk.

Duncan Macniven

Registrar General for Scotland

July 2006

Population

Scotland's population rose for the third year running in the year to 30 June 2005, by 16,400 to 5,094,800.

For the eighth year in a row, there were more deaths than births, although the difference of 2,300 was the smallest since 1998.

The increase in population in the latest year was because in-migrants exceeded out-migrants by 19,000 – 12,500 from the rest of the UK and 7,300 from the rest of the world. Although net in-migration in the year to 30 June 2005 was lower than in the previous year, it was still the second highest since the early 1950s.

For the second year running, in-migrants from the rest of the UK exceeded out-migrants in every age group.

Scotland's population in mid-2005 was only slightly lower (0.2 per cent) than in mid-1995. While there were 10 per cent fewer people aged under 30, there were sharp increases for those aged 30 and over, particularly for those aged 45-59 and 75 & over (14 and 15 per cent, respectively).

The biggest increases in population in the last 10 years have been in West Lothian, East Lothian and Stirling, while Eilean Siar, Aberdeen City and Inverclyde have accounted for the largest decreases over the same period.

Current projections suggest that Scotland's population will rise to 5.13 million in 2019 before falling below 5 million in 2036, reaching 4.86 million by 2044. This projected long-term decline is mostly the result of fewer births and more deaths.

Births

There were 54,386 births in 2005, 429 more than in 2004. This was a modest rise compared to the previous year's increase of 1,525.

47 per cent of births in 2005 were to unmarried parents, compared with 34 per cent in 1995.

In 2005, the average age of the mother at childbirth was 29.5, compared with 27.4 in 1991, 26.1 in 1977, and 27.4 in 1964.

The total fertility rate (TFR) rose to 1.62 in 2005, higher than the historic low of 1.48 in 2002, but much lower than the 1964 peak of 3.09 and the 'replacement' level of about 2.1.

The average completed family size for women born in 1971 was 1.06 by the time they reached 30 – for women born in 1951, the same figure was 1.67.

Deaths

There were 55,747 deaths in 2005, 440 fewer than in 2004 and the lowest total recorded since the introduction of civil registration in 1855.

There were 5.3 stillbirths per thousand births (live and still) in 2005, a reduction from 5.8 per thousand in 2004 and 13.1 per thousand in 1971.

In 2005, the two most common causes of death were cancer (27 per cent of deaths) and ischaemic (coronary) heart disease (19 per cent).

The total number of suicides and probable suicides ('intentional self-harm' and 'undetermined') in 2005 was 763, a fall of 72 on 2004.

A male baby born in 2004 could expect to live for 74.3 years and a female baby for 79.4 years – increases from 69.1 and 75.4 for those born in 1981.

For Scottish males, expectation of life is almost 1 year lower than the EU (25 states) average and, for females, it is almost 2 years lower.

Marriages

There were 30,881 marriages in Scotland in 2005, 4 per cent fewer than in 2004 but around the same number as in 2003. The number of marriages in recent years has been significantly lower than the numbers in the early 1970s, when typically over 40,000 marriages took place each year.

For a quarter of the marriages in 2005 neither party was resident in Scotland. More than half of those marriages took place at Gretna.

Divorced people accounted for over a quarter of people marrying in 2005, an increase from just under 6 per cent in 1971.

Civil and religious marriages each accounted for around half of all marriages in 2005. In 1971, over two-thirds of marriages were religious.

From June 2002, civil marriages can be conducted in 'approved places' outwith registration offices. In 2005, 7,055 civil ceremonies (23 per cent of all marriages and 45 per cent of civil marriages) were conducted at these 'approved places'.

Households

Between 2004 and 2024, the number of households is projected to increase by 13 per cent to 2.5 million - an average of 14,800 additional households per year.

Most of the projected increase in the number of households is the result of the ageing population and more people living alone or in smaller households, rather than an increase in the overall population. This is part of a longer-term trend – the average household size fell from over 3 people in the 1960s to 2.2 people by 2004, and is projected to fall below 2 people by 2024.

The largest projected increases are in small households with one and two adults, and there are projected decreases in the number of larger households, containing two or more adults with children, or three or more adults.

The number of households headed by someone aged 60 or over is projected to increase by over a third between 2004 and 2024, to nearly a million, whereas the number of households headed by someone aged under 60 is projected to increase by just two per cent, to around 1.5 million.

Causes of Death

The death rate in Scotland has fallen from 21 deaths per 1,000 population in 1855 to 11 in 2005.

The number of deaths of children aged under 5 fell from 22,671 in 1855 to 344 in 2005. Included in these figures, and in the same time period, infant deaths fell from 11,691 in 1855 to 284 in 2005.

In 1855, 493 mothers died due to disorders in pregnancy and complications during and after childbirth, compared to 4 in 2005.

Deaths from infectious diseases declined dramatically during the twentieth century. In particular, the number of deaths caused by tuberculosis fell from 9,619 in 1905 to 49 in 2005.

The number of deaths from whooping cough and measles fell from 1,903 and 1,180 respectively in 1855 to zero in 2005.

The influenza pandemic in 1918-19 is estimated to have claimed more than 22,000 lives in Scotland.

Death rates from circulatory diseases peaked in the 1950s, when this grouping of diseases accounted for over 50 per cent of all deaths in Scotland. In 2005 they accounted for 36 per cent of deaths.

Cancer now accounts for the greatest number of deaths, with lung cancer the most common cause. For men, the annual death rate rose sharply to a peak in the 1970s before falling ever since. For women, by contrast, the rate was lower and increased more gradually until the mid-1990s but has not reduced significantly since then.

Alcohol-related deaths significantly increased from the early 1990s, particularly among men aged 45-59.

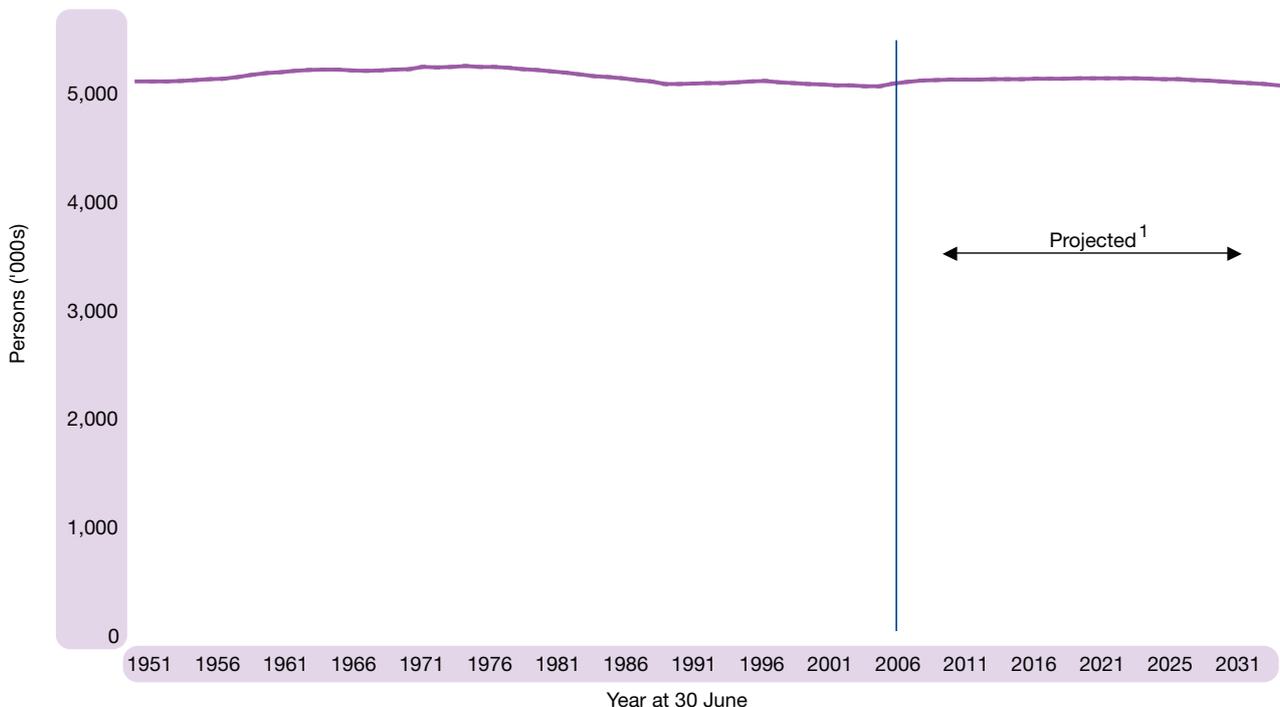
POPULATION

The latest estimate of Scotland’s population (on 30 June 2005) is 5,094,800 – a rise of 16,400 on the previous year and an increase of 30,600 since 30 June 2001. The population has been rising because, although the number of deaths exceeded births, the natural decrease was more than offset by net in-migration.

In the twelve months to 30 June 2005, there were almost 700 more births and over 1,000 fewer deaths than in the year to end June 2004. Despite this, deaths exceeded births by about 2,300 in the year to 30 June 2005. In the same period, in-migration exceeded out-migration by around 19,000. There was a net gain of around 12,500 from the rest of the UK, a net gain of around 7,300 from overseas (including asylum seekers) and an adjustment of -1,500 for unmeasured migration. Movements to and from the armed forces showed a net gain of around 940 and other changes (including adjustments for the prison population, and changes in the number of armed forces stationed in Scotland) amounted to a net loss of around 600 people.

The rise in Scotland’s population in the last three years should be seen in the context of the relative stability of the population over the last 50 years, as shown in **Figure 1.1**. The population reached a peak of 5.24 million in 1974 and since then has been on a gradually declining trend with some fluctuations until rising slightly in the last three years.

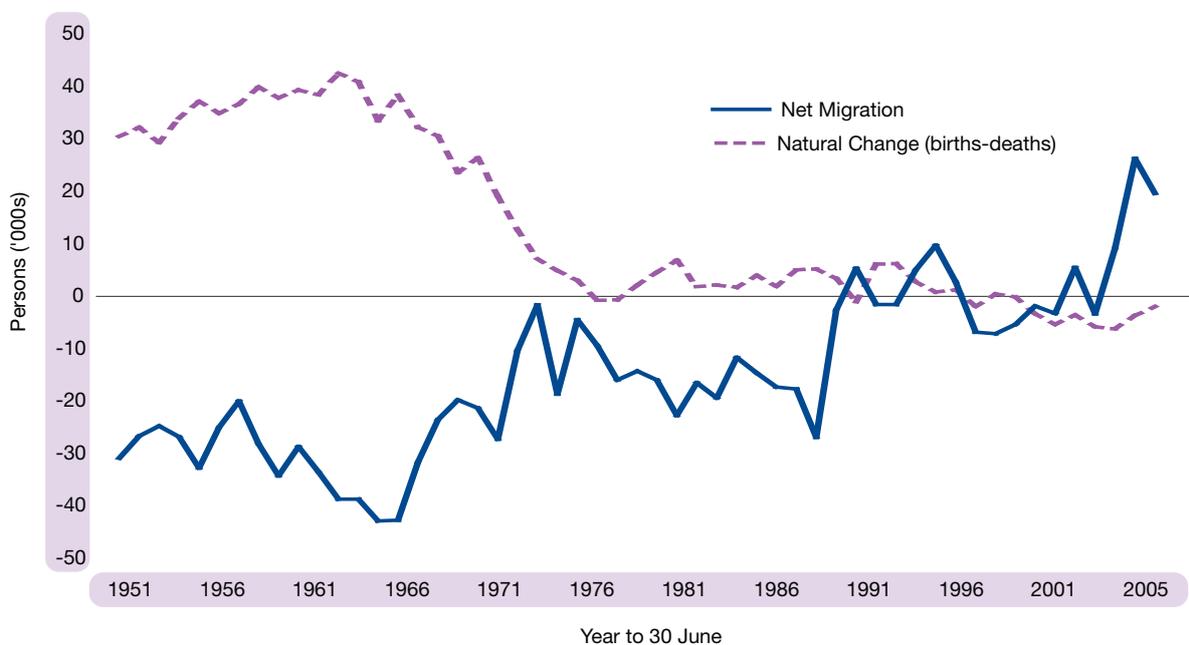
Figure 1.1 Estimated population of Scotland, actual and projected, 1951-2031



¹ 2004-based projections.

Figure 1.2 shows the trends in natural change (births minus deaths) and migration. The population rose up to 1974 because natural change was greater than net out-migration from Scotland. But, since 1974, natural change has fallen dramatically as a result of a sharp decline in the number of births (from a peak of over 100,000 in the early 1960s to less than 60,000 since 1996), while the number of deaths has remained fairly constant. This fall in natural change was accompanied by a reduction in net out-migration from Scotland. But net out-migration remained higher than the levels of natural change during the late 1970s and 1980s, causing the population to decline. In recent years the gap between births and deaths has been closing and Scotland has experienced record levels of net in-migration. However, these recent trends are still in line with the stable population since 1990.

Figure 1.2 Natural change and net migration, 1951-2005

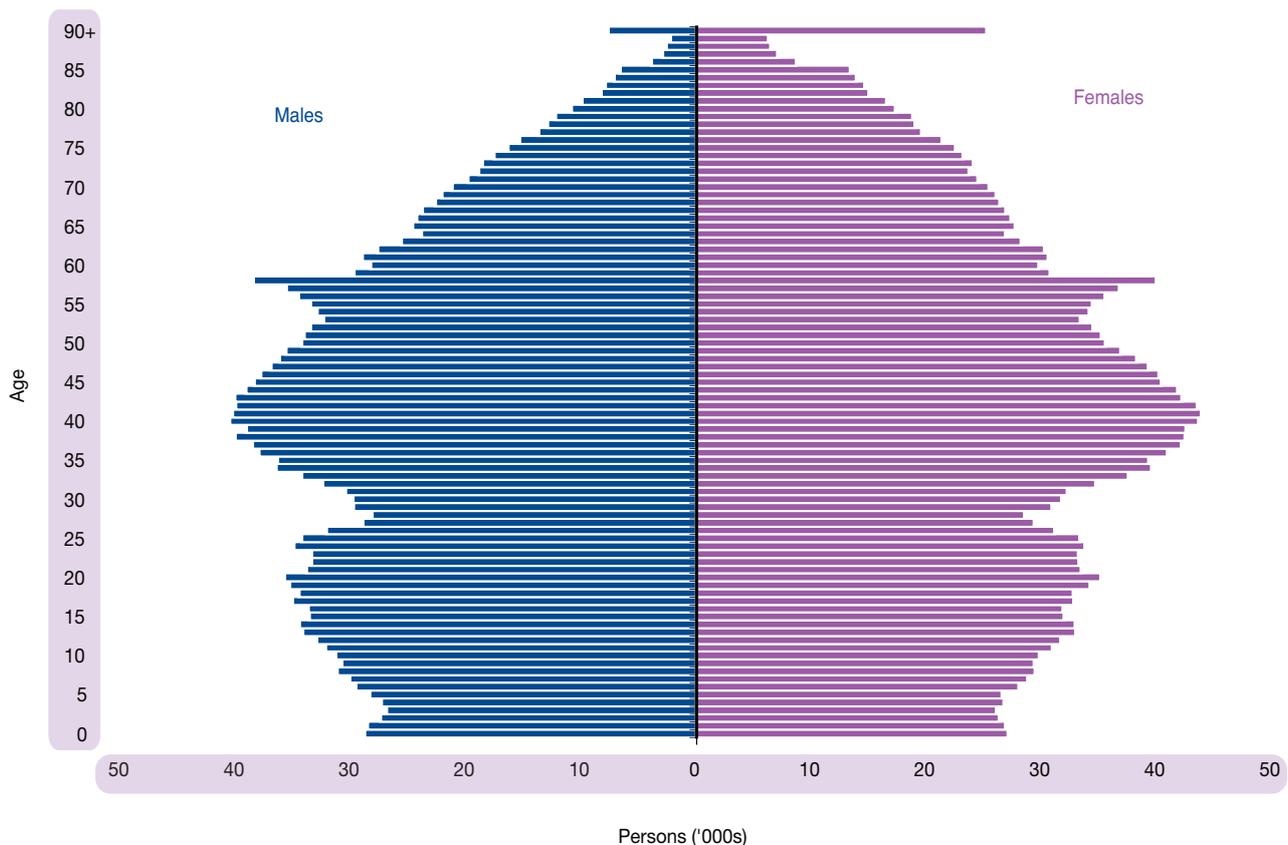


Age structure

The age/sex composition is one of the most important aspects of the population, as changes in different age groups will have different social and economic impacts. For example, increases in the elderly population are likely to place a greater demand on health and social services.

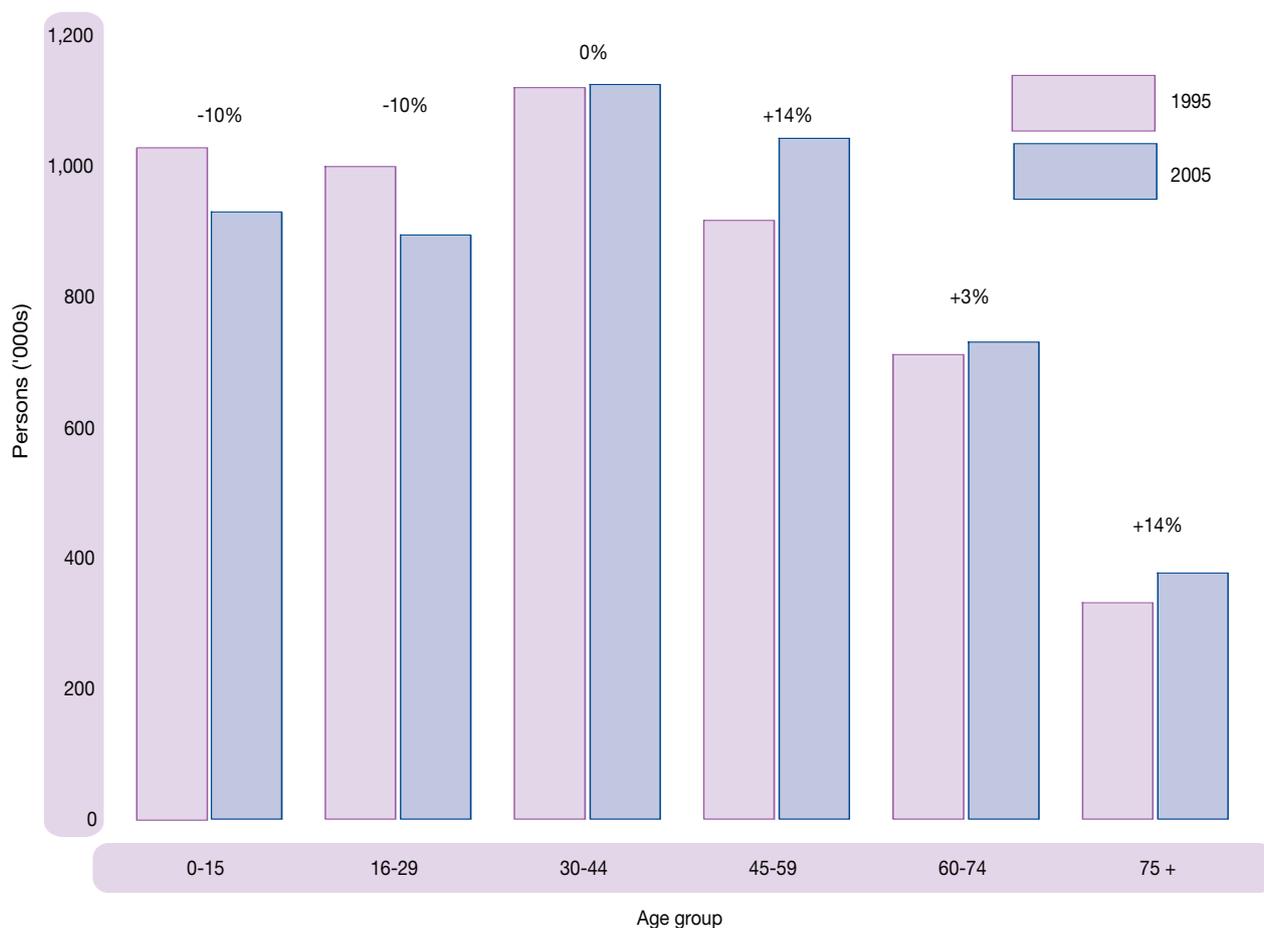
Eighteen per cent of the population was aged under 16 and 19 per cent was of pensionable age (60 and over for women and 65 and over for men), with the remaining 63 per cent of working age (16-59 for women, 16-64 for men). **Figure 1.3** shows the age structure of the population in 2005. The higher number of older females (particularly those aged over 75) reflects the longer expectation of life for women, partly as a result of higher rates of male mortality during the Second World War. The effects of the 'flu epidemic in 1918-19 and lower levels of fertility during the First World War are evident from the sharp decline in the population at ages over 84. The two baby booms of 1947 and the 1960s can also be seen, with a sharp peak at age 58 and the bigger bulge between the ages of 35 and 45.

Figure 1.3 Estimated population by age and sex, 30 June 2005



Over the last ten years, Scotland's population has decreased by around 8,900 (-0.2 per cent): from 5.1 million to 5.09 million. The changing structure of the population since 1995 is illustrated in **Figure 1.4**. Of particular note is the decrease of 10 per cent in the number of children under 16 and the increase of 14 per cent in the number of people aged 75 and over. The ageing of the population is also evident in the rise of 14 per cent in the 45-59 age group, and the fall of 10 per cent in the 16-29 age group.

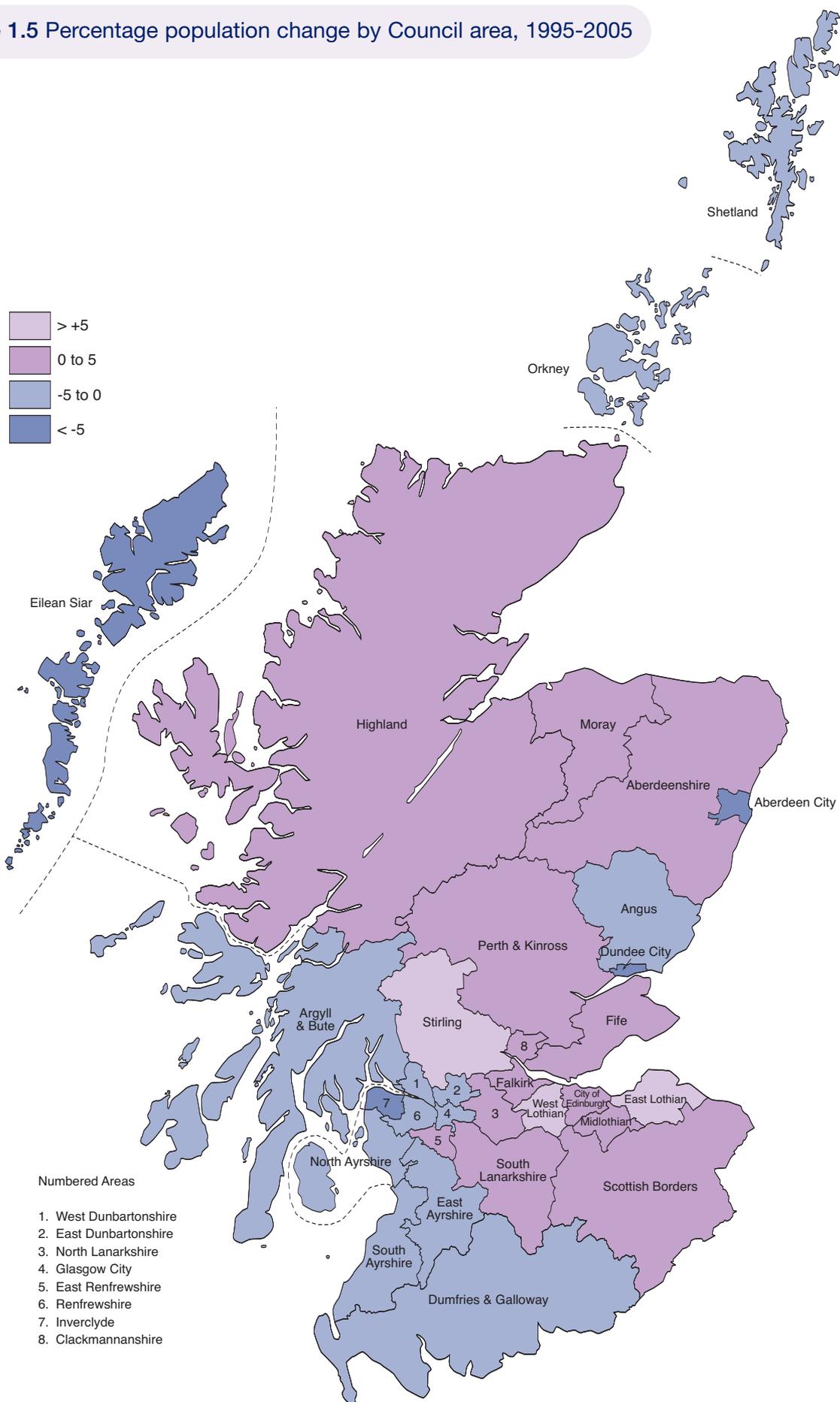
Figure 1.4 The changing age structure of Scotland's population, 1995-2005



Changes within Scotland

The map at **Figure 1.5** shows the percentage change in population between 1995 and 2005 for each Council area. It is better to compare over a time frame longer than one year, as population change tends to fluctuate from year to year, particularly for smaller areas.

Figure 1.5 Percentage population change by Council area, 1995-2005



CHAPTER 1 – DEMOGRAPHIC OVERVIEW

The Council areas where the population fall was greatest were Eilean Siar (-8.5 per cent), Aberdeen City (-8.0 per cent) and Inverclyde (-7.3 per cent). The largest absolute reduction in numbers was in Glasgow City (-25,290). West Lothian (+10.1 per cent), East Lothian (+6.0 per cent) and Stirling (+5.5 per cent) saw the greatest percentage increases.

The relative importance of migration and natural change differs between areas. For example, the areas of population increase include West Lothian, Aberdeenshire, and East Renfrewshire where the population gain is attributable both to gains from migration and to more births than deaths. In other areas, the population increase was due to in-migration, despite fewer births than deaths. These included Fife, Highland, Perth and Kinross, Scottish Borders, and East Lothian. Others with near-zero natural change were Falkirk, Stirling, and Edinburgh.

In areas of decline, the general picture is of net out-migration and more deaths than births – for example in Eilean Siar, Inverclyde, Dundee City, West Dunbartonshire and Glasgow City. Contrasting areas of decline are Aberdeen City, East Dunbartonshire and the Shetland Islands where the main factor is net out-migration. This analysis is shown in **Table 1.1** which compares the rates of natural change and migration per 1,000 population across the local authority areas.

Table 1.1 Components of population change for Council areas: 1995-2005

	Natural change ¹	Net civilian migration and other changes ¹	Percentage Population change
SCOTLAND	-0.7	0.5	-0.2
Council areas (ordered by population change)			
Eilean Siar	-5.0	-3.4	-8.5
Aberdeen City	-0.2	-7.7	-8.0
Inverclyde	-2.7	-4.7	-7.3
Dundee City	-1.9	-4.9	-6.7
West Dunbartonshire	-1.4	-3.3	-4.7
Shetland Islands	1.3	-5.5	-4.2
Glasgow City	-1.7	-2.5	-4.2
Renfrewshire	-0.6	-3.1	-3.6
East Dunbartonshire	0.4	-3.9	-3.5
East Ayrshire	-1.6	-1.1	-2.8
Angus	-2.2	0.1	-2.1
South Ayrshire	-3.6	2.0	-1.6
North Ayrshire	-1.3	-0.1	-1.4
Argyll & Bute	-4.0	2.8	-1.2
Orkney Islands	-1.7	0.6	-1.1
Dumfries & Galloway	-2.7	2.6	-0.1
North Lanarkshire	1.2	-1.2	0.0
Clackmannanshire	0.2	0.0	0.1
Moray	0.0	0.3	0.3
Midlothian	0.8	-0.4	0.4
South Lanarkshire	-0.3	0.8	0.4
Fife	-0.6	2.6	2.0
East Renfrewshire	1.2	1.2	2.4
Highland	-0.7	3.3	2.6
Edinburgh, City of	-0.2	3.3	3.1
Scottish Borders	-2.6	6.2	3.6
Perth & Kinross	-2.1	6.0	3.9
Aberdeenshire	1.6	2.5	4.1
Falkirk	-0.1	4.7	4.5
Stirling	-0.2	5.7	5.5
East Lothian	-0.6	6.6	6.0
West Lothian	3.6	6.5	10.1

¹ Per year per 1,000 population at 1995.

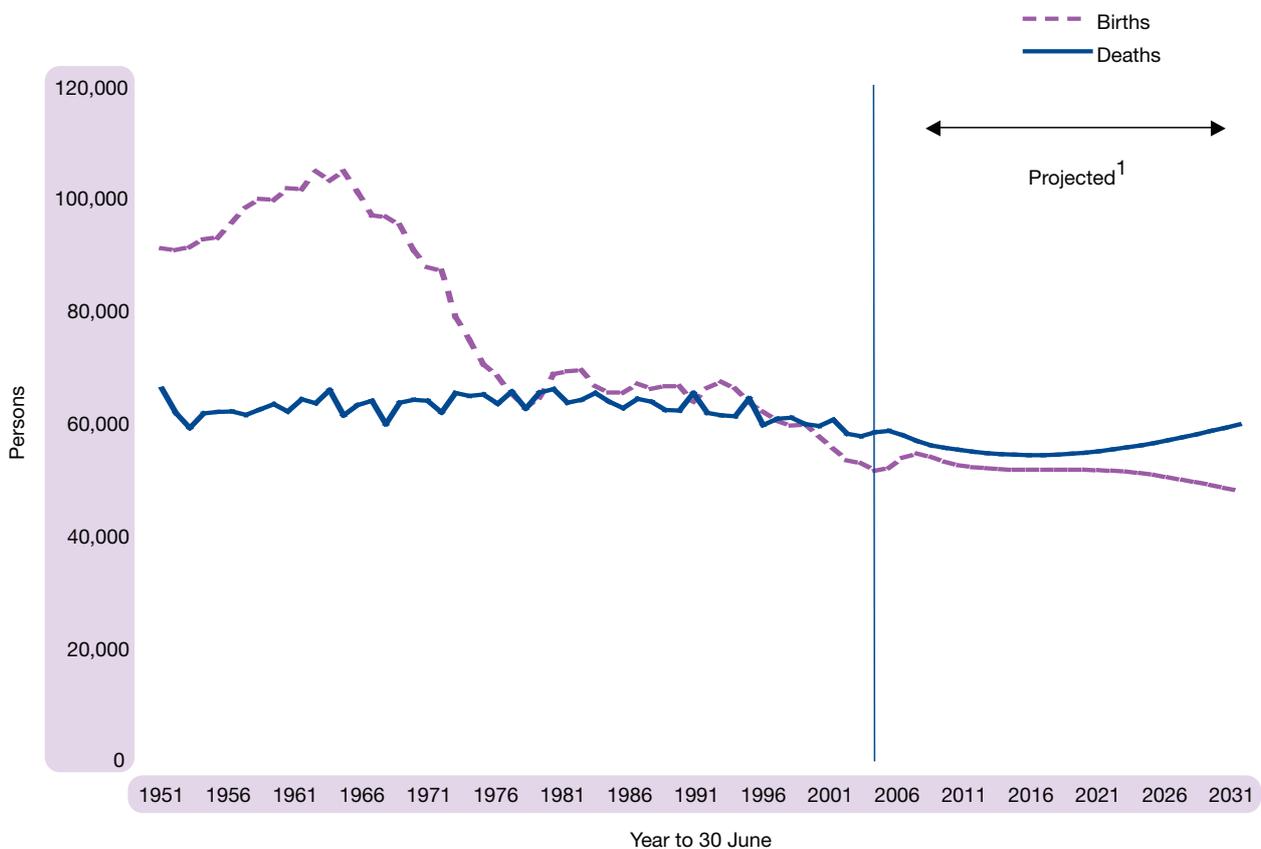
Source: The underlying data used to produce these figures can be found in Table 6 of the 'Mid-2005 Population Estimates Scotland' publication on the GROS website.

Projected population

The latest population projections are based on the estimate of Scotland’s population at 30 June 2004 and on existing trends, making no allowance for the influence of Government policies or other factors. The projections are updated every two years and the next set, based on the 2006 population estimate, will be published in late 2007. The 2004-based projections show the total population of Scotland rising from 5.08 million in 2004 to 5.13 million in 2019 before falling to 5.07 million by 2031 (**Figure 1.1**). Longer-term projections for up to 40 years ahead show a continuing decline after 2031 to below 5 million in 2036 and to 4.86 million in 2044. The projected reduction in population is therefore very slow and the precise point at which the population reaches a particular level is sensitive to relatively small changes in the underlying assumptions.

The most significant factor affecting the future population level to around 2021 is migration, because the natural decrease (more deaths than births) is likely to be offset by migrants moving to Scotland. However, after 2021 the most significant factor affecting the level of the population is the natural decrease, as the ageing population die in increasing numbers. **Figure 1.6** shows a widening gap between births and deaths, with a natural decrease of almost 15,000 a year by 2031. This is likely to be the main reason for long-term population decline in the future.

Figure 1.6 Births and deaths, actual and projected, Scotland, 1951-2031

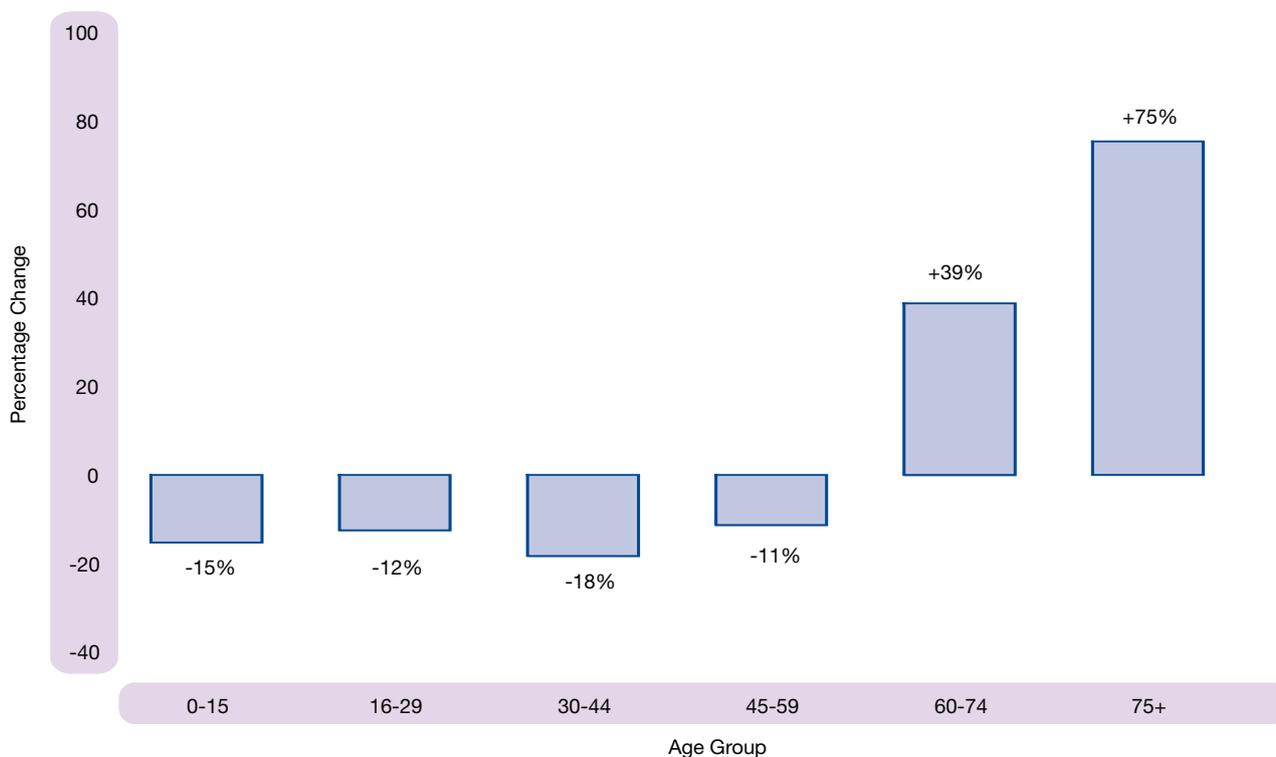


¹ 2004-based projections

Despite the projected rise in the number of people over the next 15 years, Scotland's population is still projected to age markedly as shown by **Figure 1.7**. The main changes between 2004 and 2031 are:

- The number of children aged under 16 is projected to decrease by 15 per cent from 0.94 million to 0.79 million.
- The number of people of working age is projected to fall by 7 per cent from 3.18 million to 2.96 million.
- The number of people of pensionable age is projected to rise by 35 per cent from 0.97 million to 1.31 million.
- The number of people aged 75 and over is projected to rise by 75 per cent from 0.37 million to 0.65 million (in part because the baby boomers born after the Second World War will be entering their early eighties by 2031 and also because of improved mortality rates).
- The population of males aged 65 and over is projected to increase by just over 70 per cent, whilst for females the corresponding increase is just under 50 per cent.
- The average age of the population is projected to rise from around 40 to just over 45.

Figure 1.7 The projected percentage change in age structure of Scotland's population, 2004-2031¹

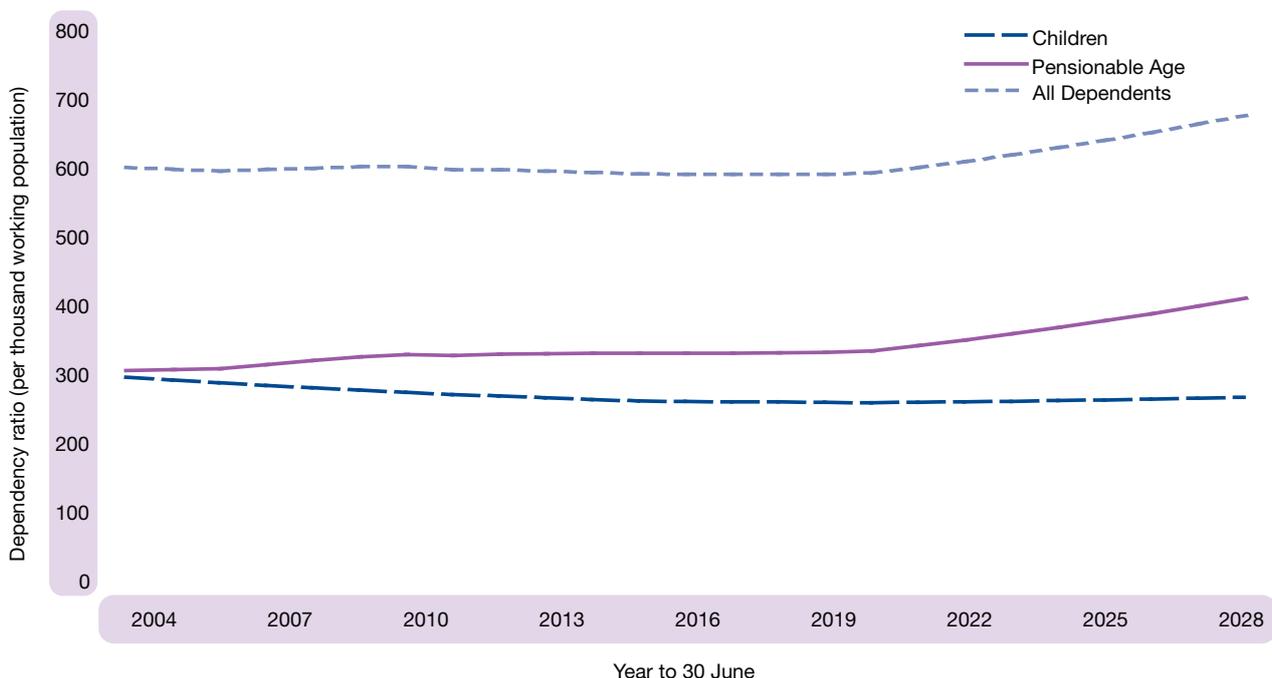


¹ 2004-based projections

CHAPTER 1 – DEMOGRAPHIC OVERVIEW

Dependency ratios show the relationship between the working age population and the two main dependent groups – children aged under 16 and people of pensionable age. **Figure 1.8** shows this in the long term, with little overall change evident over the next 15 years, but with a relatively rapid increase in the pension age population in relation to the working age population in subsequent years. Over the period up to 2020, rises in the pension age population are largely offset by a reduction in the number of children. **Figure 1.8** also reflects the changes being made between 2010 and 2020 to change the state pension age for women from 60 to 65.

Figure 1.8 Dependency Ratios¹ (per thousand working population), 2004-2028



¹ 2004-based projections

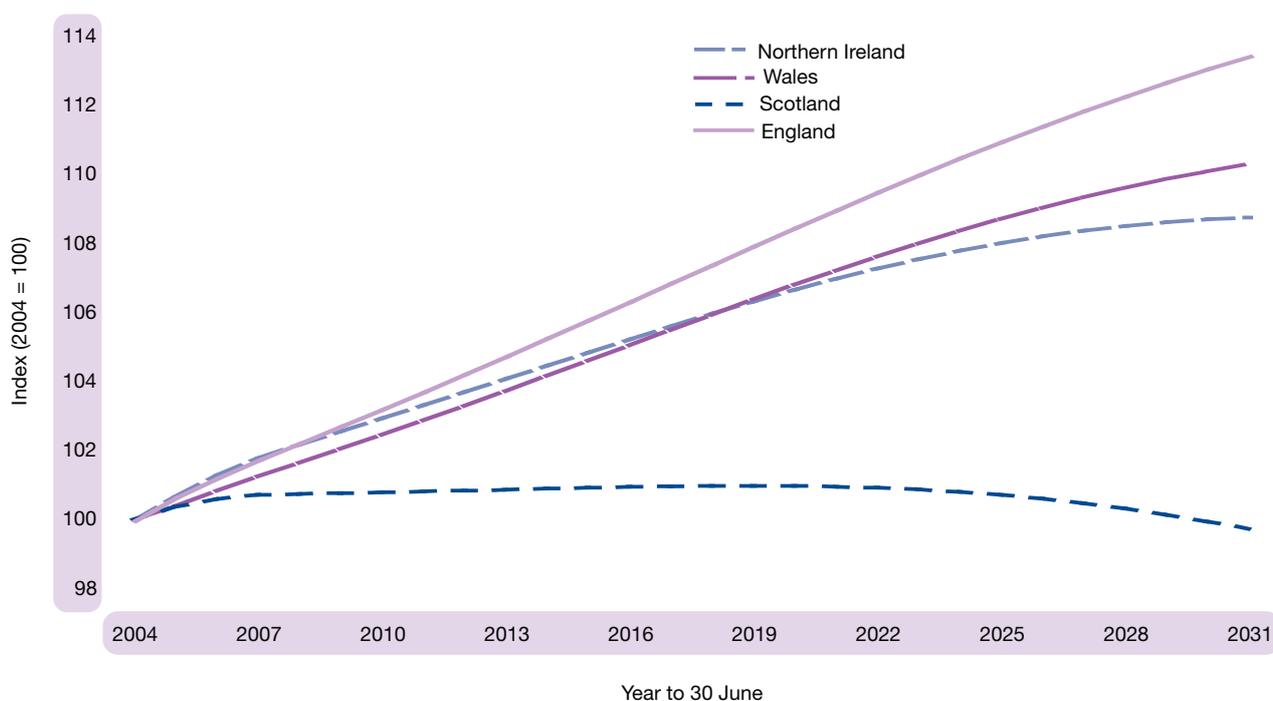
Forecasting future demographic changes is a difficult task because it involves predicting the behaviour of people who in some cases have not yet been born, living in a society which will be different from today's. So, as well as the 'principal projection' of Scotland's population on which the previous paragraphs are based, the Registrar General commissioned a number of variant population projections, based on alternative assumptions of future fertility, mortality and migration. The variant projections give users an indication of this uncertainty. They illustrate plausible alternative scenarios, rather than representing upper or lower limits of future demographic behaviour. These variant projections, and the assumptions used, can be found on the Government Actuary's Department website (www.gad.gov.uk) and a paper analysing the results for Scotland can be found on the GROS website (www.gro-scotland.gov.uk/statistics/library/popproj/04population-projections-variant/index.html).

Scotland's position within the United Kingdom and Europe

The United Kingdom population is projected to increase gradually from an estimated 59.8 million in 2004, to reach 67.0 million by 2031.

Due to differences in demographic patterns, projected trends differ for the four countries of the United Kingdom. While the population of Scotland is projected to rise, peaking in 2019 and then slowly declining, the populations of the other three countries in the UK are projected to rise to 2031, and continue rising except for Northern Ireland where the population is projected to peak in 2033 and then slowly decline. **Figure 1.9** illustrates the projected percentage change in the populations of the four countries from 2004 to 2031.

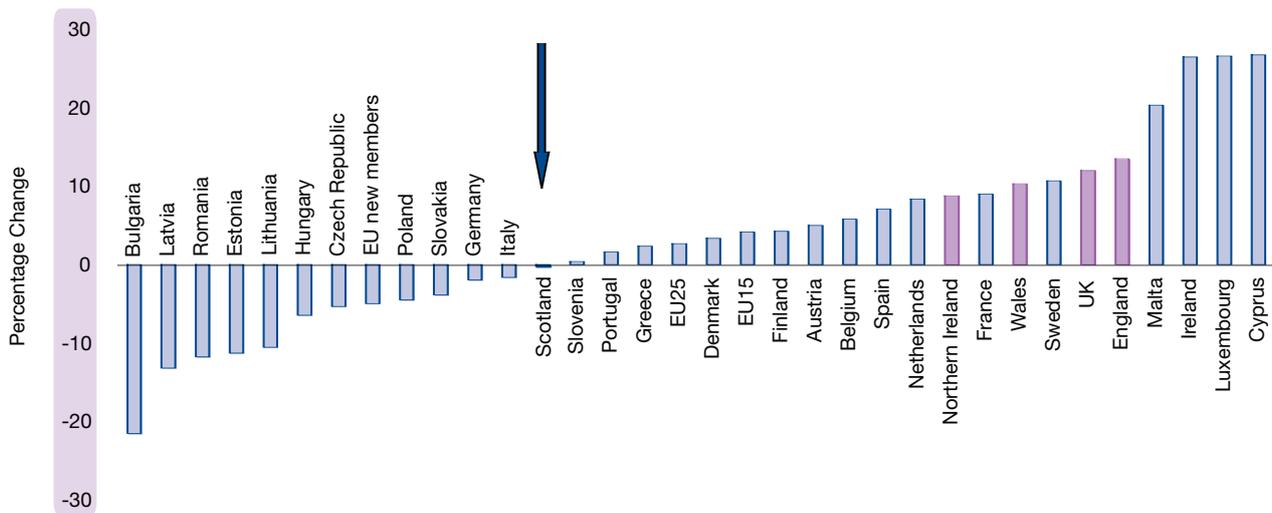
Figure 1.9 UK nations index of population change, 2004-2031



CHAPTER 1 – DEMOGRAPHIC OVERVIEW

Scotland is not alone in having a natural decrease in population (i.e. deaths exceeding births). But, for most of Europe, this is compensated by higher in-migration than in Scotland. The population of Europe (EU-25) is projected to increase (by 2.7 per cent between 2004 and 2031). On the other hand, Italy, Germany, and seven of the new accession states in Eastern Europe are among the countries with a projected population decline which exceeds Scotland's over the next 30 years, as **Figure 1.10** shows.

Figure 1.10 Projected percentage population change in selected European countries 2004-2031



Source: GAD (UK and constituent countries) and Eurostat. Eurostat also produce an alternative UK projection not shown here.

Nor is the ageing of the population unique to Scotland. The pattern of change over the last twenty years and the projected change in the age distribution is consistent with other countries in the UK and Europe, although the rate of change varies.

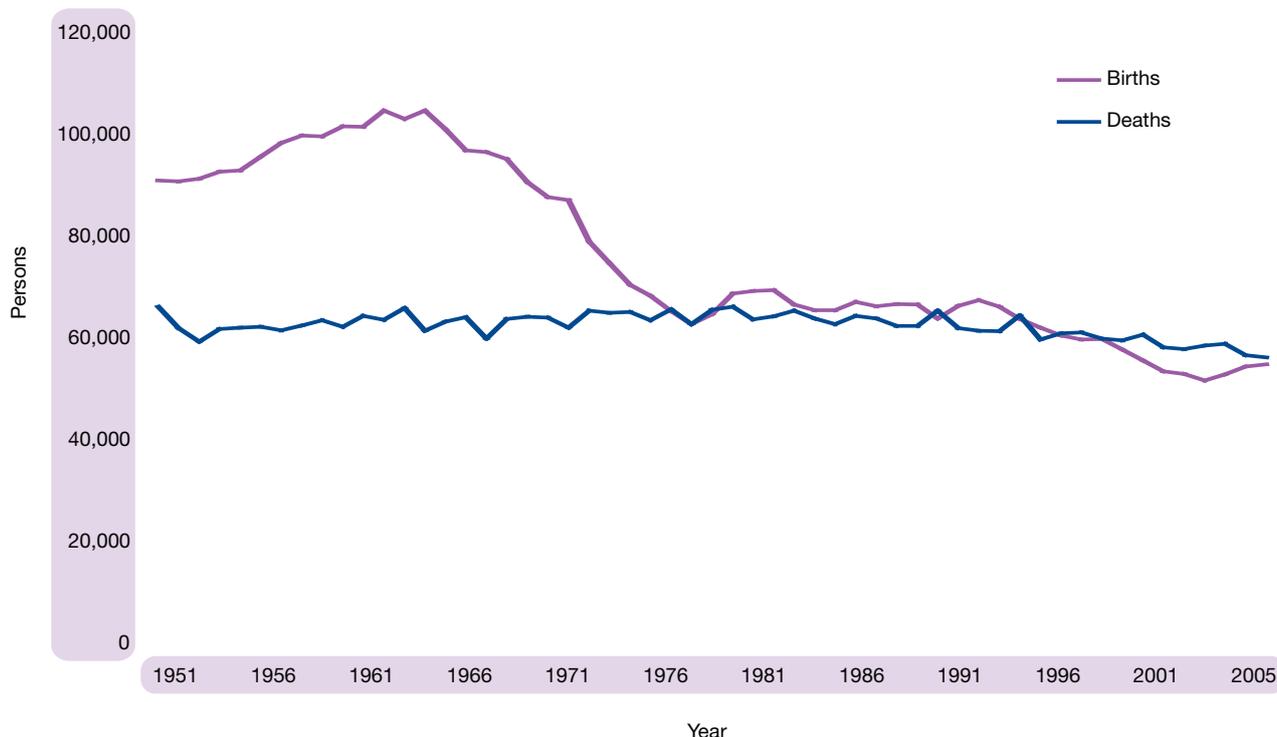
BIRTHS

Numbers

The number of births registered in Scotland in 2005 was 54,386. This was 429 (0.8 per cent) more than in 2004 and 3,116 (6.1 per cent) more than 2002's total – which was the lowest since civil registration began in 1855, with only half the number of births recorded during the 'baby boom' of the early 1960s. The relatively modest increase in 2005, compared with 2.9 per cent in the previous year, suggests that the recent upturn in births may be easing off. The number of births and deaths registered in Scotland since 1951 is plotted in **Figure 1.11**.

The proportion of births to unmarried parents (including births registered solely in the mother's name) has continued to rise, reaching 47.1 per cent in 2005 compared to 33.7 per cent ten years earlier and 18.5 per cent in 1985. However, the proportion of births registered solely in the mother's name has remained relatively constant over this period at 6 to 7 per cent, suggesting that the increase has been in babies born to stable partners who are not married.

Figure 1.11 Births and deaths, Scotland, 1951-2005

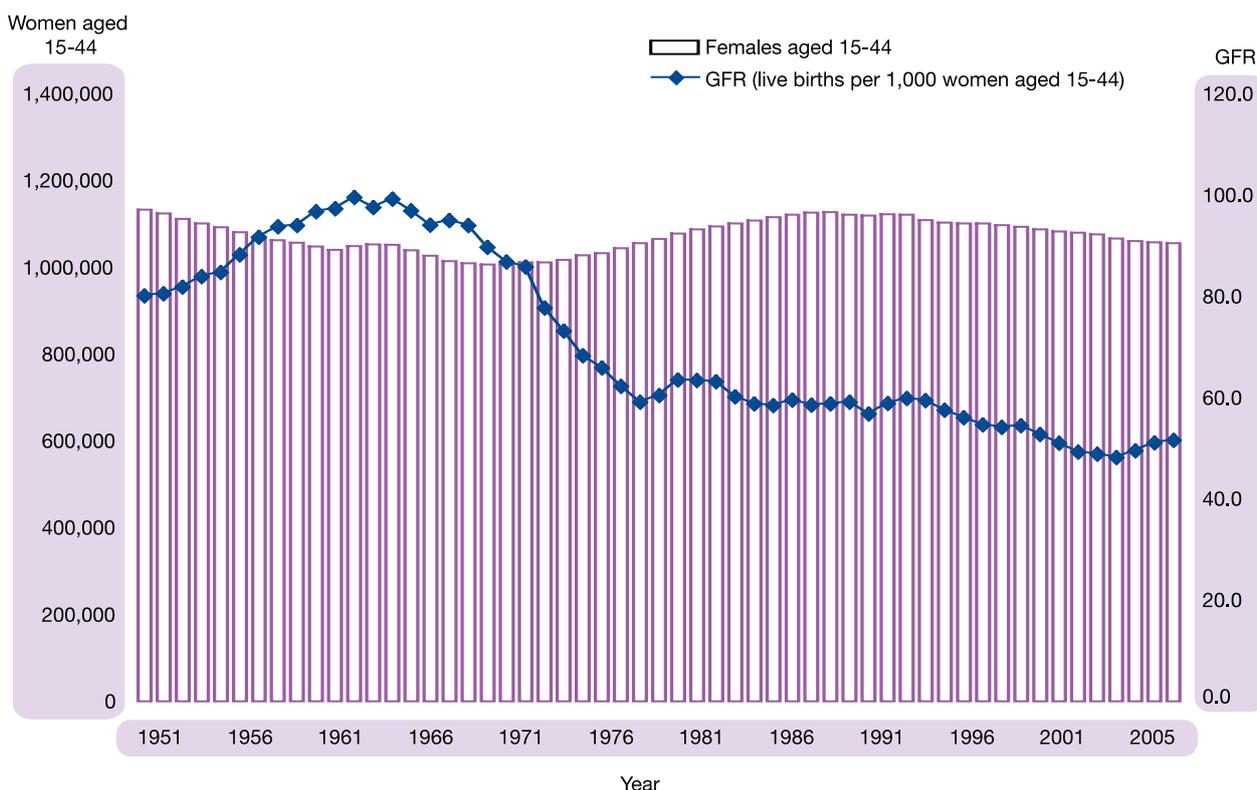


Fertility Rates

The simplest fertility rate is the *crude birth rate* which is defined as the number of live births per 1,000 total population. **Appendix 1 Table 1** shows that in 2005 the crude birth rate for Scotland stood at 10.7 compared with around 20 forty years ago. Because it takes no account of the age/gender structure of the population, the crude birth rate has only limited value (e.g. for giving rough comparisons between areas with broadly similar age/gender structures). **Appendix 1 Tables 2 and 3** present crude birth rates for administrative areas in Scotland and selected European countries. **Appendix 1 Table 2** also gives standardised birth rates for the administrative areas of Scotland: these adjusted birth rates take account of the population structures in the different areas.

A better approach is to consider the *general fertility rate* (GFR) which is based on the numbers of women of childbearing age. **Figure 1.12** shows the general fertility rate (births per 1,000 females aged 15-44), along with the number of women aged 15-44. During the ‘baby boom’ of the 1960s, the GFR reached 99.5 (in 1962). It then fell sharply to around 60 during the late 1970s and 1980s before declining more slowly during the 1990s, eventually dipping below 50 at the start of the 21st century. It has risen slightly over the last few years to its 2005 value of 51.5. Interestingly, the figure shows that the female population aged 15-44 was relatively low during the baby boom of the 1960s. Moreover, the levelling off in the annual numbers of births during the 1980s was in part associated with the increasing numbers of women born in the 1950s and 1960s, passing through their childbearing years.

Figure 1.12 Estimated female population aged 15-44 and general fertility rate (GFR), Scotland, 1951-2005



A more detailed picture is given by the *age specific fertility rates (ASFRs)* by mother's age in five-year age groups in **Figure 1.13**. This figure shows many significant age-related features of the pattern of childbearing over the last fifty years. The key point is that, as well as choosing to have fewer babies, women are also choosing to have them later in life. Other points of interest are:

- The 'baby boom' of the 1960s was mostly due to increased birth rates of women in their twenties.
- Over the last forty years, women in their twenties have experienced a dramatic fall in fertility. For women aged 20-24 the fertility rate has fallen by around two-thirds; and for those aged 25-29 it has fallen by 53 per cent.
- Fertility rates for women aged 30 and above have gradually increased over the last thirty years; in particular, the rate for 30-34 year olds overtook that of 25-29 year olds in 2002.
- Despite the recent increases, fertility rates for women aged over 30 are still lower than in the 1950s and 1960s.
- The rate for 15-19 year olds fell by around one-third during the early 1970s, but has since shown only a modest decline.
- All the rates except that for teenagers showed a slight rise between 2000 and 2005.

Figure 1.13 Live births per 1,000 women, by age of mother, Scotland, 1951-2005

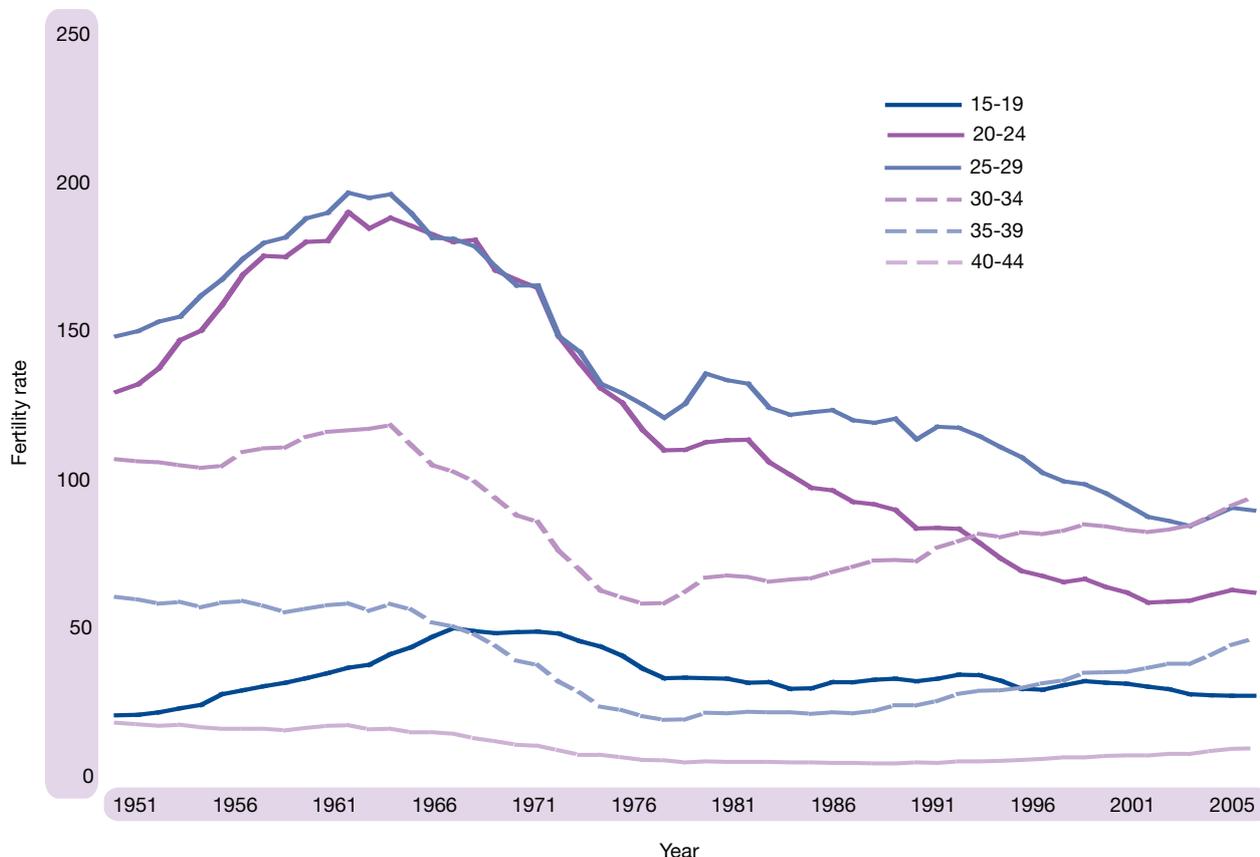
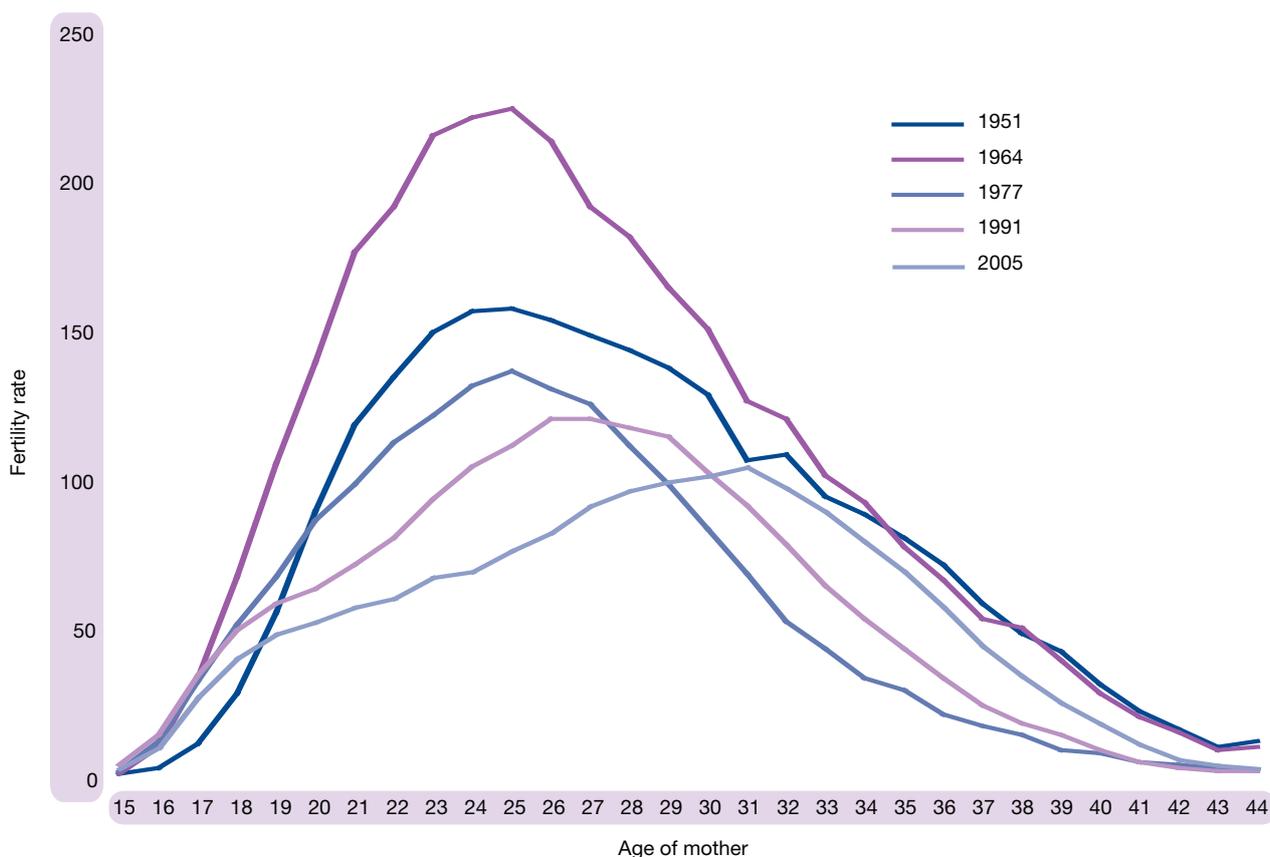


Figure 1.14 further illustrates the ageing pattern of fertility by showing detailed ASFRs for selected years: 1951, 1964, 1977, 1991 and 2005. Though the levels differed considerably, the age patterns of fertility for 1951, 1964 and 1977 were roughly the same. However, the age distribution for 1991 shows a distinctly older peak and that for 2005 reveals the large reduction in fertility of women in their twenties.

Figure 1.14 Live births per 1,000 women, by age, selected years

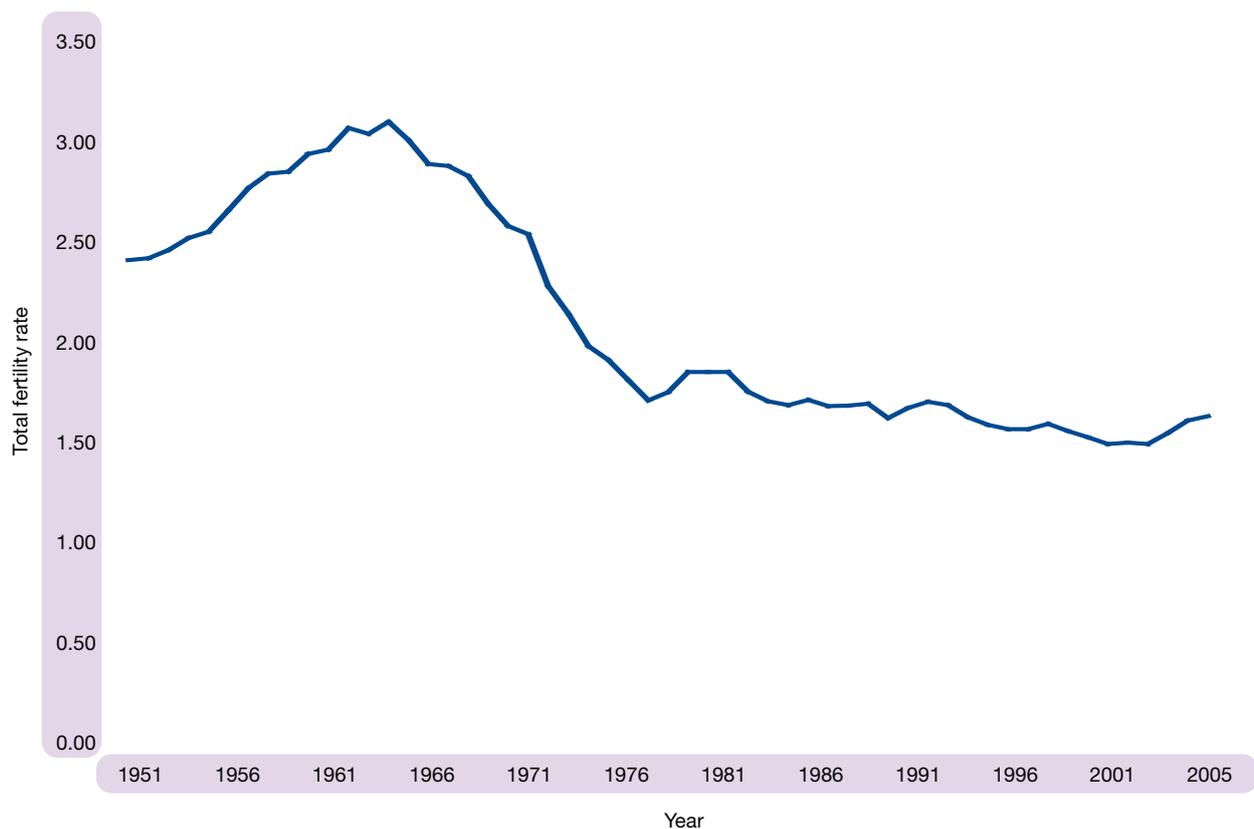


The trend towards later childbearing is underlined by an increase in the average age of mothers for all births to 29.5 in 2005, compared with 27.4 in 1991, 26.1 in 1977, and 27.4 in 1964.

The *total fertility rate* (TFR) is a commonly used summary measure of fertility levels calculated by summing the age specific rates for a single year. It gives the average number of children that a group of women would expect to have if they experienced the observed ASFRs in each of their childbearing years. For a population to replace itself, the TFR needs to be around 2.1.

The TFR for Scotland since 1951 is plotted in **Figure 1.15**. Not surprisingly, it follows the same general pattern as the GFR (**Figure 1.12**). It rose to 3.09 in 1964 before dropping sharply to 1.70 in 1977. Since then, with a few minor fluctuations, it fell more slowly to the 2002 rate of 1.48 before increasing to 1.54 in 2003 and 1.62 in 2005.

Figure 1.15 Total fertility rate, Scotland, 1951-2005

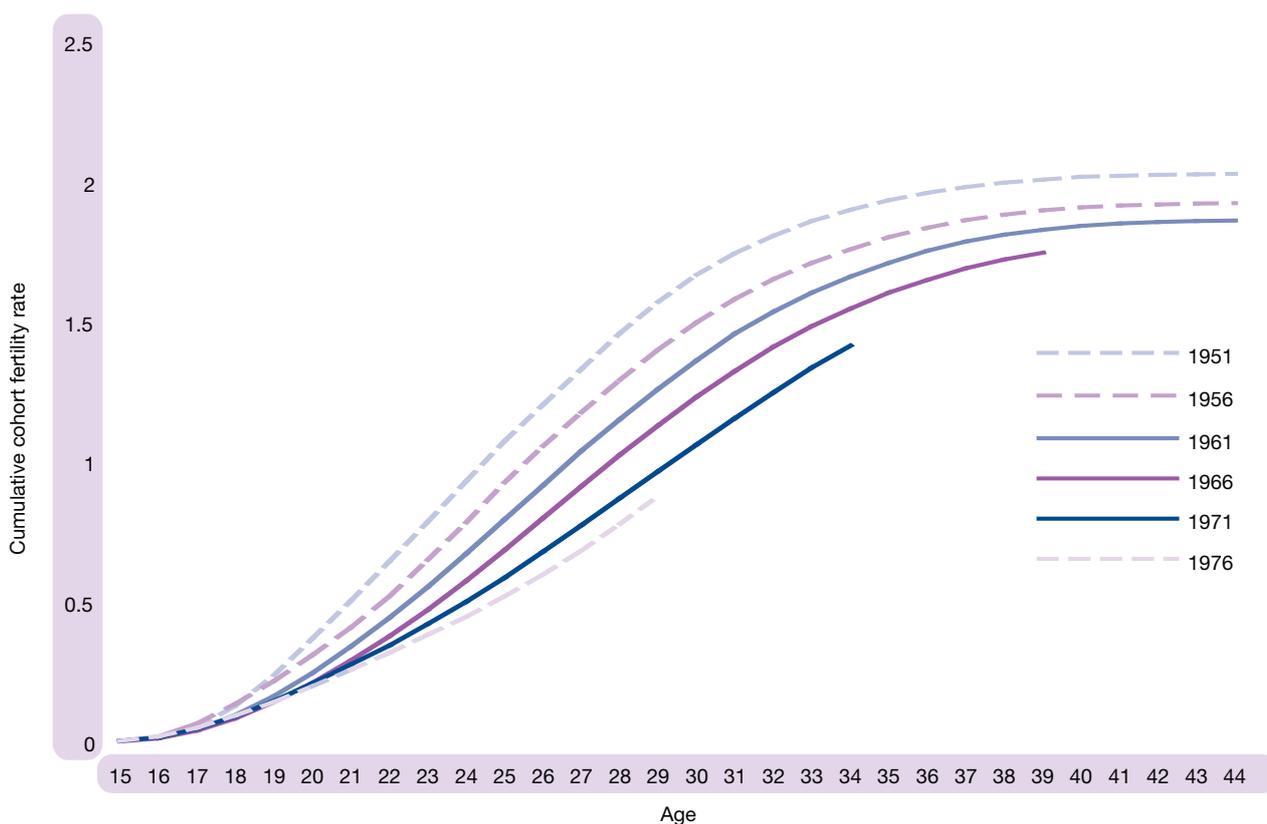


CHAPTER 1 – DEMOGRAPHIC OVERVIEW

Though widely used, in part because it is relatively easy to calculate, the TFR has serious deficiencies as it is based on only one year's observations. For example, when women are delaying childbearing, as they have been in Scotland, the TFR is likely to underestimate the number of children women will eventually have.

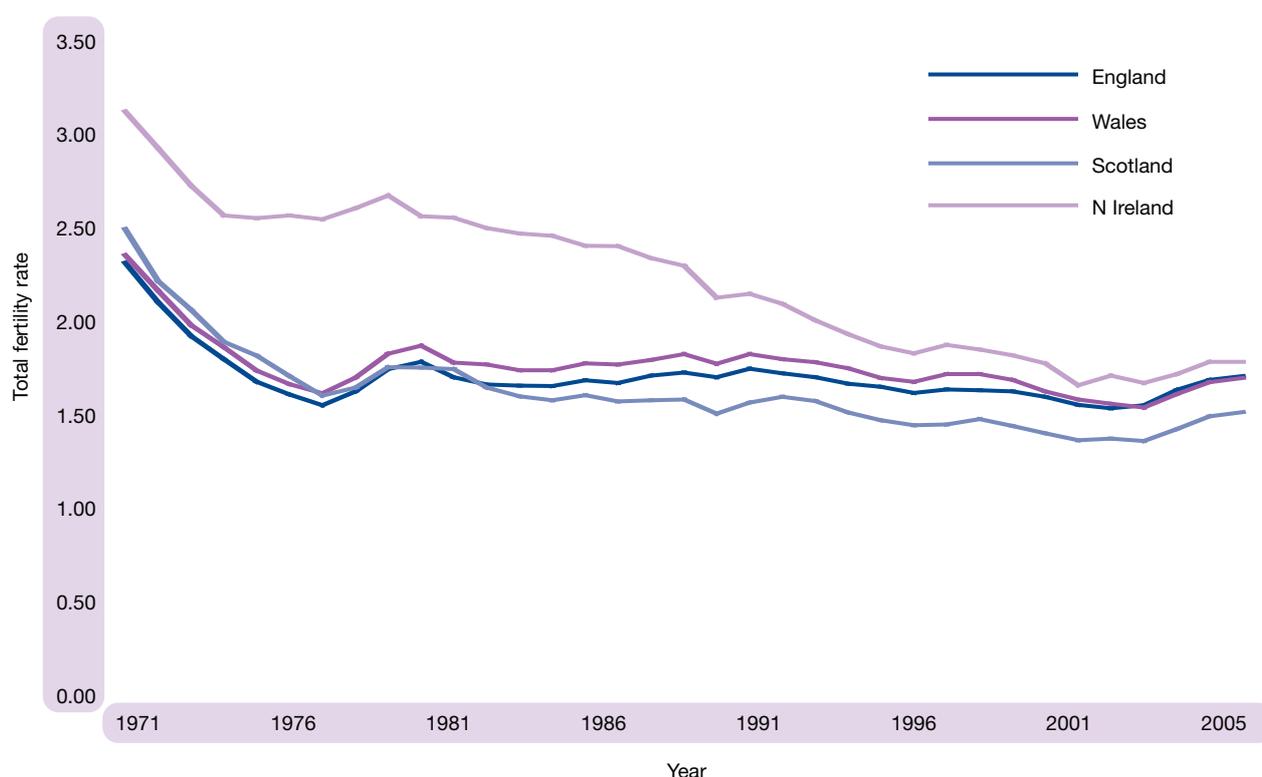
A more satisfactory measure is average *completed family size*. **Figure 1.16** shows the completed family size (or cumulative cohort fertility) by age for women born in selected years. Those born in 1951 had attained an average completed family size of 2.03 by the time they reached 45, whereas for those born in 1956 the figure was 1.93. The figure also permits the comparison of family size at selected ages for the various cohorts as they pass through the childbearing ages. For example, by age 30 the cumulative childbearing of the 1971 cohort is about 0.6 lower than that of the 1951 cohort. Of crucial importance is the extent to which the later cohorts are falling behind in family building. Whilst the increasing fertility rates of those aged over 30 may lead to some catching-up, it seems highly unlikely that this will increase the average completed family size to the levels attained as recently as the 1960s.

Figure 1.16 Cumulative cohort fertility rate for selected birth cohorts, Scotland



Scotland's fertility has also been falling relative to fertility in other parts of the United Kingdom. **Figure 1.17** compares the TFRs for England, Wales, and Northern Ireland with those for Scotland since 1971. Until the late 1970s, Scotland's TFR was slightly higher than England and Wales. However, since the early 1980s, Scotland's TFR has dropped steadily below the levels for England and Wales. In 1971 the TFR for Northern Ireland was markedly higher than for the other three countries. However, over the last 30 years the differential has been significantly reduced. It is interesting to note that the recent slight rise in fertility levels in Scotland has been paralleled elsewhere in the UK.

Figure 1.17 Total fertility rates, UK countries, 1971-2005



More detailed information on births and fertility was given in the Registrar General's 2002 report, **Scotland's Population 2002**. Chapter 2 focused on recent trends in Scottish fertility, comparing these trends with the rest of the UK and Europe and Chapter 3 placed the Scottish fertility experience in a wider geographical context, discussing reasons for low fertility and addressing the scope for policy intervention.

DEATHS

Numbers

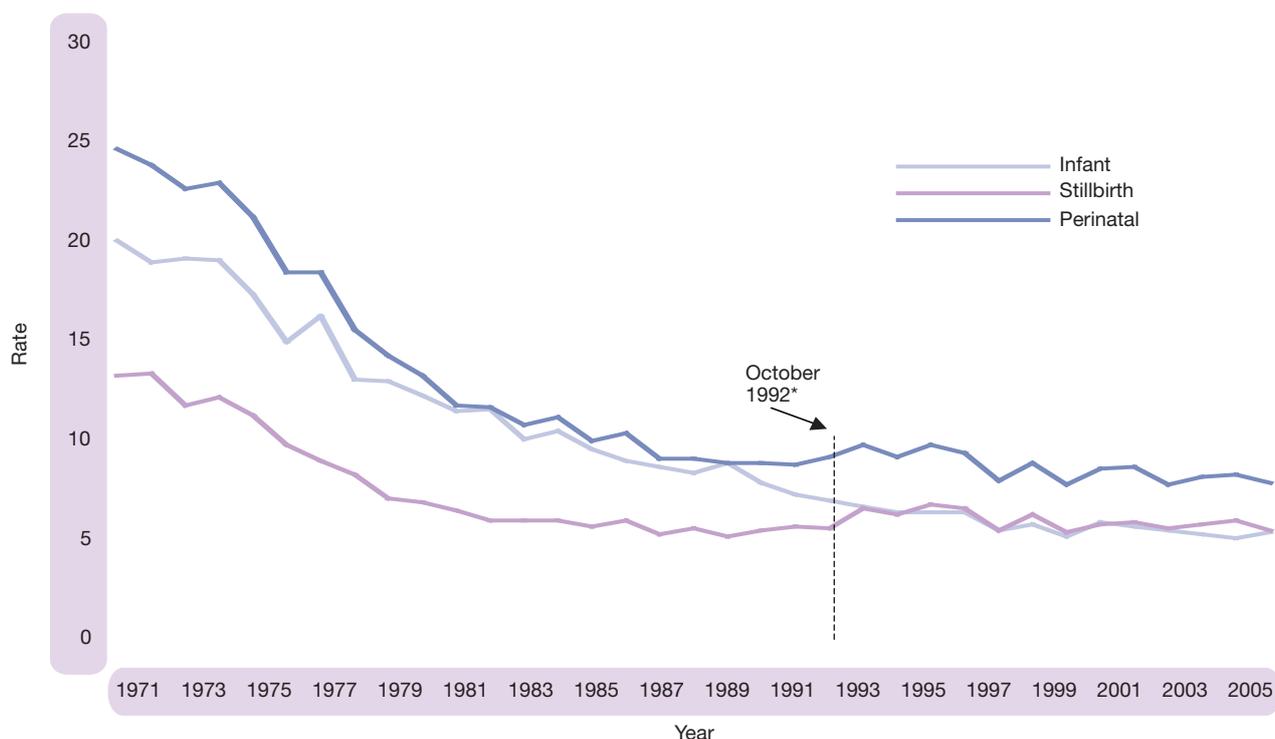
At 55,747, the number of deaths registered in Scotland in 2005 was 440 (0.8 per cent) fewer than in 2004 and represented the lowest annual total recorded since the introduction of civil registration in 1855.

Figure 1.11 shows that from 1951 up to the early 1990s the annual number of deaths remained relatively stable at about 60-65,000 a year. Since then the total has declined slowly to its current level.

Stillbirths, perinatal deaths and infant deaths

As can be seen in **Figure 1.18**, there have been significant improvements in the rates for stillbirths, perinatal deaths and infant deaths in the period since 1971. The stillbirth rate has reduced from 13.1 per 1,000 total births (live and still) in 1971 to 5.3 in 2005, despite a change in the definition of stillbirths in 1992 which reduced the minimum period of gestation from 28 weeks to 24 weeks (thus increasing the numbers classified as stillbirths). The rate of perinatal deaths (stillbirths and deaths in the first week of life) fell from 24.5 per 1,000 total births in 1971 to 7.7 in 2005, an improvement of 68 per cent. The infant death rate (deaths of children aged under 1) has improved by 74 per cent from 19.9 per 1,000 live births in 1971 to 5.2 in 2005.

Figure 1.18 Stillbirth, perinatal and infant death rates, per 1,000 total births, Scotland 1971-2005



* Change in definition of stillbirths from 28 to 24 weeks' gestation

Whilst the current rates are comparable to those for the UK as a whole, there are several Western European countries that have significantly lower rates (see **Appendix 1, Table 3**).

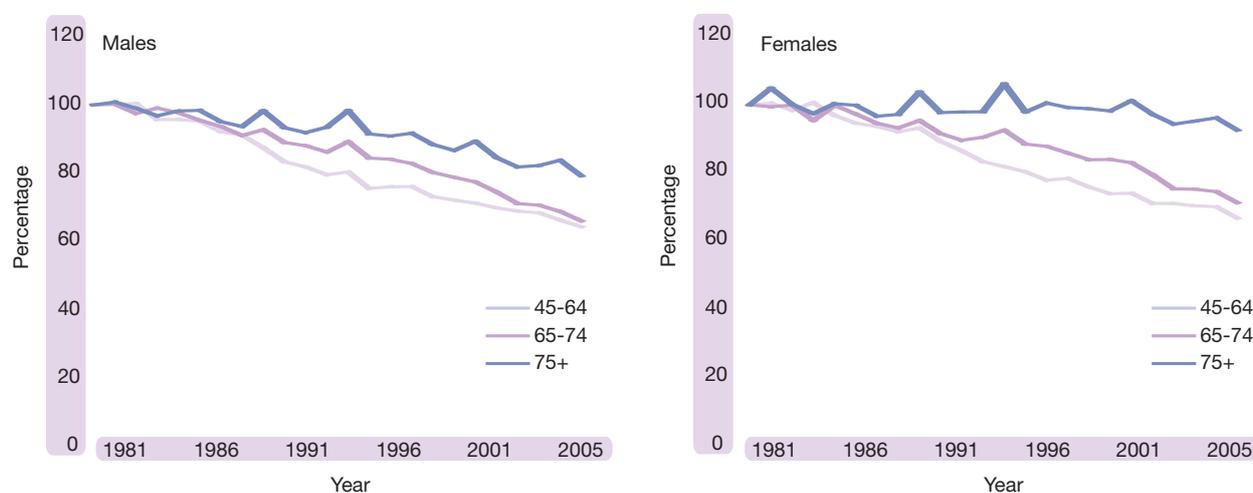
Mortality by age

About 60 per cent of deaths were of people aged 75 and over, and a further 20 per cent were between the ages of 65 and 74.

The relative stability in the total number of deaths over recent years masks significant improvements in age-specific mortality. **Figure 1.19** shows, for both men and women, selected age-specific mortality rates over the last twenty years relative to the 1981 rates. The three age groups shown (45-64, 65-74 and 75 and over) account for around 95 per cent of all deaths.

At these ages, there have been greater improvements in male than in female mortality. For the 45-64 age group, males and females experienced improvements of 45 per cent and 39 per cent respectively. In the 65-74 age group, males showed an improvement of 42 per cent compared to 35 per cent for females. The greatest differential is in the 75 plus age group, where male mortality has improved by 25 per cent compared to only 10 per cent for females. These changes have narrowed the difference between female and (traditionally higher) male mortality.

Figure 1.19 Age specific mortality rates as a proportion of 1981 rate, 1981-2005

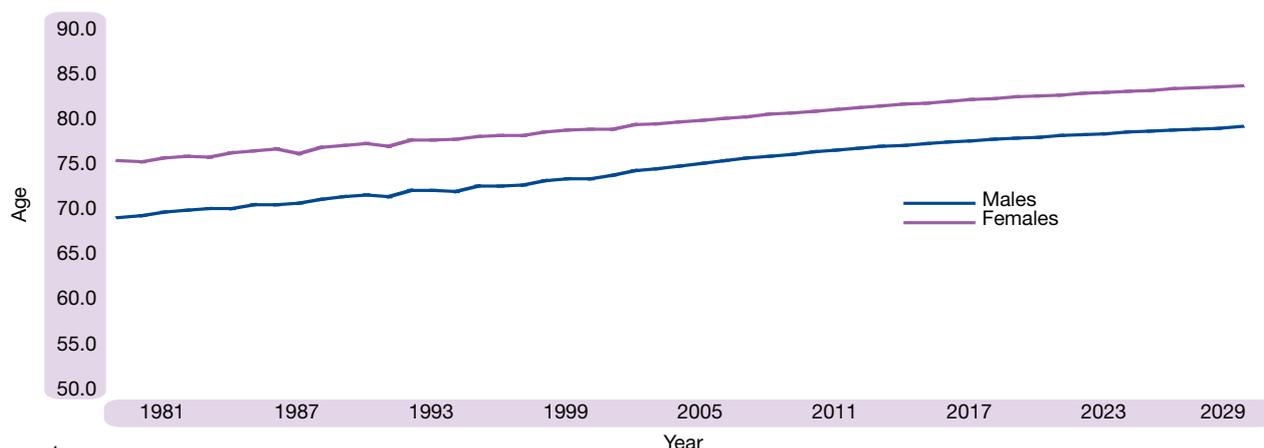


Life expectancy

Although mortality rates in Scotland have generally fallen more slowly than in the rest of the UK and elsewhere in Europe, the improvements are still considerable and the impact is demonstrated in the steadily rising expectation of life.

The expectation of life at birth is a commonly used measure of mortality rates which is particularly helpful in comparing the ‘health’ of a nation through time and for making comparisons with other countries. **Figure 1.20** shows that the expectation of life at birth in Scotland has improved greatly over the last 20 years or so, increasing from 69.1 years for males and 75.4 years for females born around 1981 to 74.3 years and 79.4 years respectively for those born around 2004. **Figure 1.20** also illustrates that improvements in life expectancy at birth are projected to continue, rising to 79.2 years for males and 83.7 years for females by 2031.

Figure 1.20 Period expectation of life at birth¹, Scotland, 1981-2031



¹ 2004-based projections.
Data after 2004 are projected.

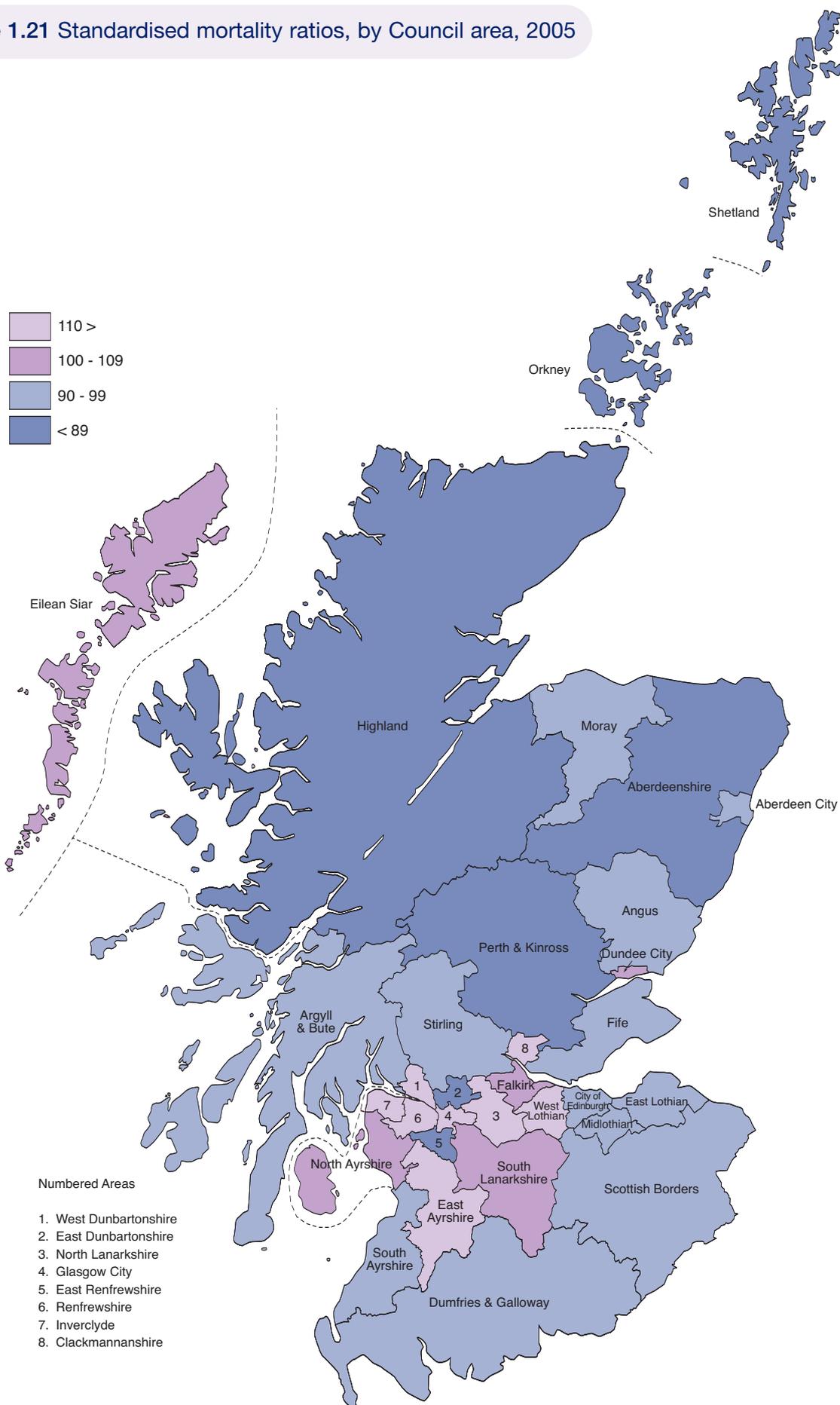
However, Scottish men and women have almost the lowest expectation of life at birth in the EU (15 states). For Scottish males, expectation of life is almost one year lower than the EU (25 states) average and, for females, it is almost two years lower. For both sexes, the expectation of life is about four years lower than the countries with the highest expectation of life.

Variations in mortality levels within Scotland

Standardised mortality ratios (SMRs), which compare local death rates with death rates in Scotland as a whole, taking account of the different population structure of each area, are presented in **Figure 1.21**. Eight of the 32 Council areas have a standardised mortality ratio that is more than 10 per cent higher than the Scottish average of 100. Most of these are in west central Scotland. The worst, Glasgow City, is 24 per cent higher than the Scottish average which itself is about 16 per cent higher than the UK average.

At the other end of the scale, 7 of the 32 Council areas have a standardised mortality ratio that is more than 10 per cent lower than the Scottish average. The lowest was Shetland which was 31 per cent below (or better than) the Scottish average. East Dunbartonshire, East Renfrewshire and Aberdeenshire were respectively 21, 19 and 18 per cent below the Scottish average.

Figure 1.21 Standardised mortality ratios, by Council area, 2005



Cause of death

In 2005, the two most common causes of death in Scotland were cancer (15,135 deaths, 27 per cent) and ischaemic (coronary) heart disease (10,331 deaths, 19 per cent). However, since 1981 the proportion of deaths caused by ischaemic heart disease has fallen from 29 to 19 per cent, whereas the proportion caused by cancer has risen from 22 to 27 per cent. And since 1995, there have been more deaths from cancer than ischaemic heart disease.

Death rates and numbers by sex, for the most common causes of death are shown in **Tables 1.2** and **1.3** respectively.

Cancer

Over the last twenty years or so, male death rates from lung cancer have fallen by over a quarter (from 119 per 100,000 population in 1980-82 to 89 in 2005). By contrast, the rates for women, though still considerably lower than those for men, have increased by nearly 70 per cent (from 41 per 100,000 population in 1980-82 to 69 in 2005).

Of the 15,135 deaths from cancers in 2005, trachea, bronchus and lung was the most common type, accounting for over a quarter (26 per cent) of all cancer deaths.

The next most frequent type of cancer death was prostate for men (765 deaths of whom 68 per cent were for people aged 75 and over) and breast for women (1,151 deaths). Death rates for these two causes have been relatively stable in recent years.

Heart disease and stroke

Death rates for ischaemic (coronary) heart disease and cerebrovascular disease (stroke) have shown significant declines. Since 1981, males have experienced slightly larger improvements (44 per cent for ischaemic heart disease and 37 per cent for stroke) compared with improvements of 41 and 34 per cent respectively for females.

Table 1.2 Death rates from selected causes, by sex, Scotland, 1980-2005**Males – rates per 100,000 population**

Year	Cancer			Ischaemic heart disease	Cerebrovascular disease
	All sites	Trachea, bronchus and lung	Prostate		
1980-82	291	119	19	408	139
1990-92	314	111	27	367	119
2000-02	321	93	32	261	101
2005	312	89	31	229	87

Females – rates per 100,000 population

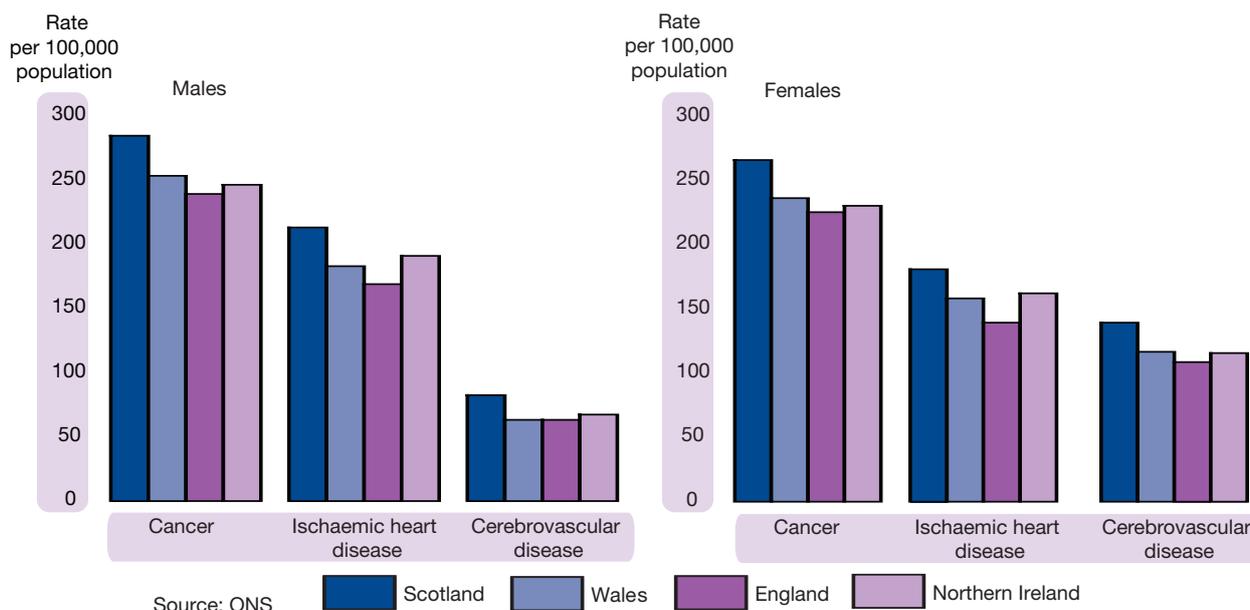
Year	Cancer			Ischaemic heart disease	Cerebrovascular disease
	All sites	Trachea, bronchus and lung	Breast		
1980-82	247	41	45	304	210
1990-92	278	57	48	297	191
2000-02	288	64	43	216	162
2005	283	69	43	178	139

Table 1.3 Number of deaths from selected causes, by sex, Scotland, 1980-2005

Year	Cancer		Ischaemic heart disease		Cerebrovascular disease	
	Males	Females	Males	Females	Males	Females
1980-82	7,269	6,634	10,173	8,150	3,470	5,638
1990-92	7,664	7,324	8,964	7,846	2,913	5,029
2000-02	7,674	7,394	6,342	5,664	2,465	4,250
2005	7,664	7,471	5,629	4,702	2,134	3,655

Using 2004 data, the latest available, **Figure 1.22** compares the death rates for the constituent countries of the UK for selected causes after adjusting for differences in age structure. The Scottish rates for cancer, ischaemic heart disease, and cerebrovascular disease (strokes) are well above the rates for the other countries of the United Kingdom for both men and women.

Figure 1.22 Age-adjusted mortality rates, by selected cause and sex, 2004



Suicides

In 2005, deaths from intentional self-harm numbered 547 (393 males and 154 females), 59 fewer than in 2004. To allow for any under-recording of suicides, it is conventional to combine deaths classified as 'events of undetermined intent' with those for 'intentional self-harm', as most of the former are believed to be suicides. The total number of deaths classified to these two groups in 2005 was 763 compared with 835 in 2004 and 794 in 2003.

Suicide is the most common cause of death for men aged 15-44 and women aged 15-34. For men the most frequent cause of these deaths was hanging, strangulation and suffocation, whereas for women it was poisoning.

Main causes of death by age and sex

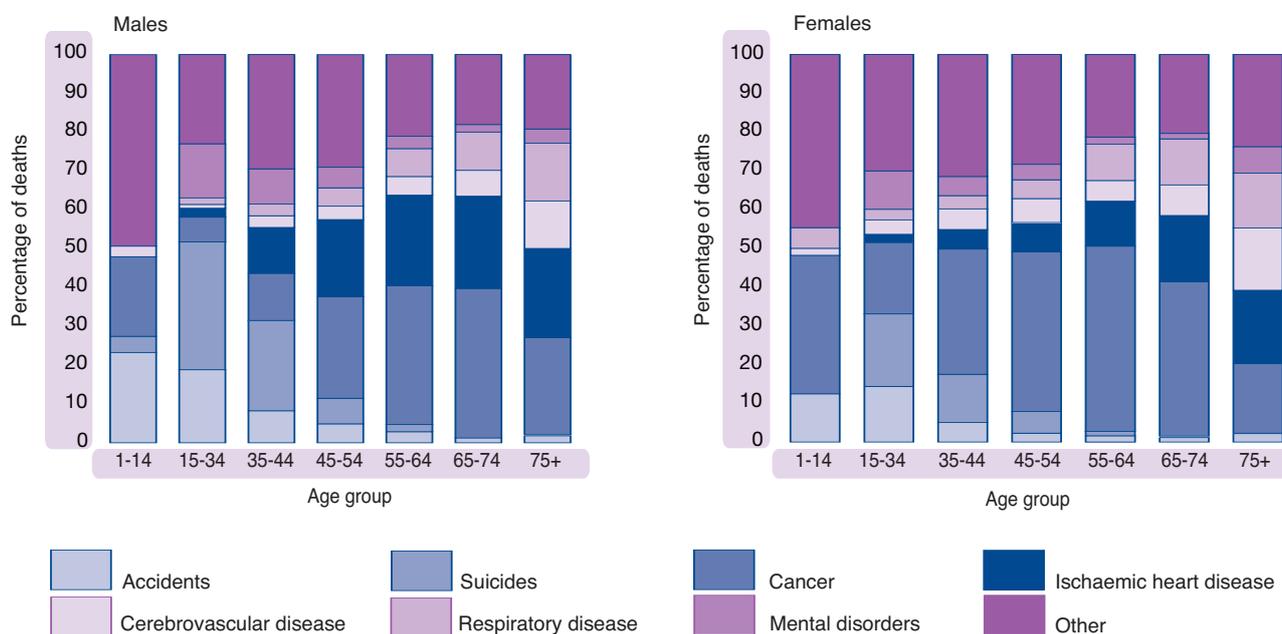
The main causes of death vary in frequency by age and sex (**Figure 1.23**). Diseases of the nervous system were the largest single cause amongst boys aged 1-14, closely followed by cancer and accidents. For girls aged 1-14, cancer was the most common cause with accidents and diseases of the nervous system ranking second equal.

For males aged 15-34, the main cause was suicide (intentional self-harm plus undetermined deaths) followed by accidents and mental disorders (almost entirely associated with drug and alcohol abuse). For females in this age group, suicide was also the largest category. Cancer and accidents respectively were the next most common causes.

Suicide was also the most frequent cause of death for males aged 35-44; cancer was second, followed by ischaemic heart disease. For women aged 35-44, cancer was the main cause followed by suicide.

For both sexes and all age groups between 45 and 74, cancer was the main cause followed by ischaemic heart disease. For women, cancer was responsible for a higher proportion of deaths in these age groups than for men. Conversely, ischaemic heart disease accounted for a higher proportion of deaths in these age groups for men than for women.

Figure 1.23 Deaths, by cause and age group, Scotland, 2005



MIGRATION

Unlike births and deaths, there is no comprehensive source for estimating migration and hence it is the most difficult component of population change to measure and predict. Migration and the reasons for migrating are also much more susceptible to short-term changes in social and economic circumstances than births and deaths.

There has been an increased interest in migration in recent years because population projections have highlighted the long-term decline and ageing of Scotland's population. The Scottish Executive's Fresh Talent initiative aims to stem population decline, and alleviate possible problems of a reduced workforce, by attracting young and economically active people to Scotland, and by encouraging others to stay.

The Registrar General's Annual Report for 2003 includes a full analysis of migration data for Scotland. This included analysis of Census 2001 information and gave an overview of data used in the population estimates for Scotland. A further analysis of Census 2001 data on migration was published on 25 January 2005: <http://www.gro-scotland.gov.uk/statistics/library/occpapers/scotlands-census-2001-statistics-on-migration/index.html>.

Trends in migration since 1951

Historically, Scotland has been a country of net out-migration with more people leaving Scotland to live elsewhere than moving to live in Scotland. However, since the 1960s net out-migration has greatly reduced. Indeed, in some years during the late 1980s and early 1990s, Scotland experienced net migration gains. This has also been the case in the last three years, with net gains of around 9,000 in the year to mid-2003, 26,000 to mid-2004 (the highest level recorded since current records started in 1952) and 19,000 to mid-2005, as can be seen from **Figure 1.24**.

Figure 1.24 Estimated net migration, Scotland, 1951-2005



Source: National Health Service Central Register (NHSCR) patient movements.

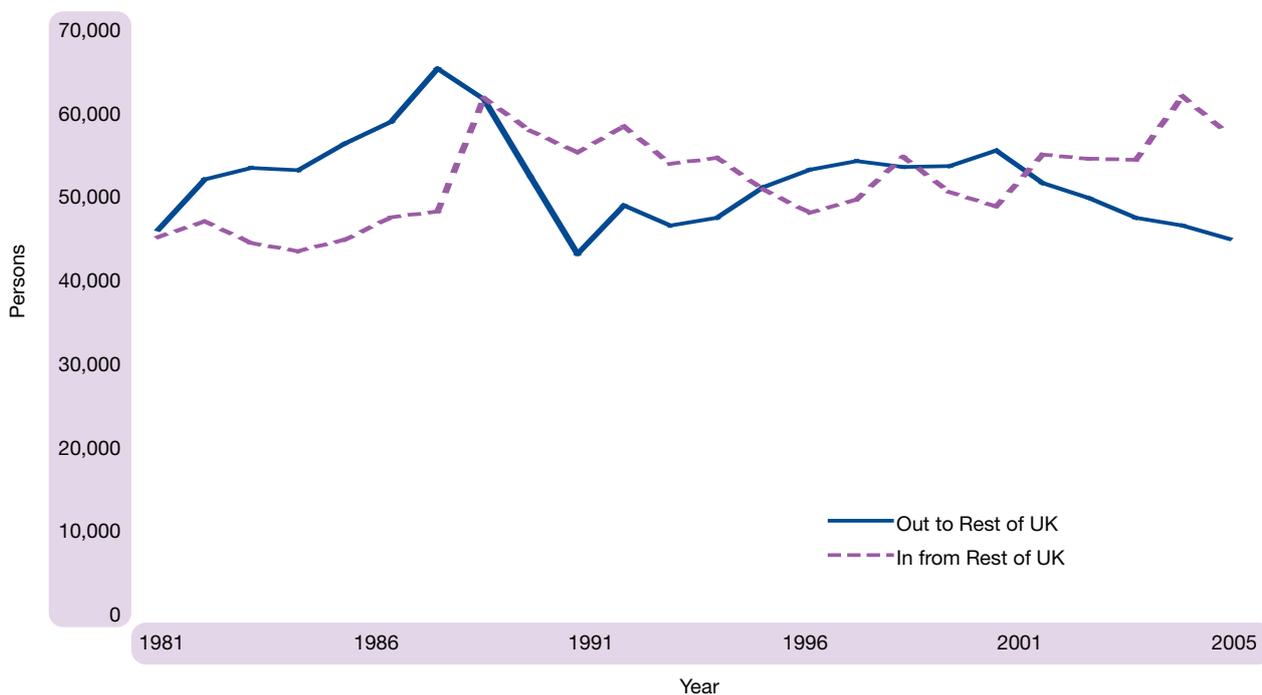
Net migration is the difference between much larger gross flows of migrants into and out of Scotland. In the last four years these have typically been about 70,000 to 90,000 in each direction. The level of net migration can be significantly affected by relatively small changes in these gross flows from year to year, particularly if one flow rises while the other falls. In the year to 30 June 2005, around 57,300 people came to Scotland from England, Wales and Northern Ireland and around 44,800 people left Scotland to go in the opposite direction. The net inflow of around 12,500 is lower than the previous year's highest-ever 15,500 net inflow, because fewer people came to Scotland and only slightly fewer people left than in the previous year.

About 35,400 people (including some asylum seekers) came from overseas and around 28,100 left Scotland to go overseas, giving a net migration gain of around 7,300, which is lower than the previous year's record net inflow of 11,700. Estimating international migration is particularly difficult as the estimate is based primarily on the International Passenger Survey (IPS). This is a sample survey conducted at main airports and ports across the UK, and the sample size for Scotland is very small (around 100 contacts in 2004). Internationally, a migrant is defined as someone who changes their country of usual residence for 12 months or more. So short-term seasonal migrant workers, including many from the Eastern European states which joined the EU in 2004, will not be counted in the migration estimates, and hence will not be counted in the mid-year population estimates. The Office for National Statistics (ONS) is currently leading work into ways of quantifying short-term migrants.

Origins and destinations of UK migrants

Figure 1.25 illustrates the trend in flows of people to and from the rest of the UK since 1981. The UK flows have been fairly constant with some fluctuations at about 50,000 in either direction.

Figure 1.25 Movements to/from the rest of the UK, 1981 to 2005



Source: National Health Service Central Register (NHSCR) patient movements.

Table 1.4 shows that in the year to mid-2005, around 21 per cent of people coming to Scotland from the rest of the UK went to the Lothian NHS Board area, 13 per cent to Greater Glasgow, 12 per cent to Grampian and 8 per cent to Tayside. Similarly 22 per cent of people leaving Scotland to go to the rest of the UK were from Lothian, 18 per cent from Greater Glasgow and 11 per cent from Grampian. The NHS Board areas with the highest net gains were Highland, Grampian and Lothian, all with net inflows of around 2,000.

Table 1.4 Movements between Scotland and the rest of the UK by NHS Board area, mid-2004 to mid-2005

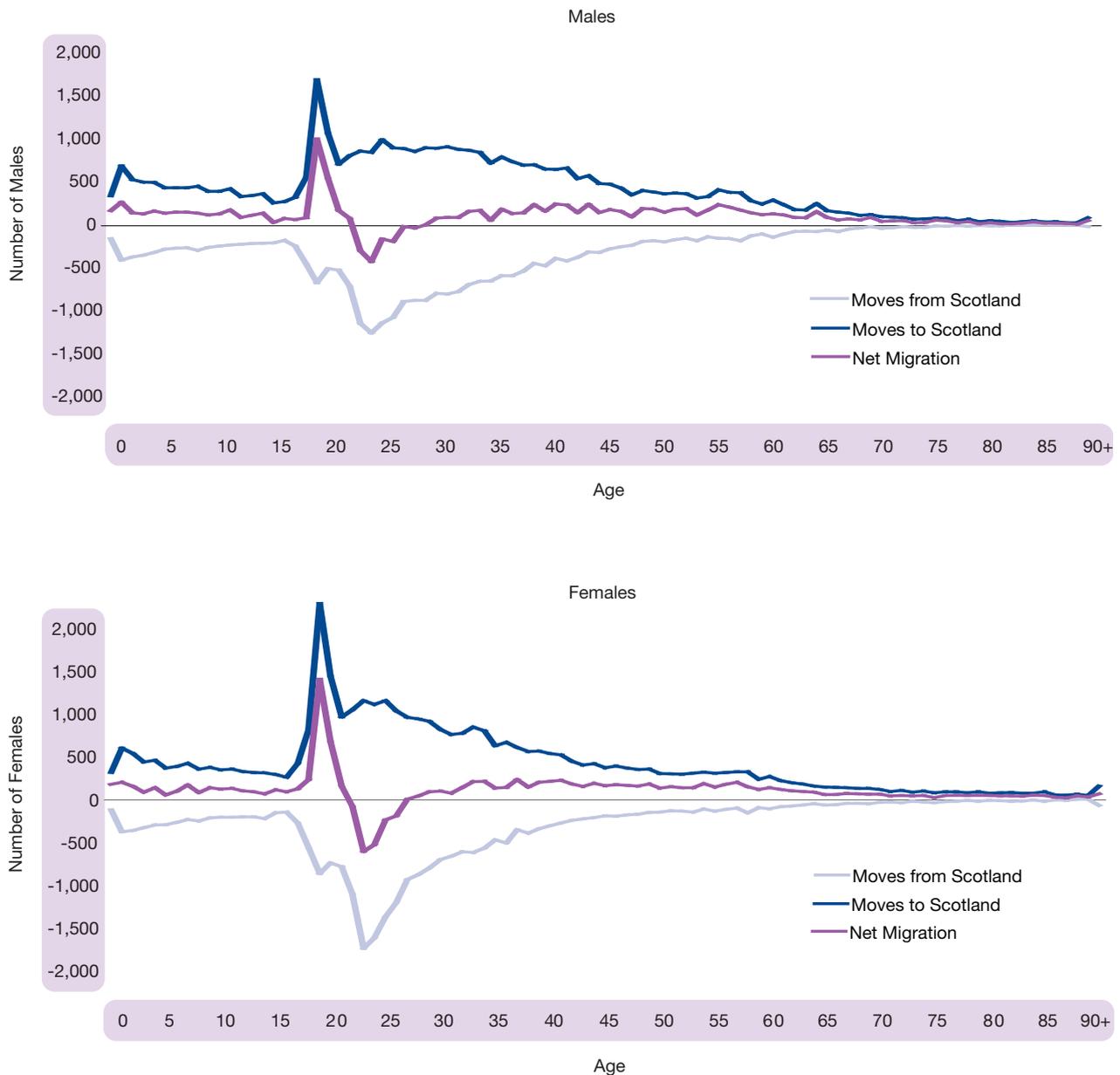
	Rest of UK inflow 2004-05	% of inflow	Rest of UK outflow 2004-05	% of outflow	Net	
Argyll & Clyde	3,564	6	3,030	7	534	
Ayrshire & Arran	2,990	5	2,574	6	416	
Borders	1,833	3	1,211	3	622	
Dumfries & Galloway	3,144	5	1,675	4	1,469	
Fife	3,873	7	2,969	7	904	
Forth Valley	2,598	5	1,975	4	623	
Grampian	6,959	12	4,900	11	2,059	
Greater Glasgow	7,557	13	7,864	18	-307	
Highland	4,197	7	2,081	5	2,116	
Lanarkshire	3,015	5	2,691	6	324	
Lothian	11,803	21	9,994	22	1,809	
Orkney Islands	370	1	195	0	175	
Shetland Islands	371	1	228	1	143	
Tayside	4,605	8	3,194	7	1,411	
Western Isles	463	1	254	1	209	
Scotland	Total	57,342	100	44,835	100	12,507

People coming to Scotland from the rest of the UK came mainly from England (93 per cent). Fifteen per cent came from each of the North West, the North East and the South East, 14 per cent from London, 10 per cent from Yorkshire and the Humber, 9 per cent from the East, 8 per cent from the South West and 7 per cent from the East Midlands and the West Midlands. There were fairly similar proportions of people going to the areas of England from Scotland. For example, about 15 per cent went to the South East, 15 per cent to the North West and 16 per cent to London.

Age and sex of migrants

The age and sex of migrants remains relatively constant from year to year. **Figure 1.26** illustrates the age/sex distribution of migrants for males and females moving between Scotland and the rest of the UK between 2004 and 2005. The peak ages for migrating are the late teens to mid-twenties reflecting moves out of the parental home for higher education or employment. There also tend to be smaller peaks for moves of the very young, under the age of five, as their parents move home before their children have started school. The pattern of migration is very similar for men and women, though more women than men tend to migrate in their early twenties. However, this may reflect different patterns of re-registering with an NHS doctor after a move (the main data source for migration estimates) rather than different patterns of migration.

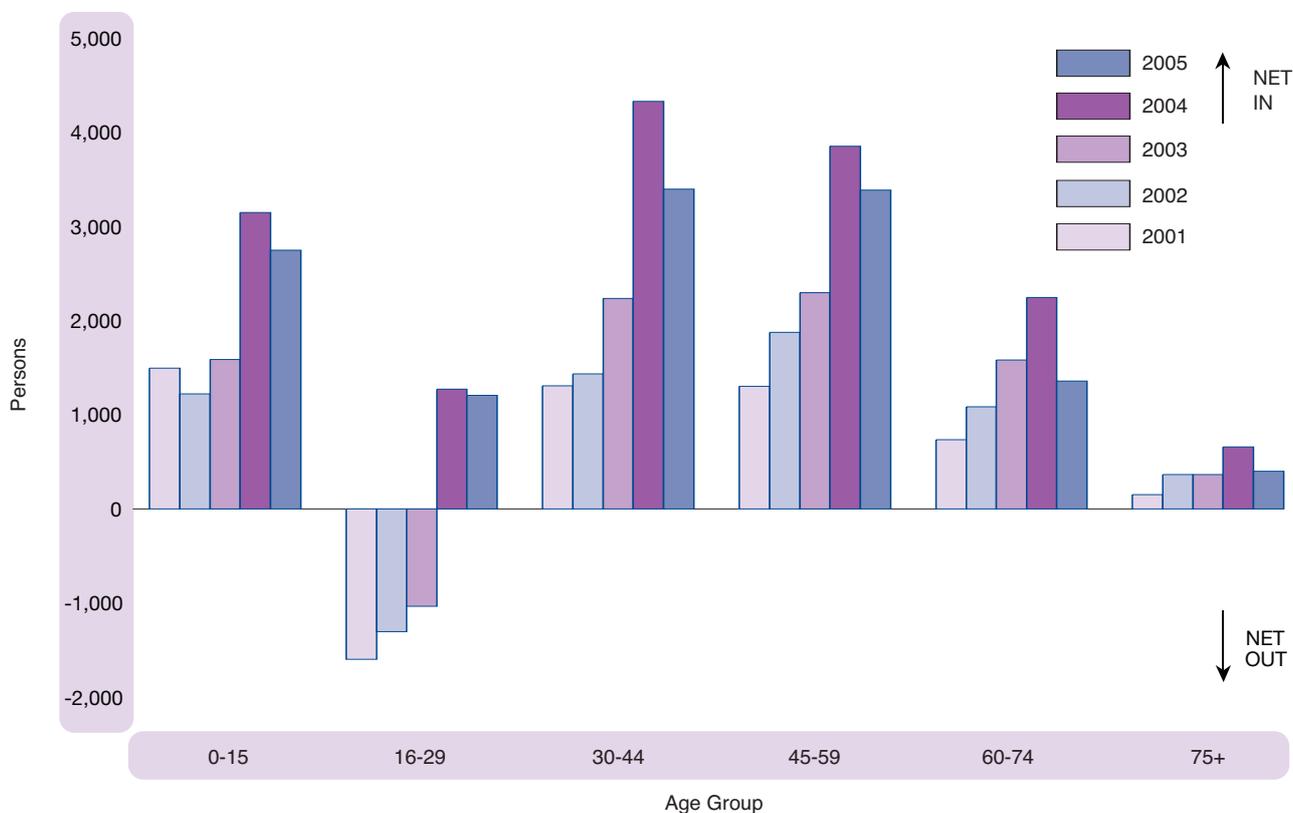
Figure 1.26 Movements between Scotland and the rest of the UK, by age, mid-2004 to mid-2005



The peaks in migration for males and females in their late teens and early twenties create marked net migration gains at ages 19 and 20, and net migration losses at ages 23 and 24. These patterns are consistent with an influx of students from outside Scotland starting higher education, followed by a further move after graduation. Later in life, there is no significant 'retirement migration' in either direction.

Figure 1.27 shows that, in the year to mid-2005, Scotland gained people of all age groups from the rest of the UK. The figures for previous years show that movement of all age groups into Scotland has increased. The figures for the latest year are lower than in mid-2004 for all age groups, albeit not by much for the 16-29 age group.

Figure 1.27 Net movements between Scotland and the rest of the UK by age group¹, 2001-2005



¹ The age and sex distribution of people moving to Northern Ireland from Scotland, was assumed.

Source: National Health Service Central Register (NHSCR) patient movements.

CHAPTER 1 – DEMOGRAPHIC OVERVIEW

Table 1.5 shows movements to/from the UK and overseas between mid-2004 and mid-2005 by age group.

Migrants tend to be much younger than the general population with between 46 per cent (rest of the UK) and 69 per cent (overseas) of in-migrants aged 16-34 compared with 24 per cent of the resident population. No significant retirement migration is evident, as only 5 per cent of people coming to Scotland from the rest of the UK were aged 65 and over, as were an assumed 1 per cent of overseas migrants.

Table 1.5 Rest of UK/Overseas moves by age group: 2004-2005

Numbers										
Movements between Scotland and the rest of the UK ¹										
	0-15	16-24	25-34	35-44	45-54	55-64	65-74	75-84	85+	All ages
IN	9,656	12,796	13,704	9,083	5,376	3,933	1,622	780	392	57,342
OUT	6,909	10,894	13,504	6,575	3,186	2,044	954	508	261	44,835
NET	2,747	1,902	200	2,508	2,190	1,889	668	272	131	12,507
Movements between Scotland and Overseas (including asylum seekers, excluding unmeasured migration adjustment) ²										
	0-15	16-24	25-34	35-44	45-54	55-64	65-74	75-84	85+	All ages
IN	4,836	12,412	11,943	3,553	1,455	736	329	107	29	35,400
OUT	4,329	6,829	8,464	4,121	1,997	1,280	598	318	164	28,100
NET	507	5,583	3,479	-568	-542	-544	-269	-211	-135	7,300
Total net migration (including asylum seekers, rounding and unmeasured migration adjustments) ³										
	0-15	16-24	25-34	35-44	45-54	55-64	65-74	75-84	85+	All ages
NET	3,245	6,973	3,607	2,144	1,710	1,304	338	4	-29	19,296
Percentages										
Movements between Scotland and the rest of the UK ¹										
	0-15	16-24	25-34	35-44	45-54	55-64	65-74	75-84	85+	All ages
IN	17	22	24	16	9	7	3	1	1	100
OUT	15	24	30	15	7	5	2	1	1	100
Movements between Scotland and Overseas (including asylum seekers, excluding unmeasured migration adjustment) ²										
	0-15	16-24	25-34	35-44	45-54	55-64	65-74	75-84	85+	All ages
IN	14	35	34	10	4	2	1	0	0	100
OUT	15	24	30	15	7	5	2	1	1	100

1 National Health Service Central Register (NHSCR) patient movements mid-2004 to mid-2005.

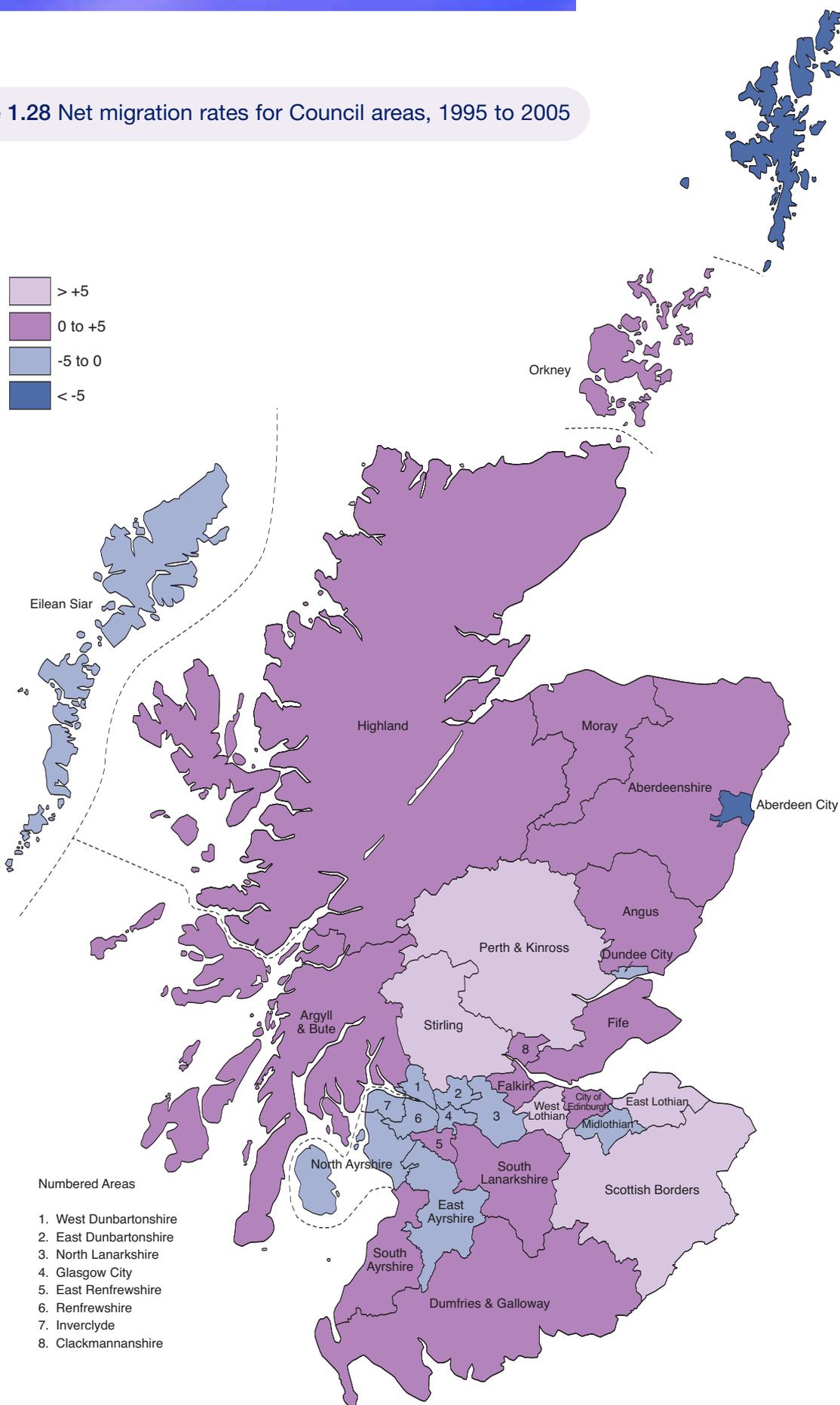
2 Totals are based primarily on International Passenger Survey (IPS) data. However, the sample size in Scotland is too small to give an age breakdown so an age distribution is assumed using NHSCR data.

3 Note that the movements between Scotland and the rest of the UK and overseas will not sum to the total net migration as they exclude unmeasured migration and rounding adjustments.

Migration and the distribution of people in Scotland

In many parts of Scotland, migration is the most important component of population change. Net migration rates (here, the amount of net migration between 1995 and 2005 as a proportion of the 1995 population) are a useful indicator when comparing migration between areas of different sizes. Information on net rates for Council areas is shown in **Figure 1.28**.

Figure 1.28 Net migration rates for Council areas, 1995 to 2005



The patterns of migration over the period 1995 to 2005 indicate the highest net out-migration rates were in Aberdeen City, Shetland Islands and Dundee City. The highest net in-migration rates were in East Lothian, West Lothian and Scottish Borders.

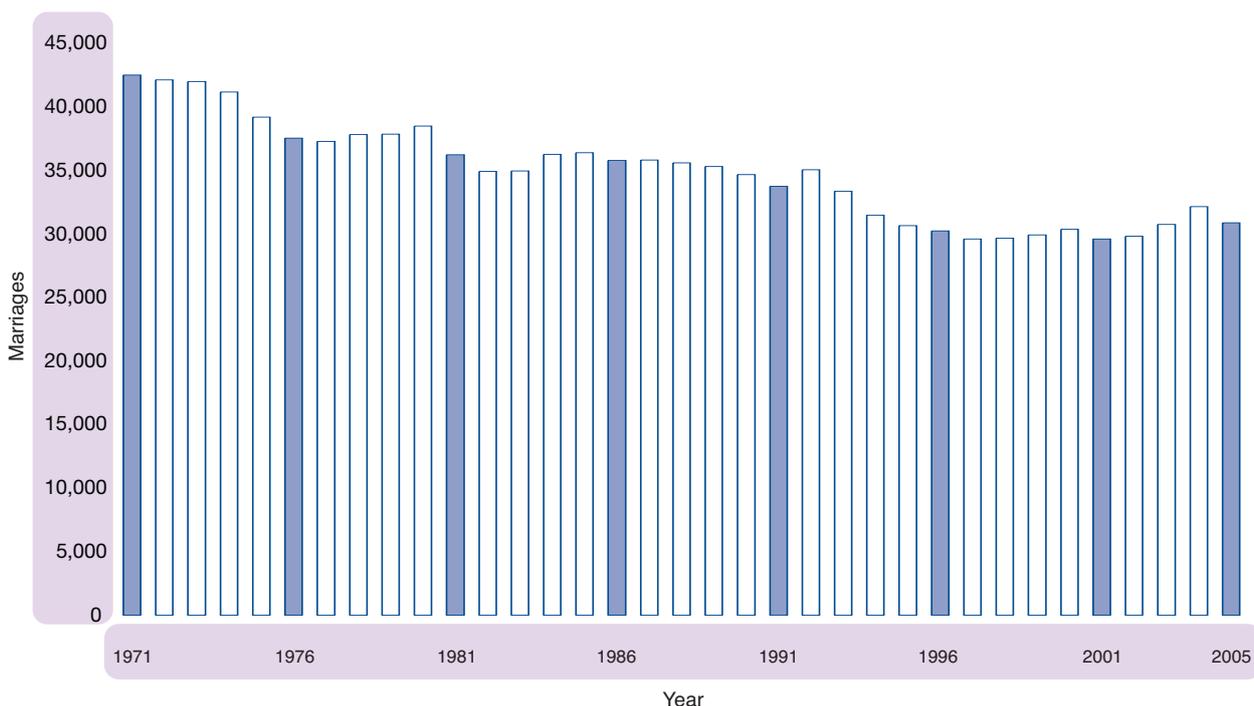
MARRIAGES

Numbers

There were 30,881 marriages in Scotland in 2005, 1,273 (4.0 per cent) fewer than in 2004, which had the highest total since 1993. **Figure 1.29** shows that, following a decline from over 40,000 marriages a year in the early 1970s, the annual total has levelled out at around 30,000.

The information in this section covers all marriages registered in Scotland, regardless of the usual residence of the parties involved. Recent years have seen a general increase in the number of marriages where neither the bride nor groom was resident in Scotland, though there was a fall in this category from 9,710 in 2004 to 8,817 in 2005 – nearly half of which were at Gretna. Of course, many couples who are resident in Scotland go abroad to be married. These marriages are not included, and only some come to the attention of the Registrar General through notification to British consular authorities.

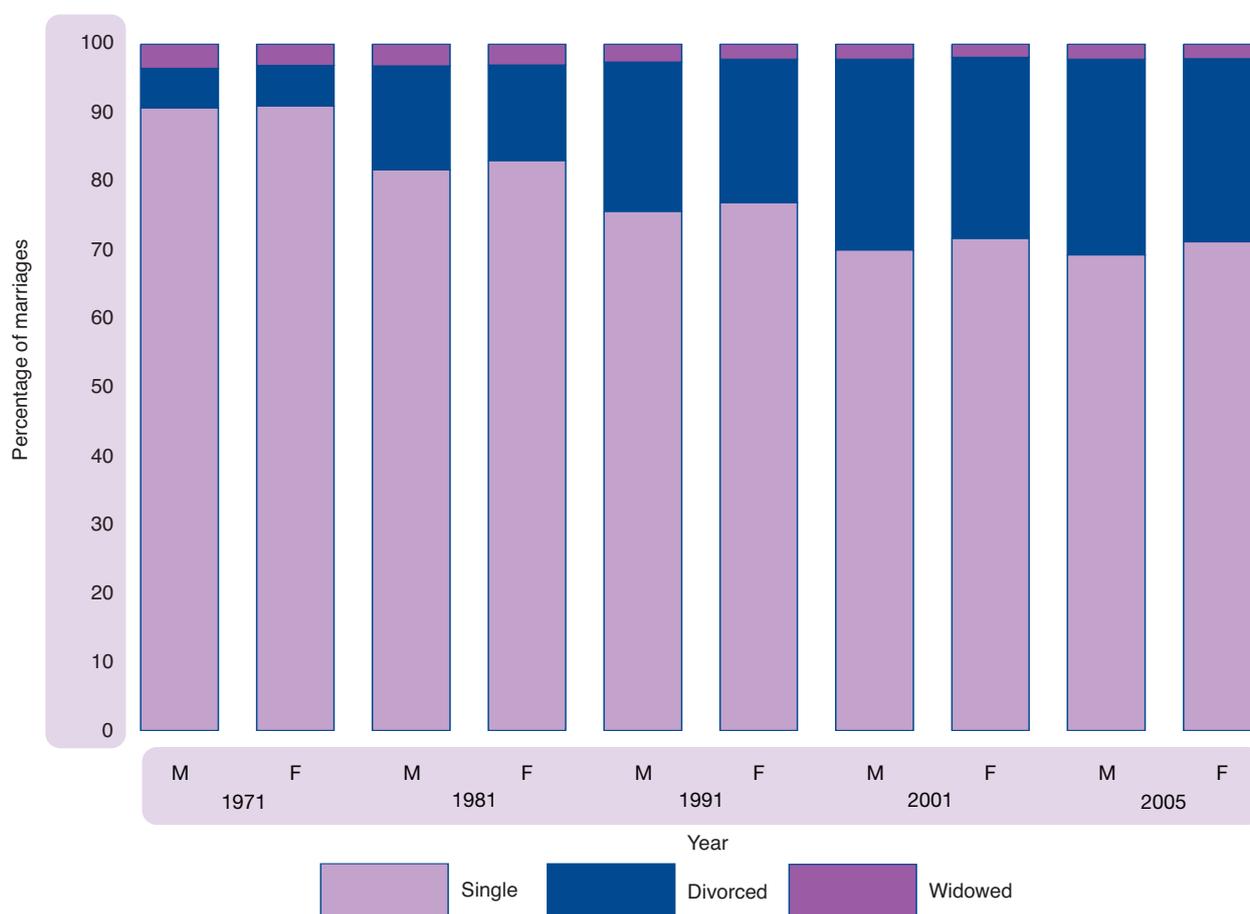
Figure 1.29 Marriages, Scotland, 1971-2005



Marital status at marriage

Figure 1.30 shows the percentage of marriages by marital status at the time of marriage between 1971 and 2005. The percentage of people marrying who had been divorced rose from just under 6 per cent in 1971, to over a quarter in 2005 (28 per cent for males and 27 per cent for females). The majority of this shift reflects a reduction in the proportion of marriages where one of the partners had never been married. However, the proportion of those marrying who were widowed has also declined slightly – in 2005, the proportion was about 2 per cent whereas it was just over 3 per cent in 1971.

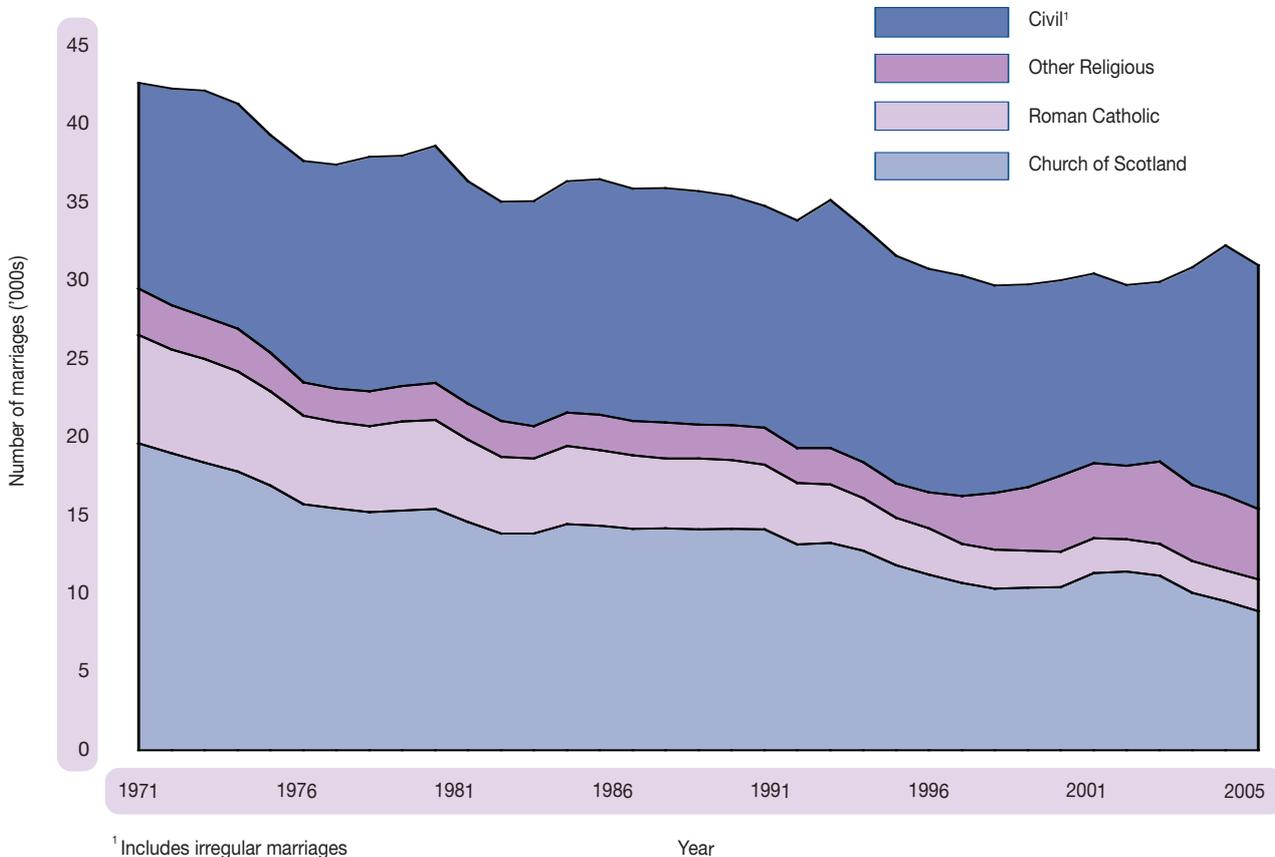
Figure 1.30 Marriages, by marital status of persons marrying, 1971-2005



Marriages by type of ceremony

Civil marriages accounted for half of all marriages in 2005 compared to around one-third in 1971 (**Figure 1.31**). The trend mainly reflects a decline in the number of religious ceremonies during the 1970s, 1980s and early 1990s. The small increase in religious marriages observed during the period 1997-2002 was largely associated with the increase of 'tourism' marriages, of which a significant proportion were carried out at Gretna.

Figure 1.31 Marriages, by type of ceremony, 1971-2005



Until 2002, civil marriages could only be held in registration offices. The Marriage (Scotland) Act 2002 allowed registrars to conduct ceremonies in other approved places, from June 2002. Over 600 venues have now been approved, including castles, hotels, clubs and a small number of outdoor venues in gardens or the countryside.

During 2005, 7,055 civil ceremonies (23 per cent of all marriages and 45 per cent of civil marriages) were conducted at these 'approved places'. This represented an increase of 18 per cent on 2004 and an increase of 104 per cent on 2003, the first full year of the new arrangements. There has been a corresponding decrease in the number of religious marriages, from 18,371 in 2002 to 15,368 in 2005.

Just over half of the 15,368 religious marriages were celebrated in places of worship and most civil marriages in registration offices (8,455 or 55 per cent). Hotels were the venue for about 2,600 religious and 3,100 civil ceremonies, while approximately 1,200 religious and 600 civil marriages took place in castles and other historic buildings and 58 religious and 25 civil marriages were held on ships and barges.

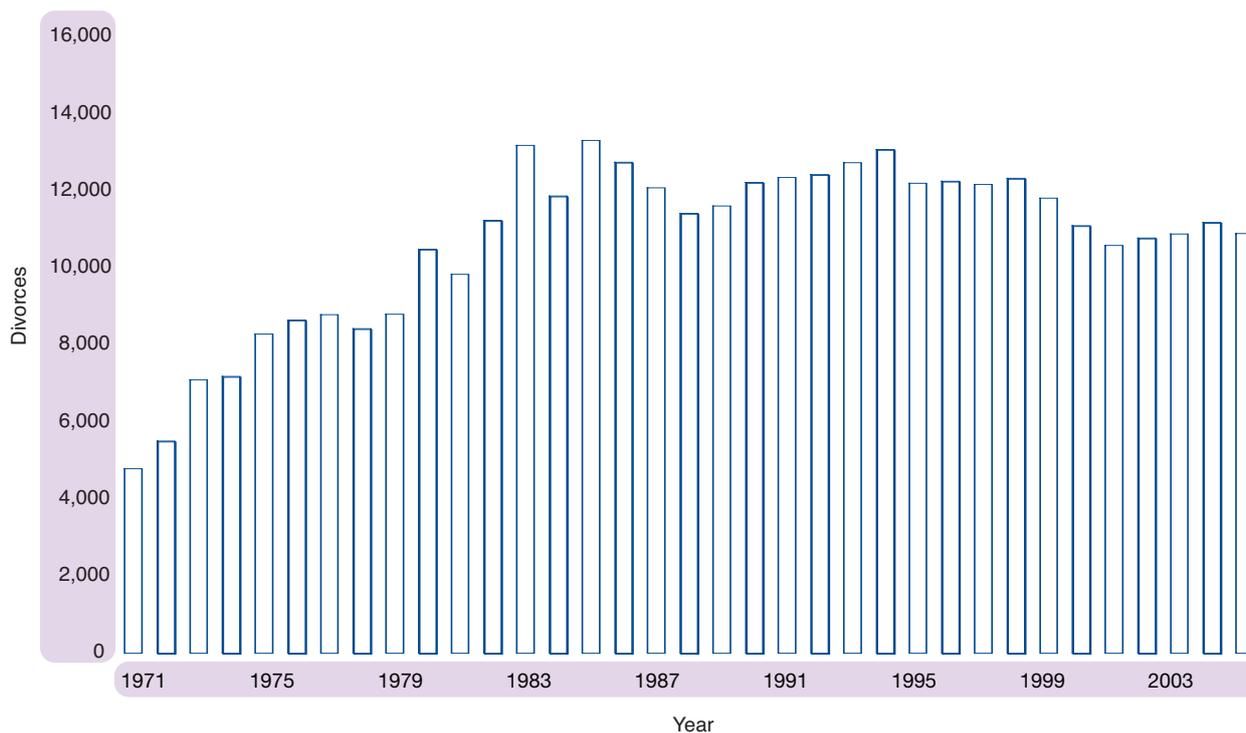
DIVORCES

Numbers

The number of divorces in 2005 was 10,940, some 287 fewer than in 2004. **Figure 1.32** shows the number of divorces between 1971 and 2005. There was a marked increase in the number of divorces up to a peak of over 13,373 in 1985. Recent years have seen a slight fall from the levels recorded in the late 1980s and 1990s. It is probable that increasing cohabitation may be relevant to the recent decline in divorces, since divorce proceedings are not necessary to sever such relationships.

The information in this report relates to divorces granted under the Divorce (Scotland) Act 1976 and covers divorces granted in Scotland, regardless of where the marriage took place.

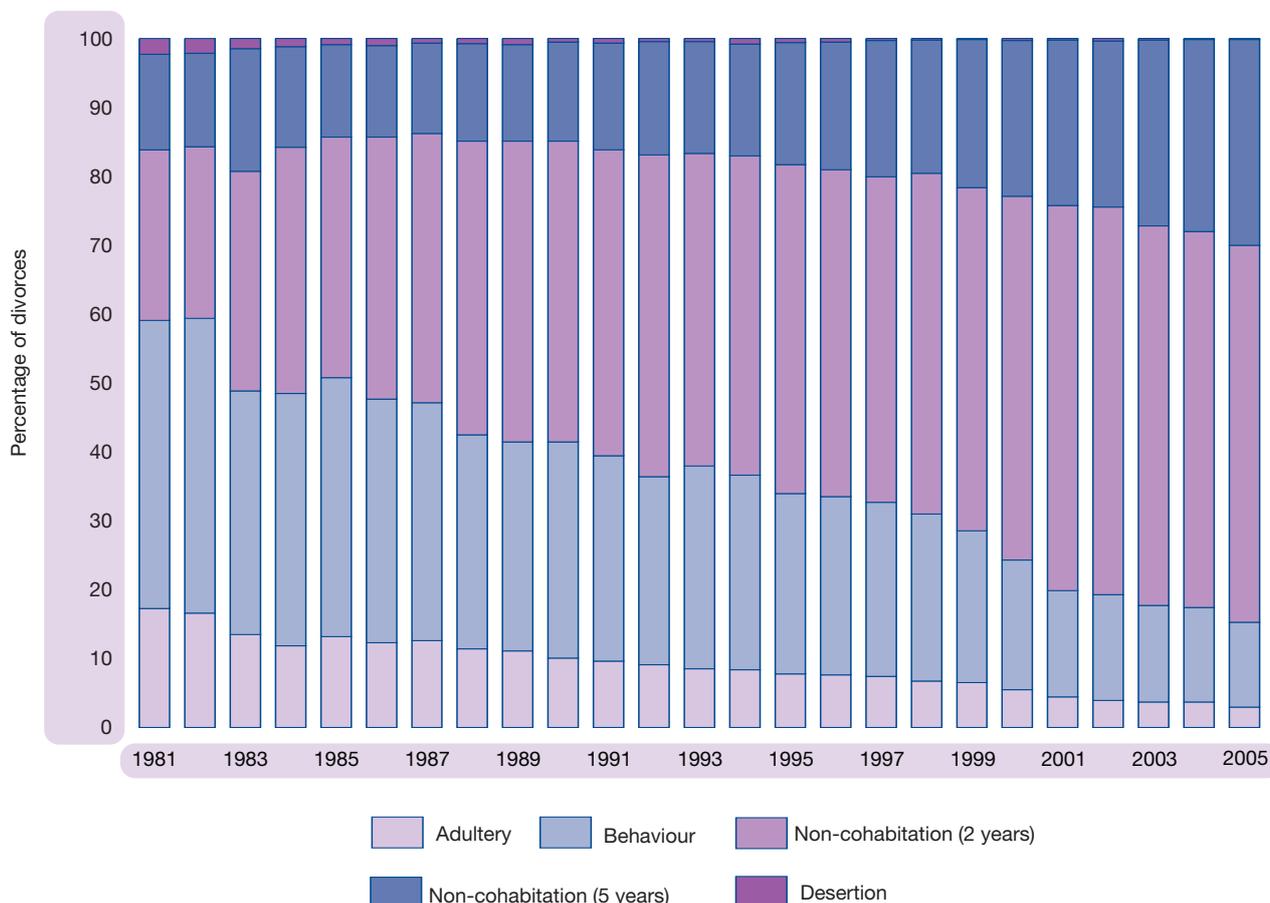
Figure 1.32 Divorces, Scotland, 1971-2005



Grounds for divorce

Figure 1.33 shows the trend in grounds for divorce between 1981 and 2005. The Divorce (Scotland) Act 1976 introduced new grounds for divorce – principally non-cohabitation, meaning that couples separated for two years (with consent) or five years (without consent) could file for divorce on that ground.

Figure 1.33 Number of divorces, by grounds for divorce, Scotland, 1981-2005



In 2005, non-cohabitation was the most frequent reason for divorce, accounting for 85 per cent of all divorces. Non-cohabitation (two years and consent) increased from 25 per cent of all divorces in 1981 to 55 per cent of all divorces in 2005; non-cohabitation (five years) increased from 14 per cent to 30 per cent; and adultery as the stated reason for divorce fell from 17 per cent to 3 per cent.

Divorces by marital status

Of those divorcing in 2005, 16 per cent of both men and women had divorced previously. This compares with 8 per cent for men and 7 per cent for women in 1981. This is consistent with the increase in the proportion of all marriages where one or both participants was divorced previously (now 2 in 5 marriages compared with 1 in 4 twenty years ago).

Duration of marriages that ended in divorce

In 2005, the median duration of marriage ending in divorce was 15 years, whereas the comparable duration for 1981 was 9 years. In part, this increase will reflect the changing balance between cohabiting relationships and marriage.

Divorce by age at marriage

In 2005, 26 per cent of all divorces involved couples where at least one of the partners was aged 20 or under when they married. This is a significant fall from 60 per cent in 1981, but not unexpected given that the proportion of marriages where at least one of the partners was aged 20 or under has fallen from 36 per cent in 1981 to 3 per cent in 2005.

CIVIL PARTNERSHIPS

The Civil Partnership Act 2004, which applies throughout the UK, came into force on 5 December 2005, allowing same-sex couples to register their partnership. In Scotland, the first civil partnership was registered on 20 December 2005 and by the end of the year a total of 84 had been registered – 53 male couples and 31 female couples.

ADOPTIONS

The Registrar General recorded 439 adoptions during 2005 – 46 more than in 2004, but just over half the number recorded in the early 1990s and around a quarter of the number recorded in the early 1970s.

Some 33 per cent of the children adopted in 2005 were adopted by a step-parent and 64 per cent were adopted by non-relatives of the child. Only 16 per cent of children adopted in 2005 were aged under 2, nearly all being adopted by non-relatives. By contrast, only 22 per cent of the 104 adoptions of children aged 10 or over were by non-relatives.

GENDER RECOGNITION

The Gender Recognition Act 2004 came into force on 4 April 2005. The Act applies throughout the UK and enables transsexual people to apply to the Gender Recognition Panel to obtain a Gender Recognition Certificate. Successful applicants are considered from the date of issue of the Certificate to be legally of their acquired gender. A holder of a Gender Recognition Certificate is able to enjoy all the rights appropriate to a person of his or her acquired gender, including obtaining a new birth certificate showing his or her recognised legal gender.

The Registrar General has set up a Gender Recognition Register in which the birth of a transsexual person whose acquired gender has been legally recognised is registered showing any new name(s) and the acquired gender. This enables the transsexual person to apply to the Registrar General for a new birth certificate showing the new name(s) and the acquired gender. In 2005, there were 47 entries in the Gender Recognition Register. The Gender Recognition Register is not open to public scrutiny.

HOUSEHOLDS

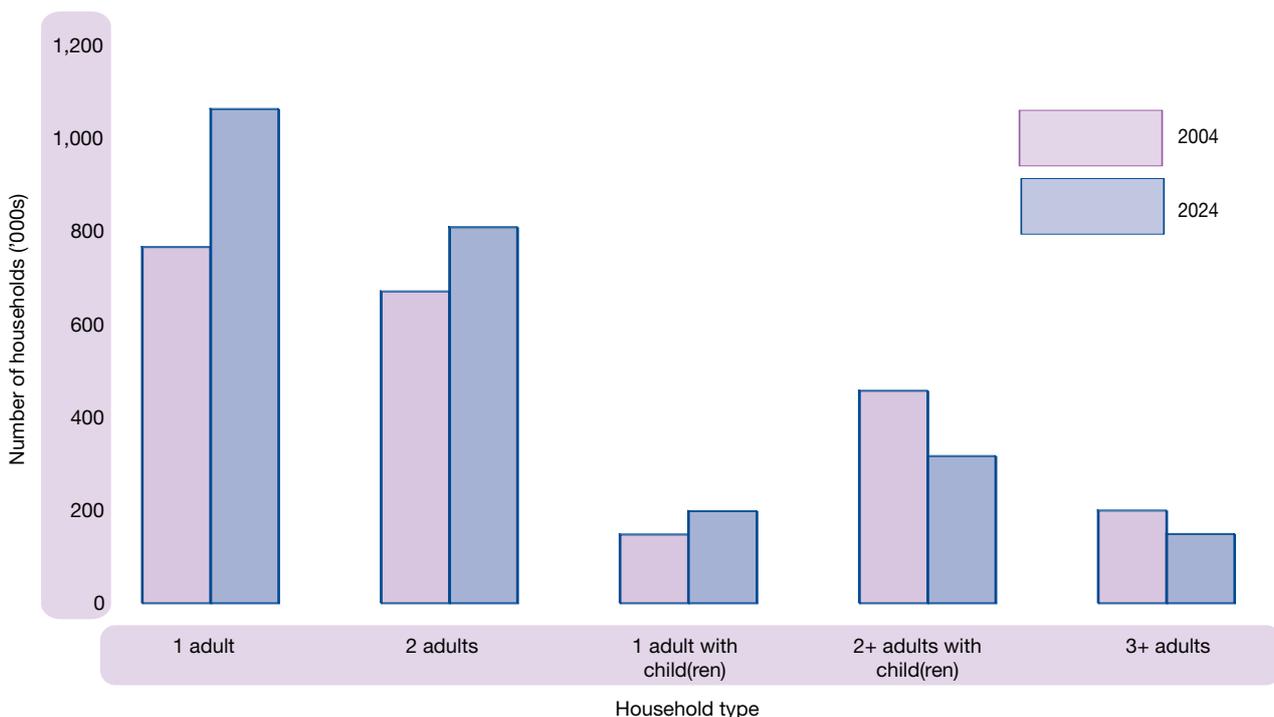
In contrast to the long-term projected decline in Scotland’s population, the latest projections of the number of households show an increase. This is mainly due to the population ageing, and more people living alone, or in smaller households – the average household size is projected to drop from 2.22 people in 2004, to just under 2 by 2024. This is a continuation of the long-running decline in average household size – in 1971, the average household contained around 3 people. Between 2004 and 2024, the number of households is projected to increase by 13 per cent to 2.5 million – an average of 14,800 additional households per year.

Household type

Figure 1.34 shows the projected number of households of each type, in 2004 and 2024. There is a large projected increase in the number of adults living alone, from 770,000 (34 per cent of all households) in 2004 to over a million (42 per cent) by 2024. There are also increases in other small households – households containing just two adults without children are projected to rise from 670,000 to 810,000, and the number of households containing one adult with children is projected to rise from 150,000 to 200,000.

In contrast, the number of larger households is projected to fall, with households containing two or more adults with children decreasing from 460,000 (20 per cent of all households) in 2004 to 320,000 (12 per cent) by 2024. There is also a projected decrease in the number of households containing three or more adults, from 200,000 to 150,000 over the same period.

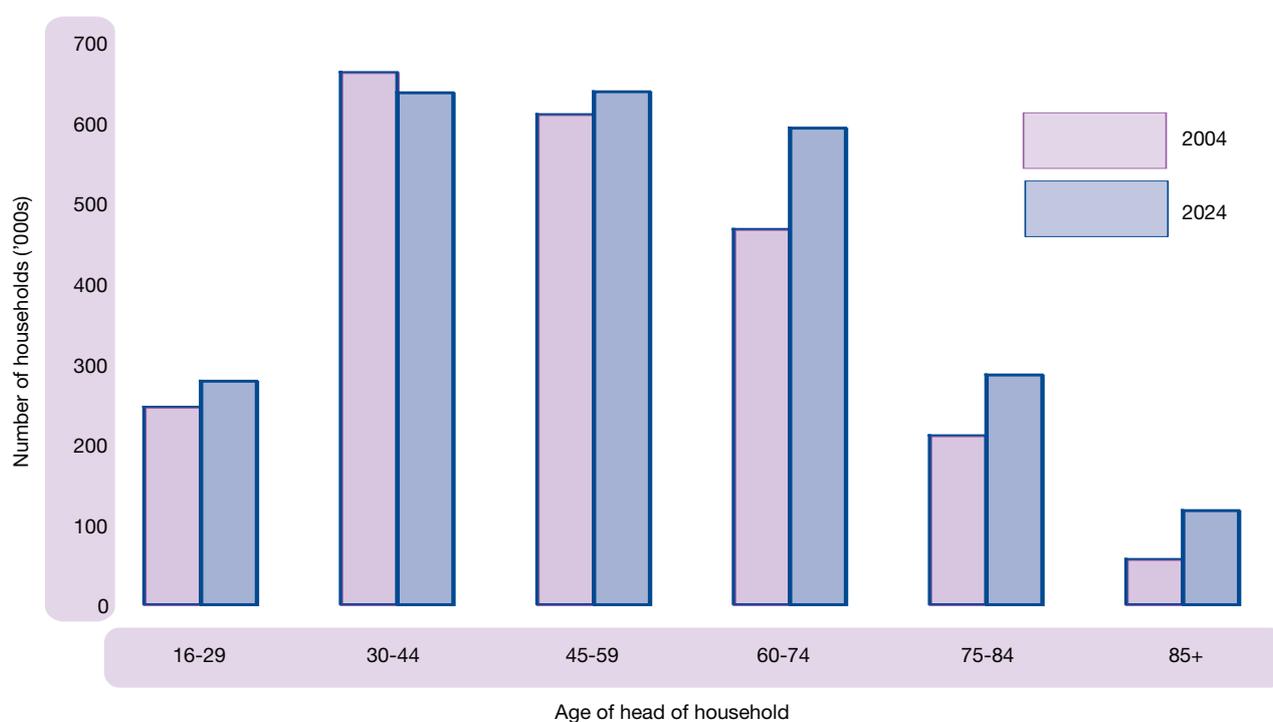
Figure 1.34 Projected households in Scotland by household type: 2004 and 2024



Age of head of household

Figure 1.35 shows the projected number of households in 2004 and 2024, by the age of the head of household. The population projections show that Scotland's population is ageing, with a projected increase in the number of people in the older age groups and fewer people in the younger age groups. This trend is reflected in the household projections, with the largest increases shown in households headed by people aged 60 or over (an increase of over a third between 2004 and 2024, from 730,000 to 990,000). In contrast, households headed by someone aged under 60 are projected to increase by just 2 per cent, to around 1.5 million. The number of households headed by someone aged 85 or over is projected to more than double over this period, from 56,000 to 117,000.

Figure 1.35 Projected households in Scotland by age of head of household: 2004 and 2024

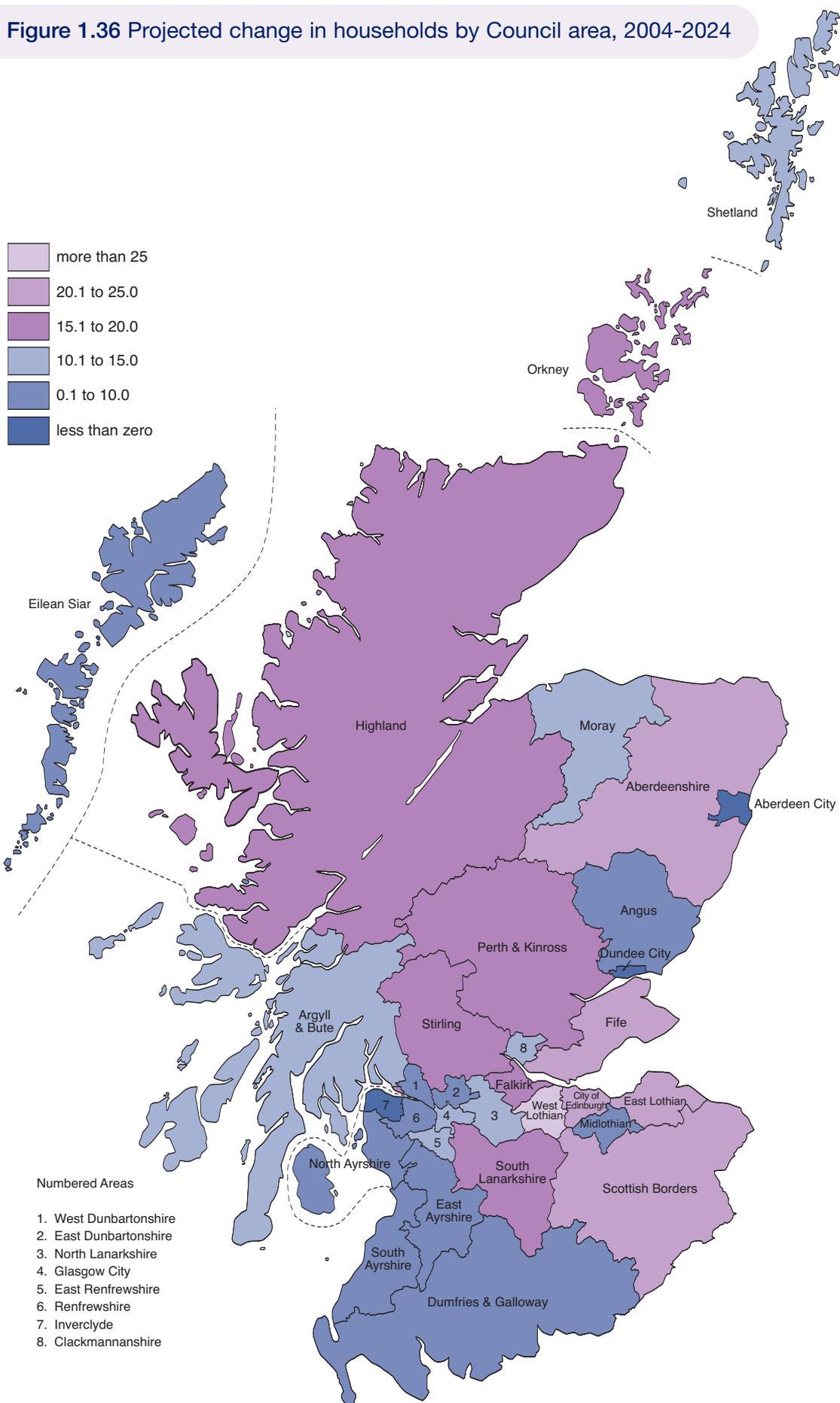


Variations within Scotland

The number of households in almost every local authority area is projected to increase. **Figure 1.36** shows the projected percentage change in the number of households between 2004 and 2024.

The largest projected increase between 2004 and 2024 is in West Lothian (34 per cent). Edinburgh, the Scottish Borders, East Lothian, Aberdeenshire and Fife all have projected increases of between 21 and 23 per cent. Aberdeen City has a projected decrease of 11 per cent over the same period, and Dundee City has a projected decrease of 6 per cent. In general, the city areas have the highest proportion of people living alone, and the lowest proportion of households containing two or more adults with children.

Figure 1.36 Projected change in households by Council area, 2004-2024



INTRODUCTION

Last year's 150th anniversary report, presented a wide range of information on the demographic statistics collated and published by GROS since the start of civil registration in 1855. However, though there was a section on deaths, space did not permit any consideration of cause of death. This chapter is designed to complete the picture. It looks at the background to the collection of information on cause of death. It gives information on long-term trends for selected broad groupings of diseases, including recent trends in some of the most important causes of death.

Table 2.1 presents a selection of statistics that highlights the dramatic changes that have occurred during the past 150 years.

BACKGROUND TO THE COLLECTION OF CAUSE OF DEATH INFORMATION

Since 1855, much information on cause of death has been published in the Registrar General's Annual Reports. Indeed, in some years, the reports contained several hundred pages of detailed statistical tabulations. However, for a number of reasons, it is not easy to interpret the long-term trends. This section highlights some of the problems of interpretation including coverage, quality of information, improvements in medical diagnosis and changes to the systems of coding and classification.

Coverage

Since the start of civil registration on 1 January 1855, it is believed that virtually all deaths occurring in Scotland have been registered, though, as will be seen below, some of the information collected on cause of death was far from perfect.

Uncertified deaths

Nowadays, cause of death details are invariably supplied by a registered medical practitioner or, following investigations of specific categories of deaths, a procurator fiscal. That was not always the case. Though information is not available for 1855, it is known that some 11 per cent of the deaths in Scotland in 1881 were uncertified and that in some rural areas the proportion was over 50 per cent. For uncertified deaths, registrars simply recorded the cause of death information supplied by the person registering the death. The cause of death information for most of these deaths was probably inaccurate or incomplete. By 1905, the proportion of uncertified deaths had dropped to 2.3 per cent. It fell below 1 per cent in 1922 and was only 0.02 per cent (15 deaths) in 1955.

Quality of information collected

In the earlier years, cause of death information was missing for a significant proportion of all deaths. For example, in 1855, no cause of death was recorded for 5,732 (9.2 per cent) of the 62,004 deaths. Moreover, vague terms were used in many of the other register entries. For example, 5,685 (9.2 per cent) were classified as being due to 'age', and a further 2,068 (3.3 per cent) were classified as being due to 'premature debility'. A study of the early Annual Reports reveals the use of many other imprecise terms.

By the turn of the century, the quality of information showed some improvement. For example, under the different classification used in 1905, the number of deaths classified as being due to 'old age' had fallen to 3,852 (5.2 per cent of the 74,536 deaths registered in that year). Nevertheless, a further 2,609 (3.5 per cent of the total) were classified to other 'ill-defined or not specified' causes. Fifty years later, the position had improved markedly. For the 61,645 deaths in 1955, the comparable figures were 839 (1.4 per cent) and 290 (0.5 per cent), respectively. And for the 55,747 deaths in 2005, the comparable figures were 210 (0.4 per cent) and 115 (0.2 per cent) respectively, with 20 of the 115 ill-defined deaths coded as 'sudden infant death syndrome'.

Definitions and classifications

Over the years, medical and scientific advances and improved diagnoses have meant that doctors can give ever more detailed and accurate information on cause of death. This has inevitably led to the need to review definitions and classifications. Moreover, subtle changes in terminology may also be observed. These facts make comparisons over time increasingly difficult. A simple example demonstrates these points. Only 871 deaths from cancer were recorded in 1855 whereas the total in 2005 was over 15,000. Even allowing for the smaller size and the younger age structure of the Scottish population at that time, the figure for 1855 is almost certainly an under-estimate of the true total. It is thought likely that many cancer deaths were classified to other causes, such as phthisis (consumption).

The first 'International Classification of Causes of Death' (ICD) was developed at the end of the nineteenth century. During the twentieth century, periodic revisions, latterly co-ordinated by the World Health Organisation (WHO), were produced almost every decade. The Second Revision was the first to be used in Scotland, in the Registrar General's Annual Report for 1911, and the later revisions were all adopted in turn. Since 2000, GROS has used the Tenth Revision of what is now called the International Statistical Classification of Diseases and Related Health Problems (ICD10). More details on the coding and classification of the cause of death information collected at death registration may be found in the **Annex** to this Chapter.

CHAPTER 2 – CAUSES OF DEATH

Table 2.1 Selected statistics on deaths and causes of death for 1855, 1905, 1955 and 2005

	1855	1905	1955	2005
Total deaths	62,004	74,536	61,645	55,747
Population ('000s)	2978.1	4592.6	5111.3	5094.8
Crude death rate (deaths per 1,000 pop.)	20.8	16.2	12.1	11.0
Infant deaths				
– number	11,691	15,275	2,811	284
– rate per 1,000 live births	125.2	116.2	30.4	5.2
Deaths of people aged under 5				
– number	22,671	23,952	3,222	344
– as a % of all deaths	36.6	32.1	5.2	0.6
Maternal deaths	493	450	43	4
Deaths of people aged 75 and over				
– number	7,906	9,102	23,453	33,306
– as a % of all deaths	12.8	12.2	38.0	59.7
Uncertified deaths	n/a	1,741	15	0
Old age	5,685	3,852	839	210
Other ill-defined cause or no cause stated	5,732	2,609	290	95
Selected infectious diseases				
Tuberculosis	10,007	9,619	982	49
Whooping cough	1,903	2,243	10	0
Measles	1,180	1,662	20	0
Circulatory disorders	2,006	12,173	32,944	20,060
Cancer	871	4,132	10,585	15,135
Selected respiratory diseases				
Pneumonia	2,094	6,672	1,828	2,483
Bronchitis	3,036	4,821	2,086	98
Influenza	n/a	912	212	11
Accidents and injuries (external causes)	1,913	2,949	2,920	2,212
Transport – road	n/a	315	635	294
Burns/scalds	311	328	144	53
Drowning (incl. suicide/undetermined)	440	552	260	91
Homicides	n/a	26	25	80
Suicides (excl. undetermined)	103 ¹	305	394	547

¹ 1856 data.

TRENDS, 1911 – 2005 BY BROAD GROUPING

Data and methods

Because of the constantly improving range and quality of the information and the changing classifications used to tabulate data on cause of death, consideration of long-term trends is far from straightforward. This is particularly true for the nineteenth century data but it is still difficult for the first half of the twentieth century. However, building on work done by the Office for National Statistics and others (*Griffiths C and Brock A, Twentieth Century Mortality Trends in England and Wales, Health Statistics Quarterly, 18, 2003*) it has been possible to prepare trend data covering the period 1911-2005 for broad groupings of diseases that essentially equate to current ICD Chapters. As would be expected from the evolutionary nature of the ICD classifications, it was not always possible to select exactly equivalent codes, but the groupings chosen are adequate for consideration of broad trends. The precise ICD2 – ICD10 codes included in each grouping are not reproduced here, but they may be obtained by contacting 'Statistics Customer Services' on the GROS website (<http://gro-scotland.gov.uk/contacts/contact-form.html>) or in the ONS article referred to above. The causes of death illustrated in this Chapter accounted for some 50,000 deaths in 2005 – about 90 per cent of all deaths.

The trends are presented as charts of age-standardised rates per 100,000 population showing males and females separately. The information on deaths by age, sex and cause comes from the Annual Reports of the Registrar General and the population denominators are taken from the mid-year population estimates. The latter are based on the decennial censuses of population and take into account any revisions made following subsequent censuses. Finally, the rates have been directly age-standardised using the European Standard Population. This technique removes the effect of changing age and sex distributions in the population by applying the observed age/sex mortality rates to a standard, fixed population structure.

Despite the difficulties of comparison, one theme dominates the earlier years – the reduction in the number of deaths caused by infectious diseases. For this reason, some additional information on the major epidemic diseases is presented. And because diagnosis and reporting of these diseases was relatively straightforward, it has been possible to incorporate data from 1855-1910.

Infectious diseases

Figure 2.1 Infectious diseases – Age standardised mortality rate (per 100,000), 1911-2005

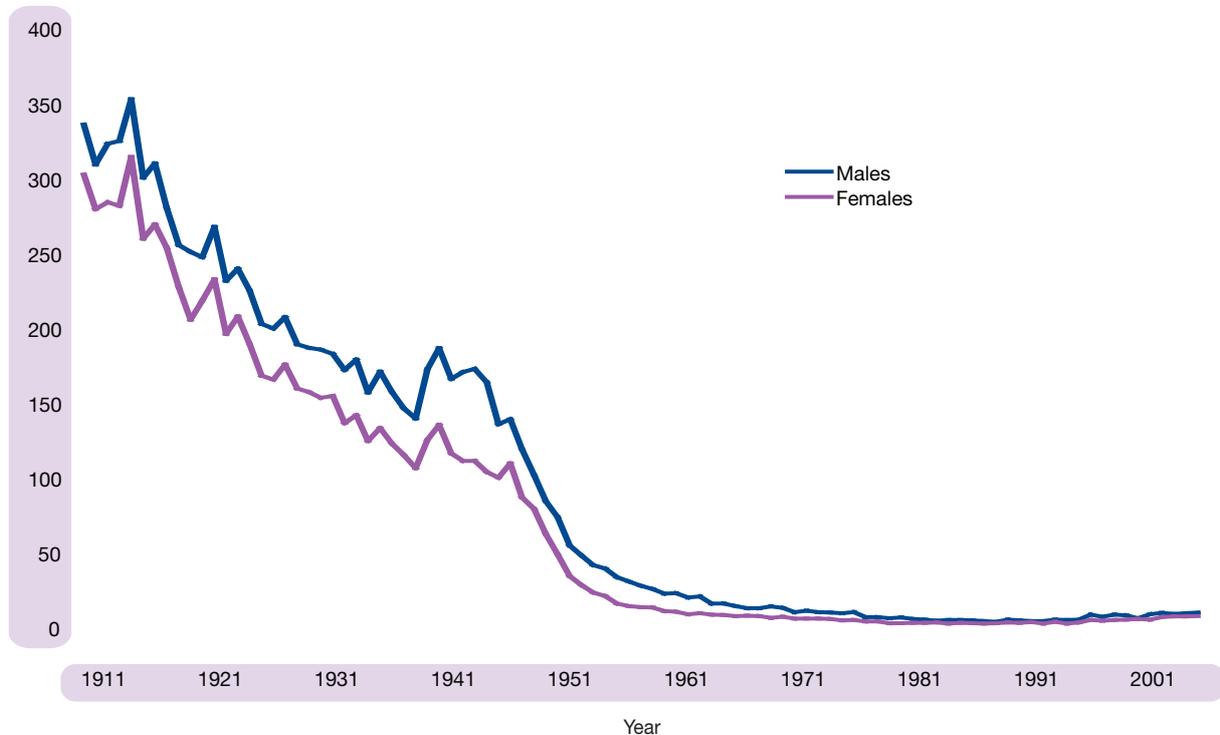
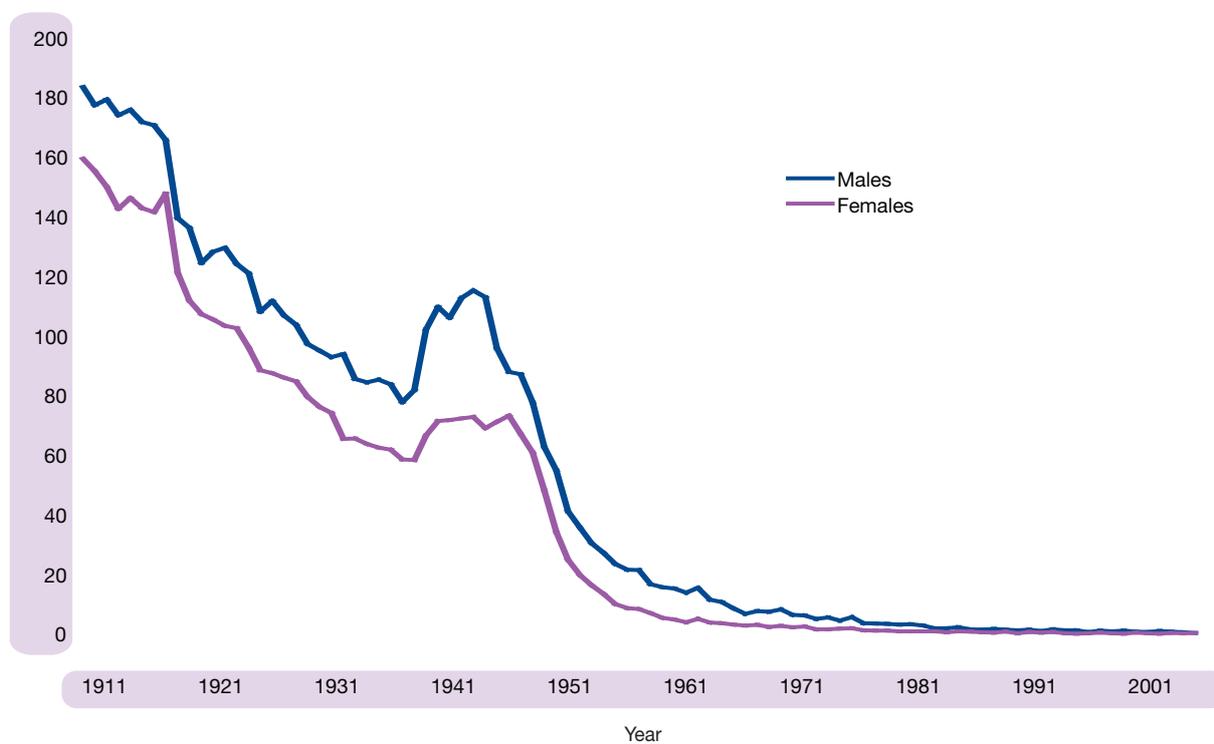


Figure 2.1 clearly shows the dramatic decline in infectious disease mortality that took place in the twentieth century. A substantial component of this disease grouping is tuberculosis, so it is not surprising that the changes for tuberculosis alone (**Figure 2.2**) follow a similar pattern, with a long-term decline briefly interrupted by a temporary increase around the time of the Second World War. The steep fall in the 1950s is associated with the use of the BCG vaccine and more effective antibiotics.

Figure 2.2 Tuberculosis – Age standardised mortality rate (per 100,000), 1911-2005



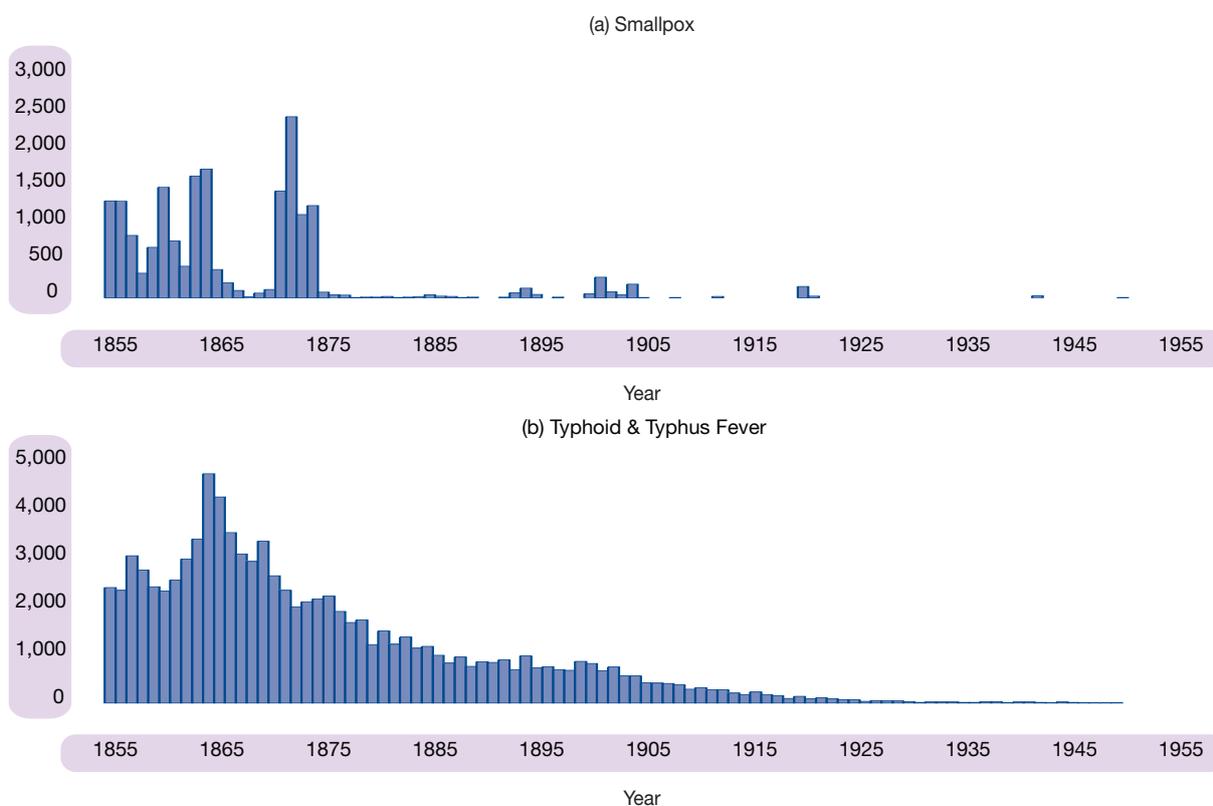
CHAPTER 2 – CAUSES OF DEATH

There were also substantial improvements for other epidemic diseases. These can be seen in **Figure 2.3 (a-f)** which displays the numbers of deaths from selected epidemic diseases over the period 1855-1955. For some diseases (e.g. smallpox) the reductions were brought about by better treatment or vaccination whereas for others (e.g. typhoid and typhus fever) the reductions were related to more general public health measures such as improved sanitation. Several of the charts, notably those for measles and whooping cough, display continued high levels of mortality well into the twentieth century. Indeed it was not until the second half of the twentieth century, and widespread childhood immunisation, that steady low levels were attained.

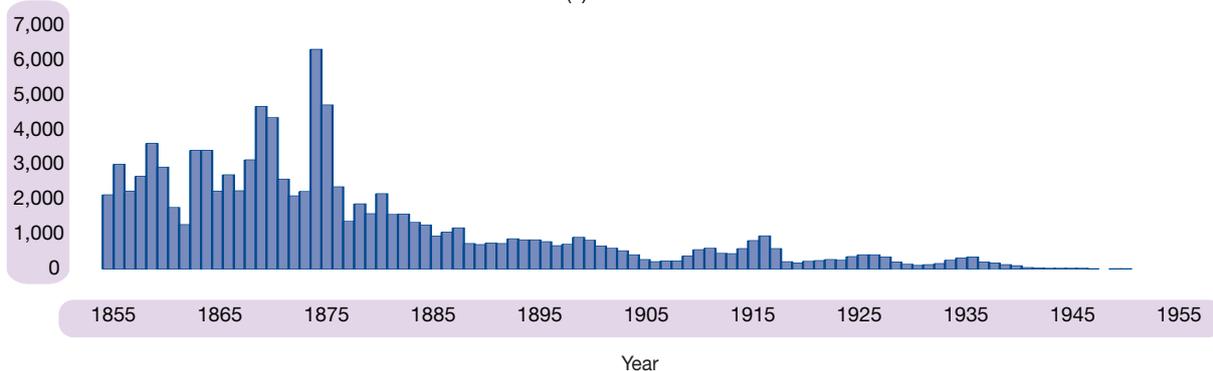
In the earlier years, many of these diseases took a high toll among infants and other young children. In 1905, for example, 96 per cent of deaths from whooping cough and 93 per cent of deaths from measles involved children aged under 5. The substantial falls in the infant mortality rate during the twentieth century are, in large part, due to the eradication of such deaths.

The last 20 years or so have seen a small though significant rise in the number of deaths from infectious disease. Though a small part of this increase will be due to the inclusion of deaths from HIV/AIDS, the main reason for the more recent rise is an increasing number of deaths attributed to bacterial septicaemia. Some of these will have been the result of ‘hospital acquired infections’.

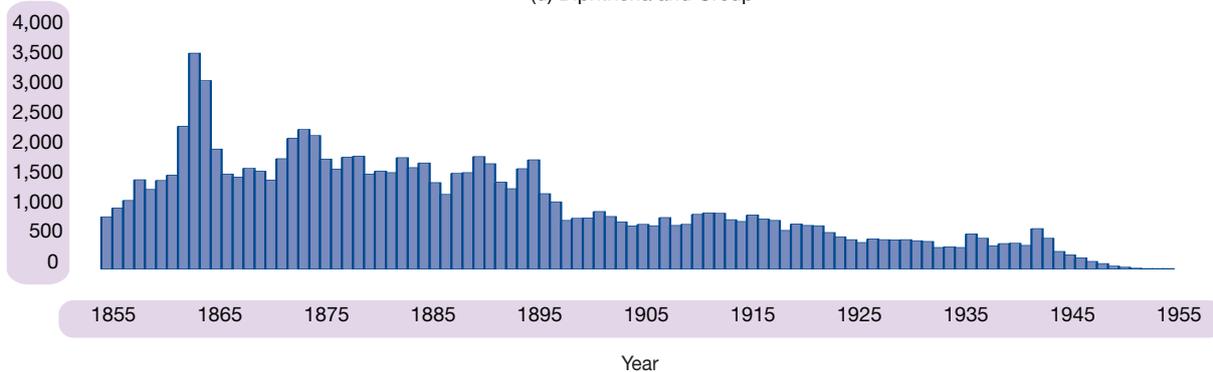
Figure 2.3 a-f: Deaths from selected epidemic diseases, Scotland, 1855-1955



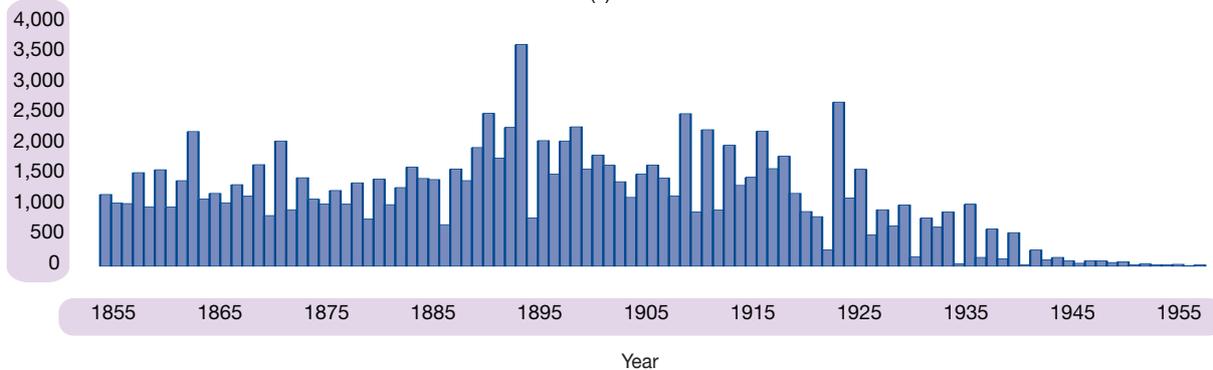
(c) Scarlet Fever



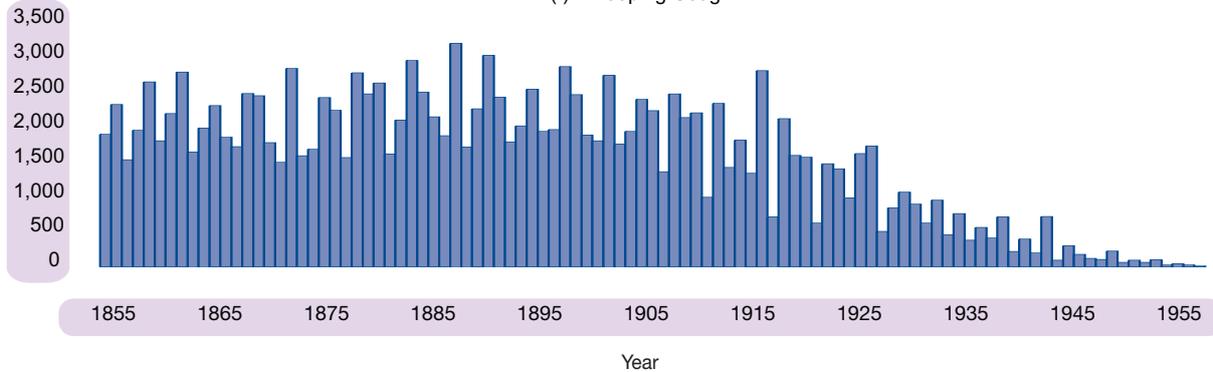
(d) Diphtheria and Croup



(e) Measles

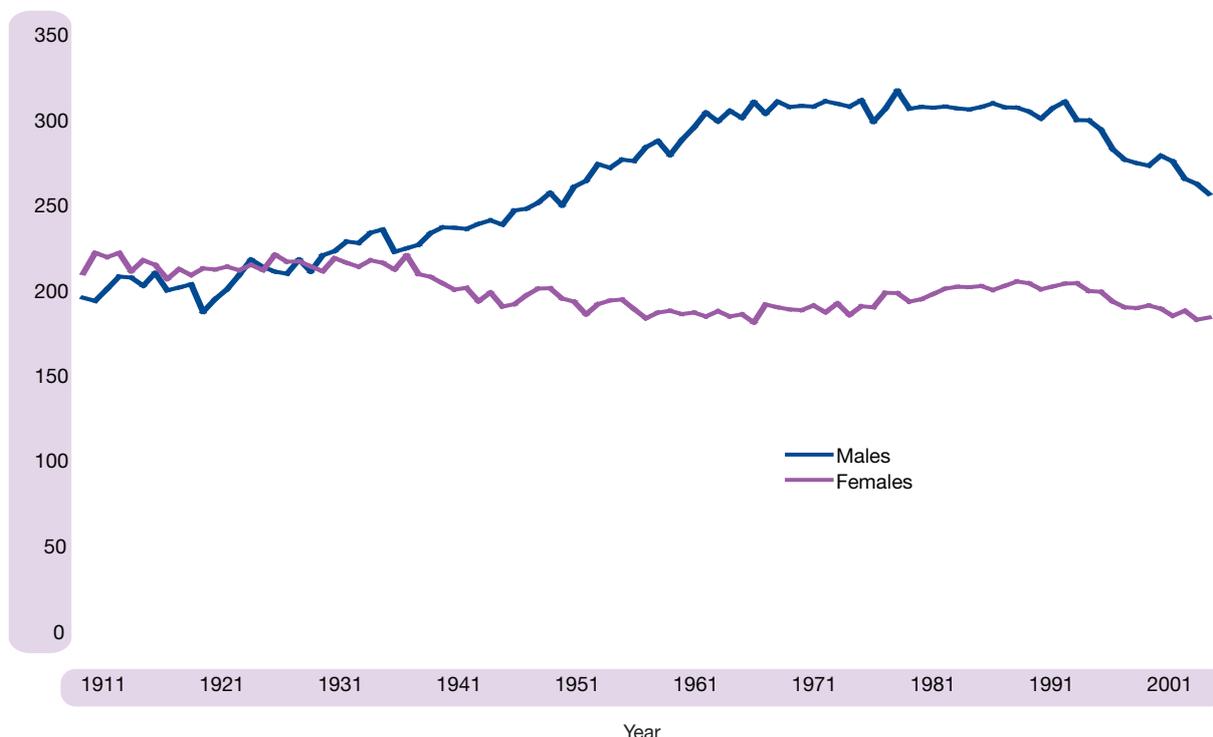


(f) Whooping Cough



Cancer (Neoplasms)

Figure 2.4 Cancer – all types – Age standardised mortality rate (per 100,000), 1911-2005



Though cancer has been recognised as a disease for thousands of years, it is generally accepted that it was under-diagnosed in the nineteenth century and that diagnosis was unreliable until the middle of the twentieth century. **Figure 2.4** shows that the recorded death rates from cancer (all types) were broadly similar for men and women at the start of the twentieth century. However, those for men increased significantly from the 1920s to the 1960s whilst those for women dipped slightly. From the 1960s to the 1990s the rates for men were broadly steady whilst those for women rose slightly. The last decade or so has seen a fall in the rates for both sexes, but particularly for men.

To understand these patterns it is necessary to consider trends for the main types separately. For many types of cancer, individual ICD codes were not introduced until the Fifth Revision (used from 1940); and there was a further rationalisation of key codes in the Sixth Revision (used from 1950). For these reasons, the trends for specific types of cancer presented in **Figures 2.5a** and **2.5b** focus on the period since 1950.

Figure 2.5a Cancers – males – Age standardised mortality rate (per 100,000), 1950-2005

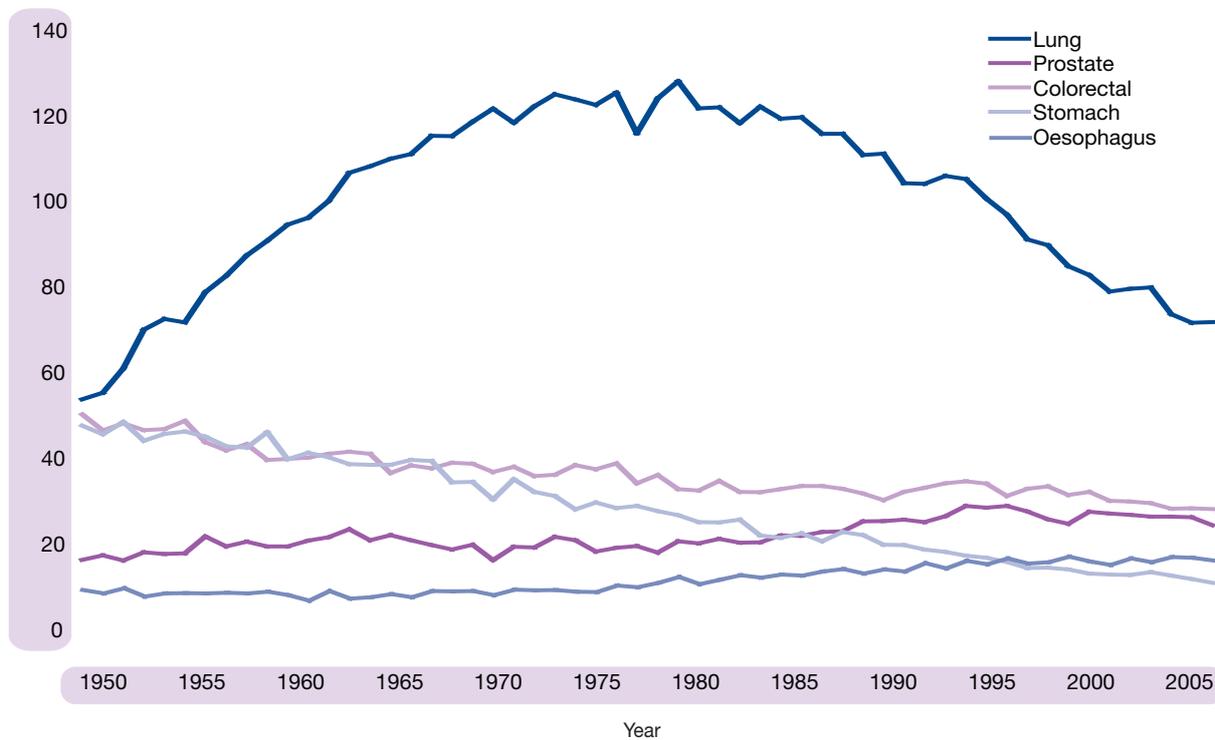
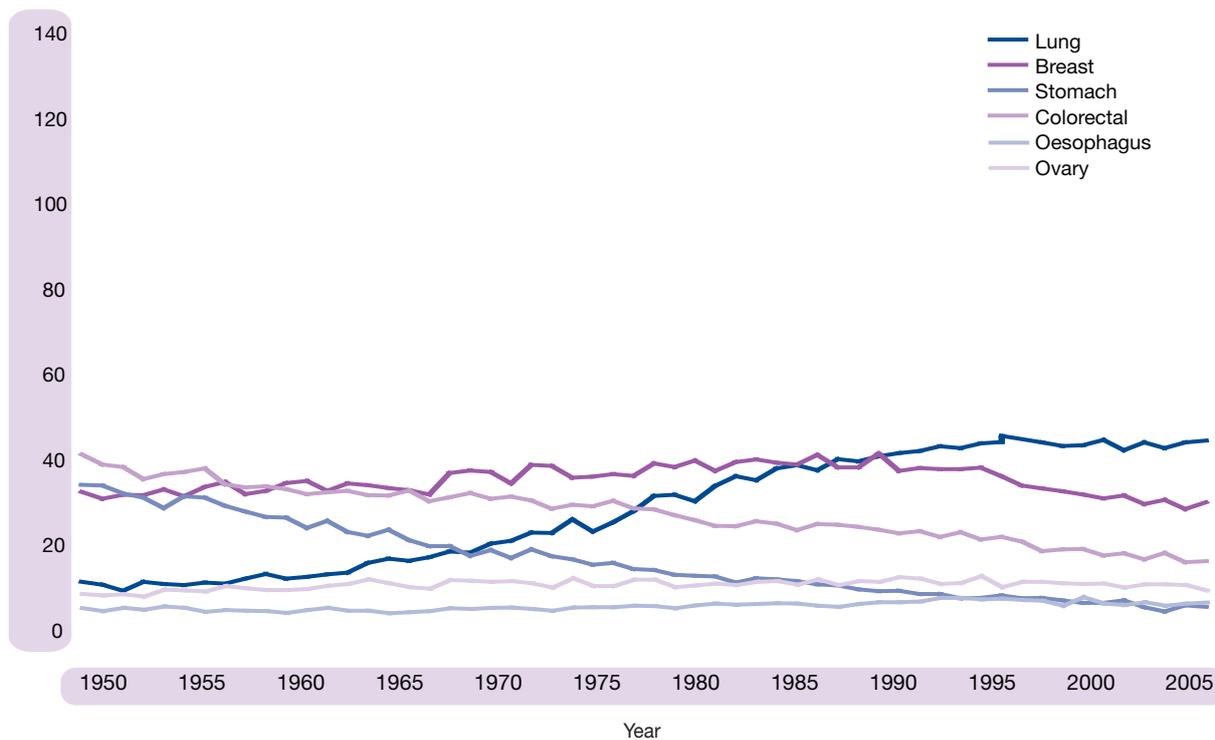


Figure 2.5b Cancers – females – Age standardised mortality rate (per 100,000), 1950-2005



Figures 2.5a and 2.5b show that, for both sexes, mortality from cancer of the trachea, bronchus and lung (collectively referred to as 'lung') is currently dominant. Though lung cancer was a relatively rare disease at the beginning of the twentieth century, it is now the most common cause of cancer death in the world. In Scotland in 2005 it accounted for 2,195 (8.3 per cent) of all male deaths and 1,814 (6.2 per cent) of all female deaths.

Perhaps the most striking feature revealed by the charts is the differing trends in lung cancer rates for men and women over the last 50 years. Whilst that for men rose rapidly to a peak in the 1970s before falling rapidly since, that for women increased more slowly up to the mid-1990s before levelling off at its current level. The links between cigarette smoking and lung cancer are well established and it is believed that these different patterns can be explained by the differing timing of take-up and cessation of smoking by men and women during the twentieth century.

Figures 2.5a and 2.5b show that, for both men and women, the rates for stomach cancer, and to a lesser extent colorectal cancer, have declined steadily over the past fifty years. However, those for oesophageal cancer are increasing, particularly for men. Cancer of the oesophagus is known to be associated with smoking, but a more powerful link with alcohol consumption is believed to be the reason for its recent increase amongst men.

For men, the last fifty years have also seen a steady increase in mortality from prostate cancer, though the majority of the deaths are of men aged 75 and over. For women, the rate for breast cancer, having risen slowly for several decades, was overtaken by that for lung cancer around the mid-1980s and has since shown a gentle decline. **Figure 2.5b** also shows that the rate for ovarian cancer increased slightly between 1950 and 1970 but has remained broadly stable since then.

Diseases of the circulatory system

Figure 2.6 Circulatory diseases – Age standardised mortality rate (per 100,000), 1911-2005

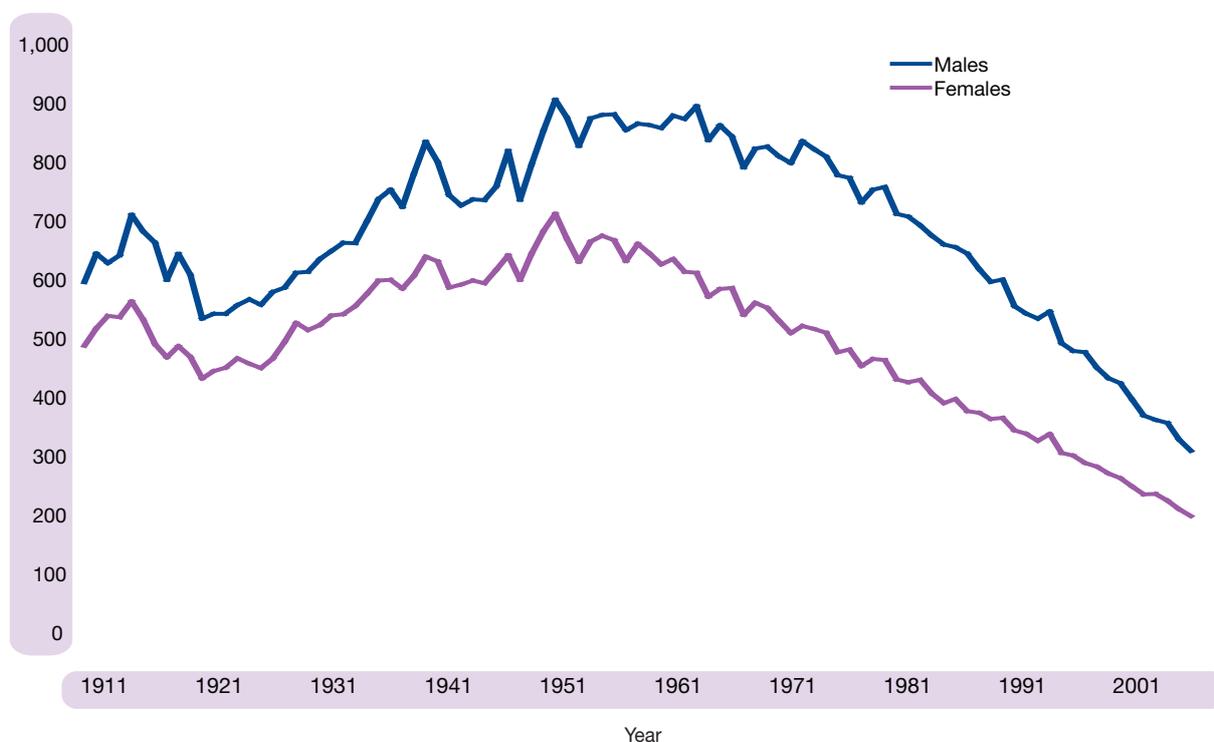


Figure 2.6 shows how, for both sexes, death rates from circulatory diseases first rose and then fell during the twentieth century. Having peaked around the 1950s, the rates for men have fallen steadily for the last forty years. Those for women followed a similar pattern, though the decline in the rates started a few years earlier.

In 2005, diseases of the circulatory system accounted for some 36 per cent of all deaths in Scotland, a significant fall from the period 1950-1985 when they accounted for over 50 per cent of deaths. These high levels are believed to have been partly due to smoking.

Currently, some 80 per cent of the deaths classified to this grouping belong to two specific disease categories – ischaemic (or coronary) heart disease and cerebrovascular disease (or stroke). In 2005 these two categories accounted for 52 per cent and 29 per cent respectively of the relevant ICD Chapter (Diseases of the Circulatory System). **Figures 2.7** and **2.8** display how the mortality rates for ischaemic heart disease and stroke have improved substantially over the last 50 years. Whilst the male rate for stroke is only slightly higher than that for females, it can be seen that a substantial differential still exists for deaths from ischaemic heart disease.

CHAPTER 2 – CAUSES OF DEATH

Figure 2.7 Ischaemic heart disease – Age standardised mortality rate (per 100,000), 1950-2005

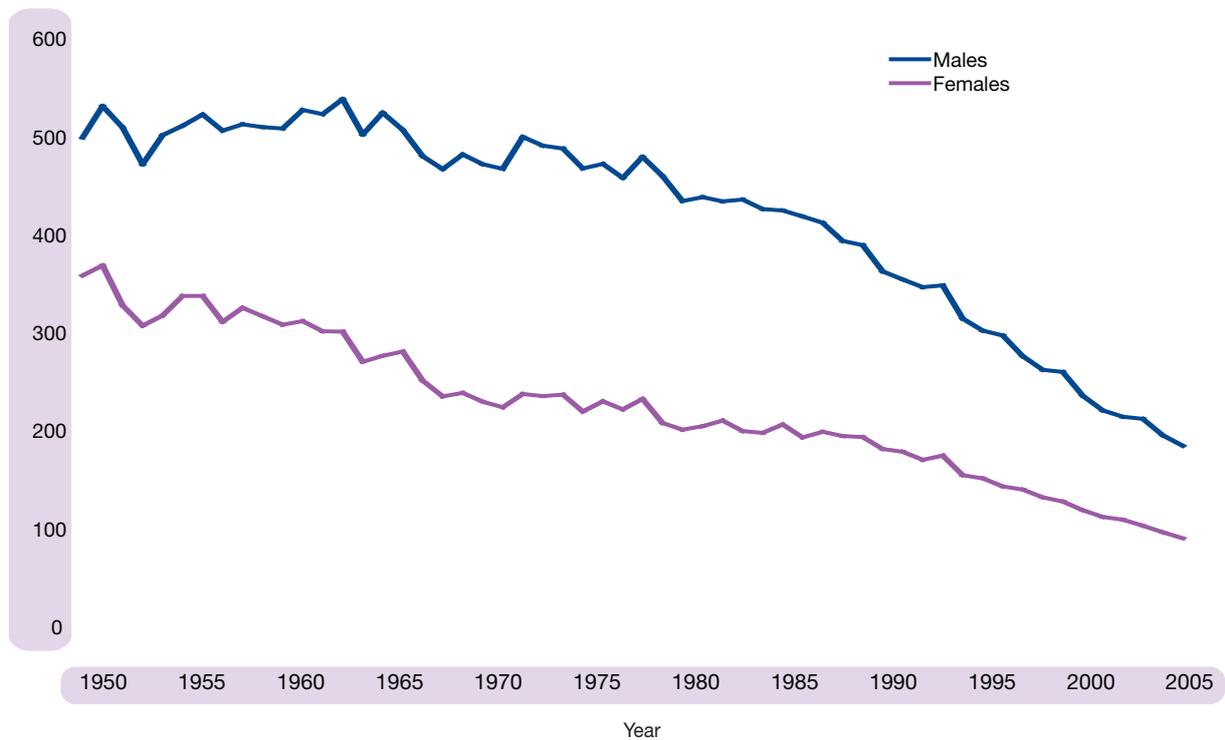
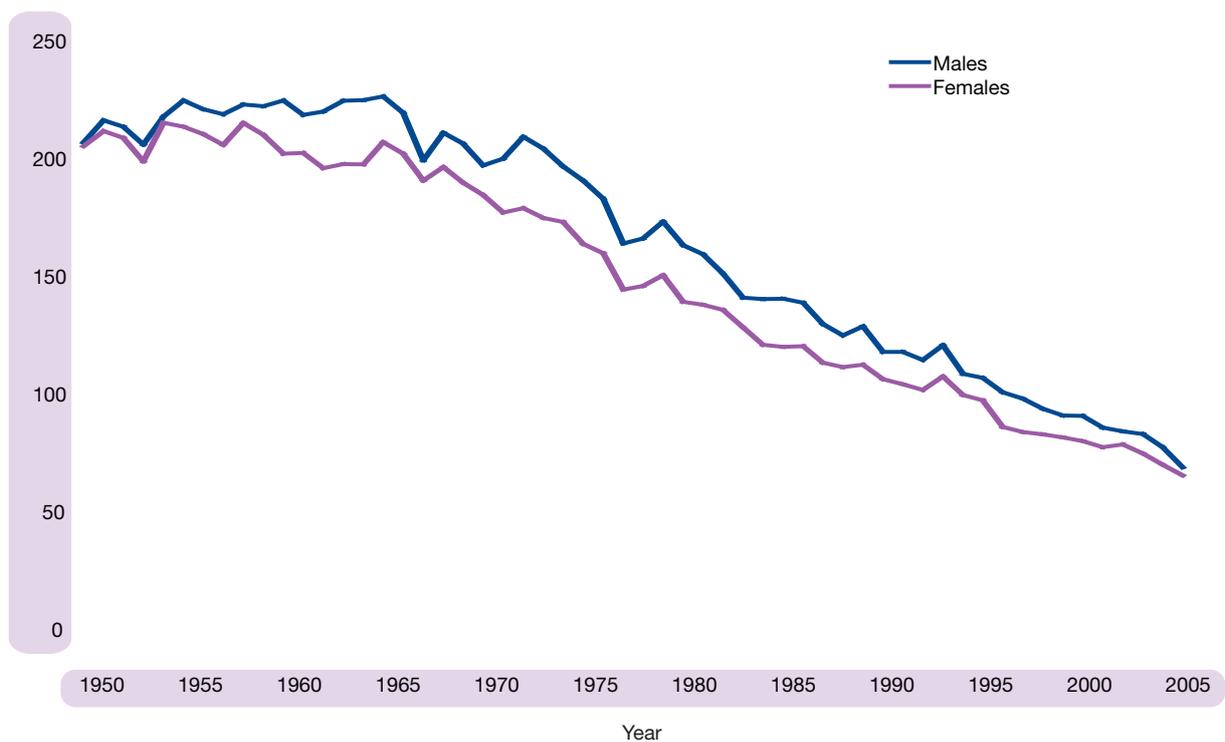


Figure 2.8 Stroke – Age standardised mortality rate (per 100,000), 1950-2005



After cancer (all types), coronary heart disease (CHD) and stroke are now the biggest causes of death in Scotland. In 2005, they accounted for 18.5 per cent and 10.4 per cent of all deaths. However, in recent years, there has been a dramatic fall in the level of premature deaths from these diseases. To ensure that these improvements continued, the Scottish Executive, in the 1999 public health White Paper *Towards a Healthier Scotland*, set targets to halve the death rates between 1995 and 2010 from CHD and stroke in those aged under 75. And in 2004 the target for CHD was increased to a 60 per cent improvement. The improvements between 1995 and 2005 shown in **Figures 2.9a** and **2.9b** suggest that both targets will be met.

Figure 2.9a Ischaemic (coronary) heart disease, age under 75
Standardised death rates per 100,000 population, Scotland, 1995-2005

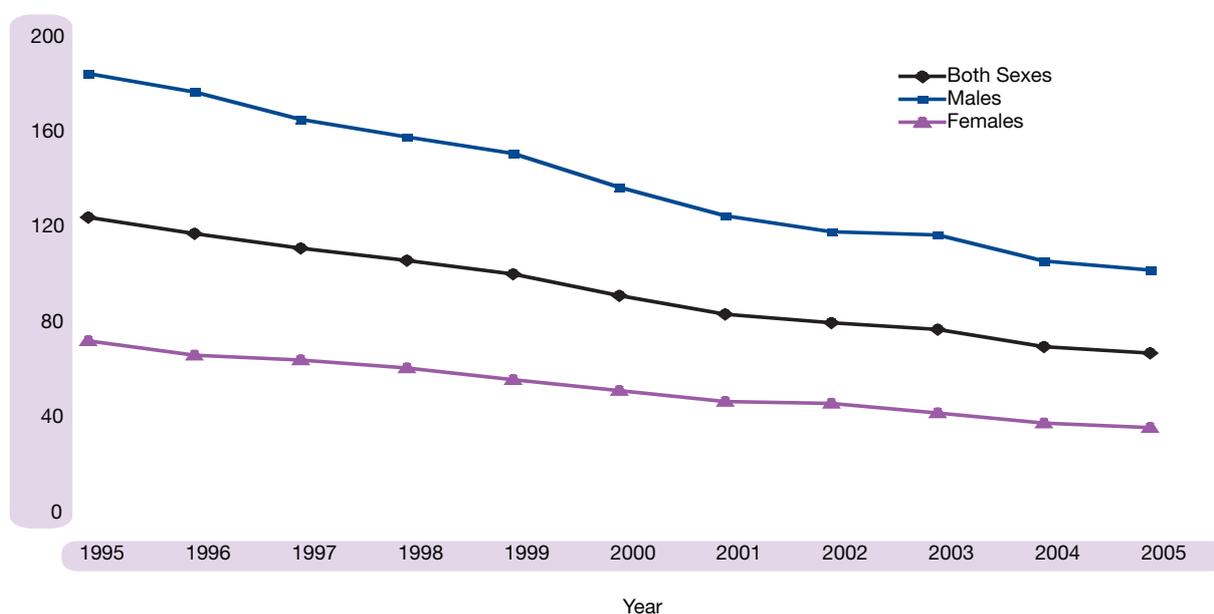
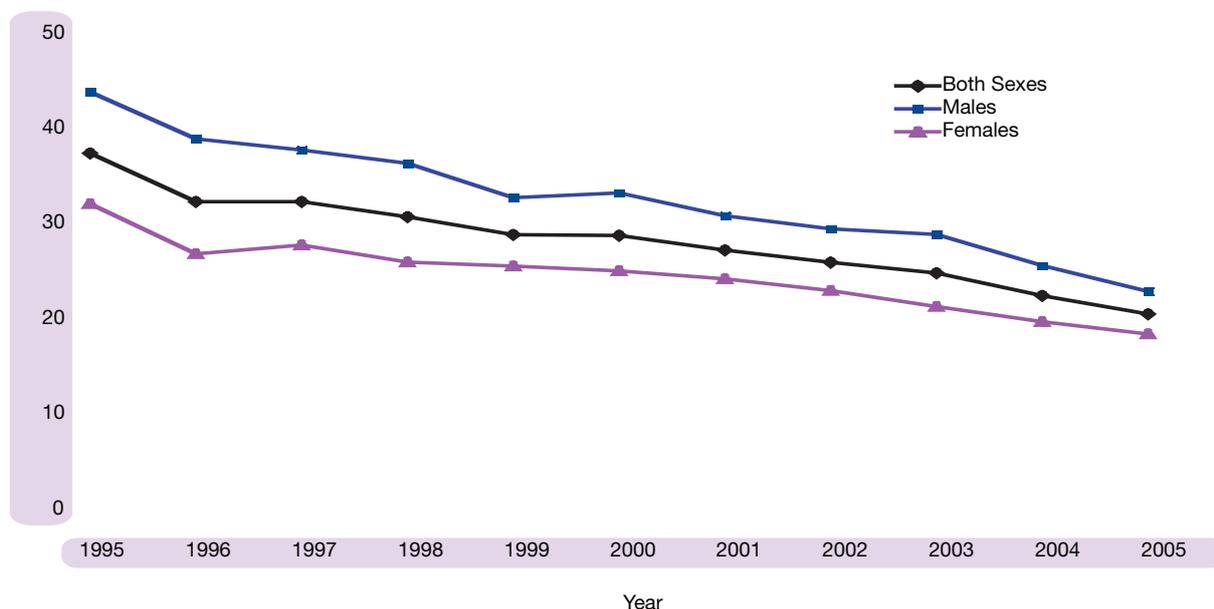
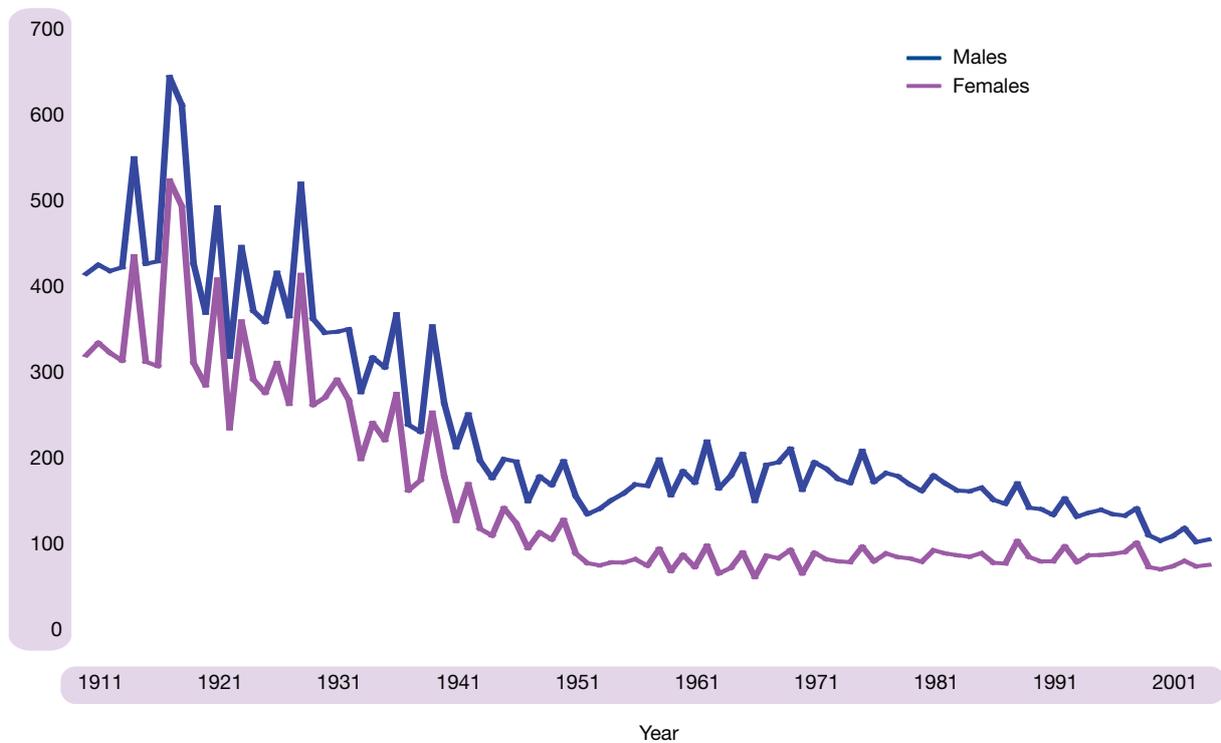


Figure 2.9b Cerebrovascular disease (stroke), age under 75
Standardised death rates per 100,000 population, Scotland, 1995-2005



Diseases of the respiratory system

Figure 2.10 Respiratory diseases – Age standardised mortality rate (per 100,000), 1911-2005



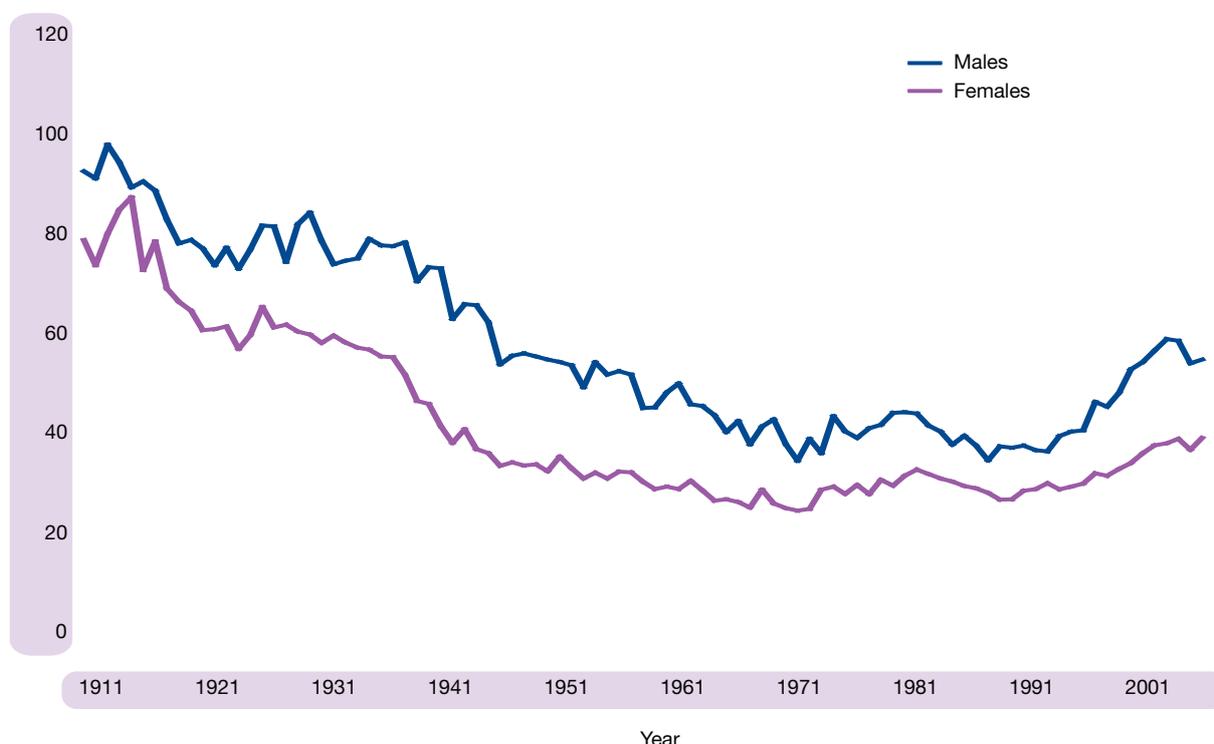
For the first half of the twentieth century, mortality rates from respiratory diseases fell significantly for both sexes, thereafter remaining broadly constant for women but rising slightly for men during the 1950s before falling again by the end of the century. This rise in the male rates is thought to be mainly due to smoking related diseases, such as bronchitis and emphysema, and occupational diseases, such as pneumoconiosis. A minor fall in the rates for both sexes from 2000 is associated with a change in the coding rules that were implemented when ICD10 was introduced. (Further information on this aspect may be found in Appendix 2 of the Registrar General's Annual Report for 2000.)

A particular feature of **Figure 2.10** is the significant year-to-year fluctuation seen within the overall trend. This generally reflects the different levels of influenza activity in different years, with high levels leading to a marked increase in deaths from various respiratory diseases. The most striking example of this was the influenza epidemic of 1918-19. It has been estimated that between 20 and 50 million people died worldwide as a result of the 'Spanish 'flu' pandemic. Scotland did not escape its share of this toll. The Registrar General's Annual Report for 1919 contained a special supplement entitled 'The mortality in Scotland resulting from the influenza epidemic of 1918-19'. Some of the key points to emerge were:

- a) Over the 10-month period July 1918 – April 1919, 17,575 deaths were recorded as due to influenza, either solely (2,876) or in conjunction with some other named cause (14,699).
- b) Of those where another cause was recorded, 11,236 mentioned pneumonia and 1,249 mentioned bronchitis.
- c) Taking account of increases in other causes with no mention of influenza, it was estimated that the true total of deaths caused by the epidemic was probably around 22,000, though it may have been even higher.
- d) Unusually, 50 per cent of the deaths involved people aged 15-44 (it was more usual for influenza epidemics to increase mortality among the elderly and, to some extent, the very young).
- e) The mortality exceeded that of any previous epidemic of any infectious disease (the next highest total being for a scarlet fever epidemic in 1874-75 which claimed some 11,000 lives).

Diseases of the digestive system

Figure 2.11 Digestive diseases – Age standardised mortality rate (per 100,000), 1911-2005



The main categories covered by this broad grouping (Figure 2.11) are liver disease, ulcers, and intestinal diseases. Until the last thirty years or so, mortality rates from these diseases showed a steady decline. Having levelled off during the 1970s and 1980s, there have recently been significant rises for both sexes, particularly men. These recent increases are essentially due to increasing mortality from cirrhosis of the liver, related to excessive alcohol consumption.

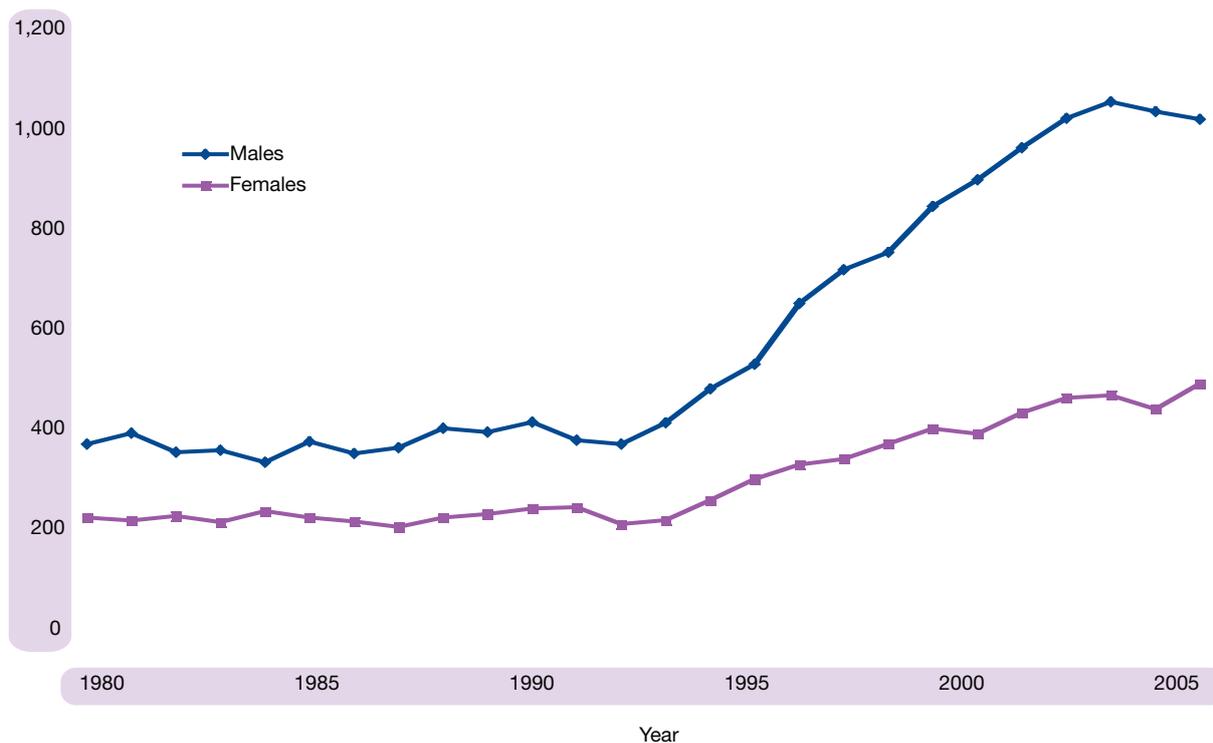
Alcohol-related deaths

As well as alcoholic liver disease, there are numerous causes of death that are considered to be 'alcohol-related'. The main additional category is 'mental and behavioural disorders due to use of alcohol'. There are several other causes that are specifically alcohol related (e.g. alcoholic pancreatitis) as well as some (e.g. oesophageal cancer) where alcohol consumption is only responsible for a proportion of deaths. Following wide consultation, the Office for National Statistics (ONS) recently proposed a new selection of diseases to be used for high-level public health monitoring of alcohol-related deaths (see **Appendix 2**, Notes and Definitions).

Figure 2.12 shows the number of deaths in Scotland since 1980 using this new definition. The trends for both sexes were relatively stable during the 1980s, but there have been significant increases, particularly for men, since the early 1990s. Further analysis of the data shows that deaths have generally been rising in all age groups, with the largest increases being among those aged 45-59.

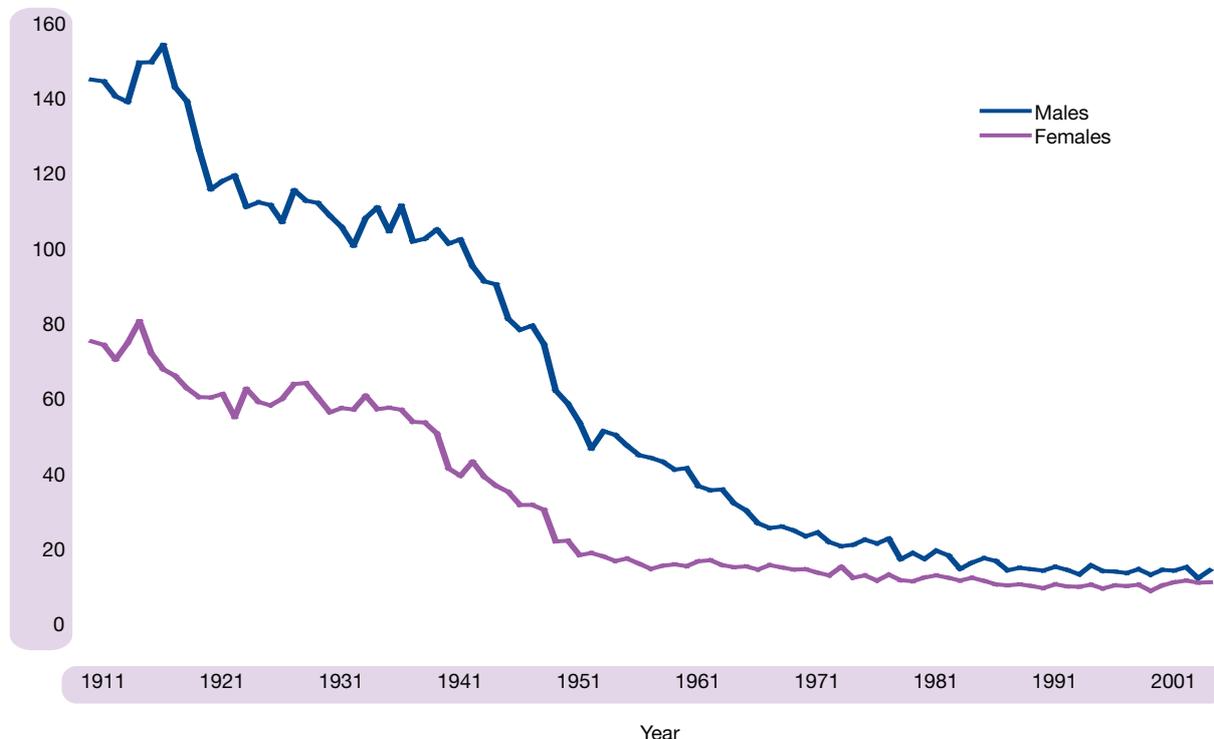
The reasons underlying these changes are not fully understood, but changing social attitudes, increased affluence and relative price levels, and licensing changes are all thought to have contributed to increased alcohol consumption.

Figure 2.12 Deaths from alcohol-related diseases, Scotland, 1980-2005



Diseases of the genitourinary system

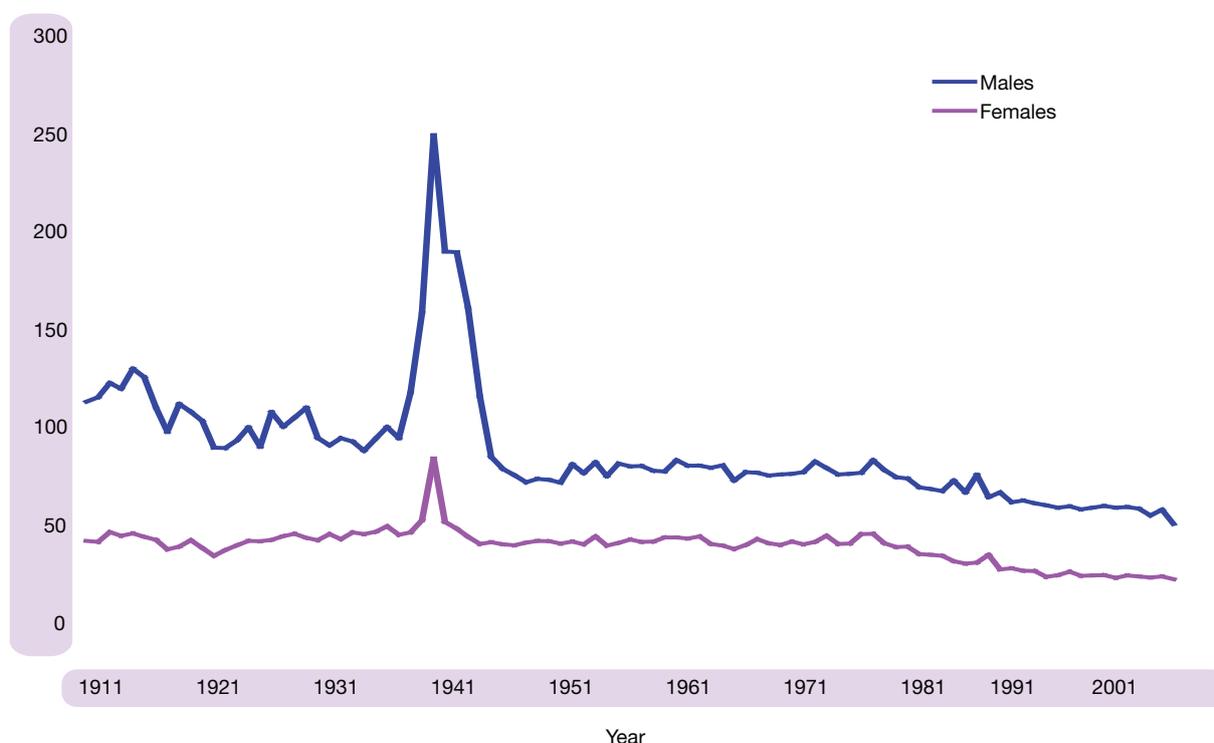
Figure 2.13 Genitourinary diseases – Age standardised mortality rate (per 100,000), 1911-2005



The main category associated with this grouping is renal failure. **Figure 2.13** reveals a significant fall over the twentieth century, particularly for men, with a significant narrowing of male/female differential. Since 1911 the proportion of deaths allocated to this grouping has fallen from 4 per cent to under 2 per cent. This is mainly due to fewer deaths from kidney infection and nephritis.

Injury and poisoning (external causes of mortality)

Figure 2.14 Injury and poisoning – Age standardised mortality rate (per 100,000), 1911-2005



As well as accidents, this Chapter (External Causes of Mortality) includes suicides and homicides (and, more recently, deaths where the intent could not be determined). **Figure 2.14** shows that, apart from the period of the Second World War, there has been a slow but steady decline in the standardised death rates from injury and poisoning mentioned in this Chapter. With the exception of the war years, this grouping has generally accounted for between 4 and 5 per cent of all deaths.

As with all other groupings, only deaths occurring in Scotland were included in these analyses. The increase in the rates during the Second World War reflects a combination of factors including deaths amongst returning wounded, deaths associated with air raids and military activities in Scotland, and a significant increase in road accident deaths (particularly those involving pedestrians) caused by the imposition of blackout regulations.

Road traffic accidents have always been an important part of this grouping, though recently they have declined substantially. In fact, despite increased vehicle ownership and use of cars, they are at a historically low level. In 2005 they numbered 294, less than half the number 50 years ago and slightly less than the 315 deaths from horse or vehicle accidents recorded in 1905.

Other changes over the last hundred years or so include significant decreases in the number of drownings and also deaths from scalds and burns. However, there have been increases in deaths from accidental falls (mainly among the elderly), and from suicides and homicides. It should be emphasised that definitional and reporting issues make long-term comparisons difficult for all three of these categories.

Suicides

The Registrar General's Annual Report for 1856 was the first to report a figure for suicides. The total given was 103, though it was recognised that this was almost certainly an under-estimate of the true figure. Since then the recorded totals have increased substantially, to 305 in 1905, 394 in 1955 and 547 in 2005 (see **Table 2.1**). Throughout, conclusive proof was required for a death to be classified as a suicide.

The Eighth Revision of the ICD, introduced in Scotland in 1968, included a new category of 'Injury undetermined whether accidentally or purposely inflicted'. As it is believed that the overwhelming majority of deaths classified to this category are probable suicides it is now conventional to include these 'undetermined' deaths when considering data on suicides. Before 1968, most such deaths would have been classified as accidents.

Figure 2.15 Suicides and undetermined deaths, Scotland, 1980-2005

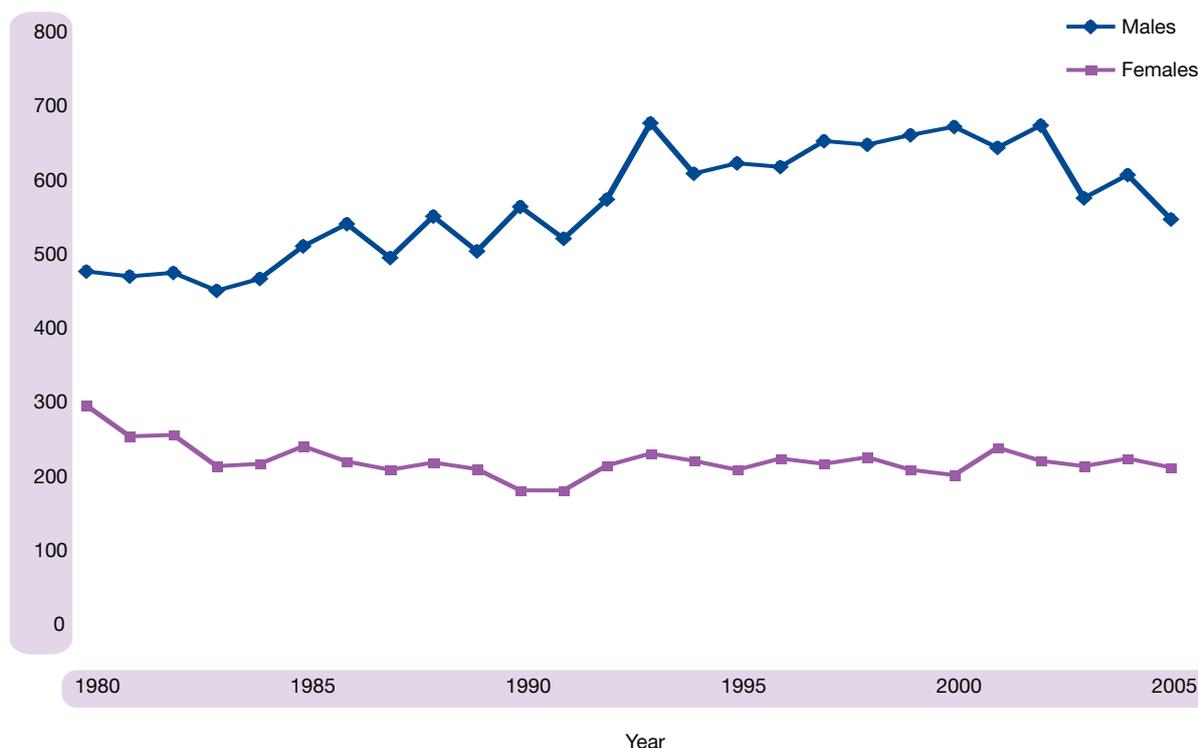


Figure 2.15 shows the number of deaths from the combined categories since 1980. Following a modest initial decline, the number of suicides among women has remained relatively constant at just over 200 a year. However, the totals for men rose to a peak of almost 700 in 1993, and remained over 600 until 2002. Since then, there has been a sharp fall to around 550 in 2005. Of particular concern has been the fact that for men, the highest rates have been amongst those aged 15-44.

In December 2002, the Scottish Executive launched 'Choose Life', a national strategy and action plan to prevent suicide in Scotland. Further information about Choose Life and more detailed statistical analyses may be found on the Choose Life website (www.chooselife.net).

Other ICD Chapters not shown in graphs

Because of problematic coding and classification issues, or the small numbers of deaths involved, a number of the current ICD Chapters have been omitted from the more detailed presentations in this Chapter. Some brief comments on the larger of these other ICD Chapters are given below.

Mental and behavioural disorders: there were 2,454 deaths in this grouping in 2005, 4.4 per cent of all deaths. The bulk of the deaths fall into three categories – dementia (1,835), alcohol dependence (343) and drug dependence (217). All three are particularly difficult to compare over time. Some comments about recent trends in alcohol-related diseases were included in an earlier section of this Chapter, following the comments on diseases of the digestive system. More information about drug-related deaths may be found in the annual papers prepared by GROS on this subject (<http://www.gro-scotland.gov.uk/statistics/library/drug-related-deaths/index.html>).

Diseases of the nervous system: this Chapter accounted for 1,300 (or 2.3 per cent) of the deaths in 2005. Alzheimer's disease (415 deaths) and Parkinson's disease (250 deaths) were the two largest categories. Once again, because of changing certification practices and classifications, the analysis of long-term trends for these conditions is problematic.

Endocrine, nutritional and metabolic diseases: this group accounted for 988 (1.8 per cent) of the deaths in 2005. Approximately three-quarters of these deaths were caused by diabetes.

The remaining Chapters all had less than 1 per cent of the deaths in 2005. In fact, some had very small numbers, for example the 4 deaths classified to 'Pregnancy, childbirth and the puerperium'. This contrasts with the 43 maternal deaths recorded in 1955 and the 450 recorded in 1905 (see **Table 2.1**).

Note on availability of further data:

This short Chapter could only present a limited overview of the cause of death information available from GROS. As well as the published annual reports, GROS has a detailed mortality database covering the period from 1974 onwards. This database can be used to provide analyses by a wide range of demographic variables and geographical breakdowns. Additionally, GROS is building up a set of electronic tabulations covering earlier mortality data. Initially these will cover the period 1900-1973, though it is planned to add information covering the nineteenth century in due course. Most of this older information will cover the whole of Scotland, with no geographical breakdowns. Further information on data availability may be found on our website (<http://www.gro-scotland.gov.uk>) or by contacting Statistics Customer Services (<http://www.gro-scotland.gov.uk/contacts/contact-form.html>).

ANNEX: CODING AND CLASSIFYING CAUSE OF DEATH IN SCOTLAND

International Classifications

The first 'International Classification of Causes of Death' was developed at the end of the nineteenth century. During the twentieth century, periodic revisions, latterly co-ordinated by the World Health Organisation (WHO), were produced almost every decade. These revisions were required to stay abreast of medical advances, both in terms of disease identification and aetiology, and changes in medical terminology. The latest classification, the Tenth Revision, was developed by WHO together with nine international collaborating centres for the classification of diseases. Its use enhances international comparability in the collection, classification, analysis and presentation of mortality and morbidity statistics.

The full title of the classification changed a number of times over the years, the Tenth Revision being renamed as the 'International Statistical Classification of Diseases and Related Health Problems'. However, it is universally known as the 'ICD' with the latest revision being known as ICD10.

History of use in Scotland

The Second Revision was the first to be used in Scotland, in the Registrar General's Annual Report for 1911. The revisions used since then are summarised in the table below. This shows that the Ninth Revision was used for a rather longer period, 1979-1999, than any of the earlier revisions. WHO plans that ICD10 will remain current for some years to come and has established procedures for the agreement of minor updates.

Use of International Classification of Diseases in Scotland:

1911-1920	2nd Revision
1921-1930	3rd Revision
1931-1940	4th Revision
1941-1949	5th Revision
1950-1957	6th Revision
1958-1967	7th Revision
1968-1978	8th Revision
1979-1999	9th Revision
2000-	10th Revision

Selecting the underlying cause of death

Traditionally, tabulations of mortality statistics have presented information based on a single cause for each death and the early international classifications were devised to categorise the single cause normally reported on death certificates. However, as doctors began to report more than one condition on certificates, it became necessary to develop rules to select a principal or 'underlying' cause. The underlying cause is defined by the ICD as:

- (a) *the disease or injury which initiated the train of morbid events leading directly to death, or*
- (b) *the circumstances of the accident or violence which produced the fatal injury.*

For over fifty years WHO has recommended a specific format for collecting information on cause of death. The key part of the current Scottish medical certificate of cause of death (Form 11) is shown below. This conforms to the latest format recommended by WHO in that it includes a fourth line in Part I where the sequence of causes directly leading to death is listed. In a correctly completed certificate, the underlying cause should appear on the last completed line of Part I. In Part II, the doctor may record other conditions that contributed to the death, but did not directly cause it.

Extract from the Scottish medical certificate of cause of death (Form 11)

Cause of death		Approximate interval between onset and death				
		Years	Months	Days		
I hereby certify that to the best of my knowledge and belief, the cause of death was as stated below:						
I	Disease or condition directly leading to death*	(a).....	due to (or as a consequence of)	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Antecedent causes	(b).....	due to (or as a consequence of)	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Morbid conditions, if any, giving rise to the above cause, stating the underlying condition last	(c).....	due to (or as a consequence of)	<input type="text"/>	<input type="text"/>	<input type="text"/>
		(d).....	due to (or as a consequence of)	<input type="text"/>	<input type="text"/>	<input type="text"/>
II	Other significant conditions contributing to the death, but not related to the disease or condition causing it		<input type="text"/>	<input type="text"/>	<input type="text"/>
* This does not mean mode of dying, such as heart or respiratory failure; it means the disease, injury or complication that caused death.						

The information originally recorded on the medical certificate of cause of death may be amended or enhanced in two key ways. First, GROS may receive additional information on the cause of death from procurators fiscal, who are responsible for conducting investigations into selected types of death. Second, GROS may contact the certifying doctor to obtain clarification of the stated causes.

If the certificate has not been completed properly, for example if the reported sequence of causes is illogical, it is necessary to have rules that, whenever possible, ensure the selection of an appropriate underlying cause of death. These selection rules are an integral part of the ICD. There are also a number of modification rules which apply to particular conditions, combinations or circumstances even when the certificate has been completed properly. For example two or more mentioned conditions may be linked to derive a composite underlying cause, or a trivial condition unlikely to cause death may be rejected in favour of a more serious condition.

Changes to the selection and modification rules can have significant effects on the underlying causes chosen. Indeed, changes to the selection rules may have as great an effect as changes to the classification itself.

Automated coding

Over 30 years ago, the National Center for Health Statistics (NCHS) in the United States began to develop software that would assign ICD codes to the causes reported on death certificates and consistently apply the rules for choosing the underlying cause. The aim of automated coding is the correct and consistent application of the complex coding rules set out in the ICD. The system uses a set of detailed decision tables developed by coding, classification and medical experts.

The suite of programs developed by NCHS is now used by an increasing number of countries around the world including Scotland, where it was introduced (for ICD9 coding) in 1996. A short report on the introduction of automated coding appeared in Appendix 2 of the Registrar General's 1996 Annual Report. An ICD10 version of the software has been used since 2000.

The introduction of automated coding was another step in the direction of greater accuracy, consistency and international comparability. However, though automated coding works well, trained staff are still required to check and edit the input data and to resolve uncertainties and ambiguities.

APPENDIX 1 – SUMMARY TABLES

Table 1 Population and vital events, Scotland, 1855 to 2005

Year	Estimated population ('000s)	Live births ¹		Stillbirths ²		Infant deaths		Deaths		Marriages	Divorces
		Number	Rate ³	Number	Rate ⁴	Number	Rate ⁵	Number	Rate ³		
1855-60	3,018.4	102,462	34.1	...	...	12,250	119.6	62,644	20.8	20,645	19
1861-65	3,127.1	109,764	35.1	...	...	13,166	119.9	69,265	22.1	22,013	14
1866-70	3,275.6	114,394	34.9	...	...	13,971	122.1	71,974	22.0	22,832	9
1871-75	3,441.4	120,376	35.0	...	...	15,314	127.2	77,988	22.7	25,754	24
1876-80	3,628.7	126,086	34.8	...	...	14,921	118.3	74,801	20.6	24,956	54
1881-85	3,799.2	126,409	33.3	...	...	14,864	117.6	74,396	19.6	26,176	74
1886-90	3,943.9	123,977	31.4	...	...	14,943	120.5	74,320	18.8	25,702	94
1891-95	4,122.5	125,800	30.5	...	...	15,895	126.4	78,350	19.0	27,962	115
1896-1900	4,345.1	130,209	30.0	...	...	16,857	129.5	78,021	17.9	31,771	146
1901-05	4,535.7	132,399	29.2	...	...	15,881	119.9	77,313	17.1	31,838	181
1906-10	4,679.9	128,987	27.6	...	...	14,501	112.4	75,534	16.1	31,811	195
1911-15	4,748.3	120,654	25.4	...	...	13,604	112.8	74,466	15.7	33,857	264
1916-20	4,823.8	109,750	22.8	...	...	10,869	99.0	72,365	15.0	37,437	531
1921-25	4,879.6	112,245	23.0	...	...	10,299	91.8	67,652	13.9	34,720	427
1926-30	4,845.1	96,674	20.0	...	...	8,260	85.4	66,017	13.6	32,605	478
1931-35	4,905.1	89,306	18.2	...	...	7,212	80.8	64,839	13.2	34,986	507
1936-40	4,956.8	87,734	17.6	...	...	6,650	75.8	67,166	13.5	42,941	750
1941-45	4,711.9	91,593	19.4	3,393	35.7	6,202	67.7	66,302	13.8	43,772	1,413
1946-50	5,054.3	101,222	20.0	3,047	29.2	4,789	47.3	63,854	12.6	43,206	2,435
1951-55	5,103.6	91,366	17.9	2,390	25.5	3,009	32.9	61,838	12.1	41,718	2,274
1956-60	5,145.2	98,663	19.2	2,307	22.9	2,755	27.9	61,965	12.0	41,671	1,792
1961-65	5,201.0	102,642	19.7	2,000	19.1	2,568	25.0	63,309	12.2	40,235	2,253
1966-70	5,204.3	93,033	17.9	1,415	15.0	1,970	21.2	62,797	12.1	42,832	4,056
1971-75	5,234.7	75,541	14.4	939	12.3	1,421	18.8	63,808	12.2	41,404	6,604
1976-80	5,213.9	65,758	12.6	529	8.0	900	13.7	64,343	12.3	37,801	9,068
1981-85 ⁶	5,151.9	66,422	12.9	389	5.8	695	10.5	63,723	12.4	35,756	11,941
1986-90 ⁶	5,089.5	65,544	12.9	350	5.3	550	8.4	62,796	12.3	35,440	12,067
1991-95 ⁶	5,093.5	63,571	12.5	382	6.0	418	6.6	61,171	12.0	32,866	12,548
1996-2000 ⁶	5,077.5	56,856	11.2	327	5.7	316	5.6	59,478	11.7	29,965	11,984
2001	5,064.2	52,527	10.4	301	5.7	290	5.5	57,382	11.3	29,621	10,631
2002	5,054.8	51,270	10.1	278	5.4	270	5.3	58,103	11.5	29,826	10,826
2003	5,057.4	52,432	10.4	296	5.6	265	5.1	58,472	11.6	30,757	10,928
2004	5,078.4	53,957	10.6	317	5.8	266	4.9	56,187	11.1	32,154	11,227
2005	5,094.8	54,386	10.7	292	5.3	284	5.2	55,747	10.9	30,881	10,940

1 Live births only, prior to 1939.

2 See Notes and Definitions.

3 Rate per 1,000 population.

4 Rate per 1,000 live and still births.

5 Rate per 1,000 live births.

6 Population and corresponding rates for 1982-2000 are based on revised population estimates for 1982-2000 which were revised to take account of the final Census-based population estimates for 2001.

Table 2 Estimated population, births, stillbirths, deaths and marriages, numbers and rates, by council area, Scotland, 2005

Area	Estimated population at 30 June	Live births			Stillbirths ²		Infant deaths		Deaths			Marriages
		Number	Rate ¹	Standardised Rate	Number	Rate ²	Number	Rate ³	Number	Rate ¹	Standardised Rate	
SCOTLAND	5,094,800	54,386	10.7	10.7	292	5.3	284	5.2	55,747	10.9	10.9	30,881
Council areas												
Aberdeen City	202,370	2,061	10.2	9.3	9	4.3	11	5.3	2,121	10.5	10.6	902
Aberdeenshire	235,440	2,465	10.5	12.0	11	4.4	6	2.4	2,048	8.7	8.9	1,145
Angus	109,170	1,095	10.0	11.9	5	4.5	6	5.5	1,351	12.4	10.7	380
Argyll & Bute	90,870	773	8.5	11.5	3	3.9	2	2.6	1,080	11.9	9.9	883
Clackmannanshire	48,630	528	10.9	11.4	6	11.2	7	13.3	543	11.2	12.1	176
Dumfries & Galloway	148,340	1,407	9.5	12.0	7	5.0	5	3.6	1,847	12.5	10.2	5,994
Dundee City	142,170	1,545	10.9	10.2	7	4.5	10	6.5	1,745	12.3	11.3	622
East Ayrshire	119,400	1,258	10.5	11.2	6	4.7	12	9.5	1,465	12.3	12.4	371
East Dunbartonshire	105,960	930	8.8	10.7	5	5.3	3	3.2	942	8.9	8.7	327
East Lothian	91,800	1,054	11.5	13.5	3	2.8	6	5.7	1,013	11.0	10.1	407
East Renfrewshire	89,600	898	10.0	12.0	6	6.6	5	5.6	814	9.1	8.9	427
Edinburgh, City of	457,830	4,691	10.2	7.9	28	5.9	20	4.3	4,475	9.8	10.2	2,625
Eilean Siar	26,370	233	8.8	11.3	2	8.5	1	4.3	391	14.8	11.8	102
Falkirk	149,150	1,738	11.7	11.5	12	6.9	12	6.9	1,557	10.4	11.0	675
Fife	356,740	3,831	10.7	11.2	21	5.5	17	4.4	3,788	10.6	10.3	1,927
Glasgow City	578,790	6,833	11.8	9.5	45	6.5	30	4.4	7,072	12.2	13.6	2,382
Highland	213,590	2,233	10.5	12.5	8	3.6	10	4.5	2,246	10.5	9.8	1,748
Inverclyde	82,130	902	11.0	11.7	9	9.9	7	7.8	1,049	12.8	12.4	278
Midlothian	79,190	867	10.9	11.8	4	4.6	6	6.9	826	10.4	10.8	701
Moray	88,120	878	10.0	11.5	4	4.5	4	4.6	943	10.7	10.3	440
North Ayrshire	135,830	1,379	10.2	10.9	6	4.3	10	7.3	1,601	11.8	11.4	747
North Lanarkshire	323,420	3,834	11.9	11.4	21	5.4	22	5.7	3,400	10.5	12.3	1,144
Orkney Islands	19,590	180	9.2	11.3	0	0.0	1	5.6	208	10.6	9.5	118
Perth & Kinross	138,400	1,347	9.7	11.9	3	2.2	5	3.7	1,555	11.2	9.4	1,100
Renfrewshire	170,000	1,869	11.0	11.2	11	5.9	7	3.7	1,991	11.7	12.2	567
Scottish Borders	109,730	1,047	9.5	11.8	6	5.7	5	4.8	1,308	11.9	10.1	780
Shetland Islands	22,000	227	10.3	11.4	2	8.7	0	0.0	165	7.5	7.6	103
South Ayrshire	111,780	976	8.7	10.4	6	6.1	7	7.2	1,400	12.5	10.3	770
South Lanarkshire	306,280	3,322	10.8	11.1	15	4.5	17	5.1	3,290	10.7	11.3	1,081
Stirling	86,930	873	10.0	10.4	4	4.6	3	3.4	870	10.0	10.0	781
West Dunbartonshire	91,400	1,000	10.9	10.9	6	6.0	14	14.0	1,153	12.6	12.9	510
West Lothian	163,780	2,112	12.9	12.3	11	5.2	13	6.2	1,490	9.1	12.1	668

1 Rate per 1,000 population.

2 Rate per 1,000 live and still births.

3 Rate per 1,000 live births.

APPENDIX 1 – SUMMARY TABLES

Table 3 International populations and vital statistics rates, selected countries, latest available figures

Country	Estimated population ('000s)		Live births per 1,000 population		Stillbirths ² per 1,000 total births (live & still)		Infant mortality per 1,000 live births		Deaths per 1,000 population		Marriages per 1,000 population	
	Year	Population	Year	Rate	Year	Rate	Year	Rate	Year	Rate	Year	Rate
Scotland	2005	5,095	2005	10.7	2005	5.3	2005	5.2	2005	10.9	2005	6.1
European Union												
Austria	2005	8,207	2004	9.7	2004	4.0	2004	4.5	2004	9.1	2004	4.7
Belgium	2005	10,446	2003	10.8	1997	4.7	1997	5.6	1997	10.2	2004	4.1
Cyprus	2005	749	2004	11.3	...	...	2003	4.1	2003	7.2	2004	7.2
Czech Republic	2005	10,221	2004	9.6	2004	2.7	2004	3.8	2004	10.5	2004	5.0
Denmark	2005	5,411	2004	11.9	2004	4.9	2001	4.6	2001	10.8	2004	7.0
Estonia	2005	1,347	2003	9.6	2004	4.5	2003	7.0	2003	13.4	2004	4.5
Finland	2005	5,237	2004	11.1	2004	3.3	2004	3.3	2004	9.1	2004	5.6
France	2005	60,561	2002	12.7	2001	4.8	2002	4.1	2002	9.0	2004	4.3
Germany	2005	82,501	2004	8.6	2004	3.9	2004	4.1	2004	9.9	2004	4.8
Greece	2005	11,076	2003	9.5	2002	4.7	2003	4.0	2003	9.6	2004	4.2
Hungary	2005	10,098	2003	9.3	2004	5.0	2003	7.3	2003	13.4	2004	4.3
Irish Republic	2005	4,109	2003	15.5	2002	6.0	2001	6.0	2002	7.6	2003	5.1
Italy	2005	58,462	2003	9.4	1998	3.7	2001	4.7	2001	9.8	2004	4.3
Latvia	2005	2,306	2004	8.8	2004	6.5	2004	9.4	2004	13.9	2004	4.5
Lithuania	2005	3,425	2004	8.9	2004	4.9	2004	7.9	2004	12.0	2004	5.6
Luxembourg	2005	455	2004	12.0	2004	3.1	2004	3.5	2004	7.8	2004	4.4
Malta	2005	403	2004	9.7	2004	3.8	2004	5.9	2004	7.5	2004	6.0
Netherlands	2005	16,306	2004	11.9	2003	4.6	2004	4.4	2004	8.4	2004	4.7
Poland	2005	38,174	2003	9.2	2003	4.9	2003	7.0	2003	9.6	2004	5.0
Portugal	2005	10,529	2003	10.7	2003	4.1	2003	4.2	2003	10.4	2004	4.7
Slovakia	2005	5,385	2002	9.5	2004	3.9	2002	7.6	2002	9.6	2004	5.2
Slovenia	2005	1,998	2004	9.0	2004	5.4	2003	4.0	2003	9.7	2004	3.3
Spain	2005	43,038	2003	10.5	1999	3.7	2003	3.9	2003	9.2	2004	5.0
Sweden	2005	9,011	2003	11.1	2004	3.3	2002	3.3	2002	10.7	2004	4.8
United Kingdom ¹	2004	59,834	2004	12.0	2004	5.5	2004	5.0	2004	9.7	2004	...
Other Europe												
Bulgaria	2005	7,761	2004	9.0	2004	7.8	2004	11.7	2004	14.2	2004	4.0
Norway	2005	4,606	2003	12.4	2003	3.8	2003	3.5	2003	9.3	2004	4.9
Romania	2005	21,659	2004	10.0	2004	6.0	2004	16.8	2004	12.0	2004	6.6
Switzerland	2005	7,415	2004	9.9	2004	3.8	2002	4.5	2002	8.5	2004	5.3

Sources: Eurostat, WHO/Europe and the Office for National Statistics.

1 Excludes Isle of Man and Channel Islands.

2 The definition of a stillbirth varies from country to country and over time. The position in the UK is described in the Notes and Definitions.

... Figures not available.

This Appendix gives general notes on some of the data and conventions used in this report as well as providing definitions for some of the terminology used.

GENERAL

– tabular conventions

Where a range of years is listed in a time series table (e.g. 1951-55), the data presented will be an average for this period.

Throughout the tables ‘year’ means ‘calendar year’ except where otherwise defined. By convention, many of the time series presented start at census years (e.g. 1991).

– date of registration and place of occurrence

All the data presented on births, stillbirths, marriages and deaths relate to the date of registration of the event and not to the date of occurrence. For example, a birth on 31 December 2003 which was registered on 5 January 2004 would be included in the 2004 figures. Births and stillbirths are usually registered within the statutory period of 21 days. Similarly, marriages are usually registered within 3 days and deaths within 8 days.

Births, stillbirths, and deaths have been allocated to the area of usual residence if it is in Scotland, otherwise to the area of occurrence. Marriage figures relate to the area of occurrence.

POPULATION

All population figures refer to estimates at 30 June of the year in question.

Throughout this report, revised annual mid-year estimates of population are used for comparing population trends and for calculating rates per head for the period 1982-2000. Population estimates for these years were revised to be in line with the mid-2001 population estimates which were based on the results of the 2001 Census. More information describing the methods used to produce revised population estimates is available on the GROS website.

– population covered

The resident population of an area includes all those usually resident there whatever their nationality. Students are treated as being resident at their term-time address. Members of HM Forces and non-UK armed forces stationed in Scotland are included. HM Forces stationed outside Scotland are excluded.

– age

Ages relate to age last birthday.

– population projections

Population projections for Scotland are prepared by the Government Actuary, at the request of and in consultation with the Registrar General. The latest national projection was the 2003-based projections published in September 2004. Sub-national projections, consistent with the previous 2002-based national projections, were published in January 2004.

MIGRATION

Net migration figures presented for the period 1982-2000 have been revised following the revisions to the population estimates for the same years. Unless otherwise stated, these are estimates of net civilian migration which include movements to and from the Armed Forces but exclude other changes, such as changes in the numbers of Armed Forces stationed in Scotland.

– UK regions

The regions of the UK are taken as Scotland, Wales, Northern Ireland and the Government Office Regions of England. A map can be found at <http://www.statistics.gov.uk/geography/gor.asp>

BIRTHS

– general fertility rate (GFR)

The number of births per 1,000 women of childbearing age (15-44).

– total fertility rate (TFR)

The average number of children that would be born to a cohort of women who experienced, throughout their childbearing years, the fertility rates of the calendar year in question.

– age specific fertility rate (ASFR)

The number of births per individual for a specific age during a specified time.

– cohort

A well-defined group of people who have had a common experience or exposure who are observed through time. For example, the birth cohort of 1900 refers to people born in that year.

– marital status of parents

Married parents: refers to parents who are married to each other.

Unmarried parents: refers to parents who are unmarried, or married but not to each other.

DEATHS

– cause-of-death coding

From 1 January 2000, deaths in Scotland have been coded in accordance with the International Statistical Classification of Diseases and Related Health Problems (Tenth Revision) (ICD10). Classification of underlying cause of death is based on information collected on the medical certificate of cause of death together with any additional information provided subsequently by the certifying doctor. Changes notified to the General Registrar Office for Scotland by Procurators Fiscal are also taken into account. Additional information about suicides is supplied by the Crown Office.

– alcohol related deaths

The data for 2000-2005 presented in **Figure 2.12** include the following ICD10 categories (equivalent ICD9 categories were used for the period 1980-1999);

F10	Mental and behavioural disorders due to use of alcohol
G31.2	Degeneration of nervous system due to alcohol
G62.1	Alcoholic polyneuropathy
I42.6	Alcoholic cardiomyopathy
K29.2	Alcoholic gastritis
K70	Alcoholic liver disease
K73	Chronic hepatitis, not elsewhere classified
K74	Fibrosis and cirrhosis of liver (Excluding K74.3-K74.5 – Biliary cirrhosis)
K86.0	Alcohol induced chronic pancreatitis
X45	Accidental poisoning by, and exposure to, alcohol
X65	Intentional self-poisoning by, and exposure to, alcohol
Y15	Poisoning by, and exposure to, alcohol; undetermined intent

– expectation of life

The average number of additional years a person could expect to live if current mortality trends were to continue for the rest of that person's life. Most commonly cited as life expectancy at birth.

– age standardisation

A straight comparison of crude rates between areas may present a misleading picture because of differences in the sex and age structure of the respective populations. The technique of standardisation has been used in certain tables and charts to remedy this. In general, standardisation involves a comparison of the actual number of events occurring in an area with the aggregate number expected if the age/sex specific rates in the standard population were applied to the age/sex groups of the observed population.

– stillbirth

Section 56(1) of the Registration of Births, Deaths and Marriages (Scotland) Act 1965 defined a stillbirth as a child which had issued forth from its mother after the 28th week of pregnancy and which did not breathe or show any other sign of life. The Still-Birth (Definition) Act 1992, which came into effect on 1 October 1992, amended Section 56(1) of the 1965 Act (and other relevant UK legislation), replacing the reference to the 28th week with a reference to the 24th week.

– perinatal

Refers to stillbirths and deaths in the first week of life.

– infant

Refers to all deaths in the first year of life.

MARRIAGES

Civil marriages were introduced by the Marriage (Scotland) Act 1939, which came into operation on 1 July 1940.

DIVORCES

The data presented on divorces relate to the date on which the decrees were granted.

In legal terms the Divorce (Scotland) Act 1976 introduced a single ground for divorce – irretrievable breakdown of marriage – with the detailed reasons as ‘proofs’. However, the information presented in this report on reasons for divorce retains the terminology ‘grounds for divorce’.

ADOPTIONS

The Registrar General for Scotland registers adoptions under the Adoption of Children (Scotland) Act 1930.

HOUSEHOLDS

Like population projections, household projections are produced every two years, and are mainly used for informing decisions about future housing need and service provision. The latest household projections, covering the period 2004 to 2024, incorporate the results of the 2004-based population projections. They also incorporate information from the last two Censuses, to project trends in household formation by type of household and the age of the head of household. The head of household is defined in the Census as the first person on the Census form who is aged 16 or over and is usually resident at the address in question.

The projections provide an indication of what would happen if past trends continue. They do not take account of policy initiatives, or other factors that may affect future populations. Projections for small groups are likely to be less reliable than those for larger groups.

Household estimates and projections publications are available from <http://www.gro-scotland.gov.uk/statistics/library/household-estimates-projections/index.html>.

NATIONAL STATISTICS

This is a National Statistics publication. It has been produced to high professional standards set out in the National Statistics Code of Practice and Release Practice Protocol (http://www.statistics.gov.uk/about_ns/cop/default.asp). These statistics undergo regular quality assurance reviews to ensure that they meet customer needs. They are produced free from any political interference. Details of pre-release access are provided on the General Register Office for Scotland website under 'Future Publications'.

GENERAL REGISTER OFFICE FOR SCOTLAND

The General Register Office for Scotland (GROS) is the department of the devolved Scottish Administration responsible for the registration of births, marriages, deaths, divorces and adoptions in Scotland. We are responsible for the Census of Population in Scotland which we use, with other sources of information, to produce population and household statistics. We make available important information for family history. Our website is <http://www.gro-scotland.gov.uk>.

Our aim is to provide relevant and reliable information, analysis and advice that meet the needs of government, business and the people of Scotland.

Our objectives are:

To produce statistics and analysis relevant to user needs by

- Developing the range of statistics and analysis we produce.
- Where practicable improving timeliness.
- Providing more statistics disaggregated by age, gender and ethnicity.
- Developing more data for small areas through the Neighbourhood Statistics project.
- Contributing to production of comparable statistics across the UK and internationally.

To ensure effective use of our statistics by

- Contributing more directly to policy processes inside and, where possible, outside government.
- Improving access to and presentation of data and analysis.
- Improving the advice provided on statistics.

To work effectively with users and providers by

- Maintaining arrangements to consult and involve users and providers.
- Involving users and providers in planning developments in outputs and processes.

To develop the quality of statistics by

- Assuring and improving quality as an integral part of data collection and analysis and through regular reviews in line with National Statistics quality strategy.
- Developing statistical methods, systems and classifications.
- Working with the rest of the Government Statistical Service to develop joint approaches/solutions where appropriate.

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- Maintaining and promoting integrity through implementation of the National Statistics Code of Practice and related protocols.
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To ensure the efficient and effective delivery of statistics products and services by

- Making best use of all sources including administrative sources.
- Minimising the burden on data providers through survey monitoring and advice.
- Ensuring value for money.
- Making best use of information and communications technology.
- Working with other analysts.
- Ensuring effective communication within the Statistician Group.

To develop our workforce and competences

- Ensuring recruitment of staff with the necessary skills and potential.
- Ensuring development of expertise amongst existing staff.
- Promoting and upholding the standards of the statistics profession.

Enquiries about this publication should be addressed to: Statistics Customer Services, General Register Office for Scotland, Ladywell House, Edinburgh EH12 7TF.
Telephone: (0131) 314 4243, Fax: (0131) 314 4696, E-mail: customer@gro-scotland.gsi.gov.uk

Further detailed statistics produced by GROS are available from the Online Data Library on the GROS website (<http://www.gro-scotland.gov.uk/statistics/library/index.html>). Statistics from the 2001 Census are on Scotland's Census Results On-Line website (<http://www.scrol.gov.uk>) and on the Census section of the main website (<http://www.gro-scotland.gov.uk/statistics/census/index.html>).

Information about future publications is provided on the GROS website (<http://www.gro-scotland.gov.uk/futurepb.html>). If you would like to receive notification of forthcoming statistical publications, you can register your interest on the Scottish Executive ScotStat website at <http://www.scotland.gov.uk/scotstat>.

If you are not satisfied with our service, please write to *Peter Scrimgeour, Head of Census and Statistics, Room 1/2/3, Ladywell House, Ladywell Road, Edinburgh EH12 7TF*.
Telephone: (0131) 314 4290, E-mail: peter.scrimgeour@gro-scotland.gsi.gov.uk

We also welcome any comments or suggestion that would help us to improve our standards of service.

RELATED ORGANISATIONS

ORGANISATION	CONTACT
<p>The SCOTTISH EXECUTIVE (SE) forms the bulk of the devolved Scottish Administration. The aim of the statistical service in the SE is to provide relevant and reliable statistical information, analysis and advice that meets the needs of government, business and the people of Scotland.</p>	<p><i>Ryan Stewart, Office of the Chief Statistician, Scottish Executive, 3rd Floor West Rear, St Andrew's House, Edinburgh EH1 3DG</i> Telephone: (0131) 244 0442 Fax: (0131) 244 0335 E-mail: statistics.enquiries@scotland.gsi.gov.uk Website: http://www.scotland.gov.uk/Topics/Statistics</p>
<p>The OFFICE FOR NATIONAL STATISTICS (ONS) is responsible for producing a wide range of economic and social statistics. It also, for England and Wales, registers life events and holds the Census of Population.</p>	<p><i>Customer Contact Centre, Room 1.015, Office for National Statistics, Cardiff Road, Newport NP10 8XG</i> Telephone: 0845 601 3034 Minicom: 01633 812399 Fax: 01633 652747 E-mail: info@statistics.gsi.gov.uk Website: www.statistics.gov.uk</p>
<p>The NORTHERN IRELAND STATISTICS AND RESEARCH AGENCY (NISRA) is Northern Ireland's official statistics organisation. The Agency also has responsibility, in Northern Ireland, for the registration of births, marriages, adoptions and deaths and the Census of Population.</p>	<p><i>Northern Ireland Statistics and Research Agency, McAuley House, 2-14 Castle Street, Belfast BT1 1SA</i> Telephone 028 9034 8100 Fax 028 9034 8106 Website: www.nisra.gov.uk</p>

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