



Births and Deaths in England and Wales, 2011 (Final)

Coverage: **England and Wales**

Date: **17 October 2012**

Geographical Areas: **Local Authority and County, Region**

Theme: **Population**

Key Findings

- There were 723,913 live births in England and Wales in 2011, increasing slightly (by 0.1 per cent) from 723,165 in 2010.
- There were 484,367 deaths registered in England and Wales in 2011, compared with 493,242 in 2010 (a fall of 1.8 per cent).
- The total fertility rate (TFR) in England and Wales in 2011 was 1.93 children per woman.
- Age-standardised mortality rates (ASMRs) in 2011 were the lowest ever recorded for England and Wales, at 6,236 deaths per million population for males and 4,458 deaths per million population for females.

Summary

This bulletin is an update to ['Births and Deaths in England and Wales \(provisional\), 2011'](#) published on 10 July 2012. It presents summary statistics on live births, stillbirths and deaths in England and Wales in 2011. Birth statistics reported include counts of live births and stillbirths, fertility rates by age of mother and by area of usual residence and the percentage of births to mothers born outside the UK. Death statistics reported include counts of deaths by age and sex and by selected cause and age-standardised mortality rates. Standardised mortality ratios (SMRs) and infant mortality rates by area of usual residence are also included.

Counts of live births, stillbirths and deaths and rates for stillbirths, infant deaths, neonatal deaths and perinatal deaths for 2011 reported in this bulletin are unchanged from those reported in ['Births and Deaths in England and Wales \(provisional\), 2011'](#) and published as part of the ['Birth summary tables, England and Wales, 2011 \(provisional\)'](#) and the ['Death registrations summary tables, England and Wales, 2011 \(provisional\)'](#) in July 2012.

The 2011 fertility and mortality rates and the average age of mother reported within this release are now final (they have been calculated using mid-2011 population estimates based on the 2011 Census which were published on 25 September 2012). This is the first time that final 2011 fertility and mortality rates for England and Wales have been published by the Office for National Statistics (ONS).

Fertility and mortality rates along with the average age of mother for 2002-2010 have been calculated using mid-year population estimates based on the 2001 Census. Population estimates for mid-2002 to mid-2010 will be revised to take account of the 2011 Census to ensure a consistent time series over the decade. Estimates for England and Wales are due to be published in December 2012/January 2013 while subnational estimates are due to be published in March/April 2013.

Revisions to fertility and mortality rates/measures which are based on these population estimates will therefore take place in future releases. Any comparisons of rates/measures between 2002-2010 and 2011 should be treated with caution due to these planned revisions. To enable comparisons over time, fertility and mortality rates in 2011 have been compared to those in 2001 since rates for 2001 are not affected by the planned revisions.

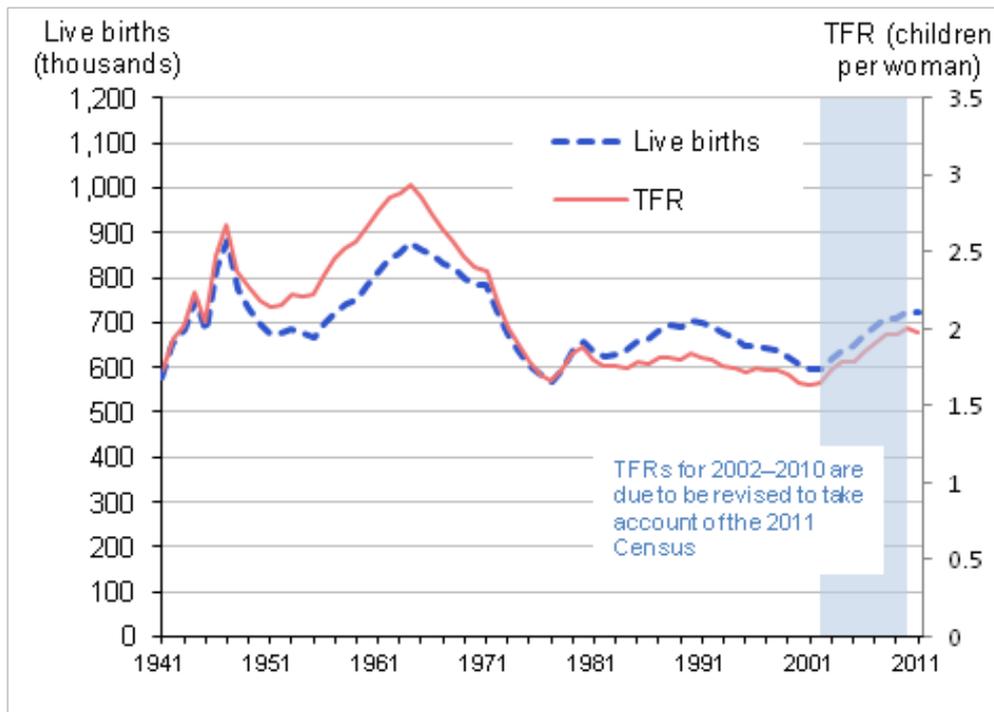
Key Trends in Births and Deaths (Numbers and Rates)

Live births

There were 723,913 live births in England and Wales in 2011, compared with 723,165 in 2010 (a rise of 0.1 per cent). The number of live births and the total fertility rate (TFR) fluctuated throughout the twentieth century with a sharp peak at the end of World War II (figure 1). Live births peaked at near post-war levels again in 1964 (875,972 births), but since then lower numbers have been seen. The lowest recorded annual number of births in the twentieth century was 569,259 in 1977.

The small rise in live births in 2011 represents a continuation of the increasing numbers recorded since a recent low in 2001. During this period the number of live births has risen by 22 per cent from 594,634 in 2001 despite a small fall between 2008 and 2009. The number of live births in 2011 reached the highest level since 1972 when there were 725,440 live births. The number of births is affected by fertility rates and the size and age structure of the female population.

Fertility rates (see background note 4) for 2011 give an average of 1.93 children per woman in England and Wales. During the 1990s, the TFR fell from 1.82 in 1991 to a record low of 1.63 by 2001. This was largely due to women delaying childbearing to older ages ([Jefferies \(297 Kb Pdf\)](#), 2008; [Tromans, et al. \(2.08 Mb Pdf\)](#), 2008). Overall, since 2001 the TFR has increased rising from 1.63 children per woman to 1.93 in 2011. It is not possible to establish whether the TFR fell between 2010 and 2011 until population estimates for 2010 are revised following the 2011 Census.

Figure 1: Number of Live Births and Total Fertility Rate (TFR), England and Wales, 1941–2011

Source: Office for National Statistics

Notes:

1. Based on births occurring in the calendar year.
2. The TFRs for 2002–2010 are calculated using the mid-year population estimates for the reference year based on the 2001 Census. Revised population estimates for 2002–2010 will be published in December 2012/January 2013. TFRs for 2002–2010 will subsequently require revisions.
3. The TFR for 2011 is calculated using the mid-2011 population estimates based on the 2011 Census.

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(31 Kb)

Changes in the TFR can result from changes in the timing of childbearing within women's lives as well as any changes in completed family size. There is no single explanation underlying the overall increases in fertility since 2001 which are likely to have resulted from a combination of factors ([Jefferies \(297 Kb Pdf\)](#), 2008; [RAND](#), 2012). Possible causes may include:

- Women born in the 1960s and 1970s who postponed childbearing in their twenties 'catching up' in their thirties and forties.
- Increases in the numbers of foreign born women with above average fertility rates ([Tromans, et al. \(2.08 Mb Pdf\)](#), 2009).
- Government policy ([Jefferies \(297 Kb Pdf\)](#), 2008; [RAND](#), 2012) and the economic climate ([Sobotka, et al., 2010](#)) indirectly influencing individuals' decisions around childbearing and therefore affecting the number of births although this does not have a clear impact on fertility in a particular direction.

The first two factors listed above are likely to have put upward pressure on the TFR since 2001.

Stillbirths

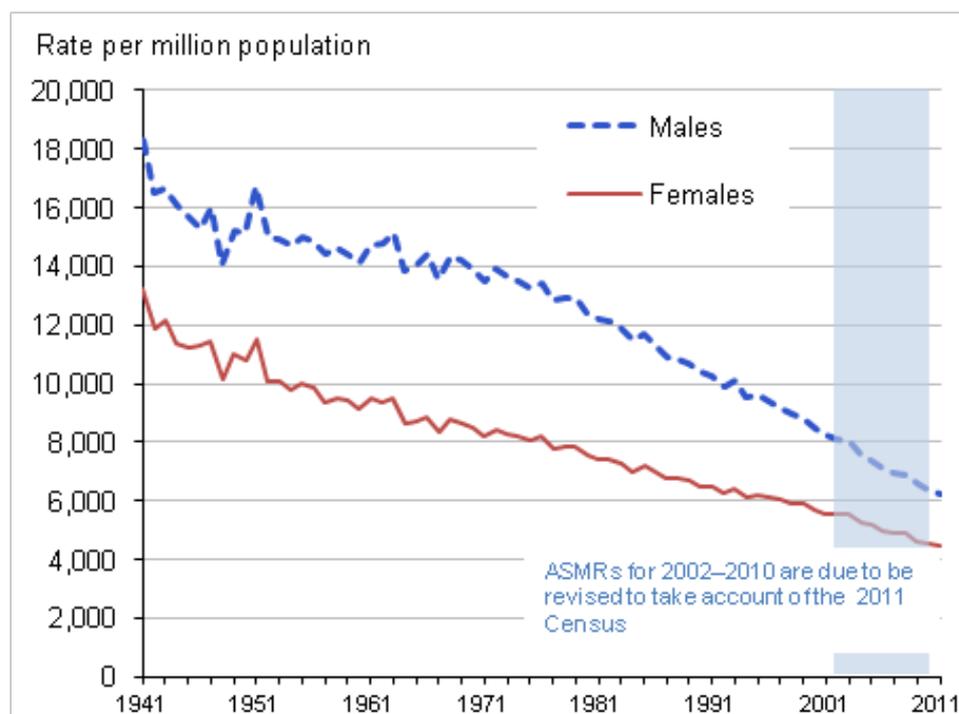
The number of stillbirths increased slightly to 3,811 in 2011 from 3,714 in 2010 (a rise of 2.6 per cent). This rise is partly a consequence of the increase in the total number of births (both live births and stillbirths) in 2011. The stillbirth rate takes into account the total number of births and therefore provides a more accurate indication of trends. In 2011 the stillbirth rate rose slightly to 5.2 per thousand total births from 5.1 in 2010.

Small fluctuations in the number of stillbirths and the stillbirth rate have occurred during the last decade (the highest stillbirth rate during the period was 5.8 per thousand total births in 2003). Key risk factors for stillbirths are overweight mothers, smoking during pregnancy and multiple pregnancies ([SANDS](#), 2012).

Total deaths

There were 484,367 deaths registered in England and Wales in 2011 compared with 493,242 in 2010 (a fall of 1.8 per cent), and 532,498 in 2001. This is the third consecutive year that annual death registrations have been below half a million. Before 2009 the last time that death registrations fell below half a million was in 1952.

Figure 2: Age-standardised mortality rates (ASMRs), England and Wales, 1941–2011



Source: Office for National Statistics

Notes:

1. Based on deaths registered in the calendar year.

2. The ASMRs for 2002–2010 are calculated using the mid-year population estimates for the reference year based on the 2001 Census. Revised population estimates for 2002–2010 will be published in December 2012/January 2013. ASMRs for 2002–2010 will subsequently require revisions.
3. The ASMRs for 2011 are calculated using the mid-2011 population estimates based on the 2011 Census.

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Over the course of the twentieth century, age-standardised mortality rates (ASMRs) steadily decreased (figure 2). Up until the early 1970s, year-on-year fluctuations were higher, a likely consequence of influenza epidemics and cold winters although the relationship between temperature, influenza and winter mortality is complex (for further information see [Excess winter mortality in England and Wales, 2010/11 provisional and 2009/10 final](#)).

Mortality rates have continued their downward trend, with 6,236 deaths per million population for males and 4,458 deaths per million population for females in 2011. Since 1971 ASMRs have decreased by 54 per cent for males and 46 per cent for females. The 2011 ASMRs for both males and females are the lowest ever recorded in England and Wales.

Mortality rates are generally falling; reasons for this include medical advances in the treatment of many illnesses and diseases. This is illustrated by the reduction in ASMRs for many causes of death. Since 2001 age-specific mortality rates across all five-year age-sex groups have either decreased or remained unchanged ([see table 1 \(341 Kb Excel sheet\)](#)).

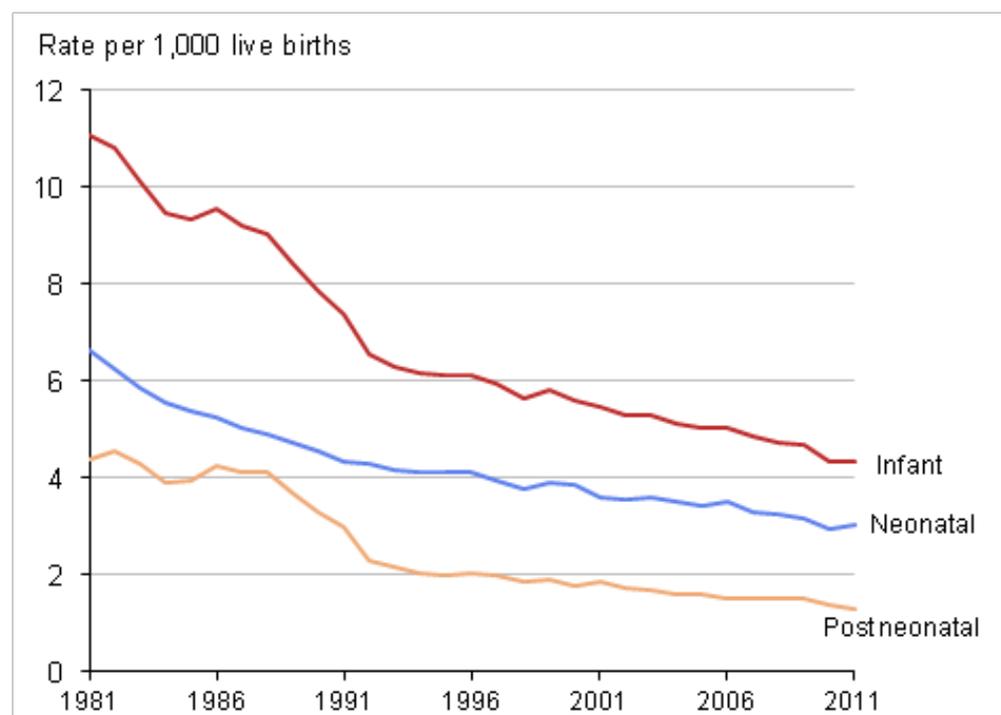
Infant, perinatal and neonatal deaths

In 2011 there were 3,154 infant deaths (under 1 year of age) registered in England and Wales, a slight increase from 2010. The infant mortality rate rose slightly in 2011 to 4.4 deaths per thousand live births compared with 4.3 in 2010.

In 2011 the neonatal mortality rate (deaths under 28 days) remained the same as in 2010 at 3.0 deaths per thousand live births. The postneonatal mortality rate (deaths between 28 days and one year) decreased to 1.3 deaths per thousand live births from 1.4 in 2010.

The perinatal mortality rate (stillbirths and deaths under 7 days) was 7.6 per thousand total births in 2011 compared with 7.4 in 2010.

Small fluctuations in the infant mortality rate have occurred over recent years, after a series of larger drops in the early 1980s and again between 1987 and 1991 (figure 3). Between 1981 and 2011 the infant mortality rate fell by 60 per cent, while the neonatal and postneonatal mortality rates fell by 55 and 70 per cent respectively. However, the rates of change were not constant over the period: change in the first half of the period was nearly twice that in the second half.

Figure 3: Infant, neonatal and postneonatal mortality rates, England and Wales, 1981–2011

Source: Office for National Statistics

Notes:

1. Based on deaths registered in the calendar year.

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(28.5 Kb)

There are many established risk factors for infant mortality; prematurity, low birthweight and multiplicity being the most significant in terms of strength of association and consistency. Risk factors are known to vary according to age at death. For example, the effect of low birthweight and prematurity is stronger in the neonatal period than the postneonatal period while socio-economic status is strongly associated with deaths under one year ([Oakley, et al., 2009 \(720.5 Kb Pdf\)](#)).

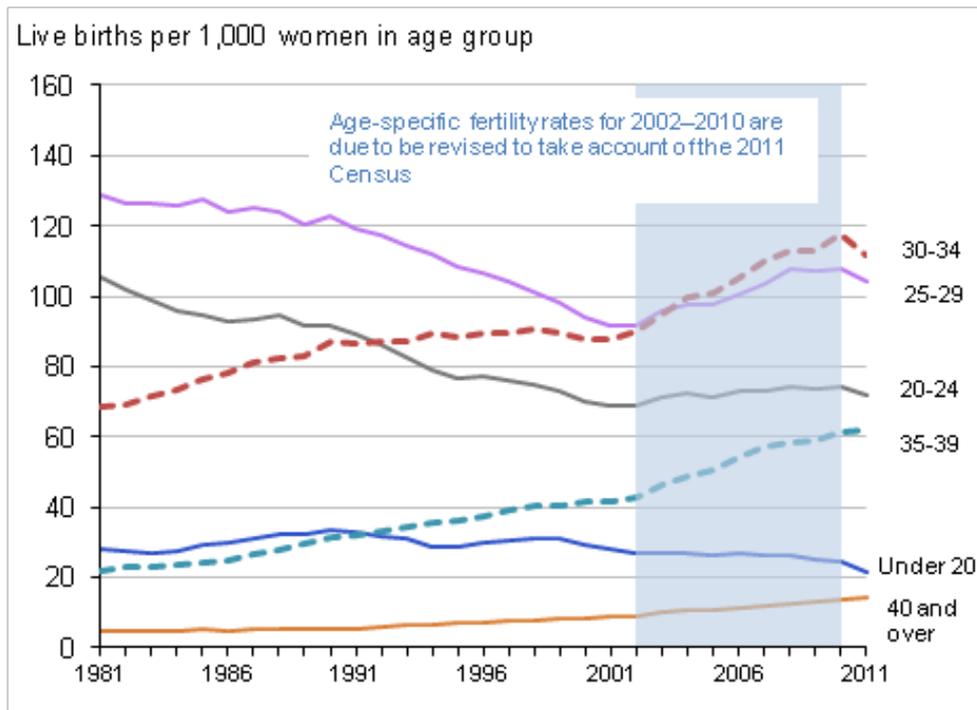
Further Patterns and Trends: Births

Live births by age of mother

Since 2001 when the total fertility rate was at a record low, fertility levels have risen for women in all age groups with the exception of those aged under 20. The largest percentage increase in fertility was for women aged 40 and over followed by women aged 35–39 with increases of 61 per cent and 50 per cent respectively. This continues the trend of rising fertility among women aged 35 and over recorded during the 1980s and 1990s. The number of live births to mothers aged 40 and over has more than quadrupled from 6,860 in 1981 to 29,350 in 2011.

Fertility rates for women aged 20–24, 25–29 and 30–34 have increased by 4 per cent, 14 per cent and 27 per cent respectively since 2001 (figure 4). In contrast fertility rates among women aged under 20 fell by 24 per cent over the same period. It is not possible to establish how fertility rates at certain ages have changed between 2010 and 2011 until population estimates for 2010 are revised following the 2011 Census.

Figure 4: Age-specific fertility rates, England and Wales, 1981–2011



Source: Office for National Statistics

Notes:

1. Based on births occurring in the calendar year.
2. The age-specific fertility rates for 2002–2010 are calculated using the mid-year population estimates for the reference year based on the 2001 Census. Revised population estimates for 2002–2010 will be published in December 2012/January 2013. Fertility rates for 2002–2010 will subsequently require revisions.
3. The age-specific fertility rates for 2011 are calculated using the mid-2011 population estimates based on the 2011 Census.

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(31 Kb)

These changes in age-specific fertility have resulted in the average age of mother rising to 29.7 years in 2011 compared with 28.6 years in 2001 (see background note 10).

Between the mid-1940s and mid-1970s, the average age of mother decreased by just under 3 years (29.3 years in 1944 to 26.4 years in 1973). Since 1973 the average age of mother has generally increased. The overall rise since 1973 reflects the increasing numbers of women who

have been delaying childbearing to later ages. Possible influences include; increased participation in higher education, increased female participation in the labour force, the increasing importance of a career, the rising opportunity costs of childbearing, labour market uncertainty, housing factors and instability of partnerships ([Ní Bhrolcháin, et al., 2012](#)).

Live births within marriage/civil partnership

In 2011 nearly half of all babies were born outside marriage/civil partnership (47.2 per cent), compared with 46.8 per cent in 2010 and 40.0 per cent in 2001. This continues the long-term rise in the percentage of births outside marriage/civil partnership, which is consistent with increases in the number of couples cohabiting rather than married or in a civil partnership (for further information, see [Families and Households](#) on the ONS website).

Live births to mothers born outside the UK

The percentage of live births in England and Wales to mothers born outside the UK continued to rise in 2011, reaching 25.5 per cent compared with 25.1 per cent in 2010 and 16.5 per cent in 2001. The proportion of births to mothers born outside the UK has increased every year since 1990 when it was 11.6 per cent. Recent rises in the number of births to non-UK born women can be mainly attributed to the increase in the population of women born outside the UK ([Tromans, et al., 2009 \(2.08 Mb Pdf\)](#)).

The proportion of births to women born outside the UK is higher than the proportion of the female population of childbearing age born outside the UK ([Tromans, et al., 2009 \(2.08 Mb Pdf\)](#)). There are two reasons for this: firstly fertility levels are on average higher among foreign-born women and secondly the foreign-born and UK-born female populations of reproductive age have different age structures (for example a higher proportion of foreign-born women are aged from 25 to 34, the ages where fertility rates are highest).

More detailed ONS birth statistics for 2011 by [parents country of birth](#) were published on 30 August 2012.

A report on [Childbearing of UK and non-UK born women living in the UK - 2011](#) is to be published by ONS on 25 October 2012. This will look at fertility patterns in the UK for UK born and non-UK born mothers in the period 2007–2011. The report includes investigation of fertility patterns at the country level, and also of specific non-UK maternal countries of birth.

Live births by area of usual residence

In 2011 the West Midlands had the highest TFR among the regions of England with 2.02 children per woman. London had the lowest TFR (1.84 children per woman).

Among the local authorities in England in 2011, Cambridge had the lowest TFR with 1.37 children per woman, while Barking and Dagenham had the highest (2.45 children per woman). In Wales in 2011, Ceredigion had the lowest TFR with 1.61 children per woman while Denbighshire had the highest (2.23 children per woman). The TFRs for Ceredigion and Denbighshire are based on small numbers of women and so should be interpreted with some caution.

Fertility levels vary by local area for several reasons including differences in the timing of childbearing and differing ideals on family size. These can be influenced by the population characteristics of the area such as levels of educational attainment, ethnicity/country of birth, and deprivation levels ([Tromans, et al., 2008 \(3.33 Mb Pdf\)](#)).

Further Patterns and Trends: Deaths

Causes of death

In January 2011 the software used for cause of death coding was updated from the International Classification of Diseases, Tenth Revision (ICD–10) v2001.2 to v2010. The main changes in ICD-10 v2010 are amendments to the modification tables and selection rules, which are used to ascertain a causal sequence and consistently assign underlying cause of death from the conditions recorded on the death certificate.

Overall, the impact of these changes is small although some cause groups are affected more than others. For further information, see the [results of the bridge coding study](#) on the ONS website. There is also another study looking at the impact on [stillbirths and neonatal deaths](#).

Cancer accounted for nearly a third (30 per cent) of all deaths registered in 2011, with an age-standardised rate of 2,023 deaths per million population for males and 1,478 deaths per million population for females. Since 2001 death rates for cancer have fallen by 14 per cent for males and 10 per cent for females.

Circulatory diseases, such as heart disease and strokes accounted for 29 per cent of all deaths registered in 2011. In 2010, circulatory diseases were the most common cause of death (32 per cent of all deaths). Between 2001 and 2011, the male and female age-standardised death rates for circulatory diseases fell by 44 per cent to 1,803 deaths per million population for males and 1,110 deaths per million population for females.

Over the course of the twentieth century, there have been fairly steady decreases in mortality rates for the main three broad disease groups (cancer, circulatory and respiratory) in England and Wales. The reasons for this include improvements in the treatment of these diseases. There have also been initiatives to improve people's health through better diet and lifestyle, for example, the Department of Health's White Paper entitled '[Choosing Health: making healthy choices easier](#)' published in 2004.

Death registrations by area of usual residence

A standardised mortality ratio (SMR) is essentially a comparison of the number of the observed deaths in a population with the number of expected deaths if the age-specific death rates were the same as a standard population. SMRs allow for useful comparisons to be made against a national average as the results take into account differing age structures in the populations of local areas. Local authorities find these ratios useful to gauge how deaths in their area compare with England and Wales as a whole.

The North East had the highest SMR among the regions of England in 2011 with mortality levels 12 percentage points above the national level. In contrast, mortality levels were lowest in London

and the South East (7 percentage points below the national level). Comparisons of SMRs across years can be misleading because they are influenced by the size and the age-sex structure of the population in local areas which varies between years (for further information see background note 5).

In 2011 the local authority in England with the highest SMR was Manchester (32 percentage points above the national level) while South Cambridgeshire had the lowest (26 percentage points below the national level).

In Wales, Blaenau Gwent had the highest SMR (29 percentage points above the national level) while Monmouthshire had the lowest (10 percentage points below the national level).

The substantial variation in mortality rates between different local areas reflects underlying differences in factors such as income deprivation, socio-economic status and health behaviour (for further information see '[Life Expectancy at birth and at age 65 for health areas in the United Kingdom](#)').

Infant mortality by region of usual residence

Infant mortality rates vary by region and can fluctuate over time. In 2011 the West Midlands had the highest regional infant mortality rate, with 6.0 deaths per thousand live births. The South East had the lowest with 3.5 deaths per thousand live births. Wales had an infant mortality rate of 3.9 deaths per thousand live births.

The variation between different regions reflects underlying differences in maternal factors such as the mother's country of birth, socio-economic status, and age (for further information, see [infant mortality by social and biological factors](#)).

Differences Between Provisional and Final Fertility and Mortality Rates for 2011

On 10 July 2012 ONS published provisional [fertility](#) and [mortality](#) rates for 2011. National rates were calculated using 2010-based population projections for 2011 while subnational rates were calculated using mid-2010 population estimates. Following the publication of the mid-2011 population estimates based on the 2011 Census, fertility and mortality rates for 2011 have been finalised.

Differences between provisional and final fertility and mortality rates for 2011 are detailed below:

- The 2011 total fertility rate (TFR) for England and Wales is 1.93 children per woman. This is lower than the provisional TFR of 1.98.
- In England and Wales, the age-specific fertility rates for females at all ages in 2011 are slightly lower than provisional figures suggested. Final age-specific rates are between 0.4 per cent lower (women aged 20–24) and 5.1 per cent lower (women aged 30–34) than provisional figures.
- The average age of mother in England and Wales in 2011 is 29.7 years. The calculation of this figure does require population estimates but the figure remains unchanged.

- The 2011 age-standardised mortality rate (ASMR) for males in England and Wales is 6,236 deaths per million population. This is higher than the provisional ASMR of 6,172.
- The 2011 ASMR for females in England and Wales is 4,458 deaths per million population. This is higher than the provisional ASMR of 4,402.
- In England and Wales, the age-specific mortality rates for males and females in 2011 remain unchanged in two-thirds of age groups. For males, the greatest difference in rates was for those aged 85 and over where the final rate is 5.6 per cent higher than the provisional rate. For males aged 70 and over, rates are higher than provisional figures suggested while for males aged 50–70 rates are lower. For females the greatest difference in rates was for those aged 30–34 where the final rate is 20 per cent lower than the provisional rate (0.4 deaths per thousand women aged 30–34 compared with a provisional rate of 0.5). For females aged 70 and over, rates are between 0.4 and 4.0 per cent higher than provisional rates.

At local authority level the picture is more complex as the size and direction of the difference between provisional and final fertility and mortality rates varies between local areas:

- Final 2011 TFRs were lower than provisional figures in over three-quarters of areas, with final TFRs being 4.6 per cent lower than provisional TFRs on average.
- Final 2011 standardised mortality ratios (SMRs) were lower than provisional figures in half of all areas, while in 14 per cent of areas the SMR remains unchanged. The average difference between final and provisional SMRs was 0.0 per cent.
- The range between the highest and lowest TFRs and SMRs has decreased resulting in reduced variation between areas. Variation in rates tends to increase as the reference year moves further away from a census year and the degree of estimation involved in calculating population estimates increases.

Population Estimate Revisions and Their Impact on Fertility and Mortality Statistics for 2002-2010

Population estimates for mid-2002 to mid-2010 will be revised to take account of the results of the 2011 Census to ensure a consistent time series over the decade. Revised population estimates are due to be published as follows:

- December 2012-January 2013: Revised population estimates for England and Wales, mid-2002 to mid-2010.
- March- April 2013: Revised population estimates for subnational areas in England and Wales, mid-2002 to mid-2010.

Subsequent revisions to fertility and mortality rates and the average age of mother for 2002-2010 will therefore take place in future releases. Consequently, any comparisons between rates for 2002-2010 and 2011 should be treated with caution. Rates across the two time periods are not directly comparable due to the planned revisions.

Differences between the 2011 Census and 2011 population estimates based on the 2001 Census which will impact on 2002-2010 revisions

A high level [reconciliation report \(361.9 Kb Pdf\)](#) explaining national level differences between 2011 Census estimates and population estimates for March 2011 rolled forward from the 2001 Census,

was published alongside the first release of 2011 Census data in July 2012. The rolled forward estimates were 476,000 lower than the 2011 Census estimate for England and Wales which splits down into 144,000 males and 332,000 females. The report discusses initial research carried out into the potential causes of this difference.

The most substantial positive differences for males are in the 10–19 and 30–39 age ranges. The 2011 Census has more males at ages 10–19 and 30–39 than the rolled forward estimates. However, the opposite is true for males aged 20–29 where Census estimates are substantially below the rolled forward estimates. For females, the pattern is slightly different. The Census has considerably more females at ages 10–19 and 30–39. However, there are also more females at ages 20–29. For other ages (0–9 and ages above 40) the Census estimates and the rolled forward estimates are relatively close for both males and females.

A [report \(1.19 Mb Pdf\)](#), examining the difference between mid-2011 population estimates based on the 2011 Census and the mid-2011 estimates rolled forward from the 2001 Census at local authority level, was published on 25 September 2012.

Planned Changes to Birth and Death Outputs

During May 2012 changes were made to the Population Statistics Act 1938, which means that information on the number of previous children and whether previously married is now collected from all mothers at birth registration and not just from married women. This will have an impact on a number of tables and [proposals for changes \(66.2 Kb Pdf\)](#) to outputs for 2012 and 2013 data are available on the ONS website. Feedback from users is welcome.

Changes to the tables included within [Live Births by socio-economic status of father](#) are also being considered including the possible implementation of the combined method for deriving the National Statistics Socio-economic Classification (using the higher NS-SEC of both parents rather than the NS-SEC of the father). A proposal for changes to outputs for 2012 data will be available on the ONS website alongside the release of 2011 data.

Future changes to mortality outputs are outlined in the [plan for mortality outputs \(116 Kb Pdf\)](#) available on the ONS website. Feedback from users is welcome.

Users and Uses of Birth and Death Statistics

The Office for National Statistics uses these data to:

- Produce population estimates and population projections both national and subnational.
- Quality assure census estimates.
- Report on social and demographic trends.
- Analyse mortality; for example infant mortality, where infant deaths are linked to their corresponding birth record to enable more detailed analyses on characteristics such as age of parents, birthweight and whether the child was born as part of a multiple birth.
- Produce life expectancy estimates.

The Department of Health (DH) is a key user of birth and death statistics. Data are used, for example, to plan maternity services, inform policy decisions and monitor child mortality. The [Public Health Outcomes Framework](#) sets out the desired outcomes for public health and how these will be measured, this includes indicators related to births and deaths. Similar indicators are also included within the [NHS Outcomes Framework](#).

Other key users of the data are local authorities and other government departments for planning and resource allocation. For example, local authorities use birth statistics to decide how many school places will be needed in a given area. The Department for Work and Pensions (DWP) uses detailed birth and death statistics to feed into statistical models they use for pensions and benefits.

Users also include other public sector organisations such as the Police and the Home Office who are interested in data on external causes of death. Private sector organisations such as banks, insurance and investment companies are particularly interested in deaths by single year of age and region which feeds into risk estimation, while births data are also of interest to retailers to inform future demand.

Other users include academics, demographers and health researchers who conduct research into trends and characteristics. Lobby groups use birth and death statistics to support their cause, for example, campaigns against school closures, midwife shortages, alcohol misuse or suicide. Special interest groups, such as Birth Choice UK, make the data available to enable comparisons between maternity units to help women choose where they might like to give birth. Organisations such as Eurostat and the United Nations (UN) use birth and death statistics for making international comparisons. The media also report on key trends and statistics.

Further Information on Birth and Death Statistics

More data on [births](#) and [deaths](#) in England and Wales in 2011, including [Deaths by single year of age](#) are available on the ONS website.

[Quality and Methodology Information](#) documents for births and deaths statistics are available on the ONS website. Further information on data quality, legislation and procedures relating to births and deaths is available on the ONS website in [births metadata \(332.6 Kb Pdf\)](#) and [mortality metadata \(2.46 Mb Pdf\)](#).

Further 2011 birth and death statistics will be published later in 2012, see the [Publication Hub](#) for more details on releases.

[Characteristics of Birth 1, 2011](#) and [Births by area of usual residence of mother, 2011](#) for England and Wales will be published on 31 October 2012.

[Mortality Statistics: Deaths registered in England and Wales \(series DR\), 2011](#) will be published on 6 November 2012.

[Mortality statistics: Deaths registered in England and Wales by area of usual residence, 2011](#) will be published in December 2012/January 2013.

Interactive mapping tools, which enable trends in [fertility](#) and [mortality](#) to be analysed at the local area level are available on the Neighbourhood Statistics website. The tools will be updated in Summer 2013 to include revised rates for 2002-2010 and rates for 2011.

To meet user needs, very timely but provisional counts of death registrations are published as follows: [Provisional counts of weekly death registrations by age-sex group and region](#) and [provisional counts of monthly death registrations by local authority](#). Users should note that figures for 2012 have not been subject to the full quality assurance process so figures are considered provisional.

For births data for other UK countries please see the latest [birth statistics for Northern Ireland](#) and the latest [birth statistics for Scotland](#).

For mortality data for other UK countries please see [statistics on deaths in Northern Ireland](#) and [statistics on deaths in Scotland](#).

International comparisons of live birth and death rates are available in the [Vital Statistics: Population and Health Reference Tables](#).

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Background notes

1. Death figures reported here are based on deaths registered in the data year. This includes some deaths that occurred in years prior to 2011 (20,917 deaths). ONS also takes an annual extract of death occurrences in the autumn following the data year (to allow for late registrations). This is used for seasonal analysis of mortality data and several infant mortality outputs. The difference between death registrations and death occurrences in a year is relatively small. For example, the number of death registrations in 2010 involving deaths occurring in 2010 was 473,661 while the number of 2010 death occurrences was 491,449 (a difference of 4 per cent).
2. Birth figures are based on births occurring in the data year, but incorporate a small number of late registrations from births occurring in the previous year. More information can be found in the [births metadata \(332.6 Kb Pdf\)](#).
3. There is a large degree of comparability in birth and death statistics between countries within the UK. However, there are some differences although these are believed to have a negligible impact on the comparability of the statistics. These differences are outlined in [Quality and Methodology Information documents for births and deaths](#).
4. The total fertility rate (TFR) is the average number of live children that a group of women would have if they experienced the age-specific fertility rates of the calendar year in question throughout their childbearing lives. The TFR provides an up-to-date measure of the current intensity of childbearing. Changes in timing of births may influence the TFR; for example if women are increasingly delaying childbearing to older ages the TFR may underestimate average family size. National TFRs are calculated by summing single-year age-specific fertility rates over all ages within the childbearing years (taken to be ages '15 and under' to ages '44 and over'). TFRs for subnational areas (that is regions, counties, unitary authorities and health authorities/boards) are calculated by summing five-year age-specific fertility rates over all childbearing ages and then multiplying by five (this method gives more robust TFRs for areas with smaller populations).
5. A standardised mortality ratio (SMR) is essentially a comparison of the observed number of deaths in a population with the expected number of deaths if age-specific death rates were the same as a standard population. It is expressed as a ratio of observed to expected deaths, multiplied by 100. If an area has an SMR equal to 100 it implies that the mortality levels in the area are the same as the national levels. A number higher than 100 implies an excess mortality rate whereas a number below 100 implies below average mortality. Comparisons of SMRs across years can be misleading because they are influenced by the size and the age-sex structure of the population in local areas which varies between years.

6. Definitions used in this bulletin:

- Stillbirth – born after 24 or more weeks completed gestation and which did not, at any time, breathe or show signs of life.
- Early neonatal – deaths under 7 days.
- Perinatal – stillbirths and early neonatal deaths.
- Neonatal – deaths under 28 days.
- Postneonatal – deaths between 28 days and 1 year.
- Infant – deaths under 1 year.

7. The infant mortality rates in this release have been calculated by dividing the number of infant death registrations (deaths under 1 year) by the number of live births occurring in the year plus late registrations from the previous year. Infant mortality rates can also be calculated using death occurrences. These rates are not released until later because for the death occurrences dataset to be acceptably complete it must be taken some 9 months after the end of the relevant calendar period. All perinatal and neonatal rates have also been calculated using death registrations rather than death occurrences. Statistics on infant, neonatal and perinatal deaths occurring in England and Wales in 2011 will be published in [Child Mortality Statistics](#) (this publication is based on death occurrences rather than registrations).

8. Coding underlying cause of death: the cause of death data are based on the final underlying cause of death, which takes account of any additional information provided by medical practitioners or coroners after the death has been registered. The original underlying cause of death only changes in a very small number of deaths (around 0.2 per cent) in a given year. Deaths registered in 2011 have been coded to the Tenth Revision of the International Classification of Diseases and Related Health Problems (ICD–10) v2010.

9. The Human Fertilisation and Embryology Act 2008 contained provisions enabling two females in a same-sex couple to register a birth from 1 September 2009 onwards. Due to the small numbers of births registered to same-sex couples, births registered within a civil partnership are included with births registered within marriage. Births registered by a same-sex couple outside of a civil partnership have been included with births registered outside marriage. The impact on 2011 birth statistics is negligible since only 0.08 per cent of live births were registered to same-sex couples. In 2011 there were 417 live births registered to same-sex couples in a civil partnership and 191 live births registered to a same-sex couple outside a civil partnership.

10. The standardised mean (average) age of mother is used in order to eliminate the impact of any changes in the distribution of the population by age and therefore enables trends over time to be analysed. Standardised means are calculated using rates per 1,000 female population by single year of age of mother. The 2011 average age of mother has been calculated using the mid-2011 population estimates.

11. A list of the names of those given pre-publication access to the statistics and written commentary is available in [pre-release Annual Births & Deaths - Final Release \(30.2 Kb Pdf\)](#). The rules and principles which govern pre-release access are featured within the [Pre-release Access to Official Statistics Order 2008](#).

12. Special extracts and tabulations of births and deaths data for England and Wales are available to order for a charge (subject to legal frameworks, disclosure control, resources and agreements of costs, where appropriate). Such enquiries should be made to:

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PO15 5RR

Tel: +44 (0)1329 444 110

E-mail: vsob@ons.gsi.gov.uk

The [ONS charging policy](#) is available on the ONS website.

13. We would welcome feedback on the content, format and relevance of this release. [User Engagement in the Health and Life Events Division](#) is available to download from the ONS website. Please send feedback to the postal or email address above.
14. Follow ONS on [Twitter](#) and [Facebook](#).
15. Details of the policy governing the release of new data are available by visiting www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html or from the Media Relations Office email: media.relations@ons.gsi.gov.uk

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