Deaths Registered in England and Wales: 2014

Deaths, stillbirths and infant mortality including death rates, causes, age, and area of residence.

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1. Main points

- There were 501,424 deaths registered in England and Wales in 2014, compared with 506,790 in 2013 (a fall of 1.1%)

- Age-standardised mortality rates (ASMRs) have continued to decrease in 2014. There were 11,213 deaths per million population for males and 8,219 deaths per million population for females

- The infant mortality rate decreased in 2014 to 3.9 deaths per thousand live births, compared with 4.0 in 2013

- There were 3,254 stillbirths in England and Wales in 2014, compared with 3,284 in 2013 (a fall of 0.9%)

- In 2014, cancer was the most common broad cause of death (29% of all deaths registered) followed by circulatory diseases, such as heart disease and strokes (27% of all deaths registered). Cancer was the most common broad cause of death for both sexes

2. Summary

This bulletin presents summary statistics on deaths, stillbirths and infant mortality in England and Wales in 2014. All statistics are based on deaths registered in England and Wales in a particular year. For information on registration delays for a range of causes, see Impact of registration delays on mortality statistics.

The 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 counts of stillbirths and infant mortality rates by area of usual residence are also included.

This is the first time that 2014 annual figures for deaths in England and Wales have been published.

3. Total deaths

There were 501,424 deaths registered in England and Wales in 2014, compared with 506,790 in 2013 (a fall of 1.1%), and 514,250 in 2004. This continues the long-term downward trend in the number of deaths. The number of registration days in a calendar year can have a small effect on the number of deaths registered in that year. The number of deaths is also affected by the size and age structure of the population. Statistics on the number of deaths in England and Wales are available back to 1938 in the Vital statistics: population and health reference tables and back to 1901 in the 20th century mortality files.

4. Age-standardised mortality rates

Mortality rates calculated using the 2013 European Standard Population (ESP) have continued the downward trend, with 11,213 deaths per million population for males and 8,219 deaths per million population for females in 2014 (Figure 1). Since 2001, age-standardised mortality rates (ASMRs) have decreased by 26% for males and 21% for females. The male ASMR has decreased each year since 2001, whereas the female ASMR has decreased with the exception of 3 small rises, the latest being in 2012.
Mortality rates are generally falling, as people are tending to live longer for a variety of reasons, including improved lifestyles and medical advances in the treatment of many illnesses and diseases. This is illustrated by the reduction in ASMRs for many causes of death. Since 2004, ASMRs across all 5 year age groups by sex have either decreased or remained unchanged (see Table 1 (312 Kb Excel sheet)). Mortality rates for males and females in 2014 have continued to decline, as have the number of deaths, while there has been an increase in the population at older ages.

Figure 1: Age-standardised mortality rates (ASMRs), 2001-2014

England and Wales

Source: Office for National Statistics

Notes:

1. Based on deaths registered in the calendar year

2. These rates are for all ages and are standardised to the 2013 European standard population, expressed per million population (see background note 3)

The ASMRs produced in this report and in the associated reference tables have been calculated using the 2013 ESP. In 2013, Eurostat updated the ESP for the first time since it was introduced in 1976, to make it more representative of the current population in Europe (Eurostat, 2013).

The impact of the change from the 1976 ESP to the 2013 ESP was greatest for conditions commonly associated with older ages (where ASMRs increased) and those almost exclusive to very young ages (where ASMRs decreased). More information about the impact of this change can be found on our website

5. Stillbirths

The number of stillbirths in England and Wales decreased to 3,254 in 2014 compared with 3,284 in 2013 (a fall of 0.9%). In comparison, the total number of births (both live births and stillbirths) decreased by just 0.5% in 2014. Stillbirths in England decreased by 1.8% from 3,103 in 2013 to 3,047 in 2014. Stillbirths in Wales increased by 15.7% from 153 in 2013 to 177 in 2014. Due to the small number of stillbirths in Wales, small changes in the number of stillbirths in a year can result in large percentage changes.
The stillbirth rate takes into account the total number of births and so provides a more accurate indication of trends than just analysing the number of stillbirths over time. In 2014, the stillbirth rate for England and Wales remained at 4.7 per thousand total births, the same as in 2013. In 2013, this was the lowest stillbirth rate since 1992 when it was 4.3. In England, the stillbirth rate in 2014 was 4.6 per thousand total births, the same as in 2013. There has been a general downward trend in the stillbirth rate since 2004 with a decrease of 19.3% over the last 10 years (Figure 2). In Wales the stillbirth rate in 2014 was 5.2 per thousand total births, up from 4.5 in 2013 but, has fallen from 5.7 in 2004 (Figure 2).

Figure 2: Stillbirth rates, 2004-2014

![Graph showing stillbirth rates from 2004 to 2014 for England and Wales.](image)

Source: Office for National Statistics

Notes:

1. Stillbirths rates per 1,000 live births and stillbirths
2. Based on stillbirths and births occurring in each calendar year

Small fluctuations in the number of stillbirths and the stillbirth rate in England and Wales have occurred during the last decade, with the highest stillbirth rate during the period being 5.7 per thousand total births in 2004. The main risk factors for stillbirths include maternal obesity, smoking, and fetal growth restriction (Gardosi et al., 2013).

Stillbirths and neonatal mortality rates are an indicator within the NHS Outcomes Framework 2014/15, measuring the number of deaths in new born babies younger than 28 days in England. The Department of Health (DH), together with the stillbirth and neonatal death charity (Sands) and a number of important organisations such as NHS England, Public Health England (PHE), the Royal College of Midwives and the Royal College of Obstetricians and Gynaecologists, are working on an ongoing stillbirth programme. This has included identifying and agreeing the main messages that can be used to raise awareness of the risk factors for stillbirths among pregnant women and health professionals and the actions that can be taken to minimise these risks.

In Wales, a National Stillbirth Working Group was set up within the 1000 Lives Plus programme of work in April 2012, and includes representation of important stakeholders in maternity care. The National Assembly for Wales published a report in 2013 which identified a number of actions to improve the stillbirth rate in Wales. Further information can be found on the 1000 Lives Plus website.
6. Infant, perinatal and neonatal deaths

In 2014, there were 2,689 infant deaths (under 1 year of age) registered in England and Wales, a decrease from 2,767 in 2013. The infant mortality rate (based on death registrations – see background note 8) decreased in 2014 to 3.9 deaths per thousand live births, compared with 4.0 in 2013.

In 2014, the perinatal mortality rate (stillbirths and deaths under 7 days), the neonatal mortality rate (deaths under 28 days) and the postneonatal mortality rate (deaths between 28 days and 1 year) remained the same as in 2013, 6.7 deaths per thousand total births, 2.7 deaths per thousand live births, 1.2 deaths per thousand live births and respectively.

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 1984 and 2014, the infant mortality rate fell by 59%, while the neonatal and postneonatal mortality rates fell by 52% and 69% respectively. Although the overall trend has been one of decreasing rates, the rates of change have not been constant over the period; change in the first decade was nearly twice that in the latter two decades.

**Figure 3: Infant, neonatal and postneonatal mortality rates, 1984 to 2014**

![Chart showing infant, neonatal, and postneonatal mortality rates from 1984 to 2014](source)

**Notes:**

1. Based on deaths registered in each calendar year

There are many established risk factors for infant mortality: prematurity, low birthweight and multiplicity are 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 1 year (Oakley, et al., 2009 [720.5 Kb Pdf]).
7. Causes of death

On 1 January 2014, ONS changed the software used to code cause of death to a package called IRIS (version 2013). Further information can be found in background note 5.

Cancer accounted for nearly a third (29%) of all deaths registered in 2014, with an age-standardised rate of 3,446 deaths per million population for males and 2,359 deaths per million population for females. For both males and females, cancer was the most common broad cause of death (32% of all male deaths registered in 2014 and 27% of all female deaths registered in 2014). Cancer was also the most common broad cause of death in 2013 (29% of all deaths). Since 2004, death rates for cancer have fallen by 11% for males and 8% for females.

Circulatory diseases, such as heart disease and stroke, accounted for just over a quarter (27%) of all deaths registered in 2014. Between 2004 and 2014, the age-standardised death rates for circulatory diseases fell by 40% to 3,194 deaths per million population for males, and by 42% to 2,102 deaths per million population for females.

Over the course of the 20th century, there have been fairly steady decreases in mortality rates for the main 3 broad disease groups (cancer, circulatory and respiratory) in England and Wales. The reasons for this include improvements in the treatment and diagnosis of these diseases.

There have also been initiatives to improve people’s health through better diet and lifestyle, for example, in England, the Department of Health’s “Change4Life campaign”, which began in 2009. There have been other high-profile awareness campaigns such as the “Be clear on cancer campaign”, which has been active since January 2010, and “Stoptober”, which runs every October.

In March 2013, DH published Living Well for Longer: National support for local action to reduce premature avoidable mortality. This sets out the actions national partners for health and care, including Government, the National Health Service (NHS) and Public Health England (PHE) would take in 2014/15 to reduce premature avoidable mortality. A report, Living Well for Longer – One Year On has been published on progress towards these commitments. This also explained how the system would continue to prioritise actions towards reductions in premature death as part of mainstream functions.

Similarly, Public Health Wales has a number of campaigns such as “Stop smoking Wales”, “Change4Life Wales”, which launched in 2010, and the “Screening for life” campaign, which is run in July.

8. Death registrations by area of usual residence

Standardised mortality ratios (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 (see background note 4). Local authorities find these ratios useful to gauge how deaths in their area compare with England and Wales as a whole in a given year.

The North East had the highest SMR among the regions of England in 2014, with mortality levels 14 percentage points above the national level. Mortality levels were lowest in London, at 9 percentage points below the national level.

In 2014, the local authority in England with the highest SMR was Middlesbrough (37 percentage points above the national level). The City of London had the lowest (57 percentage points below the national level, although this rate may have low reliability as a measure due to the small number of deaths registered – 28 deaths).
In Wales, Blaenau Gwent had the highest SMR (27 percentage points above the national level) while Monmouthshire had the lowest (12 percentage points below the national level).

It is recognised that there are generally higher levels of deprivation in the north of England than in the south (Department for Communities and Local Government, 2011), and in the Welsh valleys in comparison to counties such as Monmouthshire (Welsh Index of Multiple Deprivation (WIMD), 2014). Increased mortality rates for many causes of death have long been associated with higher levels of deprivation (Romeri et al., 2006 (522.9 Kb Pdf)). This is a reflection of underlying differences in factors such as income deprivation, smoking status and other health-related behaviour. For further information see Life expectancy at birth and at age 65 for local areas in the United Kingdom.

9. Infant mortality by region of usual residence

Infant mortality rates (based on death registrations – see background note 8) vary by region and can fluctuate over time. In 2014, the West Midlands had the highest regional infant mortality rate, with 5.5 deaths per thousand live births. London had the lowest, with 3.1 deaths per thousand live births. Wales had an infant mortality rate of 3.7 deaths per thousand live births.

The variation between different regions may reflect underlying differences in maternal factors such as the mother’s country of birth, socio-economic status and age (for further information, see Child mortality statistics).

10. Deaths in the UK

The provisional number of UK deaths registered in 2014 was 570,341 (see background note 2). This is a fall of 1.1% compared with 2013, when there were 576,458 deaths.

Northern Ireland recorded a fall in the number of deaths, decreasing by 1.9% to 14,678 in 2014, from 14,968 in 2013. In Scotland the number of deaths also decreased, from 54,700 in 2013 to 54,239 in 2014 (provisional figure), a fall of 0.8%.

11. Users and uses of death statistics

ONS uses mortality data for the following purposes:

- producing population estimates and population projections at both national and subnational level
- reporting on social and demographic trends
- carrying out further analysis, for example, on life expectancy, health expectancy and by cause of death (including avoidable mortality, drug-related deaths and suicides)
- further analysing 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, gestational age, ethnicity and whether the child was born as part of a multiple birth
- quality assuring Census estimates
The Department of Health (DH) is an important user of mortality statistics. The Public Health Outcomes Framework sets out the desired outcomes for public health and how these will be measured, while the NHS Outcomes Framework measures performance in the health and care system at a national level. Data from both frameworks are used, for example, to inform policy decisions and to reduce premature mortality from the major causes of death.

The Welsh Government (WG) is another important user of mortality statistics. The Programme for Government sets out the indicators, one of which is 21st Century Healthcare. Data are then used to determine delivery priorities, such as those relating to cancer and circulatory diseases, as outlined in the Wales NHS health delivery plans.

Infant mortality is also seen as an important measure among health outcomes and there is a long established link between social and health inequalities, and infant mortality. Infant mortality continues to take a central role in DH and WG’s work on health inequalities.

Other important users of mortality data are local authorities and other government departments, for planning and resource allocation. The Department for Work and Pensions uses detailed mortality 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 to feed into risk estimation. Funeral directors are interested in the number of deaths occurring at the local area level.

Other users include academics, demographers and health researchers who conduct research into trends. Lobby groups and charities use death statistics to support their cause, for example, campaigns against alcohol and drug misuse, or suicide. Organisations such as Eurostat and the UN use death statistics for making international comparisons. The media also report on main trends in mortality.
12. Further information

More data on deaths in England and Wales in 2014 are available on our website.

Data on births in England and Wales in 2014 are also available on our website.

A Quality and Methodology Information (222.3 Kb Pdf) document for mortality statistics is available on our website. Further information on data quality, legislation and procedures relating to mortality is available in the Mortality metadata (2.46 Mb Pdf).

There is an article exploring the Trends in births and deaths over the last century.

There is also an interactive mapping tool which enables trends in mortality to be analysed at the local level.

Further 2014 death statistics will be published later in 2015, see the GOV.UK release calendar for more details on releases.

Mortality Statistics: Deaths Registered in England and Wales (series DR), 2014 will be published in October/November 2015.


To meet user needs, very timely but provisional counts of death registrations are published: 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 2015 have not been subject to the full quality assurance process so figures are considered provisional. Monthly figures for 2014 will be updated to final figures on 28 July 2015.

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 death numbers and rates are available in the Vital statistics: population and health reference tables.

For data on the leading causes of death in the world please see the WHO website.

13. References


1. Death figures reported here are based on deaths registered in the data year. This includes some deaths that occurred in the years prior to 2014 (23,672 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 2013 involving deaths occurring in 2013 was 482,658, while the number of 2013 death occurrences was 502,670 (a difference of 4%). Further information on the impact of registration delays can be found on our website.

2. There is a large degree of comparability in death statistics between countries within the UK. 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 (222.3 Kb Pdf) document for deaths.

3. The age-standardised mortality rates (ASMRs) in this release cover all ages. Age-specific rates for 2014 were calculated using the mid-2014 population estimates based on the 2011 Census and were then directly age-standardised to the 2013 European Standard Population (ESP), which allows comparisons between populations with different age structures, including between males and females and over time. Trends in mortality levels within and between areas have remained relatively unchanged following the implementation of the 2013 ESP. More information on the 2013 revised ESP is available on our website.

4. A standardised mortality ratio (SMR) is 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.

5. The Office for National Statistics (ONS) code cause of death using the World Health Organization’s (WHO) International Classification of Diseases (ICD). Between January 2001 and December 2010, ONS used the Mortality Medical Data System (MMDS) ICD-10 version 2001.2 software provided by the United States National Center for Health Statistics (NCHS) to code cause of death. In January 2011, this was updated to version 2010, which incorporated most of the WHO amendments authorised up to 2009, for further information see the results of the bridge coding study. On 1 January 2014, ONS changed the software used to code cause of death to a package called IRIS (version 2013). The development of IRIS was supported by Eurostat, the statistical office of the European Union, and is now managed by the IRIS Institute hosted by the German Institute of Medical Documentation and Information in Cologne. IRIS software version 2013 incorporates all official updates to ICD-10 approved by WHO, which were timetabled for implementation before 2014. These updates include changes to the use of codes within the neoplasms (cancer) chapter (ICD-10 codes C00-D48). In addition a small number of changes were made to the coding...
of specific conditions, to bring previous coding practice in line with international coding rules and changes were made to the coding of neonatal deaths and stillbirths. Further information on IRIS can be found on the ONS website and in the dual coding study looking at the impact on mortality statistics.

6. Coding underlying cause of death: the cause of death data are based on the final underlying cause of death, which takes into account 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%) in a given year. Deaths registered in 2014 have been coded to the Tenth Revision of the International Classification of Diseases and Related Health Problems (ICD–10) v2010.

7. 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

8. 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 2014 will be published in Child mortality statistics (this publication is based on death occurrences rather than registrations).

9. A list of the names of those given pre-publication access to the statistics and written commentary is available in Pre-release Access List for Death Registrations Summary Tables. The rules and principles which govern pre-release access are featured within the Pre-release Access to Official Statistics Order 2008.

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

Vital Statistics Outputs Branch Office for National Statistics Segensworth Road Titchfield Fareham Hampshire PO15 5RR

Tel: +44 (0)1329 444110 E-mail: vsob@ons.gsi.gov.uk

The ONS charging policy is available on our website. In line with the ONS approach to open data, all ad hoc data requests will be published onto the website.

11. We would welcome feedback on the content, format and relevance of this release. Please send feedback to the postal or email address above.

12. Follow us on Twitter, Facebook and ONS LinkedIn.

13. 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

The United Kingdom Statistics Authority has designated these statistics as National Statistics, in accordance with the Statistics and Registration Service Act 2007 and signifying compliance with the Code of Practice for Official Statistics.

Designation can be broadly interpreted to mean that the statistics:

- meet identified user needs
• are well explained and readily accessible
• are produced according to sound methods
• are managed impartially and objectively in the public interest

Once statistics have been designated as National Statistics it is a statutory requirement that the Code of Practice shall continue to be observed.