

Mortality statistics in England and Wales QMI

Contact:


Release date:
6 August 2019

Next release:
To be announced

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1 . Output information

National Statistic		Related publications <ul style="list-style-type: none"> Weekly deaths Monthly deaths Death registration summary tables Series DR Mortality statistics: area of usual residence 20th Century mortality files 21st Century mortality files Quarterly mortality report, England
Data collection	Administrative data	
Frequency	Weekly, monthly, quarterly and annually	
How compiled	Based on third-party data	
Geographic coverage	England and Wales	
Contact	mortality@ons.gov.uk	
Last revised	August 2019	

2 . Important points about mortality data

- The Births and Deaths Registration Act (1836) made it a legal requirement for all deaths to be registered from 1 July 1837.
- The Local Registration Service, in partnership with the General Register Office (GRO), register deaths occurring in England and Wales.
- Coding for cause of death is carried out according to the World Health Organization (WHO) International Classification of Diseases (ICD-10) and internationally agreed rules, allowing for international comparisons.

3 . Overview of the output

Mortality statistics represent the number of deaths registered in a particular reference period. They are based on the details collected when deaths are certified and registered.

Published [weekly](#), [monthly](#), quarterly and annually, mortality statistics are based on deaths registered in a particular period to ensure they are timely and accurate. Provisional figures have not been subject to the full quality assurance process.

Annual primary mortality statistics (based on deaths registered in a calendar year) are published in three packages. These separate releases are [Series DR](#), [Mortality statistics: area of usual residence](#) and our [explorable dataset](#). Prior to 2019 there were four publications; death registration summary tables were merged with Series DR from deaths registered in 2018 onwards.

Annual mortality statistics generally cover all deaths that take place in England and Wales. However, the annual time series data table in the [vital statistics: population and health reference tables](#) provides a range of mortality statistics for the UK and its constituent countries, with some measures available back to 1838.

External users of mortality statistics include the [Department of Health and Social Care \(DHSC\)](#), which uses the data to inform policy decisions and to monitor child mortality, and local authorities and government departments, for planning and resource allocation. The [Department of Work and Pensions](#) also uses detailed mortality statistics to feed into statistical models for calculating pensions and benefits.

More detailed information is available in the [User guide to mortality statistics](#).

4 . Output quality

This report provides a range of information that describes the quality of the data and details any points that should be noted when using the output.

We have developed [Guidelines for Measuring Statistical Quality](#) based upon the five European Statistical System (ESS) quality dimensions. This report addresses these quality dimensions and other important quality characteristics, which are:

- relevance
- timeliness and punctuality
- coherence and comparability
- accuracy and reliability
- output quality trade-offs
- assessment of user needs and perceptions
- accessibility and clarity

More information is provided about these quality dimensions in the following sections.

5 . About the output

Relevance

(The degree to which statistical outputs meet users' needs.)

The registration of deaths occurring in England and Wales is carried out by the Local Registration Service in partnership with the General Register Office (GRO). Information collected at death registration in England and Wales is recorded on the Registration Online (RON) system by registrars. Normally, most of the information is supplied by the informant (usually a close relative of the deceased), while the cause of death is usually obtained from the medical certificate of cause of death (MCCD), completed by a medical practitioner when the death is certified.

We quality assure mortality data for England and Wales and coordinate and publish statistics for the whole of the UK alongside statistics for each constituent country. Once published, they are freely available on our website.

All deaths that occur in England and Wales must be registered in England and Wales. Deaths of those whose usual residence is outside England and Wales are included in total figures for England and Wales but are excluded from any sub-division of England and Wales. Our mortality statistics exclude deaths of all residents of England and Wales that occur and are registered outside England and Wales.

To meet user needs, very timely but provisional counts of death registrations are published.

[Provisional counts of weekly death registrations for England and Wales](#) by age group, sex and regions (within England) and Wales are published 11 days after the week ends. Weeks run from Saturday to Friday, and figures are normally published the following Tuesday. The respiratory disease counts are updated with each weekly publication as the coding of the underlying cause is not always complete at the time of production. Other figures are not updated. Figures for the latest week are published.

[Provisional counts of monthly death registrations for England and Wales](#) by regions (within England), unitary authorities, counties, districts and London boroughs are published on the fourth Tuesday of the following month.

[Quarterly mortality report, England](#) provides timely surveillance of mortality in England with provisional death registration and death occurrence data for England broken down by sex, age and underlying cause of death.

Our first release of final annual data takes place in summer, when our [Deaths registered in England and Wales \(Series DR\)](#) are published, with supporting commentary in a statistical bulletin. Previously, our [Death registration summary tables](#) were the first release; however, these have now been merged with the series DR. More detailed figures are then released in a series of themed packages.

[Deaths registered in England and Wales \(Series DR\)](#) provides detailed death statistics for the reference year including:

- numbers and rates for all deaths (male and female); infant deaths; neonatal deaths and still-births; crude death rates; age-standardised mortality rates (ASMRs); and infant mortality rates from 1838 onwards
- numbers by age group and sex, marital status and place of occurrence (for example, at home or in hospital)
- numbers and mortality rates for all deaths (male and female) and infant deaths, neonatal deaths and still-births by area of usual residence (regions (within England), unitary authorities, counties, districts, London boroughs and local health boards (within Wales))
- numbers of injury and poisoning deaths by external cause
- numbers and percentages of leading causes of death by age group and sex
- ASMRs by selected underlying cause
- years of life lost due to mortality from certain underlying causes
- number of deaths by single year of age and sex for England and Wales (1963 onwards) and the UK (1974 onwards)

[Mortality statistics: area of usual residence](#) provides detailed figures down to local authority level for the reference year, including:

- numbers and rates for all deaths (male and female) infant deaths; neonatal deaths and perinatal deaths; and ASMRs
- figures for all areas within the UK and its constituent countries (numbers and rates) by regions (England), unitary authorities, counties, districts, London boroughs, health areas, council areas (Scotland) and local government districts (Northern Ireland)

Detailed annual mortality statistics are available in Nomis, an [explorable dataset](#) for England and Wales, including:

- number of deaths by age group, sex, area of usual residence, leading cause of death and detailed underlying cause, classified using the [Tenth Revision of the International Classification of Diseases and Related Health Problems \(ICD-10\)](#)
- figures for all areas within England and Wales by regions (England), unitary authorities, counties, districts and middle super output area (MSOA)
- ASMRs and percentages of all deaths, or within the whole population, sex or age group

[20th Century mortality files](#) (on our archive website) provide death registration statistics for England and Wales by sex, age group and underlying cause.

[21st Century mortality files](#) provide death registration statistics for England and Wales by sex, age group and underlying cause.

We also publish more detailed mortality statistics as follows:

- [Alcohol-related deaths](#) in the UK provides numbers and rates of alcohol-related deaths by sex, age group, and individual cause of death by UK and its constituent countries and regions (within England)
- [Avoidable mortality](#) provides numbers and rates by sex and age by country for England and Wales for deaths from causes that are considered avoidable in the presence of timely and effective healthcare or public health interventions
- [Deaths of homeless people](#) provides numbers by sex, age, underlying cause, and region in England and Wales
- [Deaths related to drug poisoning](#) provides number of deaths by cause of death, sex, age and substance(s) involved in the death by country for England and Wales; it also includes rates for deaths related to drug misuse by regions (within England), unitary authorities, counties, districts, London boroughs, and average registration delay by local authorities (England) and unitary authorities (Wales)
- [Excess winter mortality](#) provides selected provisional and final numbers and indices by age, sex and cause for England and Wales, regions and local authorities (within England) and unitary authorities (Wales)
- [Suicides in the UK](#) provides suicide rates by sex for the UK and its constituent countries; numbers and rates of narrative conclusions by sex and regions (within England and Wales); numbers (registrations) and rates of suicides and median registration delay for local authorities (England) and unitary authorities (Wales); and numbers of occurrences and rates by age and sex by country for England and Wales

These releases are covered by separate Quality and Methodology Information (QMI) reports.

We use mortality statistics to:

- produce population estimates and population projections, both national and subnational
- produce life expectancy estimates
- quality assure census estimates
- report on social and demographic trends
- conduct health analyses
- further analyse mortality (for example, life expectancies and causes of death, including deaths from certain infections and drug-related deaths)
- further analyse infant mortality where infant deaths are linked to their corresponding birth record, to enable more detailed analyses on characteristics (for example, age of parents, birthweight and whether the child was born as part of a multiple birth)

The [Department of Health and Social Care \(DHSC\)](#), NHS Digital, and the Welsh Government are key users of mortality statistics. For example, the DHSC uses data to 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 Indicators](#). NHS Digital use data to produce their [Compendium: Mortality](#) set, which covers wide range of mortality indicators. The Welsh Government use data to determine delivery priorities, such as those relating to cancer and circulatory diseases, as outlined in the NHS Wales [health delivery plans](#) and in the [Public Health Outcomes Framework](#).

Infant mortality, including still-births and neonatal deaths, is considered to be a priority measure among health outcomes. There is a long-established link between social and health inequalities and infant mortality. Infant mortality continues to take a central role in work of the DHSC and Welsh Government's on health inequalities.

Other key users of the data are local authorities and other government departments, for planning and resource allocation. The Department for Work and Pensions (DWP) uses detailed mortality statistics to feed into statistical models for calculating pensions and benefits. Health organisations also use the data.

Other public sector organisations such as the police and the Home Office 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 models.

Academics, demographers and health researchers conduct research into trends and characteristics. Lobby groups use mortality statistics to support their cause (for example, alcohol misuse or suicide). Organisations such as Eurostat and the United Nations use mortality statistics for making international comparisons. The media also report on trends and statistics.

Public Health England (PHE) use weekly death figures for influenza surveillance and for monitoring the impact of cold weather and heatwaves. Monthly death figures assist local authorities in public health monitoring and civil contingency planning. Funeral directors also use these figures to monitor their market share.

Organisations such as [Eurostat](#) and the [United Nations Statistics Division](#) use our mortality statistics; for example to monitor progress towards global indicators as part of the [UN's Sustainable Development Goals](#).

The [Disclosure control policy for birth and deaths statistics](#) provides guidance for the release and publication of tables based on our death registration data for England and Wales.

Timeliness and punctuality

(Timeliness refers to the lapse of time between publication and the period to which the data refer. Punctuality refers to the gap between planned and actual publication dates.)

To meet user needs, very timely but provisional counts of death registrations are published by week and by month. Annual figures are then published in three themed packages. Summary figures are published in July, seven months after the end of the reference year, following the full quality assurance of the data. Mid-year population estimates for the reference year are also required to calculate mortality rates; these are usually published in June. The summary figures are laid before Parliament in accordance with section 19 of the Registration Services Act 1953 as amended by the Statistics and Registration Service Act 2007. More detailed statistics on death registrations are published in packages between August and January.

For more details on related releases, the [GOV.UK release calendar](#) provides 12 months' advance notice of release dates. In the unlikely event of a change to the pre-announced release schedule, public attention will be drawn to the change and the reasons for the change will be explained fully at the same time, as set out in the [Code of Practice for Statistics](#).

6 . How the output is created

Mortality statistics are based on information collected when deaths are certified and registered in England and Wales. Deaths in England and Wales should be registered within five days of the date of death. There are, however, situations where the registration of a death will be delayed (for example, if the death is referred to a coroner). We have published some analysis of the [impact of registration delays on mortality statistics](#) by cause and the time taken to register a death.

More detailed information on the main processes used in the compilation of mortality statistics –including cause of death coding, accuracy and quality of the data, and the calculation of rates – are available in our [User guide to mortality statistics](#).

Rates for “all causes” include deaths at all ages. Rates by cause of death for 1986 onwards exclude neonatal deaths (infants aged under 28 days). Following recommendations by the World Health Organization (WHO), we have recorded the cause of death for neonates differently from 1986 onwards. Assigning an underlying cause for deaths under 28 days has not been possible since the change. More information is available in our [User guide to mortality statistics](#) and our [User guide to child and infant mortality statistics](#).

In January 2014, we implemented software from the IRIS Institute to automatically code the underlying cause of death. Further information on IRIS can be found in Section 9.1 of our [User guide to mortality statistics](#) and in the [dual coding study](#) looking at the impact on mortality statistics. A further study looks at the [impact of the coding changes on stillbirths and neonatal deaths](#).

7 . Validation and quality assurance

Accuracy and reliability

(The degree of closeness between an estimate and the true value.)

Data collection

Before submitting a death registration through the Registration Online (RON) system, the registrar will verify that all the information provided has been entered accurately. There are some automatic validation checks within RON to help the registrar with this process. More information about these checks is available in our [User guide to mortality statistics](#).

Information supplied by the informant is generally believed to be correct since knowingly supplying false information may render the informant liable to prosecution for perjury. More information on the information supplied when a death is registered or cause of death is certified is available in the annex section of our [User guide to mortality statistics](#).

The cause of death reported represents the final underlying cause of death. This takes account of additional information received from medical practitioners or coroners after the death has been registered; around 40% of deaths are referred to the coroner. The process of referral to a coroner and how referred deaths are dealt with varies between areas. A consultation on a [charter for the coroner service](#) took place in 2011 and aimed to “ensure a greater level of consistency across the country”.

Annually, there are around 30,000 coroner’s inquests in England and Wales. Most are “short-form” conclusions such as:

- accident or misadventure
- natural causes
- suicide
- homicide

“Narrative” conclusions can be used by a coroner or jury instead of a short-form conclusion to express their conclusions as to the cause of death following an inquest.

In deaths from injury and poisoning, some narrative conclusions clearly state the intent and mechanism. However, in a proportion the narrative conclusions give no indication of whether the fatal injury or toxic substance was self-administered or if there was deliberate intent to self-harm. We define these deaths as “hard to code”. Around 8.8% of deaths coded as accidents in 2018 were “hard to code”. Consequently, narrative conclusions could inflate the number of deaths classified as accidents and decrease the number classified as intentional self-harm.

Since 2013, when a death is referred to a coroner for investigation, they may issue a Certificate of the Fact of Death (also known as an interim death certificate) to allow relatives to obtain probate and proceed with other practical arrangements without waiting for the outcome. In those cases where the coroner subsequently decides not to hold an inquest, the legal responsibility to register the death remains with the next of kin (or other person involved).

It is understood that in a small number of cases, the person responsible does not understand this situation. This is possibly because the interim death certificate resembles the formal certificate of death registration in appearance and serves most of the same purposes. This has led to a small number of deaths being unintentionally left unregistered. It is estimated that approximately 50 to 100 deaths a year remain unregistered for this reason. These unregistered deaths are not included in our mortality statistics.

Coding cause of death

Coding for cause of death is carried out according to the World Health Organization (WHO) [ICD-10](#) and internationally agreed rules. More information can be found in Section 9.1 of the [User guide to mortality statistics](#).

Most deaths (around 80%) have the underlying cause of death coded automatically using coding software. The remainder are coded manually by experienced coders. Manual coding is necessary for deaths involving a coroner's inquest. Using an automated coding tool improves the international and temporal comparability of mortality statistics. Periodical reports on persistent coding problems are referred to a medical epidemiologist and to international forums.

The cause of death reported in national- and regional-level mortality statistics represents the final underlying cause of death. This takes account of additional information received from medical practitioners or coroners after the death has been registered; around 0.1% of deaths registered in 2018 had their underlying cause amended. Sometimes the later information becomes available only after the annual extract has been taken. Users with access to individual records of deaths may consequently find some differences with published statistics. Further information is available in Section 9.3 of our [User guide to mortality statistics](#).

The Coroners and Justice Act 2009 will reform the death certification process by introducing a single unified system. The introduction of medical examiners and the scrutiny they provide is expected to improve the quality (precision and completeness) of the cause of death recorded on the medical certificate of cause of death (MCCD), helping to improve mortality statistics.

The consistency of manual cause of death coding for narrative conclusions (previously known as narrative verdicts) has been assessed; [narrative verdicts and their impact on mortality statistics](#) provides more information. The study showed that in 2001, 0.01% of all deaths registered in England and Wales had a narrative conclusion; this increased to 0.61% in 2009. Of these deaths with a narrative conclusion, around 25% had an external cause of death in 2001, the remaining 75% were disease related. By 2009, around 40% of deaths with narrative conclusions were from external causes.

The exercise to establish the consistency of coding the cause of death by our cause coders showed that the current coding rules were being applied uniformly, so the impact of manual coding on statistics is negligible. In 2018, 0.73% of all deaths registered in England and Wales had a narrative conclusion and 57% of these had an external cause of death.

Quality assurance

Daily extracts of death registrations we receive from RON then pass through a series of automatic validation processes that highlight any inconsistencies. The [User guide to mortality statistics](#) provides detailed information on the processing and quality of mortality data for England and Wales.

Internal consistency checks are then conducted to eliminate any errors made during the recording of deaths, and to ensure the annual dataset is complete. Any concerns relating to cause of death are referred to a medical advisor or medical epidemiologist. The [User guide to mortality statistics](#) provides more detail on all these checks.

Coherence and comparability

(Coherence is the degree to which data that are derived from different sources or methods, but refer to the same topic, are similar. Comparability is the degree to which data can be compared over time and domain, for example, geographic level.)

Mortality statistics form an important component of public health measurement; they adhere to key international standards (for example, cause of death classification and coding), which facilitates international comparisons.

The European Standard Population (ESP) is an artificial population structure used to weight age-standardised mortality rates (ASMRs), enabling comparisons. Originally published in 1976, it was updated by Eurostat in 2013. The distribution of the 1976 and 2013 ESPs can be found in the [User guide to mortality statistics](#). Further information about the [change in ESP methods](#) is available on our archive site. Rates based on the two different ESPs are not comparable.

Revisions to mortality statistics occur infrequently and generally only take place following revisions to the mid-year population estimates, resulting in revised mortality rates. Footnotes are added to tables where revisions have taken place and are documented in supplementary information accompanying the release. Errors are rare but any identified are corrected and clearly marked on the release. Please see the [Revisions policy for population statistics](#) for more information.

Changes to the format and content of publications

Over the years, the format and content of mortality publications have changed. Prior to 1993, annual mortality statistics were based on the number of deaths registered in a year. From 1993 to 2005, the figures related to the number of deaths that occurred in a year. From 2006 onwards, annual mortality statistics reverted back to the number of deaths registered in a year. More details on these changes can be found in [Series DR](#) for 2006. Registrations are not entirely comparable to occurrences; however, the differences are relatively minor and figures are broadly comparable for most causes.

Findings from the [ONS consultation on statistical products](#) in 2013 resulted in several mortality publications being discontinued from May 2014 onwards:

- provisional quarterly mortality statistics for the UK and its constituent countries in the [Vital statistics: population and health reference tables \(last published November 2018\)](#)
- annual data on [Injury and poisoning mortality, England and Wales](#) (last published February 2013)
- [Deaths involving Clostridium difficile](#) and [Deaths involving MRSA](#) continued to be published for Wales only from the 2013 data year, however they are no longer published (last published August 2016 and September 2015, respectively)

From the 2015 data year onwards, Table 5 of [Series DR](#) has been discontinued, as more detailed data on underlying cause of death is available as an [explorable dataset](#). This dataset also contains mortality figures by area of usual residence, age and sex.

Changes to definitions and classifications used in published statistics

Due to improvements in the classification and coding of communal establishments, in 2011 we revised our place of death definition. These changes were implemented for 2010 mortality statistics. In particular, the classification was changed to reflect user needs and now identifies:

- local authority and non-local authority care homes
- NHS and non-NHS hospitals (acute or community, not psychiatric)
- other communal establishments (including schools; nurses' homes; hotels; aged persons' accommodation; university and college halls of residence; young offender institutions; and prisons and remand homes)

The Still-Birth (Definition) Act 1992 changed the definition of a still-birth from a child being born after 28 weeks to a child being born after 24 weeks (which did not breathe or show any other signs of life). This means that data for 1992 onwards are not directly comparable with data for still-births before the introduction of the Act.

Since 1993, a short-list of selected underlying causes has been used in death registrations ([Series DR](#)) table. This list was developed in consultation with the Department of Health and consists of around 100 conditions. The list is based on the following:

- all conditions given in the WHO basic tabulation list; with the exception of a few conditions that are so rare as certified causes of death in England and Wales that they could safely be excluded from the list
- totals for each ICD chapter
- conditions used in monitoring public health targets
- other conditions often referred to by the Office for National Statistics (ONS)

This short list provides a standard listing of conditions frequently referred to by all users of the data. For more information on the short-list, see Section 10 of our [User guide to mortality statistics](#).

Changes in the collection and coding of mortality data

Changes in the collection and coding of mortality data may affect the interpretation of trends. The most recent changes that have affected mortality statistics are detailed as follows.

From 1 January 2001, ICD-10 was used to code cause of death, replacing ICD-9, which had been used since 1979. Overall, the vast majority of deaths remained in comparable chapters, but some diseases and conditions did move between chapters. The causes of death most affected included leukaemia, diseases of the liver and land transport accidents. There were also some changes to the rules governing the selection of underlying cause of death, especially Rule 3, which had a large effect: [Understanding the changes to mortality statistics following the move to coding cause of death to ICD-10](#). Comparability ratios were produced to ensure trends over time could be analysed. Further assessments of the change were also published in [Health Statistics Quarterly 13](#) and [Health Statistics Quarterly 19](#).

From 1 January 2007, we introduced a new ICD-10 code (U50.9) for deaths involving adjourned inquests, previously coded to Y33.9. This has simplified the tabulation of deaths from undetermined intent and estimates of intentional self-harm.

Following guidance from the WHO, the ICD-10 code J09 “Influenza due to identified avian influenza virus” was extended to include H1N1 swine influenza from 2009. The numbers of deaths shown under ICD-10 code J09 differ from the figures reported by Public Health England (PHE). PHE reports deaths as related to pandemic A /H1N1 using information from either the death certificate, laboratory testing or both. The Registration Online System was fully implemented in 2009.

We moved from using ICD-10 v2001.2 to ICD-10 v2010 in 2011 and published initial assessments of [the impact on cause of death of moving to ICD10 v2010](#) and [the impact of moving to ICD v2010 for stillbirths and neonatal deaths](#). The impact of the change on specific causes is published alongside the relevant statistics for 2011.

On 1 January 2014, we implemented IRIS software version 2013 to code cause of death. This incorporated official updates to ICD-10 approved by the WHO. Further information on IRIS can be found in Section 9.1 of our [User guide to mortality statistics](#) and in the [dual coding study](#) looking at the impact on mortality statistics. A further study looks at the [impact of the coding changes on stillbirths and neonatal deaths](#).

On 1 October 2014, the Presumption of Death Act 2013 came into force in England and Wales. This enabled applications to the High Court for a declaration that a missing person is presumed to be dead, where the person who is missing is thought to have died or has not been known to be alive for a period of at least seven years.

Earlier changes can be found in Section 16.4 of the [User guide to mortality statistics](#).

Comparisons across reference periods and subnational areas

The number of registration days in a reference period can impact upon mortality statistics. For example, bank holidays can affect the number of registrations within a week or month.

Weekly deaths counts cannot be summed to match the counts for monthly deaths as some weeks may span more than one month.

Until the 2016 data year, annual mortality statistics by area of usual residence were produced using the boundaries that were in place during the year the death was registered. For 2017 data onwards, figures produced in annual publications will be based on the latest boundaries available at the time of the first release of mortality statistics for that year, and the same boundaries will be used throughout the annual packages. Figures produced in ad hoc publications will be based on the latest boundaries available. This approach means that changes in boundaries can affect the comparability of statistics over time.

Since 1993, the informant has been able to decide what address to give if more than one might be applicable. Prior to 1993, there were “rules” determining the validity of one address over another (previous annual reference volumes contain details of these rules).

UK and international comparability

There is a large degree of comparability in mortality statistics between countries within the UK; all figures are based on the details collected when deaths are registered. We quality assure data for England and Wales, enabling detailed mortality statistics to be published. Similarly, National Records of Scotland (NRS) and the Northern Ireland Statistics and Research Agency (NISRA) quality assure data for their own countries and subsequently publish detailed mortality statistics based on deaths registered in the reference period. The definitions, classifications and methods used to produce published death statistics are broadly comparable across the four countries. More information can be found in the [Quality Information for Northern Ireland](#) and in the [Quality information for Scotland](#).

We publish several internationally recognised indicators that facilitate comparisons, which include:

- crude death rates (total deaths per 1,000 population)
- infant mortality rates (deaths under one year per 1,000 live births)
- neonatal mortality rates (deaths under 28 days per 1,000 live births)
- perinatal mortality rates (still-births and deaths under seven days per 1,000 live and still-births)
- age-specific death rates (deaths per 1,000 population in age-sex group; rates for age under one year use the number of live births)
- ASMRs (deaths per 100,000 population standardised to the European Standard Population), which enable comparisons between populations with different age structures, including between males and females and over time.

From the 2015 data year, ASMRs are calculated using population estimates for all age groups. Prior to this, the number of live births were used for the population aged under one year. This change has had no significant impact on the rates.

To enable international comparisons, the [Vital statistics in the UK: births, deaths and marriages](#) provide the crude death rate for different countries. We produce the UK death rate in the table. All other figures are obtained from the [United Nations \(UN\) Monthly Bulletin of Statistics](#).

Internationally, we provide data to [Eurostat](#), the WHO and the UN each year to allow them to compile mortality figures and enable comparison across countries.

8 . Concepts and definitions

(Concepts and definitions describe the legislation governing the output and a description of the classifications used in the output.)

For information on UK legislation relating to mortality statistics and for definitions of terms please see our [User guide to mortality statistics](#).

9 . Other information

Output quality trade-offs

(Trade-offs are the extent to which different dimensions of quality are balanced against each other.)

Up to 1992, publications gave numbers of deaths registered in the period concerned. From 1993 to 2005, figures relate to the number of deaths that occurred in the reference period. Since 2006, figures have been based on deaths registered in the reference period. We made this change to enable the timely release of mortality statistics; figures based on the period of occurrence are much less timely and complete due to late registrations resulting from referral to a coroner. More details on these changes can be found in [Mortality Statistics: Deaths registered in England and Wales \(Series DR\), 2006](#).

We continue to take an annual extract of death occurrences in the autumn following the data year. This is used for seasonal analysis of mortality data and several infant mortality outputs.

Assessment of user needs and perceptions

(The processes for finding out about uses and users and their views on the statistical products.)

Our user consultation to review infant mortality statistics took place between 20 April and 20 July 2017, and we published an [ONS response to the review](#).

The findings of the [ONS Consultation on Statistical Products](#) from September and October 2013 resulted in certain mortality publications being discontinued. For more information, see the section on changes to the format and content of publications in Section 7 'Validation and quality assurance'.

A user consultation to review the infant mortality statistics we produce took place between 5 July 2011 and 16 August 2011, and we published an [ONS response to the review](#).

User feedback is also requested at the bottom of all emails sent by customer service teams within the Vital Statistics Outputs Branch. We also receive feedback through regular attendance at user group meetings and conferences.

10 . Sources for further information or advice

Accessibility and clarity

(Accessibility is the ease with which users are able to access the data, also reflecting the format in which the data are available and the availability of supporting information. Clarity refers to the quality and sufficiency of the release details, illustrations and accompanying advice.)

Our recommended format for accessible content is a combination of HTML web pages for narrative, charts and graphs, with data being provided in usable formats such as CSV, Excel and NOMIS explorable datasets. Our website also offers users the option to download the narrative in PDF format. In some instances, other software may be used or may be available on request. Available formats for content published on our website but not produced by us, or referenced on our website but stored elsewhere, may vary. For further information, please contact mortality@ons.gov.uk.

For information regarding conditions of access to data, please refer to the following:

- [Terms and conditions \(for data on the website\)](#)
- [Accessibility](#)

Special extracts and tabulations of mortality data for England and Wales are available to order (subject to legal frameworks, disclosure control, resources and the [ONS charging policy](#), where appropriate). Such enquiries should be made to the Mortality Analysis team (mortality@ons.gov.uk or telephone +44 (0)1633 456935). We publish all [user-requested data](#).

Access to microdata and disclosive data – that is, data that have the potential to identify an individual record – requires the approval of the ONS Microdata Release Procedure (MRP) before the data can be provided.

Useful links

For information on data quality, legislation and procedures relating to mortality statistics, please see the [User guide to mortality statistics](#).

Links to our death statistics publications are included in section 5 'About the output'.

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