

Statistical bulletin

# Unexplained deaths in infancy, England and Wales: 2020

Annual data on sudden infant deaths in England and Wales and infant deaths for which the cause remained unascertained after a full investigation, with associated risk factors.

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Release date:  
8 September 2022

Next release:  
August to September 2023  
(provisional)

## Table

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# 1 . Main points

- In 2020, there were 150 unexplained deaths of infants (aged under one year) in England and Wales, accounting for 6.7% of all infant deaths.
- The unexplained infant mortality rate had been decreasing since records began in 2004, before levelling out since 2014.
- The infant mortality rate in 2020 (0.24 deaths per 1,000 live births) is lower than previous years, although this provisional figure may be influenced by delays to death registrations because of the coronavirus (COVID-19) pandemic.
- In 2020, sudden infant deaths accounted for 52% of unexplained deaths.
- Unexplained infant deaths are more likely to occur in males, during the postneonatal period, and in low birthweight babies.
- In 2020, mothers aged under 20 years were over seven times more likely to experience unexplained infant deaths than mothers aged 30 to 34 years.
- The unexplained infant mortality rate for babies of mothers born in the UK is more than double the rate for babies of mothers born outside of the UK; and could partly be explained by the different age profile of unexplained infant deaths compared with all infant deaths.

Registration delays for infant deaths may have been longer than normal during the coronavirus pandemic. Therefore, some deaths that occurred in 2020 may not be included in the provisional 2020 data published in this release. Final 2020 data will be published next year. For more information, please see Section 8: [Strengths and limitations](#).

## Statistician's comment

"Today's data show the risk of unexplained infant death continues to be relatively small. There are a range of factors that may influence the risk of an unexplained infant death, from sleeping practices to the age and health of the mother."

"While provisional 2020 rates are down on figures for 2019, because of the coronavirus pandemic and registration delays, some deaths that occurred in 2020 may not be included in this release. Final 2020 data will be published next year, and we will continue to monitor the figures closely."

Amy Watts, Child Health Team, Office for National Statistics

Follow the Child Health Team on Twitter [@ONSJames](#)

## 2 . Trends in unexplained infant deaths

In 2020, there were 150 [unexplained infant deaths](#) in England and Wales, which accounted for 6.7% of all infant deaths that year. This is a decrease from 2019 (187 deaths) and 2018 (213 deaths; see [Table 1 of the accompanying dataset](#)). We also see a declining trend for the total number of all infant deaths in England and Wales (see [Table 1 of the accompanying dataset](#) in our [Child and infant mortality in England and Wales: 2020 bulletin](#)).

The unexplained [infant mortality rate](#) is a better measure for monitoring change over time than the actual number of unexplained deaths. This is because rates account for the number of live births each year.

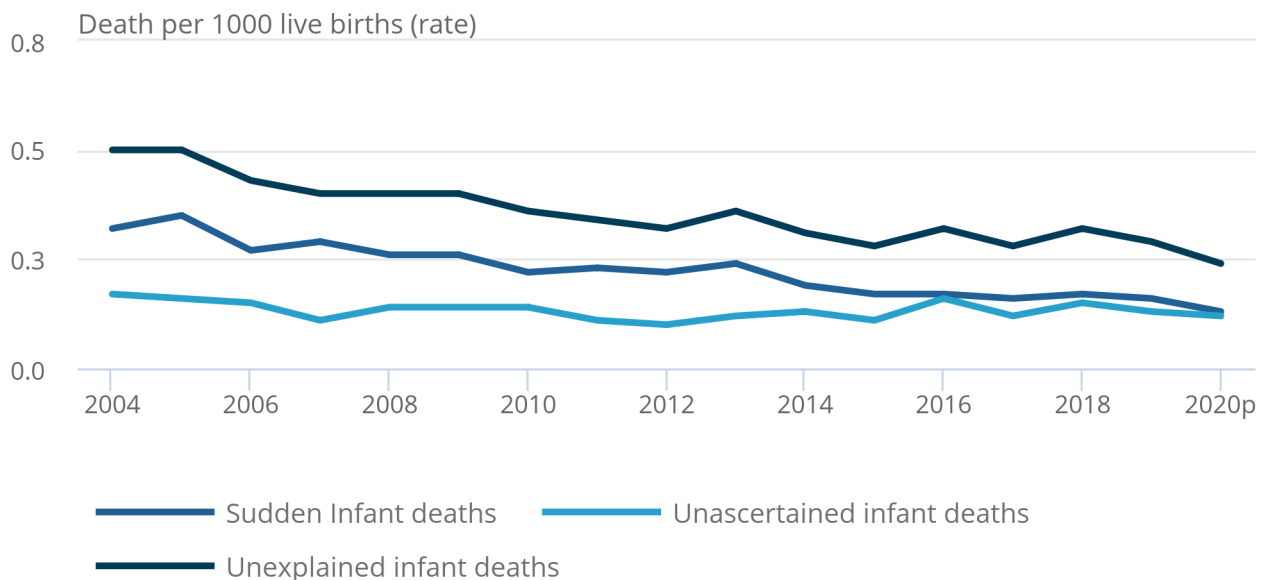
The unexplained infant mortality rate has generally decreased since 2004 (Figure 1). From 2014 to 2019 the rate remained stable at around 0.30 per 1,000 live births. The unexplained infant mortality rate in 2020 (0.24 deaths per 1,000 live births) is lower than previous years, although this provisional figure may be influenced by delays to death registrations because of the coronavirus (COVID-19) pandemic. We will continue to monitor these rates to assess if the downward trend continues.

**Figure 1: The unexplained infant mortality rate has generally decreased since reporting began in 2004**

All unexplained infant mortality rate, England and Wales, 2004 to 2020p

### Figure 1: The unexplained infant mortality rate has generally decreased since reporting began in 2004

All unexplained infant mortality rate, England and Wales, 2004 to 2020p



Source: Office for National Statistics – Deaths in England and Wales

Because of the small number of unexplained infant deaths recorded each year, the data tends to fluctuate over time and therefore year-on-year changes in rates should be interpreted with caution.

[Unexplained infant deaths](#) include [sudden infant deaths](#) and [unascertained infant deaths](#). In 2020, sudden infant deaths accounted for 52% of unexplained deaths. The 24% decrease in sudden infant deaths in the latest year (from 103 in 2019, to 78 in 2020) has driven the overall decrease in unexplained infant deaths (see [Table 1 of the accompanying dataset](#)). Since 2004, the sudden infant death mortality rate has generally declined, with 0.13 infant deaths per 1,000 live births in 2020 (Figure 1). This could be explained by:

- greater availability and awareness of [guidance for parents from the NHS](#) and charities such as The Lullaby Trust, who raise awareness of [safer sleep practices](#) for parents
- a decrease in maternal smoking, as documented in [official NHS statistics on women's smoking status at time of delivery](#)

### 3 . Birth characteristics

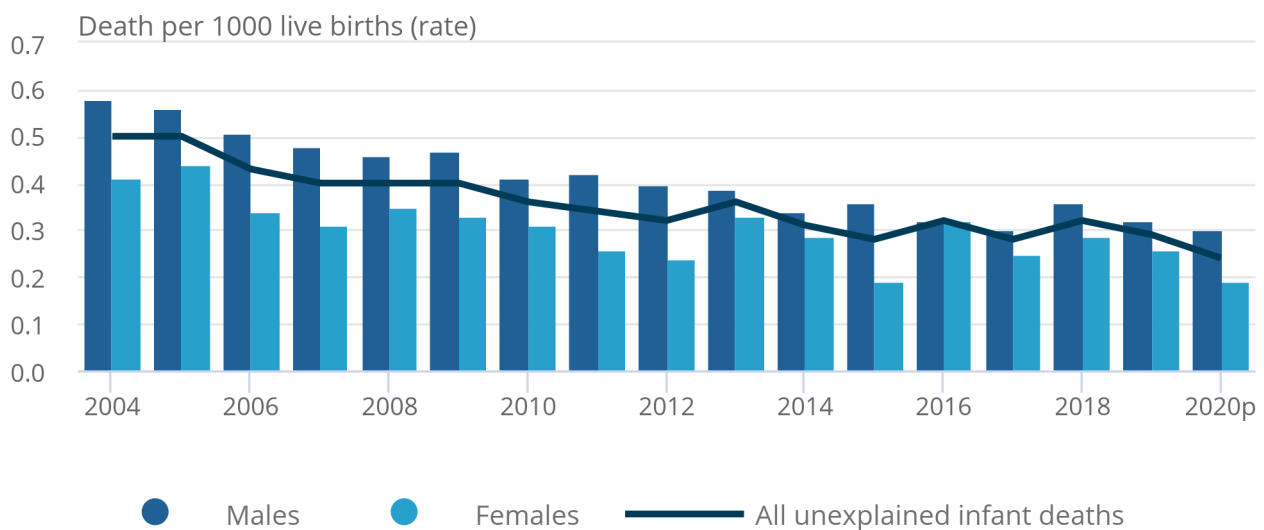
Male infants have consistently had a higher risk of unexplained infant death than females, though the gap has decreased over time (Figure 2). In 2004, males had 0.58 unexplained deaths per 1,000 live births, compared with 0.41 for females. In 2020, males had 0.30 unexplained deaths per 1,000 live births, compared with 0.19 for females.

**Figure 2: Male infants have a greater risk of an unexplained death than females**

All unexplained infant deaths by sex, England and Wales, 2004 to 2020p

Figure 2: Male infants have a greater risk of an unexplained death than females

All unexplained infant deaths by sex, England and Wales, 2004 to 2020p



Source: Office for National Statistics – Deaths in England and Wales

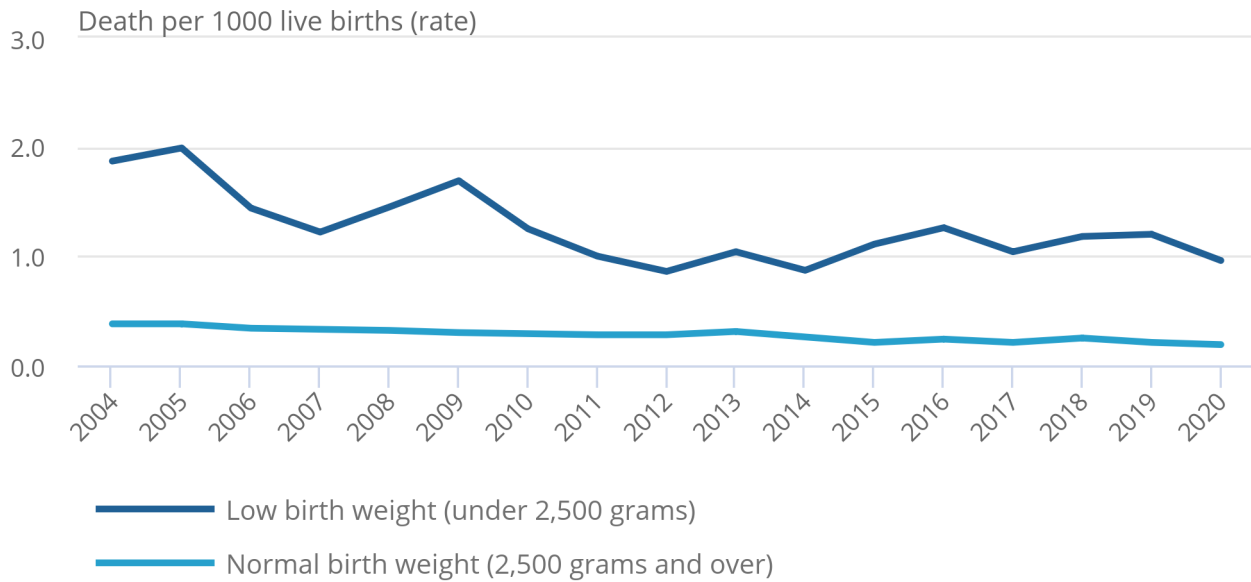
The rate of unexplained infant deaths among low birthweight babies, those less than 2,500 grams (g), has generally decreased since 2004. However, it is consistently around four times higher than babies with a normal birthweight, those 2,500g and over (Figure 3).

### Figure 3: Low birthweight babies continue to have a higher unexplained infant mortality rate

All unexplained infant deaths by birthweight, England and Wales, 2004 to 2020p

## Figure 3: Low birthweight babies continue to have a higher unexplained infant mortality rate

All unexplained infant deaths by birthweight, England and Wales, 2004 to 2020p



Source: Office for National Statistics – Deaths in England and Wales

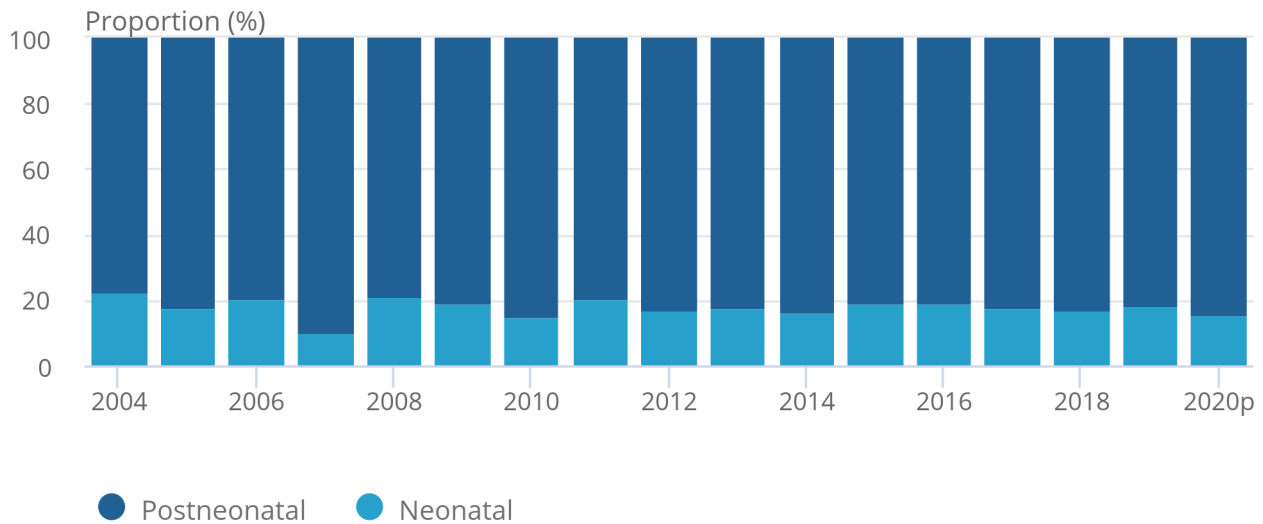
In general, infant deaths of any cause are more likely to occur in the [neonatal](#) period. However, unexplained infant deaths are more likely to happen later in infancy. In 2020, the majority (84%) of all unexplained infant deaths occurred in the [postneonatal](#) period. This proportion has remained consistent over time (Figure 4).

## Figure 4: The majority of unexplained infant deaths occur in the postneonatal period

Percentage of unexplained deaths by age at death, England and Wales, 2004 to 2020p

### Figure 4: The majority of unexplained infant deaths occur in the postneonatal period

Percentage of unexplained deaths by age at death, England and Wales, 2004 to 2020p



Source: Office for National Statistics – Deaths in England and Wales

Notes:

1. Proportions may not sum to 100% because of rounding.

## 4 . Mother's characteristics

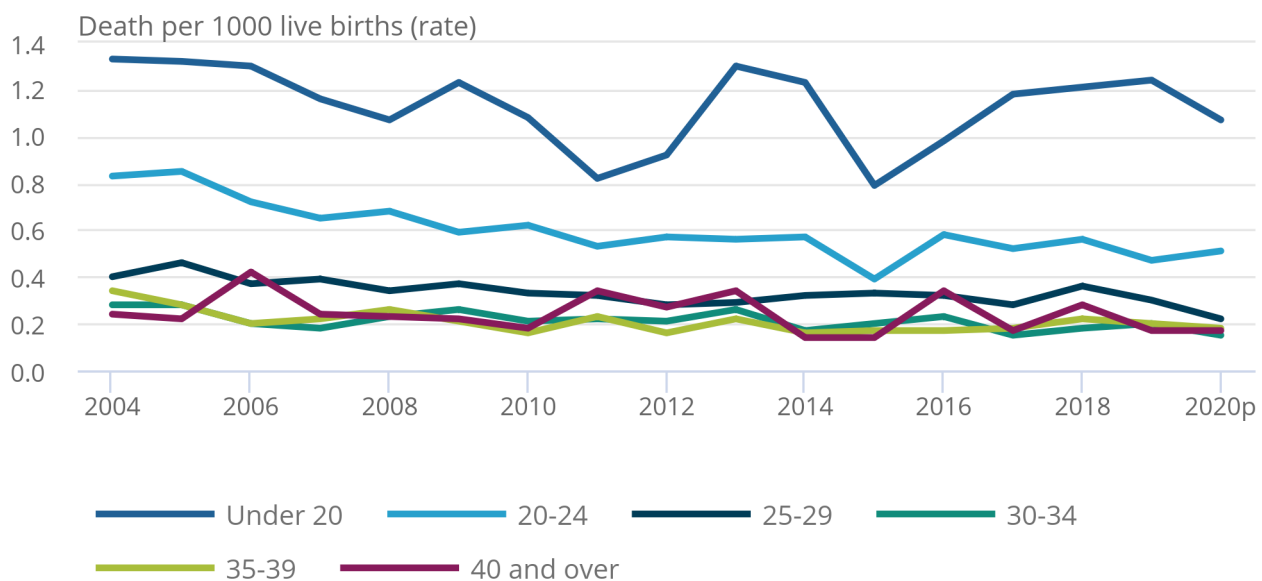
Maternal age is a risk factor for infant mortality generally, as well as for unexplained infant deaths. In 2020, the unexplained infant mortality rate was highest for mothers aged under 20 years, at 1.07 deaths per 1,000 live births (Figure 5). This is over seven times higher than for mothers aged 30 to 34 years who had the lowest rates (0.15 deaths per 1,000 live births).

**Figure 5: Babies of mothers aged under 20 years have a higher risk of unexplained infant mortality**

All unexplained infant deaths by mother's age, England and Wales, 2004 to 2020p

### Figure 5: Babies of mothers aged under 20 years have a higher risk of unexplained infant mortality

All unexplained infant deaths by mother's age, England and Wales, 2004 to 2020p



Source: Office for National Statistics – Deaths in England and Wales

In general, the infant mortality rate is higher in babies of mothers born outside of the UK (see [Table 11 of the Child and infant mortality in England and Wales: 2020 dataset](#)). Conversely, for unexplained infant deaths, the mortality rate for babies of mothers born in the UK has been more than double the rate for babies of mothers born outside of the UK (0.30 compared with 0.12 deaths per 1,000 live births in 2020; see [Table 7 of the accompanying dataset](#)).

Although we do not have the data available to explain this difference, it may be partly because of the different age profiles of unexplained infant deaths compared with all infant deaths. For example, unexplained infant deaths are most likely to occur during the postneonatal period, where the postneonatal mortality rates are similar for both mothers born inside and outside the UK. Infant deaths from other causes, however, tend to occur during the neonatal period, where the mortality rate is higher for mothers born outside the UK.

Further data on unexplained infant deaths by month of occurrence, region, and marital status can be found within our [Main tables: Unexplained deaths in infancy, England and Wales dataset](#).

Data on infant deaths that were referred to a coroner for investigation, regardless of the cause of death are not commented on within this statistical bulletin but can be found within our [Unexpected deaths in infancy, England and Wales dataset](#).



## 5 . Unexplained infant mortality data

[Main tables: Unexplained deaths in infancy, England and Wales](#)

Dataset | Released 8 September 2022

Annual data on sudden infant deaths in England and Wales and deaths for which the cause remained unascertained after a full investigation.

[Unexpected deaths in infancy in England and Wales](#)

Dataset | Released 8 September 2022

Annual data on unexpected deaths (certified by a coroner) and infant deaths by selected causes in England and Wales.

[Unexplained deaths in infancy, England and Wales](#)

Dataset | Released 2006 to 2013

Historical reports on unexplained infant deaths in England and Wales from the Office for National Statistics' (ONS's) National Archives, which includes sudden infant deaths and deaths for which the cause remained unknown or unascertained.

[Unexpected deaths in infancy, England and Wales: historical data](#)

Dataset | Released 19 August 2015

Historical annual data on unexpected deaths (certified by a coroner) and infant deaths by selected causes in England and Wales for the period 2004 to 2013.

## 6 . Glossary

### 2020p

2020 provisional unexplained infant mortality data.

### Infant

The death of those aged under one year.

### Infant mortality rate

The number of infant deaths, per 1,000 live births.

### Neonatal

The death of an infant aged under 28 days.

### Postneonatal

The death of an infant aged between 28 days and one year.

### Sudden infant deaths

Coded to the International Classification of Diseases tenth revision (ICD-10) code R95 "sudden infant death syndrome (SIDS)", which includes any mention of "sudden infant death", "cot death", "SIDS", "crib death", or another similar term anywhere on the death certificate.

### Unascertained deaths

Coded to the ICD-10 code R99 "other ill-defined and unspecified causes of mortality", which includes cases where the only mention on the death certificate is unascertained death.

## Unexplained infant deaths

Unexplained infant death includes both sudden infant death (ICD-10 code R95) and unascertained (ICD-10 code R99) deaths. Figures are based on death occurrences.

## 7 . Measuring the data

The unexplained infant mortality release is compiled from information supplied when births and deaths are certified and registered as part of civil registration.

Figures in the [unexplained deaths in infancy dataset](#) are based on [death occurrences data](#) available from 2004 up to 28 June 2022. These figures will not match those published in our [Child and infant mortality in England and Wales: 2020 bulletin](#) because of the time at which the extract was taken.

Unexplained infant deaths are referred to a coroner who may order a post-mortem or full inquest to ascertain the reasons for the death. The time taken to investigate the circumstances of the death often result in a delay in the coroner registering the death. Therefore, we publish provisional figures to allow for late death registrations. Figures for 2019 have been finalised and figures for 2020 are provisional. The 2020 figures will be finalised in the next annual release.

### Important information for interpreting unexplained deaths in infancy statistics

- Figures represent infant deaths (deaths of those aged under one year) that occurred in England and Wales in the calendar year shown; these include infant deaths whose mother's usual residence was outside England and Wales.
- Unexplained infant deaths include sudden infant deaths ("cot deaths") coded to International Classification of Diseases Tenth Revision (ICD-10) code R95, and unascertained deaths (ICD-10 code R99); the latter are infant deaths where no medical cause was recorded. Further information can be found in our [User guide to mortality statistics methodology](#).
- Infant deaths are linked to their corresponding birth registration to enable analysis of risk factors and demographic characteristics such as birthweight and maternal age.

## 8 . Strengths and limitations

### Quality

Our [User guide to child and infant mortality statistics methodology](#) provides further information on data quality, legislation and procedures. Our [Unexplained deaths in infancy, England and Wales Quality and Methodology Information \(QMI\)](#) provides relevant information about the strengths and limitations of the data, methods used, and data uses and users.

### Coronavirus (COVID-19) and infant mortality statistics

Since 2016, there has been a progressive increase in registration delay for unexplained infant deaths. The coronavirus pandemic is likely to have exacerbated existing registration delays because of delays in coroner's proceeding during this time. This is reflected in the larger than average differences between the final 2019 data within this release, and the provisional 2019 data that we published last year in our [Unexplained deaths in infancy, England and Wales: 2019 bulletin](#). Infant deaths that occurred in 2020 may have not yet been captured by the provisional 2020 data included in this release. Next year, we will have a more accurate picture of late death registrations during 2021, for deaths that occurred in 2020.

## National Statistics status for infant mortality

National Statistics status means our statistics meet the highest standards of trustworthiness, quality and public value, and it is our responsibility to maintain compliance with these standards.

You can view our most recent [Assessment of compliance with the Code of Practice for Official Statistics \(PDF, 152KB\)](#), which was completed in May 2012. This document confirms National Statistics status.

Improvements since the last review include:

- conducting a user consultation in 2017 to improve presentation and to meet our user needs, details of which are available in the response to the consultation, the [Infant mortality outputs review](#)
- analysis on the [impact of registration delays on mortality statistics](#)
- updating our [policy for protecting confidentiality in tables of births and deaths statistics](#)

## 9 . Related links

### [Vital Events Reference Tables for Scotland](#)

Publication | Last updated 28 June 2022

Data for Scotland from the National Records of Scotland on stillbirths and infant deaths based on registrations.

### [Deaths registered in England and Wales: 2021](#)

Bulletin | Released 1 July 2022

Registered deaths by age, sex, selected underlying causes of death and the leading causes of death. Contains death rates and death registrations by area of residence and single year of age.

### [Child and infant mortality in England and Wales: 2020](#)

Bulletin | Released 17 February 2022

Stillbirths, infant and childhood deaths occurring annually in England and Wales, and associated risk factors.

### [Stillbirths and infant deaths section of the 2020 Registrar General Annual Report](#)

Publication | Released 21 October 2021

Data for Northern Ireland from the Northern Ireland Statistics and Research Agency (NISRA) on stillbirths and infant deaths based on registrations.

### [Births in England and Wales: 2021](#)

Bulletin | Released 9 August 2022

Live births, stillbirths and the intensity of childbearing, measured by the total fertility rate.

### [Health Statistics Quarterly, No. 39, Autumn 2008](#)

Report | Released 28 August 2008

Data covering trends in UK health, and containing commentary on health findings, topical articles illustrated with colour charts and diagrams, statistical graphs, and tables up to 2008.

## 10 . Cite this statistical bulletin

Office for National Statistics (ONS), released 8 September 2022, ONS website, statistical bulletin, [Unexplained deaths in infancy, England and Wales: 2020](#)