Office for National Statistics

Statistical bulletin

Unexplained deaths in infancy, England and Wales: 2023

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

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Next release:
To be announced

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1 . Main points

In 2023:

- There were 164 unexplained deaths of infants (aged under one year) in England and Wales, accounting for 7.1% of all infant deaths.
- The provisional unexplained infant mortality rate was 0.28 deaths per 1,000 live births, which is consistent with the stabilised trend over the last 10 years.
- Sudden infant deaths accounted for 52% of all unexplained infant deaths.
- Unexplained infant deaths continued to be more likely before the age of four months, in low birthweight infants or where the mother had at least two previous children.
- Unexplained mortality was highest for infants born to mothers aged under 20 years (1.07 deaths per 1,000 live births), and lowest for infants born to mothers aged 40 years and over (0.10 deaths per 1,000 live births).

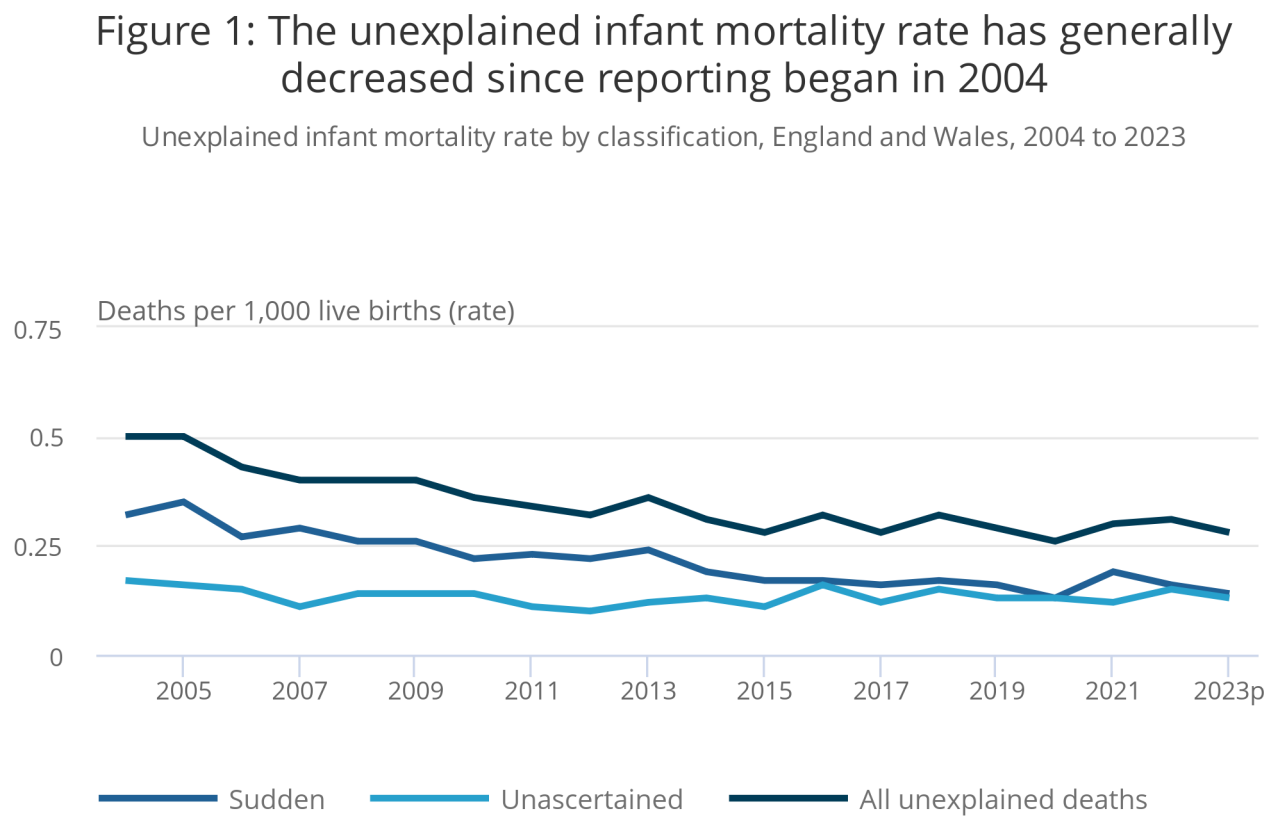
2 . Trends in unexplained infant deaths

In 2023, there were 164 unexplained infant deaths in England and Wales. The unexplained infant mortality rate decreased markedly from 0.50 deaths per 1,000 live births in 2005 to 0.32 deaths per 1,000 live births in 2012 (Figure 1). However, the decline has since slowed and become more variable, echoing the overall decline in the infant mortality rate for England and Wales (see Table 1 of the Child and infant mortality in England and Wales: 2023 dataset). The unexplained infant mortality rate was 0.28 deaths per 1,000 live births in 2023.

An unexplained infant death can be recorded as either a sudden infant death, or as an unascertained death. Since 2004, sudden infant deaths have generally declined at a faster rate than unascertained deaths. In 2023, there were 0.14 sudden infant deaths per 1,000 live births, and 0.13 unascertained deaths per 1,000 live births.

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

Unexplained infant mortality rate by classification, England and Wales, 2004 to 2023



Source: Deaths in England and Wales from the Office for National Statistics

Notes:

1. Data for 2023 are provisional.

Because of the small number of unexplained infant deaths recorded each year, the data tend to fluctuate over time. Therefore, we would not recommend drawing conclusions from changes between individual years.

Registration delays

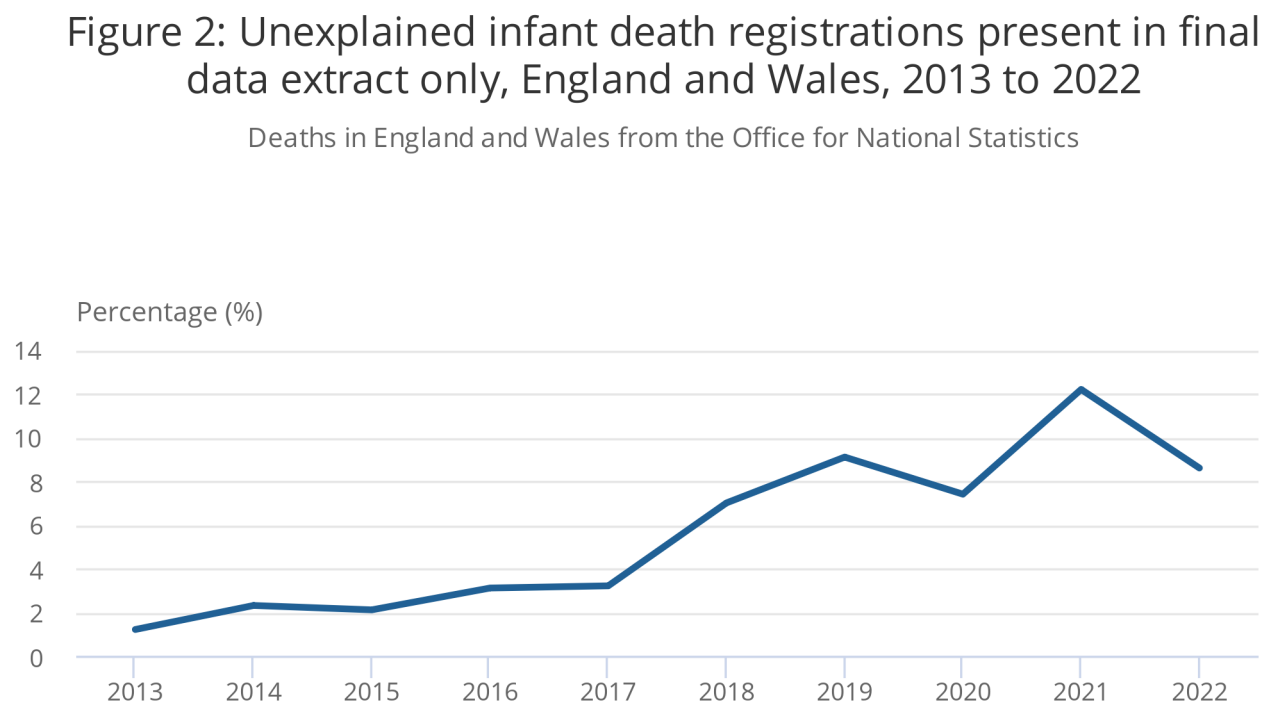
The unexplained nature of these infant deaths means that there can be long delays before investigations are completed and registration can occur. Numbers and rates for 2023 are therefore provisional (marked as “2023p” in the charts and datasets) and will be finalised when we publish the 2024 provisional information. Each year, the majority of registrations are received within 18 months of the end of the calendar year and are therefore included in the provisional analysis, but a small number (referred to as “late registrations”) arrive within an additional 12 months.

For 2022, 16 late registrations were received in the year after the data extract was taken for the provisional analysis. This means that the 2022 unexplained infant mortality rate has been revised from 0.28 deaths per 1,000 live births to 0.31 deaths per 1,000 live births.

Between 2013 and 2017, late registrations represented fewer than 4% of the unexplained infant death registrations received. Recently, late registrations have become more prevalent; in 2021, 12.2% of published unexplained infant deaths were not available for inclusion in the provisional analysis (Figure 2). However, the percentage of registrations received late fell to 8.6% in 2022.

Figure 2: Unexplained infant death registrations present in final data extract only, England and Wales, 2013 to 2022

Deaths in England and Wales from the Office for National Statistics



Source: Deaths in England and Wales from the Office for National Statistics

For 2020 data, there was a decrease in the percentage of the final published number of unexplained infant deaths that were not received in time for the provisional publication, contrary to the overall trend. This was matched by a corresponding increase in deaths that took place in 2020, but were not registered until after the final extract was taken in June 2023 for the publication of 2020 data. It is therefore likely that the volatility around 2020 and 2021 was a result of disruption to registration services caused by the coronavirus (COVID-19) pandemic

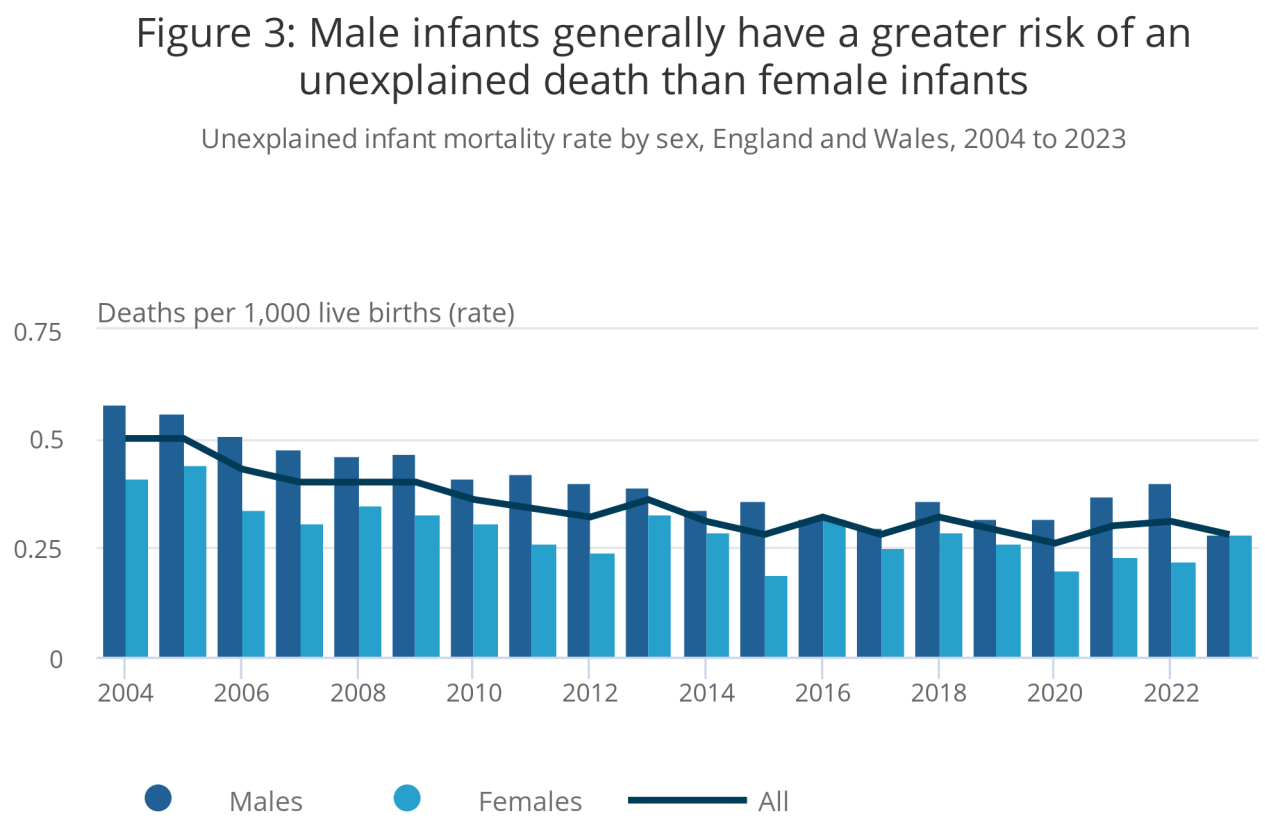
3 . Infant characteristics

Sex

In 2023, the unexplained mortality rate was 0.28 deaths per 1,000 live births for both male and female infants. Historically, male infants tend to experience higher risk of unexplained infant death than female infants, while the rate is more variable for females (Figure 3). From 2004, the difference between males and females narrowed until 2016, then began to widen again until 2022.

Figure 3: Male infants generally have a greater risk of an unexplained death than female infants

Unexplained infant mortality rate by sex, England and Wales, 2004 to 2023



Source: Deaths in England and Wales from the Office for National Statistics

Notes:

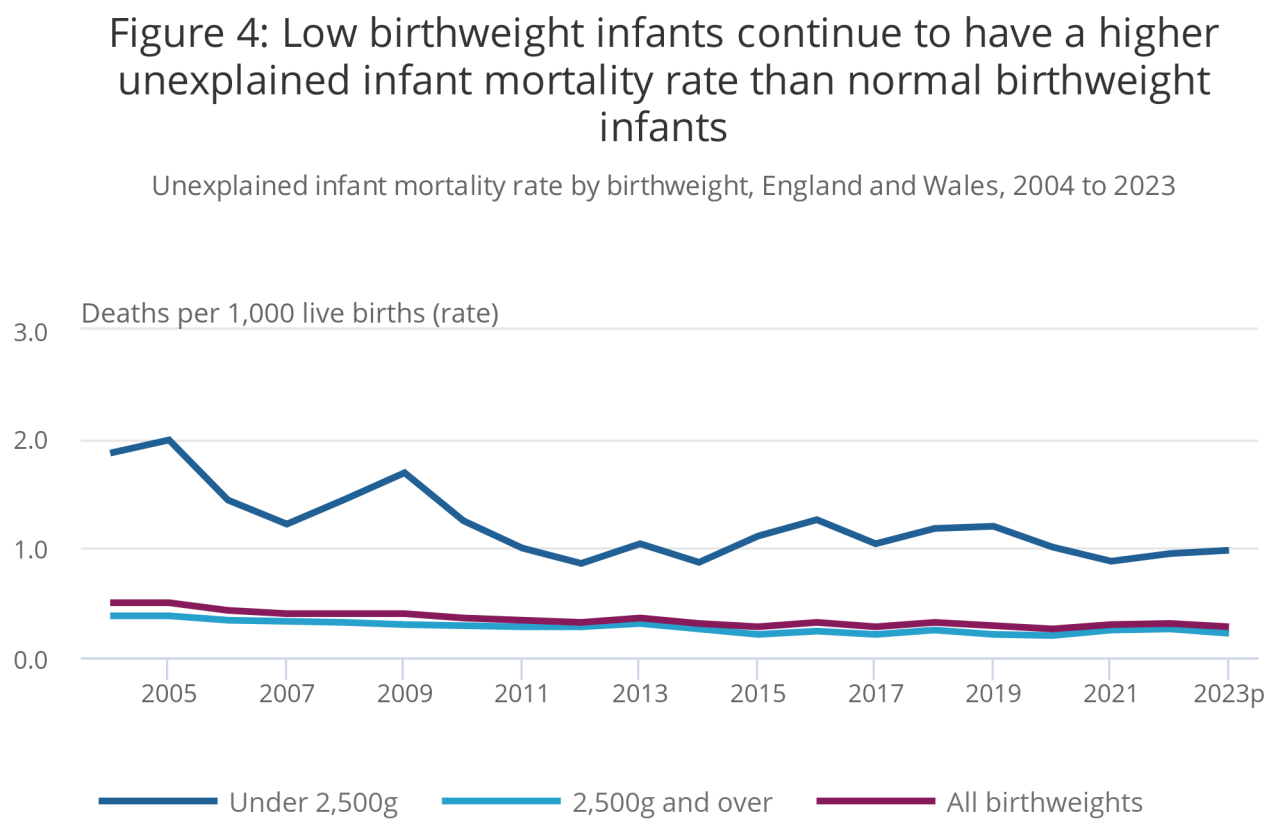
1. Data for 2023 are provisional.

Birthweight

The World Health Organization defines a low birthweight infant as weighing under 2,500 grams at birth. Overall, the unexplained mortality rate for low birthweight infants has reduced more quickly than for normal birthweight infants (Figure 4) since 2004. However, in 2023, low birthweight infants were still over four times more likely to die from an unexplained cause than normal birthweight infants.

Figure 4: Low birthweight infants continue to have a higher unexplained infant mortality rate than normal birthweight infants

Unexplained infant mortality rate by birthweight, England and Wales, 2004 to 2023



Source: Deaths in England and Wales from the Office for National Statistics

Notes:

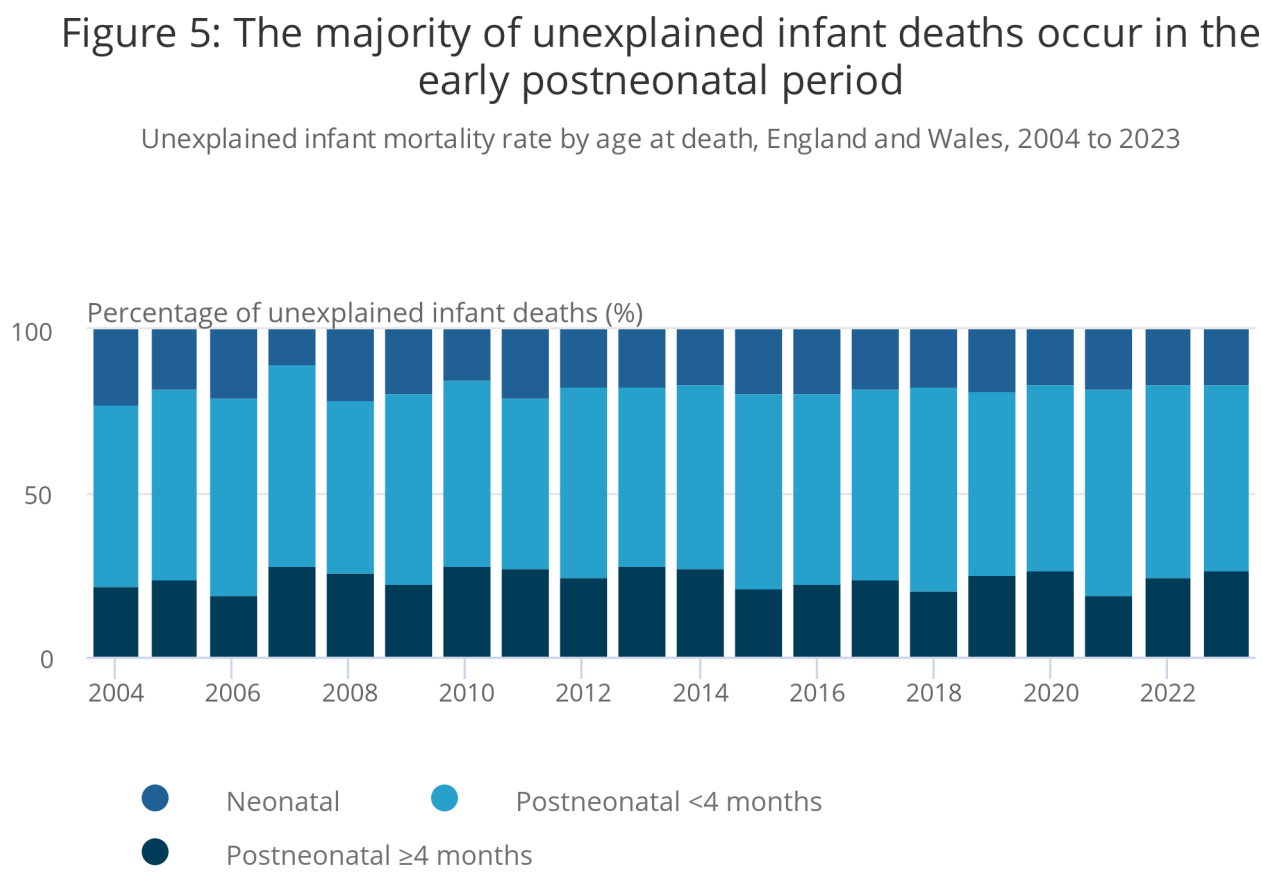
1. Data for 2023 are provisional.

Age

Infant deaths of any cause are more likely to occur in the neonatal period. In contrast, unexplained infant deaths are more likely to occur among postneonatal infants. The majority (83.5%) of all unexplained infant deaths in 2022 occurred in the postneonatal period. Over half (56.7%) of all unexplained infant deaths were of postneonatal infants under the age of four months. These percentages have remained consistent over time (Figure 5). For definitions of these terms, see Section 6: Glossary.

Figure 5: The majority of unexplained infant deaths occur in the early postneonatal period

Unexplained infant mortality rate by age at death, England and Wales, 2004 to 2023



Source: Deaths in England and Wales from the Office for National Statistics

Notes:

1. Data for 2023 are provisional.

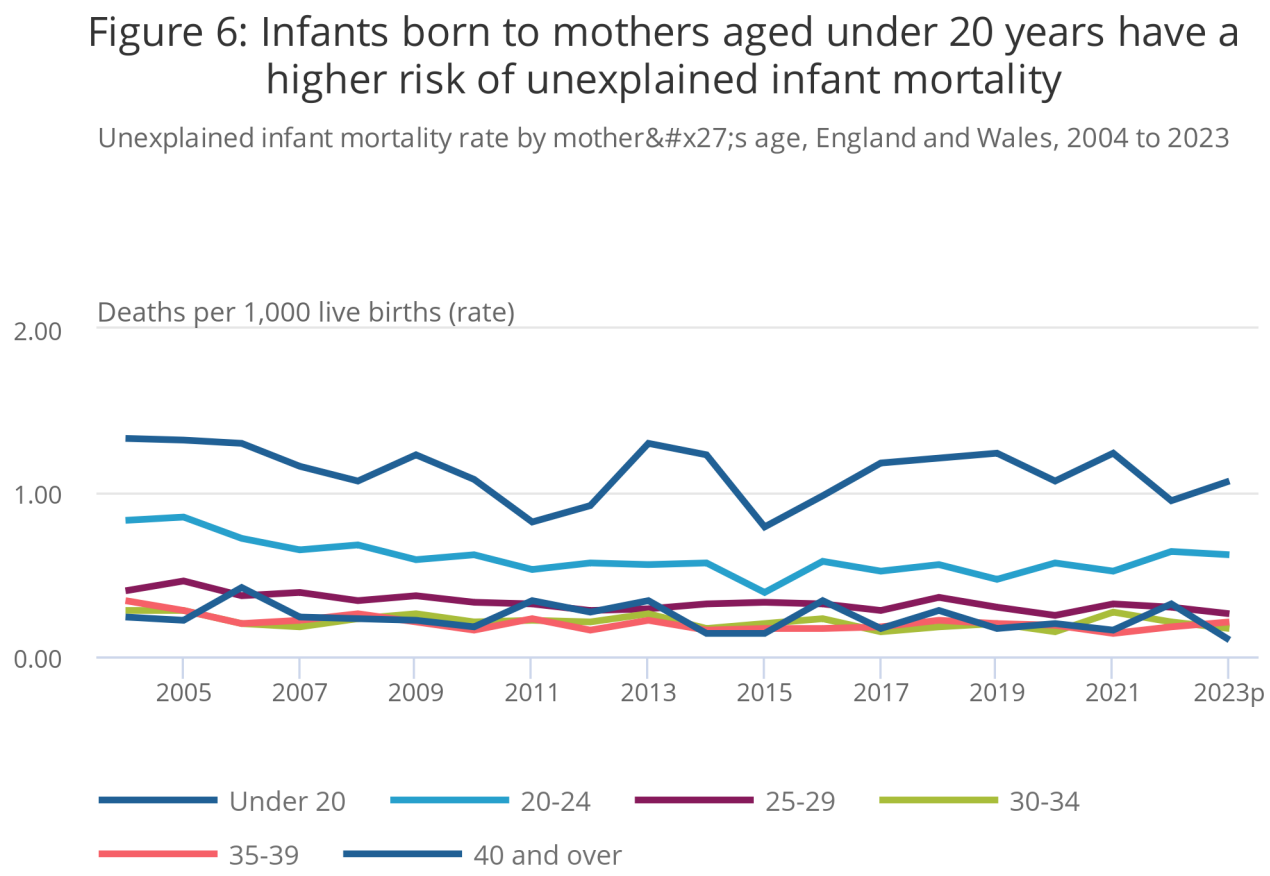
4 . Parent characteristics

Mother’s age

The unexplained infant mortality rate continued to be higher among younger maternal ages in 2023. It was highest among infants of mothers aged under 20 years, at 1.07 deaths per 1,000 live births. Rates are lowest for infants of mothers aged 30 years and above over time, but individual age groups can present a volatile trend because of comparing rates based on small numbers (Figure 6).

Figure 6: Infants born to mothers aged under 20 years have a higher risk of unexplained infant mortality

Unexplained infant mortality rate by mother's age, England and Wales, 2004 to 2023



Source: Deaths in England and Wales from the Office for National Statistics

Notes:

1. Data for 2023 are provisional.

Mother’s country of birth

In recent years, the infant mortality rate has been higher in infants of mothers born outside of the UK (see Table 11 of the Child and infant mortality in England and Wales: 2023 dataset).

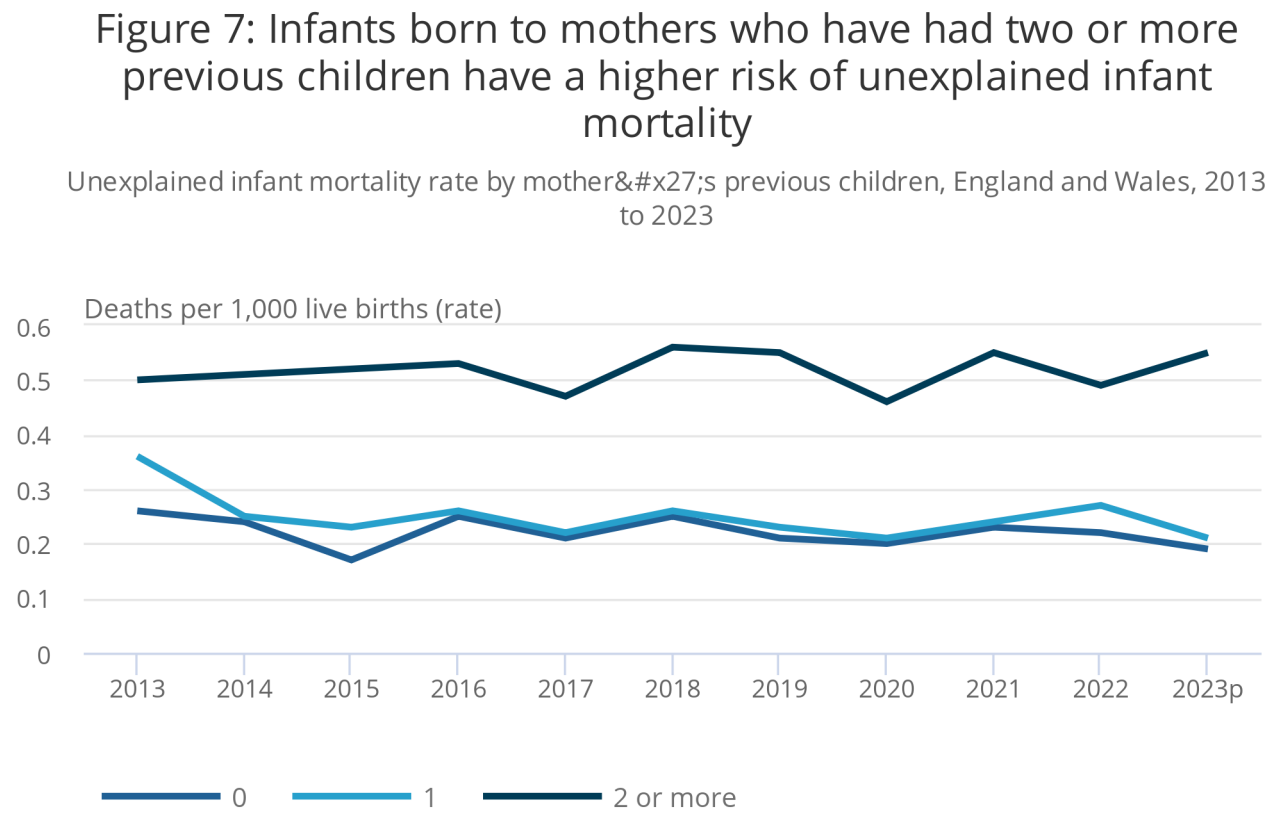
Conversely, the unexplained infant mortality rate for infants of mothers born in the UK was more than double the rate for infants of mothers born outside of the UK (0.33 deaths per 1,000 live births compared with 0.15 deaths per 1,000 live births, respectively in 2023). This pattern is consistent with previous years.

Previous children

In 2023, there were 0.19 unexplained infant deaths per 1,000 live births for infants whose mother had no previous children, and 0.21 deaths per 1,000 live births where mothers already had one child. However, the equivalent rate for infants whose mother had at least two previous children has remained consistently higher, and in 2023 was more than twice that of those whose mother had one or no previous children (0.55 deaths per 1,000 live births) (Figure 7).

Figure 7: Infants born to mothers who have had two or more previous children have a higher risk of unexplained infant mortality

Unexplained infant mortality rate by mother's previous children, England and Wales, 2013 to 2023



Source: Deaths in England and Wales from the Office for National Statistics

Notes:

1. Data for 2023 are provisional

Socio-economic classification

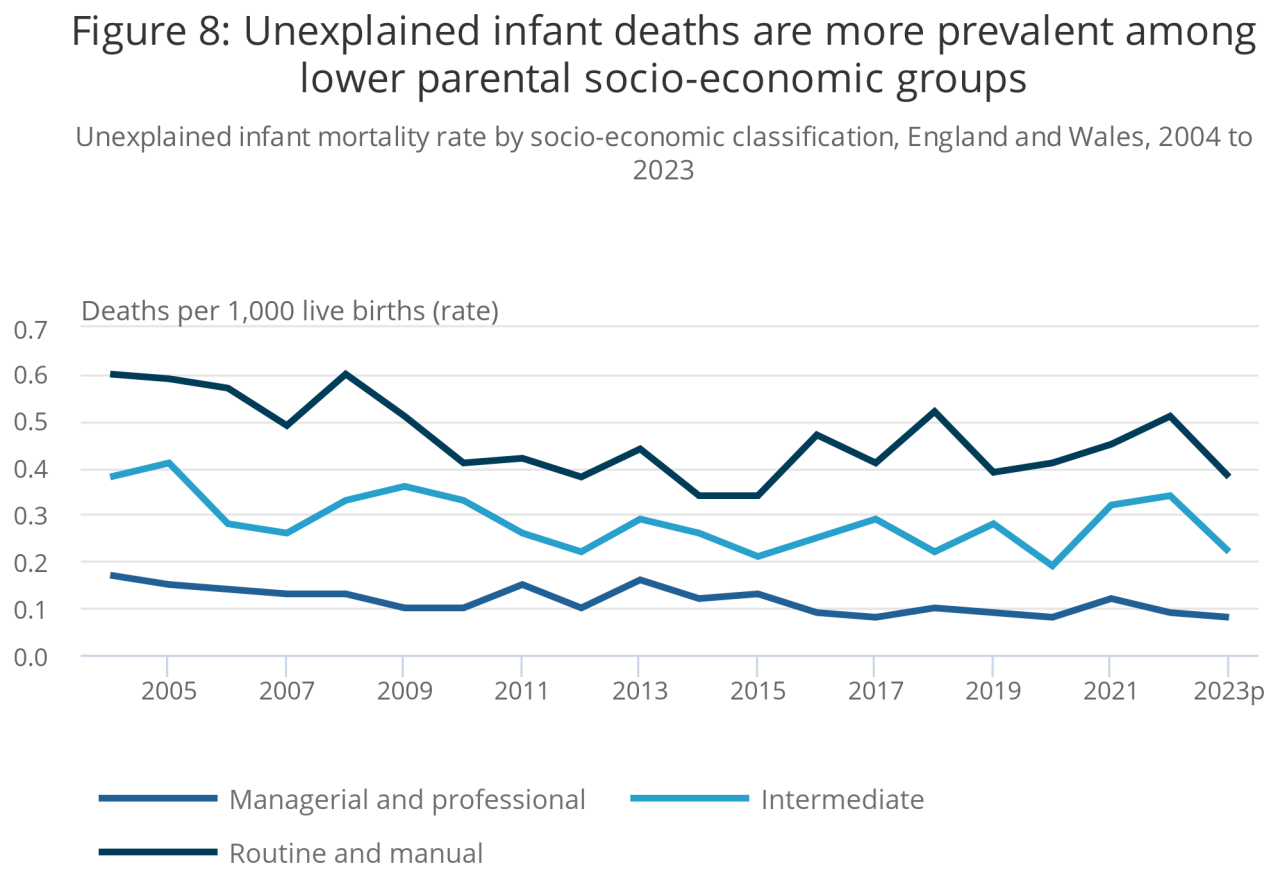
Our National Statistics socio-economic classification provides a framework to allocate people to one of three broad employment categories. Where employment information is provided for both parents, the infant is allocated to the higher of the parents' two categories.

Of the infants that were able to be categorised to this framework in 2023, those of the routine and manual category represented 22.2% of total births, but 47.0% of unexplained infant deaths. As a result, the unexplained infant mortality rate for infants in the routine and manual category (0.38 deaths per 1,000 live births) was over four times higher than that of infants in the managerial and professional category (0.08 deaths per 1,000 live births).

Figure 8 shows that the relative position of the rate of unexplained infant deaths across socio-economic groups has remained consistent since the beginning of the dataset in 2004. However, where the mortality rate has steadily decreased for infants born to at least one managerial and professional parent, it has stabilised or increased from around 2015 for infants where both parents' socio-economic classification is lower than managerial and professional.

Figure 8: Unexplained infant deaths are more prevalent among lower parental socio-economic groups

Unexplained infant mortality rate by socio-economic classification, England and Wales, 2004 to 2023



Source: Deaths in England and Wales from the Office for National Statistics

Notes:

1. Data for 2023 are provisional.

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.

Further data on unexplained infant deaths by region and marital status can be found within our Unexplained deaths in infancy, England and Wales dataset.

5 . Data on unexplained infant mortality

Unexplained deaths in infancy, England and Wales
Dataset | Released 27 October 2025
Annual data on sudden infant deaths in England and Wales and deaths for which the cause remained unascertained after a full investigation. These are the main data used in the Unexplained deaths in infancy statistical bulletin.

Unexpected deaths in infancy, England and Wales
Dataset | Released 27 October 2025
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

2023p

2023 provisional unexplained infant mortality data.

Infant death

A death under the age of 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 death

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

Sudden infant deaths

Coded to the International Classification of Diseases 10th 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 that occurred during the year of interest.

7 . Data sources and quality

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

Live birth data are supplied to the Office for National Statistics (ONS) by the General Register Office. Births in England and Wales are required to be registered within 42 days of the birth, along with information on characteristics of both the mother and the infant.

Figures in ourunexplained deaths in infancy datasets are based ondeaths that occurred between 2004 and 2023. The 2021 and 2023 data include deaths for which the ONS received the registration by 26 June 2025. These figures will not match the Child and infant mortality in England and Wales: 2023bulletin, as this was published on 22 April 2025.

Unexplained infant deaths are referred to a coroner who may order a post-mortem or full inquest to ascertain the reasons for the death. This investigation often results in a delay in the coroner registering the death. Therefore, we publish provisional figures to allow for late death registrations. Figures for 2022 have been finalised; figures for 2023 are provisional and will be finalised in the next annual release.

Important information for interpreting unexplained deaths in infancy statistics.

- Figures represent infant deaths 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 the International Classification of Diseases 10th 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 the User guide to mortality statistics methodology.
- Infant deaths are linked to birth registrations by NHS number, name and date of birth, to enable analysis by various risk factors and demographic characteristics.

Strengths and limitations

OurUser 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 and infant mortality statistics

Some unexplained infant death registrations in the final dataset are not received in time for inclusion in the provisional dataset. For deaths in 2022, the most recent year for which both provisional and final data are available, 16 additional registrations were received into the final data that had not featured in the provisional data. They represent 8.6% of the deaths that were included in the finalised figures.

The percentage of the final dataset accounted for by these late registrations has risen in recent years, accelerating after 2017. Although it is likely that some of the later additional delays are caused by backlogs created or exacerbated because of the coronavirus (COVID-19) pandemic, other issues also contribute to determining the timeliness of death registration, and we will continue to monitor the situation.

Accredited official statistics

These accredited official statistics were independently reviewed by the Office for Statistics Regulation in February 2013. They comply with the standards of trustworthiness, quality and value in the Code of Practice for Statistics and should be labelled "accredited official statistics".

8 . Related links

Vital Events Reference Tables for Scotland
Publication | Most recent update 26 August 2025
Data for Scotland from the National Records of Scotland on stillbirths and infant deaths based on registrations.

Deaths registered in England and Wales: 2023
Bulletin | Released 9 October 2025
Registered deaths by age, sex, selected underlying causes of death and the leading causes of death. Contains mortality rates and death registrations by area of residence and single year of age.

Child and infant mortality in England and Wales: 2023
Bulletin | Released 22 April 2025
Stillbirths, infant and childhood deaths occurring annually in England and Wales, and associated risk factors.

Stillbirths and Infant Deaths Section of the 2023 Registrar General Annual Report
Publication | Released 21 November 2024
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: 2024
Bulletin | Released 27 August 2025
Live births, stillbirths and the intensity of childbearing, measured by the total fertility rate.

9 . Cite this statistical bulletin

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