MBRRACE-UK
Mothers and Babies: Reducing Risk through Audits and Confidential Enquiries across the UK

Baby deaths in the UK
Key findings from 2023

Making sense of the numbers

Every year MBRRACE-UK collects data on baby deaths in the UK to understand how many babies die and how often it happens (the rates). We also look at important risk factors that might help explain why these deaths occur. We then produce a "State of the nation" report which summarises the rates of stillbirth and neonatal deaths for the different nations and organisations planning and delivering maternity and neonatal care in the UK.

This helps those planning and delivering healthcare to develop different strategies to prevent baby deaths, based on when and why they happen.

The report may also be of interest to others concerned about baby loss in the UK—from bereaved parents and advocacy organisations, to families, expectant parents, and the general public.

What follows is a summary of the key findings from our latest report, which looks at the deaths of babies who were born in the UK in 2023. You can read full report on our website.

A **stillbirth** is a death occurring before or during birth once a pregnancy has reached 24 weeks.

A **neonatal death** is a baby born at any gestation who lives, even briefly, but dies within 4 weeks of birth.

Stillbirths and neonatal deaths combined are known as **extended perinatal deaths**.

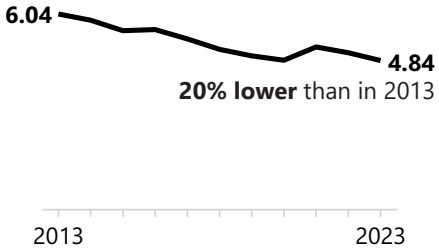
We mostly report on deaths of babies born at 24 weeks or later. Since babies born before 24 weeks are at much higher risk of dying, we look at them separately to better understand the risks for that group.

Rates of baby death continued to decrease in 2023, mostly because of a reduction in stillbirths

Compared to 2022, stillbirth rates were lower in every nation of the UK, and fewer newborns died in England, Wales, and Northern Ireland. However, changes over a single year don't always tell the whole story, so it's important to look at trends over a longer period of time.

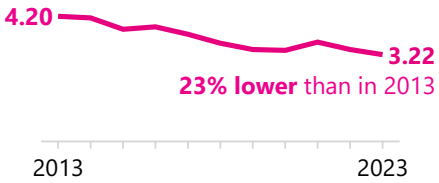
Since MBRRACE-UK started in 2013, the number of babies who died shortly before, during, or soon after birth has been falling. In 2023, the rate was 4.84 baby deaths for every 1,000 births. This is 20% lower than in 2013, mostly because there were fewer stillbirths.

Extended perinatal deaths
per 1,000 total births



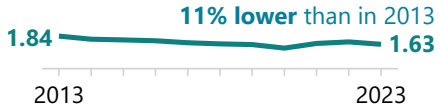
Country	2022	2023
UK & Crown Dependencies	**5.04**	**4.84** ▼
England	5.00	4.88 ▼
Scotland	4.90	4.56 ▼
Wales	5.54	5.10 ▼
Northern Ireland	5.78	4.16 ▼

Stillbirths
per 1,000 total births



Country	2022	2023
UK & Crown Dependencies	**3.35**	**3.22** ▼
England	3.33	3.27 ▼
Scotland	3.31	2.95 ▼
Wales	3.63	3.32 ▼
Northern Ireland	3.49	2.51 ▼

Neonatal deaths
per 1,000 live births



Country	2022	2023
UK & Crown Dependencies	**1.69**	**1.63** ▼
England	1.67	1.62 ▼
Scotland	1.59	1.61 ▲
Wales	1.91	1.79 ▼
Northern Ireland	2.29	1.66 ▼

Stillbirth rates were similar across most Trusts and Health Boards, but neonatal mortality rates varied more

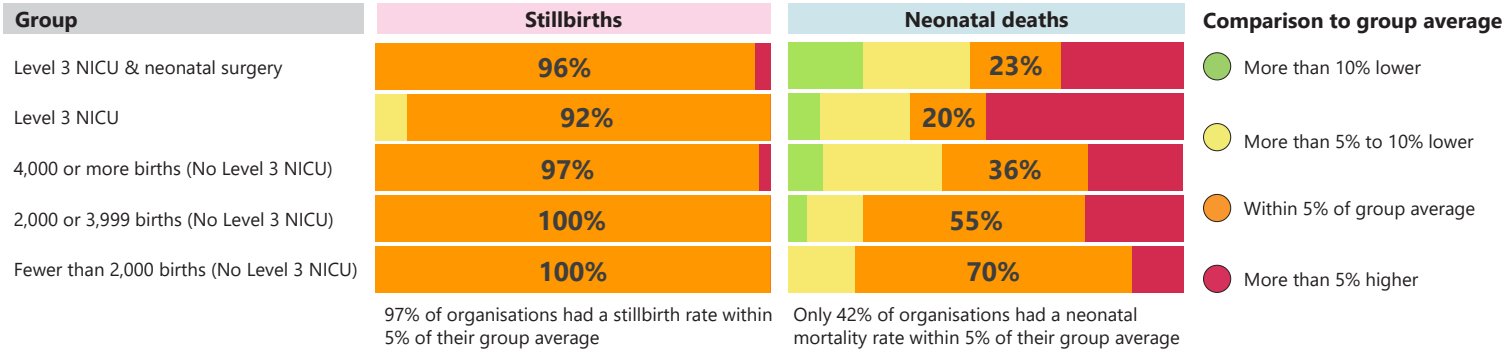
To make comparisons between Trusts and Health Boards fairer, we place them into five groups based on the level of care they provide—for example, whether they have a neonatal intensive care unit (NICU). Some hospitals care for pregnant women with higher health risks or look after babies who are sicker, either because they offer specialist services or serve communities with specific social or health challenges. Even with excellent care, this can lead to higher mortality rates.

Because the number of deaths at a hospital can vary from year to year just by chance, we **stabilise** the rates to smooth out this random variation. We also **adjust** the rates to account for important risk factors like the mother's age, socio-economic background, the baby's ethnicity and sex, whether it was a twin or triplet, and how early in pregnancy the baby was born. These **stabilised and adjusted** rates give us a clearer picture of whether a Trust or Health Board has a higher or lower rate than expected. We then compare their rates to the average in their group to help us understand how they are doing.

For stillbirths, most Trusts and Health Boards had similar rates—97% had a stillbirth rate within 5% of the average rate for their group. But there was more variation in neonatal mortality rates, with only 42% falling within that range. You can view each Trust and Health Board's rates in our data viewer.

Keep in mind that mortality rates show what happened over a period of time, but they may not reflect the quality of care. To understand these numbers properly, it's important to consider the type of population being cared for and how services are set up in different areas—including things like patient transfers and referrals.

Comparison of Trust & Health Board mortality rates against their group average



Stillbirths
per 1,000 total births

Gestational age	2022	2023
22 to 23 weeks	405.5	403.0 ▼
24 to 27 weeks	216.0	207.8 ▼
28 to 31 weeks	74.4	69.9 ▼
32 to 36 weeks	12.7	12.5 ▼
37 to 41 weeks	1.09	0.99 ▼

Neonatal deaths
per 1,000 live births

Gestational age	2022	2023
22 to 23 weeks	625.2	641.1 ▲
24 to 27 weeks	139.6	146.1 ▲
28 to 31 weeks	29.5	31.1 ▲
32 to 36 weeks	6.58	5.05 ▼
37 to 41 weeks	0.62	0.60 ▼

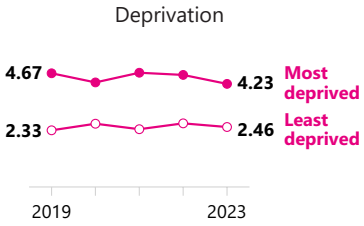
Stillbirth rates decreased, but neonatal mortality rates increased for the most preterm babies

Stillbirth rates dropped across all stages of pregnancy, with the biggest decrease seen in babies born at term (37 to 41 weeks). However, neonatal deaths increased for babies born very prematurely, between 24 and 31 weeks, but decreased for those born at 32 weeks or later.

Babies born at 22 to 23 weeks made up a growing share (25%) of all neonatal deaths.

Preterm births remained a major factor in baby deaths, with 76% of stillbirths and 75% of neonatal deaths happening in babies born before 37 weeks.

Stillbirths
per 1,000 total births

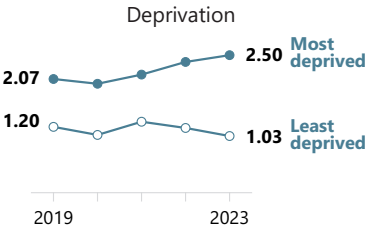


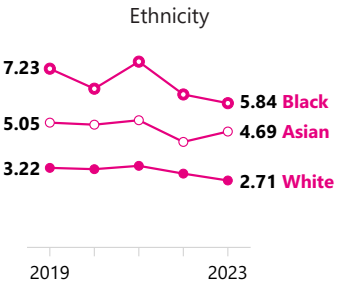
Neonatal mortality rates for babies from the most deprived areas increased for the third year

Differences based on income and social background continued to be a major issue. Stillbirth rates remained highest among babies born to mothers living in the most deprived areas, despite an 8% drop in the rate for this group since 2022.

Neonatal death rates also showed a growing gap, with rates rising for the most deprived groups and falling for those in less deprived areas.

Neonatal deaths
per 1,000 live births

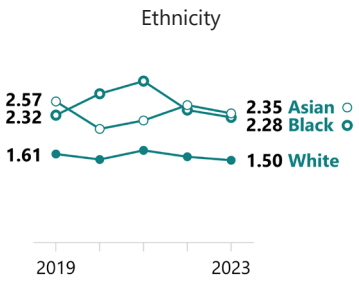




Ethnic disparities in baby deaths continued

Stillbirth rates went down for Black and White babies, but increased by 10% for Asian babies. Black babies were still more than twice as likely to be stillborn compared to White babies.

Neonatal death rates fell for all ethnic groups, but they remained highest for Asian and Black babies.



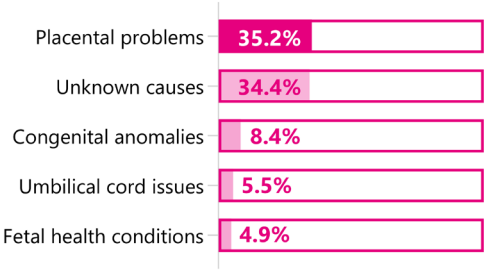
The most common causes of baby death were unchanged

The main causes of stillbirth were problems with the placenta, congenital anomalies (health conditions or differences a baby is born with that affect how their body develops or works), issues with the umbilical cord, and fetal health conditions that developed during pregnancy—such as problems with the baby's organs, blood or immune system.

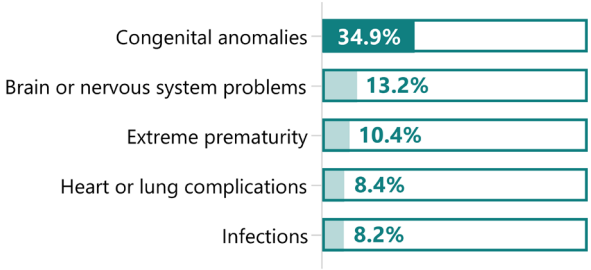
Neonatal deaths were most often caused by congenital anomalies, problems with the brain or nervous system, extreme prematurity, heart or lung complications, and infections.

Congenital anomalies were a major cause, making up 8% of stillbirths and 35% of neonatal deaths.

Most common causes of stillbirth



Most common causes of neonatal death



When stillbirths and neonatal deaths are combined, congenital anomalies contributed to 17% of deaths

What do we need to do?

These findings show that progress is being made in reducing baby deaths, but there is still important work to do—especially to tackle the gaps linked to deprivation, ethnicity, and how early in pregnancy a baby is born.

MBRRACE-UK has previously made national recommendations to help with this, but local services, networks, and commissioners may need to take a closer look at their own areas to understand what's happening and take action that works for their communities.

1. **Make sure services are planned and funded to meet the growing need for intensive care for extremely premature babies**

   Care commissioners should ensure that neonatal intensive care services have the capacity and resources to support the increasing number of babies born before 24 weeks who are receiving active care focused on survival.

2. **Support thorough reviews of baby deaths to help improve care**

   All stillbirths and neonatal deaths across the UK should be reviewed with the Perinatal Mortality Review Tool (PMRT), with input from experienced external clinicians, so services can learn from them and improve how care is delivered.

3. **Help healthcare providers use national guidance to improve care for premature babies**

   Royal Colleges and care commissioners should support healthcare providers to adopt and implement the BAPM Perinatal Optimisation Pathway, which aims to improve outcomes for preterm babies.

4. **Keep taking targeted action to reduce health inequalities**

   Work should continue at both national and local levels to reduce the unfair differences in outcomes linked to factors like poverty, ethnicity, and where families live.

HQIP Healthcare Quality Improvement Partnership
University of Leicester
University of Birmingham
The Newcastle upon Tyne Hospitals NHS Foundation Trust
TIMMS
Sands Stillbirth & neonatal death charity
NHS Chelsea and Westminster Hospital NHS Foundation Trust
Oxford Population Health
University of Oxford
NPEU