NCMD

National Child Mortality Database

Knowledge, understanding and learning to improve young lives

Child Death Review Data: Year ending 31 March 2021

November 2021

HQIP

Healthcare Quality Improvement Partnership

Contact us

National Child Mortality Database (NCMD) Programme
Level D, St Michael's Hospital, Southwell Street, Bristol BS2 8EG

- Email: ncmd-programme@bristol.ac.uk
- Visit us our website: www.ncmd.info
- Follow us on Twitter: @NCMD_England

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Suggested citation

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1. Introduction

Child death review (CDR) processes are mandatory for Child Death Review Partners (CDR Partners) in England. The CDR process has been in place in England since 1 April 2008 and was previously the responsibility of Local Safeguarding Children Boards (LSCBs). CDR partners are responsible for reviewing the deaths of all children up to the age of 18. This function is carried out through local Child Death Overview Panels (CDOPs). The overall purpose is to understand why children die and to put in place interventions to protect other children and reduce the risk of future deaths.

In 2018, the Department of Health and Social Care (DHSC) published new and revised statutory and operational guidance related to CDR.

The National Child Mortality Database (NCMD) launched on 1 April 2019 and collates data collected by CDOPs in England from reviews of all children who die at any time after birth and before their 18th birthday. There is a statutory requirement for CDOPs to collect this data and to provide it to NCMD, outlined in the statutory and operational guidance. The guidance requires all CDR Partners to gather information from every agency that has had contact with the child, during their life and after their death, including health and social care services, law enforcement, and education services. This is done using a set of statutory CDR forms and the information is then submitted to NCMD.

How to read this report

Section 2 summarises the number of notifications where the child died between 1 April 2020 and 31 March 2021. Notification to NCMD in the 48 hours after death includes basic demographic data and the suspected cause of death.

Section 3 summarises the number of children whose death was *reviewed* by a CDOP between 1 April 2020 and 31 March 2021 (the death may have occurred in previous years). It is important to note that the CDOP reviews of child deaths might not have been completed in the same year as when deaths occurred. Reviews are often performed up to and over one year after the death, and this time can vary depending on the circumstances of the death.

The data for both sections is compared to the previous year. It should be read in conjunction with the following data tables, where more detail is available:

- Reference Tables – CDR Data (year ending 31 March 2021)

Throughout this report the term ‘infant’ is used to describe a child under 1 year of age and ‘child’ is used to describe all children from 0 – 17 years.

2. Deaths that occurred between 1 April 2020 and 31 March 2021

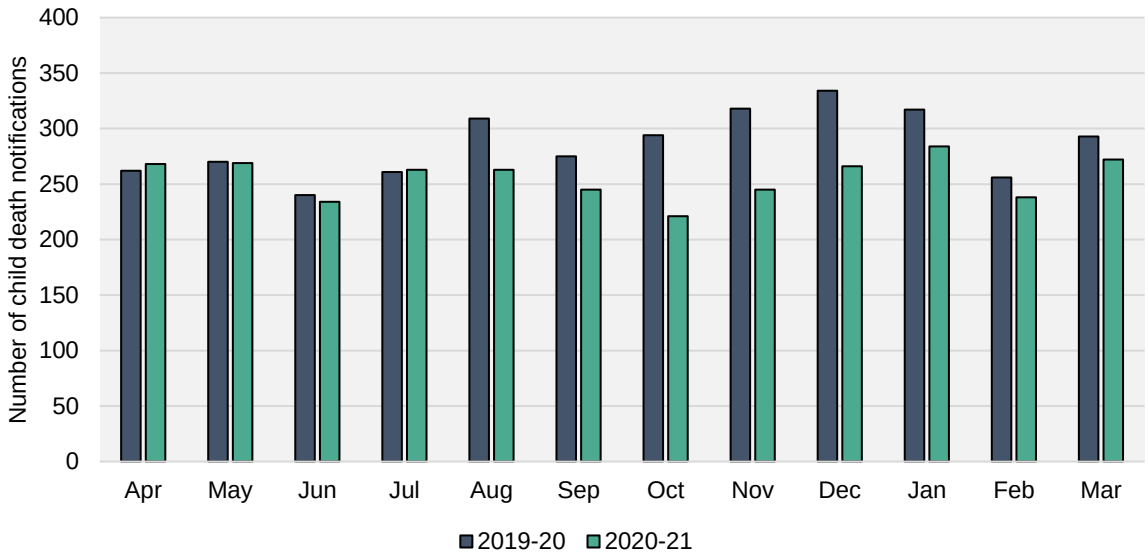
This section of the report focuses on the number of deaths and provides descriptive analysis on the demographics of **children who died between 1 April 2020 and 31 March 2021** in comparison to the previous year.

The data presented here represents child deaths that were submitted to NCMD that were going to be reviewed by a CDOP in England.

The number of child death notifications (Table 5)

NCMD received 3,068 notifications of child deaths from CDOPs in England where the child died between 1 April 2020 and 31 March 2021. This is 361 fewer deaths than the previous year. The reduction of deaths is apparent over winter months, which may be due to social distancing and other public health measures put into place in response to the COVID-19 pandemic. A broader review of this data is available elsewhere (https://doi.org/10.1101/2021.08.23.21262114).

Figure 1: The number of child death notifications received by Child Death Overview Panels by month of death



Data source: NCMD

Infant and child death rates (Tables 1 and 2)

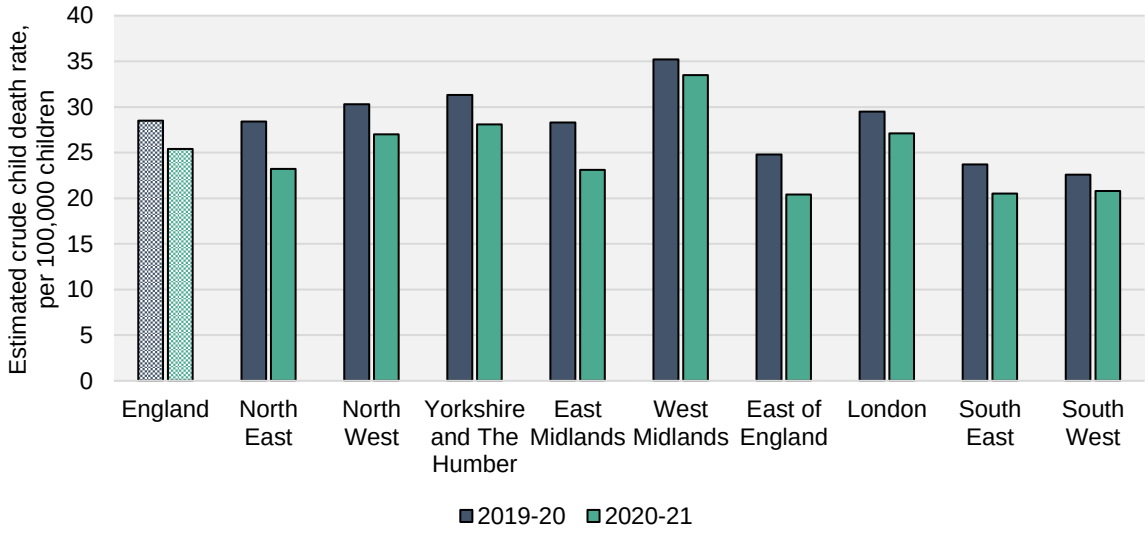
The overall child death rate and infant death rate presented here have been calculated using different populations. The child death rate includes all children who died at any time after birth and before their 18th birthday and has been calculated using data from the mid-year population estimate for 0 – 17 year olds.

The child death rate is presented per 100,000 population. The infant death rate (deaths of children under 1 year of age) has been calculated using data for live births, and the rate is presented per

1,000 live births. Whilst these rates are presented at regional level, there may be significant differences in rates between CDOPs within each region.

There were 25.4 child deaths per 100,000 population in England for 2020-21 which is a decrease from the previous year. The child death rate decreased for all regions in England.

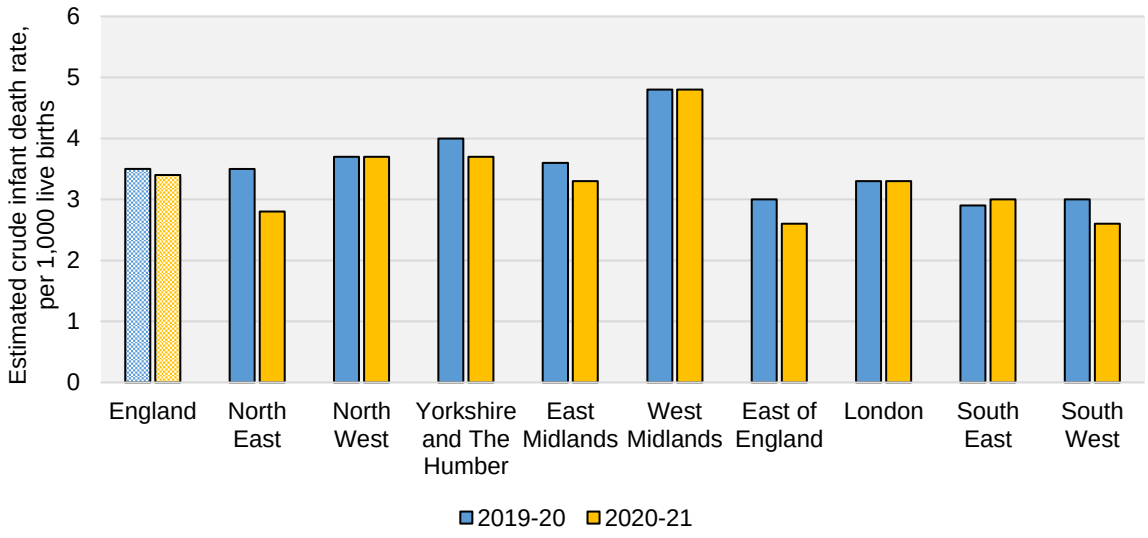
Figure 2: The estimated crude child death rates per 100,000 population by region



Data source: NCMD, ONS mid-year population estimates

There were 3.4 infant deaths per 1,000 live births in England for 2020-21, decreasing from 3.5 deaths per 1,000 live births in the previous year. The infant death rate decreased for most regions in England.

Figure 3: The estimated crude infant death rates per 1,000 live births by region



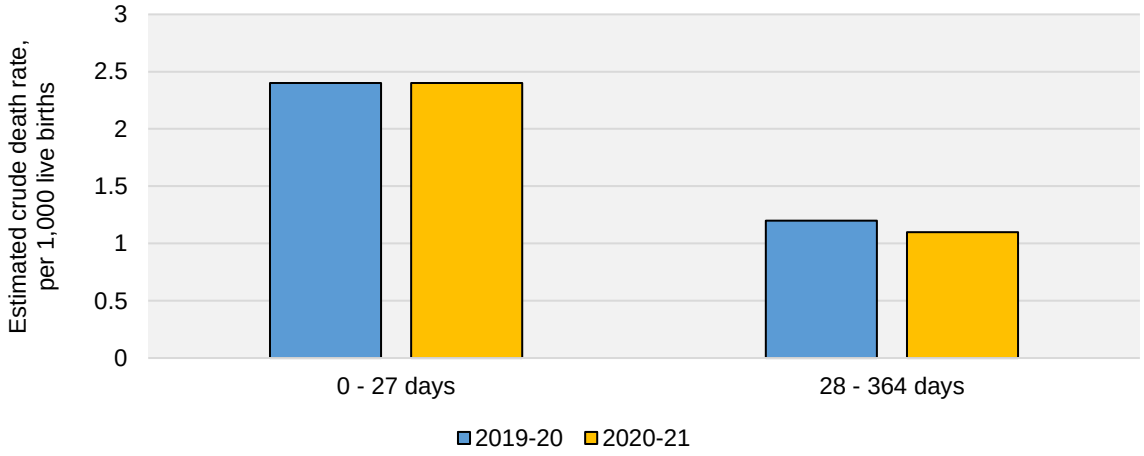
Data source: NCMD, ONS live births

Further data on regional rates of death by age group is available in Table 2.

Age group and sex (Table 3)

The death rate of children aged between 0 and 27 days inclusive (2.4 deaths per 1,000 live births) was more than twice that of the death rate for children aged between 28 and 364 days (1.1 deaths per 1,000 live births). Death rates remained the same for the 0-27 days age group but decreased for the 28-364 days age group in comparison to the previous year.

Figure 4: The estimated crude death rates per 1,000 live births by age group

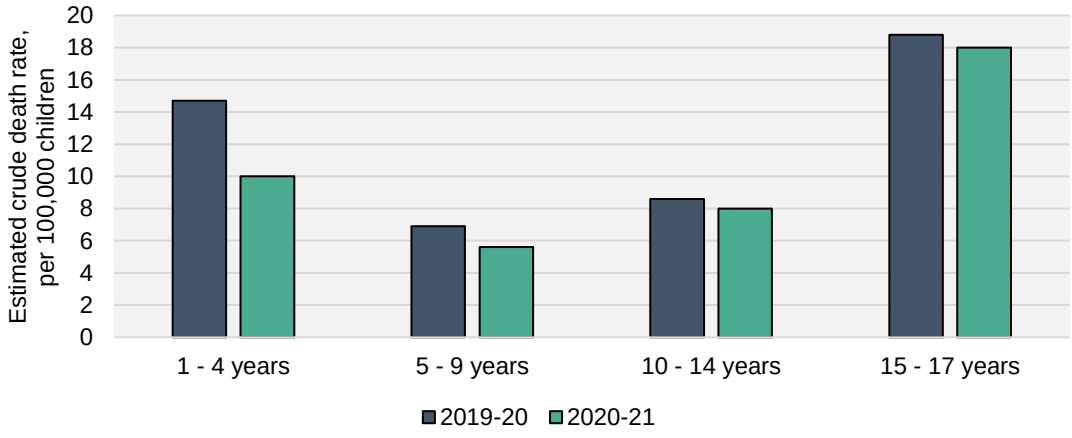


Data source: NCMD, ONS live births

For children aged 1 and over, the highest death rate can be seen for children aged between 15 – 17 years (18.0 deaths per 100,000 population).

Death rates decreased across all age groups in comparison to the previous year. The decrease was more apparent in some age groups than others; in particular the decrease in the death rate of children aged between 1 and 4 years was larger than in all other age groups.

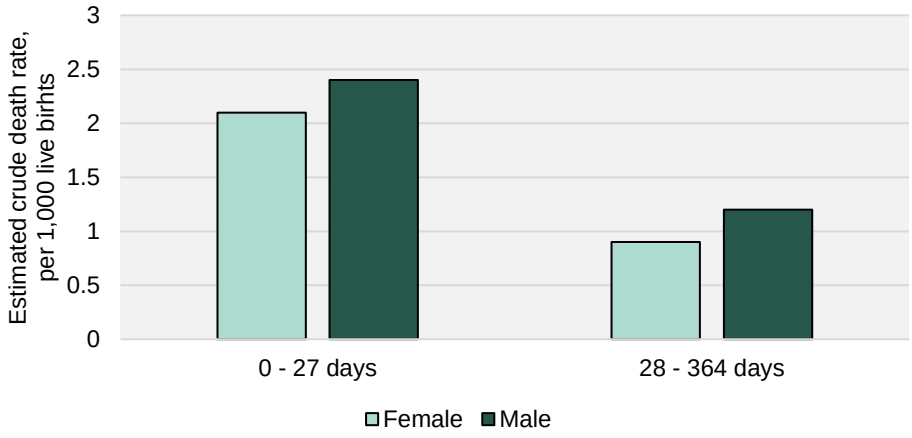
Figure 5: The estimated crude death rates per 100,000 population by age group



Data source: NCMD, ONS mid-year population estimates

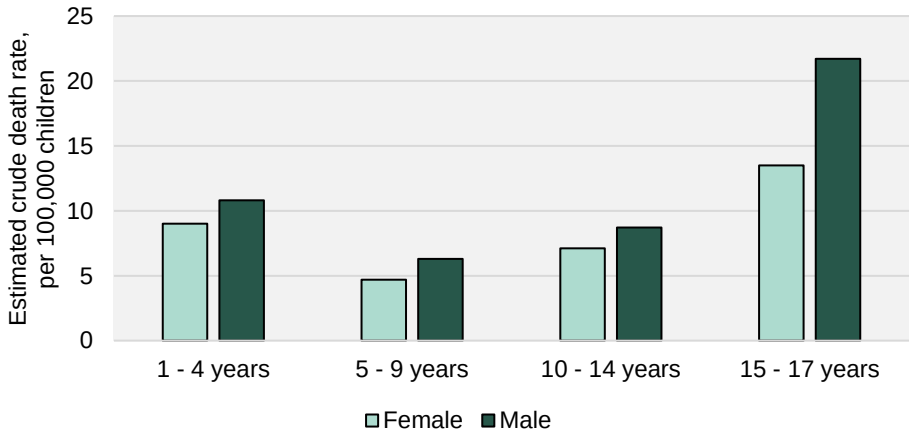
The death rate for males remained higher than that of females across all age groups, with the largest difference in death rate between males and females in the 15 – 17 years age group.

Figure 6: The estimated crude death rates per 1,000 live births by sex and age group, year ending 31 March 2021



Data source: NCMD, ONS live births
Deaths where the child's sex was not known or incomplete were excluded

Figure 7: The estimated crude death rates per 100,000 population by sex and age group, year ending 31 March 2021



Data source: NCMD, ONS mid-year population estimates
Deaths where the child's sex was not known or incomplete were excluded

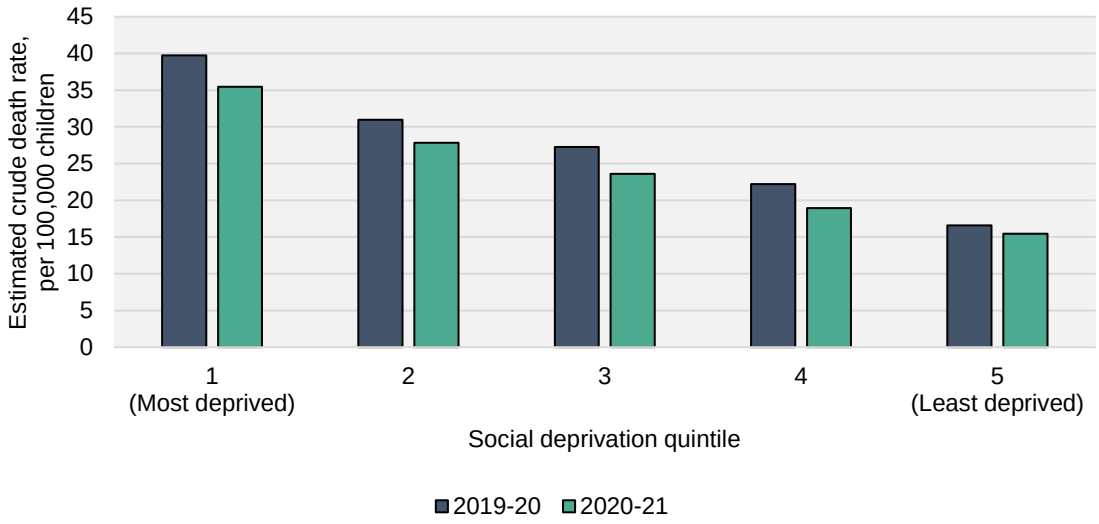
Social deprivation (Table 4)

For analysis on social deprivation and mortality, the postcode of residence for each child was linked to its corresponding Index of Multiple Deprivation (IMD 2019) which is calculated to the granularity of around 1,500 people. Each neighbourhood is ranked from most deprived to least deprived, which are then divided into five equal sized groups (quintiles).

The child death rate of children resident in the most deprived neighbourhoods in England (35.5 deaths per 100,000 children) was more than twice that of children resident in the least deprived neighbourhoods (15.5 deaths per 100,000 children).

Whilst the overall death rate was lower in 2020-21, the pattern of more deaths associated with children living in more deprived neighbourhoods remains consistent with previous year's data. The reduction of deaths across the two years was most marked for the more deprived neighbourhoods.

Figure 8: The estimated crude child death rates per 100,000 population by social deprivation quintile



Data source: NCMD, ONS mid-year population estimates
Data where the child's postcode was not known or incomplete have been excluded

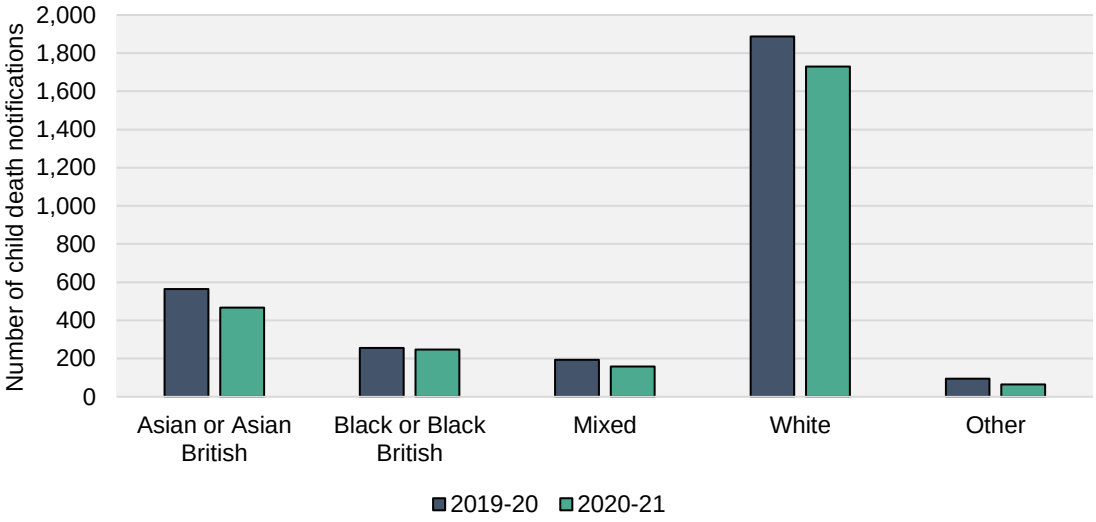
Ethnic group (Table 6)

Ethnic group was recorded in 2,668 (87%) death notifications. Of these, 65% (n=1,729) of deaths were of children who were recorded as being from a White ethnic group, 18% (n=467) of deaths were of children from an Asian or Asian British background, 9% (n=248) were from a Black or Black British background, 6% (n=159) were from a Mixed background and 2% (n=65) were from any other ethnic group.

These proportions were similar to the previous year. There were significantly fewer deaths in 2020-21 for all ethnic groups apart from children from a Black or Black British ethnic background.

13% of all child death notifications in 2020-21 were submitted where the ethnicity of the child was not known or it was not recorded. CDR professionals, CDOPs and NCMD should focus on improving the completeness of ethnicity for all child deaths to ensure that the mortality differences by ethnicity can be measured accurately in future years. Improved completeness along with more reliable population data being available will allow for comprehensive analysis on death rates between ethnic groups.

Figure 9: The number of child death notifications received by Child Death Overview Panels by ethnic group (where known)



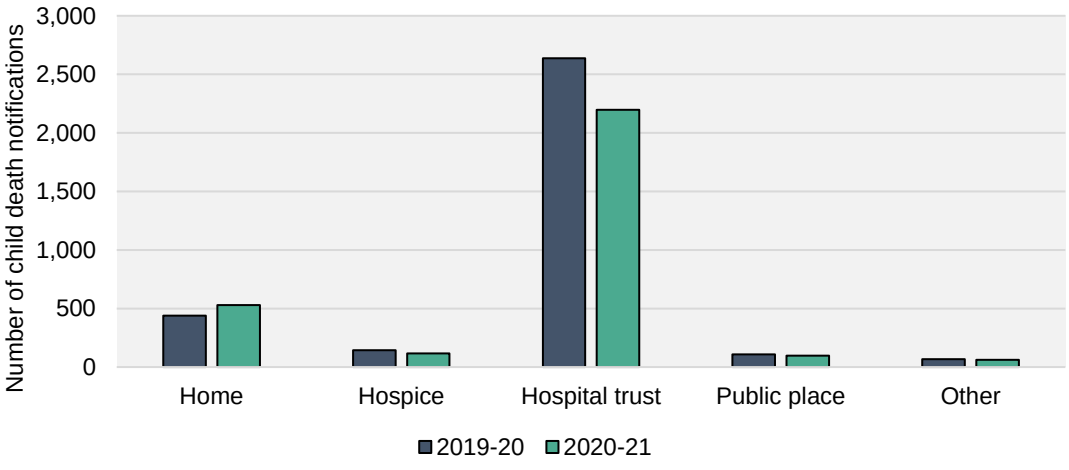
Data source: NCMD
Deaths where the child's ethnic group was not known or incomplete have been excluded

Place of death (Table 7)

The place of death is defined at data collection as where the child is believed to have died regardless of where death was confirmed. It was recorded in 98% (n=3,003) of death notifications. Where the place of death was known, the majority (73%, n=2,198) of deaths occurred in a hospital trust, consistent with the previous year. Deaths that occurred on neonatal units accounted for 800 (27%) deaths; the largest proportion of deaths across all locations recorded.

Deaths reduced across most places of death in comparison to the previous year. However, there was an increase in the number of deaths where the place of death was recorded as the child's home.

Figure 10: The number of child death notifications received by Child Death Overview Panels by place of death



Data source: NCMD
Other includes: Abroad, school, and any other place of death
Deaths where the place of death was not known or incomplete were excluded

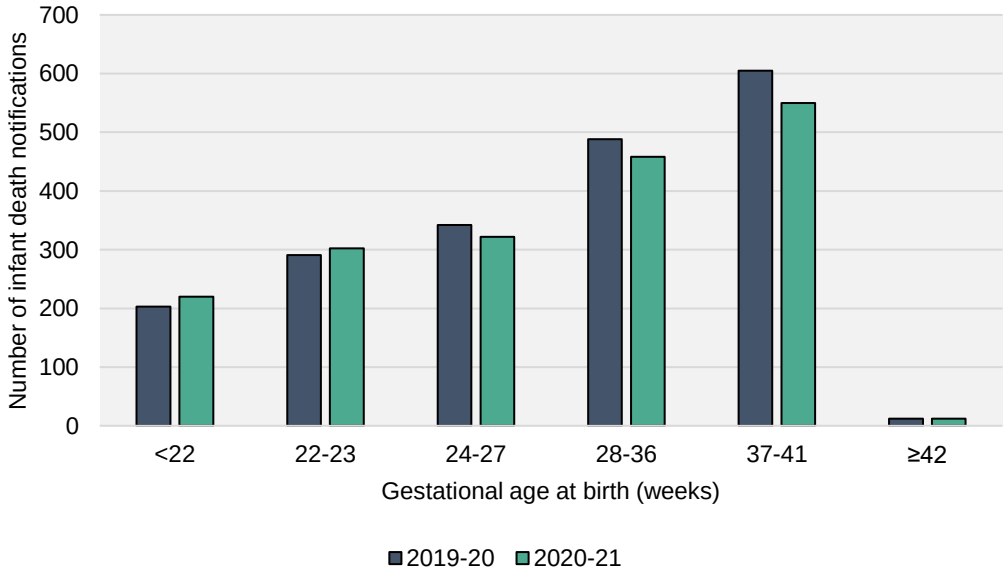
Gestational age at birth (Tables 8 and 9)

Gestational age was recorded in 1,864 (93%) death notifications of infants. This is an increase of completed data in comparison to the previous year, where 90% was completed.

Where gestational age was known, 70% (n=1,302) of infants were born at a premature gestational age (before 37 weeks). There was a decrease in the number of deaths where the infant was born at 24 weeks or later compared to the previous year. Deaths below 24 weeks slightly increased on the previous year. Due to increases in the data completed for gestational age for infants, any interpretation should be cautious.

A further breakdown of gestational age by age group and place of death can be found in Tables 8 and 9.

Figure 11: The number of infant death notifications received by Child Death Overview Panels by gestational age at birth



Data source: NCMD
Data only presented for deaths of infants (<1 year)
Deaths where the child's gestational age at birth was not known or incomplete were excluded

Category of death

Notification to NCMD in the 48 hours after death includes basic demographic data and the suspected cause of death. The CDOP offices then undertake a data collection process, and the cause and category of death is confirmed once the case has been reviewed by CDOP some months later. In future years, NCMD will be able to report on confirmed category of death for each defined year when deaths occurred.

Reviews are often performed up to and over one year after the death, and this time can vary depending on the circumstances of the death. Factors that can contribute to a longer length of time between the death of a child and CDOP review include: the return of reporting forms from

professionals, the completion of the final post mortem report by the pathologist, undertaking of a coronial or criminal investigation or a Child Safeguarding Practice Review (formerly known as Serious Case Review), and receipt of the final report from the local child death review meeting.

Impact of COVID-19

Due to the concerns regarding the impact of COVID-19 on child mortality, specific separate work was performed and can be reviewed elsewhere (https://doi.org/10.21203/rs.3.rs-689684/v1). In brief, an estimated 25 children are likely to have died of SARS-CoV-2 infection between 1 March 2020 and 28 February 2021, with an estimated mortality rate of 2 per million children per year.

3. Deaths reviewed between 1 April 2020 and 31 March 2021

This section focuses on data from the completed child death reviews by the CDOPs where **the child death review took place between 1 April 2020 and 31 March 2021 (the child may have died in previous years).** CDOPs in England must review all deaths of children normally resident in the local area and, if they consider it appropriate, any non-resident child who has died in their area.

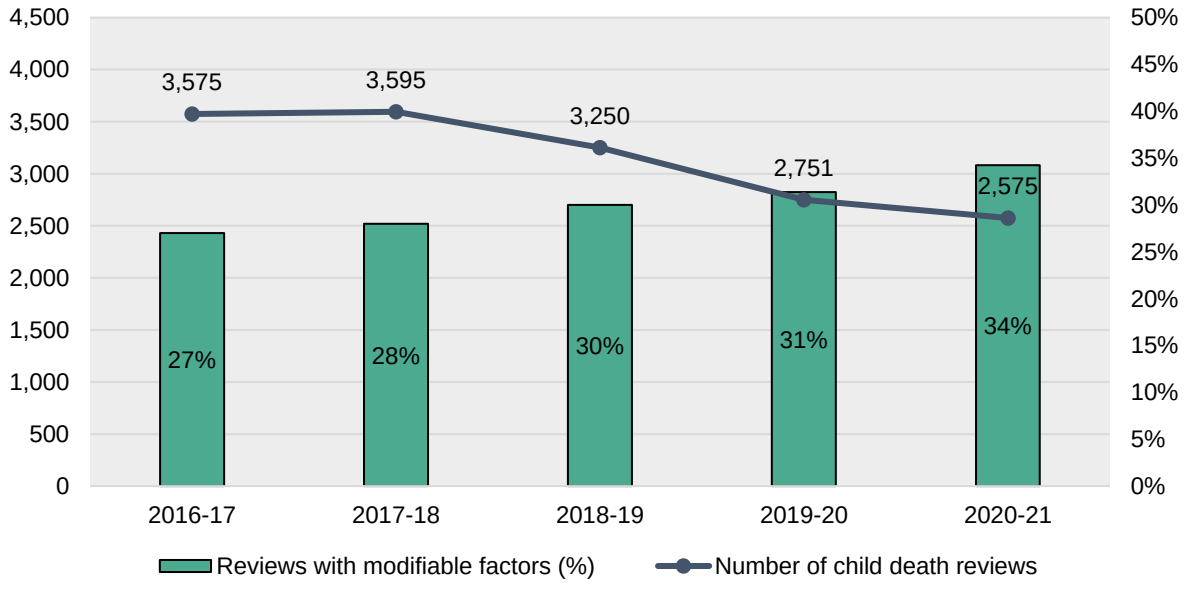
The number of child death reviews (Table 10)

2,575 child deaths were reviewed by CDOPs in England between 1 April 2020 and 31 March 2021. Of these, 20% (n=521) were reviews of children who died within the same year and 80% (n=2,054) were reviews where the child died before 1 April 2020 (Table 18).

There were 176 (6%) fewer reviews compared to the previous year, likely because of the impact of the COVID-19 pandemic and fewer deaths occurring.

The proportion of reviews that identified modifiable factors continues to rise each year with 34% of deaths reviewed during 2020-21 identifying modifiable factors.

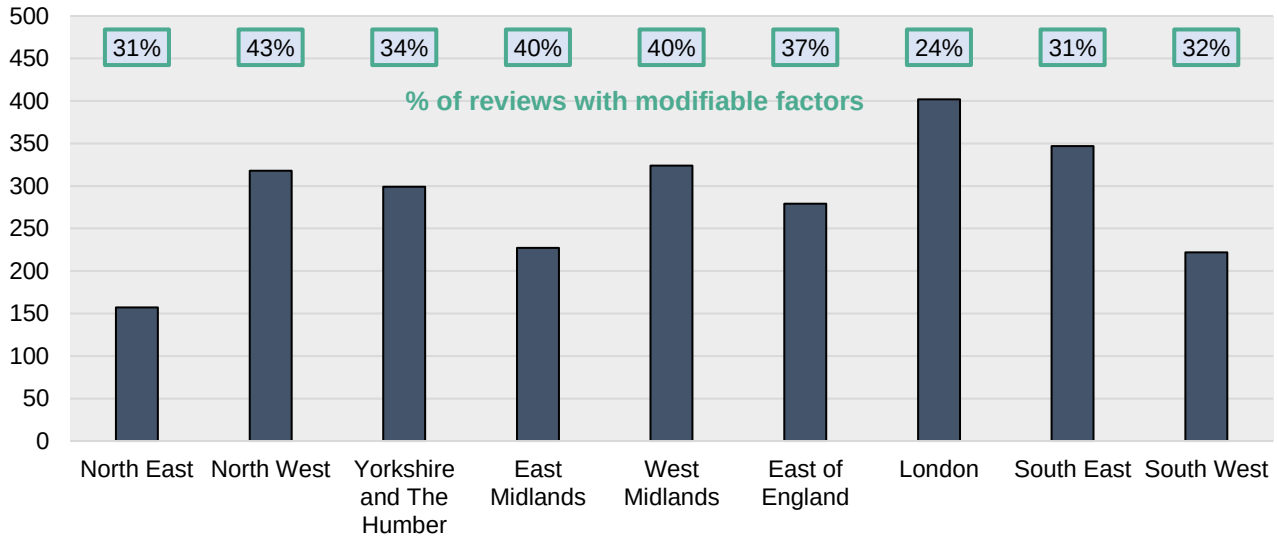
Figure 12: The number of child death reviews completed by Child Death Overview Panels in England and the proportion of cases with modifiable factors identified, by year of review



Data source: NCMD, LSCB1 Return 2018-19

Figure 13 shows the number of reviews completed and the proportion that identified modifiable factors for each region.

Figure 13: The number of child death reviews completed by Child Death Overview Panels and the proportion of cases with modifiable factors identified by region, year ending 31 March 2021



Data source: NCMD

Social Care and Child Safeguarding Practice Reviews (Tables 15 and 16)

A Child Safeguarding Practice Review (CSPR) (previously Serious Case Review) is conducted when a child is seriously harmed, or dies, as a result of abuse or neglect. The review identifies how local professionals and organisations can improve the way they work together. Out of the number of child death reviews completed throughout the year, NCMD received information that a CSPR was carried out for at least 64 child deaths. Of these, 78% identified modifiable factors in the review, in comparison to 33% where a CSPR did not take place.

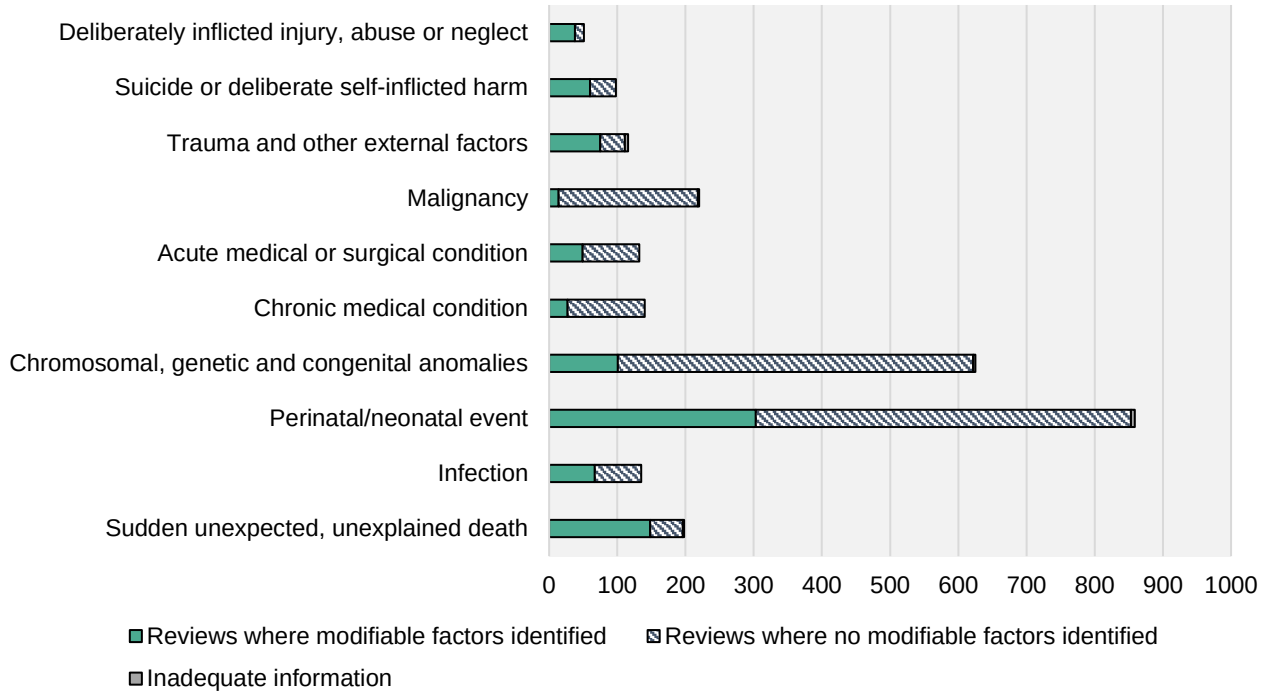
The NCMD received information on 332 children whose death was reviewed during the year who were known to social care at the time of their death, and nearly half of these children (n=150, 45%) were a child in need. 41% of reviews where the child was known to social care at the time of their death had modifiable factors identified in the review, in comparison to 31% of reviews where the child was never known to social care.

Category of death (Table 11)

For child death reviews during 2020-21 (the child may have died in previous years), one third (33%, n=859) of reviews recorded a primary category of *Perinatal/neonatal event*, and a further 24% (n=625) recorded a primary category of *Chromosomal, genetic and congenital anomalies*. Deaths categorised as *Malignancy* (n=220, 9%) and *Sudden unexpected and unexplained death* (n=198, 8%) were the next most frequent categories.

Analysis on reviews that identified modifiable factors is available in this section.

Figure 14: The number of reviews completed by Child Death Overview Panels by primary category of death and whether modifiable factors were identified, year ending 31 March 2021



Data source: NCMD

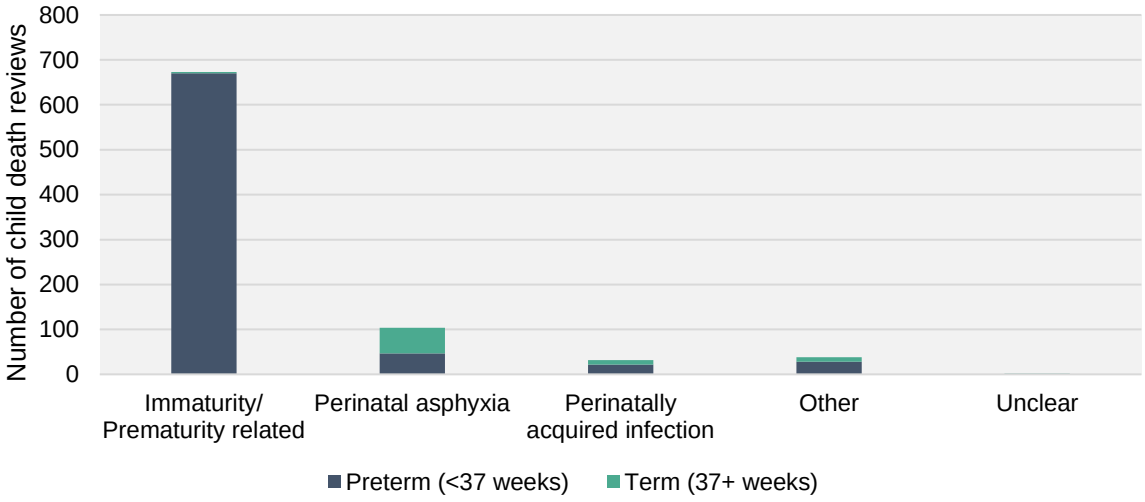
A further breakdown by sub-category of death is available in Table 11, and by age group in Table 12.

Perinatal/neonatal events (Table 13)

With deaths categorised as *Perinatal/neonatal event* continuing to represent one third of death reviews (33%, n=859) and having the highest number of reviews that identified modifiable factors (n=303), a sub-category field for these deaths was introduced into the analysis form.

Of all deaths categorised as *Perinatal/neonatal event* with sufficient information (n=853), 79% (n=673) were immaturity/prematurity related deaths, meaning that deaths due to immaturity/prematurity accounted for around a quarter (26%) of all child deaths reviewed. 104 (12%) children whose deaths were categorised as *Perinatal/neonatal event* were due to perinatal asphyxia, 57 of whom were born at a term gestation (37 weeks and over). 32 deaths (4%) were due to a perinatally acquired infection.

Figure 15: The number of reviews categorised as *Perinatal/Neonatal event* by Child Death Overview Panels by sub-category, year ending 31 March 2021



Data source: NCMD
Deaths where the child's gestational age was not known or incomplete have been excluded from the figure.

Modifiable factors (Tables 11 and 17)

During the review, the CDOP is responsible for identifying any modifiable factors in relation to the child's death. Such modifiable factors are defined as factors which, by means of nationally or locally achievable interventions, could be modified to reduce the risk of future child deaths.

Figure 14 shows that deaths categorised as *Sudden unexpected and unexplained* continued to have the highest proportion of reviews with modifiable factors (n=148/196, 76%), followed by *Deliberately inflicted injury, abuse or neglect* (n=38/51, 75%), *Trauma or other external factors* (n=75/111, 68%) and *Suicide or deliberate self-inflicted harm* (n=60/98, 61%). Deaths that were categorised as *Malignancy* had the lowest proportion of reviews that identified modifiable factors (n=14/218, 6%).

The age groups with the highest percentage of modifiable factors identified were 28-364 days and 15-17 years. Both of these age groups identified modifiable factors in 43% of reviews.

The most frequent examples of modifiable factors were largely consistent with those reported in the NCMD's second annual report. Thematic reports produced by NCMD will include focussed sections on analysis of modifiable factors.

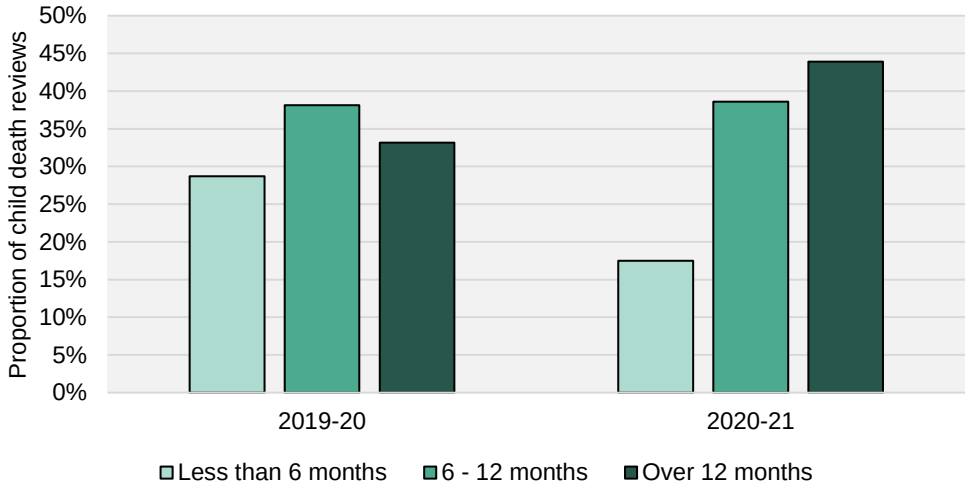
Duration of reviews (Table 18)

521 (20%) reviews completed by CDOPs were of children who died between 1 April 2020 and 31 March 2021, while 2,054 (80%) reviews were of children who died during previous years.

The median time between the date of death and the date of the CDOP review was 335 days. Of the 2,575 reviews, 39% of reviews took between 6 and 12 months to complete, and 44% took over 12 months to complete.

The reviews that took over 12 months to complete presented the highest proportion of reviews where modifiable factors were identified (42%), compared to 26% for reviews taking under 6 months.

Figure 16: The percentage of reviews completed by Child Death Overview Panels by the number of months the review took to complete



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All reference tables can be found here.

5. Further information

Child death reviews: year ending 31 March	This publication can be found at the following websites: • 2018 and 2019: https://digital.nhs.uk/data-and-information/publications/statistical/child-death-reviews • 2017 and earlier: https://www.gov.uk/government/collections/statistics-child-death-reviews
Child death review forms	The data collection forms used to gather information on child deaths can be found here: https://www.gov.uk/government/publications/child-death-reviews-forms-for-reporting-child-deaths
Child death review statutory and operational guidance	The child death review statutory and operational guidance can be found here: https://www.gov.uk/government/publications/child-death-review-statutory-and-operational-guidance-england
Child death review process	For information on the child death review processes, see Chapter 5 of the 'Working Together to Safeguard Children' document which can be found here: https://www.gov.uk/government/publications/working-together-to-safeguard-children--2
NCMD Second Annual Report 2021	https://www.ncmd.info/2021/06/10/2nd-annual-report/
NCMD publications	https://www.ncmd.info/publications/

6. Technical information

Case ascertainment and limitations

All CDOPs continue to submit data to NCMD on an ongoing basis. It is noted in the Working Together (2018) guidance that there is a responsibility on Registrars of Deaths to notify CDOPs of all deaths of children under 18 years of age, to ensure that CDOPs know about all deaths of children in their area. It is important that CDOPs regularly cross reference their data with local Registrars to provide assurance that all child deaths are being reported and reviewed.

Data presented within this release is based on data that has been submitted to NCMD by CDOPs. For the 2020-21 data year, NCMD is aware of at least 1 out of 58 CDOPs that did not submit all death notifications and 3 out of 58 CDOPs that did not submit all of their death reviews to NCMD, so some totals may be underestimated. This data will be added to future publications should these notifications/reviews be retrospectively added to the database.

The data for both 2019-20 and 2020-21 was downloaded on 7th July 2021. This means that some of the data presented in previous publications may have changed as some updates were made retrospectively to previous years. Any additional deaths notified or reviewed after 7th July 2021 will be included in the 2022 data publication.

In addition, denominators used to calculate rates (e.g. child death rate) are based on population estimates, and comparisons using ethnicity data in particular should be treated with caution due to limitations of the comparator data (based on England and Wales data from the 2011 census). Additional data from the next census (2021) will allow for a more reliable comparison in future reports. NCMD is dependent on accurate data entry by the CDOPs, and specifically, category of death is presented within the report as it was submitted by the CDOP. As seen in the Neonatal/Perinatal event sub-categorisation analysis, it is likely that in a minority of cases the category of death submitted to NCMD may not be consistent with the description of the category. Further work with the CDOPs and better clarity on the online data collection form to improve data consistency is underway.

For further information on NCMD data processing please see our Privacy Notice.

NCMD
National Child Mortality Database
Knowledge, understanding and learning to improve young lives

National Child Mortality Database (NCMD)
Child Mortality Analysis Unit,
Level D, St Michael's Hospital, Southwell Street, Bristol BS2 8EG
Email: ncmd-programme@bristol.ac.uk
Website: www.ncmd.info
Twitter: @NCMD_England