

NCMD

National Child Mortality Database

Knowledge, understanding and
learning to improve young lives

Deaths of children and young people due to traumatic incidents:

**Vehicle Collisions, Drownings,
Violence and Maltreatment and Unintentional Injuries**

National Child Mortality Database Programme Thematic Report

Data from April 2019 to March 2022

Published July 2023



Authors

- Tom Williams¹
- David Odd^{1,2}
- Vicky Sleep¹
- Sylvia Stoianova¹
- Joanna Garstang³
- Giles Haythornthwaite⁴
- Rachel Rowlands⁵
- Peter Sidebotham⁶
- Nikhil Misra⁷
- Martin Griffiths⁸
- Chris Rogers⁹
- Ben Mant¹⁰
- Marc Bowes¹¹
- Ashley Martin¹²
- Katrina Phillips¹³
- Nichola Baldwin¹⁴
- Lee Heard¹⁴
- Debi McAndrew¹⁵
- Nayab Nasir¹⁶
- Fiona Murphy¹⁷
- Karen Luyt¹

1. National Child Mortality Database, University of Bristol
2. School of Medicine, Division of Population Medicine, Cardiff University
3. Birmingham Community Healthcare NHS Foundation Trust
4. University Hospitals Bristol and Weston NHS Foundation Trust
5. University Hospitals of Leicester NHS Trust
6. National Child Safeguarding Practice Review Panel
7. Liverpool University Hospitals NHS Foundation Trust
8. Violence Reduction Programme, NHS England
9. South Western Ambulance Service NHS Foundation Trust
10. Wiltshire Police
11. West Yorkshire Police
12. The Royal Society for the Prevention of Accidents
13. The Child Accident Prevention Trust
14. The Royal Life Saving Society UK
15. Merseyside Violence Reduction Partnership
16. Office for Health Improvement and Disparities
17. Alder Hey Children's NHS Foundation Trust

Partners



Front cover: The Mothers of Kirkenes, statue by Per Ung commemorating the bravery of mothers protecting their children during World War Two.

Acknowledgements

The National Child Mortality Database (NCMD) Programme is commissioned by the Healthcare Quality Improvement Partnership (HQIP) as part of the National Clinical Audit and Patient Outcomes Programme (NCAPOP). HQIP is led by a consortium of the Academy of Medical Royal Colleges, the Royal College of Nursing, and National Voices. Its aim is to promote quality improvement in patient outcomes and in particular, to increase the impact that clinical audit, outcome review programmes and registries have on healthcare quality in England and Wales. HQIP holds the contract to commission, manage and develop the National Clinical Audit and Patient Outcomes Programme (NCAPOP), comprising around 40 projects covering care provided to people with a wide range of medical, surgical and mental health conditions. The programme is funded by NHS England, the Welsh Government and, with some individual projects, other devolved administrations and crown dependencies. www.hqip.org.uk/national-programmes.



Supported by: Nick Cook, Kate Hayter, James Harle, Gaja Wright, Brian Hoy and Ghazala Jones from the NCMD team.

With thanks to:

All Child Death Overview Panels (CDOPs) and Child Death Review Professionals who submitted data for the purposes of this report and for their continued support with information to NCMD for the national analysis and learning from child deaths in England.

Bereaved parents, Beckie, Karoline and Stacey who bravely shared their experiences with us in this report, so that we may all learn and improve our practice.

Knife Savers programme, Liverpool, West Yorkshire Police and the Hampshire and the Isle of Wight Fire and Rescue Service for sharing their case studies throughout the report.

Members of the NCMD Steering Group, Professional Advisory Group and partner charity organisations: The Lullaby Trust, Sands and Child Bereavement UK for their review and contributions to the final draft.

The DSM Foundation and Learning Disability and Autism Programme for their review and contributions to the final draft.

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

Website: www.ncmd.info

Twitter: @NCMD_England

Contents

Executive Summary	3
Recommendations	5
How to read this report	6
1. Overview of deaths due to trauma	7
2. Deaths due to vehicle collisions	12
3. Deaths due to violence and maltreatment	20
4. Deaths due to drowning	30
5. Deaths due to other traumatic injuries or external causes	40
Methodology and Limitations	46
Glossary of Terms	48
References	49
Appendices	51



Executive Summary

Every child or young person who dies as a result of physical trauma is a precious individual and their deaths represent a devastating loss for parents, siblings, grandparents, carers, guardians, extended family and friends. Traumatic injuries can occur as a result of vehicle collisions, drowning, violence or maltreatment and a number of other events, which will be covered in this report. When such incidents occur, they can also profoundly affect members of the public who witness them and other members of the wider community. As with all deaths of children and young people, there is a strong need to understand what happened, and why. We must also ensure that anything that can be learned to prevent future deaths from happening is identified and acted upon.

This National Child Mortality Database (NCMD) thematic report aims to identify common characteristics of children and young people who die as a result of physical trauma, investigate factors associated with these deaths and identify common themes to help inform policymakers, commissioners, those providing services to children and young people, and those involved in reviewing deaths of children and young people. There is a statutory requirement for Child Death Overview Panels (CDOPs) to review the deaths of all children in England who die before their 18th birthday. For the purposes of this report, the term “children and young people” refers to those up to the age of 18.

We are aware that the content of this report, which includes some detail of methods of death, may be distressing for some readers.

Key findings

All deaths due to trauma

- There were 644 deaths of children and young people due to traumatic events between 1 April 2019 and 31 March 2022 (3 years); an overall rate of 17.72 deaths per 1 million children per year. 6% of these deaths occurred abroad.
- The death rate was highest for children under 5 and 15-17 year olds, and for males. Risk of death was also different by the ethnicity of the child, the level of deprivation where they lived, and the season of the year, but living in urban or rural environments did not appear to affect the overall risk.
- Death as a result of a vehicle collision was the most common cause of traumatic death for children (5.81 deaths per 1 million children per year), followed by a slightly lower risk of death by violence and maltreatment (4.40 deaths per 1 million children per year). The risk of drowning was estimated at 2.31 deaths per 1 million children per year.
- Of those deaths reviewed by a CDOP, 42% of children or young people were known, or previously known, to social care at the time of death. This was higher than the proportion of children who were known to social care who die of any cause (28%)¹. 16% were known to mental health services at any time.

- For children aged 5-17 years where the death was reviewed, 8% had a learning disability and 11% had a neurodevelopmental condition considered by the CDOP as a factor that may have contributed to vulnerability, ill-health or death. The NHS Digital report Mental health of Children and Young People in England (2017) shows community rates of 1.3% for ASD and 1.9% for ADHD for 5-15 year olds.

Deaths due to vehicle collisions

- There were 211 deaths of children and young people due to a vehicle collision over the 3 years, with 62 in 2019-20, 71 in 2020-21, and 78 in 2021-22.
- Death rates were highest for 15-17 year olds, for males, and for children living in the most deprived neighbourhoods. There was no evidence that the rates were different by ethnicity, region or urban/rural area.
- Vehicle collisions where the child was in the vehicle, either as a driver or passenger, were most common (35% of all deaths following a vehicle collision), followed by deaths where the child was a pedestrian (32%). There were also deaths where the child was on a powered vehicle (e.g., moped or motorcycle), riding a bicycle or scooter, and other collisions such as off-road collisions, rail, boat, and aircraft.
- Different profiles of risk occurred within each age group, but all types (e.g., as pedestrian, in a vehicle, or on a powered vehicle) were most common in the 15-17 year age group than any other age group.
- 20 deaths due to a vehicle collision occurred while the child was abroad, which was 9% of all vehicle collision child deaths.
- Of the deaths that had been reviewed by a CDOP, contributory factors reported included speeding or risk-taking behaviour and consumption of drugs and alcohol. This included instances where the child that died had consumed drugs or alcohol, and instances where other vehicle drivers had consumed drugs or alcohol. Non-use of appropriate safety equipment e.g., seatbelts, and complex home circumstances (including abuse or neglect) were also reported as contributory factors.
- Learning reported from CDOPs included ensuring road planning and designs to support safe use of the road for cyclists, pedestrians and vehicle users, and the importance of proper use of safety equipment e.g., seatbelts, helmets and car seats. The ongoing need for road safety education of children and young people was also identified.

More information and learning from these deaths can be found in Section 2.

Deaths due to violence and maltreatment

- There were 160 deaths of children and young people due to violence or maltreatment during the 3 years; 35 (22%) were infants under 1, 28 (18%) were aged 1-4 years, 27 (17%) were aged 5-14 years, and 70 (44%) were aged 15-17 years. When adjusting for the number of children in the population, children under 1 had a risk of death over 5 times greater than the average.
- Death rates were also higher for males, for children living in urban areas, and in the most deprived neighbourhoods. Risk of death also varied by ethnicity, with the lowest in Asian or Asian British children and the highest in Black or Black British children.
- There were also differences across the country, with the highest risks in London compared to other regions.
- There were 78 deaths due to stabbing or firearms, of which 67 children were aged 10-17 years. Most deaths in this category were related to stabbings. There was some evidence that deaths due to this cause increased over the 3 years, from 23 in 2019-20, to 36 in 2021-22.
- For deaths that had been reviewed by a CDOP, 76% of 10-17 year olds had been known to social care at any time, with 41% known at the time of death. For children under 10, 43% were known to social care at any time, with 13% known at the time of death, and for all deaths in this age group, the perpetrator was either a biological parent or a partner of the parent where this information was recorded.
- Contributory factors reported from completed reviews included challenges with access to services, complex home circumstances and domestic abuse or neglect. Other factors included home safety and living conditions, developmental conditions or disabilities of the child, and school or peer group factors.
- Of all deaths where a neurodevelopmental condition or learning disability were recorded as a contributory factor, the most common category of death recorded was violence and maltreatment (34%).
- Learning from CDOP reviews included the need to deliver, to all clinical teams involved in the care of major trauma patients with cardiothoracic emergencies, ongoing education and training on pathways and management decisions for children presenting with penetrating injuries. The importance of engagement around preventative knife crime reduction campaigns and the need for life-saving skills training for children and young people was also highlighted.
- CDOPs reported examples where there was poor communication and information sharing, particularly in instances where children and young people had moved between areas, and the need to improve this across all services.

- Child death reviews by CDOPs also recognised and recorded the importance of continued support and implementation of the ICON programme (or other similar initiatives) to reduce infant abusive head trauma, across the country.

More information and learning from these deaths can be found in Section 3.

Deaths due to drowning

- There were 84 drownings of children and young people during the 3 years. Nearly half (38 (45%)) occurred in children under 5, 20 (24%) in children aged 5-14 years and 26 (31%) in those aged 15-17 years.
- Over half of the deaths occurred during summer months, and death rates were higher for under 5s and over 15s, for males, for children living in the most deprived neighbourhoods, and for children from a Black or Black British ethnic background.
- Drownings that occurred inland (e.g., a river or lake) were most common (37% of all drownings), followed by drownings in the bath (30%).
- The number of drownings, specifically inland drownings, and drownings in the bath, have increased across the 3 years. In contrast, deaths in swimming pools have reduced.
- There was also an increase in deaths that occurred during the Spring (March, April or May) over the 3 year period, suggesting that drowning deaths started to occur earlier in the year in 2021-22.
- Over 10% of all drowning deaths occurred while the child was abroad.
- Of the deaths that had been reviewed by a CDOP, over half (53%) of 8-17 year olds were thought to be able to swim.
- For all ages, 83% were not supervised by an adult at the time of death.
- Learning reported from CDOP reviews included the importance of supervision of children and young people; the need for appropriate warning signs and lifesaving equipment; and the importance of water safety, both in the home and in public places.

More information and learning from these deaths can be found in Section 4.

Deaths due to other traumatic injuries

- Other deaths reported included deaths as a result of drug or alcohol poisoning (n=47), accidental strangulation or suffocation (n=42), falls (n=31), choking or foreign object consumption (n=21), fire or electrocution (n=21), falling objects (n=10), animal attacks (n=6) and other traumatic injuries (n=11). Deaths from drug or alcohol poisoning may have reduced over the 3 years.

More information and learning from these deaths can be found in Section 5.

Recommendations

Recommendation 1: Ensure all primary school children receive road safety education to ensure they are aware of how to use roads safely. All those organisations involved in commissioning and delivering road safety education should work together to deliver this recommendation. **Action by: Department for Education, Department for Transport, Local Authorities and Independent Schools Council**

Recommendation 2: Review the effectiveness of current programmes in averting deaths and serious violence, especially involving knives and firearms. This should include due consideration to the findings within this report of the particular vulnerabilities of male young people and those from some ethnic groups. All those organisations involved in commissioning and delivering such programmes should work together to deliver this recommendation. **Action by: Local Safeguarding Partnerships and Violence Reduction Units**

Recommendation 3: Develop and deliver regular education and training events, including simulation-based training, on children and young people presenting with penetrating injuries and cardiothoracic emergencies including damage control surgical training for all on-call surgical consultants. This should be delivered to all clinical teams involved in the care of major trauma patients. All organisations involved in commissioning and delivering education and training for healthcare professionals should work together to deliver this recommendation. **Action by: NHS England Workforce, Training and Education Directorate, Integrated Care Boards, Adult and Paediatric Major Trauma Operational Delivery Networks**

Recommendation 4: Support the development of standardised bleed control and resuscitation training to support the training of young people in life-saving skills. All organisations involved in commissioning and delivering education and training for healthcare professionals should work together to deliver this recommendation. **Action by: NHS England Workforce, Training and Education Directorate, Violence Reduction Units, charities and not-for-profit agencies**

Recommendation 5: Prioritise measures to safeguard and protect children under one from non-accidental injury in line with the recommendations made in the Child Safeguarding Practice Review Panel Report “The Myth of Invisible Men”. **Action by: Department for Education, Local Authorities, Local Safeguarding Partnerships, NHS England Safeguarding Team, Institute of Health Visiting, Integrated Care Boards and Integrated Care Partnerships**

Recommendation 6: Ensure that the importance of safe bathing techniques, including the adult always staying within arm's reach of young children at bath time, is a public health focus in accident prevention. This should include the updating of relevant training packages for professionals including community midwives and health visitors to ensure families are aware of safe bathing techniques. All organisations

involved in commissioning and delivering education and training for healthcare professionals should work together to deliver this recommendation. **Action by: Office for Health Improvement and Disparities, Local Authorities, NHS England Workforce, Training and Education Directorate, Directors of Public Health, Institute of Health Visiting, charities and not-for-profit agencies**

Recommendation 7: Consider an urgent focused agenda to address current inequalities and provide children unable to access statutory or private swimming and water safety tuition with access to class-based water safety education. All organisations involved in commissioning or delivering water safety education should work together to deliver this recommendation. **Action by: Department for Levelling Up, Housing and Communities, Department for Education and charities and not-for-profit agencies**

Recommendation 8: Facilitate a cross-departmental roundtable meeting to discuss the current and future risk of drowning in the UK. Including the consideration of engaging with the National Water Safety Forum to better understand the scale, scope and potential opportunities for enhanced prevention measures. **Action by: The Cabinet Office**

Recommendation 9: Invest in practical experiential learning, water safety programmes situated outdoors, in response to the high number of child-related open water drowning fatalities. All organisations involved in commissioning or delivering water safety programmes should work together to deliver this recommendation. **Action By: Department for Culture, Media and Sport, Sport England, charities and not-for-profit agencies**

Recommendation 10: Start dissemination of water safety advice earlier in the year to ensure those accessing water in the spring are also aware of safety messages. All organisations involved in delivering public water safety messages, locally, regionally and nationally should act on this recommendation. **Action by: Integrated Care Boards, Local Authorities, Office for Health Improvement and Disparities, charities and not-for-profit agencies**

Recommendation 11: Consider including window restrictors and blind cord cleats in the Decent Homes Standard Review. **Action by: Department of Levelling Up, Housing and Communities**

Recommendation 12: Ensure all children and young people between 10 and 18 years are provided with evidence-based, age-appropriate drug and alcohol education, with health and wellbeing education throughout primary school. All organisations involved in commissioning or delivering drug and alcohol education should work together to deliver this recommendation. **Action by: Department for Education, Local Authorities and Independent Schools Council**

Recommendation 13: Revise and update the sudden unexpected death in infancy and childhood multi-agency

guidelines for care and investigation; to ensure investigations are appropriate and relevant for the wide variety of circumstances in which children and young people die. The Royal Colleges responsible for these guidelines should work with those organisations involved in implementing them to deliver this recommendation. **Action by: Royal College of Pathologists, Royal College of Paediatrics and Child Health, Association of Child Death Review Professionals, National Police Chiefs Council**

Recommendation 14: Raise awareness among healthcare professionals of post-traumatic stress disorder (PTSD) and complex grief and how these might affect families whose children have died as a result of traumatic incidents and ensure access to specialist help is available. All organisations commissioning or delivering education and training for healthcare professionals should work together to deliver this recommendation. **Action by: NHS England Workforce, Training and Education Directorate, Integrated Care Boards and commissioners of healthcare services**

Recommendation 15: Consider implementation of a card or other resource which can be given to members of the public who witness a traumatic event to provide information and signpost them to appropriate support. All organisations who respond in an emergency should consider how they might deliver this recommendation. **Action by: National Police Chiefs Council, National Fire Chiefs Council, Association of Ambulance Chief Executives**

Recommendation 16: Ensure universal delivery of programmes to reduce inequalities in line with the recommendations made in the NCMD thematic report on child mortality and deprivation. This should include implementation of the Healthy Child Programme and offers of intensive support to vulnerable families and those at higher risk identified in this report. All organisations involved in commissioning and delivery of relevant programmes should work together to deliver this recommendation. **Action by: Integrated Care Boards and Local Authorities**

Recommendation 17: Ensure sharing of information and learning within integrated care systems with support from Integrated Care Partnerships / Integrated Care Boards to support targeted implementation based on local data (e.g., knife crime). All organisations involved in the commissioning and delivery of the Child Death Review process should work together to deliver this recommendation. **Action by: Child Death Overview Panels, Integrated Care Boards, Integrated Care Partnerships, National Child Mortality Database**

Recommendation 18: Review and improve the information sharing and communication between local authorities and between agencies, e.g., in the cases where children and young people move between areas due to family moves or moves between care placements. This includes information sharing between schools especially for managed moves of children in care to ensure there is sufficient information available to inform the induction process and support strategies and interventions in the new areas. **Action by: Integrated Care Boards, Integrated Care Partnerships**

How to read this report

The National Child Mortality Database (NCMD) Programme was established to collate and analyse data on all children in England, who die before their 18th birthday.

This report includes child deaths as a result of vehicle collisions, drowning, violence or maltreatment, fire, burns or electrocution, falls, falling objects, drug or alcohol poisoning (excluding deaths as a result of a deliberate overdose), animal attacks, choking or foreign object consumption/inhalation, accidental suffocation or strangulation, and any other traumatic injuries. A full description of these categories, and limitations of this report are described in Methodology and Limitations.

This report excludes deaths as a result of: all traumatic injuries where there was thought to be suicidal intent, as these were previously included in the [NCMD thematic report on suicide in children and young people](#). Further information on exclusions can be found in Methodology and Limitations.

As the profiles of traumatic deaths vary widely, and learning from deaths is relevant for different agencies, this report has been split into the following sections:

1. Overview of deaths due to trauma
2. Deaths due to vehicle collisions
3. Deaths due to violence and maltreatment
4. Deaths due to drowning
5. Deaths due to other traumatic injuries

Each section reports the number of deaths that occurred between 1 April 2019 and 31 March 2022, and for those where the death had been reviewed by December 2022, the contributory factors and learning from the child death reviews.

Death rates have been calculated using [ONS population estimates](#) for 0-17 year olds and are presented throughout this report as deaths per 1 million children per year (see Methodology and Limitations for more information).

1. Overview of deaths due to trauma

Introduction

Childhood deaths due to injury, from both unintentional causes and violence, are among the most preventable deaths that can occur. Every child death represents a devastating loss for their families, friends and their wider communities.

Within the statutory child death review process in England, deaths due to injury are grouped into the following categories:

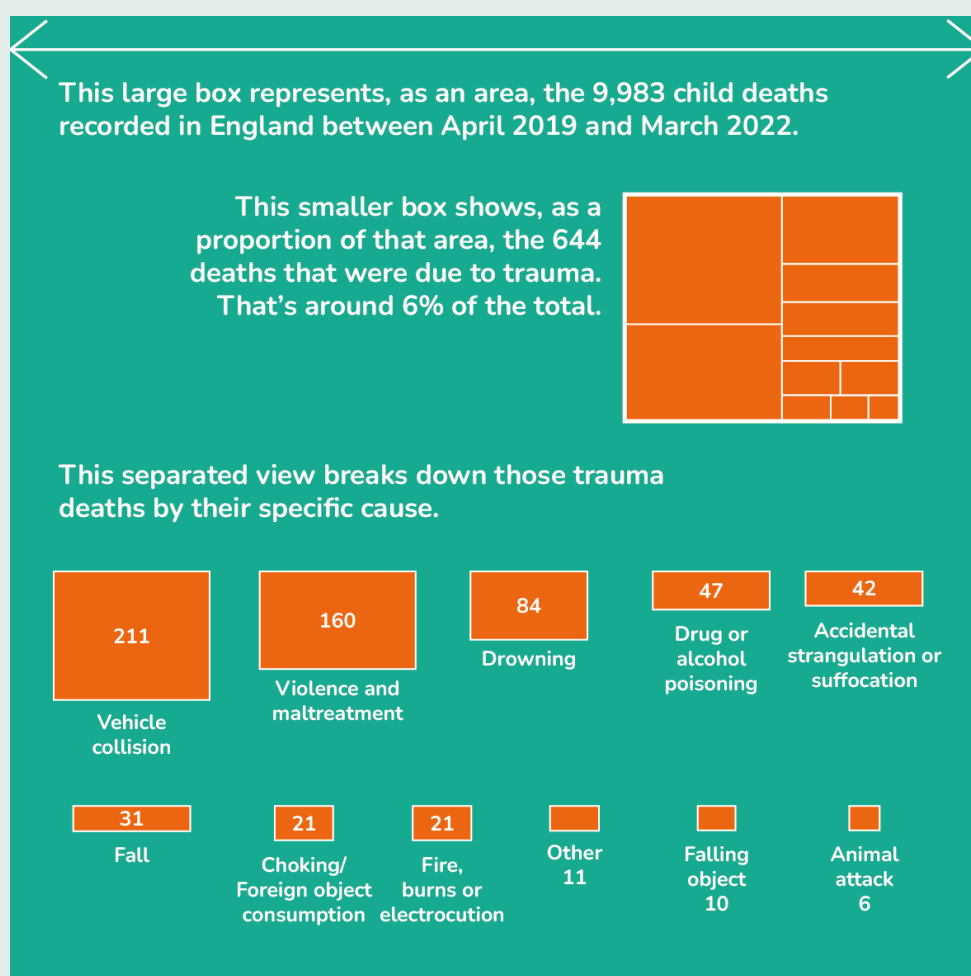
- Deliberately inflicted injury, abuse and neglect
- Suicide and deliberate self-inflicted harm
- Trauma, and other external factors (including drowning, vehicle collisions, poisoning, burns, falls, choking, suffocation and accidental strangulation)

The NCMD child death review data release in 2022 showed that of the deaths reviewed by a Child Death Overview Panel

(CDOP) and allocated to one of these three categories, 63% identified modifiable factors. These are factors that may, by means of a locally or nationally achievable intervention, be modified to reduce the risk of future child deaths. This group represents the second highest proportion of modifiable factors across all child deaths.

Therefore, taken as a whole, deaths due to injuries encompass a wide range of contributory factors and corresponding opportunities for learning and prevention. This report will look at four main groups: deaths due to violence and maltreatment, deaths that occur as a result of vehicle collisions (this includes motorised (e.g., cars, e-scooters etc) and non-motorised vehicles (e.g., bicycles), deaths due to drowning and deaths due to other traumatic injuries. The report will identify the characteristics of children and young people who die in each of these groups, examine the contributory factors and learning identified by the CDOP reviews and make recommendations to reduce the number of children who die.

Deaths occurring between April 2019 and March 2022



There were 644 deaths of children and young people due to traumatic events (as defined in Methodology and Limitations) between 1 April 2019 and 31 March 2022 (3 years), an overall rate of 17.72 deaths per 1 million children (Table 1). This is approximately 6% of all child deaths in this period. Figure 1 shows the trend of the risk of death as a result of trauma per month.

The death rate was higher in children under 5 (22.97 per 1 million children), children aged 15-17 years (46.92 per 1 million children) and the rate of death was higher for males

(24.03 per 1 million children) than females (11.07 deaths per 1 million children).

Overall risk of death due to trauma was also different by the ethnicity of the child, the level of deprivation where they lived, and the season of the year, but living in urban or rural environments did not appear to affect the risk.

As the nature of trauma deaths varies significantly, further analysis and interpretation can be found in the relevant sections throughout this report.

Table 1: Number of child deaths as a result of trauma between April 2019 and March 2022, by characteristics

Characteristic	Number with data	Number of deaths	Estimated population of children	Overall risk (per 1,000,000 children per year)	p-value for a difference between risks
All deaths	644	644	36,342,900	17.72 (16.38-19.14)	-
Age at death (years)	644				<0.001
<5 years		224 (34.8%)	9,750,312 (26.8%)	22.97 (20.06-26.19)	
5-14 years		155 (24.1%)	20,944,476 (57.6%)	7.40 (6.28-8.66)	
15-17 years		265 (41.2%)	5,648,112 (15.5%)	46.92 (41.43-52.92)	
Sex	644				<0.001
Female		196 (30.4%)	17,697,060 (48.7%)	11.07 (9.57-12.74)	
Male		448 (69.6%)	18,644,292 (51.3%)	24.03 (21.85-26.36)	
Area of residence	634				0.4012
Urban		544 (85.8%)	30,751,380 (84.6%)	17.69 (16.23-19.24)	
Rural		90 (14.2%)	5,591,520 (15.4%)	16.10 (12.94-19.78)	
Ethnicity¹	594				<0.001
Asian or Asian British		61 (10.3%)	4,347,237 (12.3%)	14.03 (10.73-18.02)	
Black or Black British		60 (10.1%)	2,013,906 (5.7%)	29.79 (22.74-38.35)	
Mixed		50 (8.4%)	2,404,008 (6.8%)	20.80 (15.44-27.42)	
Other		20 (3.4%)	938,268 (2.7%)	21.32 (13.02-32.92)	
White		403 (67.9%)	25,620,381 (72.5%)	15.73 (14.23-17.34)	
Region of CDOP	644				0.1011
East Midlands		53 (8.2%)	3,029,544 (8.3%)	17.49 (13.10-22.88)	
East of England		55 (8.5%)	4,075,992 (11.2%)	13.49 (10.17-17.56)	
London		119 (18.5%)	6,152,796 (16.9%)	19.34 (16.02-23.14)	
North East		33 (5.1%)	1,604,772 (4.4%)	20.56 (14.16-28.88)	
North West		100 (15.5%)	4,722,588 (13.0%)	21.17 (17.23-25.75)	
South East		86 (13.4%)	5,955,804 (16.4%)	14.44 (11.55-17.83)	
South West		63 (9.8%)	3,344,544 (9.2%)	18.84 (14.47-21.10)	

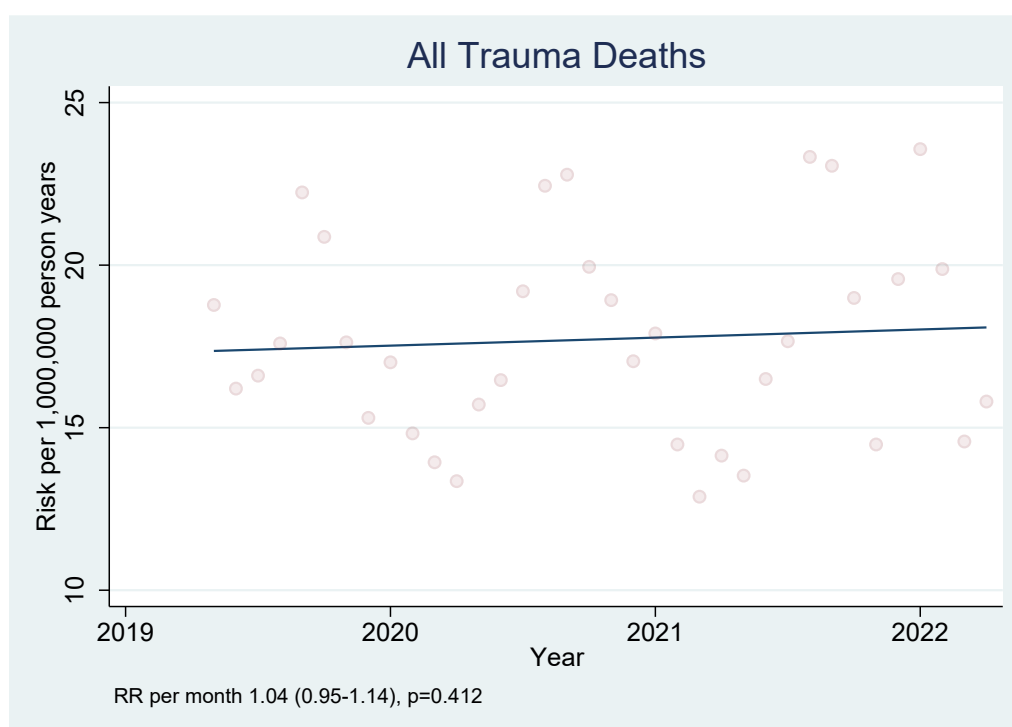
Characteristic	Number with data	Number of deaths	Estimated population of children	Overall risk (per 1,000,000 children per year)	p-value for a difference between risks
West Midlands		73 (11.3%)	3,926,988 (10.8%)	18.59 (14.57-23.37)	
Yorkshire and the Humber		62 (9.6%)	3,529,872 (9.7%)	17.56 (13.47-22.52)	
Deprivation	639				<0.001
1 (Most deprived)		225 (35.2%)	8,669,052 (23.9%)	25.95 (22.67-29.58)	
2		138 (21.6%)	7,516,656 (20.7%)	18.36 (15.42-21.69)	
3		114 (17.8%)	6,877,512 (18.9%)	16.58 (13.67-19.91)	
4		99 (15.5%)	6,576,192 (18.1%)	15.05 (12.23-18.33)	
5 (Least deprived)		63 (9.9%)	6,703,488 (18.4%)	9.40 (7.22-12.02)	
Season²	644				0.0440
Winter		154 (23.9%)	9,085,725 (25.0%)	16.95 (14.38-19.85)	
Spring		144 (22.4%)	9,085,725 (25.0%)	15.85 (13.37-18.66)	
Summer		192 (29.8%)	9,085,725 (25.0%)	21.13 (18.25-24.34)	
Autumn		154 (23.9%)	9,085,725 (25.0%)	16.95 (14.38-19.85)	

1 Ethnicity is grouped based on groupings used in the 2011 Census. 'Other' includes 'Arab' and 'Any other ethnic group'.

2 Winter (December, January, February); Spring (March, April, May); Summer (June, July, August); Autumn (September, October, November).

A breakdown of the demographics per year is presented in Appendix 1.

Figure 1: Risk of death as a result of trauma per 1,000,000 person years, for deaths April 2019 to March 2022



Deaths abroad

Working Together to Safeguard Children (2018) requires child death review partners to review the deaths of all children normally resident in their area. This includes children who die whilst they are abroad, for example, on holiday or visiting family. The Child Death Review Statutory and Operational Guidance provides advice on how to conduct a child death review investigation for a child who dies abroad, and this includes working with the Foreign Commonwealth and Development Office where necessary.

During the 3 years, there were 37 traumatic deaths of children resident in England that occurred abroad (defined as outside of England)(Table 2). The highest number of these deaths were caused by a vehicle collision (n=20), followed by drownings (n=9). These deaths are included in all analysis throughout this report. However, deaths that occur abroad are challenging for CDOPs to review, as collecting information from authorities abroad is difficult and therefore the information collected on these deaths can often be limited.



Table 2: Number of child deaths as a result of trauma that occurred outside of England between April 2019 and March 2022

	Number of deaths that occurred between April 2019-March 2022
All deaths due to trauma	644
Deaths abroad	37 (6%)
Vehicle collision	20
Drowning	9
Other causes	8

The Royal Life Saving Society UK (RLSS UK) is currently working with the Foreign Commonwealth and Development Office (FCDO) to raise awareness of the risks of drowning while abroad. This will include a number of animated information clips highlighting the various dangers and how to stay safe in and around water when on holiday.

Completed child death reviews

For deaths from traumatic events that occurred between 1 April 2019 and 31 March 2022, 53% (n=342/644) had been reviewed by a CDOP by 5 December 2022 (Table 3). It can often take some time for deaths due to traumatic events to progress through the whole child death review process, sometimes over a year. This is because the CDOP review occurs after the conclusion of the coroner's inquest and in the case of deaths due to violence or maltreatment, after the conclusion of any criminal trial, child safeguarding practice review or domestic homicide review.

Table 3: Number of child deaths as a result of trauma between April 2019 and March 2022 and proportion reviewed by a CDOP before December 2022, by cause

	Number of deaths that occurred between April 2019-March 2022	Child death reviews completed by December 2022	% reviews completed by December 2022
Vehicle collision	211	113	54%
Violence and maltreatment	160	67	42%
Drowning	84	45	54%
Drug or alcohol poisoning	47	29	62%
Accidental strangulation or suffocation	42	32	76%
Fall	31	21	68%
Foreign object choking/consumption/inhalation	21	16	76%
Fire, burns, or electrocution	21	7	33%
Falling object	10	2	20%
Animal attack	6	3	50%
Other	11	7	64%
Total	644	342	53%

CDOPs collect detailed information on the social environment in which the child or young person lives as part of the child death review process. 42% (n=144/342) of children or young people were either previously known to social care or were known at the time of death (Table 4). This was higher than the proportion of children who were known to social care who die of any cause (28%)¹. Within the child population in England, 4% are reported to be a Child in Need or on a Child Protection Plan². In 16% (n=41/249) of reviews, it was recorded that the child was known to mental health services.

Table 4: Background features identified in completed child death reviews, where child died as a result of trauma

	Number of child death reviews completed
Social care	
Known to social care at the time of death	53/342 (15%)
Previously known, but not an open case	91/342 (27%)
Not known to social care	198/342 (58%)
Subject to CSPR ¹	48/296 (16%)
Child ever known to Mental Health Services	41/249 (16%)

1 Child Safeguarding Practice Review

1 NCMD CDR data release (2022)
2 Characteristics of children in need (2022)
3 Special educational needs in England (2022)

Children and young people with a disability, learning disability, or neurodevelopmental condition

Developmental conditions or disabilities were recorded as contributory factors in 13% (n=46/342) of all completed child death reviews where the child died due to trauma (for 0-17 years). This included learning disabilities, neurodevelopmental conditions, motor impairments, sensory impairments and other developmental impairments or conditions such as speech and language difficulties.

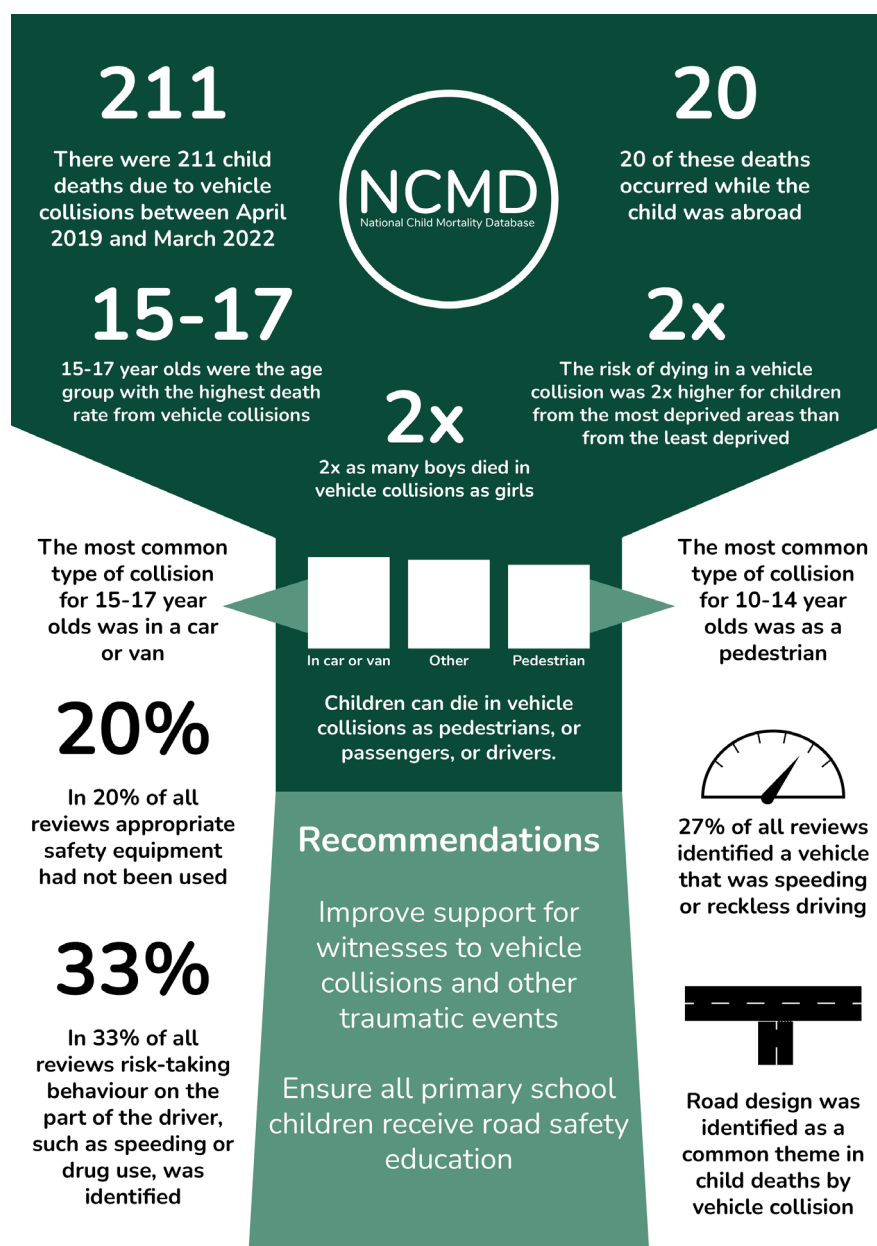
Where the child or young person was aged 5-17 years, 8% (n=17/222) had a learning disability recorded by the CDOP as a factor that may have contributed to their vulnerability, ill-health or death.

11% (n=24/222) of completed reviews recorded a neurodevelopmental condition as a contributory factor for children aged 5-17 years who died due to trauma, including autism spectrum disorder (ASD) and attention deficit hyperactivity disorder (ADHD). This includes 7 children and young people where there was no formal diagnosis or who were awaiting assessment for a possible neurodevelopmental condition at the time of their death. The NHS Digital report Mental health of Children and Young People in England (2017) shows community rates of 1.3% for ASD and 1.9% for ADHD for 5-15 year olds and, more recently, special education needs data reported levels of ASD in schools at 2.2% in 2021-22³.

Children and young people with a learning disability and children and young people with a neurodevelopmental condition died across all traumatic causes, but the most common category of death recorded for this group was violence and maltreatment (34%, n=14/41).



2. Deaths due to vehicle collisions



Introduction

Globally, road traffic accidents are the leading cause of death among children and young people aged 5-29 years⁴. This report uses the term “collisions” rather than “accidents” since most injuries and their precipitating events are predictable and preventable⁵. Children and young people can be involved in vehicle collisions in a number of ways, for example, as a pedestrian, as the driver of a vehicle or as a passenger in a vehicle.

Road danger is a strong disincentive to active transport (i.e., walking and cycling). A survey of parents of primary school children in inner London in 1998 found that 90% of parents were worried about the safety of their children as pedestrians on the school-home journey⁶. Fear of pedestrian injury may encourage greater car use, leading to higher motorised traffic volumes and greater risks to pedestrians.

⁴ RCPCH (2020)

⁵ Davis et al (2001)

⁶ Sonkin et al (2006)

Deaths occurring between April 2019 and March 2022

For this report, the analysis on vehicle collisions encompasses all types of vehicle collisions. This includes collisions involving cars, bicycles, scooters, motorbikes, mopeds, tractors and quad bikes. For this group the child or young person may have been a pedestrian, driver of the vehicle or, in the case of multi-person vehicles, a passenger. The analysis in this section also includes deaths as a result of collisions involving boats, trains, and aircraft. Deaths, where the collision was thought to be due to suicidal intent, have not been included in this report. Further information can be found in the Methodology and Limitations section.

There were 211 deaths of children and young people due to a vehicle collision between 1 April 2019 and 31 March 2022 (3 years), an overall rate of 5.81 deaths per 1 million children per year (Table 5). Although the number of deaths increased from 61 in 2019-20 to 78 in 2021-22, there was not strong statistical evidence of a significant change in the number of deaths from vehicle collisions across the 3 years (Table 7 and Figure 2).

The Department for Transport has previously released [national statistics](#) that found a decrease in overall road casualties in

the UK during national lockdowns in 2020 in response to the COVID-19 pandemic. This time period is included within the data in this report.

Age, sex and ethnicity of children and young people who die in vehicle collisions

There were 37 (17.5%) deaths of children aged under 5, 70 (33.2%) deaths of children and young people aged 5-14 years, and 104 (49.3%) deaths of young people aged 15-17 years. The death rate was higher for 15-17 year olds than for all other ages, where there were 18.41 deaths per 1 million children per year.

There were almost twice as many males (64.0%, n=135) than there were females (36.0%, n=76) dying in vehicle collisions.

The highest number of deaths was seen in children from a White ethnic background (77.2%, n=149), followed by Asian (11.9%, n=23), Mixed (5.7%, n=11), and Black (4.2%, n=8). When adjusting for the ethnic group distribution in the population, there was little to suggest that risk of death due to a vehicle collision was different by ethnicity.

Table 5: Number of child deaths as a result of a vehicle collision between April 2019 and March 2022, by age, sex, and ethnicity

Characteristic	Number with data	Number of deaths	Estimated population of children	Overall risk (per 1,000,000 children per year)	p-value for a difference between risks
All deaths	211	-	36,342,900	5.81 (5.05-6.64)	
Age at death (years)	211				<0.001
<5 years		37 (17.5%)	9,750,312 (26.8%)	3.79 (2.67-5.23)	
5-14 years		70 (33.2%)	20,944,476 (57.6%)	3.34 (2.61-4.22)	
15-17 years		104 (49.3%)	5,648,112 (15.5%)	18.41 (15.04-22.31)	
Sex	211				0.0002
Female		76 (36.0%)	17,697,060 (48.7%)	4.29 (3.38-5.38)	
Male		135 (64.0%)	18,644,292 (51.3%)	7.24 (6.07-8.57)	
Ethnicity ¹	193				0.360
Asian or Asian British		23 (11.9%)	4,347,237 (12.3%)	5.29 (3.35-7.94)	
Black or Black British		8 (4.2%)	2,013,906 (5.7%)	3.97 (1.71-7.83)	
Mixed		11 (5.7%)	2,404,008 (6.8%)	4.58 (2.28-8.19)	
Other		2 (1.0%)	938,268 (2.7%)	2.13 (0.26-7.70)	
White		149 (77.2%)	25,620,381 (72.5%)	5.82 (4.92-6.83)	

¹ Ethnicity is grouped based on groupings used in the 2011 Census. 'Other' includes 'Arab' and 'Any other ethnic group'.

A breakdown of the demographics per year, where possible, is presented in Appendix 2.

Area, region, deprivation and season

The death rate for children living in the most deprived neighbourhoods (7.61 deaths per 1 million children) was twice that for those living in the least deprived neighbourhoods (3.88 deaths per 1 million children).

There was little to suggest that risk of death due to vehicle collision was different across regions, rural/urban area or time of the year (Table 6).

Table 6: Number of child deaths as a result of a vehicle collision between April 2019 and March 2022, by area, region, season and deprivation

Measure	Number with data	Number of deaths	Estimated population of children	Overall risk (per 1,000,000 children per year)	p-value for a difference between risks
Area of residence	210				0.1079
Urban		169 (80.5%)	30,751,380 (84.6%)	5.50 (4.70-6.39)	
Rural		41 (19.5%)	5,591,520 (15.4%)	7.33 (5.26-9.95)	
Region of CDOP	211				0.1465
East Midlands		16 (7.6%)	3,029,544 (8.3%)	5.28 (3.02-8.58)	
East of England		18 (8.5%)	4,075,992 (11.2%)	4.42 (2.62-6.98)	
London		23 (10.9%)	6,152,796 (16.9%)	3.74 (2.37-5.61)	
North East		15 (7.1%)	1,604,772 (4.4%)	9.35 (5.23-15.42)	
North West		28 (13.3%)	4,722,588 (13.0%)	5.93 (3.94-8.57)	
South East		36 (17.1%)	5,955,804 (16.4%)	6.04 (4.23-8.37)	
South West		23 (10.9%)	3,344,544 (9.2%)	6.88 (4.36-10.32)	
West Midlands		28 (13.3%)	3,926,988 (10.8%)	7.13 (4.74-10.31)	
Yorkshire and the Humber		24 (11.5%)	3,529,872 (9.7%)	6.80 (4.35-10.12)	
Deprivation	210				0.0359
1 (Most deprived)		66 (31.4%)	8,669,052 (23.9%)	7.61 (5.89-9.69)	
2		38 (18.1%)	7,516,656 (20.7%)	5.06 (3.58-6.94)	
3		39 (18.6%)	6,877,512 (18.9%)	5.67 (4.03-7.75)	
4		41 (19.5%)	6,576,192 (18.1%)	6.23 (4.47-8.46)	
5 (Least deprived)		26 (12.4%)	6,703,488 (18.4%)	3.88 (2.53-5.68)	
Season¹	211				0.1389
Winter		47 (22.3%)	9,085,725 (25.0%)	5.17 (3.80-6.88)	
Spring		42 (19.9%)	9,085,725 (25.0%)	4.62 (3.33-6.25)	
Summer		62 (29.4%)	9,085,725 (25.0%)	6.82 (5.23-8.75)	
Autumn		60 (28.4%)	9,085,725 (25.0%)	6.60 (5.04-8.50)	

¹ Winter (December, January, February); Spring (March, April, May); Summer (June, July, August); Autumn (September, October, November).

A breakdown of the demographics per year, where possible, is presented in Appendix 2.

Type of collision

The highest proportion (34.6%, n=73) of deaths due to a vehicle collision occurred where the child was inside a vehicle (e.g., a car or van, either as a passenger or driver), followed by collisions where the child was a pedestrian (31.8%, n=67), and then where the child was on a powered vehicle (e.g., a motorbike, quadbike, e-scooter, or moped) (13.3%, n=28), including 3 deaths that involved electric scooters.

There were also deaths where the child was on a bicycle or manual scooter (10.0%, n=21) and other collisions such as aircraft, rail, boat, or off-road accidents (10.4%, n=22) (Table 7). There was little to suggest an important change in the trend of deaths as a result of a vehicle collision over the 3 years (Figure 2), and this was also the case for each collision type (Table 7).

Table 7: Number of child deaths as a result of a vehicle collision between April 2019 and March 2022, by year of death and type of collision

Collision type	Numbers of deaths				P-value for a trend across time
	All years	2019-20	2020-21	2021-22	
Vehicle collisions	211	62	71	78	0.178
In a vehicle (e.g., car, as a passenger or driver)	73	26	19	28	0.744
Pedestrian	67	16	25	26	0.136
Bicycle or manual scooter	21	7	8	6	0.789
On powered vehicle (e.g., motorcycle, moped, quad, e-scooter)	28	8	7	13	0.250
Other (off road, aircraft, boat, rail, other or unclear)	22	5	12	5	>0.999

The profile of vehicle collisions varied across the age groups; the largest number of deaths where the child was in a vehicle was seen for 15-17 year olds (n=43) (Table 8). There were 26 deaths of 10-14 year olds where the child was a pedestrian (an age where children leave primary education, are seen to become more independent and, for example, start walking to school). Three quarters of children and young people in

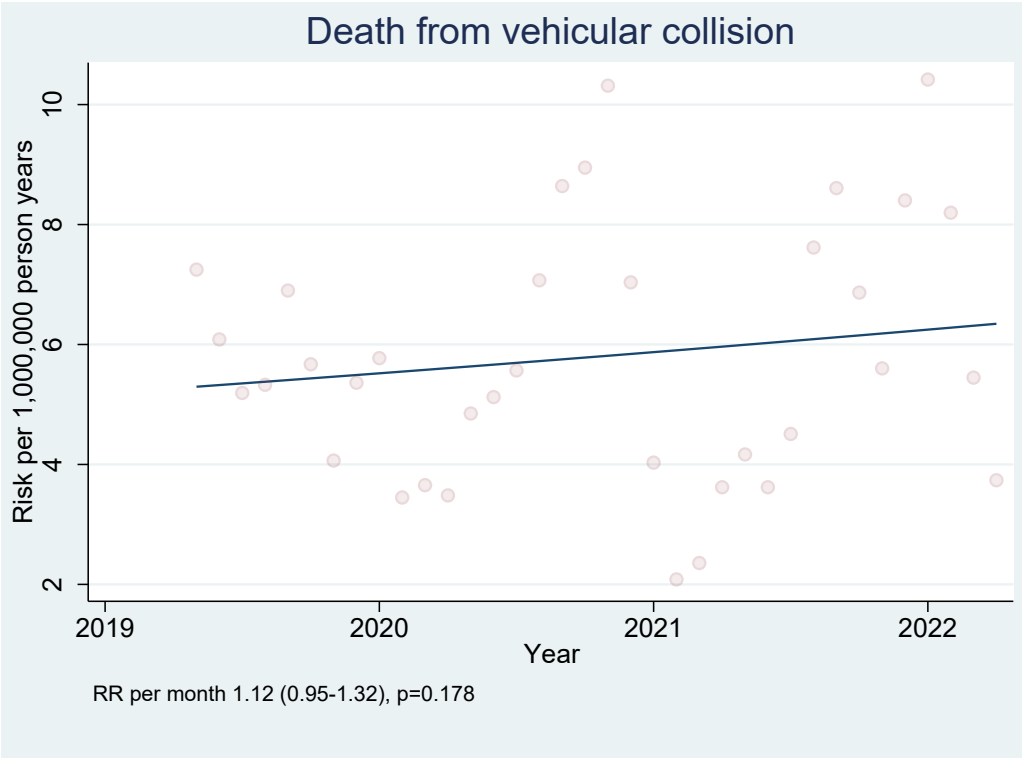
this group were not accompanied by an adult at the time the incident occurred. Of the 34 deaths of 15-17 year olds where the child was either on a powered vehicle, off road vehicle, boat or rail, 23 were on a motorcycle, moped, quad bike, or e-scooter. The number of deaths and risk per 1 million children in each age category, are shown in Table 8.

Table 8: Risks of death as a result of a vehicle collision between April 2019 and March 2022, by age group and vehicle collision type

Collision type	Number of deaths			Risk per 1,000,000 children per year			P-value
	<5 years	5-14 years	15-17 years	<5 years	5-14 years	15-17 years	
In a vehicle (e.g., car, as a passenger or driver)	16	14	43	1.64 (0.94-2.66)	0.67 (0.47-1.12)	7.61 (5.51-10.25)	<0.001
Pedestrian	15	34	18	1.54 (0.86-2.54)	1.62 (1.12-2.27)	3.19 (1.89-5.04)	<0.060
Bicycle or manual scooter	2	10	9	0.21 (0.02-0.74)	0.48 (0.23-0.88)	1.59 (0.73-3.02)	0.006
Other (on powered vehicle, off road, aircraft, boat, rail, other or unclear)	4	12	34	0.41 (0.11-1.05)	0.57 (0.30-1.00)	6.02 (4.17-8.41)	<0.001

Other combines multiple categories to ensure non-disclosure of small numbers

Figure 2: Risk of death as a result of a vehicle collision per 1,000,000 person years, for deaths between April 2019 and March 2022



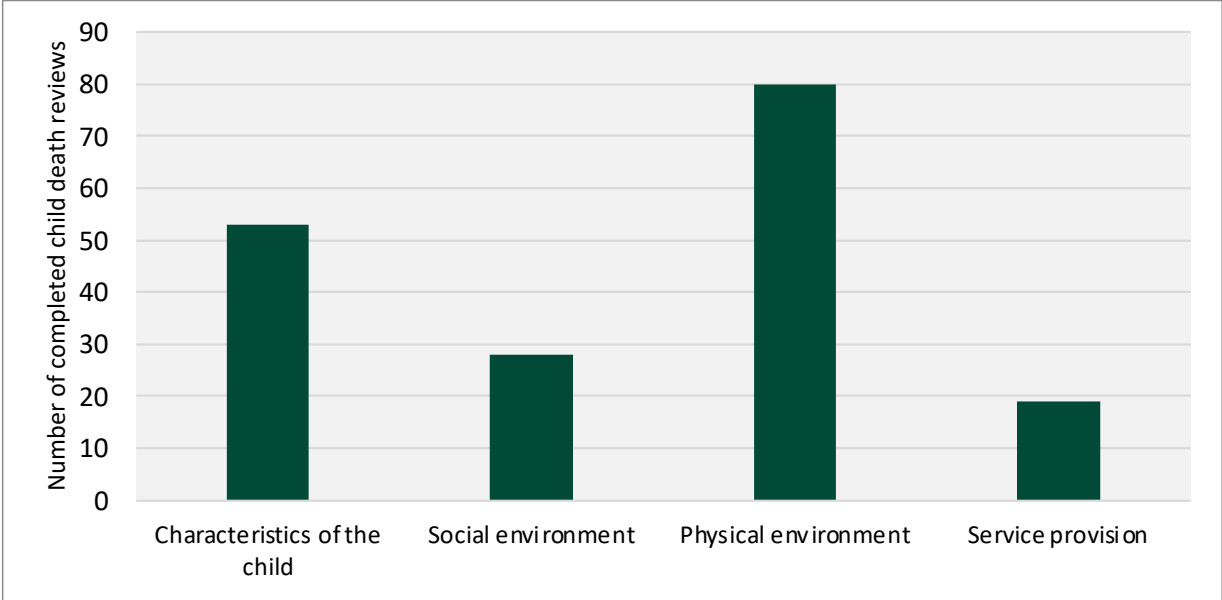
Completed child death reviews

Of the deaths due to a vehicle collision that occurred between April 2019 and March 2022, 54% (n=113/211) had been reviewed by a CDOP by 5 December 2022.

During the child death review, CDOPs are required to record

factors that that may have contributed to the vulnerability, ill health or death of the child or young person. At least one contributory factor was reported in the physical environment in 71% (n=80) of reviews, followed by characteristics of the child (47%, n=53) (Figure 3).

Figure 3: Contributory factors recorded by the CDOP, that may have contributed to the vulnerability, ill health or death of the child, where the child died due to a vehicle collision



Factors intrinsic to the child or young person:

Children's emotional responses in risk situations influence how they behave and differ for boys and girls. Research shows that boys are more likely than girls to experience excitement in risky situations and, in addition, risk decisions made by children and young people are influenced by what they feel, or what they expect to feel when taking risks⁷.

CDOPs recorded the presence of emotional or behavioural factors in the child in 15% (n=17/113) of deaths due to vehicle collisions. This included risk-taking behaviours (e.g., speeding, driving under the influence of drugs or alcohol and having an unsecured helmet), mental health conditions (e.g., anxiety and emotional dysregulation), and loss of key relationships in the child's life (e.g., family bereavement and break up of a relationship between the young person and their partner). Smoking, alcohol or substance use by the child was recorded in 14% (n=16/113) of deaths, including consumption of drugs or alcohol on the day of death and where the child was known to consume alcohol or drugs regularly. The child was known to mental health services in 15% (n=13/84) of deaths reviewed (Table 9).

Factors in the social environment:

For deaths due to vehicle collisions that had been reviewed by a CDOP, 34% (n=38/113) of children and young people had been known to social care at some point during their life (Table 9). 12% (n=14) were known to social care at the time of their death, and in a further 21% (n=24), the child or young person was previously known to social care.

Table 9: Background features identified in child death reviews, where child died due to a vehicle collision

	Number (%) of completed child reviews
Social care	
Known to social care at the time of death	14/113 (12%)
Previously known, but not an open case	24/113 (21%)
Not known to social care	75/113 (66%)
Child ever known to Mental Health Services	13/84 (15%)

Previous research has shown links seen between abuse and behavioural problems⁷. In 11% (n=12/113) of reviews, the CDOPs recorded that the child was subject to neglect or abuse, or there was other known domestic abuse in the household which contributed to the vulnerability, ill health or death of the child.

Factors in the physical environment:

Department of Transport statistics show that in 2021, speed was a contributory factor in 12% of all road collisions in the UK⁸. For fatalities, this proportion increased to 25%. This included incidents where the speed limit was exceeded and incidents where the vehicle was travelling too fast for the conditions.

Speeding or other risk-taking behaviour (e.g., driving under the influence of alcohol or drugs, using a mobile phone whilst driving) was recorded as a contributory factor in 27% (n=31/113) of deaths reviewed by a CDOP. This was observed in all types of vehicle collisions and in incidents where the child or young person was a pedestrian, driver or passenger.

Department of Transport statistics show that the proportion of car occupant deaths for children between 0-16 years, where the car occupant was not wearing a seatbelt, was 22% in 2021⁹. CDOPs recorded non-use of appropriate safety equipment as a contributory factor in 20% (n=23/113) of deaths. This included the child or young person not wearing a seatbelt, helmet or other protective clothing, and not having lights on a bicycle. There were also examples where the safety equipment used did not meet British standards as it was bought second-hand or from abroad. For infants under 1 year of age, there were no deaths identified where the child was in a correctly fitted car seat. Road conditions including poor weather, poor lighting (e.g., at night, dawn or dusk) and uneven or gravel surfaces were also recorded as contributory factors in 12% (n=14) of deaths reviewed.

Other factors recorded included driver inexperience, unroadworthy vehicle, wearing of earphones as a pedestrian, distractions while driving, and farm safety. A defective or unroadworthy vehicle (including motorbikes, mopeds or cars) was recorded in 5 reviews. In 3 reviews, the CDOP identified that the child was not in or correctly restrained in a car seat.

Factors relating to service provision:

Factors recorded here can relate to provision of services by any agency e.g., law enforcement, social care, healthcare or education.

In 9 deaths reviewed, CDOPs identified gaps in support for children and young people during their lives. The majority of these related to lack of appropriate referrals to agencies to help assess and understand the reasons for poor behaviour. This included lack of diagnosis or assessment of children and young people with ADHD, non-referral to the Children and Young People's Mental Health Service (CYPMHS) and failure to consider risk of criminal exploitation. In a small number of cases, it was recorded that inadequate staffing levels had led to a delay in referrals or interventions taking place.

⁷ Morrongiello et al (2007)

⁸ Department for Transport RAS0704 (2021)

⁹ Department for Transport RAS0711 (2021)

Communication factors were recorded in 7% (n=8/113) of reviews. The majority of issues related to poor communication and information sharing between agencies during the child or young person's life. CDOPs recorded examples of poor information sharing by local authorities and between social care and healthcare agencies. In some instances, this was thought to have led to missed opportunities to support the child or young person who died.

Communication issues related to challenges in responding after the death of the child or young person were also highlighted. This included a lack of clarity around whether there was a need to conduct forensic investigations, lack of a police presence when the child was examined after death and challenges in communication between police departments. It is important to note that the current multi-agency guidelines for care and investigation when a child or young person dies suddenly and unexpectedly, published in 2016, recommend police and healthcare involvement for the post-death examination. However, in instances where it is clear the death has occurred due to trauma and there is no concern about the possibility of homicide, there is limited value in this examination.

Learning from CDOP reviews

Road planning and design

A common theme identified by CDOPs was the need to ensure that road layout and design support safe use of the road by cyclists, pedestrians, and vehicle users. Road design also has a key influence on speed of vehicles. Higher speeds reduce the time available for people to react and increase the severity of collisions¹⁰. Pedestrians have a 90% chance of surviving collisions at speeds below 30kph but a less than 50% chance at speeds of 45kph¹¹.

NICE Guideline PH31 on unintentional injuries on the road for under 15s includes recommendations on needs assessment and planning, including partnership working to introduce engineering measures to reduce speed, and development of safer routes commonly used by children and young people.

¹⁰ NICE Guidance PH31
¹¹ Racioppi et al (2004)

Safety equipment

The importance of the correct use of seatbelts by children and young people was also recorded by CDOPs. This arose from instances where the seatbelt was not properly in place and therefore did not provide full protection at the time of the collision. Incorrect use of car seats was also noted and CDOPs highlighted the need to consider the height or weight of the child as well as their age, to ensure that safety advice is properly followed. Government guidance on child car seats is available which includes the use of both child car seats and booster seats, how to fit a car seat correctly and what to do for children with disabilities or medical conditions.

Cycle helmets are designed to reduce the impact to the head of a person cycling during a collision and there were also a number of instances where children and young people were not wearing helmets at the time of their collision while cycling.

Education and awareness-raising

A common theme identified by CDOPs was the ongoing need for education of children and young people. Education and awareness-raising work should include information around road safety including safe driving (e.g., tiredness, road conditions), risk-taking (e.g., speeding, drug and alcohol use) and the importance of continued and updated cycle safety awareness for all children, including the importance of wearing a helmet, reflective/high visibility clothing and the use of lights. However, it is essential that this is delivered alongside programmes that improve the safety of road systems for all users. This will create an environment in which cars and cyclists can safely co-exist and remove one of the key barriers to cycling, bringing corresponding health benefits. Think! is the government's road safety campaign and there is a suite of education resources available on their website for children aged 3 to 16 years.

As 9% of deaths due to vehicle collisions happened while the child or young person was abroad (Table 2), the need for education and awareness-raising also includes the need to reinforce messages to those travelling abroad.





The presentation for secondary school children covers The Fatal Four and this is due to be expanded to include other risk-taking behaviour with the updating of the input to cover a fifth element, careless driving.

'One Life Lost' is a separate presentation which is offered to Key Stage 4 children. Schools have reported that this is very impactful. It is delivered by experienced Roads Policing Officers who share their stories. This approach includes the experience of real people who have been involved in these incidents and can answer the questions of children and young people at the time of the presentation.

Alongside this current provision, which is delivered by Police Officers and PCSOs, West Yorkshire Police have also developed a new scheme called Pol-Ed which is a programme of lessons for Key Stage 2, 3 and 4 for teachers to deliver in schools, and covers driving safety. Schools can register for these resources for free in West Yorkshire.

Support for witnesses of vehicle collisions

Members of the public can often witness vehicle collisions or in some instances, they are the first people to come across an incident and need to call emergency services. CDOPs have recorded incidents where there was a lack of support for bystanders following the witnessing of such incidents.

Case Study: "You have Witnessed" Card

The Hampshire and Isle of Wight Fire and Rescue Service were keen to develop the ability to reach out to witnesses of traumatic events and so have developed a card that can be given to members of the public, by professionals, when they attend the scene of any traumatic incident. It is given out by operational crews and officers. The card is titled "You have witnessed" and explains some of the emotional, physical and mental symptoms that may be experienced following a traumatic event. The card gives information on some strategies that can help people to cope immediately after the incident and signposts to further support services including suggesting contact with their local GP.

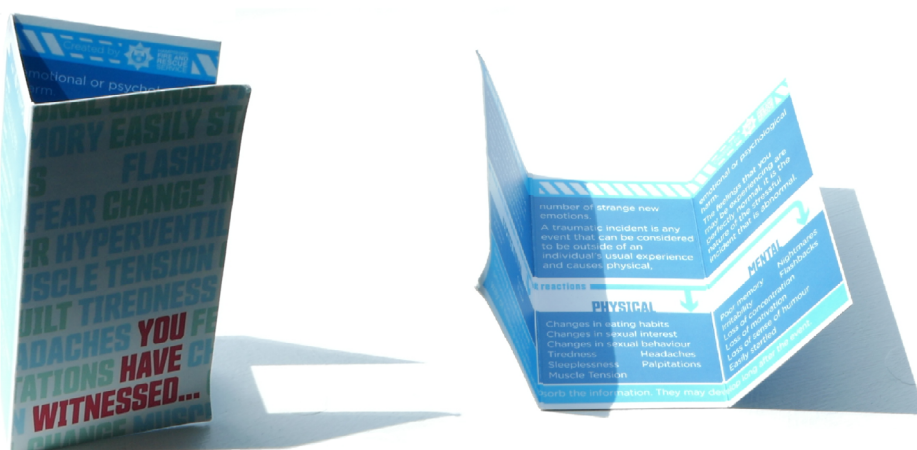
Unintentional deaths of children and young people on the railway are rare, however CDOPs noted the importance of raising awareness of the dangers of train tracks and education for children and young people around the dangers posed when trespassing on the tracks.

Case Study: West Yorkshire Police School Engagement Offer on Road Safety Awareness

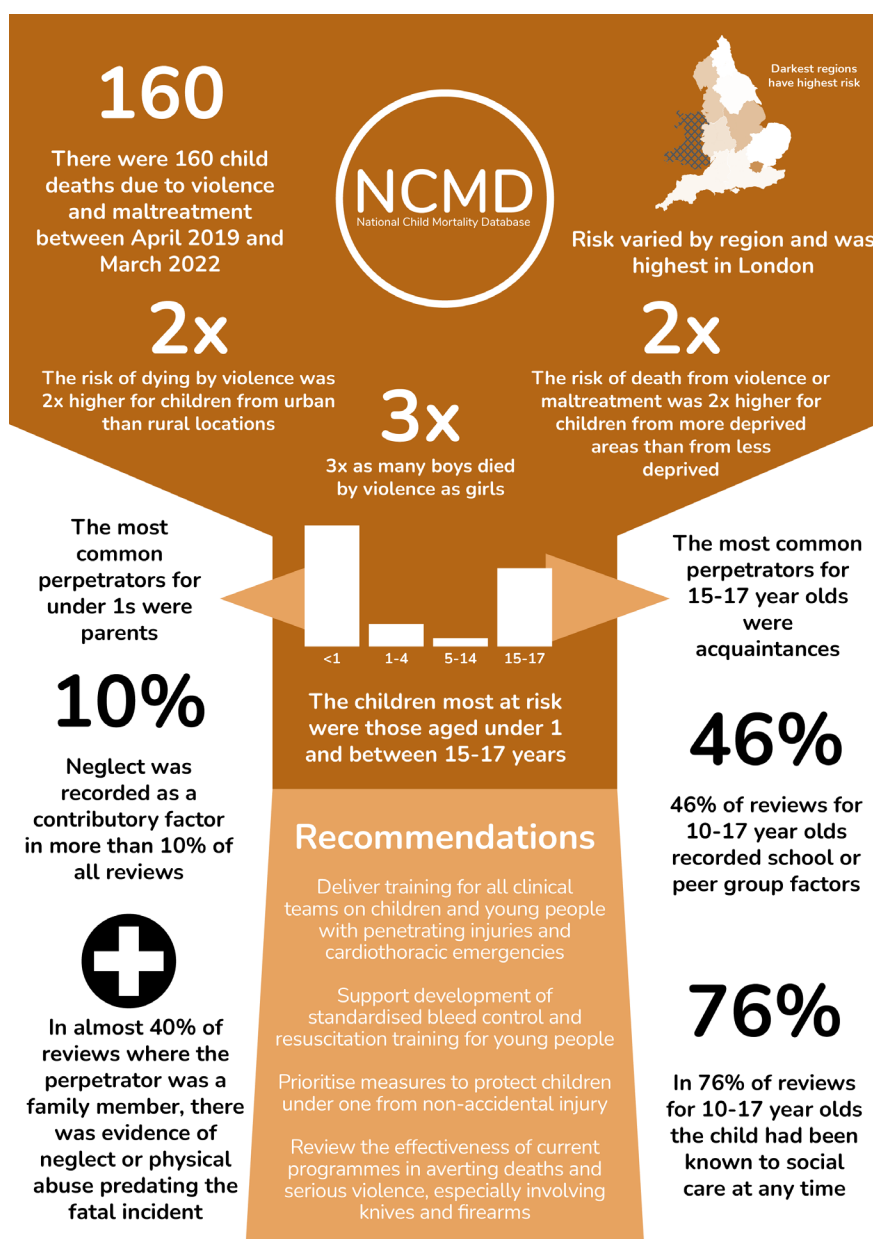
West Yorkshire Police provide teacher-created presentations on road safety for their Safer Schools Officers (SSOs) to deliver in secondary schools and for Police Community Support Officers (PCSOs) to deliver in primary schools. In addition, a 'Risks of the Road' education input is offered in response to low level road incidents which would previously have been given an outcome of 'no further action'.

The "Fatal Four" are offences prioritised by the police in the National Police Chiefs Council roads policing strategy, to reduce the number of people who are killed or seriously injured on the roads. They are:

- Speeding
- Drink and drug driving
- Driving while distracted
- Non-wearing of seatbelts



3. Deaths due to violence and maltreatment



Introduction

The [2030 Agenda for Sustainable Development](#) adopted by all United Nations member states in 2015 is centred around 17 Sustainable Development Goals (SDGs) for urgent action by all countries. SDG target 16.2 aims to end violence against children.

Globally, over half of all children aged 2-17 years have experienced violence in the past year¹². The World Health Organisation [Global Status Report on preventing violence against children \(2020\)](#) highlights that over the course of their lifetime, children exposed to violence are at increased risk of: mental illness and anxiety disorders; high-risk behaviours like alcohol and drug abuse, smoking and unsafe sex; chronic diseases such as cancers, diabetes and heart disease; infectious diseases like HIV; and social problems including educational under attainment and further involvement in violence, and crime.

¹² Babinski et al (2016)



The World Health Organisation (WHO) reported that globally during the COVID-19 pandemic, movement restrictions, isolation, overcrowding and household tensions contributed to increased levels of stress and anxiety in parents, caregivers and children, and cut families off from their usual sources of support. They also reported that during lockdown the number of deaths due to homicide decreased and spikes in calls to helplines about child abuse were reported alongside declines in the number of referrals to child protection services¹³.

WHO has developed an evidence based technical package called INSPIRE: Seven Strategies for Ending Violence Against Children. INSPIRE serves as a technical package and handbook for selecting, implementing and monitoring effective policies, programmes and services to prevent and respond to violence against children.

Deaths occurring between April 2019 and March 2022

There were 160 deaths of children and young people due to violence or maltreatment between 1 April 2019 and 31 March 2022 (3 years); an overall rate of 4.40 deaths per 1 million children per year (Table 10).

There were 6 deaths included where the child died because of an underlying health condition that was caused by violence or maltreatment that occurred in the years before the death. These deaths were included in the analysis.

Age, sex and ethnicity of children who died due to violence or maltreatment.

There were 35 (21.9%) deaths due to violence or maltreatment where the child was under 1 year old, 28 (17.5%) deaths of 1-4 year olds, 27 (16.9%) deaths of 5-14 year olds and 70 (43.8%) deaths of 15-17 year olds. When adjusting for the population of children within these age groups, death rates were highest for infants under 1 (19.15 per 1 million infants) and then for 15-17 year olds (12.39 per 1 million children).

The NSPCC briefing "Infants: Learning from Case Reviews" was published in March 2023 and highlights that identifying infants more vulnerable to abuse and neglect is a key issue. The Child Safeguarding Practice Review Panel have published national reviews: The Myth of Invisible Men: Safeguarding children under 1 from non-accidental injury caused by male carers (September 2021) and Child Protection in England which explored the murders of Arthur Labinjo-Hughes and Star Hobson (May 2022). The Panel have also published a briefing paper Bruising in non-mobile infants in September 2022.

In February 2023, the Department for Education published 'Stable Homes Built on Love: Implementation, Strategy and Consultation'. This consultation sets out the government's plan for how to make children's social care work better. The consultation closed in May 2023 and responses are currently being reviewed.

Across all ages, there were three times as many deaths of males (76.3%, n=122) as there were females (23.8%, n=38). Risk of death also varied by ethnicity of the child, with the lowest in Asian or Asian British children (2.07 per 1 million children) and highest in Black or Black British children (15.39 per 1 million children).

There did not appear to be any changes in deaths from violence and maltreatment by any demographic across the three years (Appendix 3; Table 28). However, interpretation should be cautious as a lower proportion of deaths that occurred in 2021-22 had been reviewed by a CDOP in comparison to previous years; the figure for the most recent years is subject to change following completion of reviews. Some deaths which present with no apparent explanation at the point of notification may then be reviewed and the cause found to be as the result of violence or maltreatment.

¹³ WHO (2020)

Table 10: Number of child deaths due to violence and maltreatment between April 2019 and March 2022, by age, sex and ethnicity

Characteristic	Number with data	Total number of deaths	Estimated population of children	Overall risk (per 1,000,000 children per year)	p-value for a difference between risks
All deaths	160	-	36,342,900	4.40 (3.75-5.14)	-
Age at death (years)	160				<0.001
<1 year		35 (21.9%)	1,827,288 (5.0%)	19.15 (13.34-26.64)	
1-4 years		28 (17.5%)	7,923,024 (21.8%)	3.53 (2.35-5.11)	
5-14 years		27 (16.9%)	20,944,476 (57.6%)	1.29 (0.85-1.88)	
15-17 years		70 (43.8%)	5,648,112 (15.5%)	12.39 (9.66-15.66)	
Sex	160				<0.001
Female		38 (23.8%)	17,697,060 (48.7%)	2.15 (1.52-2.95)	
Male		122 (76.3%)	18,644,292 (51.3%)	6.54 (5.43-7.81)	
Ethnicity¹	146				<0.001
Asian or Asian British		9 (6.2%)	4,347,237 (12.3%)	2.07 (0.95-3.93)	
Black or Black British		31 (21.2%)	2,013,906 (5.7%)	15.39 (10.46-21.85)	
Mixed		20 (13.7%)	2,404,008 (6.8%)	8.32 (5.08-12.85)	
Other		9 (6.2%)	938,268 (2.7%)	9.60 (4.39-18.21)	
White		77 (52.7%)	25,620,381 (72.5%)	3.01 (2.37-3.76)	

¹ Ethnicity is grouped based on groupings used in the 2011 Census. 'Other' includes 'Arab' and 'Any other ethnic group'.

A breakdown of the demographics per year, where possible, is presented in Appendix 3.

Area, region, deprivation and season

The number of deaths increased with increasing deprivation quintile; and the death rate for children living in the most deprived neighbourhoods (7.27 per 1 million children) was greater than that of children living in the least deprived neighbourhoods (Table 11).

There were also differences across different regions of England, with higher risks in London (8.61 per 1 million children) compared to the East of England (2.45 per 1 million children). The death rate of children living in urban areas (4.68 per 1 million children) was also higher than those living in rural areas (2.32 per 1 million children). Season did not appear to affect the risk of death.



Table 11: Number of child deaths due to violence and maltreatment between April 2019 and March 2022, by area, region, season and deprivation

Characteristic	Number with data	Total number of deaths	Estimated population of children	Overall risk (per 1,000,000 children per year)	p-value for a difference between risks
Area of residence	157				0.0077
Urban		144 (91.7%)	30,751,380 (84.6%)	4.68 (3.95-5.51)	
Rural		13 (8.3%)	5,591,520 (15.4%)	2.32 (1.24-3.98)	
Region of CDOP	160				<0.001
East Midlands		18 (11.3%)	3,029,544 (8.3%)	5.94 (3.52-9.39)	
East of England		10 (6.3%)	4,075,992 (11.2%)	2.45 (1.18-4.51)	
London		53 (33.1%)	6,152,796 (16.9%)	8.61 (6.45-11.27)	
North East		2 (1.3%)	1,604,772 (4.4%)	1.25 (0.15-4.50)	
North West		25 (15.6%)	4,722,588 (13.0%)	5.29 (3.43-7.81)	
South East		17 (10.6%)	5,955,804 (16.4%)	2.85 (1.66-4.57)	
South West		10 (6.3%)	3,344,544 (9.2%)	2.99 (1.43-5.50)	
West Midlands		16 (10.0%)	3,926,988 (10.8%)	4.07 (2.32-6.62)	
Yorkshire and the Humber		9 (5.6%)	3,529,872 (9.7%)	2.55 (1.17-4.84)	
Deprivation	157				<0.001
1 (Most deprived)		63 (40.1%)	8,669,052 (23.9%)	7.27 (5.58-9.30)	
2		44 (28.0%)	7,516,656 (20.7%)	5.85 (4.25-7.86)	
3		24 (15.3%)	6,877,512 (18.9%)	3.49 (2.24-5.19)	
4		22 (14.0%)	6,576,192 (18.1%)	3.35 (2.10-5.06)	
5 (Least deprived)		4 (2.5%)	6,703,488 (18.4%)	0.60 (0.16-1.53)	
Season¹	160				0.8425
Winter		45 (28.1%)	9,085,725 (25.0%)	4.95 (3.51-6.23)	
Spring		39 (24.4%)	9,085,725 (25.0%)	4.29 (3.05-5.87)	
Summer		38 (23.8%)	9,085,725 (25.0%)	4.18 (2.96-5.74)	
Autumn		38 (23.8%)	9,085,725 (25.0%)	4.18 (2.96-5.74)	

¹ Winter (December, January, February); Spring (March, April, May); Summer (June, July, August); Autumn (September, October, November).

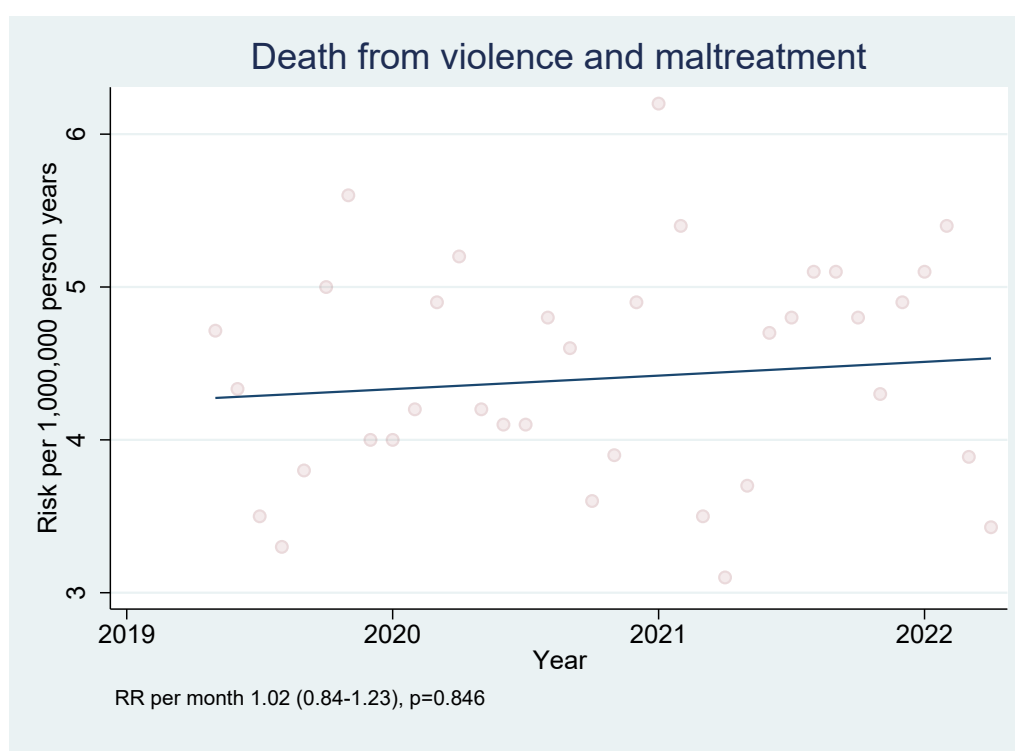
Deaths due to stabbing or firearms accounted for just under half (48.8%, n=78) of deaths due to violence and maltreatment (Table 12), of which 67 children were aged 10-17 years. The majority of this category were related to stabbings. This includes stabbing by bladed weapons and improvised weapons such as bottles and screwdrivers. Other violence and maltreatment (51.3%, n=82) included blunt force trauma, asphyxiation and traumatic head injuries, where 60 children were aged under 10 years at the time of their death.

Overall, there was little evidence of an increase in death from violence and maltreatment across the 3 years (Figure 4), but some evidence that the numbers of children dying by stabbings or firearms has increased over the 3 years, from 23 in 2019-20, to 36 in 2021-22 (Table 12).

Table 12: Number of child deaths as a result of violence and maltreatment between April 2019 and March 2022, by year of death and type of violence

	Number of deaths				P-value for a trend across time
	All years	2019-20	2020-21	2021-22	
Violence and maltreatment	160	54	50	56	0.846
Stabbing or Firearms	78	23	19	36	0.073
Other injuries	82	31	31	20	0.138

Figure 4: Risk of death as a result of violence and maltreatment per 1,000,000 person years, for deaths between April 2019 and March 2022



Completed child death reviews

Of the violence and maltreatment related deaths that occurred between 1 April 2019 and 31 March 2022, 42% (n=67/160) had been reviewed by a CDOP by 5 December 2022.

For children aged under 10, where information on perpetrators was recorded (n=28), the perpetrator was either a biological parent or a partner of a biological parent in all deaths (n=28), and in 43% (n=12) there was more than one perpetrator (Table 13).

For children aged 10-17 years, where it was known (n=26), the perpetrator was unrelated but known to the child in 50% (n=13) of deaths, a parent or other family member in 23% (n=6), and a stranger in 27% (n=7). There were multiple perpetrators in 12% (n=3) of deaths in this age group.

Table 13: Relationship of perpetrator(s) to the child in completed child death reviews, where the child died due to violence and maltreatment

	0 – 9 years	10 – 17 years	Total
Relationship of alleged perpetrator(s) to the child			
Parent(s) (including biological parents and non-biological partners) or other family member	28	6	34 (63%)
Unrelated but known to the child	0	13	13 (24%)
Stranger	0	7	7 (13%)
More than 1 perpetrator	12	3	15 (28%)
Total completed child death reviews	28	26	54 (100%)

In 13 reviews, information on the perpetrator was not recorded or not known.

For deaths where the perpetrator was a family member, there was evidence of previous neglect or abuse in 39% (n=10/26) of completed reviews, and in 60% (n=15/25) the perpetrator was either known to police, to be violent, or to mental health or social services (Table 14).

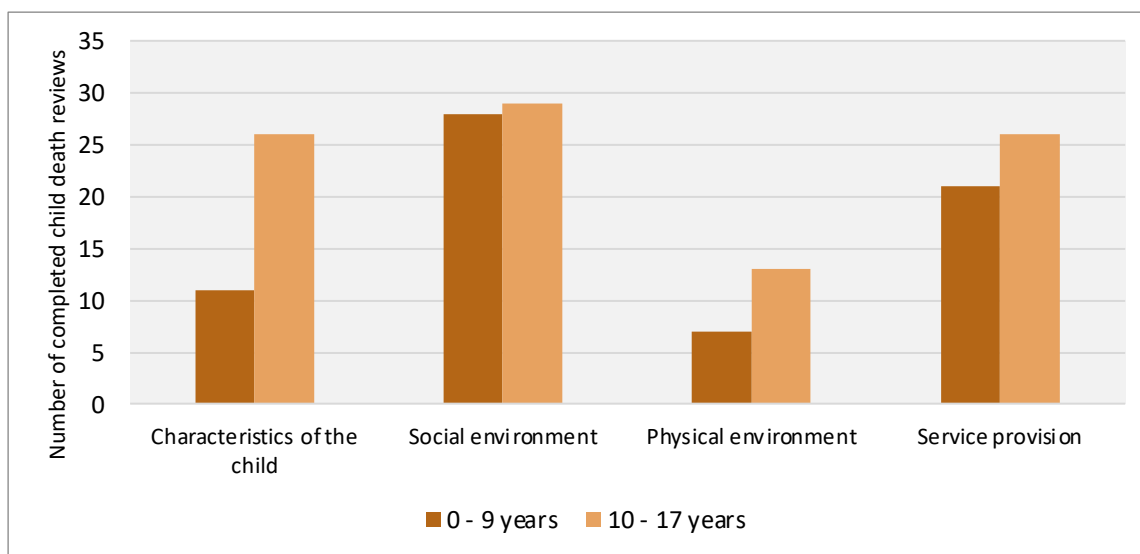
Table 14: Information on background of perpetrator(s) who were known to the child in completed child death reviews, where the child died due to violence and maltreatment

	Family (biological parents, partners and other family members)	Unrelated but known to the child
Evidence of neglect or physical abuse/inflicted injury pre-dating the fatal incident	10/26 (39%)	3/13 (23%)
Alleged perpetrator(s) known to police		
For drug/alcohol related offences	5/25 (20%)	6/13 (46%)
For any other offences	8/25 (32%)	7/13 (53%)
Alleged perpetrator(s) known to be violent	7/25 (28%)	6/13 (46%)
Alleged perpetrator(s) known to mental health services	7/25 (28%)	1/13 (7%)
Alleged perpetrator(s) known to adult or children's social services	11/25 (44%)	9/13 (69%)
Any of the above	15/25 (60%)	9/13 (69%)
No evidence of above	10/25 (40%)	4/13 (31%)

Where there was more than one perpetrator, the question was answered where at least one of the perpetrators met the characteristic. Data for where the perpetrator was a stranger is not reported due to small numbers. Data included where at least one question was answered, therefore should be interpreted as a minimum.

During the child death review, CDOPs are required to record factors that may have contributed to the vulnerability, ill health or death of the child. The most common domain for contributory factors was the social environment; at least one contributory factor was reported in 93% (n=28/30) of reviews of children under 10, and in 78% (n=29/37) of children aged 10-17 years (Figure 5).

Figure 5: Contributory factors recorded by the CDOP, that may have contributed to the vulnerability, ill health or death of the child, where the child died due to violence and maltreatment



Factors intrinsic to the child or young person:

For deaths of 10-17 year olds, emotional or behavioural factors in the child or young person were recorded in 41% (n=15/37) of reviews. This included risk-taking behaviours (e.g., criminal activity, fighting and involvement with drugs), mental health conditions (e.g., anxiety, depression and difficulty managing emotions), and loss of key relationships in the child's life (e.g., frequent moves of school or home and lack of a trusted adult in the child's life).

Developmental conditions or disabilities were also recorded in 41% (n=15/37) of deaths of 10-17 year olds, including neurodevelopmental conditions such as autism or ADHD

(n=8) and learning disabilities (n=6). Factors also included information around the lack of formal diagnosis of children and young people with ADHD.

Smoking, alcohol, or substance use by the child was recorded in 32% (n=12/37) of deaths in this age group. This includes instances where the child or young person consumed drugs or alcohol on the day of death and where they were known to consume alcohol or drugs regularly. For the same age group, the child or young person had at some time been known to mental health services in 30% (n=8/27) of deaths reviewed (including those that were known at the time of their death) (Table 15).



Factors in the social environment:

Children and young people sometimes live in households with complex circumstances. This might include living with a parent or carer who misuses drugs or alcohol, which may make home life chaotic and unpredictable; exposure to domestic abuse, including hearing it from another room, seeing the consequences of the abuse afterwards, and being hurt from being nearby or trying to stop the abuse from occurring.

The National Society for the Prevention of Cruelty to Children (NSPCC) defines domestic abuse as any type of controlling, coercive, threatening behaviour, violence or abuse between people who are, or who have been in a relationship, regardless of gender or sexuality. It can include physical, sexual, psychological, emotional or financial abuse. Domestic or child abuse/neglect was recorded as a contributory factor in 56% (n=37/67) of reviews of all ages; 22 recorded physical abuse of the child or young person by an adult, 7 recorded the child or young person was subject to neglect, and in 6 instances the child or young person was subject to emotional or sexual abuse. For 17 children or young people, other domestic abuse in the household was recorded including being witness to domestic abuse between the child or young person's parents or between a parent and their partner.

Challenges with access to services were recorded in 30% (n=20/67) of reviews, including parental non-engagement with any service, instances where the child or young person was not brought to or did not attend appointments, and disguised compliance. Disguised compliance involves parents and carers appearing to co-operate with professionals in order to allay concerns and stop professional engagement¹⁴. The NSPCC briefing "[Infants: Learning from Case Reviews](#)" highlights that professionals need support and supervision in recognising and questioning disguised compliance and what this can look like in practice. Household functioning and supervision relating to complex home circumstances, or lack of appropriate supervision for younger children, was recorded in 12% (n=8/67) of reviews.

In the 10-17 year old age group, school or peer group factors were recorded in 46% (n=17/37) of deaths reviewed by CDOPs. This included information related to gang or knife crime, school exclusion or suspension or truancy, drug use/ other anti-social behaviour and peer relationship difficulties. 76% (n=28/37) of 10-17 year olds had been known to social care at any time, with 41% (n=15/37) known to social care at the time of death (Table 15).

For under 10s, 43% (n=13/30) were known to social care at any time, with 13% (n=4/30) known at the time of death.

Table 15: Background features identified in child death reviews, where child died due to violence and maltreatment

	0 – 9 years	10 – 17 years	Total
Social care			
Known to social care at the time of death	4/30	15/37	19/67 (29%)
Previously known, but not an open case	9/30	13/37	22/67 (32%)
Not known to social care	17/30	9/37	26/67 (39%)
Subject to CSPR ¹	17/23	14/31	31/54 (57%)
Child ever known to Mental Health Services	-	8/27	8/27 (30%)

¹ Child Safeguarding Practice Review

Factors in the physical environment:

Home safety or living conditions were recorded as a contributory factor by CDOPs in 15% (n=10) of deaths reviewed. This included living environment deprivation, homelessness and temporary accommodation, and poor living conditions. This was often experienced through frequent house moves leading to a lack of stability for the child or young person in their home environment.

Factors relating to service provision:

CDOPs recorded incidents where strategy meetings were not convened, safeguarding referrals were not made e.g., lack of referral to the Multi-agency risk assessment conference (MARAC) or there had been a failure to escalate concerns. There were also examples of delays in assessments taking

place e.g., sexually harmful behaviour assessments and non-investigation of bruising in non-mobile babies. In addition, there were examples of lack of assessment of or professional curiosity around fathers.

There were a number of service provision factors recorded by CDOPs in relation to children and young people who had previously survived a violent event and sustained life changing injuries from which they died a number of years later. These children and young people often have complex medical conditions requiring full time care. Challenges recorded by CDOPs for this group included a lack of availability of specialist care provision and poor communication between agencies and family members.

¹⁴ Reder et al (1993)

Learning from CDOP reviews

Challenges in the major trauma pathway for children and young people with penetrating injury to the heart, chest or lungs

Any child or young person with life or limb-threatening penetrating trauma should be transferred to a hospital that can offer resuscitation and either definitive care or transfer to a specialist unit. CDOPs recognised that when a child or young person sustains a penetrating traumatic injury, they are sometimes taken to the nearest hospital which may not have to deal with such injuries very often. It is therefore important that trauma networks have a standard operating procedure for penetrating injury in children. This plan will vary between regions due to the configuration of underlying services, but as much as possible collaborative arrangements should be put in place to foster the use of overlapping skills and maximise the expertise of the surgical and anaesthetic teams, and all the support teams including child safeguarding. This could include moving surgeons between organisations to operate alongside each other, treating children in adult settings within reach of paediatric teams or hosting adult-based surgeons to support paediatric surgeons inside a paediatric setting. Collaborative working in the best interest of the child should be the focus. Dealing with children who have sustained such injuries can be stressful for professionals and having a pre-agreed plan as a starting point will mitigate this.

In addition, CDOPs highlighted the need for ongoing education and simulation-based team training on pathways and management decisions for children and young people presenting with penetrating injuries and cardiothoracic emergencies, to be delivered to all clinical teams involved in the care of major trauma patients.

Knife Crime Reduction Campaigns

The importance of engagement in preventative campaigns around knife crime and serious youth violence and the wider societal issues around these was recognised by CDOPs. Specifically, they recognised that the presence of youth workers assigned to hospital emergency departments has helped in working with young people who present to hospital at risk of knife crime. This enables early intervention and engagement with young people, helps to identify potential risk factors, and supports liaison with multi-agencies and community follow up.

In 2019, government funding was provided to establish (or build upon existing) Violence Reduction Units (VRUs). The core aim of the VRUs is to provide leadership and strategic co-ordination of all relevant agencies to support a whole system approach to reducing serious violence. The key elements of this approach are:

- multi-agency working to enable an efficient and effective response to violence.
- accessing and sharing data to ensure the response targets those in need.
- engaging with communities and young people to guide the response.
- commissioning and delivering evidence-based

interventions to effectively support those in need.

ICON Programme

CDOPs recognised and recorded the importance of continued support and implementation of the ICON programme, or other similar localised programmes, across the country. The ICON programme helps people who care for babies cope with crying. It is a programme that aims to prevent abusive head trauma of infants.

ICON stands for:

- I** - Infant crying is normal.
- C** - Comforting methods can help
- O** - It's okay to walk away
- N** - Never, ever shake a baby

Whilst the effectiveness of ICON is currently under evaluation, it is endorsed by the Royal College of Paediatrics and Child Health (RCPCH) and the Royal College of GPs (RCGP). It is now commissioned and implemented in more than 70% of England. It is based on the success of similar programs in North America. Lessons from the ICON evaluation will need to be understood by all organisations and agencies aiming to reduce abusive head trauma in infants.

Criminal Exploitation of Children and Young People

CDOPs identified a number of children and young people involved in or at risk of criminal exploitation. Criminal exploitation is a form of child abuse where children and young people are manipulated and coerced into committing crimes. CDOPs specifically highlighted one of the key findings from the Child Safeguarding Practice Review (CSPR) report on criminal exploitation. This finding related to the fact that exclusion from mainstream school can heighten risk for children and young people and permanent exclusion can be a trigger for a significant escalation of risk. CDOPs recorded the need to ensure that the CSPR report findings and recommendations are widely implemented.

Movement of children across areas

There were several examples of poor communication and information sharing, particularly in instances where children and young people had moved between areas. This was either due to family moves or moves between care placements. Education to improve information sharing between schools, especially for managed moves for children in care, was considered important to ensure there is sufficient information available to inform the induction process and support strategies and interventions in the new area.



Life-saving skills training for young people

CDOPs highlighted the importance of training of young people in lifesaving skills such as bleeding control and basic life support, to reduce fatalities by youth violence. A number of training programmes already exist around the country, however, there remains a need to standardise the offer around bleed control and resuscitation training in terms of content, delivery of the training, psychological support for attendees, and post-event opportunities e.g., work experience.

Case Study: KnifeSavers, Liverpool

The KnifeSavers public access bleeding control campaign originated from the Major Trauma Centre at Aintree University Hospital in Liverpool, founded by a trauma surgeon, and aims to educate and empower literally anyone on how to control bleeding from a penetrating knife injury.

The educational material and core messaging were written in collaboration with patients who had been admitted with knife injuries to the Major Trauma Centre, and their families.

There are three central components to the campaign –

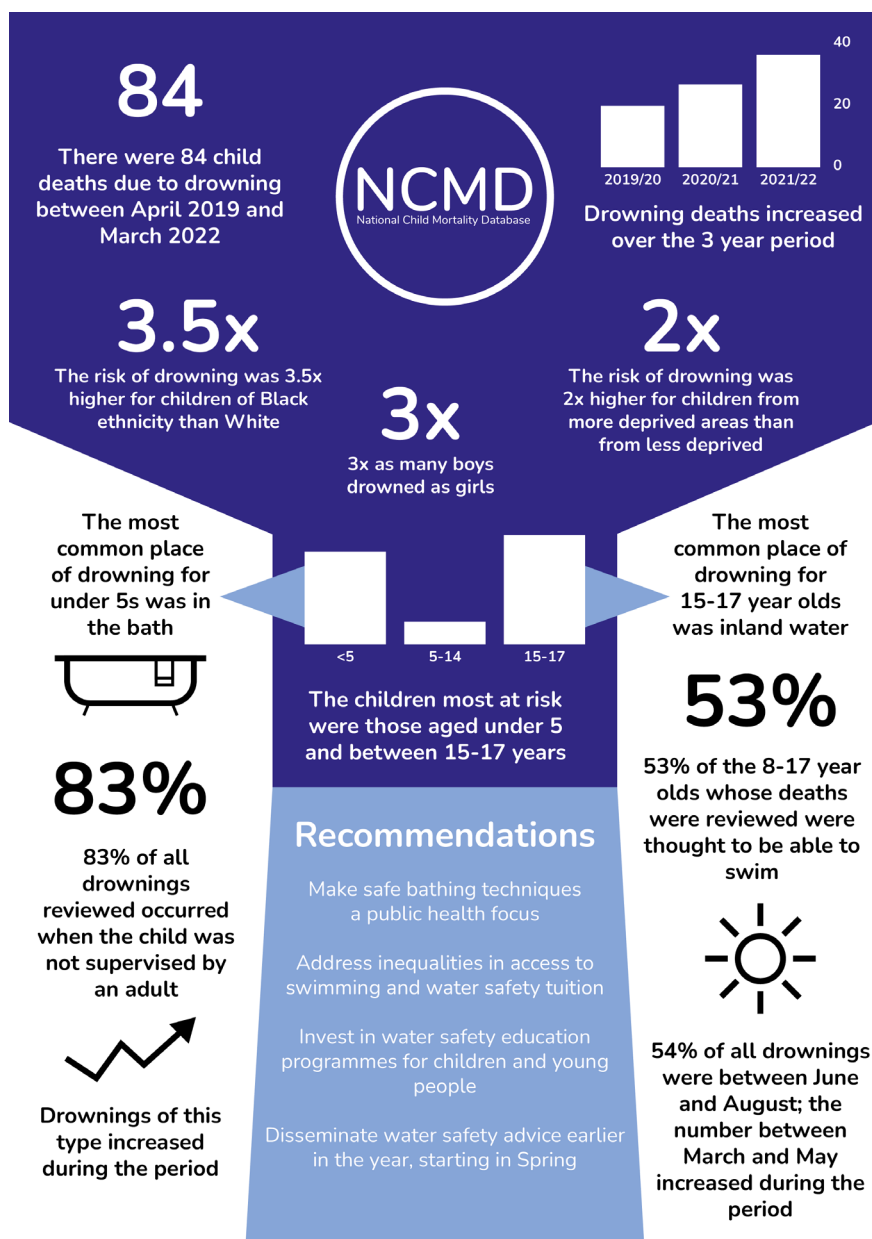
- Bleeding control packs and cabinets, which the campaign had fundraised for and promotes.
- Education on bleeding control, the time criticality of action and the potentially fatal risks of a single knife wound.
- Raising regional and national awareness of bleeding control and knife injuries.

Since its inception in 2019, the KnifeSavers campaign has educated around 2000 people of all ages around the North West, helped establish around 1500 bleeding control packs in the city of Liverpool, Merseyside and wider region, run events in collaboration with dozens of schools and colleges and has 5 documented cases of their training, in conjunction with the bleeding control packs, having been employed successfully in stopping bleeding from knife wounds.

The training sessions are delivered by clinicians who have had, and continue to have, a lived experience with delivering healthcare to patients with penetrating wounds from knife injuries. The sessions also discuss the potentially fatal risks of a single knife wound, which could be averted by not picking up the knife in the first place.

The imminent next stages involve the establishment of highly visible and publicly accessible bleeding control cabinets (containing bleeding control packs) around the region, as well as the production of an innovative e-learning package on bleeding control and the dangers of a single knife wound for higher education, written in collaboration with a number of regional schools, colleges and youth groups.

4. Deaths due to drowning



Introduction

The World Health Organisation [Global Report on Drowning](#) (2014) highlights that drowning is among the 10 leading causes of death of children and young people in every region of the world, with children aged under 5 years disproportionately at risk. In Australia, drowning is the leading cause of unintentional injury death in children aged between 1-3 years and in the United States of America, drowning is the second leading cause of unintentional injury death in children aged between 1-14 years.

Drowning is consistently recognised as a highly preventable public health challenge, with mostly low-cost solutions, such as installing barriers to control access to water hazards, supervision for younger children and teaching school-age children basic water competency.

Effective policies and legislation are also important for drowning prevention including a national water safety strategy. The UK recognised the importance of a national drowning strategy in 2015, when the [National Water Safety Forum](#) published “[A future without drowning: the UK Drowning Prevention Strategy 2016-2026](#)” to contribute to a

co-ordinated and collaborative approach to drowning prevention. The purpose of the strategy is to prevent accidental drowning fatalities by working in partnership, to ensure consistent guidance for the safe enjoyment and management of activities in, on and around water, the importance of which was reinforced in the first [UN Resolution on Global Drowning Prevention in 2021](#).

Deaths occurring between April 2019 and March 2022

There were 84 deaths of children and young people due to drowning between 1 April 2019 and 31 March 2022 (3 years); an overall rate of 2.31 deaths per 1 million children per year (Table 16). There was evidence of an increase in drownings across the 3 years, increasing from 20 in 2019-20 to 37 in 2021-22 (Table 19).

Age, sex and ethnicity of children and young people who die by drowning

There were 38 (45.2%) deaths due to drowning of children aged under 5, 20 (23.8%) deaths of 5-14 year olds, and 26 (31.0%) deaths of 15-17 year olds. When adjusting for the

population of children within these age groups, death rates were higher for children under 5 (3.90 per 1 million children) and those aged between 15-17 years (4.60 per 1 million children).

There were almost three times as many males (73.8%, n=62) as there were females (26.2%, n=22). The higher proportion of males is consistent with characteristics of all-age drowning deaths, where between 2017 and 2021, 83% of accidental drowning fatalities were male¹⁵.

The highest number of deaths was seen in children from a White ethnic background (61.5%, n=48), followed by Black (16.7%, n=13), Asian (13.8%, n=10), and Mixed (6.4%, n=5). After adjusting for the ethnic group distribution in the population, deaths rates varied by ethnic group with children described as Black or Black British having the highest death rate (6.46 per 1 million children) and children from a White or White British background having the lowest death rate (1.87 per 1 million children). Further analysis is needed to investigate this disparity.

Table 16: Number of child deaths as a result of drowning between April 2019 and March 2022, by age, sex and ethnicity

Characteristic	Number with data	Number of deaths (3 years)	Estimated population of children	Overall risk (per 1,000,000 children per year)	p-value for a difference between risks
All deaths	84	-	36,342,900	2.31 (1.84-2.86)	
Age at death (years)	84				<0.001
<5 years		38 (45.2%)	9,750,312 (26.8%)	3.90 (2.76-5.35)	
5-14 years		20 (23.8%)	20,944,476 (57.6%)	0.95 (0.58-1.47)	
15-17 years		26 (31.0%)	5,648,112 (15.5%)	4.60 (3.01-6.74)	
Sex	84				<0.001
Female		22 (26.2%)	17,697,060 (48.7%)	1.24 (0.78-1.88)	
Male		62 (73.8%)	18,644,292 (51.3%)	3.33 (2.55-4.26)	
Ethnicity¹	78				0.016
Asian or Asian British		10 (12.8%)	4,347,237 (12.3%)	2.30 (1.10-4.23)	
Black or Black British		13 (16.7%)	2,013,906 (5.7%)	6.46 (3.44-11.04)	
Mixed		5 (6.4%)	2,404,008 (6.8%)	2.08 (0.68-4.85)	
Other		2 (2.6%)	938,268 (2.7%)	2.13 (0.26-7.70)	
White		48 (61.5%)	25,620,381 (72.5%)	1.87 (1.38-2.48)	

¹ Ethnicity is grouped based on groupings used in the 2011 Census. 'Other' includes 'Arab' and 'Any other ethnic group'.

A breakdown of the demographics per year, where possible, is presented in Appendix 4.

¹⁵ The Water Incident Database (2017-2021)

Area, region and deprivation

More deaths occurred of children and young people living in the most deprived neighbourhoods of England (40.5%, n=34), in comparison to the least deprived (11.9%, n=10) (Table 17). When adjusting for the number of children and young people living in each quintile, the death rate for children and young people living in the most deprived neighbourhoods (3.92 per 1 million children) was more than twice that of children and young people living in the least deprived neighbourhoods (1.49 per 1 million children).

There was no significant evidence that rates of death significantly varied across regions, or whether the child or young person lived in a rural or urban area.



Table 17: Number of child deaths as a result of drowning between April 2019 and March 2022, by area, region and deprivation

Measure	Number with data	Number of deaths (3 years)	Estimated population of children	Overall risk (per 1,000,000 children per year)	p-value for a difference between risks
Area of residence	82				0.4090
Urban		72 (87.8%)	30,751,380 (84.6%)	2.34 (1.83-2.95)	
Rural		10 (12.2%)	5,591,520 (15.4%)	1.79 (0.86-3.29)	
Region of CDOP	84				0.5365
East Midlands		6 (7.1%)	3,029,544 (8.3%)	1.98 (0.73-4.31)	
East of England		6 (7.1%)	4,075,992 (11.2%)	1.47 (0.54-3.20)	
London		10 (11.9%)	6,152,796 (16.9%)	1.63 (0.78-2.99)	
North East		5 (6.0%)	1,604,772 (4.4%)	3.12 (1.01-7.27)	
North West		17 (20.2%)	4,722,588 (13.0%)	3.60 (2.10-5.76)	
South East		12 (14.3%)	5,955,804 (16.4%)	2.01 (1.04-3.52)	
South West		8 (9.5%)	3,344,544 (9.2%)	2.39 (1.03-4.71)	
West Midlands		10 (11.9%)	3,926,988 (10.8%)	2.55 (1.22-4.68)	
Yorkshire and the Humber		10 (11.9%)	3,529,872 (9.7%)	2.83 (1.36-5.21)	
Deprivation	84				0.0006
1 (Most deprived)		34 (40.5%)	8,669,052 (23.9%)	3.92 (2.72-5.48)	
2		22 (26.2%)	7,516,656 (20.7%)	2.93 (1.83-4.43)	
3		12 (14.3%)	6,877,512 (18.9%)	1.74 (0.90-3.05)	
4		6 (7.1%)	6,576,192 (18.1%)	0.91 (0.33-1.96)	
5 (Least deprived)		10 (11.9%)	6,703,488 (18.4%)	1.49 (0.72-2.74)	

Season

Drowning deaths occurred throughout the year, however, the largest proportion (53.6%, n=45) occurred during summer months (June, July or August) (Table 18). Whilst fewer deaths occurred in Spring (March, April or May), there was evidence that the numbers of deaths occurring within these months

increased over the time period (relative risk increase per month, 2.89 (1.30-6.40), $p_{\text{trend}}=0.009$) (Appendix 4; Table 30). It is possible that this may be due to the climate change and temperature shifts, but further research is needed in this area.



Table 18: Number of child deaths as a result of drowning between April 2019 and March 2022, by season

	Number with data	Number of deaths (3 years)	Estimated population of children	Overall risk (per 1,000,000 children per year)	p-value for a difference between risks
Season¹	84				<0.001
Winter		17 (20.2%)	9,085,725 (25.0%)	1.87 (1.09-3.00)	
Spring		15 (17.9%)	9,085,725 (25.0%)	1.65 (0.92-2.72)	
Summer		45 (53.6%)	9,085,725 (25.0%)	4.95 (3.61-6.63)	
Autumn		7 (8.3%)	9,085,725 (25.0%)	0.77 (0.31-1.59)	

¹ Winter (December, January, February); Spring (March, April, May); Summer (June, July, August); Autumn (September, October, November).

Location of drowning

The highest proportion of drowning deaths occurred in inland water such as rivers and lakes (36.9%, n=31), followed by drownings in the bath (29.8%, n=25), in a swimming pool (14.3%, n=12), in other residential water (11.9%, n=10), and in coastal settings (7.1%, n=6) (Table 19).

Of the 12 deaths within swimming pools, 8 occurred abroad in a hotel or private villa. The number of deaths that occurred in swimming pools decreased across the 3 year period.

84% (n=31/37) of the deaths that occurred in open water occurred at inland water bodies (lake, quarry, reservoir, river or canal), and 16% (n=6/37) occurred in a coastal setting (sea, harbour, dock, marina or port). In comparison, for all-age drownings in open water 2021, the proportion of inland drownings was 60% ¹⁶.

There was evidence that there was an increase in the number of deaths that occurred at inland water bodies, increasing from 5 in 2019-20, to 18 in 2021-22. There was also an increase in the number of drownings that occurred in the bath, from 4 in 2019-20, to 12 in 2021-22.

¹⁶ The Water Incident Database (2021)

Table 19: Number of child deaths as a result of drowning between April 2019 and March 2022, by year of death and location of drowning

Location of drowning	Number of deaths				P-value for a trend across time
	All years	2019-20	2020-21	2021-22	
Drowning	84	20	27	37	0.024
Inland (Lake, Quarry, Reservoir, River, Canal)	31	5	8	18	0.006
Residential bath	25	4	9	12	0.055
Swimming pool (includes swimming pools abroad, public and private pools)	12	7	*	*	0.045
Other residential (including pond, paddling pool, other, hot-tub)	10	*	*	5	0.254
Coastal (Sea, Harbour, Dock, Marina, Port)	6	*	*	*	0.619

* denotes that a figure has been suppressed to ensure non-disclosure.

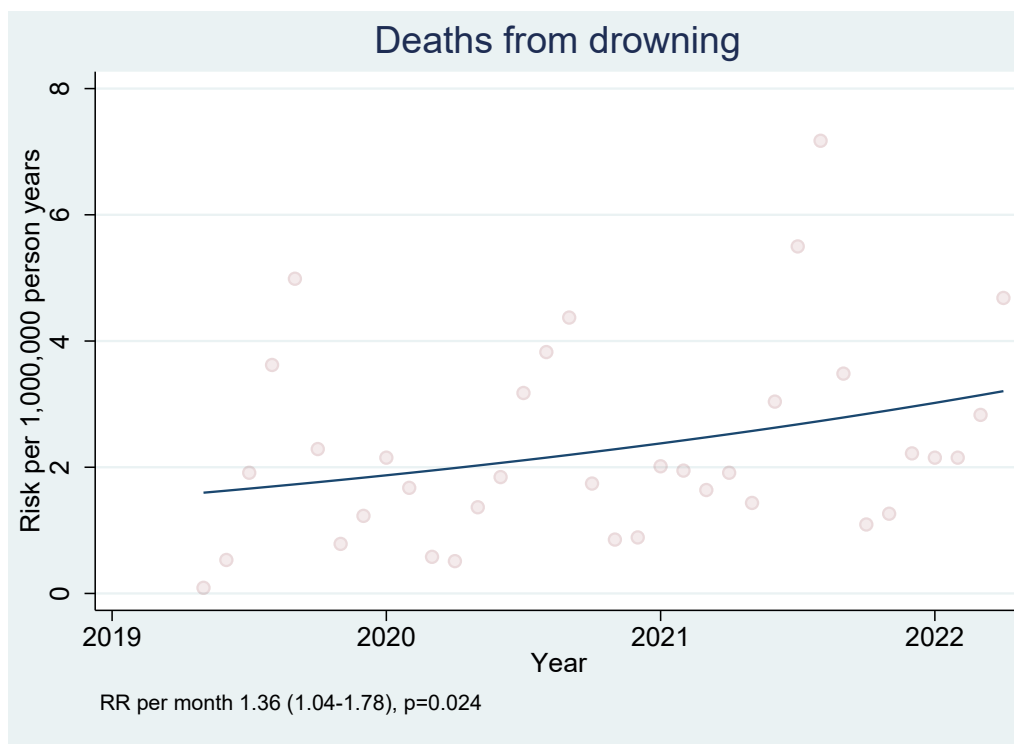
The profile of locations varied across the age groups, however, the largest number of deaths were drownings in the bath for children under 5 years (n=17) and inland drownings for 15-17 year olds (n=17). The number of deaths and risk per 1 million children in each age category, are shown in Table 20. When adjusting for the population in each age group, the highest two risks were drowning in inland water for children aged between 15 and 17 (3.01 per 1 million children), and in baths for children under 5 (1.74 per 1 million children).

There were 7 deaths of infants (aged under 1 year) due to drowning in the bath. Of these, 5 infants were known to be using a bath seat at the time of death. It is essential that children are not left unsupervised for any duration whilst using a bath seat and that parents remain within arm's reach of the child at all times. More information on how to keep your child safe at bath time can be found on RoSPA's website [here](#) or on CAPT's website [here](#). Information on washing and bathing your baby can be found on the NHS website [here](#).

Table 20: Risks of death as a result of drowning between April 2019 and March 2022, by age group and location of drowning

Location of drowning	Number of deaths			Risk per 1,000,000 children per year			P-value
	<5 years	5-14 years	15-17 years	<5 years	5-14 years	15-17 years	
Residential bath	17	6	2	1.74 (1.02-2.79)	0.29 (0.11-0.62)	0.35 (0.04-1.28)	<0.001
Coastal (Sea, Harbour, Dock, Marina, Port)	0	2	4	-	0.10 (0.01-0.35)	0.71 (0.19-1.81)	0.0088
Inland (Lake, Quarry, Reservoir, River, Canal)	6	8	17	0.62 (0.23-1.34)	0.38 (0.16-0.75)	3.01 (1.75-4.82)	<0.001
Swimming pool (includes swimming pools abroad, public and private pools)	7	3	2	0.72 (0.29-1.48)	0.14 (0.03-0.42)	0.35 (0.04-1.28)	0.046
Other residential (including pond, paddling pool, other, hot-tub)	8	1	1	0.82 (0.35-1.62)	0.05 (0.01-0.27)	0.18 (0.01-0.99)	0.0014

Figure 6: Risk of death as a result of drowning per 1,000,000 person years, for deaths between April 2019 and March 2022

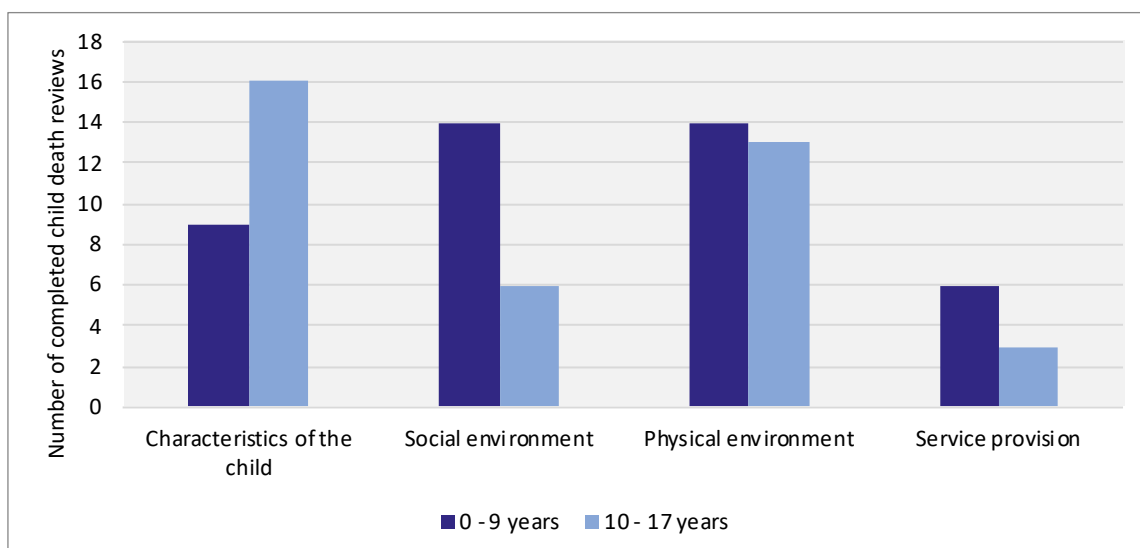


Completed child death reviews

For drownings that occurred between 1 April 2019 and 31 March 2022, 54% (n=45/84) had been reviewed by a CDOP by 5 December 2022. As only half of the deaths had been reviewed, the numbers presented throughout this section will be an underestimate of the true incidence, and focus should be given on proportions.

During the child death review, CDOPs are required to record factors that may have contributed to the vulnerability, ill health or death of the child. For children under 10, contributory factors were most commonly recorded in the social environment (n=14/21, 67%) and the physical environment (n=14/21, 67%). For children aged 10-17 years, at least one contributory factor was recorded in the characteristics of the child in 67% of reviews (n=16/24), followed by physical environment (n=13, 54%) (Figure 7).

Figure 7: Contributory factors recorded by the CDOP, that may have contributed to the vulnerability, ill health or death of the child, where the child died as a result of drowning



Factors intrinsic to the child or young person:

For older children and young people, swimming is a life skill with many physical, mental and social benefits. Basic swimming and water safety skills can be lifesaving and it is important that children and young people are aware of the dangers of different types of water. For example, swimming in the sea with its currents, cold water and seaweed poses very different risks from swimming in a pool. Babies and toddlers can slip under the water quietly, e.g., if not in arm's reach of the adult while in the bath, and may lack the developmental skills to get themselves out of trouble.

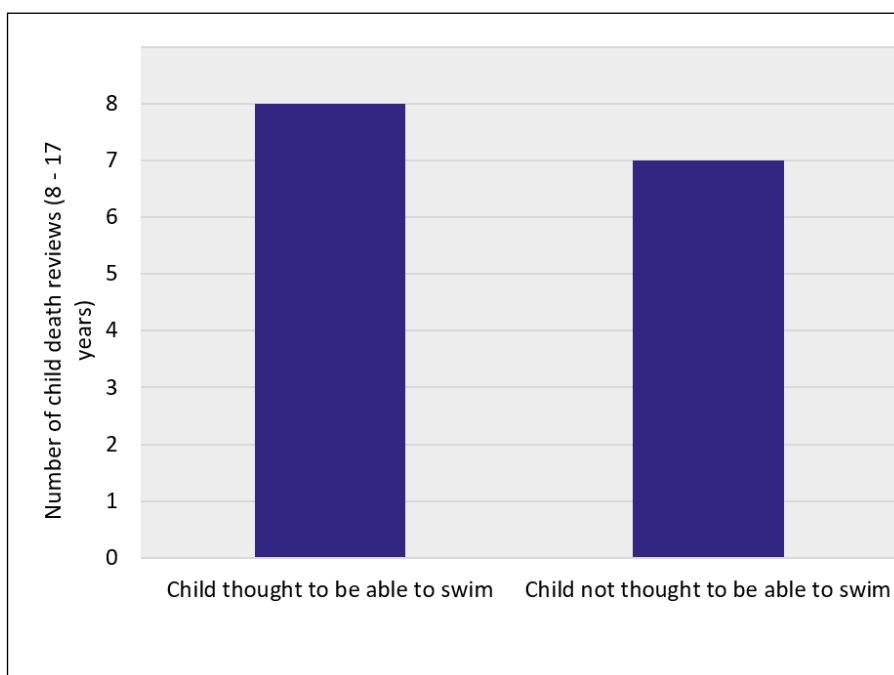
The national curriculum states that all schools must provide swimming instruction by year 6 (age 11)¹⁷. Pupils should be taught to swim competently, confidently and proficiently over a distance of at least 25 metres, use a range of strokes effectively and perform safe self-rescue in different water-based situations. According to the Active Lives Survey¹⁸, there are challenges with every child accessing school swimming. Pre-COVID, almost 1 in 4 children (24%) were not hitting the 'can self-rescue' standard. A disparity between high and

low-affluence households was reported, as well as between different ethnic backgrounds, with those from the lowest affluence and those from ethnic minorities most likely to fail to reach the statutory standards. The most recent data shared through the 2022 Active Lives Survey shows that only 34.7% of children from low-affluence families are able to swim 25m unaided. This means that children from low-affluence families are half as likely (34.7%) to be able to swim 25m unaided than those from high-affluence families (76.4%).

Whether or not someone can swim can be subjective and the ability to swim is only one element of water safety. Children are often taught to swim in heated swimming pools, which is a different environment from cold, open water, where they may have to contend with currents and other environmental conditions. Therefore, the ability to swim, in the absence of other water competencies, does not mean the risk to the child or young person is absent.

Where it was known (n=15), 8 (53%) of 8-17 year olds were thought to be able to swim (Figure 8). All 8 children drowned in open water, either in coastal or inland areas.

Figure 8: Number of completed child death reviews where the child was aged 8-17 years and died as a result of drowning, by swimming ability



In 9 reviews this information was not known or unclear.

As children under 8 would not be expected to be able to swim, data is reported for children who were aged 8 – 17 years only.

Within the 8 reviews that said 'Yes' to this question, some reviews reported that the child was able to swim but was not a 'strong' swimmer or that the child had received swimming lessons, but their level of competency was not known.

In 9 reviews, information on whether or not the child could swim was not known, demonstrating that the full scale of the influence of swimming ability is unclear.

¹⁷ Department for Education (2013)

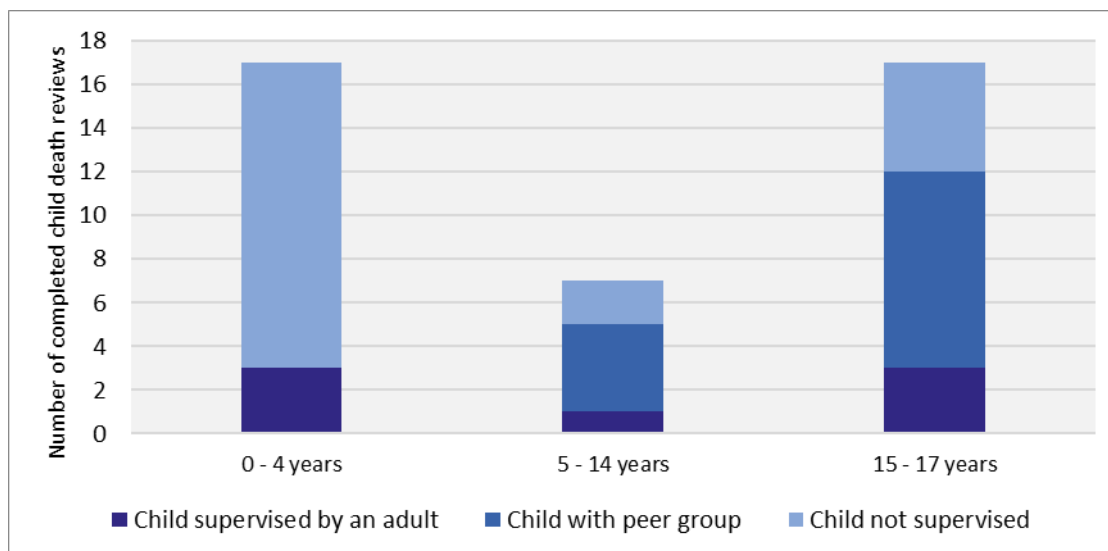
¹⁸ Sport England (2022)

Other contributing factors reported by CDOPs included alcohol or substance use, either on the day of death or the child or young person was known to have previously used alcohol or drugs, which was reported in 13% (n=6/45) of deaths reviewed of all ages. The impact of drugs on co-ordination, vision and balance is well documented and the effect on cognition and judgement are similar to the effects of alcohol¹⁹.

Factors in the social environment:

The child death review data collection forms routinely ask about whether the child was supervised at the time of the drowning incident and, where it was recorded, 83% (n=34/41) of children or young people were not being supervised by an adult (Figure 9). This includes 13 children or young people who were in the company of another child or young person, usually a sibling or a friend.

Figure 9: Number of child death reviews where child died as a result of drowning, by whether the child was being supervised, and age at death



In 4 reviews this information was not clear or not known.

Drownings that occurred while the child was unsupervised occurred across the age spectrum, the majority of which were of children aged under 5 (82%, n=14/17). The most common reasons for leaving the child or young person unsupervised were taking a phone call, leaving the room to get something e.g., a towel, miscommunication between groups of adults on who was supervising the child, and attending to a sibling or other young children.

For children aged between 10-17 years, 83% (n=19/23) were unsupervised by an adult, including 13 (57%) who were accompanied by another young person at the time of death. This raised concerns about the possible effect of peer pressure and worry about social exclusion and the potential impact this may have on risk-taking for children and young people around the water.

There were 6 children aged 5-17 years who were unsupervised and known to have complex medical conditions or disabilities e.g., cerebral palsy, epilepsy or learning disabilities.

Factors relating to the physical environment:

Home safety or conditions were recorded as a contributory factor in 24% (n=11/45) of deaths reviewed, including accessible water within the home or garden e.g., hot tubs, ponds, swimming pools, without appropriate barriers in place. Accessibility of open water, non-visible warning signs and a lack of available rescue equipment where the incident occurred were recorded as a contributory factor in 29% (n=13/45) of deaths reviewed. RoSPA guidance for Managing Safety at Inland Water Sites supports site owners to consider risk and mitigations.

¹⁹ Pajunen et al (2017)

Beckie and Dylan's Story

I am sure many of you know Dylan's story but for those of you who don't here goes.

At 17 years of age, I gave birth to Dylan, and I promised him I would love him unconditionally, protect him until my last breath and always be there for him.

Dylan was like most children he had lots of friends, he did well at school, involving himself in many out of school activities, and he seemed to soak up information like a sponge. He loved reading, swimming, watching films and documentaries, and exploring the outdoors.

Dylan was one of four children by the time he went to high school he had two younger brothers and a little sister. We as a family had the perfect life; we never had much but never really wanted much either, we had everything we needed under one roof - a healthy happy family.

Dylan continued to thrive at school, he was asked to attend a young and gifted program and he went from strength to strength. He became very popular and had so many friends and was even asked to represent his school at district level for sport.

As he turned into a teenager, he loved free running he would do a back flip anywhere. I often told him to be careful as it's a pretty dangerous thing to be involved in, but he loved it and was always smiling if he had a crowd watching him.

Not long before entering year nine on a hot sunny day in July, Dylan and two friends decided to go swimming in a local quarry, hundreds of young lads do it every year. They had been in the water for around 20 minutes swimming when Dylan shouted for help at least three times. One friend called 999 and went for help. At this point a group of Polish men were coming to the quarry to go diving but because of the language barrier, they thought Dylan was shouting hello at first. The moment they realised Dylan was needing help they ran down the hill stripping off their clothes. One of the men pulled Dylan to a small island in the quarry and started to perform CPR until the emergency services arrived. Upon arrival very little was done by paramedics before pronouncing Dylan dead.

I can't get my head round this and I don't think I ever will. Usually, people are taken to hospital and more doctors would try to resuscitate them. Dylan was under water for no more than three minutes.

My husband had been at the top of the quarry while paramedics worked on Dylan. I arrived at the quarry to meet my husband who informed me that our son had passed away. I screamed. I say screamed but really the noise that came out of my mouth that day was much more than a scream, it's a sound I did not know a person could make.

I asked to go in the ambulance with my son. I was in shock, but I wanted to talk to him tell him I loved him and most of all spur him on to live. I will never know if hearing my voice would have made a difference to my son's outcome, as I was not allowed to be with him as he was transferred to hospital.

Over two hours after his passing, as a family, we were allowed to formally identify his body.

When I walked into that mortuary and saw my beautiful perfect first-born son lifeless, not breathing, not moving, just looking perfect, I could not hold myself together. I hugged his chest and held him so tight I sobbed and begged for him to come back to us. I told him right there and then that I would not let his death be in vain.

I would give anything to have known then what I do now. I am certain that had I known the dangers in and around open water, or had Dylan known how cold-water effects the body he would still be with us now.

He would be 26 this year.

Since Dylan's death I have spoken to around 200,000 people from around the country. I've spoken in schools, colleges, universities, to police and fire cadets, beavers, scouts and girl guides. I've addressed members of the public and members of parliament.

I have received numerous awards for my efforts from local radio to national BBC awards. I was honoured with a British Empire Medal from the late Queen Elizabeth II. I was asked to speak at 2022's RoSPA water safety conference and I have also met Prince William to speak of ways we could prevent deaths along the river Thames. All the recognition is obviously amazing when trying to raise awareness but all so bittersweet. I would rather be watching my son growing up.

The effect on people has been almost immeasurable. Every person that I have ever known or loved has been affected by the death of Dylan.

My husband suffers Post Traumatic Stress Disorder (PTSD) and anxiety amongst other issues. I had a heart attack; I believe from having a broken heart.

My children have had to adapt their lives so much as they did not just lose a brother in Dylan the day he died, they lost the parents that they had always known and loved their whole lives. We were different people, losing a child does that to you.

My grandad could not look me in the eye anymore...

My mother, father, step-parents and siblings are all affected. Dylan's friends were affected and our community still grieves. Dylan's school was affected... As I say everyone I know has been affected by the loss of Dylan.

He was such a special young man he was always destined to be someone special. He is missed every second of everyday.

Learning from CDOP reviews

Water safety advice in the home:

Learning identified by CDOPs relating to deaths that occurred in private residences included the need to increase awareness and dissemination of water safety within the home, especially during hot spells or summer months. This should include the dangers for young children in baths, hot tubs, paddling pools, swimming pools and other water in the home. RLSS UK provides advice on [how to ensure your home and garden are safe](#).

In addition, the need to advocate for a consistent approach across primary, community and acute care settings to accident prevention and a good repository of accessible information was also highlighted. CAPT have produced a [guide on preventing unintentional injuries](#) for all staff working with children under 5 years of age. This includes water safety messages to be given to families.

Supervision of children and young people:

Ensuring appropriate supervision at all times for children and young people when in, on or around water, is vital, including when on holiday abroad. Drowning happens silently and this is in contrast to what families may see in films and television. This can give a false sense of reassurance when out of the room that everything is okay. Babies and toddlers can slip under the water quietly, e.g., if not in arm's reach of the adult while in the bath, and may lack the developmental skills to get themselves out of trouble.

The Royal Life Saving Society have comprehensive advice on their website to support families with water safety advice and resources, including considerations [when holidaying outside the UK](#). CAPT also have advice on their website including a [downloadable factsheet](#) for practitioners to share with parents when talking through the need for supervision.

Education and water safety in public spaces:

CDOPs recorded learning from deaths that occurred in open water, including the importance of water safety for rivers, lakes, seas and harbours in hot weather even when swimming with friends, and that it is essential that open water safety education and experience for children should be taken forward regionally and nationally. There is a requirement to nationally revise and reform the current approach to swimming and water safety education, with the purpose of tackling the current inadequacies for low-income and ethnically diverse children, who are being missed by the current statutory efforts and are over-represented in child drowning deaths.

CDOPs highlighted the importance of teaching all children to be water competent, to be familiar with water and to identify risk. This will ensure they can float if they find themselves in open water and reduces the chance of panic. The [Float to Live](#) campaign was recognised as a good example of this. Alongside this, CDOPs recognised the importance of continuing to educate parents, children and young people around water safety more generally: reacting in water, the risks of cold-water shock and the effects of alcohol and substance use and the impact that they can have while in the water.

The [StayWise Portal](#) has been developed by the National Water Safety Forum (NWSF) and the UK's leading emergency services and safety-focused organisations. It is a free online library of educational resources for schools, youth centres, parents and others to use to help keep children safe.

Warning signs and life-saving equipment:

Learning highlighted the need to ensure adequate warning signs were present in areas of open water and that such signs are clearly visible. In addition, the presence of easily accessible and well-maintained lifesaving equipment (e.g., throw lines and life rings), particularly in popular areas of open water, is essential to reduce the number of childhood drownings.



5. Deaths due to other traumatic injuries or external causes

Introduction

This section of the report focuses on deaths due to other traumatic injuries or external causes and includes deaths due to fire or burns, drug or alcohol poisoning (not including intentional overdoses) and unintentional injuries including falls, choking and accidental strangulation. These events are rare, but often identify significant modifiable factors which can be addressed to reduce the risk of future deaths occurring.

In relation to deaths due to fire or burns across all age groups, the Office for National Statistics (ONS) figures show that cooking appliances were responsible for almost half of accidental fires in the home, but only 11% of fire related deaths, in the year ending March 2022. However smoking materials (e.g., cigarettes) accounted for only 7% of accidental house fires but were responsible for 24% of deaths²⁰.

The rate of drug poisoning deaths across England and Wales continues to increase²¹. This report excludes deaths as a result of an intentional drug overdose but includes those where the drug use was intended to be recreational by the child or young person.

Unintentional injuries are those that are not inflicted purposely and that occur without the intent of harm. In 2018, Public Health England, RoSPA and CAPT produced a report titled “Reducing unintentional injuries in and around the home among children under 5 years”. This report highlighted unintentional injuries as a major cause of preventable death and disability in this age group and identified the need for a whole systems approach to address the key determinants of preventable injuries.

Deaths occurring between April 2019 and March 2022

There were 189 deaths from other traumatic causes over the 3 year period, with 69 in 2019-20, 69 in 2020-21 and 51 in 2021-22. As previously reported²², the deaths from drug or alcohol poisoning may be reducing, but there was no evidence of any change in the other causes across time. Table 21 shows these numbers by each category, and further analysis can be found under the relevant headings throughout this section.

Table 21: Number of child deaths between April 2019 and March 2022, by year of death and cause

Cause	Number of deaths				P-value for a trend across time
	All years	2019-20	2020-21	2021-22	
All other categories	189	69	69	51	0.109
Drug or alcohol poisoning	47	21	16	10	0.052
Accidental strangulation or suffocation	42	13	18	11	0.706
Fall	31	14	11	6	0.082
Fire, burns or electrocution	21	5	9	7	0.594
Choking or foreign object consumption/inhalation	21	7	8	6	>0.999
Falling Object	10	*	*	*	>0.999
Animal Attack	6	*	*	*	0.328
Other unintentional injuries	11	*	*	*	>0.999

* denotes that a figure has been suppressed to ensure non-disclosure.

²⁰ Office for National Statistics (2022)

²¹ Office for National Statistics (2022)

²² Odd et al (2023)

Drug or alcohol poisoning

Deaths occurring between April 2019 and March 2022

There were 47 deaths where the death was thought to be as a result of drug or alcohol poisoning (excluding deaths as a result of a deliberate overdose). These deaths were all of children and young people over the age of 10 years.

Drug use can cause a range of health-related problems including mental health problems such as anxiety, depression and suicide, lung damage, cardiovascular disease and blood borne viruses.

There are four categories of drugs commonly referred to as “recreational drugs”: analgesics, depressants, stimulants and hallucinogens. Analgesics include heroin, morphine, oxycodone and codeine. Depressants include alcohol and tranquilisers. Stimulants include cocaine, methamphetamine and ecstasy (MDMA). Hallucinogens include lysergic acid diethylamide (LSD), peyote, psilocybin (magic mushrooms), cannabis, ketamine and phencyclidine (PCP).

The children and young people in this group had used illicit drugs, also referred to as recreational drugs, prescription drugs, antihistamines and inhaled gases. Table 22 shows drugs consumed by each category. In 24% (n=11/46) deaths, more than one drug was recorded in the cause of death.

Table 22: Number of child deaths between April 2019 and March 2022, by drug category consumed by the child or young person

Category of substance	Number of deaths
Analgesics (e.g., heroin, morphine, oxycodone)	9
Depressants (e.g., tranquilisers, alcohol, gases and aerosols)	14
Stimulants (e.g., MDMA, cocaine)	26
Hallucinogens (e.g., LSD, spice (synthetic cannabinoid), ketamine)	5
Other (including prescription drugs and antihistamines)	4
Total deaths	46

In 12 deaths, more than one drug was consumed in more than one category.
In one case it was unclear what the drug was from the information provided.

The most common type of drug taken by children and young people is stimulants, including MDMA, also known as ecstasy (n=23) and cocaine (n=5). The next most common group was depressants including gases and aerosol inhalation (n=8). Gases and aerosols are in many normal household products such as butane gas lighter refills, deodorants and hairspray. As depressants, they slow down the brain and body responses and produce a similar effect to being under the influence of alcohol. They are inhaled by the child or young person making it difficult to control the dose.

Completed child death reviews

The CDOP had completed the reviews of 29/47 (62%) deaths by 5 December 2022. Where it was recorded, 50% (n=12/24) of children and young people who died as a result of drug poisoning were known to mental health services. Children and young people take drugs for many different reasons and sometimes this might be to help cope with the symptoms of a mental health problem.

Learning identified the need to ensure peer awareness of warning flags or how to recognise an adverse reaction and when to call for help from the emergency services. CDOPs recognised that fear of repercussions as a consequence of substance misuse is a barrier to contacting the emergency services for young people.

Access to drug education is now statutory in state-funded schools in England. However, the statutory framework for Relationships, Sex and Health Education (RSHE) does not currently include reference to skills in social decision making, managing risk and resilience. It applies only to 16–18 year olds in sixth form schools, and it is not in place for those in sixth form or further education colleges. It is also important that parents and carers are given access to up-to-date information and advice relating to young people, drugs and decision-making. The DSM Foundation works with young people, families, teachers and professionals in schools, colleges and community groups. They have developed an evidence-based, multi-component drug and alcohol education programme for young people, parents and teachers, based on practice that research has demonstrated to be most effective.

CDOPs recognised the significance of use of the internet and social media in relation to the accessibility and purchase of drugs.

For deaths due to alcohol intoxication, CDOPs recorded the importance of increased awareness among children and young people of the risks of alcohol intoxication, including that it can cause death.

Accidental strangulation or suffocation

Deaths occurring between April 2019 and March 2022

There were 42 deaths as a result of accidental strangulation or suffocation. 13 (31%) children were aged under 1, 17 (40%) were aged 1-4 years, and 12 (29%) were aged 5-17 years. In total, 18 children died where entrapment or overlay was found to be a significant contributing factor. 24 deaths were due to other accidental strangulation or suffocation, including 9 due to strangulation by blind/curtain cords or cables.

Completed child death reviews:

The CDOP had completed the review of 32/42 (76%) deaths. Learning identified by CDOPs included:

Blind cord safety:

The importance of ensuring new parents and caregivers are made aware of the dangers of blind cords and that children should not access cords or wires of any type. In particular, advice should include ensuring the place of sleep is away from cords. CAPT has a [blind cord safety advice hub](#) on its website with free resources and downloads for practitioners to share with families.

Safety standards introduced in 2014, required new blinds to be safe by design or be supplied with appropriate child safety devices installed. However, tenants and homeowners are not aware of the dangers of blinds made before that date. This includes instances where families have moved into a new property where blinds are already installed and purchase of second hand or home-made blinds. Residential landlords and housing associations should be required to ensure that blinds that pre-date the 2014 standards are made safe or replaced with newer models. The British Blind and Shutters Association (BBSA) website [Make it Safe](#) provides helpful advice and information for landlords on how to make window blinds safe.



Macy and Karoline's story

The morning of the accident, my daughter Macy had been to nursery. After lunch, I took her upstairs to play and have a nap, while I got on with some cleaning. This was our normal routine, and I didn't give it a second thought. Macy often enjoyed looking out of her bedroom window and previously had messed with the panels of the blind, so I removed them just leaving the runner and the cord. When I went upstairs to check on my little girl, something unspeakable had happened. That afternoon, at around 3pm, Macy was pronounced dead after arriving at hospital.

As it was an old-style terrace house, the windowsills were lower than at newer properties. The fact Macy was tall for her age and that she was stood on a mattress on the floor, put there in case she fell out of bed, meant the looped cord was within her reach. I had no idea about the dangers to children posed by blind cords, nor did any of my friends and family. I've since learned from the Royal Society for the Prevention of Accidents (RoSPA) that their stats showed there have been 30 deaths related to blind cords in the UK since 1999 with many of the accidents involving old 'looped' cords relating to children. This figure represents 30 deaths too many. 30 young lives full of potential snatched away. 30 life-altering tragedies that could have been easily avoided.

The coroner recorded a verdict of accidental death due to strangulation from a blind cord.

Regulations brought in 2014 stated all blinds sold and installed must have the cords attached to the wall; have a chain break feature; or a wand-style device to open and close them if a child is likely to have access. Our landlord said the blinds had been fitted by a local firm when he bought the property in December 2010 and hadn't re-fitted them as he wasn't aware he needed to. He said the property was checked before we moved in and that the blinds were in good working order as far as he was aware, and there had been no previous concerns raised by tenants.

Macy was a happy little girl who melted hearts. She had such an infectious smile and a giggle that would have you laughing with her regardless of the mood you were in. Macy will be forever deeply missed and will always be our precious little angel.

At the inquest, the coroner compiled a report and sent it to the housing minister and RoSPA. The report highlighted the need for a regulatory body for landlords, to keep them up to date with the latest health and safety advice and legal obligations.

I'm now dedicated to helping RoSPA raise awareness about blind cord safety for parents and landlords. I hope I can save other families from the loss and heartache that we have had to suffer.

Falls

Deaths occurring between April 2019 and March 2022

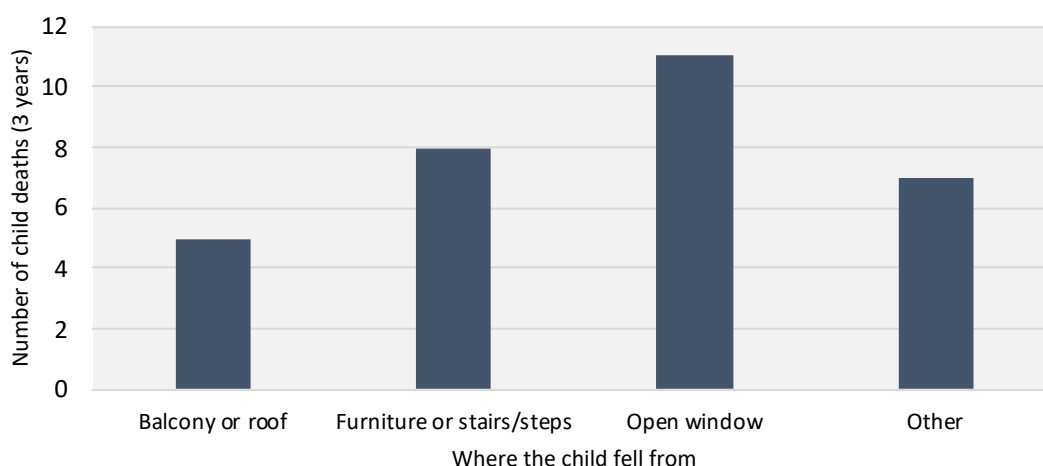
Falls can result in serious head trauma, which can lead to death or life-changing injuries, the consequences of which can last for a lifetime and affect the whole family. Falls included in this category exclude deaths where there was thought to be suicidal intent.

CAPT highlights that one of the most common reasons that

children fall is that their rapid development takes parents and carers by surprise, for example, a toddler might take his parents by surprise when he climbs on something that he had previously been unable to reach.

There were 31 deaths as a result of a fall. The most common place the child fell from was an open window (n=11) (Figure 10). 65% (n=20/31) of the deaths occurred in the home or other private residence e.g., a friend or family member's house.

Figure 10: Number of child deaths as a result of a fall between April 2019 and March 2022, by where the child fell from



Completed child death reviews

The CDOP had completed the reviews of 21/31 (68%) deaths by 5 December 2022. Learning identified by the CDOPs centred on safety planning for families, particularly when they are planning to stay away from home, and the importance of making discussions around window safety a part of health visitor reviews. CAPT have helpful advice on their websites for families and professionals including a guide on preventing unintentional injuries for staff working with children under 5 years of age, and a falls prevention factsheet in English, Arabic, Bengali, Panjabi, Polish and Urdu. The Institute of Health Visiting also has tips for families on falls.

There are currently no requirements for landlords to fit window restrictors in rented accommodation, and a lack of legislative powers to enforce latching/locks on windows and balconies to prevent similar accidents. In 1976, in New York City the window guard rule was adopted which required building owners to install window guards in apartments housing children aged 10 years or under. This led to a dramatic and long-lasting reduction in child window fall-related injuries and deaths²³.

Fire, burns or electrocution

Deaths occurring between April 2019 and March 2022

There were 21 deaths as a result of a fire, burns or electrocution. In 15 cases the death was caused by a fire; examples of the source of ignition (where it was known) were candles, cigarettes/lighters, electrical wiring, and boilers. In 6 cases the cause of death was electrocution, 5 of which occurred on a railway line.

Completed child death reviews

The CDOP had completed the reviews of 7/21 (33%) deaths by 5 December 2022. Learning for deaths from fires included ensuring that smoke alarms are installed, checked, and maintained, or an appropriate alternative is installed for children or young people who are deaf or hard of hearing. For deaths as the result of electrocution, the need for better signage on railway lines was also recorded, to ensure the community are aware of the dangers of trespassing on the live tracks.

²³ Toprani et al (2018)

Choking or foreign object consumption/inhalation

Deaths occurring between April 2019 and March 2022

There were 21 deaths as a result of choking or foreign object consumption/inhalation. For 17 children the death was as a result of choking or food inhalation. In 9 of those deaths, food was the item involved (e.g., a grape, strawberry, sausage, frozen fruit) and in 8 deaths, it was a non-food item that was involved (e.g., balls, small parts from toys, and other small plastic, metal or fabric objects).

The size and shape of grapes means that they can completely plug children's airways, with the tight seal produced by the fruit's smooth, flexible surface making them tricky to shift with first aid manoeuvres. Research has shown that grapes are one of the most common causes of food-related choking²⁴. CAPT advises that grapes should be cut in half lengthways and ideally in quarters until the child is up to five years of age as they have small airways that can easily be blocked by a grape. General advice on choking prevention can be found on CAPT's website.

For 3 children, the death was due to consumption of a foreign object, for example a button battery. There is a common misconception that button batteries are a choking hazard. In fact, if a button battery gets stuck in a child's oesophagus, it doesn't stop them breathing. Instead, it can burn through to the main artery, with potentially fatal consequences. CAPT has advice on their website on [button battery safety](#).

Where it was known (n=19), the event occurred at home or another private residence (e.g., a friend or family member's house) in 16 deaths. Other deaths occurred at a school or nursery or in a public place.

Completed child death reviews

The CDOP had completed the review of 16/21 (76%) deaths by 5 December 2022. Learning identified by CDOPs included:

Awareness raising on how to help a child who is choking:

CDOPs highlighted that previous research has shown that children with disabilities are at high risk of choking episodes due to several factors including: problems with chewing, difficulty swallowing, behaviours such as eating inappropriate items and the effects of medication^{25,26}. In 25% (n=4/16) of reviews the CDOP recorded at least one developmental condition or disability that may have contributed to the vulnerability, ill health or death of the child. These included learning disabilities, neurodevelopmental conditions, sensory or motor impairment and other developmental impairment.

Learning identified included the need for pictorial resources on how to help a child who is choking, to ensure understanding by families without English as a first language and those with poor literacy. Such resources should be widely shared, not just with parents, but with the wider community and other caregivers. This should also include adequate signposting to online resources which include information about safety with weaning and what to do when a baby chokes. St John's Ambulance have advice available on [what to do if a child is choking](#).

Button battery safety:

There is a need for increased awareness about button battery safety. Button batteries, including lithium coin batteries, are used in many toys and other products around the home such as remote controls, car keys, musical greetings cards, and small electronic devices such as calculators and weighing scales. If swallowed, button batteries can cause serious internal damage. When combined with saliva, the electrical current from the battery produces caustic soda that can burn through the oesophagus and can cause further damage to other internal organs. Parents and caregivers should be aware of the many places button batteries exist in the home and keep them safe, dispose of old batteries, and to go straight to A&E if they think their child has inserted or ingested a button battery.

Current toy safety regulations require toys that use button batteries to have lockable battery compartments, although older products and those bought online may not offer as much protection. The British Standards Institution has also published a voluntary standard that sets out the safety requirements for button and coin batteries and the consumer products that use them. PAS 7055:2021 defines what manufacturers and producers of button and coin batteries are required to do with their packaging, instructions, labelling, marketing and disposal. It also covers requirements for consumer products that use these types of battery and the retailers and distributors of these products in consumer markets.

The Office for Product Safety and Standards (OPSS) has set up a ministerial working group to look at button battery safety. This has five work strands covering consumer awareness and education, data and international comparisons, industry standards and best practice, emerging technology, and enforcement and supporting regulators. CAPT is leading the work on awareness raising, with a [safety hub](#) on its website and [free printed resources](#), including in translation.

24 Altkorn et al (2008)

25 Thacker et al (2008)

26 Samuels et al (2006)

Stacey and Harper's story

Harper-Lee was definitely a little character. We used to always call her 'Sassy Pants' because she was a little diva, everything she wanted she got.

Her favourite thing she loved to do was sing and dance, especially to the soundtrack to the film Moana. That film really did have some of her favourite songs, it was on all day every day... I can't listen to some of the songs now from that film. Her favourite things were her dummy and bottle.

Obviously it's still a bit raw, it's alright during the week because I keep busy with campaign work, it just hits hard on the weekends. I had her on the Saturday, we went to a children's party, left her Sunday morning, and she passed away Sunday night, so weekends are incredibly horrible for me at the minute. The hardest thing is just trying to live my life without her.

When it comes to button batteries, I didn't have a clue how dangerous they are.

I didn't realise how much stuff button batteries are in, like musical birthday cards and they're only secured with a piece of paper over them. I was very, very surprised to learn how many items they're in, I've also had people message me to say they've found button batteries at the bottom of their toy boxes where they've just fallen out of toys. The amount of things I've found out that they're in, it's actually shocking.

It was a remote control that Harper had the battery out of, there was no catch, no screw, so she pulled it out, since it happened, we actually found another remote. So we checked that one, and the back of it just slid open, as it slid, the battery just flew up in the air because they're not secure enough.

An elderly person who has bad eyesight could quite easily mistake it for medication, and kids could mistake it for a sweet.

I want more people to be aware of the dangers of button batteries. The amount of people I've spoken to who don't even know the dangers, the parents who are messaging me aren't aware, there just seems to be a real lack of awareness.

That day when Harper went into the hospital, she was covered in blood. The button battery had been through her oesophagus, her main arteries, so I know she couldn't have survived that. If she had, she wouldn't have lived the life she was living before.

At first, we thought it was her tonsils because she's always suffered with septic tonsillitis. Her doctor had thought initially her tonsils had burst, so when they went into theatre to have the camera inserted, I was shocked when the surgeon came back out to me and said, "It's not her tonsils, it's a button battery."

My initial thought was, she's in safe hands, they'll retrieve the battery, and I'll see her in a couple of hours. I did not realise the extent of the damage they can do. It wasn't very nice what we saw Harper go through. We didn't realise that button batteries can cause death.

The last thing she ever said to me was 'Mummy, I need you'. That's what I remember most from that day, and the doctors saying, 'I'm so sorry'.

I'm going to continue raising awareness, I will not let my baby die for nothing. As much as I'm still grieving and hurt, I don't want any other parent or family going through what my girls and I are going through. I want families and doctors to understand the level of harm that these batteries can do, for hospitals to see patients suffering with these injuries as quickly as possible, and for everyone to take as much precaution as possible around these batteries.

Falling objects

Deaths occurring between April 2019 and March 2022

There were 10 deaths as a result of injuries sustained from a falling object, and the incident occurred outside of the home in 8 deaths (e.g., school, shop or other public place). Items that fell, included trees or branches, mirrors, lockers, walls and fireplaces.

Completed child death reviews

CDOPs had completed the reviews of fewer than 5 deaths by 5 December 2022 but learning recorded included the importance of ensuring items are fully secured to walls in both private residences and public places.

Animal attack

Deaths occurring between April 2019 and March 2022

There were 6 deaths as a result of injuries sustained from an animal attack. All deaths were due to an attack by a dog.

Completed child death reviews

Where the CDOP had completed the review by 5 December 2022, learning identified by CDOPs included the importance of supervision of all children around pets, and that risk assessments and referral processes should be followed where a health or social care professional has concerns about a vulnerable child.

Close supervision is the key to ensuring that dogs and children can live safely together. [The Dog's Trust](#) has some helpful information on how to effectively and closely supervise dogs and children together. In addition, the Child Accident Prevention Trust, Department for Environment, Food and Rural Affairs (DEFRA), Dogs Trust, Royal Society for the Prevention of Cruelty to Animals (RSPCA) and the Office for Health Improvement and Disparities (OHID) have produced two [factsheets](#) on dog safety and the importance of close supervision of children around dogs.

Methodology and Limitations

Definition of categories

Table 23: Definition and inclusion criteria of each category included within this report for deaths due to traumatic events

Category	Definition
Vehicle collision	Vehicle collisions where the child was in control of the vehicle, a passenger, a pedestrian, on a bicycle or scooter, on a motorbike or other powered vehicle. Also includes any off-road accidents e.g., motocross, tractors and accidents involving rail, aircraft or boat. Excludes deaths where there was suicide intent.
Violence and maltreatment	Any suspected or confirmed deliberately inflicted injury through stabbings (including bladed weapons and improvised weapons), firearms, shaking, blunt force trauma, and any other mode of non-accidental injury. This includes deaths as a result of human trafficking or terrorist attacks. This category takes precedence over any other category that may be applied e.g., non accidental injury through drowning. Deaths were included where there was information in the child death review record that a deliberately inflicted injury was suspected, or confirmed, where the child death review had been completed.
Drowning	Deaths where drowning was suspected or confirmed to be the cause of death. This includes closed water e.g., baths, hot tubs, ponds, private swimming or paddling pool, public swimming pool and open water e.g., sea, lake, quarry, reservoir, river, harbour, or canal.
Drug or alcohol poisoning	Deaths as the result of drug or alcohol poisoning (excluding deaths as a result of a deliberate overdose).
Accidental strangulation or suffocation	Includes accidental hangings, accidental strangulation or suffocation, autoerotic asphyxia, entrapment, overlay. Excludes deaths where there was suicide intent.
Falls	Deaths as a result from a fall, including unwitnessed collapse. Excludes deaths where there was suicide intent.
Fire, burns, or electrocution	Deaths as a result of fire, burns or electrocution, excluding natural disasters.
Choking or foreign object consumption/inhalation	Deaths as a result of choking on a foreign object or consumption/inhalation of a foreign object.
Falling object	Deaths as a result of injuries sustained from a falling object (e.g., walls, trees, furniture). Includes vehicle collisions as the result of a falling object.
Animal attack	Deaths as a result of injuries sustained from an animal attack.
Other	Other deaths as a result of a traumatic injuries that are not covered by any of the above categories.

Cohort identification and exclusions

Deaths that occurred between 1 April 2019 and 31 March 2022 and notified to NCMD were identified where either they were categorised as trauma at notification, or the CDOP had reviewed the death and assigned a primary category of death of Deliberately inflicted injury, abuse or neglect, Trauma, or Substance misuse (a sub-category of Suicide or deliberate self-inflicted harm). Any deaths identified where the review was completed but reviewed by a CDOP as any other category were excluded. Deaths that met the categories and inclusion criteria in Table 23 were subsequently included.

The following deaths were excluded from the analysis in this report: deaths as a result of medical/surgical complications or errors, anaphylaxis, birth events, and concealed pregnancies. Some of these categories (e.g., birth events) have been covered in [previous thematic reports](#) and, where no thematic analysis exists, NCMD intends to report on the learning from these deaths in future. Deaths where there was suicidal intent (determined by those where there was an agreement between 3 clinicians at notification, or deaths that had been reviewed as suicide by a CDOP) were excluded.

There were an additional 7 deaths of infants under 1 year of age that were reviewed by a CDOP as category 1 or 3, that were excluded as no cause of death could be found following full investigation. When reviewing these deaths, CDOPs will come to a decision about whether, on the balance of probabilities, the death should be categorised as Sudden Unexplained Death in Infancy or Childhood, or, in instances where there are features suggesting positional asphyxia, it may be categorised as due to Trauma and other external factors. In addition, if the CDOP decides the circumstances are consistent with neglect, they may categorise the death as due to Deliberately inflicted injury, abuse or neglect. This variability in practice between CDOPs reflects the complexity of these deaths and the challenges in interpreting the interaction and significance of different factors. This therefore represents a significant challenge for CDOPs when choosing between the categories of death on the statutory analysis form. In all 7 (100%) of these infant deaths at least one risk factor was present which is known to increase the risk of unexplained infant deaths (put down prone or side, hazardous co-sleeping, inappropriate sleeping surface when sleeping alone or inappropriate items in the bed).

Data extraction

The dataset used within this report was extracted on 5 December 2022 and were sub-categorised with all information in the system available. The data was finalised on 7 March 2023.

Population estimates data

ONS data for [mid-year population estimates for 2020](#) for 0-17 year olds were used as denominators to calculate rates of death. Underlying population by ethnicity was obtained from the [ONS census data \(2021\)](#). Risk of death was calculated per 1 million children, per year, and are presented alongside their appropriate 95% confidence intervals.

Technical information

Data reported from CDOPs within the statutory child death data collection forms was used for this analysis. The child's postcode of residence was linked to the [Index of Multiple Deprivation](#) for a measure of local deprivation, with a lower value suggesting greater deprivation, and was also linked to determine the [urban/rural classification](#) of the child's residence. Season of death was derived using the month of death (Spring was deaths in March, April and May; Summer was June, July, August; Autumn was September, October, November and Winter was December, January and February). Where data was missing for a covariate, individuals with missing values were not included for that analysis only.

To derive the possibility of a difference between these risks, different child characteristics (e.g., age) were added to a regression model and a p-value was derived.

Testing for differences in trends was performed by assessing if the trend seen was different across characteristics. Tests for trend across time were performed by counting the number of deaths in each month and testing if this risk increased or decreased over the period of the data collection. Graphs for trends were plotted using the output from the regression models. Monthly risks were plotted after Gaussian smoothing using the number in index month and (where possible) the 2 months either side of it.

The data was assumed to follow a Poisson distribution for all measures, and the likelihood ratio test used to derive all p-values.

Contributory factors

Whilst completeness of at least one factor graded at a 2 or above was generally good (89%), numbers and proportions should be interpreted as a minimum. On some occasions, the factor could have been recorded with a relevance of 1 (i.e., factors identified but are unlikely to have contributed to the death), and therefore not included within this report, or the factor may not have been recorded at all on the analysis form. The denominator used to calculate proportions of contributory factors present was the total number of reviews completed.

Other limitations

Deaths were only included within the cohort and each category of trauma if there was sufficient information within the record that reported the death as a traumatic event or injury at the point of data extraction. As a lower proportion of deaths that occurred in 2021-22 had been reviewed by a CDOP in comparison to the deaths that occurred in the earliest year (2019-20), the figure for the most recent years will be subject to more change following completion of reviews. Therefore, all numbers are likely to be an underestimate and some deaths which present with no explanation at the point of notification may then be reviewed and the cause found to be trauma. This is likely to be more prevalent for causes where investigations are often needed to determine the cause e.g., violence and maltreatment. Similarly, some information on deaths that were due to an underlying health condition as a result of a traumatic event in years prior to the death may not be available until the review e.g., chest infection as part of complex cerebral palsy secondary to non-accidental head injury.

The time period used in this report included the year 2020, when there were multiple lockdown restrictions in place in response to the COVID-19 pandemic. This had indirect effects on many aspects of society e.g., a reduction of road casualties, and may have had many different effects on deaths due to traumatic events. Whilst trends over time within this report have been investigated, they have been restricted to reporting years, rather than to investigate changes during or after periods of lockdown restrictions.

Glossary of Terms

Active Lives Survey	A survey measuring the activity levels of people across England
ADHD	Attention deficit hyperactivity disorder
ASD	Autism spectrum disorder
Asphyxiation	The state or process of being deprived of oxygen, which can result in unconsciousness or death
BBVs	Blood borne viruses. There are three main blood borne viruses - HIV, Hepatitis B, and Hepatitis C
BBSA	The British Blind and Shuttles Association
CAPT	The Child Accident Prevention Trust
Cardiothoracic emergencies	Emergencies relating to the heart and chest or lungs
CDOPs	Child Death Overview Panels
CYPMHS	The Children and Young People's Mental Health Service
DEFRA	The Department for Environment, Food and Rural Affairs
FCDO	The Foreign Commonwealth and Development Office
ICBs	Integrated Care Boards
MARAC	The Multi-agency risk assessment conference
NICE	The National Institute for Health and Care Excellence
NSPCC	The National Society for the Prevention of Cruelty to Children
ONS	The Office for National Statistics
OPSS	The Office for Product Safety and Standards
PCSOs	Police Community Support Officers
PTSD	Post-traumatic stress disorder
RCGP	The Royal College of GPs
RCPCH	The Royal College of Paediatrics and Child Health
RLSS UK	The Royal Life Saving Society UK
RoSPA	The Royal Society for the Prevention of Accidents
RSHE	Relationships, sex education and health education
SSO's	Safer Schools Officers
SDGs	Sustainable Development Goals
VRUs	Violence Reduction Units
WHO	The World Health Organisation

References

1. NCMD Child death review data release 2022, <https://www.ncmd.info/publications/child-death-review-data-release-2022/>
2. Characteristics of children in need. Reporting year 2022', Education National Statistics. [Online] Available: <https://explore-education-statistics.service.gov.uk/find-statistics/characteristics-of-children-in-need#explore-data-and-files>
3. 'Special educational needs in England. Academic year 2021/22'. Education National Statistics. [Online] Available: <https://explore-education-statistics.service.gov.uk/find-statistics/special-educational-needs-in-england/2021-22>
4. Royal College of Paediatrics and Child Health (2020) State of Child Health. London: RCPCH. Available at: <https://stateofchildhealth.rcpch.ac.uk/evidence/injury-prevention/road-traffic-accidents/>
5. Davis RM, Pless B. BMJ bans "accidents": Accidents are not unpredictable. *Bmj*. 2001;322(7298):1320-1321. doi:10.1136/bmj.322.7298.1320
6. Sonkin B, Edwards P, Roberts I, Green J. Walking, cycling and transport safety: An analysis of child road deaths. *J R Soc Med*. 2006;99(8):402-405. doi:10.1258/jrsm.99.8.402
7. Morrongiello BA, Lasenby-Lessard J. Psychological determinants of risk taking by children: An integrative model and implications for interventions. *Inj Prev*. 2007;13(1):20-25. doi:10.1136/ip.2005.011296
8. 'Reported road collisions, vehicles and casualties tables for Great Britain', RAS0704, Department for Transport (2021) [Online] Available: <https://www.gov.uk/government/statistical-data-sets/reported-road-accidents-vehicles-and-casualties-tables-for-great-britain>
9. 'Reported road collisions, vehicles and casualties tables for Great Britain', RAS0711, Department for Transport (2021) [Online] Available: <https://www.gov.uk/government/statistical-data-sets/reported-road-accidents-vehicles-and-casualties-tables-for-great-britain>
10. 'Unintentional injuries on the road: interventions for under 15s', NICE (2010) [Online] Available: <https://www.nice.org.uk/guidance/ph31>
11. Racioppi F, Eriksson L, Tingvall C, Villaveces A. Preventing road traffic injury: a public health perspective for Europe. World Health Organisation (2004) [Online] Available: www.euro.who.int
12. Babinski DE, Huffnagle SM, Bansal PS, Breaux RP, Waschbusch DA. Global Prevalence of Past-year Violence Against Children: A Systematic Review and Minimum Estimates *Paediatrics*. *Pediatrics*. 2016 Mar; 137(3): e20154079
13. 'Global status report on preventing violence against children', World Health Organisation (2020) [Online] Available: <https://www.who.int/publications/i/item/9789240004191>
14. Reder D.P., Duncan S., & Gray M. (1993). *Beyond Blame: Child Abuse Tragedies Revisited* (1st ed.). Routledge. [Online] Available: <https://doi.org/10.4324/9780203977552>
15. Annual Reports and Data, National Water Safety Forum, The WAter Incident Database (WAID) (2017-2021) [Online] Available: <https://nationalwatersafety.org.uk/waid/annual-reports-and-data/>
16. Annual Reports and Data, National Water Safety Forum, The WAter Incident Database (WAID) (2021) [Online] Available: <https://nationalwatersafety.org.uk/waid/annual-reports-and-data/>
17. 'National curriculum in England: physical education programmes of study', Department for Education (2013) [Online] Available: <https://www.gov.uk/government/publications/national-curriculum-in-england-physical-education-programmes-of-study/national-curriculum-in-england-physical-education-programmes-of-study>
18. 'Active lives data tables', Sport England [Online] Available: <https://www.sportengland.org/research-and-data/data/active-lives/active-lives-data-tables>
19. Pajunen T, Vuori E, Vincenzi FF, Lillsunde P, Smith G, Lunetta P. Unintentional drowning: Role of medicinal drugs and alcohol. *BMC Public Health*. 2017;17(1):1-10. doi:10.1186/s12889-017-4306-8

20. 'Detailed analysis of fires attended by fire and rescue services, England, April 2021 to March 2022', Office for National Statistics (2022) [Online] Available: <https://www.gov.uk/government/statistics/detailed-analysis-of-fires-attended-by-fire-and-rescue-services-england-april-2021-to-march-2022/detailed-analysis-of-fires-attended-by-fire-and-rescue-services-england-april-2021-to-march-2022>
21. 'Deaths related to drug poisoning in England and Wales: 2021 registrations' Office for National Statistics (2022) [Online] Available: <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/deathsrelatedtodrugpoisoninginenglandandwales/2021registrations>
22. Odd D, Stoianova S, Williams T, Fleming P, Luyt K. Child Mortality in England During the First 2 Years of the COVID-19 Pandemic. 2023;6(1):1-12. doi:10.1001/jamanetworkopen.2022.49191
23. Toprani A, Robinson M, Middleton III JK, Hamade A, Merrill T. New York City's Window Guard Policy: Four decades of success. *Injury Prevention* 2018; 24:i14-i18
24. Altkorn R., Chen X, Milkovich S, Stool D, Rider G, Bailey C.M, Haas A, Riding K.H, Pransky S.M, Reilly J.S, Fatal and non-fatal food injuries among children (aged 0–14 years), *International Journal of Pediatric Otorhinolaryngology*, Volume 72, Issue 7, 2008, Pages 1041-1046, ISSN 0165-5876, <https://doi.org/10.1016/j.ijporl.2008.03.010>.
25. Thacker A, Abdelnoor A, Anderson C, et al. Indicators of choking risk in adults with learning disabilities : A questionnaire survey and interview study. 2008;8288. doi:10.1080/09638280701461625
26. Samuels R, Chadwick DD, Learning C, et al. Predictors of asphyxiation risk in adults with intellectual disabilities and dysphagia. Published online 2006:362-370. doi:10.1111/j.1365-2788.2005.00784.x

Appendices

Appendix 1 – all trauma deaths, additional tables

Table 24: Number of child deaths as a result of trauma between 1 April 2019 and 31 March 2022, by characteristics and year of death

Characteristic	Number with data	Number (%) of child deaths by year		
		2019-20	2020-21	2021-22
All deaths	644	205	217	222
Age at death (years)	644			
<5 years		67 (32.7%)	85 (39.2%)	72 (32.4%)
5-14 years		42 (20.5%)	56 (25.8%)	57 (25.7%)
15-17 years		96 (46.8%)	76 (35.0%)	93 (41.9%)
Sex	644			
Female		66 (32.2%)	71 (32.7%)	59 (26.6%)
Male		139 (67.8%)	146 (67.3%)	163 (73.4%)
Area of residence	634			
Urban		172 (85.2%)	182 (84.7%)	190 (87.6%)
Rural		30 (14.9%)	33 (15.4%)	27 (12.4%)
Ethnicity¹	594			
Asian or Asian British		20 (11.2%)	25 (12.6%)	16 (7.4%)
Black or Black British		18 (10.1%)	17 (8.5%)	25 (11.5%)
Mixed		17 (9.6%)	11 (5.5%)	22 (10.1%)
Other		6 (3.4%)	7 (3.5%)	7 (3.2%)
White		117 (65.7%)	139 (69.9%)	147 (67.7%)
Region of CDOP	644			
East Midlands		18 (8.9%)	12 (5.5%)	23 (10.4%)
East of England		21 (10.2%)	19 (8.8%)	15 (6.8%)
London		41 (20.0%)	36 (16.6%)	42 (18.9%)
North East		9 (4.4%)	11 (5.1%)	13 (5.9%)
North West		33 (16.1%)	26 (12.0%)	41 (18.5%)
South East		32 (15.6%)	31 (14.3%)	23 (10.4%)
South West		22 (10.7%)	24 (11.1%)	17 (7.7%)
West Midlands		12 (5.9%)	35 (16.1%)	26 (11.7%)
Yorkshire and the Humber		17 (8.3%)	23 (10.6%)	22 (9.9%)
Deprivation	639			
1 (Most deprived)		77 (38.1%)	68 (31.5%)	80 (36.2%)

Characteristic	Number with data	Number (%) of child deaths by year		
		2019-20	2020-21	2021-22
2		41 (20.3%)	43 (19.9%)	54 (24.4%)
3		30 (14.9%)	48 (22.2%)	36 (16.3%)
4		35 (17.3%)	31 (14.4%)	33 (14.9%)
5 (Least deprived)		19 (9.4%)	26 (12.0%)	18 (8.1%)
Season²	644			
Winter		49 (23.9%)	46 (21.2%)	59 (25.6%)
Spring		46 (22.4%)	50 (23.0%)	48 (21.6%)
Summer		59 (28.8%)	68 (31.3%)	65 (29.3%)
Autumn		51 (24.9%)	53 (24.4%)	50 (22.5%)

1 Ethnicity is grouped based on groupings used in the 2011 Census. 'Other' includes 'Arab' and 'Any other ethnic group'.

2 Winter (December, January, February); Spring (March, April, May); Summer (June, July, August); Autumn (September, October, November).

Appendix 2 – deaths due to vehicle collisions, additional tables

Table 25: Number of child deaths as a result of a vehicle collision between April 2019 and March 2022, by characteristics and year of death

Characteristic	Number with data	Number (%) of child deaths by year		
		2019-20	2020-21	2021-22
All deaths	211	62	71	78
Age at death (years)	211			
<5 years		11 (17.7%)	12 (16.9%)	14 (18.0%)
5-14 years		19 (30.7%)	26 (36.6%)	25 (32.1%)
15-17 years		32 (51.6%)	33 (46.5%)	39 (50.0%)
Sex	211			
Female		22 (35.5%)	28 (39.4%)	26 (33.3%)
Male		40 (64.5%)	43 (60.6%)	52 (66.7%)
Area of residence	210			
Urban		50 (80.7%)	56 (80.0%)	63 (80.8%)
Rural		12 (19.4%)	14 (20.0%)	15 (19.2%)
Region of CDOP	211			
East Midlands		7 (11.3%)	*	7 (9.0%)
East of England		6 (9.7%)	6 (8.5%)	6 (7.7%)
London		8 (12.9%)	*	12 (15.4%)
North East		*	*	*
North West		11 (17.4%)	11 (15.5%)	6 (7.7%)
South East		9 (14.5%)	15 (21.1%)	12 (15.4%)
South West		7 (11.3%)	7 (9.9%)	9 (11.5%)
West Midlands		*	12 (16.9%)	12 (15.4%)

Characteristic	Number with data	Number (%) of child deaths by year		
		2019-20	2020-21	2021-22
Yorkshire and the Humber		6 (9.7%)	9 (12.7%)	9 (11.5%)
Deprivation	210			
1 (Most deprived)		22 (35.5%)	21 (30.0%)	23 (29.5%)
2		10 (16.1%)	12 (17.1%)	16 (20.5%)
3		8 (12.9%)	14 (20.0%)	17 (21.8%)
4		12 (19.4%)	15 (21.4%)	14 (18.0%)
5 (Least deprived)		10 (16.1%)	8 (11.4%)	8 (10.3%)
Season¹	211			
Winter		14 (22.6%)	7 (9.9%)	26 (33.3%)
Spring		16 (25.8%)	15 (21.1%)	11 (14.1%)
Summer		18 (29.0%)	22 (31.0%)	22 (28.2%)
Autumn		14 (22.6%)	27 (38.0%)	19 (24.4%)

¹ Winter (December, January, February); Spring (March, April, May); Summer (June, July, August); Autumn (September, October, November).

Ethnicity not presented by year due to small numbers.

Table 26: Trend characteristics of deaths as a result of a vehicle collision between April 2019 and March 2022

Characteristic	Number of deaths	Estimated population of children	Trend of mortality over the 3 years (Relative Risk (95% Confidence Interval))	p-value for a difference between trends
All deaths	211	36,342,900	1.12 (0.95-1.32)	-
Age at death (years)				
<5 years	37	9,750,312	1.13 (0.76-1.68)	0.439
5-14 years	70	20,944,476	1.14 (0.85-1.52)	
15-17 years	104	5,648,112	1.11 (0.87-1.40)	
Sex				0.814
Female	76	17,697,060	1.14 (0.93-1.41)	
Male	135	18,644,292	1.08 (0.82-1.43)	
Area of residence				0.644
Urban	169	30,751,380	1.12 (0.77-1.63)	
Rural	41	5,591,520	1.12 (0.93-1.35)	
Ethnicity¹				0.256
Asian or Asian British	23	4,347,237	0.88 (0.54-1.41)	
Black or Black British	8	2,013,906	1.74 (0.74-4.08)	
Mixed	11	2,404,008	2.11 (0.98-4.56)	
Other	2	938,268	2.37 (0.37-15.26)	
White	149	25,620,381	1.34 (1.11-1.62)	

Season ²				0.121
Winter	47	9,085,725	1.48 (1.03-2.13)	
Spring	42	9,085,725	0.84 (0.58-1.21)	
Summer	62	9,085,725	1.10 (0.81-1.50)	
Autumn	60	9,085,725	1.13 (0.83-1.55)	

1 Ethnicity is grouped based on groupings used in the 2011 Census. 'Other' includes 'Arab' and 'Any other ethnic group'.

2 Winter (December, January, February); Spring (March, April, May); Summer (June, July, August); Autumn (September, October, November).

Appendix 3 – deaths due to violence and maltreatment, additional tables

Table 27: Number of child deaths as a result of violence and maltreatment between April 2019 and March 2022, by characteristics and year of death

Characteristic	Number with data	Number (%) of child deaths by year		
		2019-20	2020-21	2021-22
All deaths	160	54	50	56
Age at death (years)	160			
<5 years		23 (42.6%)	27 (54.0%)	13 (23.2%)
5-14 years		7 (13.0%)	8 (16.0%)	12 (21.4%)
15-17 years		24 (44.4%)	15 (30.0%)	31 (55.4%)
Sex	160			
Female		15 (27.8%)	14 (28.0%)	9 (16.1%)
Male		39 (72.2%)	36 (72.0%)	47 (83.9%)

Area of residence, Ethnicity, Region, Deprivation and Season not presented by year due to small numbers.

Table 28: Trend characteristics of deaths as a result of a violence and maltreatment between April 2019 and March 2022

Characteristic	Number of deaths	Estimated population of children	Trend of mortality over the 3 years (Relative Risk (95% Confidence Interval))	p-value for a difference between trends
All deaths	160	36,342,900	1.02 (0.84-1.23)	-
Age at death (years)				
<1 year	35	1,827,288	0.77 (0.51-1.16)	0.842
1-4 years	28	7,923,024	0.81 (0.51-1.28)	
5-14 years	27	20,944,476	1.33 (0.83-2.12)	
15-17 years	70	5,648,112	1.16 (0.87-1.55)	
Sex				0.173
Female	38	17,697,060	1.10 (0.89-1.37)	0.195
Male	122	18,644,292	0.79 (0.53-1.17)	
Area of residence				
Urban	144	30,751,380	1.09 (0.89-1.33)	0.661
Rural	13	5,591,520	0.70 (0.35-1.40)	
Ethnicity¹				0.854
Asian or Asian British	9	4,347,237	0.89 (0.42-1.90)	
Black or Black British	31	2,013,906	0.90 (0.60-1.35)	
Mixed	20	2,404,008	1.09 (0.65-1.80)	
Other	9	938,268	0.86 (0.40-1.83)	
White	77	25,620,381	1.23 (0.95-1.60)	
Season²				0.854
Winter	45	9,085,725	1.07 (0.75-1.53)	
Spring	39	9,085,725	0.86 (0.58-1.26)	
Summer	38	9,085,725	1.32 (0.89-1.97)	
Autumn	38	9,085,725	0.89 (0.60-1.31)	

¹ Ethnicity is grouped based on groupings used in the 2011 Census. 'Other' includes 'Arab' and 'Any other ethnic group'.

² Winter (December, January, February); Spring (March, April, May); Summer (June, July, August); Autumn (September, October, November).

Appendix 4 – deaths due to drowning, additional tables

Table 29: Number of child deaths as a result of drowning between April 2019 and March 2022, by characteristics and year of death

Characteristic	Number with data	Number (%) of child deaths by year		
		2019-20	2020-21	2021-22
All deaths	84	20	27	37
Age at death (years)	84			
<5 years		8 (40.0%)	14 (51.9%)	16 (43.2%)
5-14 years		5 (25.0%)	5 (18.5%)	10 (27.0%)
15-17 years		7 (35.0%)	8 (29.6%)	11 (29.7%)
Sex	84			
Female		9 (45.0%)	6 (22.2%)	7 (18.9%)
Male		11 (55.0%)	21 (77.8%)	30 (81.1%)

Area of residence, Ethnicity, Region, Deprivation and Season not presented by year due to small numbers.

Table 30: Trend characteristics of deaths as a result of drowning between April 2019 and March 2022

Characteristic	Number of deaths	Estimated population of children	Trend of mortality over the 3 years (Relative Risk (95% Confidence Interval))	p-value for a difference between trends
All deaths	84	36,342,900	1.36 (1.04-1.78)	-
Age at death (years)				
<5 years	38	9,750,312	1.38 (0.92-2.06)	0.060
5-14 years	20	20,944,476	1.47 (0.84-2.56)	
15-17 years	26	5,648,112	1.26 (0.78-2.03)	
Sex				0.078
Female	22	17,697,060	1.61 (1.17-2.22)	
Male	62	18,644,292	0.87 (0.52-1.46)	
Area of residence				0.517
Urban	72	30,751,380	1.29 (0.97-1.72)	
Rural	10	5,591,520	1.59 (0.72-3.55)	
Ethnicity¹				0.959
Asian or Asian British	10	4,347,237	1.56 (0.74-3.30)	
Black or Black British	13	2,013,906	1.56 (0.81-3.01)	
Mixed	5	2,404,008	1.60 (0.55-4.64)	
Other	2	938,268	0.95 (0.19-4.69)	
White	48	25,620,381	1.31 (0.94-1.82)	
Season²				<0.001
Winter	17	9,085,725	1.09 (0.61-1.96)	
Spring	15	9,085,725	2.89 (1.30-6.40)	
Summer	45	9,085,725	1.18 (0.82-1.70)	
Autumn	7	9,085,725	1.56 (0.60-4.03)	

¹ Ethnicity is grouped based on groupings used in the 2011 Census. 'Other' includes 'Arab' and 'Any other ethnic group'.

² Winter (December, January, February); Spring (March, April, May); Summer (June, July, August); Autumn (September, October, November).

NCMD

National Child Mortality Database

Knowledge, understanding and
learning to improve young lives

National Child Mortality Database (NCMD)

Level D, St Michael's Hospital
Southwell Street
Bristol, BS2 8EG

Email: ncmd-programme@bristol.ac.uk

Website: www.ncmd.info

Twitter: @NCMD_England