



Surrey Child Death Review Partnership

2018 - 2022

A four-year report of patterns and trends in the deaths of children and babies aged under 18 years normally resident in Surrey, whose deaths occurred between 1st April 2018 – 31st March 2022

surreyscp.org.uk

“The death of a child is the most difficult thing any family can go through. ‘Child Death Review’ is a term used to describe the formal processes that happen after a child dies. There are some elements that take place for every child death, and some that may not be needed depending on the circumstances. By law all child deaths should be reviewed to try to prevent future deaths where possible.”[1]

[1] Child death review: statutory and operational guidance (England) - GOV.UK (www.gov.uk)

INTRODUCTION

Child Death Review (CDR) is the process to be followed when responding to, investigating, and reviewing the death of any child under the age of 18, from any cause. It runs from the moment of a child's death to the completion of the review by the Child Death Overview Panel (CDOP). The process is designed to capture the expertise and thoughts of all individuals who have interacted with the case to identify changes that could save the lives of children.

This report follows the publication of a previous four-year report on Child Deaths in Surrey 2014 – 2018.⁽²⁾



The death of a child is a devastating loss that profoundly affects bereaved parents as well as siblings, grandparents, extended family, friends, and professionals who were involved in caring for the child in any capacity. Families experiencing such a tragedy should be met with empathy and compassion. They need clear and sensitive communication. They also need to understand what happened to their child and know that people will learn from what happened. The process of expertly reviewing all children's deaths is grounded in deep respect for the rights of children and their families, with the intention of preventing future child deaths.

(2) CHILD DEATH OVERVIEW PANEL (surreyscp.org.uk).

Key Points

Between 1st April 2018 and 31st March 2022, Surrey Child Death Review Partnership were notified of 323 deaths, of which 233 were neonates or children who would normally be resident in Surrey, this compares with 299 deaths of which 219 were children who were resident in Surrey during the previous four-year period.

The data for all deaths of children and young people under 18 resident in Surrey shows that during the period 1st April 2018 – 31st March 2022 there have been 15,670 years of life lost. **That is an average of 3,918 years of life lost per year, which is approx. 35.88 of years of life lost per 10,000. In comparison cardiovascular disease deaths in England were 38.74 years of life lost per 10,000 population.** ⁽³⁾ This illustrates the high impact of child death and highlights the importance of on-going investment in this area.

Of the children who died, the death rate of those children living in 'the most deprived or next most deprived quintiles' (the poorest 40% of Lower Super Output Areas in Surrey) is double that of the death rate of those who were living in least deprived quintile (the wealthiest 20% of Lower Super Output Areas in Surrey).

The data shows that over an 8-year period there is a statistically significant difference between the rate of child deaths in Woking and the rate of child deaths in Elmbridge. There is also a statistically significant difference over a 4-year period between the average Surrey child death rate and the rate for Woking, which is statistically significantly higher. In addition to this over the 8-year period there is a difference between the average Surrey child death rate and the rates for Woking, Spelthorne and Guildford which are statistically significantly higher.

The data follows the pattern of the last 4-year report, where the recording of ethnicity of children suggests that the pattern of deaths does not match the ethnic distribution within the live Surrey population.

Smoking is the single most important modifiable risk factor in pregnancy. Smoking is associated with a range of poor pregnancy outcomes including miscarriage, stillbirth, premature birth, neonatal complications, low birth weight and sudden unexpected death in infancy.

If Surrey had the same child death rate as Finland, between 2015 and 2019 there would have been 248 deaths instead of 289, an excess of 41 deaths.

⁽³⁾ Years of life lost due to mortality from coronary heart disease: crude rate, 1-74 years, 3-year average, MFP - NHS Digital

Child Deaths in Surrey



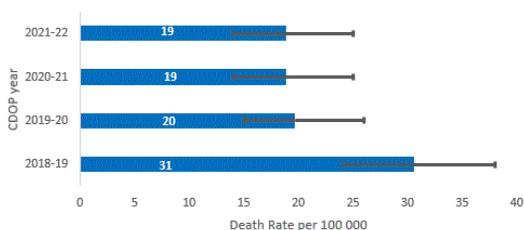
Between 1st April 2018 and 31st March 2022, Surrey Child Death Review Partnership were notified of 323 deaths, of which 233 were neonates or children who would normally be resident in Surrey, this compares with 299 deaths of which 219 were children who were resident in Surrey during the previous four-year period. Of the 233 Surrey child deaths notified.

- 134 were male and 99 were female
- 105 were neonatal deaths (infants who die before reaching 28 days of age)

Previously there were 219 Surrey child deaths notified to CDOP between 1st April 2014 and 31st March 2018:

- 135 were male and 84 were female
- There were 98 neonatal deaths (infants who die before reaching 28 days of age)
- A further 41 were aged between one month and one year of age.

Crude Death Rate per 100,000 Children and Young People Aged 0-17 years, Surrey April 2018 to March 2022 with 95% Confidence Interval



Data Source ONS MYE

Figure 1: Trend in death rate, crude rate per 100,000, children and young people aged 0-17 years in Surrey 2018 – 2022.

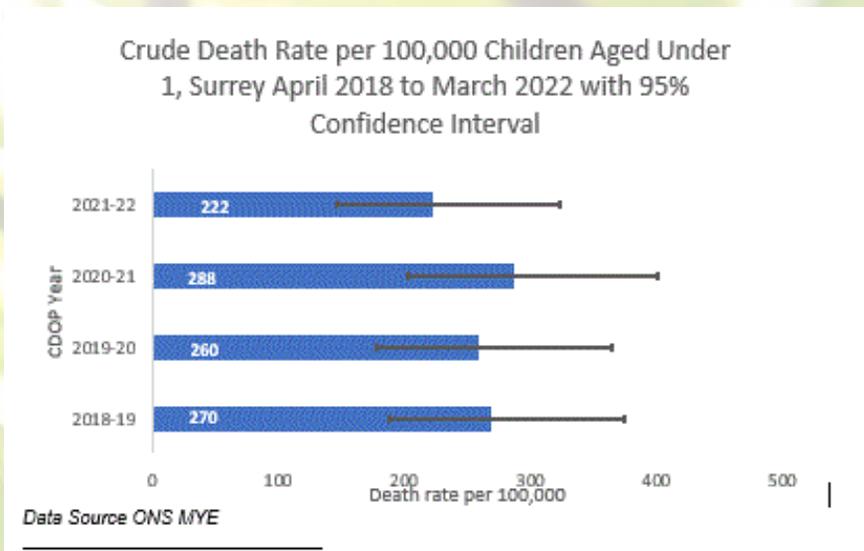
Whilst there is an overall increase in numbers for the four-year period, there is insufficient evidence to conclude that the deaths per year are statistically significantly different. We should also be aware of the slight trend in decreasing numbers in the last three years, this follows a decrease during the Covid-19 pandemic period. The infant mortality rate for Surrey 2019 - 2021 is 3.2 per 1000 which is significantly lower than both the regional and England rate.

Nationally In 2020, 2,226 infant deaths (aged under one year) and 789 child deaths (aged 1 to 15 years) occurred in England and Wales; these are the lowest numbers of infant and child deaths since records began in 1980.(4)

(4) Child and infant mortality in England and Wales - Office for National Statistics (ons.gov.uk)

“

There is insufficient evidence to conclude that the deaths per year are statistically significantly different over the four year period. Nationally in 2020, the infant mortality rate was 3.6 deaths per 1,000 live births in England and Wales; while this follows a general decline since 1980, the infant mortality rate has remained fairly stable since 2014.⁽⁵⁾ Data shows that Surrey's infant mortality rate is better than the England average.⁽⁶⁾



”

Figure 2: Trend in death rate in Surrey, crude rate per 100,000, children aged under 1 year.

(5) Child and infant mortality in England and Wales - Office for National Statistics (ons.gov.uk)

(6) Child and Maternal Health - Data - OHID (phe.org.uk)

Years of Life Lost (YLL)

Years of life lost (YLL) is a measure of premature mortality. Its primary purpose is to compare the relative importance of different causes of premature death within a particular population and it can therefore be used by health planners to define priorities for the prevention of such deaths. It can also be used to compare the premature mortality experience of different populations for a particular cause of death. The concept of years of life lost is to estimate the length of time a person would have lived had they not died prematurely. By inherently including the age at which the death occurs, rather than just the fact of its occurrence, the calculation is an attempt to better quantify the burden, or impact, on society from the specified cause of mortality. (7)

The data for all deaths of children and young people under 18 resident in Surrey shows that during the period 1st April 2018 – 31st March 2022 there have been 15,670 years of life lost. **That is an average of 3,918 years of life lost per year, which is approx. 35.88 of years of life lost per 10,000. In comparison cardiovascular disease deaths in England were 38.74 years of life lost per 10,000 population.** (8) This illustrates the high impact of child death and highlights the importance of on-going investment in this area.

For this calculation we used an average life expectancy of 75 years, due to the comparator used. We know this is a conservative estimate as children born in Surrey today are likely to live longer than 75 years on average, so the YLL is likely to be far higher.

(7) Compendium – Years of life lost - NHS Digital

(8) Years of life lost due to mortality from coronary heart disease: crude rate, 1-74 years, 3-year average, MFP - NHS Digital

Age at death	No of deaths	total days lost	years lost	annual average YLL
Neonates <28 days	105	2837505	7108	1777
28 days to 1 year	42	1129922	3096	774
over 1 year	86	1995234	5466	1367
total	233	5962661	15670	3918

Table 1: Years of life lost for all child deaths in Surrey 2018 - 2022

Child deaths by District and Borough

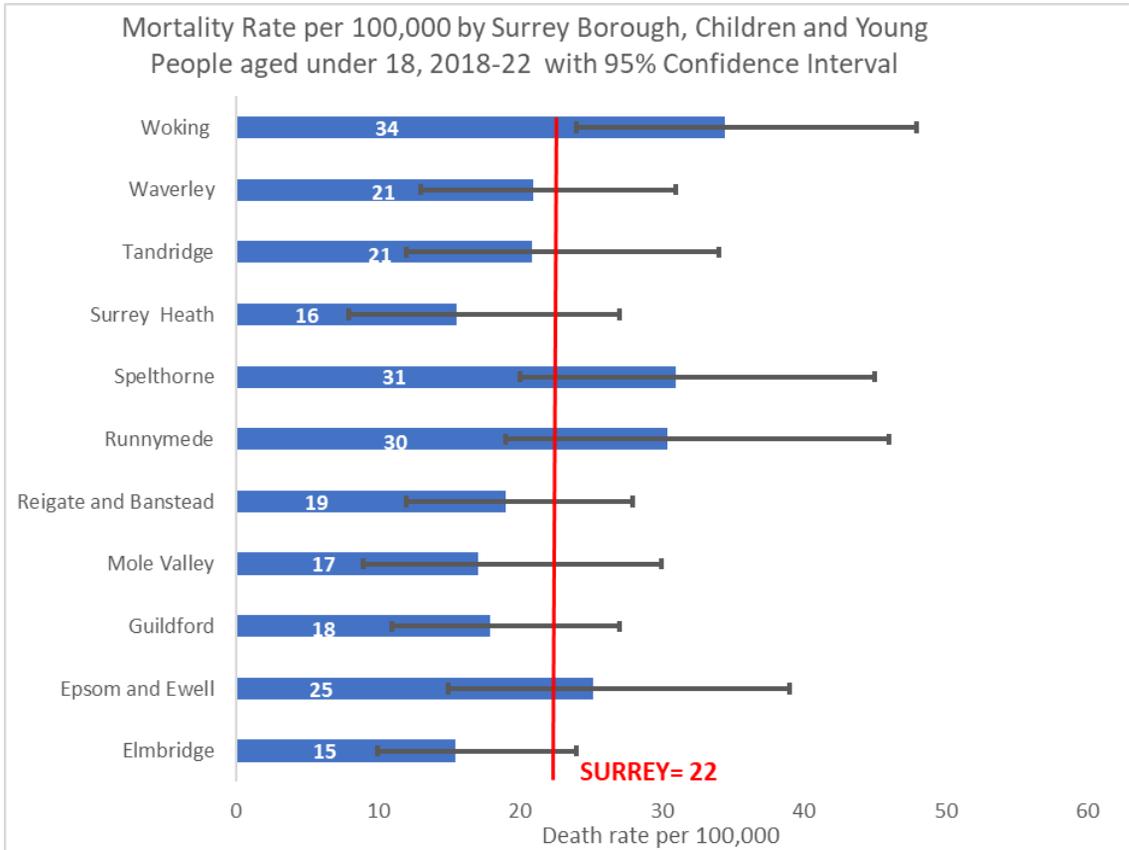


Figure 3: Mortality rate per 100,000 2018 – 2022 by District and Borough, children and young people aged under 18.

There is insufficient evidence over 4 years of data to conclude that the deaths per District and Borough are statistically significantly different to each other, but as in the 2014 - 2018 report, Woking is again the Borough with the highest number of deaths, the rate for Woking is the only borough which is statistically significantly higher than the Surrey average. In addition to this the data from the two 4-year reports has been combined and this is presented in figure 4.

Child deaths by District and Borough

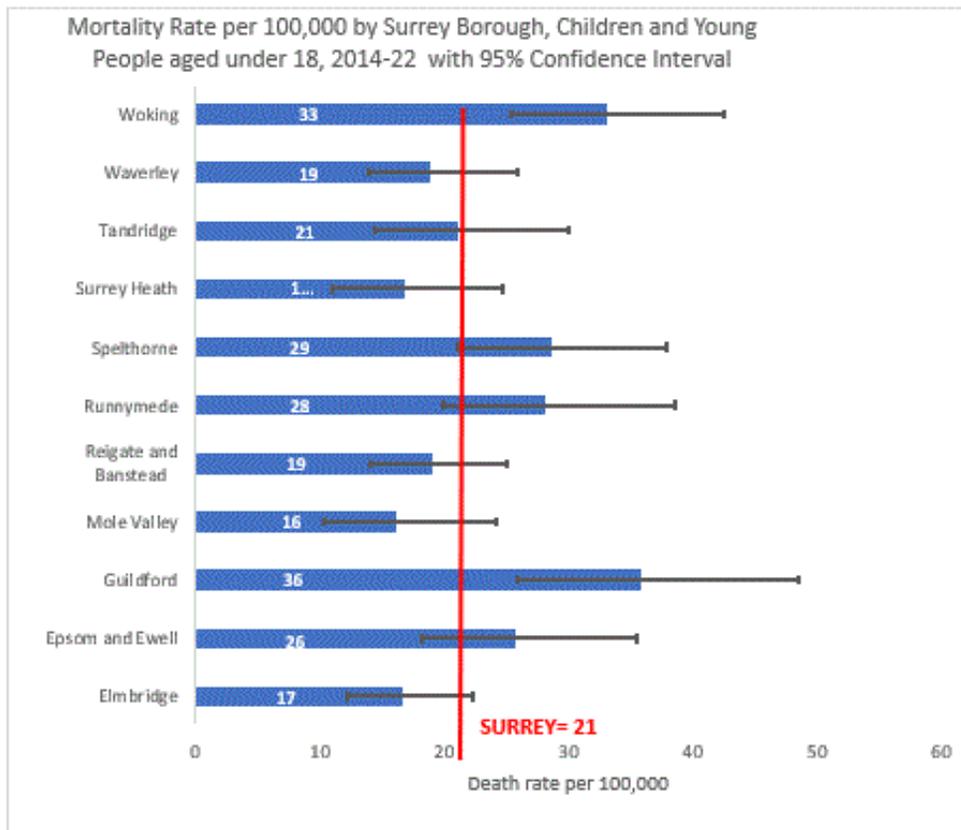


Figure 4: Mortality rate per 100,000 2014 - 2022 by District and Borough, Children and young people under 18

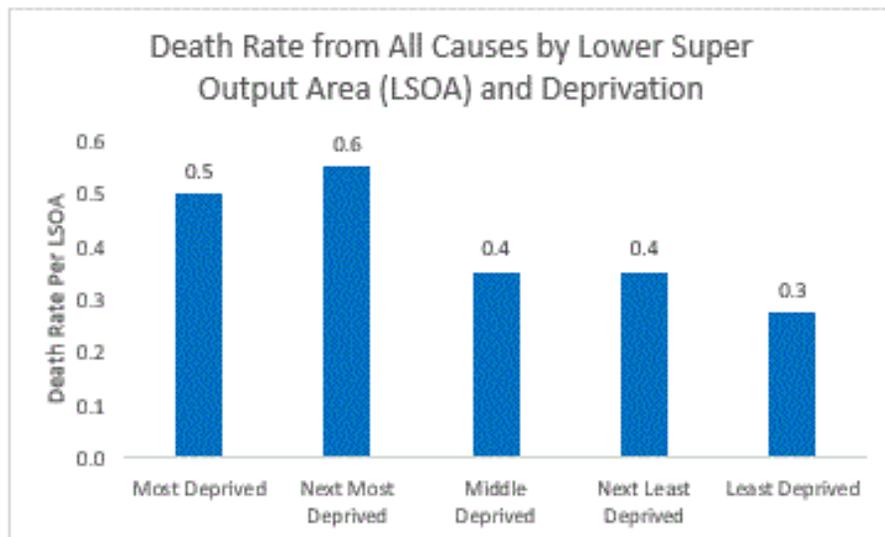
This data shows that over an 8-year period there is a statistically significant difference between the rate of child deaths in Woking and Guildford, which have the highest rates in Surrey and the rate of child deaths in Elmbridge and Mole Valley, which have the lowest. There is also a statistically significant difference between the average Surrey child death rate and the rates for Woking and Guildford which are statistically significantly higher.

The Surrey Strategic Partnership, of which Woking Borough Council is a member, has identified the ward of Maybury and Sheerwater as one of four 'Priority Places' in the county which will be subject to multiple interventions by county-wide and local partners in a coordinated manner in order to deliver its targets. The ward of Maybury and Sheerwater is comprised of six sub areas. The underlying issues in Maybury and Sheerwater are complex and vary between the different sub areas. (9) In 2022 when the Surrey Health and Wellbeing Strategy was refreshed, Canalside in Woking and Westborough and Stoke in Guildford were identified as the 'Key Neighbourhoods' for initial focus based on the 2019 Index of Multiple Deprivation's rankings for the Lower Super Output Areas in Surrey.(10)

(9) CS5 Priority Places - Woking 2027

(10) Surrey Health and Well-being Strategy - update 2022 | Healthy Surrey

Child deaths by deprivation



Data Source 2019 English Index Multiple Deprivation Indices

Figure 5: Child death rate in Surrey from all causes by lower super output area and deprivation.

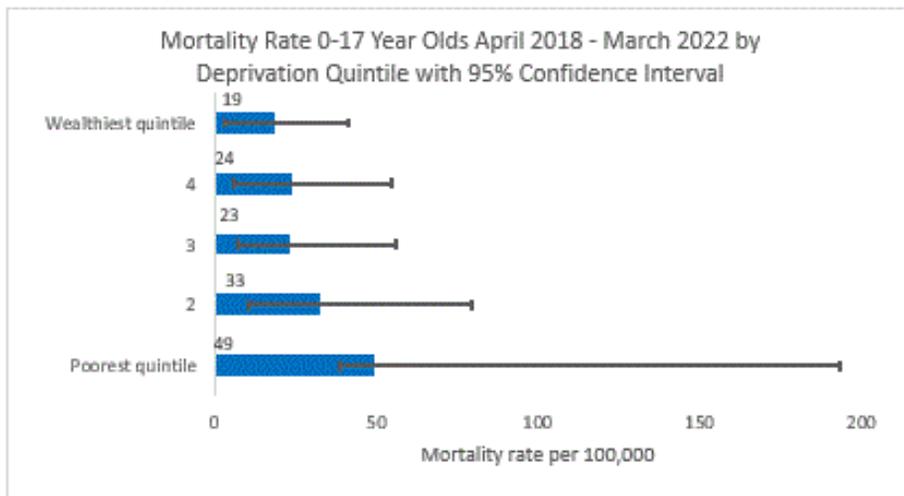
The graph in Figure 5 shows that of the children who died, the death rate of those children living in 'the most deprived or next most deprived quintiles' (the poorest 40% of LSOAs in Surrey) is double that of the death rate of those who were living in least deprived quintile (the wealthiest 20% of LSOAs in Surrey). This replicates the data Nationally. According to the National Child Mortality Database, in their report, 'Child Mortality and Social Deprivation National Child Mortality Database Programme Thematic Report Data from April 2019 to March 2020' (Published May 2021)(11) which is based on data for children who died between April 2019 and March 2020 in England, finds a clear association between the risk of child death and the level of deprivation (for all categories of death except cancer). More specifically, the report, states that over a fifth of all child deaths might be avoided if children living in the most deprived areas had the same mortality risk as those living in the least deprived – which translates to over 700 fewer children dying per year in England.

Nationally, in 2020, babies with a parent from higher managerial, administrative and professional backgrounds had a rate of 2.6 deaths per 1,000 live births. Babies with a parent from routine and manual backgrounds had a rate of 4.8 deaths per 1,000 live births. (12)

(11) NCMD-Child-Mortality-and-Social-Deprivation-report_20210513.pdf

(12) Child and infant mortality in England and Wales - Office for National Statistics (ons.gov.uk)

Child deaths by deprivation



Data Source 2019 English Index: Multiple Deprivation Indices

Figure 6: Mortality Rate 0-17 Year Olds April 2018 - March 2022 by Deprivation Quintile with 95% Confidence Interval

The English indices of deprivation (13) measures relative deprivation in small areas in England known as lower-layer super output areas. The indices provide a relative set of measures of deprivation based on 7 different domains of deprivation. Two of these domains are Barriers to Housing and Living Environment. Barriers to Housing measures the physical and financial accessibility of housing and local services including the physical proximity of local services and issues relating to access to housing such as affordability. Living environment measures the quality of the housing, air quality and road traffic accidents. The affordability of housing in Surrey is most probably the reason why almost 50% of our child deaths fall in the lowest 20% of barriers to housing.(14)

(13) English indices of deprivation 2019 - GOV.UK (www.gov.uk)

(14) Census 2021 Housing | Surrey-i (surreyi.gov.uk);

<https://www.surreyi.gov.uk/download/233g3/wnt/2021%20Census%20Tenure.xlsx>

Child deaths by age and cause

Age group	Number of deaths	% of all deaths	Most common cause of death	Next most common cause of death
0-27 days	105	45	85 perinatal/ neonatal event (80%)	12 Chromosomal, genetic or congenital anomaly (11%)
28 days <1 year	42	18	13 SUDI (31%)	10 Chromosomal, genetic or congenital anomaly (24%)
1-4 years	23	10	6 infection (26%)	6 Chronic medical condition (26%)
5-9 years	14	6	8 malignancy (57%)	chronic medical condition * number and percentage not presented as numerator is less than 3
10-14 years	24	10	7 malignancy (29%)	5 Chronic medical condition (21%)
15-17 years	25	11	9 Suicide or deliberate self-inflicted harm (36%)	6 Trauma and other external factors, including medical/surgical complications/error (24%)

Table 2: Common causes of death by age group, Surrey 2018 – 2022.

The data for Surrey replicates the National data, where the highest number of deaths occur as a result of a perinatal event in the neonatal period. Of these deaths (91/105) were early neonatal deaths occurring at 0-7 days, 48 of these were babies born extremely preterm - at less than 28 weeks gestation. We know from national and local data that there are a number of interventions to reduce the impact of modifiable factors that would improve outcomes for these babies, for instance, smoking is uniquely harmful, causing damage not only to smokers themselves but also to the people around them. Smoking is one of the main causes of health inequalities in England, with the harm concentrated in disadvantaged communities and groups. (15) Smoking is the single most important modifiable risk factor in pregnancy. Smoking is associated with a range of poor pregnancy outcomes including miscarriage, stillbirth, premature birth, neonatal complications, low birth weight and sudden unexpected death in infancy. In the 28 days to 1 year and the 15-17 year old age group categories, we can see that the most common causes of death have potentially modifiable factors.

(15) Smoking and tobacco: applying All Our Health - GOV.UK (www.gov.uk)

Child deaths by ethnicity

Ethnicity	% children	% population (2021 census)
Asian/Asian British Background	12	7.7%
Black/Black British Background	4	1.7%
Mixed ethnic background	6	3.4%
Any white background	70	87%
Other ethnic backgrounds	1	1.7%
Not known	6	0

Table 3: Child Deaths by Ethnic Group 2018 - 2022

This data follows the pattern of the last 4-year report, where the recording of ethnicity of children suggests that the pattern of deaths does not match the ethnic distribution within the live population. As stated in the last four-year report, we do know from national data that babies of mothers who were themselves born in India, Bangladesh and East Africa have an increased risk of death, and babies of mothers born in the Caribbean, the rest of Africa and Pakistan have double the risk compared with babies of mothers born in the UK. According to ONS (16) 'Babies from the Black ethnic group have the highest rates of stillbirths and infant deaths, with babies from the Asian ethnic group consistently the second highest. A higher proportion of live births within the Asian, Black and Any Other ethnic groups were in the most deprived areas compared with the White ethnic group.' "One known risk factor for both stillbirths and infant mortality is deprivation. Babies from Asian, Black and Any Other ethnic group were more likely to live in more deprived areas compared with their white counterparts which could explain higher rates in those ethnic groups." Thomas Maddox, Vital Statistics Outputs Branch, Office for National Statistics

We also know from national data that infant mortality in the Gypsy Roma Traveller community is three times higher than in the rest of the population.

Child deaths by expectancy

Expectancy	2018 - 2019	2019 - 2020	2020 - 2021	2021 - 2022
Expected	26	14	15	14
Unexpected	21	17	12	16
JARS	23	14	7	16
Born and died in hospital	34	21	23	20
Total Child Deaths	81	52	50	50

Table 4: Child Deaths by expectancy 2018 - 2022

Whilst deaths in babies and children are no longer classified as ‘expected’ or ‘unexpected’ it is helpful to review these numbers against those initiating a Joint Agency Response (JAR), this is a coordinated multi-agency response by the named nurse, police investigator, duty social worker and should be triggered if a child dies and the death:

- is or could be due to external causes;
- is sudden and there is no immediately apparent cause (including sudden unexpected death in infancy/childhood (SUDI/C));
- occurs in custody, or where the child was detained under the Mental Health Act;
- where the initial circumstances raise any suspicions that the death may not have been natural; or
- in the case of a stillbirth where no healthcare professional was in attendance.

As Table 4 highlights 26% of all child deaths required a Joint Agency Response over the four-year period.

Child deaths by cause

Cause of death	No of deaths 2018-2022	Average annual	2018-2022 crude rate & 95% CI	% of all deaths
Acute medical or surgical condition	7	2	2.7 per 100,000 0-17 yrs (1.1-5.5)	3
Chromosomal, genetic and congenital anomalies	27	7	9.8 per 100,000 0-17 yrs (6.4-14.4)	12
Chronic medical condition	23	6	8.3 per 100,000 0-17 yrs (5.2-12.6)	10
Infection	15	4	5.7 per 100,000 0-17 yrs (3.2-9.4)	6
Malignancy	24	6	9.1 per 100,000 0-17 yrs (5.8-13.5)	10
Perinatal neonatal event	91	23	34.5 per 100,000 0-17 yrs (27.8-42.3)	39
Sudden unexpected, unexplained death	20	5	7.6 per 100,000 0-17 yrs (4.6-11.7)	9
Suicide or deliberate self-inflicted harm	13	3	5.3 per 100,000 0-17 yrs (2.9-8.9)	6
Trauma and other external factors, including medical/surgical complications/error	13	3	4.5 per 100,000 0-17 yrs (2.3-7.9)	6

Data source: ONS MYE CI – confidence interval

Table 5: Child Deaths by cause, Surrey 2018 - 2022

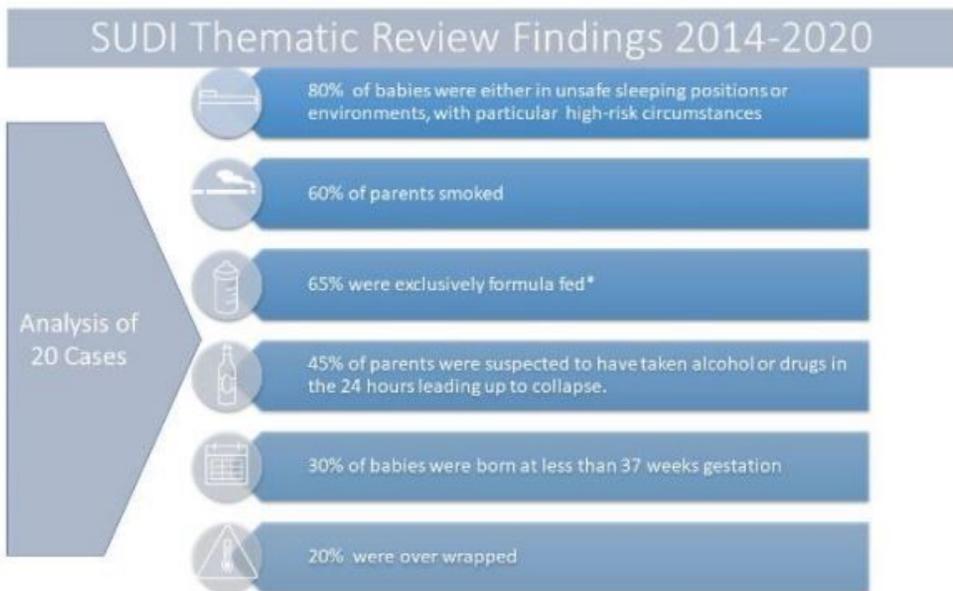
The data for Surrey replicates that shown nationally in 2020, where the main causes of death among children aged 28 days to 15 years continued to be congenital malformations, deformations and chromosomal abnormalities.⁽¹⁷⁾

(17) Child and infant mortality in England and Wales - Office for National Statistics (ons.gov.uk)

Sudden Unexpected Death In Infancy (SUDI)

There were 20 deaths which were classed as sudden and unexplained, of those which met the criteria for 'Sudden Unexpected Death in Infancy' (SUDI), a number are included in the 'Sudden Unexpected Death in Infancy, a thematic review 2014- 2020' (18)

The potentially modifiable factors were analysed for these babies and the main themes are identified in the table below:



(18) CHILD DEATH OVERVIEW PANEL (surreyscp.org.uk)

Probable suicide

In the '18 month update report on the Thematic Review Deaths of Children and Young People through probable suicide 2014- 2020' ⁽¹⁹⁾ the following table shows the main findings.

Suicide Thematic Review Findings 1st April 2014-31st October 2021

Analysis of
17 Cases

	88% of parents were aware of mental health issues
	88% experienced 3 or more ACEs
	76% had experienced a stressful trigger
	71% of cases the school aware of mental health concerns * 12% not in school
	65% were male
	65% had been referred to CAMHS
	53% had disclosed intent
	53% had self harmed
	53% had a diagnosis of ADHD/ASD
	47% were known to social care
	41% accessing CAMHS (either receiving support or referral made at time of death)
	33% had medication started or increased within the previous month
	29% were known to Police or youth Justice
	29% had concerning social media
	18% were accessing privately funded services
	8% didn't meet CAMHS thresholds

Adverse Childhood Experiences (ACEs)

Adverse Childhood Experiences (ACEs) are “highly stressful, and potentially traumatic, events or situations that occur during childhood and/or adolescence. They can be a single event, or prolonged threats to, and breaches of, the young person’s safety, security, trust or bodily integrity.” (Young Minds, 2018).⁽²⁰⁾ In a 2014 UK study on ACEs, 47% of people experienced at least one ACE with 9% of the population having 4+ ACEs (Bellis et al, 2014). ⁽²¹⁾ Of the children who died 65 out of 233 had 1 ACE (28%) and 14 out of the 233 had 3 or more ACEs (5%), we do know from the data of the deaths where there are potentially modifiable factors that there are a higher number of ACEs, for instance, 88% of the children and young people in the suicide thematic review had experienced 3 or more ACEs.

(20) Addressing trauma and adversity | Resources | YoungMinds

(21) Bellis, M. A., Hughes, K., Leckenby, N., Perkins, C. and Lowey, H. (2014) 'National Household Survey of adverse childhood experiences and their relationship with resilience to health-harming behaviours in England'. BMC Medicine. 12.

International Comparisons

If Surrey had the same child death rate as Finland, between 2015 and 2019 there would have been 248 deaths instead of 289, an excess of 41 deaths. Whilst Surrey may have lower child death rates than the United Kingdom and Welsh averages, in 2018 the child death rate in Surrey was significantly higher than that of Sweden, Finland, Spain, Iceland and Italy.

Data source: European Commission, Eurostat, MYE (ONS) CI = Confidence Interval.

Country	2015			2016			2017			2018			2019		
	Count	Rate	(95% CI)												
Sweden	477	24	(21.9 to 26.3)	481	24	(21.7 to 26.0)	451	22	(19.8 to 23.8)	444	21	(19 to 23.0)	417	19	(17.5 to 21.3)
Finland	193	18	(15.5 to 20.7)	207	19	(16.8 to 22.1)	223	21	(18.2 to 23.7)	204	19	(16.6 to 21.9)	204	19	(16.7 to 22.1)
Iceland	19	24	(14.3 to 37.1)	13	16	(8.7 to 27.9)	20	25	(15.3 to 38.7)	12	15	(7.7 to 26.1)	8	10	(4.3 to 19.5)
Spain	1861	22	(21.3 to 23.3)	1839	22	(21.0 to 23.1)	1811	22	(20.7 to 22.7)	1753	21	(20.0 to 22.0)	1666	20	(19.0 to 21.0)
Italy	2338	23	(22.2 to 24.1)	2266	23	(21.7 to 23.6)	2174	22	(21.0 to 22.9)	2149	22	(21.0 to 22.9)	1805	19	(18.0 to 19.7)
Denmark	310	26	(23.6 to 29.6)	301	26	(23.0 to 28.9)	331	28	(25.4 to 31.6)	325	28	(24.9 to 31.1)	277	24	(21.1 to 26.9)
United Kingdom	4576	33	(32.3 to 34.2)	4504	32	(31.5 to 33.4)	4448	32	(30.9 to 32.8)	4351	31	(30.1 to 31.9)	4242	30	(29.1 to 31.0)
Wales	197	31	(27.1 to 36.1)	181	29	(24.8 to 33.3)	195	31	(26.8 to 35.7)	198	31	(27.2 to 36.1)	190	30	(26.0 to 34.8)
Surrey	54	21	(15.8 to 27.5)	43	17	(12.0 to 22.4)	58	22	(16.9 to 28.8)	81	31	(24.6 to 38.4)	53	20	(15.1 to 26.3)

Table 6: Child death counts and crude rates EU countries, England, Wales and Surrey 2015 -19

Actions to reduce child deaths

The purpose of this report is to influence multi agency planning, the learning should be taken forward by organisations across Surrey. It should support commissioners and system leaders to develop evidence based commissioning, improve practice and inform learning.

In Surrey the Child Death Review Partnership have produced thematic reviews on our leading causes of neonatal and child death, including the SUDI and probable suicide thematic review and these can be found here, Child Deaths - Surrey Safeguarding Children Partnership (surreyscp.org.uk). It is important that the 'opportunities not to be missed' identified in these reports are embedded into systems and practice within Surrey.

Methods

This report used data from the CDRP database from 2018-2022. The CDRP database includes deaths of Surrey residents (wherever that death may occur). ONS data is used to illustrate long-term trends and comparisons with other countries. There may be a difference between ONS data on child deaths and those reported by the CDRP as deaths of live born babies following termination of pregnancy are excluded in the CDRP database, but included by ONS. ONS data also refers to the year that the death was registered, not when it occurred.

Strengths

1. The Child Death Review Programme Database is a population-based registry covering all child deaths in Surrey.
2. Multi-source reporting means that there is a rich dataset of good quality information.

Limitations

1. There are a small number of deaths in certain cause of death groups which limits meaningful analysis in those groups.
2. Data on ACEs are likely to be underestimated and better reporting and collection of the data is essential to enable further analysis.

Strengths and Limitations

Authors

Anna Miles | Child Death Review Administrator, Surrey Child Death Review Partnership, Surrey Heartlands ICB

Emily Welch | Child Death Review Coordinator, Surrey Child Death Review Partnership, Surrey Heartlands ICB

Nicola Mundy | Child Wellbeing Professional and Lead for Learning from Child Deaths, Surrey Child Death Review Partnership, Surrey Heartlands ICB

Acknowledgements

Thanks to Public Health Wales, for their permission to utilise their patterns and trends report as the template for this report. (22)