



**DONCASTER
SAFEGUARDING
CHILDREN
PARTNERSHIP**

**Rotherham
Safeguarding
Children Partnership**

**Sheffield
Children
Safeguarding Partnership**

SOUTH YORKSHIRE CHILD DEATH OVERVIEW PANEL

ANNUAL REPORT

APRIL 1ST 2021 – MARCH 31ST 2022

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Introduction

Numbers of child deaths

In South Yorkshire we generally expect around 80 to 100 child deaths per year. Child deaths are thankfully rare events, and so the actual figure year on year tends to display some random variation.

In the last three years the numbers have showed considerable variation – 84 (2019-20), 74 (2020-21), 104 (2021-22). Whilst 104 for the most recent year might appear comparatively high, the more stand-out figure is perhaps the 74 deaths in 2020-21, which coincides with the most restrictive social distancing measures of the COVID-19 pandemic response. The difference of 30 deaths between 2020-21 and 2021-22 reaches statistical significance, so is unlikely simply to be a random effect.

The National Child Mortality Database recorded 356 fewer deaths in 2020 than in 2019 and has informally described 2020 as the safest year on record for children. The reduction appears to be partly explained not only by a reduction in infections, but also fewer deaths relating to underlying medical conditions. Fewer accidental deaths might also be expected to occur with reduced movement, but apparently an increase in road traffic accidents was observed nationally.

It is at this point unclear to what extent the increased number of deaths seen in South Yorkshire in 2021-22 is a compensatory effect resulting from easing of restrictions, but it is interesting to note that this increase has only been apparent in Sheffield and Rotherham.

South Yorkshire CDOP

By working together the four areas are able to provide a larger cohort of data, which enables improved identification of themes, trends and shared learning than can be achieved at the individual CDOP level. Nevertheless, individual CDOPs covering the local authority footprint remain the most efficient and practical ways to carry out individual reviews, showing the best alignment to networks of healthcare, social care, education, and other related agencies.

It will inevitably be a point of future discussion whether this continues to obtain with the advent of statutory Integrated Care Boards in July 2022. As a minimum, the current Terms of Reference will need to be reviewed and updated to reflect the abolition of Clinical Commissioning Groups.

There were four SYCDOP meetings during 2021/2022:

1st April 2021
24th June 2021
7th October 2021
13th January 2022

The hosting arrangement for SYCDOP is based on an annual rotating system between the constituent local authorities. Sheffield was still the host authority for the first two quarters, meaning that the first two meetings were chaired by Diane Shahlavi, Deputy Designated Nurse/CDOP Manager in Sheffield, with

administrative support provided through Sheffield Safeguarding Children's Partnership. Hosting passed to Rotherham in the Autumn, so the third and fourth quarterly meetings were chaired by Alex Hawley, Consultant in Public Health, with the support of Rotherham Children's Safeguarding Partnership's business support function (Sarah Dale and Alex Roberts). As the host organisation in Spring/Summer 2022, Rotherham also has the responsibility of compiling this annual report on behalf of South Yorkshire.

In the Autumn of 2022 Rotherham will hand over the hosting to Barnsley.

During the year 2021-22, the four CDOP panels have completed 89 reviews of child deaths, with 104 cases still ongoing at year end. 89 reviews in a year is in line with normal expectation, but with such a high number still ongoing, it does appear likely that some backlog of cases might now be accumulating. Compared to the England median of 335, Sheffield and Barnsley currently achieve quicker review periods, whilst Rotherham and Doncaster are slower. More detail can be found in the data appendix to this report.

eCDOP

For use of eCDOP the shared web-based platform, the four local authorities jointly procure a licence on an annual rolling basis.

Barnsley local authority acts as the local contractual lead authority with Quality Education Solutions Ltd (QES) for licensing the software and recharges each other area accordingly.

This year the renewal fee was £13984.03, which equates to £3497 per local authority. This represents a 5% increase on the previous year's fee.

Membership and attendance

The arrangements document for SYCDOP sets out a list of roles that are generally expected to attend and form the core membership. For a meeting to be quorate, at least one representative from each local authority should be in attendance.

Core memberships likely to comprise:

- Public health
- Designated Doctor for child deaths
- Children's Social Care Services
- South Yorkshire Police
- Bluebell Wood Children's Hospice
- Safeguarding Health Practitioner
- Primary Care (GP or health visitor)
- Nursing and/or midwifery
- Lay representation

During 2021-22 meeting attendance has remained fairly consistent with representation Local Authorities, Health Services (including Designated Doctors), Safeguarding Partnerships, Social Care and Clinical Commissioning Groups. However, it is a moot point whether the meeting in October 2021 should have proceeded with one area having no representation in the meeting.

Discussion topics

One of the purposes of the SYCDOP meetings is for each local area to update the others on the conduct of its CDOP business and to share any concerns, learning or aspects of good practice for the benefit of all and to provide ongoing assurance at the South Yorkshire level. To date, the form and content of these updates has been spontaneous and unstructured, but is well appreciated by those attending.

Agendas are a mixture of some standing items and topic discussions, some of which arise from the update discussions in previous meetings.

Topics discussed during the year included:

Bereavement services

Discussion of what good bereavement support looks like and how South Yorkshire performs in this respect. Bereavement was considered for a future thematic review – being such as broad topic would make this challenging, however. See the National Bereavement Alliance’s commissioning guide for bereavement services (1).

Modifiable factors

Discussion took place across several meetings regarding the interpretation of the concept of modifiability for completion of analysis forms. It was apparent that there were inconsistencies across the region for how modifiability was being reported, and also potentially at odds with anecdotal advice being heard from National Child Mortality Database (NCMD) representatives. In light of this, Vicky Sleaf from NCMD was invited to present on modifiability to the January meeting. Feedback from the session was positive and helped develop a greater understanding when reporting modifiable factors. Some key points are set out.

- There are no national guidelines and no nationally agreed definition of a modifiable factor. NCMD is not commissioned to provide this type of guidance.
- Despite this, seeking consistency across South Yorkshire was seen as commendable.
- Any factor that appears in the modifiable box on the form should always also appear as a factor contributing to vulnerability within one of the four domains on the form
- Some clarity was given for the three gradings for vulnerability:
 0. only if suspected, but not confirmed - e.g. thought to have a learning disability
 1. definitely present or definitely absent, but not contributory - e.g. smoker in an road traffic collision
 2. definitely present and contributory
- Modifiability should indicate that something is amenable to change whether at an individual or wider level
- The fact that a particular intervention was tried in a case does not necessarily rule out modifiability. E.g. consider whether a smoking cessation is in place, and whether it is of sufficient quality/accessibility etc. Also then consider the potential for wider health promotion campaigns relating to smoking cessation.
- An annotated template for completion of all parts of the analysis was also shared from NCMD

LOTA – limitation of treatment agreements

Discussion took place concerning inconsistencies, changes, record keeping and flagging, responsibility for communication, etc. More follow-up may be required from this discussion.

Signs of life

Discussion concerning when to review cases of extreme prematurity (i.e. earlier than viability threshold). Consensus view was that a review is indicated whenever any signs of life are evident following birth irrespective of gestational age.

Options for thematic review

Discussion of thematic review with relationship to deprivation took place, in view of the NCMD report on deprivation and child mortality. A partial review of cases involving maternal obesity was carried out as reported in the next section.

Engagement with Coroners

South Yorkshire encompasses two different coronial areas, and experiences of engagement and communication with respective Coroner's offices varies across the region. Doncaster and Rotherham share the same Coroner. Rotherham was seeking to replicate the successful engagement exercise that Doncaster had achieved and hope to get a consistent approach.

Overseas Charging policy

Rotherham shared its experience of a particular case where the overseas charging policy had been found wanting (although not directly material to the child death). Rotherham also shared the review of the processes in the Trust and the SOP developed. Others were invited to look at their own arrangements.

Sharing of minutes

With respect to minutes of the Joint Agency Response (JAR) meetings. Clarity was obtained that parents could seek to obtain these, but would have to do so by approaching each attending organisation individually.

Some discussion also took place about the status of CDOP minutes in this respect. NCMD was believed to have queried this with DHSC. Some follow-up will be required to pursue this.

Looking ahead

CDOPs are by definition response-based and subject to unknown events. Planning ahead is therefore problematic, but an important aspect of a continuous effort to improve. For the year ahead the points listed below are likely to be important for the South Yorkshire CDOP, but unlikely to be an exhaustive list.

- Carry out a review of the document setting out the arrangements for SYCDOP and the associated Terms of Reference. This would be due for review in any case, but is all the more necessary in the light of the abolition of CCGs and the creation of Integrated Care Boards (ICBs). Review agreement/arrangements for quoracy, in the light of experience from October 2021.
- Forward planning: look at a more substantive process for agreeing a plan of priorities and actions, whilst allowing for contingencies. As a minimum, an agreement on the different purposes of each quarterly meeting would be helpful – e.g. agreeing thematic review; focussed discussion of a key topic (with invited speaker); agreeing content of annual report.
- Audit outstanding cases (and resources) across South Yorkshire – is a backlog

accumulating?

- Reporting cycle: the current reporting cycle may not align well with planning and reporting cycles within each area's related governance arrangements (e.g. safeguarding). For example, look at the pros & cons and achievability of transitioning to a calendar-year basis for reporting. In parallel with this, consider the need to realign the period for rotating hosting arrangements.
- Conduct a handover of hosting arrangements between Rotherham and Barnsley (with Barnsley currently set to chair the Autumn meeting in 2022). Ensure continuity with respect to action logs and in terms of expected attendance and support from the hosting location.
- Consider a more structured approach for content and purpose of local updates given at SYCDOP meetings.
- Agree a thematic review topic for coming year.
- Consider thematic review and other recommendations set out in this report for action.
- Review the impact of the NCMD advice on modifiability and other aspects of analysis form completion.

Thematic review – cases involving maternal obesity

Background

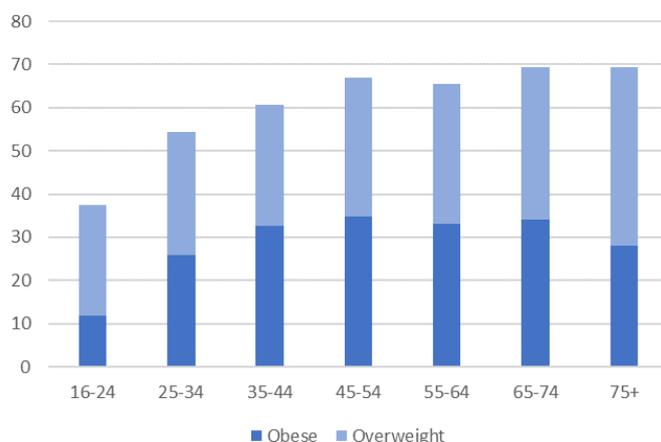
With the publication of the NCMD thematic report into child mortality and social deprivation in 2021, the South Yorkshire CDOP wanted to carry out a thematic review with a link to deprivation. The prevalence of overweight and obesity in child and adult populations is seen to be higher in the more deprived geographies of the UK, and this association has also been shown for maternal obesity (Multiple deprivation and other risk factors for maternal obesity in Portsmouth, UK).

Maternal obesity is an important public health issue with respect to foetal and pregnancy complications, maternal health and offspring health. A mother with higher pre-pregnancy BMI adversely influences the cardiovascular health of its offspring through the lifecourse (2).

| Early Pregnancy | Late Pregnancy/ Postpartum | Maternal Health | Offspring Health |
|---|---|--|---|
| <ul style="list-style-type: none"> • Foetal malformations • Miscarriage | <ul style="list-style-type: none"> • Pre-eclampsia/ gestational hypertension • Gestational diabetes • Foetal macrosomia/ growth restriction • Caesarean section • Postpartum haemorrhage • Venous thromboembolism | <ul style="list-style-type: none"> • Weight gain/obesity • Diabetes - Type 2 • Cardiovascular disease | <ul style="list-style-type: none"> • Perinatal death • Perinatal morbidity/ admission to NICU • Diabetes - Type 2 • Weight gain/obesity • Cardiovascular disease |

Source: bump2babyandme.org

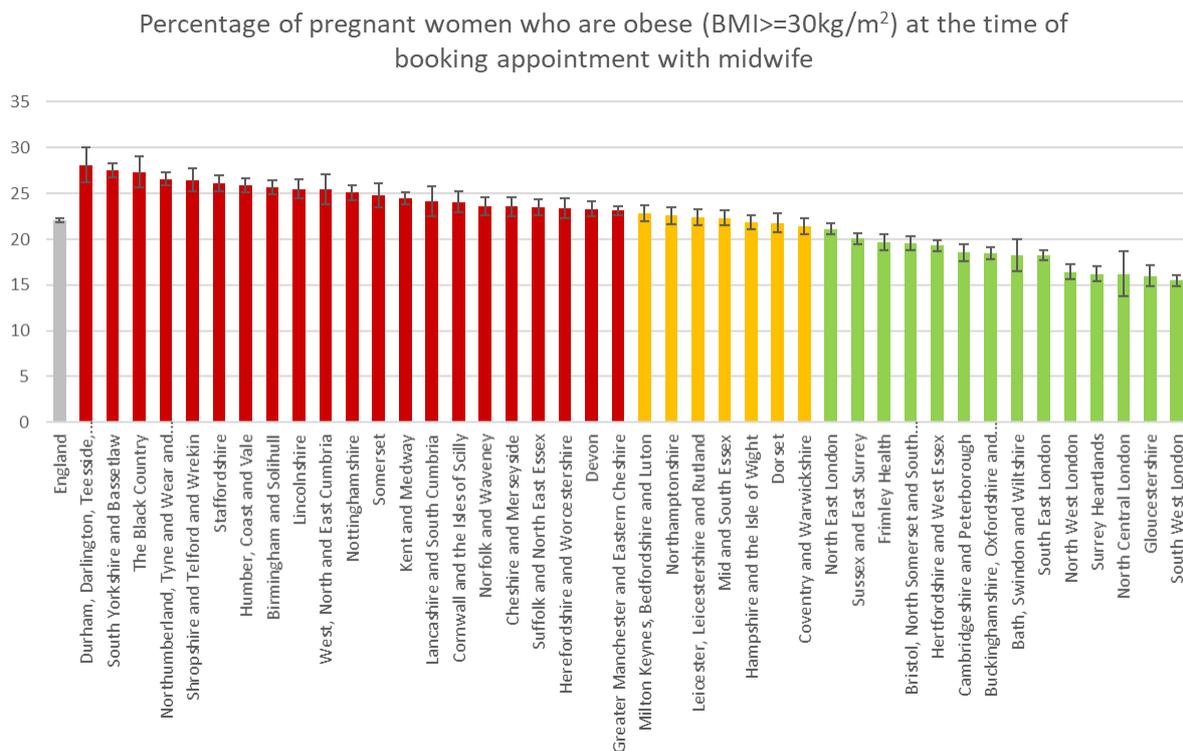
In the latest Health Survey for England (2019) the prevalence of adult obesity was 29% for women of all ages. Within women of typical child-bearing ages, obesity was most prevalent in the 35-44 age group.



Overweight and obesity prevalence in women by age
Source: Health Survey for England, NHS Digital

Recent (2019) analysis of antenatal booking data by Public Health England (3) found that 18.3% of women in England were obese at their first booking appointment, and that this proportion rises as the deprivation level increases.

South Yorkshire and Bassetlaw local maternity system (LMS) showed the second highest proportion of women who are obese at time of booking (2018/19 Maternity Services Dataset), at 27.5%. With this in mind, when looking at infant death cases, we would expect to find about 1 in 4 (or possibly higher) would involve maternal obesity in South Yorkshire, irrespective of whether that was material to the death or not.



Obesity in early pregnancy - %age by LMS. Source: <https://fingertips.phe.org.uk/>

The South Yorkshire review

Early discussions about the challenges of capacity to carry out the review led to a pragmatic approach, with the understanding that a full thematic review was not an essential requirement on an annual basis and that work to lay the foundations for a fuller review in the future was also a legitimate undertaking for the group.

In order to obtain sufficient data, three years of cases were sought – 2018-19 to 2020-21 – but with an acknowledgment that with scarce capacity across the area this might prove challenging. In the event, different periods of search were carried out and only three areas were able to find the capacity to collect and return any data.

A data collection pro forma was circulated around South Yorkshire CDOPs seeking numbers of cases of neonatal and infant deaths where the mother had a BMI > 30 at pregnancy booking appointment. The form sought breakdown by age and sex; numbers of preterm births; numbers where a complication that could be associated with maternal obesity was present; numbers delivered by Caesarean section; numbers delivered in a tertiary unit; number of cases where maternal obesity had been identified as a factor contributing to vulnerability; number where maternal obesity was identified as a modifiable factor in the death; themes, learning, actions resulting from case investigations.

Results

Owing to the partial data collection, there is little value in aggregation and analysis of the three areas that returned information. Instead a brief summary of each area's findings is presented below:

Barnsley

Barnsley searched reviews between April 2018 and March 2021, and found 16 cases of child deaths relating to a child under 1 year. Of these 4 related to a mother with a BMI over 30, but in 10 cases the BMI was not known.

As the current process does not ask for information on BMIs this data was not available to reviewers and consequently no reviews identified maternal obesity either as a factor contributing to vulnerability or a modifiable factor.

Related observations:

Of the 4 cases where BMI known to be above 30, 2 cases were premature and 2 were term with obstetric complications prior to birth that can clearly be associated with maternal obesity – gestational diabetes and preeclampsia.

Doncaster

Doncaster searched reviews between April 2018 and March 2021, and found 9 cases of child deaths relating to a child under 1 year, where the mother had a BMI of over 30. Of these: 8 were preterm; 7 had complications that can be associated with maternal obesity; 2 were delivered by Caesarean section; 3 were delivered in a tertiary unit; 0 had maternal obesity identified as a factor contributing to vulnerability; but 1 case did identify maternal obesity as a modifiable factor.

Related observations:

None of the reported learning outcomes explicitly relate to maternal obesity, but there were examples where the guidelines were not fully followed.

In one case the mother was a late pregnancy booking. It is not recorded in the review what caused the late booking, but obesity is known to be associated with later access to maternity care (4).

Rotherham

Rotherham searched reviews between January 2019 and December 2021. 6 reviews of child deaths under 1 year of age were found, of which 1 related to a mother with a BMI over 30. Of the other 5 mothers, 1 was a healthy weight, 3 were overweight and 1 was clinically underweight.

For the one maternal obesity case none of the risk factors considered by the review applied, and there was no finding of modifiability or vulnerability relating to maternal obesity.

Related observations:

Maternal BMI was documented at antenatal booking in all the records audited for this review. Also, a clear pathway for raised BMI was documented where applicable, and the correct pathway was followed. However, the raised BMI was not referred to during the child death review at CDOP.

Summary of review and findings

Overall, due to incompleteness and the heterogeneity of the data we were able to collect for this thematic review means that no obvious direct conclusions can be drawn. However, it is clear that the recording of maternal BMI itself is an issue. In fact, during the course of this review the NCMD added maternal BMI into the reporting form ("Form B"), meaning that if this

review were to be repeated a year or two hence, it would almost certainly be easier to conduct and would be more complete.

In the event that South Yorkshire CDOP does seek to repeat this exercise, a more definitive inclusion list of complications and factors would be helpful, as would the addition of the timeliness of pregnancy booking and access to maternity care.

BMI

A number of cases included were unable to report the BMI, suggesting the need to improve systems for recording/retrieving such information. The Maternity Services Dataset used to create the LMS comparative chart above is reported as having missing data in 24% of records, preventing the calculation of BMI.

However, BMI on its own might be problematic as a sufficiently sensitive or specific proxy for obesity (5), and the adoption of a particular threshold to create a dichotomous obesity definition ($>30\text{kg/m}^2$) is likely to result in some risks below this threshold being missed, and some unnecessary intervention above the threshold. Indeed NICE guidance for management of diabetes in pregnancy (NG3) favours a lower threshold for weight management advice ($>27\text{kg/m}^2$). Other NICE guidance (PH46) also recognises that lower BMI cut-offs might be appropriate for adults from black, Asian and minority ethnic groups (albeit not applying to pregnancy) where risks are likely to be higher.

Whilst the BMI threshold was used for convenience in carrying out this thematic review, its use in such a binary way in assessing risks in pregnancy is likely to be too crude (and might miss women who had had previous bariatric surgery for example). BMI should be more properly seen as one piece of information to inform a risk assessment. The WHO provides a more nuanced and purposive definition of obesity as “abnormal or excessive fat accumulation that presents a risk to health”. The use of a binary threshold that is strongly associated with weight can also present problems for sensitive communication that avoids stigma.

Modifiability

It is not possible to draw any conclusions about modifiability for this small number of cases. However, given that obesity is very prevalent, is preventable in most cases, and has significant risks for birth outcomes, it might be expected that CDOP reviews would identify maternal obesity as a factor contributing to vulnerability and as a modifiable factor in a death reasonably frequently. Given efforts in South Yorkshire this year to clarify the definition of modifiability, this might also be something that would be worth coming back to in a future review.

A key consideration in this respect would be what should be modified and how. An issue that is becoming increasingly apparent through the research is that an emphasis on individual responsibility for healthy weight is not well aligned with the causes of obesity and leads to stigma and is very probably counterproductive. Our discussion about modifiable factors this year with the National Child Mortality Database did provide some helpful clarification, in that whilst CDOP investigates the circumstances surrounding the individual, such circumstances could be taken in a much broader sense. In this instance a consideration of social and commercial determinants would be highly relevant.

From the incomplete and anecdotal data set out here, it might not be too speculative to consider whether maternal obesity is a risk that is somewhat “hiding in plain sight”, given its increasing prevalence and the gradual shift in attitudes as overweight becomes normal.

Weight management in pregnancy

Given the risks associated with maternal obesity, and also because pregnancy is seen as an important public health opportunity where parents may be more receptive to nutrition advice and more motivated to alter health behaviours, there are published NICE guidelines for weight management before, during and after pregnancy (PH27). The GLOWING pilot study has attempted to demonstrate effective ways to improve the skills and confidence of midwives as the vehicle for implementing these guidelines.

However, the guidance is now quite old (2010) and is subject to review. It is due to be superseded by two new pieces of guidance in the second half of 2023 – one relating weight management and the other relating to maternal and child nutrition. It remains to be seen to what extent the new guidance moves away from the primacy of individual responsibility. The current 2010 guidance, whilst not referring directly to the risks of weight stigma, already acknowledges that advising around weight and nutrition is a topic that requires very sensitive communication skills.

This concern is picked up to some extent by the GLOWING pilot study, including through reference to the WHO's 2016 document 'Good Maternal Nutrition. The best start in life', which observes that "practitioners may need support to ensure that they understand the women's circumstances without stigmatizing when discussing diet and physical activity".

A very recent study of risk communication in pregnancy has shown the potential for harm to women's mental health that can arise from well-intentioned but poorly delivered advice (6). This highlights the need for high quality communication with respect to weight and other public health risks (including alcohol and tobacco) that avoids stigma and respects and trusts the autonomy of pregnant women.

Ockenden Report

Surprisingly, the Ockenden Report contains only a single mention of maternal obesity (specifically in relation to a maternal death), perhaps itself being evidence of the extent to which overweight is viewed as normal. Nevertheless, there are numerous references in the report to vulnerabilities, inequalities, co-morbidities and specific conditions that are strongly related to obesity, including diabetes and hypertension. A number of the related recommendations in the report are very relevant to the issue of maternal obesity. They include:

- the importance of both antenatal and preconception care for women with diabetes, emphasising better access and integration between diabetes care, general practice and maternity services;
- having a consistent and systematic approach to risk assessment at booking and throughout pregnancy;
- the importance of the role of consultant midwives and adherence to the national standards for ratios (one whole time equivalent (WTE) consultant midwife in every midwife-led unit and 1 WTE for every for every 900 birthing women within an obstetric-led unit – see *Safer Childbirth, RCOG, 2007*)

Recommendations

Whilst the review was of a very limited nature, a number of considerations for future actions within CDOP and the wider practice community are set out as recommendations below.

Recommendations for improving/completing the thematic review

1. Repeat the review in greater depth, aided by the recent changes to the NCMD

- reporting form, which now includes BMI, and upcoming changes to NICE guidance.
2. Consider widening the scope beyond the >30kg/m² threshold. Other relevant risk factors would include previous pregnancy outcomes, diabetes, gestational diabetes, ethnicity, age, deprivation score of address, smoking status, other vulnerabilities.
 3. Agree a more specific list of complications associated with maternal obesity.
 4. Include timeliness of booking appointment in data collection.

Recommendations for the system

1. Acknowledge the high prevalence in South Yorkshire of obesity at pregnancy booking, and avoid normalisation of a higher level of risk in the population.
2. Acknowledge the primary role of social and commercial determinants vis-à-vis personal responsibility
3. At the individual level, emphasise the greater importance of a healthy approach to pregnancy planning – a greater role for preconception care, and continuity of care and consistency of advice and non-stigmatising language in providing that advice.
4. Ensure midwives feel confident in having the requisite communication and advisory skills both for antenatal care of pregnant women with obesity.
5. Ensure obesity is seen alongside other vulnerabilities and that these are sensitively identified and offered proportionate support.
6. Benchmark current workforce composition against RCOG recommendations for dealing with vulnerability and complexity, e.g. requisite number of WTE Consultant Midwives.

Recommendation for SYCDOP

1. Seek assurance from each area by asking for self-assessment against the above recommendations.

Local Area Updates

Barnsley

| What we do |
|--|
| <p>The Child Death Overview Panel (CDOP) is intended to help Barnsley's Local Safeguarding Partnership to develop a better understanding of how and why children die, and to inform further prevention work. It is the role of the CDOP to look at all deaths of children and young people in Barnsley, whatever the reason, to see if there is anything that we can learn from them and anything that might help us avoid such deaths happening in the future.</p> |
| What we did |
| <p>Between 1st April 2021 and 31st March 2022, five Barnsley CDOP meetings were held, and 13 cases were reviewed and completed with the aim of understanding how and why children die, and to inform future prevention work. Of the 13 cases reviewed, seven cases were identified as having at least one modifiable factor.</p> <p>The age at time of death ranged from <22 weeks to 15 years. Most deaths reviewed were aged under one year (n = 9); four of these occurred at or under the 22 weeks gestation period, four within the first four weeks of life (neonatal period), and one at 4 months of age. All except one of the cases were amongst children whose ethnicity was recorded as White British; the remaining case was recorded as other. The majority of deaths occurred in hospital (n=8), the remaining five deaths occurred at home. Of those that occurred in hospital, five occurred on the labour ward, two in the Neonatal Intensive Care Unit and one in the Paediatric Intensive Care Unit.</p> |
| What's worked well? |
| <ul style="list-style-type: none">• Additional CDOP meetings were set up to ensure the backlog of cases (in January) was worked through and cases were reviewed in a timely manner. As well as clearing the backlog, the additional meetings allowed for more in-depth discussions around complex cases.• A 'Panel debrief' has been added to the Barnsley CDOP meeting agenda to allow members to reflect and provide support for each other after the discussion of difficult cases. Members have commented that they value this.• A 'Learning and Development' item has been added to the Barnsley CDOP agenda to enable members to reflect on the effectiveness of the panel and identify any potential improvements.• A representative from Healthwatch Barnsley is now a core member of the panel and provides a valuable contribution to the case discussions. |

- The SUDI task and finish group have continued to collaborate, and there is now:
 - A tiered training programme on safe sleep in infancy (levels one to three).
 - Prevention of SUDI Multi Agency guidelines are now published on the Barnsley LSCP website, with a safe sleep risk and action plan incorporated.
 - A cohort of trained designated 'safe sleep in infancy champions' from a range of agencies, including South Yorkshire Fire & Rescue, Bernslai Homes, Fostering and Adoption, Children and Families Social Care.
 - Proactive publicity including interviews and radio advert broadcast on Hallam FM.

In addition, following the Barnsley CDOP meetings over 2021/22 the below achievements have been noted in relation to learning opportunities raised:

- Training has been undertaken with the administration team at Barnsley Hospital to ensure they follow the correct notification process following a child death.
- Barnsley Hospital Maternity Service are looking at best practice from Birmingham to be able to implement learning, after it was identified that there was a need for improvements in their triage system.
- A second cold light has been purchased and is in situ on the Neonatal Unit at Barnsley Hospital.
- Video laryngoscopes have been purchased and are now in situ on the Neonatal Unit at Barnsley Hospital and associated training is available.
- The Barnsley Suicide Contagion Plan has been reviewed and updated with new services and resources.
- Training session for schools to support with eating disorders and self-harm are currently being delivered.

What needs to happen?

- Ensure more robust information gathering is undertaken by Midwifery about the pregnancy, following a neonatal death. This will provide CDOP with the 'bigger picture' and allow the identification of wider modifiable factors.
- Potential to categorise and split future meetings to ensure richness of data and more in-depth discussion.

What are we worried about?

- The high number of early gestation deaths in this period.

Doncaster

Overview

This narrative provides an overview of activity relating to the Child Death within Doncaster, setting out any key risks and issues, good practice and developments during the time period 1st April 2021 - 31st March 2022.

Doncaster CDOP have met 7 times during the period 1st April 2021- 31st March 2022 and reviewed 37 cases.

Child Deaths 1st April 2021 - 31st March 2022.

| Expected Deaths | Q 1 | Q 2 | Q 3 | Q4 | Unexpected Deaths | Q1 | Q2 | Q3 | Q4 |
|-----------------|-----|-----|-----|----|-------------------|----|----|----|----|
| Doncaster | 3 | 0 | 3 | 6 | Doncaster | 3 | 2 | 4 | 1 |
| Out of Area | 0 | 0 | 1 | 0 | Out of Area | 0 | 1 | 0 | 0 |

Numbers of Child Deaths on a yearly basis from 1st January 2010 to 31st December 2021.

| 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|------|------|------|------|------|------|------|------|------|------|------|------|
| 24 | 32 | 22 | 25 | 27 | 31 | 15 | 23 | 18 | 18 | 24 | 23 |

During the calendar year of 2021/2022, the number of deaths within Doncaster has remained around the same number in comparison to previous years.

Child Death Review Team Performance relating to Unexpected Child Deaths and Service delivery

| Unexpected Deaths | Response in 24 hours Yes or No | If timescale for response not met- explanation | Home Visit Yes/ No | If no home visit- provide explanation |
|-------------------|--------------------------------|--|--------------------|--|
| 4 | Yes | N/A | Yes | N/A |
| 2 | Yes | N/A | Yes | N/A |
| 3 | Yes | N/A | Yes x 1 | 2 x carried out by police only |
| 1 | Yes | N/A | No | Carried out by police as criminal investigation. Incident happened in Public Place |

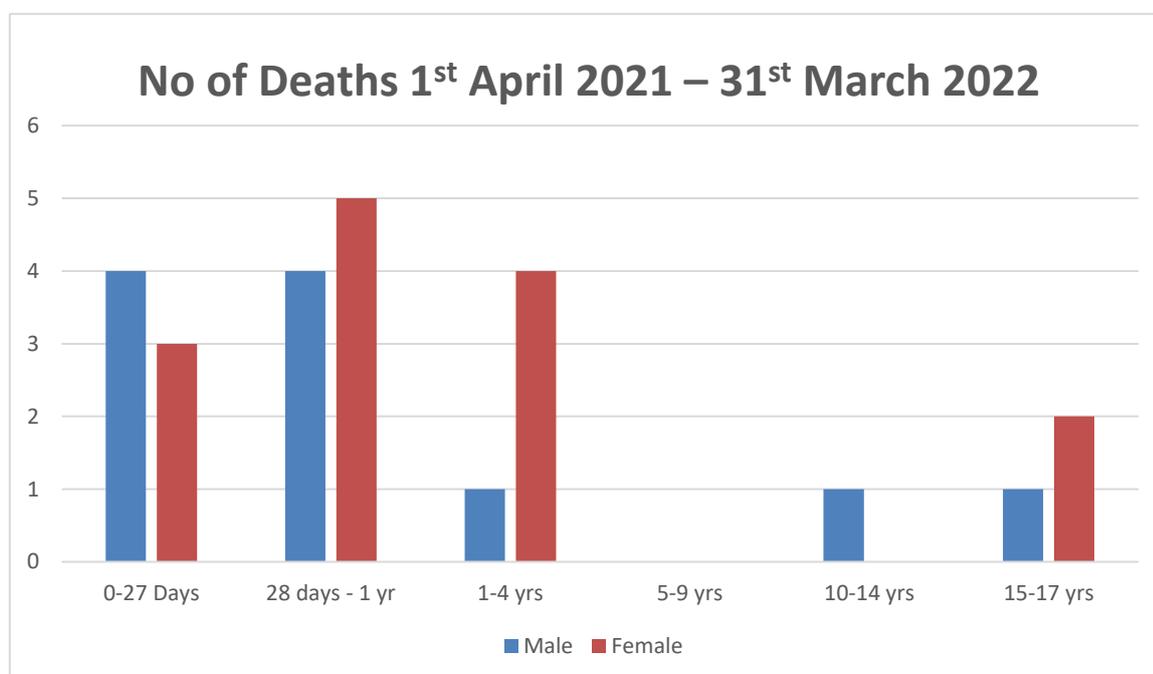
- During this review period, the Child Death Review team maintained 100% representation to the Doncaster and Nottinghamshire Child Death Overview Panels.
- The Designated Paediatricians for child deaths are supported by an identified Lead Nurse and Secretary for the Child Death service. Additionally, the number of professionals contributing to the on call rota increased during the review period and there is a 1:8 Rapid Response rota in place. The service is provided from 9am- 5pm Monday to Sunday and all staff contributing to the rota has attended appropriate training. During the review period there has been 100% rota cover.

- The Lead Nurse for Child Death Review has produced quarterly reports which have been shared with both NHS Doncaster Clinical Commissioning group, NHS Bassetlaw Clinical Commissioning Group.

Themes

There were 2 suicides within the review period which had similarities and raised concern amongst professionals. The children were both from the polish community and there were similarities in rope and position used. It was also identified that there was an adult, aged 19, who had also taken their own life in similar circumstances. The Suicide Contagion was instigated and learning has been identified and shared with relevant agencies.

Three cases of unsafe sleep have been identified. Work continues to raise awareness of safe sleep.



LeDeR referrals

Following the publication of the Confidential Inquiry into the premature deaths of people with learning disabilities (CIPOLD) DoH 2013, the Learning Disabilities Mortality Review (LeDeR) programme was established in order to contribute to improvements in the quality of health and social care for people with learning disabilities in England. As a result, local areas complete local reviews of the deaths of people with learning disabilities and systems have been implemented which combine the Child Death review and the LeDeR review within both Doncaster and Bassetlaw for children. There was 1 referral to LeDeR during the review period.

Achievements

During the review period two Paediatricians took over the role as Designated Paediatricians for Child Death Review as a job share. At the time of their appointment there was 54 cases to be reviewed. This has now been reduced to 29. During the period there has been 22 deaths; 11 males and 11 females. Of these deaths 10 were unexplained and 12 were explained. During the review period a further two deaths were reported to the Child Death Review Team and the Child Death Review Process was initiated. However, following investigations it was found that the children were stillborn and therefore were removed from the case list as stillborn deaths do not meet the criteria for a Child Death Review.

A key worker has been recruited and joined the team in September 2021 and the Secretary has had their hours increased to full time. Feedback has been positive by parents/carers and professionals. The Key Worker advocates for families in professional meetings as well as sign posting families to appropriate bereavement services.

The CDR Team have worked hard to build professional relationships with Coroners office, social care, bereavement midwives.

Designated Paediatricians and Lead Nurse have met with the Medical Examiner's Office to make sure to ensure the Trust work within the recommendations in "National Medical Examiners Good Practice Series: Medical examiners and child deaths" (The Royal College of Pathologists, 2022), on child death review process.

Link Nurses have been identified in both Doncaster and Bassetlaw Emergency Departments. This is to enable colleagues to hear of a resolution to the children they have cared for in ED.

Training

It has been identified, as a need for training, professionals within ED when caring for children aged 16-18yrs. A case highlighted that not all professionals are aware of the child death process and procedures needed to be followed. Training sessions will be booked in and the Lead Nurse will attend breakfast training sessions to share learning.

Learning from child death sessions have commenced via Teams.

Dissemination of Local and National Learning from the Child Death Review Panel (CDOP) process.

Where learning is specific to an identified single agency area- this is managed on an individual basis, including the development of action plans with relevant practice area or service managers.

Where learning relates to external agencies, the Lead Nurse liaises with relevant managers and as appropriate, learning is taken forward by the Local Safeguarding Children Board.

The Trust is represented at the Suicide Prevention Group within Doncaster.

Issues/risks

There's work to be done around raising awareness with professionals that 16-17yrs, and up until their 18th birthday, should be treated as a child and in the sad event of their death professionals need to ensure the child death review process is initiated and the death is not treated as an adult.

Local and National Child Death developments and initiatives

Work continues alongside other CDOP's in relation to safer sleep and also suicide.

Rotherham

Overview

The Rotherham CDOP met 5 times during the period 1st April 2021- 31st March 2022 and reviewed 12 cases. Core membership of the CDOP panel includes representation from Rotherham Safeguarding Children Partnership. However, due to long-term absence within Rotherham Safeguarding Children Partnership, there have been periods of time when representation at CDOP meetings and CDOP administrative support has been limited. The panel has also seen a change in lead professionals forming membership. The Consultant in Public Health, who also has responsibility for the children's public health portfolio (Best Start and Beyond) chairs CDOP.

Rotherham recorded 23 child death during the period 2021/22; this is double the child deaths reported the last two years and highest number of deaths since 2012/13, when 28 child deaths were recorded. It is hard to provide a rationale for the increase in the number of deaths, some suggestions being the lifting of Covid19 restrictions. It is hoped, going forward, NCMD may be able to offer some narrative.

What has worked well in Rotherham?

- All cases requiring a Joint Agency Response have had a case discussion meeting held within three working days of the child death. These meetings have had excellent multi-agency attendance and contribution.
- A Pathologist has been in attendance at all Child Death Review meetings (CDRM) when a post-mortem has been performed. This has received positive feedback from pathology services and their contribution at the CDRM has been of value. The Child Death Review meetings for all child deaths have worked effectively in terms of attendance and participation.
- The work of the keyworker has proved insightful into the worries, fears and issues parents hold onto following the unexpected death of their infant/child. The service continues to be available Monday – Friday, 9am – 5pm. The keyworker is the “voice of the parent” at all professional meetings.
- Direct contact and liaison with the NCMD (National Mortality Data Base Programme) has proved valuable in supporting the child death review service to remain compliant with CDR guidance e.g. grading system used to identify modifiable factors; reporting death occurring overseas.
- As a result of learning from a specific child death, there has been increased awareness of the CDR process in Urgent and Emergency Care Centre in TRFT and maternity services, resulting in timely initiation of relevant processes.
- Following attendance at a NCMD workshop on charging policy for pregnant overseas women, TRFT reviewed their process and in conjunction with finance team and maternity services, developed a SOP to improve the sharing of information between professionals, ensuring identified pregnant women receive appropriate, timely support and have their physical and emotional health needs met.
- An effective pathway has been developed for sharing learning from CDOP within TRFT and wider partnership.

- Rotherham Public Health team has hosted two six month part-time placements for GP Registrars since August 2021, and has involved them in CDOP meetings as an aspect of their training. A GP Registrar has carried out a review of evidence relating to child weight estimation in ED for CDOP, arising from case discussion in February. This has led to a proposal to develop a more regular role for GP trainees within the presentation of cases, carrying out rapid evidence reviews. It is hoped to pilot and develop this later in 2022.
- Following a case where a child was found to be severely deficient in Vitamin D postmortem (not contributory), the current guidelines for Vitamin D supplementation in babies and young children and how supplements can be obtained was confirmed and circulate. The details are well covered on the NHS website: <https://www.nhs.uk/conditions/vitamins-and-minerals/vitamin-d/>
- A case raised the issue of accessibility of the NHS England booklet “When a Child dies”, which is currently only available in English, albeit with a footnote indicating it can be made available in alternative formats, including other languages. The CDOP Chair wrote to the Department of Health to seek clarity on this, and received a reply that the production of alternative formats had been delayed during the pandemic, but with a hope to progress and scope the options for providing alternative formats in the following year. The reply also indicated that the leaflet is available in an editable format so that areas can tailor the leaflet to their local needs.

What could we do differently or better in Rotherham?

- Rotherham CDOP and TRFT child death review service were unable to improve communication with coroner’s services during 2021/22. This has halted the sharing of valuable information between the agencies. Alternative contact details have since been identified and meeting taken place May 22.
- The quality of CDR documentation and reports, which feed into the CDR process need to be improved

What are our plans for 2022/23?

- Facilitate an on-line Learning Event for multi-agency front line professionals working with children and families in the Autumn of 2022. It is hoped that if successful this will become an annual event. It will feature a mixture of local and national topics and content.
- Improve communication with, and understanding of coroner’s service. Invite coroner’s officers to JAR and CDRM meetings and set out information sharing agreement in relation to meeting minutes, post –mortem reports, outcome of inquests etc. Identify learning opportunities and support practitioners where appropriate, to improve knowledge and understanding of coroners service.

- To continue to contribute to the co-ordinated Multi-agency South Yorkshire and Bassetlaw Joint Safe Sleep Guidance and promote training to help develop a shared understanding about a safer sleep environment, enabling practitioners to reflect on their individual role in promoting safer sleep messages and recognising risk. Re-visit use of Safe Sleep Assessment Tool.
- Develop standards for keyworker service and undertake formal parental/carer feedback on the keyworker service
- To participate in further thematic reviews with our Regional partners.
- Lead Nurse Child Death Review will continue to contribute to the TRFT self-assessment in relation to Bereavement Care Standards and identify actions which may need to be addressed before they can achieve National Care Pathways 2020, Bereavement Care Standards.
- Manage the backlog of cases that have developed as a result of increased child deaths and changes to the CDOP administrative arrangements.
- Clarify role of medical examiner and impact of *“National Medical Examiners Good Practice Series: Medical examiners and child deaths”* (The Royal College of Pathologists, 2022), on child death review process.

Sheffield

What We Achieved in 2021/22

This year Sheffield CDOP met on 5 occasions, reviewing 29 deaths. A further panel meeting was planned, but was cancelled due to a lack of cases available for discussion. With operational demands of COVID and restrictions in place we have remained working virtually with good attendance achieved by all agencies.

There were 49 deaths recorded during this period which is significantly higher than the previous year (24) but broadly in keeping with the average of 44 in the years 2008-2019.

Once again, most of the deaths occurred in those under 1 year (43% 0-27 days, 27% 28-364 days) which is slightly higher than national figures.

Chromosomal, genetic and congenital abnormalities and Perinatal/neonatal events remain the most common categories of death in those reviewed 2021/22 (63%).

79% of deaths reviewed during 2021/22 were within 12 months of death; 48% between 6-12 months and 31% in less than 6 months, this is an improvement on last year (60%). It should also be noted that of those reviewed over 12 months many had been delayed due to external issues such as inquests or other reviews being undertaken. Despite the CDOP Chair (Director of Public Health) being unavailable for the review period and Vice Chair retiring, we successfully managed to continue with meetings at the required frequency with the Safeguarding Partnership funding an Independent Chair on an interim basis and the Designated Doctor Child Deaths stepping up to Chair on occasion.

The median number of days between death and CDOP meeting is 335 nationally – the figure for Sheffield is 226.

The reviews consider modifiable factors, which are defined as actions that could be taken through national or local interventions, which could reduce the risk of future child deaths. Modifiable factors were assessed to be present in 17% of cases which is below the average for England (37%) and lower than previous years. This may be explained due to a delay with Inquests and other review processes, meaning fewer reviews of more complex cases (where modifiable factors are more prevalent) took place during this period.

What impact have these achievements had on the outcomes for children and young people in Sheffield?

We continue to feed into The National Child Mortality Database which is used to systematically capture information following a child death; this has enabled local learning but is also increasingly identifying learning at a national level and informing changes in policy and practice. This has been particularly important during the pandemic with real-time surveillance being introduced to highlight any issues.

[CDOP has supported actions taken in 2020/21 to help reduce risk factors and improve how services respond following a child death.](#)

There is now a good level of data completeness at notification and reporting stages, though we recognise recording of Ethnicity could be improved. It is acknowledged that some

providers still struggle with eCDOP and ongoing support and training is required.

We will continue to explore how those families where there are complex care needs can be better supported through co-ordination of care needs with the role of a lead clinician and work with Trusts to develop their understanding of the role of a Key Worker after a child dies.

Alongside other areas in South Yorkshire we are looking to improve the experience and support for bereaved families at the time of death.

Audit of implementation of Child Death Processes within Sheffield Children's Hospital was completed and will feedback during 22-23.

Agreement has been made between the Coroner/Police/Yorkshire Ambulance and hospital trusts for life extinct 16-17 year olds to be taken to the Children's Hospital mortuary rather than medico-legal centre.

Voice of the Child, Young Person and Family

How have you listened to children, young people and families?

Working in collaboration with the Designated Doctor Child Deaths there is continued action being taken with Trusts to develop their understanding of the role of a Key Worker after a child dies.

What did children, young people and families say about your agency / service?

Parent feedback to CDOP has not been possible since August 2021. However, in all cases family are supported by Hospital trust and going forward there will be liaison with the key worker role.

What We Will Do Next in 2022/23

What do you intend to achieve in 2022/23 that contributes to better outcomes for children and families within Sheffield?

For the upcoming year 2022/23 the hosting arrangements for SYCDOP will be facilitated by Barnsley CDOP in line with the agreed rotation of a local authority area hosting the quarterly meetings and facilitating the shared learning reviews throughout an annual reporting year.

Sheffield will continue with their local Child Death Overview Panel (CDOP) processes and the supporting pathways to review deaths of children who have died that are normally resident in their own areas. These reviews will contribute collectively in identifying the key themes for shared learning reviews across South Yorkshire.

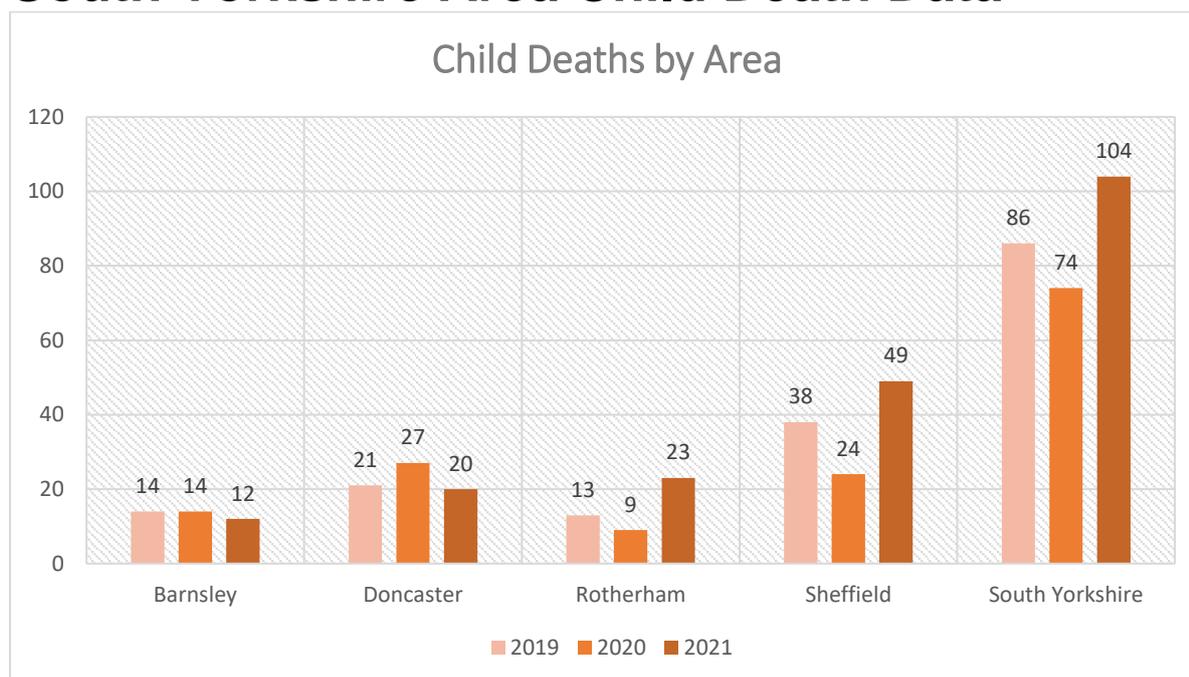
A key role in Child Death Review process is the CDOP Manager and this post has been vacant since August 2021. This has had an impact on information gathering for Panel, contributed to delays progressing actions and our ability to participate in thematic reviews in the region, and hold an annual development day. Some actions we hoped to achieve last year, in particular a focus on the impact of social deprivation, will be pursued during 2022/23.

A key focus for Sheffield throughout 2022/23 will be:

- To progress the implementation of Multi-agency Safer Sleep Guidance / practice.

- Continued roll-out of ICON across out local area.
- To participate in thematic reviews with our regional partners
- Completion of a local Contagion Plan
- CDOP will consider how we support and influence future strategies to reduce the harm of social deprivation

South Yorkshire Area Child Death Data



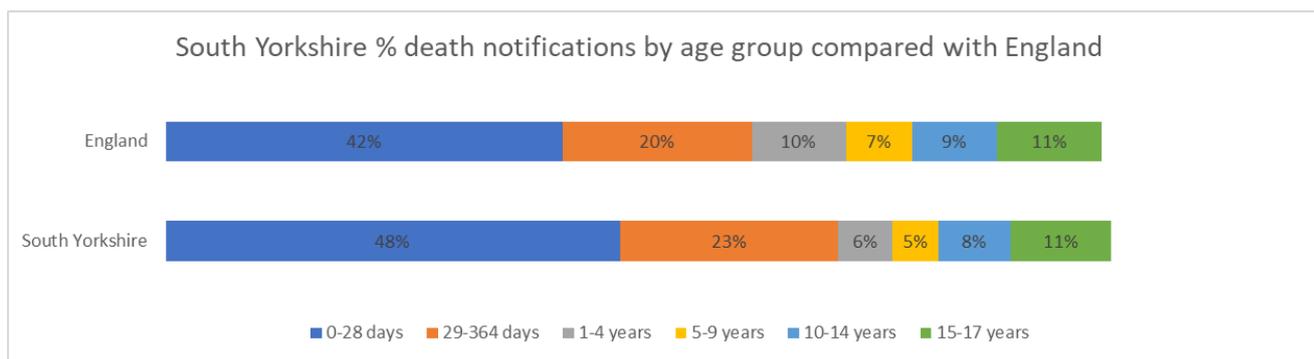
Child deaths by age range for each area:

| Age group | Barnsley | Doncaster | Rotherham | Sheffield | South Yorkshire |
|--------------|-----------|-----------|-----------|-----------|-----------------|
| 0-28 days | 14 | 8 | 7 | 14 | 50 |
| 29-364 days | 1 | 1 | 7 | 3 | 24 |
| 1-4 years | 0 | 0 | 2 | 2 | 6 |
| 5-9 years | 1 | 1 | 0 | 2 | 5 |
| 10-14 years | 0 | 0 | 1 | 0 | 8 |
| 15-17 years | 2 | 2 | 3 | 2 | 11 |
| Total | 12 | 12 | 20 | 23 | 104 |

Deaths in the first 28 days have been increasing both in number and as a proportion of all child deaths for South Yorkshire. In 2019-20 the 27 deaths aged 0-28 days represented 31% of child deaths. In 2021-22 50 deaths in this age group equate to 48% of all deaths in the year.

| Age group | 2019-20 | 2020-21 | 2021-22 |
|--------------|-----------|-----------|------------|
| 0-28 days | 27 | 33 | 50 |
| 29-364 days | 22 | 15 | 24 |
| 1-4 years | 14 | 4 | 6 |
| 5-9 years | 8 | 7 | 5 |
| 10-14 years | 8 | 6 | 8 |
| 15-17 years | 7 | 9 | 11 |
| Total | 86 | 74 | 104 |

This proportion is higher than for all England in 2021-22:



Deaths by month of notification – South Yorkshire

| Month | 2019-20 | 2020-21 | 2021-22 |
|-------|---------|---------|---------|
| Apr | 5 | 3 | 7 |
| May | 3 | 5 | 3 |
| Jun | 4 | 9 | 11 |
| Jul | 10 | 9 | 6 |
| Aug | 5 | 3 | 11 |
| Sep | 10 | 9 | 9 |
| Oct | 9 | 4 | 10 |
| Nov | 9 | 6 | 8 |
| Dec | 8 | 6 | 8 |
| Jan | 7 | 5 | 12 |
| Feb | 12 | 7 | 8 |
| Mar | 4 | 8 | 11 |

There is some variation in months when deaths are notified, which clearly reflects a considerable amount of randomness, which is to be expected of rare events. Nevertheless, over the course of three years the number of deaths in May has been consistently low, and the total of 11 deaths in May is statistically significantly different (with 95% confidence) from the total for the highest month, which is September (28). This might be worthy of further investigation.

South Yorkshire Child Death Overview Panels Review Data

The 2018 'Child Death Review Statutory and Operational Guidance' for England stipulates that CDR partner footprints should cover a population such that at least 60 child deaths are typically reviewed each year. The South Yorkshire CDOP covers Sheffield, Barnsley, Doncaster and Rotherham with a combined population of more than 1.4mn. In 2021-22, a total of 89 child death reviews were conducted (an increase from 71 the previous year).

The 2018 guidance also sets out that CDR partner footprints "should be aligned to existing networks of NHS care and other child services, and should take account of agency and organisational boundaries". The SYCDOP Terms of Reference and Memorandum of Understanding established in 2019 provide for the four local South Yorkshire areas to continue with their own local Child Death Overview Panel (CDOP) case reviews.

The number of child death notifications received in 2021-22, completed child death reviews carried out during the year, and the number of cases ongoing at year end are broken down between the four CDOP areas below. There is a varying lag between notification and completion of a review, meaning that some cases completed in the year will relate to notifications from previous years.

| | Barnsley | Doncaster | Rotherham | Sheffield | South Yorkshire |
|-------------------|----------|-----------|-----------|-----------|-----------------|
| Notifications | 12 | 20 | 23 | 49 | 104 |
| Completed Reviews | 13 | 35 | 12 | 29 | 89 |
| Cases ongoing | 12 | 29 | 24 | 39 | 104 |

Completed reviews - primary category of death

| Primary category of death | 2020-21 | 2021-22 |
|---|---------|---------|
| Perinatal / neonatal event | 17 | 28 |
| Chromosomal, genetic or congenital anomaly | 22 | 25 |
| Sudden unexpected, unexplained | 6 | 7 |
| Acute medical or surgical condition | 3 | 7 |
| Malignancy | 2 | 6 |
| Suicide or self-inflicted harm | 2 | 5 |
| Chronic medical condition | 3 | 4 |
| Deliberately inflicted injury, abuse or neglect | 4 | 3 |
| Trauma and other external factors | 6 | 2 |
| Infection | 6 | 2 |

The trend towards an increasing proportion of notifications in the 0-28 days age group is likely to explain the increase in completed review with perinatal/neonatal event as the primary category of death. The breakdown for 2021-22 between local areas is shown below.

| Primary category of death | Barnsley | Doncaster | Rotherham | Sheffield |
|--|----------|-----------|-----------|-----------|
| Perinatal / neonatal event | 6 | 10 | 3 | 9 |
| Chromosomal, genetic or congenital anomaly | 1 | 10 | 5 | 9 |

| | | | | |
|---|---|---|---|---|
| Sudden unexpected, unexplained | 2 | 3 | 0 | 2 |
| Acute medical or surgical condition | 0 | 2 | 3 | 2 |
| Malignancy | 0 | 3 | 1 | 2 |
| Suicide or self-inflicted harm | 1 | 3 | 0 | 1 |
| Chronic medical condition | 0 | 1 | 0 | 3 |
| Deliberately inflicted injury, abuse or neglect | 1 | 1 | 0 | 1 |
| Trauma and other external factors | 1 | 1 | 0 | 0 |
| Infection | 1 | 1 | 0 | 0 |

Completed reviews - modifiable factors identified

| Column1 | Barnsley | Doncaster | Rotherham | Sheffield |
|---|------------|------------|------------|------------|
| Trauma and other external factors, including medical/surgical complications/error | 0 | 0 | 0 | 0 |
| Suicide or deliberate self-inflicted harm | 1 | 1 | 0 | 0 |
| Sudden unexpected, unexplained death | 2 | 3 | 0 | 2 |
| Perinatal/neonatal event | 3 | 2 | 1 | 1 |
| Malignancy | 0 | 0 | 0 | 0 |
| Infection | 0 | 0 | 0 | 0 |
| Deliberately inflicted injury, abuse or neglect | 1 | 1 | 0 | 1 |
| Chronic medical condition | 0 | 0 | 0 | 0 |
| Chromosomal, genetic and congenital anomalies | 0 | 1 | 1 | 0 |
| Acute medical or surgical condition | 0 | 1 | 0 | 1 |
| Proportion of reviews where modifiable factors identified | 54% | 26% | 17% | 17% |

Across South Yorkshire overall 23 out of 89 cases were identified as having modifiable factors – 26% of cases.

Review completion time

The guidance suggests that CDOPs should aim to review all children's deaths within six weeks of receiving the report from the CDRM or the result of the coroner's inquest, and that CDRMs should ideally take place within three months. This would suggest an ideal period from death to review completion of 132 days. However, in reality there are many potential causes of delay for some cases, and the median period for completing a review across England is actually 335 days. Median review periods for both Doncaster and Rotherham are considerably above this. At the local level, as these periods are calculated simply on the basis of cases completed, some caution is advised when only looking at a single year. For example, a decision to clear backlogs of outstanding cases during a year is likely to inflate the figure when compared with focusing on more straightforward recent cases.

| | % CDOP completed cases by time taken | | | Median number of days between death and CDOP meeting |
|-----------|--------------------------------------|-------------|------------|--|
| | <6 months | 6-12 months | >12 months | |
| Barnsley | 8% | 54% | 38% | 325 |
| Doncaster | 0% | 23% | 77% | 466 |
| Rotherham | 0% | 42% | 58% | 415 |
| Sheffield | 31% | 48% | 21% | 226 |

References

1. **Penny, Alison, et al.** *A Guide to Commissioning Bereavement Services in England*. 2017.
2. *The Impact of Maternal Obesity on Offspring Cardiovascular Health: A Systematic Literature Review*. **Kankowski, Lois, et al.** s.l. : Frontiers Media SA, 5 2022, Vol. 13.
3. **Public Health England.** *Health of women before and during pregnancy: health behaviours, risk factors and inequalities*. London : s.n., 2019.
4. *Maternal body mass index and access to antenatal care: A retrospective analysis of 619,502 births in England*. **Barber, Charlotte, Rankin, Judith and Heslehurst, Nicola.** 1, s.l. : BioMed Central Ltd, 2017, Vol. 17, pp. 1-10. 14712393.
5. *BMI-related errors in the measurement of obesity*. **Rothman, K. J.** s.l. : Int J Obes (Lond), 2008, Vol. 32 Suppl 3. 1476-5497.
6. *WRISK voices: A mixed-methods study of women's experiences of pregnancy-related public health advice and risk messages in the UK*. **Blaylock, Rebecca, et al.** s.l. : Churchill Livingstone, 2022, Vol. 113. 0266-6138.