



National Perinatal Mortality Review Tool

Learning from Standardised Reviews When Babies Die

National Perinatal Mortality Review Tool

Fourth Annual Report



September 2022



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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.

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Glossary

CDOP	Child Death Overview Panel (England)
Cool/cold cot	A cot which is kept cool/cold to preserve the baby's body after death
CTG	Cardiotocograph
NCMD	National Child Mortality Database
MBRRACE-UK	The collaboration established to deliver the MNI-CORP
MNI-CORP	Maternal, Newborn and Infant Clinical Outcome Review Programme
PMRT	Perinatal Mortality Review Tool
Sands	Stillbirth and neonatal death charity

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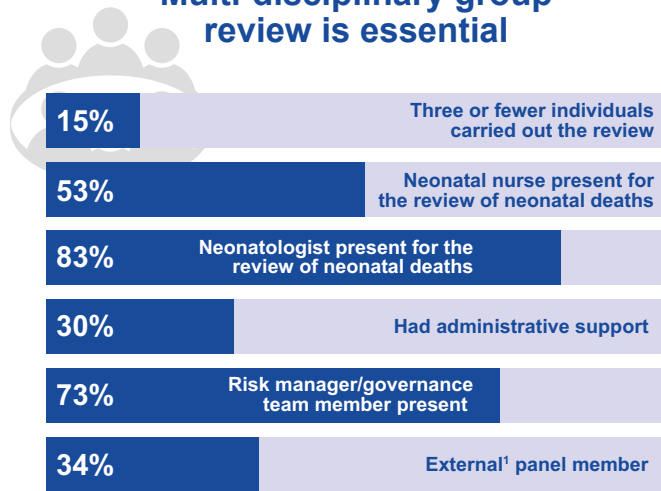
Learning from Standardised Reviews When Babies Die – 2021 Annual Report



Key Messages – September 2022

Since the launch of the national Perinatal Mortality Tool (PMRT) in early 2018 over 18,000 reviews have been started. This fourth annual report presents the findings for reviews completed from March 2021 to February 2022 coinciding with the second year of the SARS-CoV-2 global pandemic. Here are the key messages from the 4,199 reviews completed during this period.

Multi-disciplinary group review is essential



Issue with care and areas for improvement identified at review

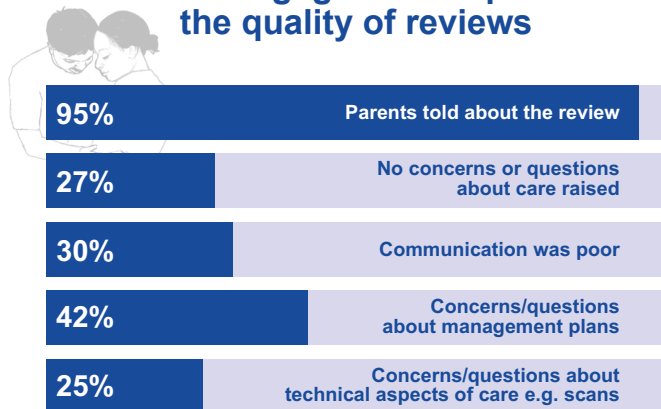


Over 19 out of 20 reviews identified areas for improvement



3 out of 20 issues identified may have made a difference to the outcome

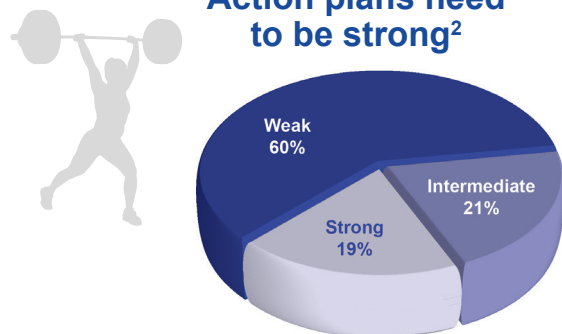
Parent engagement improves the quality of reviews



Comments, question and concerns raised by parents



Action plans need to be strong²



Examples of the strength² of actions planned

Weak	Intermediate	Strong
<p>“ Individual debrief and staff education. Present case at perinatal mortality and morbidity meeting. ”</p> <p>A reminder for individual action without any controls</p>	<p>“ SGA and Grow guidelines to be amalgamated to make the process clearer for serial scans. ”</p> <p>A new system in place but still requires individuals to act without any controls</p>	<p>“ Incubators were reviewed and a different type of incubator was needed to admit extreme preterm babies; commissioned and operational. ”</p> <p>A system level design to eliminate human error</p>

1. A relevant professional external to the trust/health board to provide a ‘fresh eyes’ independent perspective of care.
2. Strong actions are system changes which remove the reliance on individuals to choose the correct action. They use standardised and permanent physical or digital designs to eliminate human error and are sometimes referred to as ‘forcing actions’.

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Executive Summary

All the reviews reported in this, the fourth national PMRT annual report, were carried out during the SARS-CoV-2 global pandemic at the time of a multitude of challenges to the health service. Despite this there have been continued improvements in the use of the tool. Review of care when a baby dies should be a routine part of maternity and neonatal care in order to provide answers for bereaved parents and families about why their baby died. Importantly, wider learning also comes from both individual and summarised review findings which should be used to improve care and prevent future baby deaths.

Since the launch of the PMRT in 2018 an increasing proportion of eligible babies' deaths have been reviewed using the PMRT such that the care of the vast majority of babies who die is now assessed using the tool. Importantly local PMRT reviews are the only review of care that will be carried out for the majority of babies who die in the UK. For example, in England only 8% of babies who die who are eligible for a PMRT review will be investigated by the Healthcare Safety Investigation Branch, and whilst Child Death Overview Panels (CDOPs) review all neonatal deaths they use, as the basis of their discussions, the report from the local PMRT review carried out at the trust.

Supporting parents and families through bereavement and the review process is essential; meaningful engagement with parents and families in the process has the potential to improve the quality of reviews from which parents will also benefit directly. In order to engage with reviews, parents need a straightforward verbal explanation, in a language they can understand, of the purpose and process of review and the part they can play. Verbal explanations need to be supported by 'plain language' parent-facing information. Materials developed by the PMRT collaboration to support parent engagement are available for use. Free on-line training in delivering meaningful parent engagement is available for health care professionals from Sands (Appendix A).

It is key that the review process is resourced adequately to ensure that high quality and timely reviews are carried out. Resourcing involves including review activities in job plans for consultants and prioritising the time of other staff. Improvements in the multi-disciplinary nature of reviews are evident in this report with, notably, a continuing increase in the proportion of reviews of neonatal deaths which involved a neonatologist or paediatrician, and a neonatal nurse; and a continuing decrease in the number of reviews involving only three or fewer staff members. Having a member of the review team who

is external to the trust or health board provides a 'fresh eyes', independent view of care. It is gratifying that, despite the challenges of making arrangements to involve an external person, particularly during the pandemic, the steady increase over time of the proportion of reviews with an external health professional present has continued and about one third of reviews now benefit from this additional scrutiny. Of concern, however, is the fact that in the vast majority of instances trusts and health boards do not appear to provide appropriate administrative support to reduce the burden of routine administrative tasks for clinical staff carrying out reviews.

There has been a general shift in the holistic grading of care suggesting that the discipline of robust self-examination is being embraced more widely, with the need for improvements in care identified more frequently. The quality of the action plans developed following the identification of issues with care has been of concern since the tool was launched. The plans developed following the reviews in this report indicate a greater focus on 'strong', system level changes with actions designed to reduce the capacity for human error rather than 'weaker' actions aimed at individuals.

The issues with care identified in this report are largely focused around the same areas as in previous reports including screening for fetal growth restriction and management of reduced fetal movements; assessment of maternal risk status and staffing issues during labour and birth; and thermal and respiratory management once the baby has been born. These national findings, alongside the local summary reports which trusts and health boards can generate from the PMRT, provide the basis for prioritisation of local service improvement activities.

To fully realise the benefits of local reviews and consequent service improvements requires appropriate resourcing of the PMRT process and the consequent actions needed to improve care. It is clearly better that resources are spent on robust review processes meaningfully involving parents at this 'grass roots' level, and on service quality improvement activities, rather than having to resort to later, expensive external enquiries such as Kirkup, Ockenden and East Kent, and the Cwm Taf Morgannwg clinical review.

Recommendations

1. Evaluate the approach to parent engagement, ensure staff are trained and use the available PMRT Parent Engagement materials, particularly in trusts and health boards where less than half of parents are engaged with the review process
Action: Trusts and health boards, staff caring for bereaved parents, service commissioners
2. Provide adequate resourcing of PMRT review teams, including administrative support.
Action: Trusts and health boards, service commissioners
3. Provide adequate resourcing to ensure the involvement of independent external professionals in review teams
Action: Service commissioners
4. Use the local PMRT summary reports and this national report as the basis to prioritise resources for key aspects of care and quality improvement activities identified as requiring action.
Action: Trusts and Health Boards, Service Commissioners, regional/network support systems, Governments
5. Improve service quality improvement activities implemented as a consequence of reviews by developing 'strong' actions targeted at system level changes and audit their implementation and impact.
Action: PMRT review teams, governance teams in Trusts and Health Boards, Service Commissioners

1. Background

At the core of the PMRT is the fundamental aim of supporting objective, robust and standardised local review of care to provide answers for bereaved parents and their families about whether the care they and their baby received was appropriate. The second, but nonetheless important aim is to ensure local and national learning results from review findings to improve care and prevent future baby deaths.

The PMRT is designed to support the review of baby deaths, from 22 weeks' gestation onwards, including late miscarriages, stillbirths and neonatal deaths.

For about 90% of parents the PMRT review process is likely to be the only hospital review of their baby's death that will take place.

This fourth annual report builds on previous reports and presents an analysis of reviews completed from March 2021 to February 2022. The main focus of this year's report is 'quality' in terms of parent engagement, the review process and subsequent actions plans. Accompanying data tables, the technical report and an infographic are available separately.

www.npeu.ox.ac.uk/pmrt/reports

2. Findings

Since it was launched all trusts and health boards across England, Wales, Scotland and Northern Ireland have engaged with the PMRT and by the 27th June 2022 over 18,141 reviews had been started and/or completed using the tool.

During 2021 a review of care was started for 96% of all babies who died in the perinatal period comprising 97% of stillborn babies and those who died in the

late second trimester, and 94% of babies who died in the neonatal period (first four weeks after birth) (Figure 1). Whilst only 77% of these reviews were completed and the report printed, the proportion of deaths where a review has been started has increased since the launch of the tool particularly for neonatal deaths (Figure 2).

Figure 1: Proportion of deaths where a review was started by country and type of death, 2021

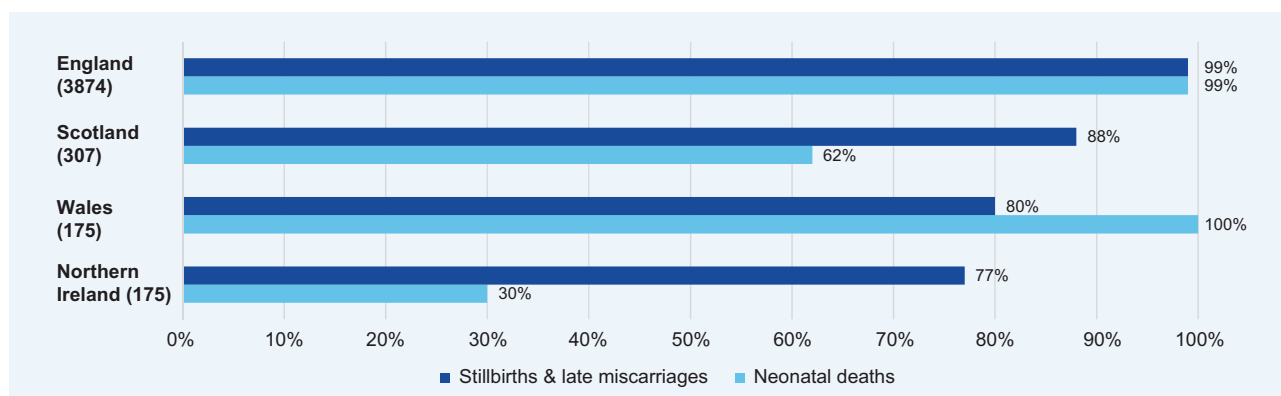
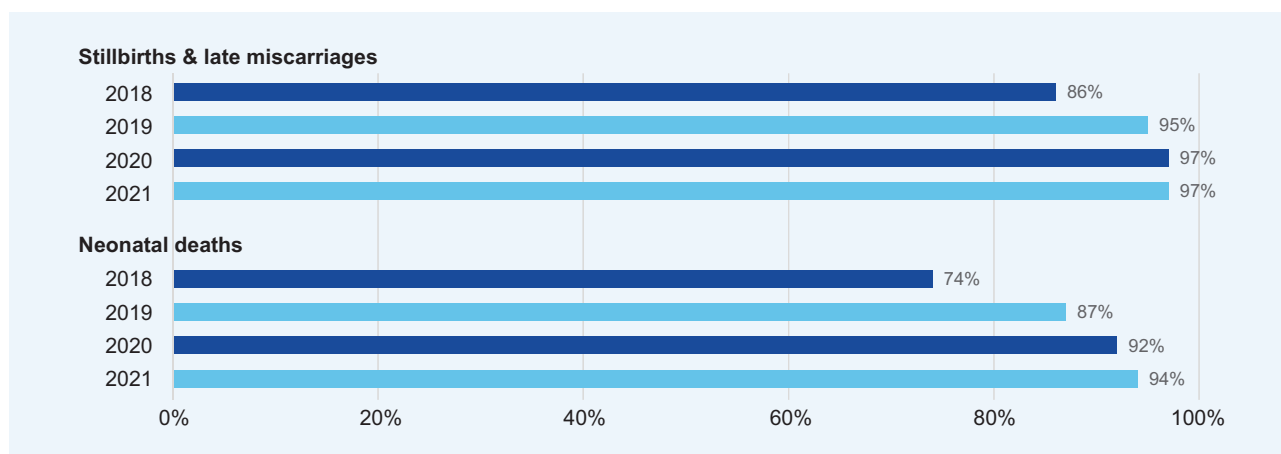


Figure 2: Proportion of deaths where a review was started by year and type of death, 2018 to 2021



The rest of this report presents the findings relating to the 4,199 reviews started in the period March 2021 to February 2022 that were subsequently completed; findings from reviews started but not completed are not included.

2.1 Parent engagement

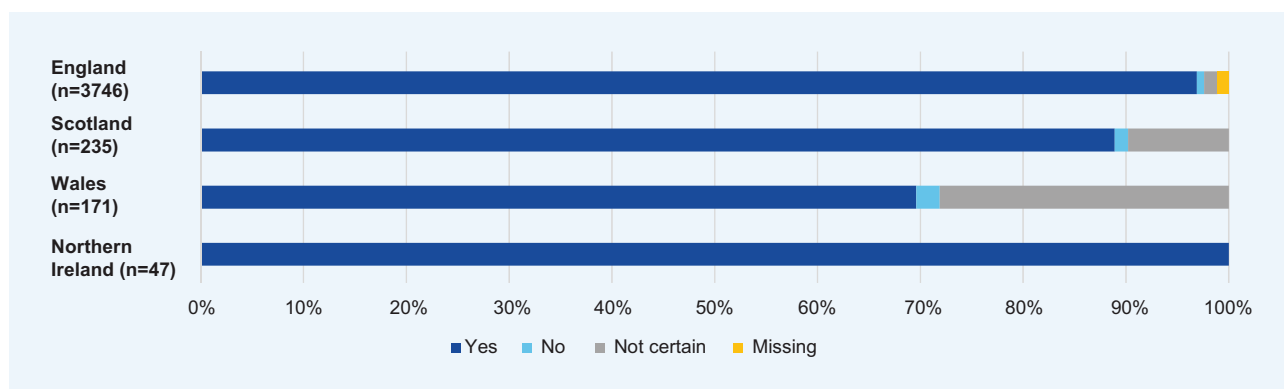
Engaging parents in PMRT reviews means ensuring parents are made aware that a review of their care and that of their baby will take place, and that they are given the opportunity to voice any questions or concerns, and their perspective of the care they received.

In their immediate grief, and often shock, parents may not feel able to express any questions or concerns and will need to be given more than one opportunity to do so. Some parents may never feel able to engage with the review process. See Appendix B for information about the materials developed by the PMRT to support parent engagement.

If parents do have questions or concerns regarding their care it is important to try to find these out prior to the completion of the review so that during the review their concerns can be addressed. This will ensure that when the review findings are fed back to parents their questions and concerns are answered.

It is not possible to fully assess the quality of parent engagement from the largely quantitative information collected in PMRT supported reviews. Here we present three indicators that provide some insights.

Figure 3: Proportion of parents who were told a review would take place, Mar 2021 to Feb 2022



2.1.1. Were parents told that a review would take place?

Overall 95% of UK parents were told that a review of their care would take place. This varied from 100% in Northern Ireland (where consent is required), 97% in England, 89% in Scotland and 70% in Wales (Figure 3).

2.1.2. Were parents' perspectives of their care sought?

Of the parents who were told that a review would take place, their perspective of their care was sought from 99%. This ranged from 99% in England, 95% in Scotland, 94% in Northern Ireland, to 90% in Wales.

2.1.3. Did parents feel able to express their views?

Overall, for just under half of reviews (46%), there was at least one comment, question or concern expressed by parents recorded and a further 3% of parents expressed very positive comments about their care which mainly related to disclosure of bad news, the immediate care after disclosure and bereavement care.

For 27% there was an indication that parents had been approached and they had responded indicating they had no comments or questions about their care.

For a further 22% of reviews no questions, concerns or comments had been received back from the parents by the time of the review. Of note for 12% of trusts and health boards it was indicated they had not received any questions, comments or feedback from parents for over half of their reviews.

Figure 4: Comments, questions and concerns about their care expressed by parents by type of death, Mar 2021 to Feb 22

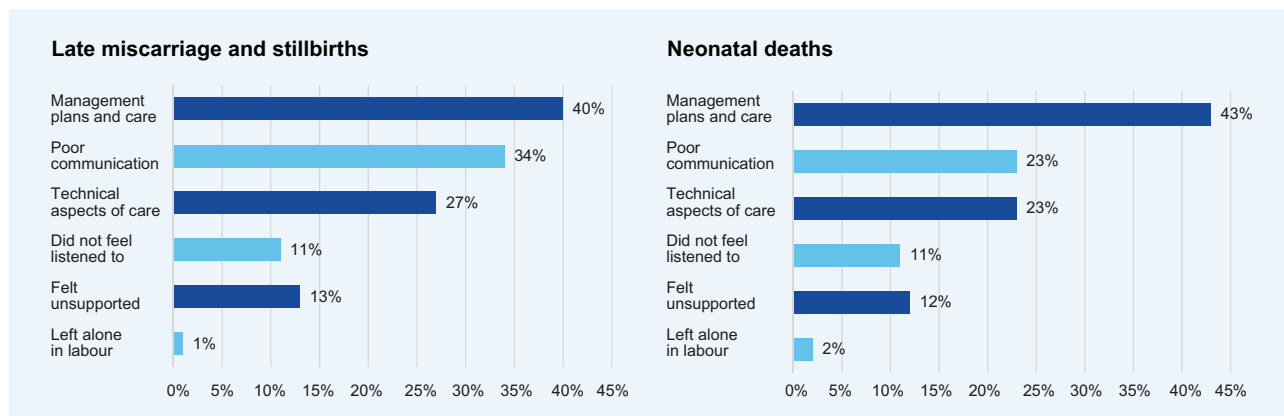


Figure 5: Comments, questions and concerns about their care expressed by parents by type of death, Mar 2021 to Feb 22

“

Praise: We are aware a review will take place. We have only praise and thanks for the care received. We feel very lucky to have had several days with our daughter. It is because of the excellent care she received that we were able to spend so long with her and make memories that we will cherish forever.

Was it me? Was it anything that I did?
Would it have made any difference if I'd got in touch with labour ward earlier when my contractions started?

Questions about care: Why did I only have one scan at 20 weeks even though I had a previous baby who was small for dates and born premature?
The last scan I had only lasted 30 seconds and nobody listened to my concerns about the baby's movements – was the scan done properly?

Questions about care: Why wasn't the baby delivered on the Saturday when there were concerns?
Why did they send me home in full labour because I forgot my notes?
I was given inconsistent information and plans kept changing. It was very confusing – why did this happen?
Did I have the right number of antenatal appointments – many were only on the phone?
I attended hospital several times with reduced movements and reduced growth, why was this not looked at more. Should more things have been done?

Support, listening and communication: I didn't feel supported when I was in labour and discussions about me were happening outside the room.
The consultant on the baby unit spoke to me like 'rubbish'. I don't think they cared.
I felt like an inconvenience at my antenatal appointments
I could hear babies crying on labour ward – this was very distressing because my baby had already died.
The doctor discussed comfort care before my baby was born. He was very cold and matter of fact and showed no compassion.

”

2.1.4. Parental comments and concerns expressed

A total of 1,916 reviews (46%) included comments, questions and concerns from parents; some provided multiple comments. A random sample of these were coded (Figures 4a, 4b) and illustrative quotes are given in Figure 5.

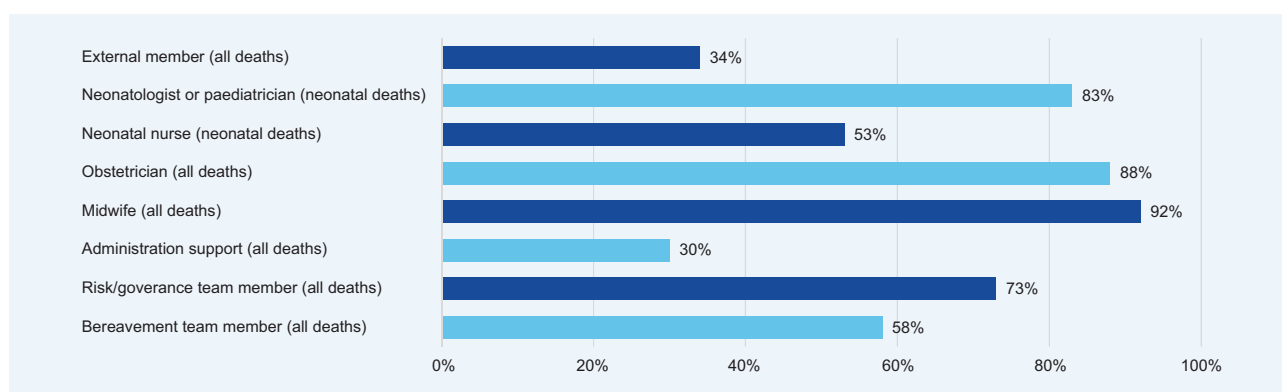
The majority of comments and questions from parents related to the management plan and the care they received (41%). There were additional questions (25%) about particular 'technical' aspects of their care which mainly related to the quality, frequency and interpretation of scans, and the quality and interpretation of baby heart rate traces (CTGs). Overall these

two categories of comments combined accounted for a similar proportion of comments compared with the previous report (66% vs 70% in the previous years' report).

Overall the proportion of reviews with a communication issue doubled to 30% compared with 16% in the previous report. Whilst for some parents this related to changes in care due to the COVID-19 pandemic this did not obviously account for the majority of comments concerning poor communication.

Overall 1 in 9 parents said they did not feel listened to and 1 in 8 indicated they felt unsupported, both of these again represented an increase from the previous report (1 in 11 and 1 in 25 respectively)

Figure 6: Proportion of reviews with specific professionals present for the review, Mar 2021 to Feb 2022



2.2 The review team

It is essential that the teams of professionals undertaking PMRT supported reviews reflect the multi-disciplinary teams who provide maternity and neonatal care. Single individuals, and even two or three members of staff, are unlikely to be able to appropriately and objectively assess all aspects of the care provided; a high quality review is a multi-disciplinary activity, ideally with external involvement to ensure it is as objective as possible.

There has been a steady improvement in the composition of the review teams which are now larger and more multi-disciplinary than in previous years. This is reflected in the median number of staff present for reviews which has increased from five in 2018-19 to eight in 2021-22.

In 2021-22 15% of reviews were conducted by three or fewer individuals compared with 35% in 2018-19. Over half (52%) of all reviews were carried out by a team consisting of eight or more professionals

and this proportion at 60% was higher for reviews of neonatal deaths; this represents an increase from 38% and 45% respectively in 2020-21.

Improvement in the multi-disciplinary nature of review teams is further illustrated by more PMRT reviews of neonatal deaths having neonatologists or paediatricians present. This has increased from 23% of reviews having a neonatologist or paediatrician present in 2018-19 to 83% in 2021-22 (Figure 6).

Having a member of the PMRT review team who is external to the Trust/Health Board and able to provide a 'fresh eyes' independent perspective is strongly recommended.¹ Whilst not yet at ideal levels the proportion of reviews benefiting from the presence of an external member has increased to 1 in 3 from 1 in 5 in the previous year. See Appendix C for details about the role of an external review team member.

¹ Kirkup B. The Report of the Morecambe Bay Investigation. London: The Stationery Office. 2015 The Report of the Morecambe Bay Investigation (publishing.service.gov.uk) (accessed 5th July 2022)

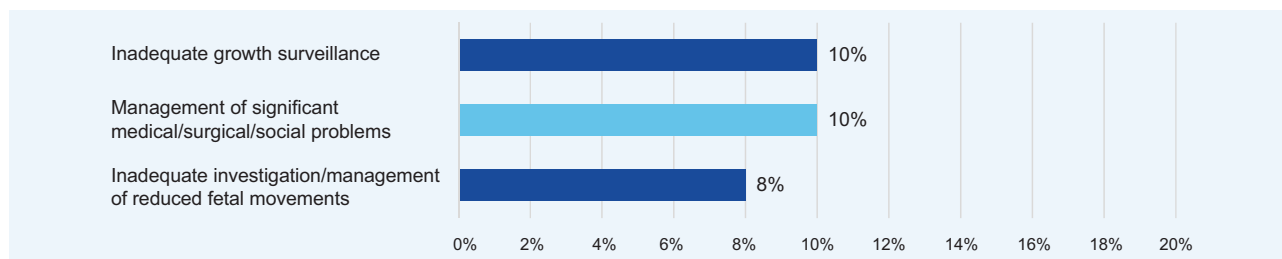
Conducting high quality reviews requires all the relevant information to be available for the review team at the review meeting. Having administrative support ensures this happens and enables timely reviews to be carried out in the most efficient and effective way.

The proportion of reviews undertaken with administrative support increased from 22% in the previous report to 30%. However, the majority (70%) of reviews, nevertheless still appear to lack this support.

The presence of members of the risk and governance team is important to ensure that learning from reviews is translated into actions which are implemented and subsequently audited. These team members were present for just under three-quarters of reviews and this has not increased over time.

Representation of bereavement team members remains at just over 50% despite the importance of bereavement care.

Figure 7: Proportion of reviews with issues during pre-conception and antenatal care identified as relevant to the outcome



2.3 Issues with care identified

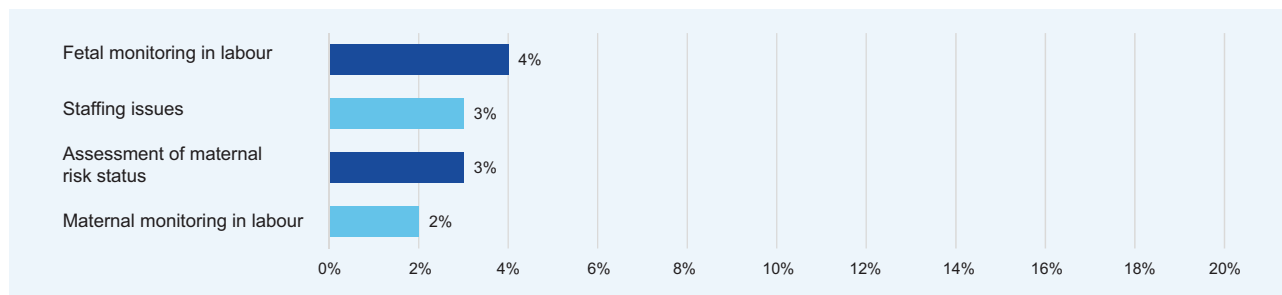
Overall, in the course of 98% of reviews at least one issue with care was identified.

The most common issues with **pre-conception and antenatal care** largely reflect findings from all earlier reports with inadequate growth surveillance (10%), delay in diagnosis or inappropriate management of medical, surgical or social problems (10%), and inadequate investigation and management of reduced fetal movements (8%) being the three most common issues identified of relevance to the death of the baby. (Figure 7); there was no change in the frequency with which these issues were identified. Late booking or not having booked at all was a more commonly

identified issue (24%), although the proportion of pregnancy outcomes for which this issue was relevant was unchanged from the previous report at 4%. It is unclear from the information available why late booking or not having booked at all was so common; this may have been a consequence of access to services or at least a perceived inability to access services as a result of changes due to the pandemic.

During **labour and birth** the four most common issues relevant to the outcome remained the same as the previous year: fetal monitoring in labour (4%), staffing issues (including insufficiently senior staff involved in care and lack of one-to-one care in established labour) (3%), inappropriate assessment of maternal risk status at the start of and during the course of care in labour (3%) and maternal monitoring (including infrequent observations and lack of a partogram) (2%) (Figure 8).

Figure 8: Proportion of reviews with issues during labour and birth identified as relevant to the outcome, Mar 2021 to Feb 2022



The most common issues with **care of the newborn baby** encompassed the initial resuscitation and stabilisation, transfer to the neonatal unit (including further onward transfer to an external unit) and

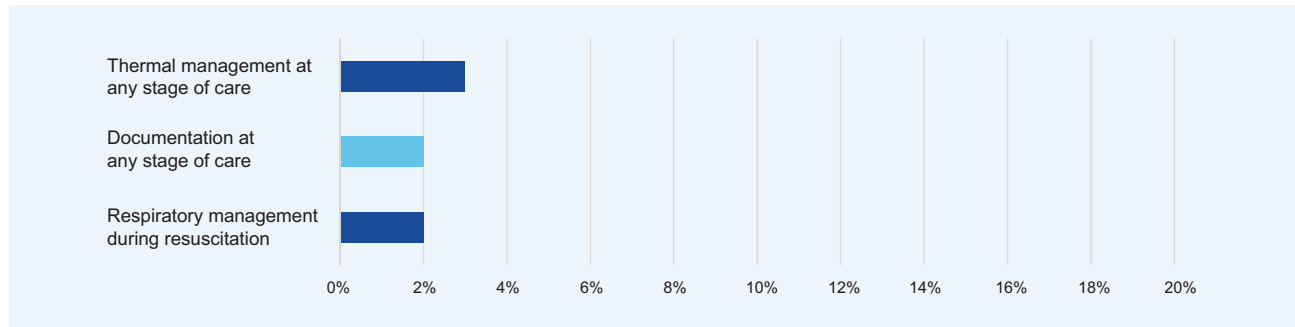
during on-going neonatal care. As with earlier stages of care, these issues also reflect the issues identified in previous reports. Problems with documentation were again highlighted with 44% of reviews identifying

issues with documentation during resuscitation and stabilisation and 25% during care on the neonatal unit. Whilst the majority of issues were not identified as relevant to the outcome, problems with documentation are of considerable clinical concern. Incomplete

documentation means it is difficult to assess the care provided as part of the PMRT review and hence the quality of this aspect of the review itself is in question.

Thermal management continues to remain the most common issue of concern identified as having relevance to the outcome for the baby affecting 3% of babies who died in the neonatal period (Figure 9).

Figure 9: Proportion of reviews with issues during resuscitation, stabilisation, transfer and neonatal care identified as relevant to the outcome, Mar 2021 to Feb 2022



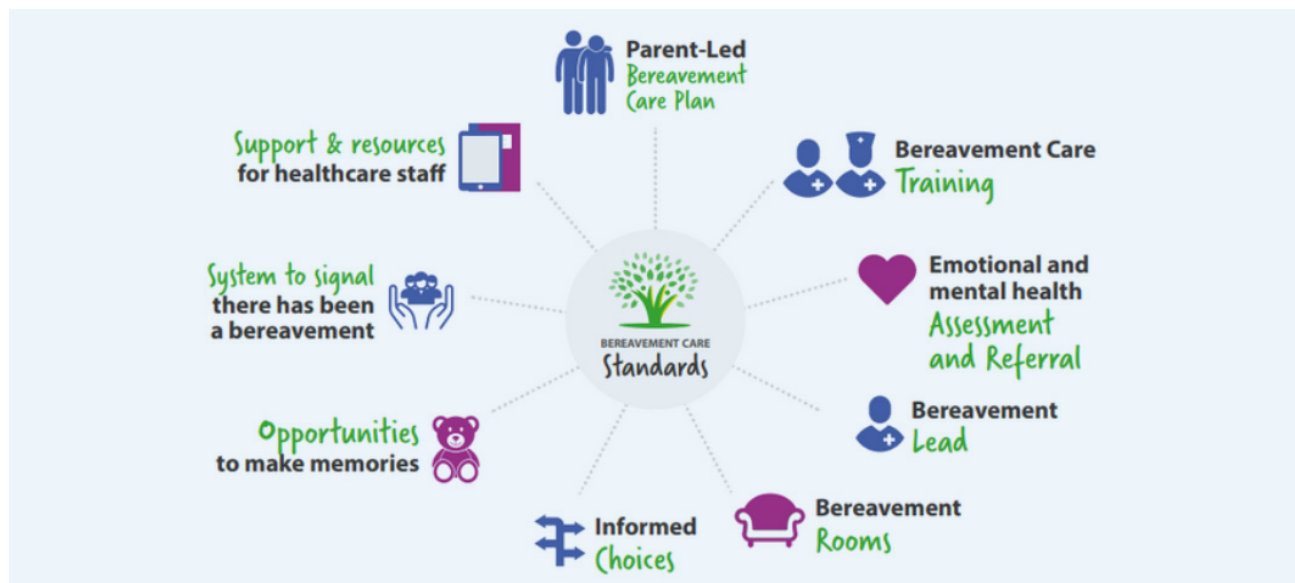
2.4 Issues with investigations and bereavement care

The single most common issue with postnatal investigations is that for approximately two-thirds (64%) of reviews when a post-mortem was requested the baby had to be transferred to another hospital for the post-mortem. A further issue affecting 7% of reviews is that the placental histology was not carried out by

a perinatal/paediatric pathologist which, as has been identified in the MBRRACE-UK confidential enquiries² is likely to have affected the quality and value of this examination.

In terms of bereavement care, the absence of a policy, support and practical help to enable parents to take their baby home was identified in nearly a quarter of all reviews. Whilst only a small proportion of parents will wish to take their baby home, they have a right to an informed choice in this important aspect of their care after the death of their baby, and will need help and support to decide what to do.

Figure 10: National Bereavement Care Pathway – standards for good bereavement care



² Draper ES, Gallimore ID, Kurinczuk JJ, Kenyon S (Eds.) on behalf of MBRRACE-UK. MBRRACE-UK 2019 Perinatal Confidential Enquiry: Still births and neonatal deaths in twin pregnancies. The Infant Mortality and Morbidity Studies, Department of Health Sciences, University of Leicester: Leicester, 2021. www.npeu.ox.ac.uk/assets/downloads/mbrrace-uk/reports/perinatal-report-2020-twins/MBRRACE-UK_Twin_Pregnancies_Confidential_Enquiry.pdf (accessed 5th July 2022).

Inadequate location and quality of the bereavement suite was identified in 6% of reviews added to which bereavement care was adversely affected by service modifications due to the pandemic for a further 5%.

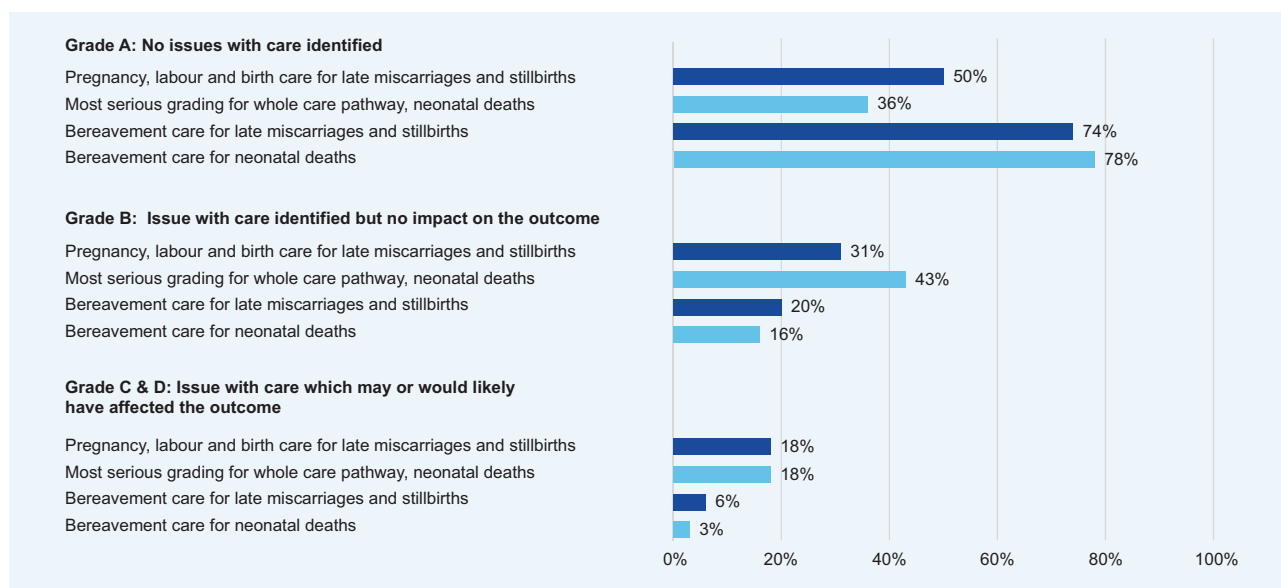
The quality of bereavement care was clearly difficult to assess in many instances due to inadequate documentation available to the PMRT review team. This may be as a result of the bereavement care notes being held in a different location to general maternity/neonatal notes. Importantly if these notes are never combined it will always be difficult to assess the care,

but with this information missing it will also be difficult to provide good quality holistic care for any future pregnancy.

The National Bereavement Care Pathway (NBCP) identifies nine standards for good bereavement care (Figure 10). These provide the basis for establishing high quality bereavement care services and can then be used to audit the service. More information is available on the NBCP website

<https://nbcpathway.org.uk/>

Figure 11: Grading of care by stage of care, Mar 2021 to Feb 2022



2.5 Grading of care

Towards the end of each review the review team is required to provide an overall grading of care for each stage of the care pathway, including bereavement care. This provides a holistic grading summary indicative of the extent to which improvements in care, had they been implemented, may have affected the outcome (Figure 11).

Over time there has been a steady decrease in the proportion of reviews of pregnancy and labour care for late miscarriages and stillbirths where the care has been graded as A (no issues with care identified) with 50% at this grade in 2021-22 compared with 55% in the previous annual report and 62% in the first annual report. Most recently this has been accounted for by a commensurate increase in reviews with care graded as B (issues with care that would have made no difference to the outcome for this baby).

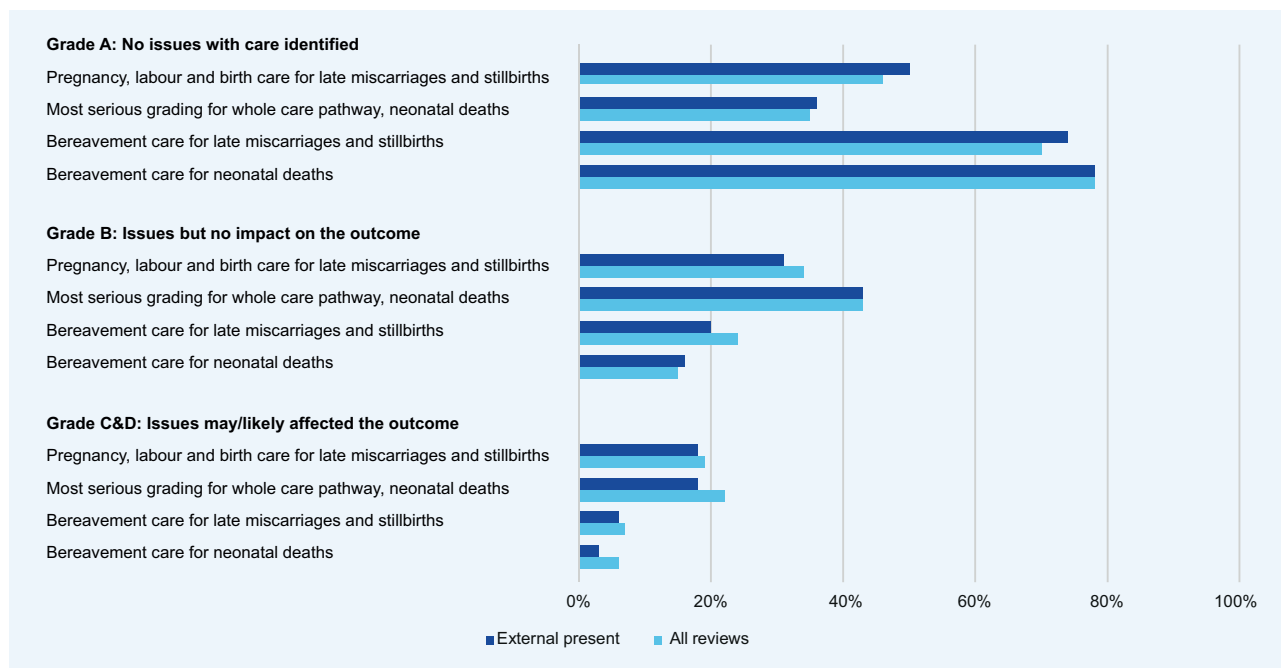
There has been a similar change in the distribution of grade A for the whole pathway of care for babies who died in the neonatal period with 36% now having care at that grade, compared with 46% in 2018-19.

There has been no change in the proportion with care graded as B (43%) whereas there has been a doubling in the proportion graded C&D (issues with care that may or were likely to have made a difference to the outcome) from 9% in 2018-19 to 18% in 2021-22.

A similar pattern of change has been seen in the grading of bereavement care for all babies with a decrease over time where the care is graded A. The commensurate increase in other grades has largely been in grade B (issues with care that would have made no difference to the outcome) rather than C&D.

There has been a steady increase over time in the proportion of reviews where a member external to the trust/health board is present (now a third of all reviews), whilst this resulted in a change in the distribution of the grading of care previously this change has not persisted. Grading distributions overall are now very similar to the grading distributions when an external member is present (Figure 12).

Figure 12: Grading by stage of care and the presence of an external member of the review team, Mar 2021 to Feb 2022



2.6 Action plans

At the end of each review, when any issues with care have been identified, each issue is examined in turn to enable the review team to agree if the issue was likely to have been relevant or not to the outcome for the mother and baby. A decision is also made, regardless of the relevance for the particular mother and baby, whether the issue requires action to improve future care.

For example, screening for gestational diabetes may have been indicated and not carried out, however, the baby died from an unrelated cause. So whilst this omission in care was not relevant to the particular baby’s death, the reasons for the omission in screening need to be investigated and systems put in place to ensure that all eligible women are offered screening.

A total of 8,780 separate actions were planned over the course of the 4,199 reviews conducted. This represents an average of just over two actions per review although not all reviews resulted in an action plan and some had more than two actions identified.

A third of all action plans resulted from issues which were identified as relevant to the outcome for the baby and/or mother whereas two thirds resulted from issues not directly relevant to the care of the specific mother and baby being reviewed, but nevertheless required action to improve future care.

2.6.1. The strength of actions

In previous reports we have highlighted the need for action plans to be “strong”, where strong actions are system level changes which remove the reliance on individuals to choose the correct action.³ These are actions which use standardisation and permanent physical or digital designs to eliminate human error and are sometimes referred to as ‘forcing actions’ (see Appendix D for further information). Action strength is illustrated in Figure 13.

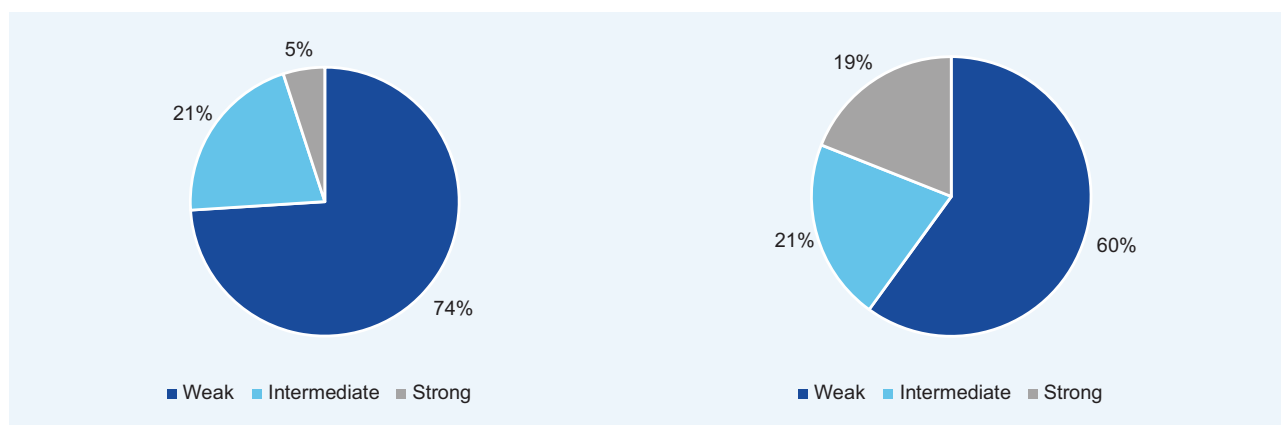
A random sample of the action plans was coded by strength. Comparing Figures 14 and 15 illustrates that whilst the proportion of intermediate actions has effectively not changed, the proportion that are strong has increased from 1 in 20 to 1 in 5 with a corresponding decrease in the proportion of weak actions.

3 US Department of Veterans Affairs. Root Cause Analysis Tools. VA National Center for Patient Safety. REV.02.26.2015.(Pgs26-29) RCA Step by Step Guide REV 07.01.2016 (va.gov) (accessed 31st July 2022)

Figure 13: The strength of actions associated with illustrative issues

Issues	Actions
The thermal management of the baby during the first 24 hours of arrival on the neonatal unit was not appropriate. Nursing staff and medical staff attempted to optimise the incubator, however they were unable to achieve humidity and maintain the baby's temperature.	Strong actions Incubators have now been reviewed and a different type of incubator was identified as needed to admit extreme preterm babies. New incubators have been commissioned and are now operational on the neonatal unit.
This mother had a risk factors for having a growth restricted baby but the plan to carry out serial scans was not followed	Intermediate actions SGA and Grow guidelines to be amalgamated to make the process clearer for serial scans
This mother had pregnancy induced hypertension during her pregnancy and there was a delay in the diagnosis	Weak actions Individual debrief and staff education. Present case at perinatal mortality and morbidity meeting.

Figure 14: Strength of actions prior to March 2021 **Figure 15: Strength of actions Mar 2021 to Feb 2022**



2.7 Using PMRT evidence to improve care

Following the completion of the review for a specific mother and baby, the review is closed and a final report of the review is produced. This can be used for discussion of the review findings with the parents and the basis for writing the 'plain language' follow-up letter to parents.

The PMRT system also has the capacity to produce summary reports of the findings of all reviews carried out over a period of time, with the period of time defined by the person generating the summary report from the PMRT system.

Many teams in trust and health boards use this summary report as a basis of quarterly mortality reporting to their Executive Board. Recurring issues identified as requiring action but for which there is no immediate solution are identified in these reports. This can be used as a means of highlighting any resource implications to improve care and outcomes. Figure 16 illustrates how two Trusts used the summary report findings to effect important improvements to their service.

Figure 16: Examples of how two trusts have used evidence from the PMRT to improve their care

The PMRT review team at the **Birmingham Women's and Children's NHS Foundation Trust** identified in every review they conducted over a period of time that they did not have appropriate cool cots to enable parents to take their baby home if they wished, nor a sound proofed bereavement suite. They used the PMRT summary reports as the basis of their quarterly report to the trust Executive Board which, at that stage included these recurring unresolved issues. As a consequence Board members' awareness of the problems was raised.

Using this evidence the bereavement team made a business case to the Executive Board to have the bereavement suite sound proofed. With the prior awareness from their quarterly reports the Board members already knew that their service was not meeting national bereavement care pathway standards and that this was having a serious impact on care for parents. When the business case was presented to the Board the funds for the necessary capital works were immediately allocated and the bereavement suite was sound proofed.

The bereavement team also used this documented evidence from the PMRT summary reports to successfully seek charitable funding to cover the cost of two cold cots suitable for parents to take their baby home. This now enables parents who wish to do so to spend time and make memories at home with their baby and for other family members to visit at home prior to the funeral.

Through their summary PMRT reports **North Bristol NHS Trust** identified a recurring omission of not accurately and consistently assessing women at their booking appointment for their risk of developing of pre-eclampsia* and placental disorders* in pregnancy and the subsequent recommendation to take low dose aspirin. Together with the 'Safer Care' Group of the Local Maternity System (LMS) a standardised risk assessment checklist, based on national guidance, was produced and introduced into the handheld maternity notes in both maternity units across Bristol. It is now clear and well documented which women have risk factors and who are therefore recommended to take low dose aspirin.

**Pre-eclampsia together with other placental disorders are important risk factors for fetal growth restriction which in turn is a risk factor for stillbirth and neonatal death. Low dose aspirin is an important preventive measure.*

3. PMRT developments

The main development of the MBRRACE-UK/PMRT platform, which has been underway for the past two years, is the integration of the MBRRACE-UK/PMRT notification of neonatal deaths with CDOPs and the National Child Mortality Database (NCMD) in England. Following notification of a neonatal death to the MBRRACE-UK/PMRT system the notification is immediately transferred to the relevant CDOP (based on baby/mother place of residence at the time of the death) and then on to the NCMD. Once the review is complete and closed, this too can then be submitted from within the PMRT system directly to the relevant CDOP and the appropriate information is directly downloaded into the NCMD. The integration of the systems reduces duplication of effort and enables information to be used for multiple purposes.

In July 2022 the phase 1 roll out of the system was launched with a small number of trusts and CDOPs. We anticipate completion of this phase in autumn following which we will invite all trusts and CDOPs to a series of meetings to launch the integrated system across England. Opportunities for integration with similar systems in the devolved nations will then be explored.

4. Conclusions and recommendations

An increasing number of reviews have been carried out using the PMRT each year since its launch in 2018 and this represents an increasing proportion of baby deaths reviewed. During 2021 a review of care using the PMRT was started for 96% of baby deaths and for 77% the review was completed and the report was printed out. This is a notable achievement given this was the second year of the pandemic when clinical services continued to be significantly challenged by the impact of the pandemic on pregnant women and staff sickness.

Whilst it is reassuring to know that the majority of baby deaths are now receiving a PMRT supported review, the next consideration is the quality of the reviews carried out. One important aspect of this is the quality of parent engagement in the review process, so that if parents have any questions, concerns or comments about their care they are able to express them so they can be addressed in the review process. To be able to do this parents need to be given help to understand what a review is and what the process means through a straightforward verbal explanation, in a

language they can understand, supported by 'plain language' parent-facing information. Parent Engagement materials were developed by the PMRT collaboration, involving parents, and are available on the PMRT website.⁴ Free on-line training in delivering meaningful parent engagement has also been available for health care professionals from Sands since early 2021. Good engagement with parents and families improves the quality of their review from which they will benefit directly and future deaths can be prevented following the implementation of relevant actions.

For about half of reviews, parent questions, concerns or comments were noted in the review. A small proportion of additional comments were positive comments about their care and these mainly related to the disclosure of bad news and bereavement care. Nevertheless, communication issues, and feeling unsupported and not listened to were more commonly reported than previously. This may have been a pandemic impact, but as we exit the pandemic it remains of concern and trusts and health boards need to consider how and why this is happening.

It is notable that for 12% of trusts and health boards fewer than half of parents had provided feedback by the time of the review. If some parents never engage with the review process, it is important to understand whether this is a decision based on informed choice or on a lack of support in being empowered to do so.

The ability to conduct a thorough, robust and systematic review of all stages of the pregnancy and neonatal journey requires health professionals who are involved in all stages of the delivery of care. Conducting a high quality review is a multi-disciplinary activity which ideally also involves someone external to the organisation who can provide the 'fresh eyes' of an independent professional. There has been a steady improvement in the number of health care professionals involved in review teams and notably the greater majority of reviews of neonatal deaths now involve a neonatologist or paediatrician and about half involve a neonatal nurse. About a third of reviews also now involve a health care professional external to the trust/health board which also represents a steady increase from previous years. This is despite the complexity in making these arrangements particularly during the challenges to the delivery of direct clinical service provision posed the pandemic. Ideally all reviews should benefit from the presence of an external professional, but this is likely to take some considerable time and resources to achieve. In the meantime, trusts and health boards may wish to focus on particularly complex or potentially contentious deaths to use this limited resource to maximum effect.

A third of all reviews have administrative support which is certainly less than ideal since such support can help ensure reviews are timely and have all the relevant information available at the meeting, the

latter being a task that will otherwise fall to a clinical member of the team. The presence of members of the risk management and governance teams is also essential to ensure that learning from reviews is translated into actionable plans which are implemented and subsequently audited. These team members were present for just less than three-quarters of reviews and this has not improved from the last report. Similarly the proportion of reviews with a member of the bereavement team present, at 50%, is less than optimal given the potential impact that poor bereavement care can have on a family's psychosocial wellbeing. It also appears that when the bereavement team are involved, in some organisations they are expected to manage the PMRT process. This is not advised since the role of the bereavement team member(s) is to advocate on behalf of the parents presenting their questions, concerns and comments, and not to take responsibility for the PMRT review process (Appendix C).

The issues with care identified in this report are largely focused around the same areas as in previous reports including screening for fetal growth restriction and management of reduce fetal movements; assessment of maternal risk status and staffing issues during labour and birth; and thermal and respiratory management once the baby has been born. The quality of documentation also continues to be of concern.

The single most common issue with investigations carried out after the baby has died is that when a post-mortem was requested two-thirds of babies had to be transferred to another hospital for this examination. The need for transfer most likely relates to access to specialist perinatal pathology services which are largely centralised due to the small number of pathologists now available with these skills. The need for transfer may be distressing for parents and, whilst this should not necessarily be the case, in some places it lengthens their wait for the review findings.

The inadequate location and quality of the bereavement suite together with bereavement care being adversely affected by service changes due to the pandemic was also highlighted for about 1 in 10 parents. Some parents may wish to take their baby home, others may not, but everyone has a right to an informed choice and may need help to decide what to do. In the absence of support and practical help the ability to take their baby home was not available for a quarter of parents. Importantly the ability of PMRT review teams to review the quality of bereavement care was adversely affected by not being able to access bereavement care notes which appear to be located separately from the general maternity notes.

Overall 98% of reviews had at least one issue with care identified. In this report we present the overall holistic grading of care at different stages along the care pathway. Over time there has been a general decline in the proportion of reviews where the care

has been graded as A, having 'no issues with care identified' with a commensurate increase in the proportion with grades C ('issues which may have made a difference to the outcome') and D ('issues which were likely to have made a difference to the outcome') other than for bereavement care where the commensurate increase has been in the proportion graded B ('issues that would have made no difference to the outcome'). In the presence of generally decreasing perinatal mortality rates this seems likely to be a result of review teams taking a more self-critical approach to the care their organisations provided and seeking to improve future care, rather than poorer care in general being provided; this is a positive development.

Previously the presence of an external professional led to a change in the distribution of grades with a greater proportion of B, C and D grades. This is not the case in the period covered by this report and may be part of a general trend to being more self-critical and improving the learning from the reviews being conducted.

The final important step in any review is to identify which issues need action to improve future care. It is heartening to now see an increase in the proportion of actions which are 'strong' and resulting in system level changes which do not rely solely on the actions of individuals for implementation. With nearly 1 in 5 actions now being 'strong' there is, nevertheless, still a lot of work to do, but the direction of travel is encouraging.

It is evident that there is no one single issue with care, relevant to the outcome for the baby that, if changed would have a substantial impact on the perinatal mortality rate. This underlines the fact that multiple, incremental and sustained improvements across all aspects of care are required to make a substantial difference to the perinatal mortality rate of individual trusts and health boards, and nationally.

These national findings identify where national efforts are needed to continue to improve care. In addition individual trusts and health boards should use their own summary PMRT report findings to prioritise where they need to focus their quality improvement efforts. We have highlighted examples where two trusts have used the evidence from their own PMRT summary reports to implement key service improvements. This was achieved by close, critical, self-examination of the care provided when a death occurred, by making sure that the findings were highlighted in their PMRT summary reports and by using this evidence to effect system level actions to improve care.

This report is published in the year the reports of the Ockenden and East Kent enquiries and the Cwm Taf Morgannwg clinical review were published. To fully realise the benefits of local reviews and consequent service improvements requires appropriate resourcing. It would clearly be better for resources to be available at the 'grass roots' level for robust, self-critical reviews to achieve this, rather than being spent on costly subsequent external enquiries or reviews.

Recommendations

1. Evaluate the approach to parent engagement, ensure staff are trained and use the available PMRT Parent Engagement materials, particularly in trusts and health boards where less than half of parents are engaged with the review process (see Appendices A and B)
Action: Trusts and health boards, staff caring for bereaved parents, service commissioners
2. Provide adequate resourcing of PMRT review teams, including administrative support (see Appendices C and E)
Action: Trusts and health boards, service commissioners
3. Provide adequate resources to ensure the involvement of independent external professionals in review teams (see Appendices C and E)
Action: Service commissioners
4. Use the local PMRT summary reports and this national report as the basis to prioritise resources for key aspects of care and quality improvement activities identified as requiring action.
Action: Trusts and Health Boards, Service Commissioners, regional/network support systems, Governments
5. Improve service quality improvement activities implemented as a consequence of reviews by developing 'strong' actions targeted at system level changes and audit their implementation and impact (see Appendix D)
Action: PMRT review teams, governance teams in Trusts and Health Boards, Service Commissioners

5. Appendices

Appendix A - training to delivery meaningful parent engagement

Free on-line training in delivering meaningful parent engagement is available for health care professionals from Sands

<https://training.sands.org.uk/courses-and-booking/open-access/>

Appendix B - Parent engagement materials

A working group, which included parents, developed a set of resources to support parent engagement with reviews.


These are available to download from the PMRT website:

www.npeu.ox.ac.uk/pmrt/parent-engagement-materials

Appendix C - Recommended composition of review teams and roles


An external member should be a relevant health professional who is external to the trust and health board. Their role is to provide a 'fresh eyes', independent and robust review of the care provided. This may involve challenging the usual care provided by the trust/health board where the death is being reviewed.

The role of the bereavement team member(s) is to advocate on behalf of the parents by presenting their questions, concerns and comments; they should be required to take responsibility for the PMRT review process.



PMRT Review Group

<p><u>Core Group*</u></p> <p>Roles within group:</p> <ul style="list-style-type: none">• Chair and Vice-Chair• Scribe/IT/Admin support• PMRT Champion <p>Minimum of 2 of each of the following:</p> <ul style="list-style-type: none">• Obstetrician• Midwife• Neonatologist and Neonatal Nurse**<ul style="list-style-type: none">- All cases where resuscitation was commenced- All neonatal deaths• Risk manager/governance team member (1 acceptable) e.g. service manager• Bereavement team (1 acceptable)• External panel member (1 acceptable) <p>* Group members can fulfil multiple roles</p> <p style="text-align: center;">All opinions and views are equal, facilitate a breadth of discussion</p>	<p><u>Additional Members</u></p> <p>Named and invited to attend or contribute where applicable:</p> <ul style="list-style-type: none">• Pathologist – when a PM was performed• GP/Community Healthcare• Anaesthetist• Sonographer/Radiographer• Safeguarding team• Service manager• Any other relevant healthcare team members pertinent to case
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Appendix D - Action plan strength

The US Veterans Affairs root cause analysis tools defines the strength of an action by describing how well the action would eliminate human error.¹

Strong actions are system level changes which remove the reliance on individuals to choose the correct action. They use standardisation and permanent physical or digital designs to eliminate human error and are sometime referred to as 'forcing' actions.

An example of a strong action is the development of a process for ensuring the systematic assessment of all women for the need for aspirin for pre-eclampsia prophylaxis and including this as a mandatory item in the electronic patient record.

Intermediate actions are those actions that put systems in place, but those systems still require individuals to make choices about the correct actions to take without any controls in place.

An example of an intermediate action is a major review which led to a new staffing model and a newly appointed Lead for Triage and Induction.

Weak actions involve reminders to individuals for action and training which require individuals to using the training to make choices about the correct actions to take and do not put any controls in place. They are often single activities without repetition which take no account of the fact that new staff are appointed. They can also involve debrief discussions with an individual involved in a patient safety incident. This will have no effect on the clinical behaviour of other members of staff.

An example of a weak action is the distribution of a communication to maternity staff regarding the necessity for intrapartum antibiotics in preterm labour and the importance of this.

1. US Department of Veterans Affairs. *Root Cause Analysis Tools. VA National Center for Patient Safety*.REV.02.26.2015. (Pgs26-29) *RCA Step by Step Guide REV 07.01.2016 (va.gov)* (accessed 31st July 2022)

Appendix E - Indicative level of review team resourcing

Example for 10 deaths per month

Person time required per week:

- 2PA*'s consultant obstetrician
- 12 hours midwife time
- 1PA* consultant neonatologist
- 5 hours neonatal nurse time
- 2 days of clerical support

*PA – programmed activity which is the metric used to describe consultant time



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