INDEPENDENT MATERNITY SERVICES OVERSIGHT PANEL

Cwm Taf Morgannwg University Health Board

Independent Review of Neonatal Services at Prince Charles Hospital

Full Report
January 2022

EXECUTIVE SUMMARY

1. A neonatal 'deep dive' review, focusing on the neonatal service provided at Prince Charles Hospital (PCH), was commissioned by the Welsh Government as part of the Independent Maternity Service Oversight Panel's (the Panel) assurance work in relation to Cwm Taf Morgannwg University Health Board (the Health Board). This was initiated by the Health Board who wished to seek further assurance about the quality and safety of the service.

2. The work commenced in May 2021 following joint discussions between the Panel and the Health Board to agree the terms of reference and methodology.

3. A multi-faceted approach was employed to explore issues within the neonatal service, including a family 'listening exercise', assessment of clinical cases, a review of documentation pertaining to management and governance and discussions with staff at all levels within the Health Board as well as wider stakeholders.

4. In August 2021, the review team[1] escalated concerns to the Welsh Government and the Health Board regarding some aspects of the safety and effectiveness of the neonatal service which required immediate action. This process was in line with the terms of reference.

5. The review team identified areas which it determined were impacting the consistent provision of safe and effective care that would be expected of this type of service in the UK. Immediate interventions were undertaken by the Health Board to improve safety and assurance in several areas, whilst the deep dive continued.

6. This report presents a summary of, and supporting evidence for the overall findings identified during the deep dive.

7. The review team found a significant number of areas requiring improvement which have impacted on the quality, safety and effectiveness of the service delivered to babies and families.

8. In addition to the safety-critical actions from the interim escalation report, the Panel has made a wide range of recommendations concerning:-

- family engagement and support;
- clinical practice;
- workforce;
- governance and assurance mechanisms;
- data collection, analysis, audit and reporting;
- learning from clinical incidents;

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[1] *The team responsible for undertaking the deep dive consisted of the Panel's Neonatal Leads, Alan Fenton and Kelly Harvey, alongside a Senior Nurse Advisor, Neonatal Nursing Advisor and a Neonatologist Adviser. However, in the interests of keeping the report succinct, they are henceforth referred to as the 'review team'.*

- culture and team relationships within the Health Board;
- reflective practice;
- development of the Maternity and Neonatal Network.

9. These recommendations are intended to improve recognition of ‘what a good service looks like’ and will underpin future ongoing service development. The recommendations are detailed and specific and whilst numerous, are intended to be more helpful than broad over-arching statements. These have been translated into an action plan template which the Health Board will use as the basis of its improvement plan going forward.

10. The Panel suggests that this report and the recommendations made may be of interest for consideration by other health services across Wales and indeed, health services further afield.

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1. BACKGROUND

In October 2018, following growing concerns about the quality and safety of care within maternity services at the former Cwm Taf University Health Board,[2] the then Minister for Health and Social Services commissioned the Royal College of Obstetricians and Gynaecologists and Royal College of Midwives (the Royal Colleges) to undertake an invited joint independent review of maternity services.

The Royal Colleges' assessors identified serious concerns during their initial review visit to the Health Board which were immediately escalated to the Welsh Government. The Royal Colleges' assessors included a neonatologist who identified several concerns relating to the neonatal service. These included aspects of clinical care (leadership, expertise and involvement in the midwifery-led service) and clinical governance (serious incident (SI) investigations, audit and team-working).

The then Minister published the Royal Colleges' findings in April 2019;[3] maternity services at the former Cwm Taf UHB were immediately placed in special measures by the Welsh Government, who also established an Independent Maternity Services Oversight Panel to provide the oversight which is necessary to ensure that the Health Board addresses the failings identified by the Royal Colleges in a timely, open and transparent manner.[4]

Further information on the Royal Colleges' review and the Panel's work to date can be found within the Panel's previous progress reports which can be accessed here.

Given the immediacy of some of the maternity specific recommendations in the Royal Colleges' report, the Panel's initial work was predominantly focused on this area. However, concerns began to emerge regarding the neonatal service during the Panel's ongoing Clinical Review Programme in relation to:-

- SI management and reporting;
- neonatal involvement in clinical cases where significant maternal morbidity or stillbirth had occurred.

Further concerns around the clinical management of a small number of individual neonatal incidents led to the Health Board wanting to gain independent assurance that the neonatal service was safe and effective.

These combined concerns led to the commissioning of a 'deep dive' review of the current neonatal service provided at Prince Charles Hospital (PCH) on 22 March 2021.[5]

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[2] The Royal Colleges' review was conducted in the former Cwm Taf area and the special measures escalation arrangements apply only to the Prince Charles and Royal Glamorgan Hospitals. However, since that time, the Health Board has taken responsibility for maternity and neonatal services provided at the Princess of Wales Hospital. Whilst Princess of Wales is not in special measures, it is important that services are delivered on a consistent basis and the Health Board has agreed to work with the Panel to ensure that is achieved.

[3] RCOG & RCM Review of Maternity Services at Cwm Taf Health Board. 2019 (accessed 25/09/2021).

[4] Welsh Government, Written Statement: Publication of the Report on the Independent Review of Maternity Services at the former Cwm Taf University Health Board. 30/04/2019 (accessed 25/09/2021).

[5] Welsh Government, Written Statement: Update regarding the independent oversight arrangements of maternity and neonatal services at Cwm Taf Morgannwg University Health Board. 22/03/2021 (accessed 10/10/2021).

The Panel and the Health Board jointly agreed the objectives for this work, which were to assess whether the neonatal service was:-

- safe and effective;
- well led and well managed;
- focused on providing a quality experience for women and families;
- integrated with the maternity service to provide a seamless service for women and babies;
- effectively integrated within the wider Wales Maternity and Neonatal Network;
- fit for purpose and sustainable in the longer term.

The terms of reference for the deep dive were collectively agreed by the Health Board, the Welsh Government and the Panel and are available at *Appendix A*.

It is worth emphasising that the deep dive review took place against the background of ongoing improvement following the Royal Colleges' report, in which maternity improvements commenced prior to those in neonatal services and thus were more mature. Clearly, the pace and degree of progress was significantly constrained by the actions which were necessary as part of the Health Board's COVID-19 response. An oversight and assurance mechanism is already in place between the Health Board and the Panel which the findings and recommendations from the deep dive will feed into.

2. PRINCE CHARLES HOSPITAL – NEONATAL SERVICE DESCRIPTION

In 2019, responsibility for providing healthcare to the Bridgend locality's population was transferred from Abertawe Bro Morgannwg University Health Board to Cwm Taf University Health Board in order to strengthen partnership arrangements for Bridgend County Borough Council. The new health board was named Cwm Taf Morgannwg University Health Board; it serves a population of approximately 450,000 people. This considerable organisational change occurred concurrently with a reconfiguration of maternity services within the former Cwm Taf University Health Board resulting from the South Wales Programme Board Report.[6] Whilst consultant-led maternity services were no longer provided at the Royal Glamorgan Hospital (RGH) site, retention of an Accident and Emergency Department at RGH has required a paediatric service to be maintained there, albeit without a Neonatal Unit.

The Neonatal Unit at Prince Charles Hospital (PCH) provides Level 2 neonatal care. Details of funded cot provision and activity in 2020 are shown in Table 1.

Table 1: *Prince Charles Hospital (2020) - Cot provision and activity*

Cot Designation	Number	Care Days (2020)	Occupancy (%)
Intensive Care (Stabilisation)	1	131	36
High Dependency	4	720	51
Special Care (SC)	10	2418	69
Normal Care	Within SC	16	-

There were:-

- 397 admissions (349 babies), of whom 312 were inborn (BadgerNet data);
- 190 admissions of term babies (8% of all births, 48% of Neonatal Unit admissions);
- 95 babies admitted from the postnatal ward;
- 24 inborn babies admitted outwith the gestational age and/or birthweight criteria agreed for the unit (<32 weeks for singletons, <34 weeks for twins, <1500g) (dashboard data).

The neonatal service at PCH contributes to the provision of neonatal care in South Wales. There is a Wales Maternity and Neonatal Network which operates as an advisory organisation. Babies requiring transfer between Neonatal Units are referred to the Cymru inter-Hospital Acute Neonatal Transfer Service (CHANTS), provision of which is shared between the tertiary Neonatal Intensive Care Units (NICU's) in Cardiff, Swansea and Newport.

[6] *NHS Wales. Report of the South Wales Programme Board. 2014 (accessed10/10/2021).*

3. METHODOLOGY

The scope and methodology for the review process was collaboratively designed by the Panel and the Health Board. The deep dive consisted of four concurrent workstreams:-

1. A "listening to women and families" exercise to understand how it feels for those accessing the neonatal service from October 2018 to the present day (this time period did not cover the episodes of care being reviewed through the Panel's 2016-2018 'look back' exercise).[7]

2. A review of evidence available to demonstrate key elements of the service requested from the Health Board and wider stakeholders.

3. Clinical case assessments of some babies admitted to the neonatal service who either died or required transfer out for ongoing intensive care during the year 2020 (the sickest babies presenting to the neonatal service).

4. Conversations with staff and wider stakeholders to understand current service provision and how this translates to staff providing care. All information given was corroborated from multiple sources. No individual opinions have been cited.

All documentary evidence and copies of clinical case notes were uploaded to a secure server to be accessed by the review team. Full details of the methodology can be found at *Appendix B.*

[7] *The Panel's clinical review work is currently focused on around 160 episodes of care provided by the Health Board predominantly between January 2016 and September 2018. This includes the 43 incidents which were originally identified in the Royal Colleges' report. These episodes of care have been sub-divided into three categories: maternal mortality and morbidity; stillbirths; and neonatal mortality and morbidity. The first two categories are now complete and the corresponding thematic reports can be accessed here on the Welsh Government's website. The Panel's Clinical Review Strategy can also be accessed via this webpage.*

4. TIMELINE AND INTERIM ESCALATION

The deep dive was conducted over a number of months, with each key workstream commencing as detailed in Table 2.

Table 2: *Deep Dive Timeline*

Date	Phase
04 May 2021	Documentary evidence review commenced
01 July 2021	Family listening exercise survey launched
07 July 2021	Clinical case assessments commenced
19 – 21 July 2021	'Virtual' Health Board visit involving the first phase of staff conversations
05 – 15 October 2021	Second phase of staff conversations

In the first three months of the deep dive, the review team identified significant issues. The findings clearly triangulated between workstreams. After careful consideration the review team escalated some areas which it determined were impacting on the consistent provision of safe and effective care that would be expected in this level of neonatal service in the UK.

The review team's concerns were detailed in a formal escalation report submitted on 24 August to the Welsh Government and the Health Board (see *Appendix C*). The escalation report set out a number of actions. These included immediate interventions required to improve safety and assurance mechanisms alongside medium and longer-term actions to support ongoing effectiveness. A statement was issued by the Minister for Health and Social Services detailing these concerns and the immediate and short-term actions being taken by the Health Board.[8]

In order to support the Health Board and at the request of the Welsh Government, the review team formulated a comprehensive action plan template (see *Appendix D*) for implementation by the Health Board to provide assurance that the service was taking the immediate actions required whilst the deep dive continued to completion. The Panel is supporting the Health Board to address the actions identified within the interim escalation report. To date the Panel has seen that progress has been made and this remains an ongoing process.

The deep dive continued following the interim escalation and this report concludes the review process, albeit that the Panel will continue to support the Health Board in implementing the report's recommendations, as well as provide the necessary level of oversight and challenge to its improvement programme.

Although the deep dive workstreams were conducted concurrently, the report presents the 'listening exercise' findings first to ensure that all readers are cognisant of the impact of a Neonatal Unit admission on families. This is followed by the evidential review and the clinical case assessments.

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[8] *Welsh Government, Written Statement: Cwm Taf Morgannwg University Health Board – Interim findings from the Independent Maternity Services Oversight Panel's deep dive review of neonatal care. 07/09/2021 (accessed 29/09/2021).*

5. FAMILY EXPERIENCES AND ENGAGEMENT

There is clear evidence that parental involvement in neonatal care is beneficial to long-term outcomes for babies and their families.[9] There are a number of nationally-recognised frameworks available to support the integration of families into the neonatal service including the Bliss Baby Charter,[10] Unicef Baby Friendly Initiative[11] and the British Association of Perinatal Medicine (BAPM) Family Integrated Care best practice framework.[12] An all-Wales Family Integrated Care document was produced in 2018/19 with a recommendation that units develop an implementation plan. It is also important to ensure that parents' views are heard and used to inform improvements within neonatal services.

5.1 ENGAGEMENT WITH PARENTS

Routine mechanisms for family engagement appear to be in place. The review team saw reference to parental feedback collection being undertaken within the neonatal service in the minutes of ward meetings and risk and governance meetings. These were said to be positive, but the team was unable to review the data or the thematic analyses arising from these; the information was requested but was unavailable within the timeframe for writing this report.

The review team was informed that the most prominent theme of the feedback received during 2020 related to the challenges experienced by families as a result of COVID-19 visiting restrictions. Comprehensive detail of numbers and themes of concerns, complaints and compliments received by the neonatal service during the periods of 2019/20 and 2020/21 had not been made available to the review team by the time of writing this report. As a result, evidence to confirm whether or not the Health Board is effectively using feedback within the above processes to influence practice has not been reviewed.

In line with the Royal Colleges' recommendations there is a workstream within the Neonatal Improvement Plan to develop the range and scope of engagement with women and families. The latest information provided by the Health Board indicated that an engagement plan has been drafted and the development of engagement processes and systems continues to be supported by the appointment of an Engagement Lead. The development of Patient Related Experience Measures (PREMs) went live in maternity services in September 2021 as a pilot and is planned to be rolled out to neonatal services and more widely within the Health Board.

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[9] *O'Brien K, Robson K, Bracht M, et al. Effectiveness of Family Integrated Care in neonatal intensive care units on infant and parent outcomes: a multicentre, multinational, cluster-randomised controlled trial. Lancet Child Adolesc Health 2018;2:245–54.*

[10] *Bliss Baby Charter. 2020 (accessed 11/10/2021).*

[11] *Unicef UK. The Baby Friendly Initiative. 2016 (accessed 11/10/2021).*

[12] *British Association of Perinatal Medicine Framework for practice. Family Integrated Care. 2021 (accessed 11/10/2021).*

Despite improvements in family engagement by the maternity service in the two years since the Royal Colleges' findings were published, the review team are not assured that the Health Board has achieved mature mechanisms to elicit feedback and demonstrate that the experiences of families using the neonatal service have been listened to and acted upon.

That said, it is recognised and important to emphasise that the restrictions associated with the COVID-19 response have impacted significantly on planned progress in this area. The Health Board are increasingly looking to draw on and replicate the learning and good practice which has developed within maternity services around feedback and engagement.

5.2 FAMILY LISTENING EXERCISE

Appreciation of the experiences of families using the neonatal service was central to the deep dive. A survey of families' experiences was developed and publicised by the Health Board, both internally and via its social media channels on behalf of the Panel (see *Appendix E*). Families whose babies had been admitted to the Health Board's neonatal services from October 2018 onwards were invited to complete the survey which was hosted on the Health Board's website. The survey was 'live' between 01 and 31 July 2021. Responses were received from over 100 families, of which 70 were specifically regarding the neonatal care they received at PCH.

The following sections present the analysis of survey responses received. The Panel has always sought for the voices of women and families to be at the heart of its work. As such, quotes from families about their experiences of neonatal care have been used to illustrate the thematic findings detailed below. These have then been placed within the context of the total number of survey responses received using visual representations.

5.3 FINDINGS

The listening exercise provided both quantitative and qualitative responses from families.

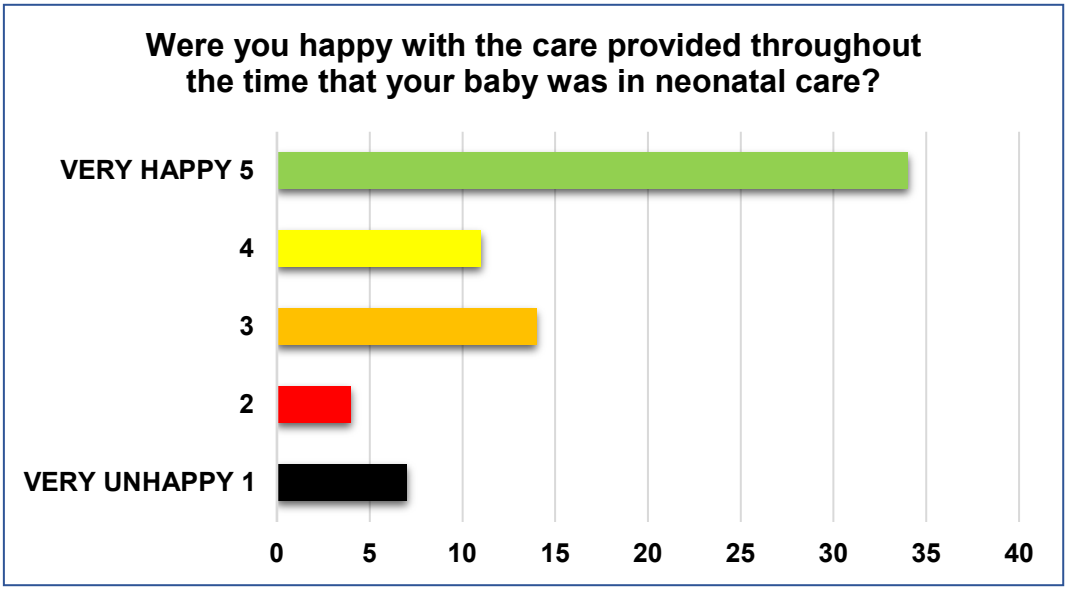
Interpretation of the findings from the quantitative and qualitative responses produces some notable differences. For example, some parents responded with high scores to the questions graded on the Likert scale and were positive about the service and, in particular, its staff. They were grateful and appreciative of the outcome for their baby and some of the examples of what a good service looked like for them are highlighted in Section 5.4.

However, when parents included free text feedback on their experiences they often highlighted specific elements of care that they felt could have been improved, even though their overall assessment may have been positive. It is important not to look at this reflective feedback purely as negative criticism. These experiences provide rich evidence for learning and can form the basis for work with families to co-produce a service that meets their vision of what good looks like.

The main quantitative responses are presented first in graphical format (figures 1-6) followed by a qualitative analysis illustrated by direct quotes from families.

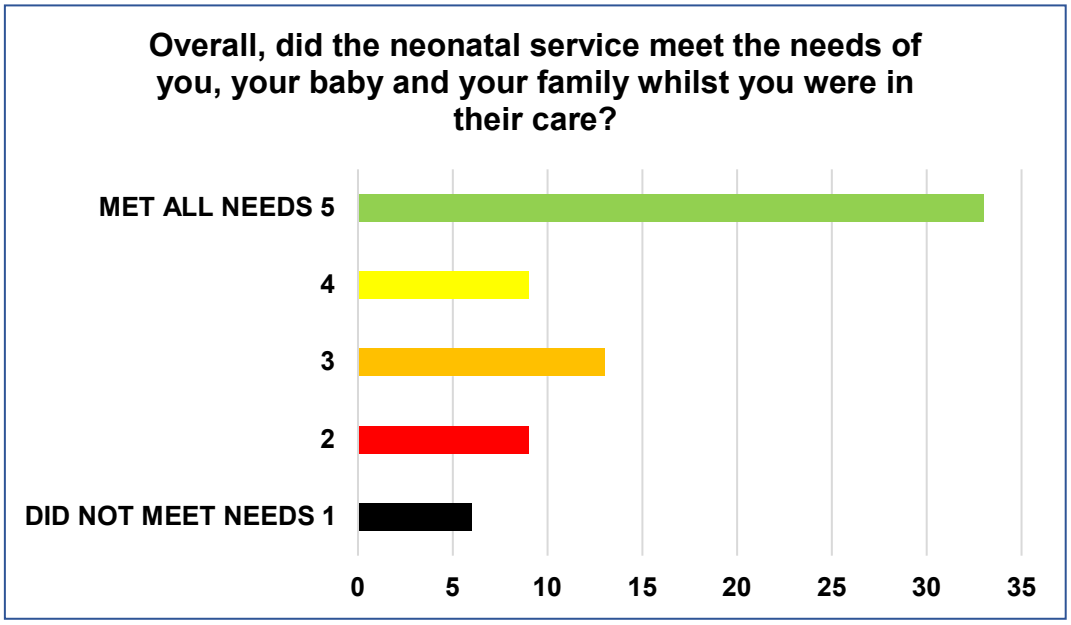
- 45 out of 70 of the families who completed the survey responded positively to the question "*Were you happy with the care provided throughout the time that your baby was in neonatal care?*"

Figure 1: *Survey Responses Regarding Happiness with Care Provided*



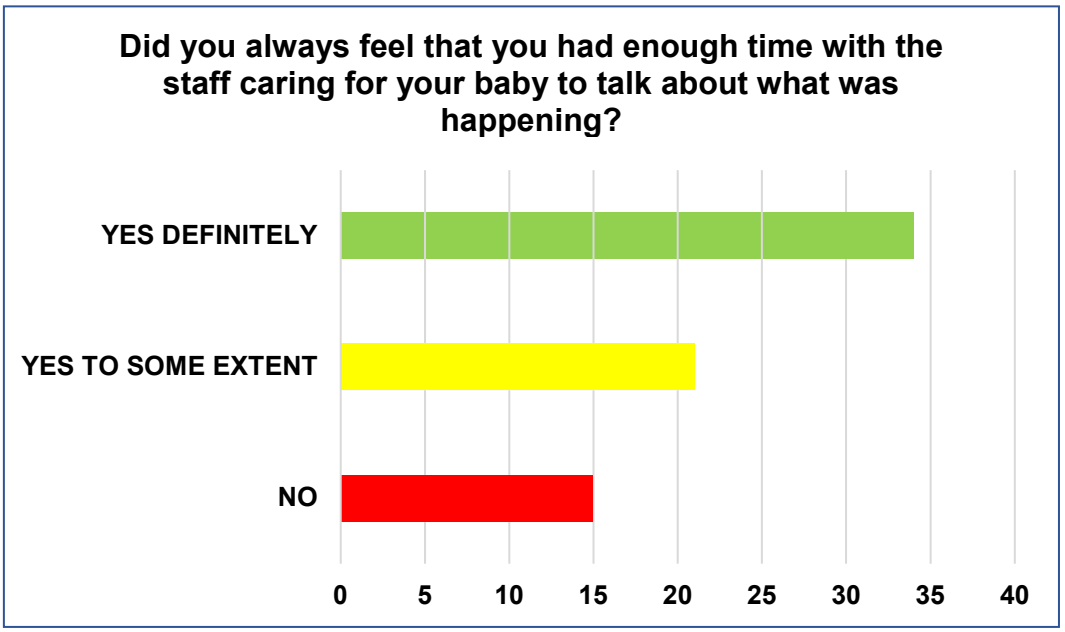
- Similar responses were received to the question *"Overall, did the neonatal service meet the needs of you, your baby and your family whilst you were in their care?"* 42 out of 70 of the families responded positively.

Figure 2: *Survey Responses Regarding Whether Care Met Needs*



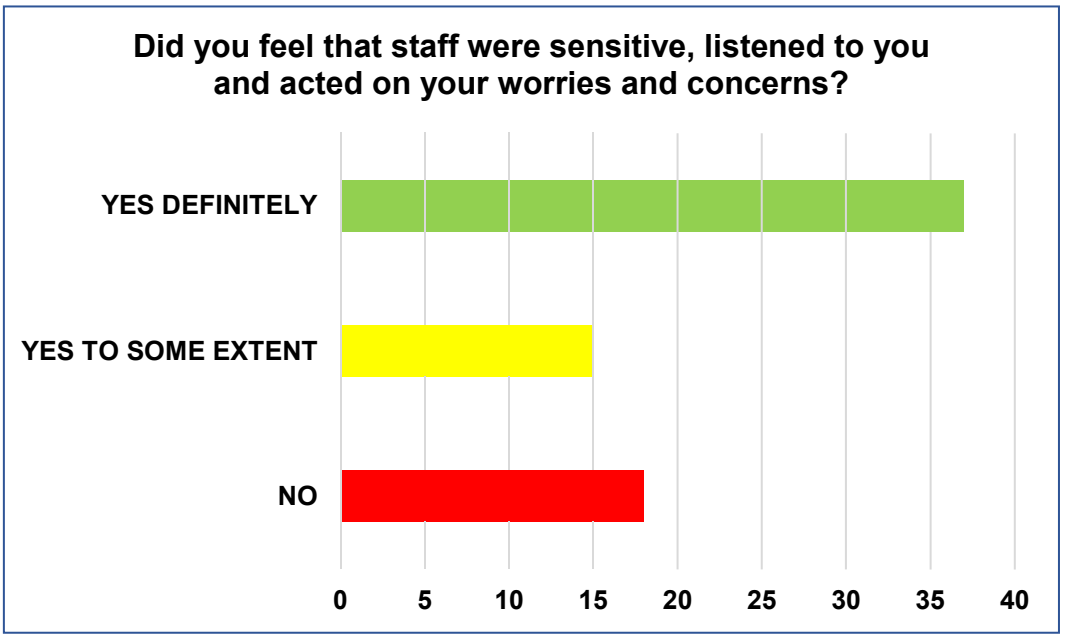
- Only 34 of the 70 families who responded to the survey answered 'yes definitely' to the question "*Did you always feel that you had enough time with the staff caring for your baby to talk about what was happening*?"

Figure 3: *Survey Response Regarding Time to Discuss Care*



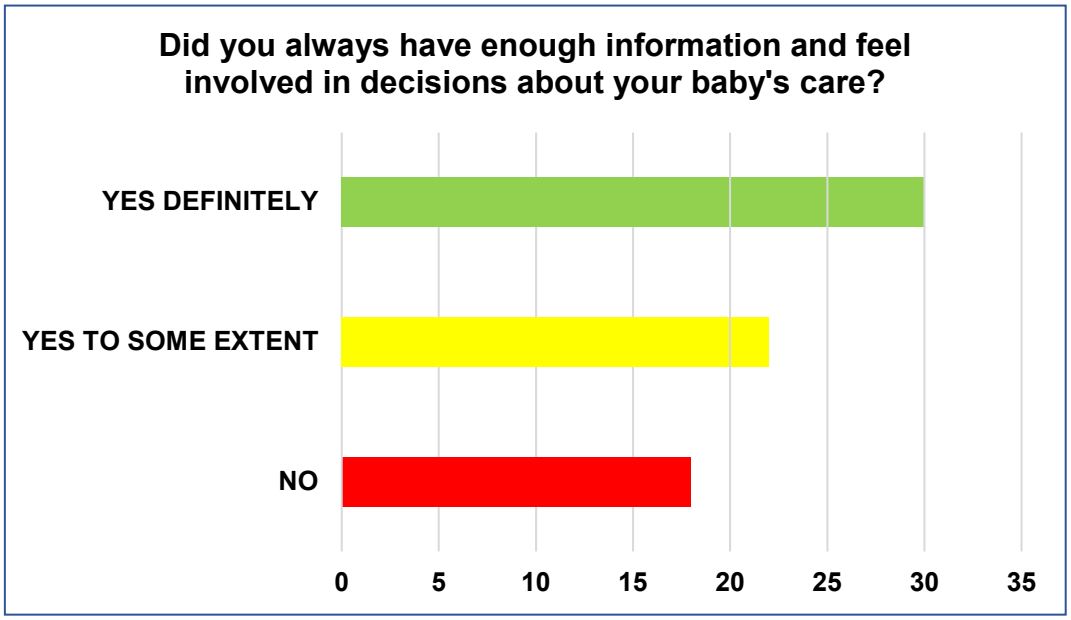
- 37 of the 70 families said "yes definitely" when asked "*Did you feel that staff were sensitive, listened to you and acted on your worries and concerns?*"

Figure 4: *Survey Responses Regarding Staff Behaviour*



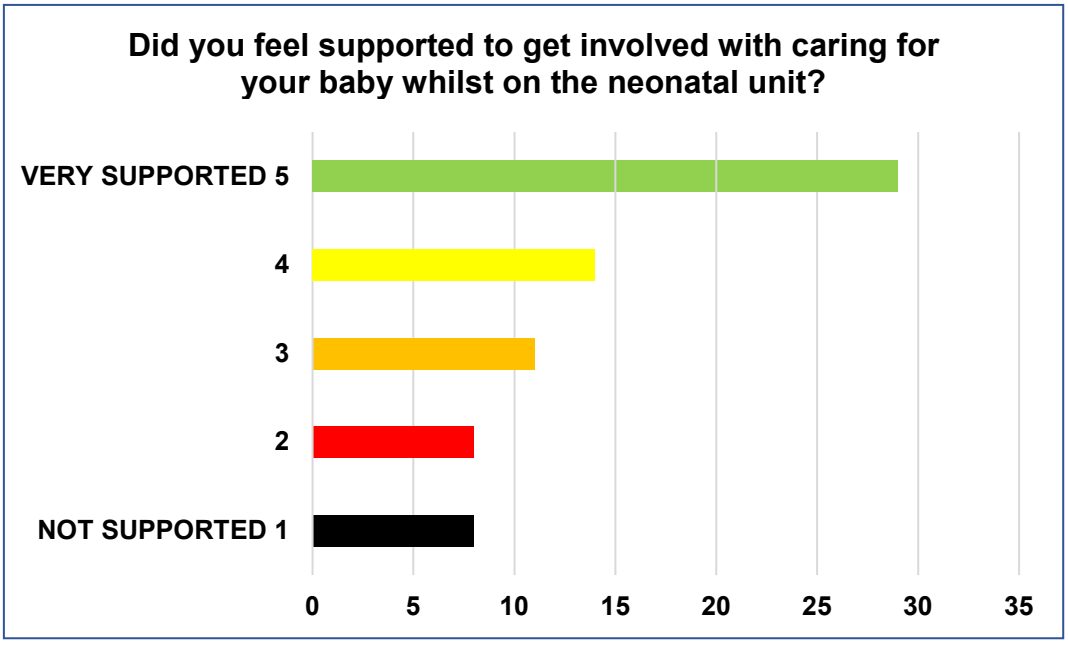
- 30 of the 70 families who responded to the survey felt they always had enough information and were involved in decisions, whilst 18 did not.

Figure 5: *Survey Responses Regarding Access to Information*



- There was a degree of variation in how families rated feeling supported to get involved in caring for their babies whilst on the Neonatal Unit.

Figure 6: *Survey Responses Regarding Feeling Involved in Care*



5.4 WHAT GOOD CARE LOOKS LIKE

The in-depth qualitative analysis of the stories and experiences to some extent contrasts with the snapshot of opinion from the scaled responses but provides a far richer and deeper understanding of families' views of care and services.

Many families responded with positive feedback for the team, particularly regarding the dedication of nursing staff overall and were keen to thank the team for 'saving their baby'. It was clear that parents were able to identify areas of good care and support they had received, as well as emphasising how it met their baby's needs and worked well for them.

Parents described a neonatal service they had experienced which puts the care of the whole family at the centre; where the service worked well, parents provided positive comments about their experience. Those elements of care and support are identified below.

Supportive staff and culture with strong personal contact in a comfortable environment:

> "The nurses made us feel comfortable and explained everything to us so we could understand as we were very worried parents." (2018)

> "Staff were so friendly and supportive. Always there when you were struggling, never judgemental, and so caring with my baby." (2020)

Staff providing information and explanations in timely and well-communicated way:

> "I could ask the staff anything and they'd stay and explain it." (2020)

> "Everyone communicated baby's care well. I understood what he was receiving what machines he was on, they gave advice and emotional support to me." (2020)

Where staff were clearly thoughtful, empathetic and good communicators and mindful of parents' needs, especially when they may be struggling or stressed in a difficult and strange situation:

"The staff were absolutely wonderful, and so helpful. We were lucky that our son was only there 5 days but the staff couldn't have done enough. I was set on breastfeeding and the nurses helped me to achieve this, on day 3, and supported me with pumping/hand expressing until then." (2020)

"I suffered with anxiety, depression and PTSD when my daughter was born 27 weeks not only did they help my daughter they helped me anytime I was crying or getting frustrated they were there right by my side." (2020)

They recognised the impact of the COVID-19 pandemic and the limitations it posed and although many were unhappy with the situation, a number did understand the actions undertaken to address the impact:

"Even though COVID regulations were in place it was made clear that we could visit and stay with baby for as long as we liked. Staff were excellent." (2021)

"The support to us as parents especially during COVID." (2021)

Parents appreciated consistency of approach, decisions and opinions with clarity around routine and the timing of care and they wanted a professional and personable service:

"I liked the daily routine and consistency in timings such as the morning check ups, clean and lights going on and turning off at consistent times each day. It helped bring rhythm to the day." (2019)

"They also made sure I was looked after and comfortable, making sure I was eating and drinking plenty. I loved that I could stay overnight to get myself into a routine but they were there if I needed them or had any questions." (2021)

They appreciated provision of good information and access to their baby with the ability to visit and contact the unit when they wanted:

"I could go to see the baby when I ever I wanted to." (2020)

"Whilst I was on stuck maternity ward and separated from my baby, I was unable to get out of bed to go see her for days. So the SCBU staff set up an iPad video call so I could see my baby and it helped me massively to be able to see her at least. They also kept me well updated on how she was doing at all times." (2021)

They highlighted opportunities and support to ensure that they were involved in decisions about their baby's care, together with the importance of one to one care for their baby and the family:

"1-2-1 nurses who you could develop a bond with. Support to "parent" your own baby by doing things such as nappy changes and care." (2019)

"Always feel involved doing care for my daughter and always been explained what's happening." (2021)

5.5 AREAS FOR IMPROVEMENT

Across the responses from parents there were a number of areas for learning and improvement which were evenly distributed throughout the time period covered. The insight provided by parents' experience provides a major opportunity to develop a service built around their needs.

Addressing these themes will ensure that the neonatal service experienced by women and families continues to improve.

Key themes identified for learning and improvement were:-

- communication and information;
- involvement in decisions about care;
- variability and inconsistency in service;
- emotional support;
- breastfeeding support;
- discharge and support at home.

These issues have been explored further as they provide a rich source of learning which will enable the Health Board to develop the women and family-centred services they aspire to.

5.5.1 Communication and information

Parents talked about the importance of clear and timely information to reassure them and enable them to understand what was happening with their baby. The Neonatal Unit can be a strange and distressing environment and parents are often anxious for updates about their baby, as well as reassurance that they are fully aware of their baby's condition. Good communication and information are key for parents to feel involved in their baby's care.

Their stories and experiences revealed that at times communication was poor and information inconsistent. This resulted in confusion and concern for families.

> "Consultants have a tendency to talk over parents to the nurses during morning rounds rather than include them in the conversation. While I appreciate that medical staff need to communicate, being in neonatal is scary and leaves parents feeling powerless and a little lost. Being included more, rather than being briefed with a few sentences at the end almost as an afterthought, would help parents regain a sense of control." (2021)

Parents want doctors to take time to share information, to ensure that parents understand what is happening, to listen to them and to be empathetic.

Parents did not always receive the right information at the right time and were left confused, ill-informed and concerned.

> "The handover process was also something we found very difficult, missing key information and not handing over parent requests was terrible." (2021)

> "I only received basic updates from the nursing staff. My partner and I were both given the impression that the doctors were too busy to speak to us." (2019)

5.5.2 Listening and concerns

A key element of communication and supporting parents is the ability to listen to their concerns and respond appropriately. Some of the families who shared their experiences discussed how they tried to bring issues to the attention of staff or to raise concerns subsequently, not always with success. They talked about being ignored or feeling unheard.

> “Our concerns were mainly with feeling ‘left out of the loop’ with our daughters care. We felt more as though we were merely visiting her, rather than being actively involved. We felt as though we had no control or say in our daughters care and were powerless to voice concerns.” (2019)

> “I was made to feel even though they listened to my concerns they were not taken seriously. Which left me questioning where to turn next.” (2021)

> "Weren't really bothered on my views, used the pandemic as an excuse.” (2020)

5.5.3 Separation from baby – communication and support

Women who were still in maternity service wards or were themselves receiving high dependency or intensive care talked about the impact of being separated from their baby who was in the Neonatal Unit. The importance of information about the location and condition of their baby cannot be stressed enough and, although the Health Board has recognised this issue, it still needs to be addressed and for staff to understand the impact of separation:

> “Brilliant job looking after my baby but for 9 hours from having baby I had no clue where he had gone, nobody was telling me anything.” (2020)

5.5.4 Involvement in decisions about care

It is good practice to involve women and families in their care and that of their baby and the examples of good practice given by parents highlight this:

> “I was asked directly about every decision made in my baby’s care and staff respected my choices without question.” (2021)

However, a number of parents were unhappy with their ability to influence or even understand what was happening to their baby. The feeling of exclusion and decisions being made without parental discussion was repeated in many of the survey responses.

> “Some of the staff were okay but the majority were absolutely clueless. We weren’t kept updated with what was happening with my daughter or her test results they were put straight into the notes. They didn’t ask permission to do certain tests and never found the cause. We were not aware that baby would be on antibiotics until the midwives on the antenatal ward told us.” (2020)

5.5.5 Variability and consistency in service

Issues emerged that reflected inconsistency in staff practice, decision-making and advice. The rotation of staff, particularly at weekends, seems to have resulted in wide variation in the information shared and practice.

There is a sense that the quality of welcome and approach was dependent on the staff that families met. It is particularly concerning that some parents’ experiences reflected how “uncomfortable” they were made to feel.

> “My decisions were not always listened to and the staff and doctors were always telling me different things. Different doctors and nurses would say different things every day. So, a consistent plan that everyone would follow would have been helpful.” (2019)

> “Some staff weren't very happy with us holding our baby and didn't want us involved in her care which made us feel very upset and when these certain people were on shift made us feel very uncomfortable there. Then there were other staff would come over for a chat, give us advice and really felt like good friends and could never thank them enough for all their chats.” (2018)

5.5.6 Emotional support

Parents are often stressed and worried during their experience of a baby being cared for in neonatal services and should be offered emotional support and counselling with information about support groups.

There were some examples of good practice but from the experiences shared by parents, there appears to be a gap in offering emotional support and counselling.

"Not one nurse or doctor would ask if I was okay or give any sort of support at all." (2020)

"No support was given even though I have a history of PTSD, anxiety and PND (from previous NICU experience)." (2021)

5.5.7 Breastfeeding support

Many women shared their experience of feeding their baby during their time in neonatal care. The stories highlighted particular issues with a lack of support for establishing breastfeeding, the sense that formula feeding was preferred by staff and that women lost the choice to breast feed. Standards for breastfeeding support are set out within the All Wales Neonatal Standards domain 3f.[13]

"The support provided for my son was excellent and he was well cared for. However I was treated poorly and made to feel under pressure with regards to being unable to produce colostrum. Therefore, I was pushed to bottle feeding for my child to leave the ward." (2021)

"The breastfeeding support was a mixed bag, some staff were amazing, but certain members of staff (especially those in special care) are complete uneducated about breastfeeding. Formula was pushed by special care staff, with no explanation given to me about why it was necessary. My baby was brought over to the ward at 2am and left with me even though I had yet to successfully feed her." (2019)

5.5.8 Discharge and support at home

Parents presented some examples of good practice but there was a sense from many that discharge could be seen as a slightly uncertain process for parents with a lack of information, delayed or last minute doctors' decisions, sudden timescales for discharge, a rushed process and a lack of support.

[13] *Neonatal Network Steering Group, (2017), All Wales Neonatal Standards – 3rd Edition (accessed 12/11/2021).*

"Very rushed discharge only knew the day my baby was coming home that she was coming home." (2019)

"We were told the baby would be discharged after the doctors rounds in the morning. We were finally allowed to take him home late evening, in the snow, after waiting around all day." (2019)

A significant issue emerged regarding a lack of support at home for parents and babies. There is no doubt that the COVID-19 pandemic has had a huge impact on family access to and the experience of any neonatal service across the UK due to hospital restrictions.

Parents recognised the difficulties created by the limitations on parental access and expressed appreciation of staff actions to improve experiences. However, the review of all responses did identify issues across the period in question (2018 - current), not just in response to current restrictions.

The main issues arising focused on community based services and included a lack of community midwife and health visitor support and advice, with only one visit experienced in some instances.

Contact with the neonatal outreach team and specialist nurses was praised.

"Community midwife I saw once. Had never met her before and didn't do much for me." (2021)

"First visits yes, but then 2 weeks later the pandemic hit so no HV visits for 1 year." (2019)

"I have had one phone call from my community team in 6 months." (2021)

All families completing the survey were responded to with thanks and with details of how to access support through the Cwm Taf Morgannwg Community Health Council or the Health Board.

5.6 SUMMARY

The Panel are very grateful for the families who contributed to this listening exercise. It is a powerful portrayal of the significant impact of the experience of care at such a difficult time, even when the clinical outcome is positive. It also demonstrates how valuable good care and support can be and it is important to note the positive experiences described by many of the families.

The experiences shared were consistent with those identified in the Royal Colleges' review and clearly demonstrate that there is considerable work required to improve communication to the standard which would be expected. These issues triangulate to the findings from the Clinical Case Assessments where family communication has been identified as a theme, in addition to those from the evidence review and stakeholder conversations which are discussed in subsequent sections of this report.

5.7 RECOMMENDATIONS

In order to respond to the findings from the feedback from families, the Health Board should address the following:

- The Health Board should complete and implement its family involvement and engagement strategy at pace and provide a robust mechanism for family feedback that is compatible with the mature engagement approach developed across maternity services. The strategy should be personalised to the needs of women and families using perinatal services and build upon feedback from both current and past service users **(1.1)**.
- Current breastfeeding support should be reviewed to ensure there is sufficient capacity to meet the needs of service users **(1.2)**.
- Peer support networks should be developed for families both within neonatal services and following discharge **(1.3)**.
- The neonatal service should have dedicated psychological provision to support families and staff **(1.4)**.
- A framework for Family Integrated Care should be implemented and its impact evidenced **(1.5)**.

6. GOVERNANCE, ASSURANCE AND ACCOUNTABILITY

6.1 CONTEXT

Neonatal services cannot be considered in isolation. They are inextricably linked to maternity services and the wider Health Board as well as to maternal and neonatal networks. There should be appropriate mechanisms for oversight of all processes and outcomes at each organisational level to ensure safety and effectiveness.

The review team examined a wide range of available documentation (see *Appendix B)* and spoke to Health Board staff at all levels from ward to Board as well as wider key stakeholders. These conversations took place virtually due to the COVID-19 response and restrictions on travel. The review team acknowledge that a common theme across these conversations was an enthusiasm and willingness to improve practice.

By reviewing evidence regarding the neonatal service and how this fits within the wider Health Board, the Maternity and Neonatal Network as well as NHS Wales' systems, the review team was able to identify themes and areas for improvement.

The deep dive focused on the evidence as it related to the neonatal service. As such, the findings and recommendations regarding governance and assurance relate to the expectations of robust clinical governance and assurance mechanisms capable of ensuring the quality of care from the service to Board.

The review team are aware that Healthcare Inspectorate Wales (HIW) and Audit Wales (AW) undertook a joint review of quality governance and risk management arrangements within the Health Board in 2019 which made 14 recommendations including improving risk management, complaints (concerns), patient safety and organisational culture. The Health Board accepted the findings and responded to the report's recommendations. HIW and AW reviewed progress in 2021[14] and whilst they identified good progress, they concluded that there was still work to do and will continue to monitor the Health Board's actions against the issues identified in their report.

6.2 GOVERNANCE AND ASSURANCE FROM UNIT TO BOARD

The assurance and governance of neonatal services were considered at three levels: (i) Local Clinical Service, (ii) Integrated Locality Group (ILG) and (iii) Health Board. The team reviewed available evidence including information gained via stakeholder meetings, observation of meetings including service meetings and Health Board committee meetings to consider each level.

[14] *Healthcare Inspectorate Wales, Audit Wales. An overview of Quality Governance Arrangements at Cwm Taf Morgannwg University Health Board: A summary of progress made against recommendations. 2021 (accessed 24/10/2021).*

6.3 Local Clinical Service Assurance

The review team found evidence that several neonatal service governance structures exist which contribute to, and impact on, formal safety and effectiveness within the Neonatal Unit.

A Neonatal Forum has been established and meets regularly: part of its role is to develop consistency of care across the Health Board. The Neonatal Quality Review and Lessons Learnt group has been identified within the Neonatal Governance flowchart.

The review of minutes from meetings including the Children and Young People Quality, Safety and Risk Committee, Neonatal Forum and the PCH Risk and Governance Meeting for Children and Neonates confirmed that multidisciplinary attendance is not consistently achieved.

In addition, the standard and quality of the agendas, action plans and minute preparation from these meetings is inconsistent, impacting on the ability to track progress from one meeting to the next and across the governance structures.

As noted in the review of the annual report, it was not evidenced at a local clinical service level that robust and accurate data are available and used to triangulate activity, outcomes, clinical audit, incidents and themes from family feedback in a way which supports the clinical team owning the assurance processes for their service. This has the potential to undermine many other governance and assurance processes.

Data should be assessed against service standards. The under reporting and misclassification of incidents and acceptance of high levels of term admissions may indicate that opportunities to recognise poor levels of quality and safety alongside areas of improvement within the service are being missed.

The review team was unable to find evidence of joint ownership of assurance and governance of aspects of care that are co-dependant on neonatal and maternity services. Moreover, there exist differing perceptions of the robustness of these processes within the two services.

6.4 Integrated Locality Group Assurance

The review team identified evidence that the Merthyr and Cynon (M&C) ILG governance structure is formally established with Quality Safety and Experience meetings, clear leadership and dedicated Quality and Governance posts. In addition, new staff members have been appointed into governance posts within the ILG.

Whilst there were signs of progress in the development of the ILG and Health Board governance processes, as well as stakeholder conversations indicating a desire to develop greater assurance, staff stated that the governance structures feel complex.

The risk register made available to the review team had duplicate or near duplicate entries and several review dates were overdue.

The ILG Medical Director made clear that a key part of the role is to ensure services are well led and a good safety culture is supported by their role and structures within the ILG.

The review team saw evidence of reporting from the M&C ILG to the Health Board Quality and Safety Committee including neonatal updates. However, these processes are all relatively new.

Detailed discussion of clinical outcomes and clinical audit was not evident in the documentation reviewed which pertained to the senior ILG and Health Board management functions.

6.5 HEALTH BOARD ASSURANCE

It was evident within the Health Board's governance processes and meeting structures, including Quality and Safety Committee, that the quality of care within maternity and neonatal services are a priority. The documentation seen and discussions observed demonstrated regular reporting of progress against the improvement programme workstreams. There was evidence of scrutiny and challenge, as well as a desire for detailed assurance from Independent Members.

However, it is a significant concern that the current Neonatal Unit clinical governance processes have not flagged the safety and effectiveness issues that the review team has identified (for example, unplanned extubation rates) and as a consequence, these issues have not been visible to the Health Board. The safety critical nature of the concerns and the failure to consistently achieve the standards expected of a similar neonatal service in the UK did not appear to have been presented to the Board until the interim escalation of August 2021.

The key issue identified by the review team was that there appeared to be a belief within the Health Board that whilst services required improvement, they were safe and had been safe in the recent past. A detailed understanding of 'what good looks like' and the gaps between what the service delivered in 2020 and what it would be expected to deliver in terms of safety and effectiveness were not visible in reporting to the Health Board's Quality and Safety Committee and to the Board.

For example, one impact of inadequate incident reviews not identifying the number of SI's and modifiable factors within these babies' outcomes was that these cases were not flagged in the Health Board's incident data. Fundamental to Board assurance is the need to have accurate incident analysis and the gaps identified may have contributed to the senior management at ILG and Board level not understanding the quality of care being delivered. A further example might be data regarding progress in reducing term admissions to the Neonatal Unit. This key indicator of improvement in the effectiveness of coordinated maternity and neonatal services does not appear to have been utilised or communicated within Health Board reports.

6.6 FINDINGS

There has been significant Health Board-wide reorganisation: this overlapped with service delivery concerns and the COVID-19 pandemic. A new operating model of three ILG's based around the geographical areas was implemented in 2020. These are clinically led and managerially supported to ensure a focus on quality and safety. ILG's and their Clinical Service Groups (CSG's) deliver acute, primary, community and mental health services for their local communities. Each ILG has Medical, Nursing and Operational Directors and a Head of Quality and Safety to support the quality governance agenda.

Women and Child Health CSG's were aligned with the ILG structures from April 2021. This has resulted in alignment of the senior leadership team for the delivery of care for neonates, women and children in the Merthyr and Cynon locality. Of note is that the two neonatal services within the Health Board are aligned to separate ILG's. This may complicate some aspects of clinical governance and practice alignment across both units. There have also been recent changes at executive level: Chief Executive Officer (September 2020), Interim Medical Director (July 2021) and Health Board Chair (October 2021).

The neonatal service governance structures are defined within the wider Health Board policies and procedures. The service should be able to demonstrate that it provides safe and effective care and evidence this at ILG, Board and network level. The escalation of concerns in August 2021 identified that this was not consistently the case.

In conversations at all levels of the Health Board and with stakeholders, the review team was informed that historic governance processes have led to a culture of blame which current teams are working to improve but acknowledge that this remains a long-term focus. It was conveyed that there was a cultural legacy that governance was part of the nursing function rather than being multidisciplinary. The implementation of the ILG and CSG levels of assurance are new but it was indicated that this change has created uncertainty for staff in understanding governance and assurance processes.

It was clear that staff are trying to make headway to deliver safe services but there was evidence of delays against improvement trajectories, in part due to the COVID-19 response. The review team was concerned by the lack of protected time allocated to senior nurses for non-clinical activity which potentially impacts on their attendance and input into these activities and is unsustainable in the longer term.

Assurance regarding the neonatal service at Board level was based on the absence of internal escalation of safety issues, rather than evidence demonstrating a safe and effective service, for example through the routine monitoring of a quality dashboard or incident metrics. It was emphasised that this is something the Board and Quality and Safety Committee need greater focus on. It was recognised by the Health Board that this approach needs to develop alongside culture change to support honesty and transparency. This was noted in a number of conversations as the 'new way of thinking' from Board level with a focus on openness and learning but is taking time to be embraced at all levels.

External peer review is an invaluable tool for improving all aspects of clinical care. This 'fresh pair of eyes' approach can provide challenge which is of benefit to organisations at all levels. It is of particular benefit where complacency or 'group think' occurs, as identified in the Kirkup report.[15] One way of providing external review is through the Wales Maternity and Neonatal Network, which currently undertakes peer assessment of neonatal services.

A network peer review at PCH was undertaken in 2019. This recognised areas of good practice including excellent family facilities, the achievement of stage 2 BFI assessment and clearly commended the commitment of the clinical team. Although no immediate risks were noted, the methodology for the peer review was very different from that employed during the deep dive. However, there were concerns raised regarding term admission rates and transitional care provision, as well as clinical governance processes including incident and mortality review.

There was evidence of work at network level engaging groups in specific areas including data, guidelines, perinatal optimisation, family care and workforce. The network's role is advisory and therefore it does not have a mandate for the work it produces, unlike that of Operational Delivery Networks in England and Managed Clinical Networks in Scotland. These are commissioned to provide management of service capacity, clinical pathways and have a formal assurance role. To achieve these functions the Wales Maternity and Neonatal Network requires review.

The evidence review and stakeholder conversations have identified:-

- challenges with neonatal intensive care pathways across South Wales;
- a lack of governance oversight with poor risk management system functionality;
- local units having to undertake cot location, taking clinical staff away from very sick babies.

For these reasons a review of neonatal services across Wales is suggested akin to the Neonatal Critical Care Transformation Review in England.[16] This should include capacity, patient flows, transport services and the network's role within operational consistency and assurance.

6.7 SUMMARY

The safety and effectiveness of a service is the collective responsibility of those invested in the service and not the sole responsibility of clinicians. It is clear from the above analysis as well as stakeholder conversations that clinical governance processes were not reducing the level of clinical risk and not therefore driving improvements in care.

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[15] *Kirkup W. The Report of the Morecambe Bay Investigation. 2015 (accessed 25/10/2021).*
[16] *NHS England and NHS Improvement. Implementing the Recommendations of the Neonatal Critical Care Transformation Review. 2019 (accessed 25/10/2021).*

It was not evidenced that within the neonatal service robust and accurate data was being used to triangulate activity, outcomes, clinical audit data, incident data and themes from family feedback. This potentially undermines many other governance and assurance processes.

Clinical service leaders are best placed to have oversight of all data concerning their service to provide assurance and escalate concerns. They need to be supported and enabled to provide a cohesive analysis of service data, concerns, challenges and successes with agreed prioritised improvement ambitions on a regular (at least annual) basis. This needs to be visible from service to Board via the ILG reporting processes, with a robust dashboard that highlights clinical outcomes and metrics of safe care.

6.8 RECOMMENDATIONS

In order to respond to the governance, assurance and accountability findings, the Health Board should address the following:

- Health Board governance processes need to demonstrate sustained achievement of improved safety and clinical effectiveness within the neonatal service **(2.1)**.
- The Health Board must improve its ward to Board assurance processes with specific focus on the quality of incident reviews and how any safety-critical findings are identified and shared through the Integrated Locality Group governance structures to the Board. This must demonstrate sustained advances in the safety and effectiveness of neonatal service provision at Prince Charles Hospital **(2.2)**.
- Evidence of detailed discussions taking place regarding clinical outcomes and clinical audit should be provided to the Integrated Locality Group and Health Board committees to ensure Executive level oversight of clinical performance and trajectory **(2.3)**.
- Clinical audit needs to be valued, resourced and utilised at all levels and must be of a high quality to promote confidence in applying findings to developing services **(2.4)**.

In addition, the Welsh Government may wish to consider the following to support wider learning for other health services in Wales:

- A review of neonatal critical care services in Wales is suggested. This should include capacity, patient flows, transport services and the network role within operational consistency and assurance **(8.1)**.
- Healthcare providers and commissioners need to actively look at high risk clinical services and seek assurance that outcomes are in line with national standards and that services are safe. Where standards cannot be met, this should be shared transparently within an organisation and escalated so that services can be supported to improve **(8.2)**.

7. NEONATAL SERVICE WORKFORCE

An understanding of the neonatal workforce, both in terms of structure and function, is key to understanding the effectiveness of the service.

7.1 FINDINGS

7.1.1 Medical

Medical leadership for the neonatal service comes from the Clinical Director for paediatrics who has worked in this role for between three and four years. Until recently there were no PCH consultants with designated leadership responsibilities within the neonatal service.

The consultant staffing model raised concerns in relation to safety and consistency and does not meet BAPM standards.[17][18] Cover for the Neonatal Unit is provided by a 'Consultant of the Week' arrangement from 08:30 - 12:30 Monday to Friday. Following closure of the RGH Neonatal Unit, 16 consultants from PCH and RGH contribute to covering the Neonatal Unit at PCH, seven of whom undertake only two weeks annually. Eight of the remaining consultants undertake between two and a half and four weeks annually. One RGH consultant undertakes 10 weeks annually. Consultant cover for the Neonatal Unit from 12:30 is provided by the on-call consultant at PCH. None of the RGH consultants provide out of hours cover for PCH.

Additional consultant support for improvement and governance has been resourced via a sessional visiting consultant from a tertiary unit one day per week. Whilst this has brought expertise and focus on neonatal-specific care and safety, this has not resulted in increased, consistent, experienced senior clinical capacity on the unit to provide clinical leadership, role modelling and challenge. An urgent review of the medical workforce, access to senior leadership and clinical expertise is required. This formed part of the interim escalation in August 2021 and the appointment of additional consultant staff is in progress.

There have been difficulties in filling the Tier 2 rota and whilst this is not unique to PCH, it does present a challenge within workforce and rota sustainability. This was covered for a period of time by the appointment of consultants to cover this on a temporary basis. The review team was informed that this period became extended and resulted in a degree of tension between these consultants and senior Health Board management. Resolution was reached with the appointment of a group of overseas trainees as non-training grade Tier 2 medical staff. This is an area which will remain a potential difficulty going forward.

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[17] *Calculating Unit Cot Numbers and Nurse Staffing Establishment and Determining Cot Capacity. British Association of Perinatal medicine November 2019 (accessed 11/11/2021).*

[18] *Neonatal Network Steering Group, (2017), All Wales Neonatal Standards – 3rd Edition (accessed 12.11.2021).*

7.1.2 Nursing

The clinical nursing team are led by a nurse manager and a paediatric matron. Senior nursing leadership has seen significant changes in personnel, in part due to secondment to the Improvement Team. Nurse leadership at Bands 6 and 7 appears to be consistent, with staff who are familiar with the service. There is one Advanced Neonatal Nurse Practitioner (ANNP) currently in post, working clinically on the Tier 1 rota. Advanced practice roles do not function in isolation and require adequate structures to be in place for professional development and appropriate supervision.[19][20] Of concern to the review team was a lack of evidence of planning for expansion of the ANNP team, succession planning or structured career development such as progression to Tier 2 working or Nurse Consultant roles.

Funded nursing establishment enables BAPM standards to be met.[21] BAPM standards only relate to the staffing required to provide direct clinical care for babies as per activity. Conversations with nursing staff suggested that they felt staffing levels were inadequate, exacerbated by the ward layout, the attendance of nursing staff at high risk deliveries, the considerable time occupied with the high number of admissions from the postnatal ward and time spent locating beds for transfers. The nurse in charge is not supernumerary and carries a clinical caseload.[22]

There is dedicated, funded time for some nursing quality roles such as breastfeeding and practice development. Other roles (for example bereavement, family integrated care/developmental care, governance and discharge planning) do not have dedicated funding.[23] In order to provide a quality, safe and effective neonatal service, wider non-clinical roles must be funded with protected time.

There appears to be no formal clinical supervision regularly taking place to support nurses to reflect on practice in a safe and supportive manner. This particularly impacts on the nurses who have additional clinical and quality roles.

Staff groups at all levels considered there was a lack of appreciation for staff wellbeing across the service. For example, the physical environment of the Neonatal Unit lacked access to drinking water in the clinical area and rest areas for staff breaks are located outside the footprint of the Neonatal Unit. The latter makes the lack of a supernumerary shift coordinator to cover for breaks even more relevant.

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[19] *Advanced Neonatal Nurse Practitioner Capabilities Framework: A BAPM Framework for Practice. 2021 (accessed 25/10/2021).*

[20] *National Leadership and Innovation Agency for Healthcare (NLIAH) 2010. Framework for Advanced Nursing, Midwifery and Allied Health Professional Practice in Wales (accessed 25/10/2021).*

[21] *Calculating Unit Cot Numbers and Nurse Staffing Establishment and Determining Cot Capacity. British Association of Perinatal medicine November 2019 (accessed 11/11/2021).*

[22] *Safe, Sustainable and Productive staffing. An Improvement Resources for Neonatal Care. National Quality Board, Edition 1 June 2018 NHS Improvement (accessed 11/11/2021).*

[23] *Department of Health. Toolkit for High Quality Neonatal Services. 2009 (accessed 17/10/2021).*

There was a feeling amongst staff that the neonatal services are perceived as a 'minor partner' within the paediatric division, leading to all levels of staff articulating that this was detrimental to innovation and improvement. There is an outstanding action from the Neonatal Improvement Plan to facilitate nursing staff spending time in local tertiary units. There would be significant value in this being a mixture of experience in a tertiary unit as well as an exemplary peer unit.

7.1.3 Wider Multidisciplinary Team

There is no dedicated time for paediatric physiotherapy, occupational therapy or speech therapy provision for the neonatal service which is a known gap nationally in relation to Neonatal Toolkit standards.[24] The lack of provision of Allied Health Professionals (AHP's) is acknowledged and is reflected on the risk register in line with All Wales standards domain 4c.[25] There is no funded social work or psychology support.

As part of the escalation in August 2021 the Panel identified prescribing practices as a significant safety-critical issue. Pharmacy service provision for the Neonatal Unit is under-resourced, only equating to one hour per weekday. This time is divided between the Neonatal Unit, babies requiring prescribed medication on the postnatal ward and paediatrics. This has a number of consequences:

- a lack of consistent oversight of prescribing practice;
- quality and safety assurance initiatives such as a pharmacy safety huddle ('Druggle') being undertaken by the current post holder, working in their own time;
- a lack of direct involvement or oversight of incident reviews involving prescribing or drug administration errors;
- an inability to quality assure prescribing practice; and
- an inability to share transferable learning.

Of additional concern is the lack of succession planning which will impact on the provision of continuous specialist neonatal pharmacy services which are sustainable in the longer term. The Panel are aware that as part of the Health Board's response to the escalation report there is a focus on pharmacy support into the neonatal service.

7.2 EDUCATION AND TRAINING

The review team viewed evidence of mandatory training records and through conversations with a wide variety of staff, were able to understand the focus and approach to staff education within the neonatal service.

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[24] *Department of Health. Toolkit for High Quality Neonatal Services. 2009 (accessed 17/10/2021).*
[25] *Neonatal Network Steering Group, (2017), All Wales Neonatal Standards – 3rd Edition (accessed 12/11/2021).*

There was good compliance from nursing staff for Newborn Life Support (NLS) training; compliance from medical staff was less reassuring: the review team were told that first responders to newborn deliveries did not always have current NLS certification and not all consultants had current NLS certification.

Regular Neonatal Unit teaching was provided, although these sessions were attended predominantly by medical staff. There appeared to be a lack of consistent, specific nurse teaching provided locally. There was also a lack of protected time for some areas of training and development with some training being done through the 'good will' of staff with time taken back at a later point.

Recently the visiting sessional consultant has contributed to a medical education program and simulation training. Of concern was that the consultants at PCH were observing these sessions rather than participating with their team. A senior nurse working within the Improvement Team has recently taken some responsibility for simulation training with an intention to widen multidisciplinary (MDT) participation. It is essential for long-term sustainability that the PCH clinical team becomes self-sufficient in delivering training.

The Neonatal Unit supports the role of a Practice Development Nurse (PDN) with time allocated for this role. There are good foundations in place such as comprehensive staff training and competency logs, access to mandatory training and the development of Quick Response-coded equipment manuals. The training log for nurses shows generally good compliance with equipment training, although this was not always reflected in the clinical case assessments. Specific examples which highlighted an apparent lack of familiarity by some staff with regards to equipment include the transport incubator and equipment used for therapeutic hypothermia (cooling). The review team saw examples in the clinical case assessments where babies were not cooled to an appropriate temperature within the expected timeframe.

Whilst there is evidence the work of the PDN is supportive of in-house education and equipment competency, the review team was made aware that the current arrangements for Practice Development have been limited for approximately 18 months due to the COVID-19 response. This is of concern as a robust system of ongoing education and training for nursing staff is vital for safe, effective care and an empowered workforce.

7.3 STAFF CULTURE

The Health Board are working to embed their corporate vision and values which are directly relevant to the safety culture. Through conversations, staff explained that they were aware of this work, but were unable to provide evidence of what impact it had achieved for staff working within the Neonatal Unit, the wider service and the ILG structure.

The 2020 staff survey results for the Health Board measured lower engagement scores in all seven survey categories than the NHS Wales average, resulting in an overall engagement score of 71% compared to the NHS Wales average of 75%. The response rate was also lower at 10% compared to an average of 20% across Wales.

Results from across the Health Board demonstrate lower than the Wales average for engagement, including responses to five questions that may affect staff raising patient safety concerns. Results are available for the Merthyr and Cynon locality but not for the Neonatal Unit specifically. Staff within the Merthyr and Cynon locality rate work satisfaction and line manager clarity of expectation in line with overall results for the Health Board.

Merthyr and Cynon locality staff rate team reflecting and learning slightly higher than the Health Board average, but the ability to make improvements and involvement slightly less favourably than the Health Board as a whole. However, all results are lower than the average for Wales.

Neonatal Unit-specific results from the national Wales staff survey are not available. The review team was informed that a Neonatal Unit Staff Survey was in progress as part of the Improvement Plan but results were unavailable at the time of reporting.

7.4 SUMMARY

There needs to be investment in the neonatal workforce.

Stability within the medical team could be supported by the expansion of the ANNP workforce who could support both Tier 1 and Tier 2 with the correct support, training and continued competence, potentially accessed at the local tertiary Neonatal Unit. There is limited evidence of opportunities for career development within the neonatal nursing team. Rotation of nursing staff to exemplar Neonatal Units needs to be achieved, supported by All-Wales standards domain 2c and 4e,[26] so that staff can experience what good looks like and feel confident when they need to challenge practice that is below the standard which would be expected.

There was little evidence that MDT training (including joint training with maternity staff) has taken place consistently. This is a significant concern in relation to safe and effective care and the ability to work as an effective MDT in times of high stress.

7.5 RECOMMENDATIONS

In order to respond to the findings relating to the neonatal workforce, the Health Board should address the following:

- British Association of Perinatal Medicine (BAPM) standards should be adhered to for both nursing and medical workforce provision and structure **(3.1)**.
- Extra consultant time needs to be provided to allow for a consultant of the week pattern from 09:00 - 17:00. All consultants who cover the unit on call should have a minimum of four neonatal service weeks per annum **(3.2)**.

[26] *Neonatal Network Steering Group, (2017), All Wales Neonatal Standards – 3rd Edition (accessed 12/11/2021).*

- There should be investment in a Neonatal Unit Senior Nurse position who is in part Matron and part Improvement Lead Nurse to ensure there is a stable senior nursing leadership structure with the specialist ability and leadership experience to know and deliver 'what good looks like' **(3.3)**
- The Advanced Neonatal Nurse Practitioner team should be expanded with clear career progression including protected time for development within the four pillars of advanced practice. Tier 1, Tier 2 and nurse consultant roles should be explored **(3.4)**.
- There should be rotation of nursing and medical teams to exemplar neonatal units to support maintenance of competence in key clinical skills and decision making **(3.5)**.
- Additional investment is required for nursing quality roles. Resilience needs to be developed, for example by ongoing internal rotation of Neonatal Unit staff into these roles **(3.6)**.
- Additional investment is required to enable the nurse in charge role to be supernumerary **(3.7)**.
- There should be adequate provision for Allied Health Professionals for neonatal services in line with national recommendations. These roles should be integrated within the neonatal unit permanent workforce **(3.8)**.
- There needs to be an expansion of clinical pharmacist resource dedicated to the neonatal service, including capacity for networking to develop expertise and exemplar practice within the neonatal unit **(3.9)**.
- Mandatory training compliance needs to improve across all staff groups. This needs to be facilitated within working hours **(3.10)**.
- Nursing, midwifery and medical Newborn Life Support (NLS) instructors need to be identified within the Health Board to support robustness in NLS local training and simulation training **(3.11)**.
- A specific nurse teaching programme should be developed, linking into network nurse teaching **(3.12)**.
- There should be a robust system for clinical supervision within the workforce linked to annual appraisal and training needs analysis for the neonatal unit. This should be provided in a safe and supportive manner **(3.13)**.
- Simulation training should use case examples to support learning in practice as a perinatal multidisciplinary team. Scenarios including intubation with drug preparation must include all levels of nursing and medical colleagues **(3.14)**.
- Simulation training should be joint with all professionals involved within perinatal services locally and the wider perinatal network. Simulations should use case examples to support learning in practice **(3.15)**.

8. NEONATAL UNIT SAFETY

Many of the neonatal staff welcomed external scrutiny and shared their own thoughts about where improvements might be made for the benefit of families and their babies. This demonstrated a team with dedicated, caring staff committed to the neonatal service and its ongoing development. However, several emerging themes supported the interim escalation by triangulating the evidence found within the documentation review, clinical case assessments and family experiences.

A feature of the staff conversations were the relationships between the Neonatal Improvement Team and the clinical team working on the Neonatal Unit. Some of the staff in the Improvement Team had previously been senior nurses on the Neonatal Unit. New senior nurses had been appointed to Band 6 and 7 posts on the Neonatal Unit but were still establishing themselves in role. Whilst senior nurses on the Neonatal Unit and the Improvement Team all have roles and responsibilities in terms of delivering an effective safety culture, the stability of tenure of the senior team, clarity of roles and trust between the clinical staff and the Improvement Team were a concern identified both by staff and the review team. It was not clear who was leading and held responsibility for the effectiveness and standards of care being delivered on the Neonatal Unit and was able to answer the question, “Is the unit safe today in relation to staffing, acuity and capacity?”

Conversations with several staff at different levels suggested that the Improvement Team and clinical teams are disconnected and the approach to service improvements were seen as being reactive rather than proactive. For these reasons it was difficult to understand how the teams worked together. This was clearly impacted by the fact that senior responsibility and lines of escalation for the Improvement Team and clinical teams are different, contributing to a feeling of silo working.

The clinical team structure within the neonatal service was described as hierarchical with a dominant medical leadership model. The review team heard evidence of a ‘blame culture’ still existing within the service in conversations with staff at all levels and disciplines.

8.1 INCIDENT REPORTING

Reported incident numbers suggests that the Neonatal Unit recognises the need to input clinical incidents. Work has been undertaken to ensure that within induction, staff joining the Neonatal Unit are informed of how to raise concerns and encouraged to do so. This does not appear to translate into a safety culture where the value of incident reporting is embedded and learning supports clinical improvement.

Staff indicated that ‘reporting friends’ remains a barrier to reporting. There were findings from the clinical case assessments wherein Datix reporting would have been expected due to transfer out or unexpected admission, but this was not evident.

From the clinical case assessments there was repeated evidence that the local review of Datix reports were inadequate and superficial. SI reports identified that actions had been completed but there was often a lack of evidence to indicate that this had generated changes in practice or been fully embedded. This was also evident in the Root Cause Analysis (RCA) investigation processes; those reviewed were not robust enough, nor consistently undertaken by appropriately skilled staff from across the MDT. The review team is aware that more recently the NHS Delivery Unit (DU) has been working with representatives from the Health Board to improve the SI review process. The aim is to develop and embed robust review processes.

Incidents were identified wherein the severity or nature of the incident had been missed or under-reported. This may have resulted from a failure to recognise suboptimal care, rather than exemplifying a poor reporting culture. For example, unplanned extubation was a recurrent theme in the clinical case assessments. Of the 25 cases reviewed, unplanned extubation was noted in seven, with some babies subsequently undergoing multiple reintubation attempts to secure their airway. From the clinical notes and the findings from Datix and SI reports it appeared that the occurrence of unplanned extubation was not recognised as impacting on patient safety or reported separately. Urgent work to reduce unplanned extubation was recommended as part of the interim escalation during August 2021.

Where learning had been identified there was evidence of recent work having been undertaken to explore themes, moving away from individual actions to instead understanding system and human factors. The Neonatal Unit has developed mechanisms to share learning including a newsletter and display board on the unit.

Some staff conveyed that they did not always receive feedback from incidents, which suggests that staff may not value the process of raising concerns. Others felt overwhelmed by the volume of communication and instructions. The review team viewed evidence of and was informed by staff that incident debriefs had been undertaken and some of these, but not all, had appropriate MDT participation. A feature of some of the post-incident review communication was that it was not set in any context which would assist staff in understanding why changes were being requested and the intended outcome; this included staff being informed about actions agreed in incident review meetings via email. The review team is aware of continuing work with the DU to support the Health Board in its approach to SI investigations.

The review team was informed that incidents involving medical staff would be discussed during appraisal and they would be provided with the Health Board's policy.

8.2 SUMMARY

Processes around incident reporting and investigation lack the necessary level of rigour and consistency. Whilst processes are changing and attempts made to disseminate key messages to staff, there is currently insufficient depth to the learning to support reflection and embed change in practice.

8.3 RECOMMENDATIONS

In order to respond to the findings relating to Neonatal Unit safety, the Health Board should address the following:

- Learning from incidents needs to ensure the context of the incident and potential for human factors are considered and explored **(4.1)**.
- Work to better understand and develop a culture focused on safety, awareness and communication across the perinatal multidisciplinary team needs to be undertaken **(4.2)**.
- Reflective practice must be included within unit learning and incident reviews. This can be both personal and multidisciplinary **(4.3)**.

9. WALES AND NATIONAL REPORTING

Accurate data concerning admissions, outcomes and workload are essential to support effective, safe service delivery. There is evidence of engagement audit activity at national, Health Board and local level within the National Clinical Audit and Outcome Review Plan (NCA & ORP) in line with All Wales standards domain 3b.[27] Unit performance data against national indicators such as the National Neonatal Audit Programme (NNAP) are clearly presented, with planned future audits listed based on the outcomes of the preceding year.

The NCA & ORP plan submitted for 2020 has lead clinicians identified for each of the audit workstreams. However, start dates, monthly progress updates and completion dates were incomplete for each of the audits listed. The Neonatal Unit contributes mortality data to MBRRACE-UK/PMRT: data for 2017-2019 from MBRRACE-UK indicates that for the former Cwm Taf University Health Board and subsequently the Health Board, neonatal mortality rates compared with similar-sized services were >5% higher than group average.[28]

Unit data collation for analysis and review by the wider MDT is the responsibility of the Neonatal Improvement Team. The annual report consisted of several pages of downloads from BadgerNet with no accompanying narrative nor further interrogation. This data did not appear to have been cross-checked and did not correspond with submissions for other reports, for example those detailing the number of admissions outwith the criteria agreed for the unit, or the number of care days undertaken. The review team also identified an infant within the clinical case assessments where death had occurred shortly after transfer from the unit. This was not recorded as such within Neonatal Unit reports.

The maternity and neonatal dashboard initially presented for the team's review contained only one neonatal metric, that of Avoiding Term Admissions Into Neonatal units (ATAIN – a national metric). This indicated a high rate of admission with minimal improvement over a period of two years. The accompanying narrative did not indicate what steps had been taken to address this issue. Following numerous discussions, additional metrics were included within the dashboard: examination of these again showed a lack of data oversight and cross-checking.

The review team was informed that there are ongoing issues regarding the completeness and accuracy of BadgerNet data (for example, retinopathy of prematurity screening). These findings triangulated with those arising from the clinical case assessments.

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[27] *Neonatal Network Steering Group, (2017), All Wales Neonatal Standards – 3rd Edition https://collaborative.nhs.wales/files/maternity-and-neonatal-network/allwalesneonatalstandardsthirdedition-pdf/ (accessed 12.11.2021).*

[28] *MBRRACE-UK Perinatal Mortality Surveillance Report, UK Perinatal Deaths for Births from January to December 2019. Leicester: The Infant Mortality and Morbidity Studies, Department of Health Sciences, University of Leicester. 2021. Perinatal mortality by organisation | MBRRACE-UK (le.ac.uk) (accessed 11/11/2021).*

9.1 SUMMARY

There is clear evidence of compliance with national reporting requirements. The major issues identified relate to the accuracy and completeness of the data, ownership by (and therefore familiarity of) the clinical team as well as the utilisation of data to inform service quality and support improvement.

9.2 RECOMMENDATIONS

In order to respond to the findings relating to reporting, the Health Board should address the following:

- The clinical team must ensure completeness and accuracy of neonatal unit data **(5.1)**.
- Neonatal dashboards should encompass a range of performance and quality metrics, supplemented with a narrative highlighting key points and identifying trends. The responsibility for this lies with the senior clinical team **(5.2)**.

In addition, the Welsh Government may wish to consider the following to support wider learning for other health services in Wales:

- Maternity and Neonatal Networks should be responsible for oversight of outcomes and key safety metrics **(8.3)**.

10. NEONATAL UNIT FUNCTIONALITY

As stated above, neonatal services do not sit in isolation and are inextricably linked with maternity services. MDT working between maternity and neonatal services is essential to optimise clinical care for women and babies.

10.1 INTEGRATION WITH MATERNITY SERVICES

This is a significant area of concern. Within the clinical case assessments there is evidence of missed opportunities for early joint working, risk assessment and decision making. Staff conversations also demonstrated that integration was an ongoing issue. Staff expressed that maternity and neonatal services work in 'silos' with a perceived lack of willingness to share information. Staff described delays in being informed of preterm women in labour.

The unit works outwith its 32+ week gestational age remit to provide care to on-site deliveries. This occurs more frequently than would be expected and is a major source of high-risk care within the unit. This is potentially symptomatic of poor liaison and communication between maternity services and neonatal staff. Staff were aware of this as being a problem.

There has also been evidence of babies repatriated from tertiary units to PCH who were still <32 weeks gestation. There is no fixed guidance for these circumstances and this should be reviewed as it may be an avoidable risk.

Joint review and learning processes are central to effective MDT working. Within key clinical governance and audit meetings, attendance is inconsistent and not always multidisciplinary. It is not possible to evidence effective joint leadership or joint ownership of day to day governance and audit which impact on maternity and neonatal outcomes.

This was a safety-critical recommendation in the interim escalation report in August 2021. The review team was informed that there has been subsequent progress in collaboratively working with maternity services. As this remains in its infancy, outcomes, learning and evidence of how the teams disseminate the need for joint working to ensure this is embedded into practice was not available at the time of reporting.

10.1.1 Avoiding Term Admissions Into Neonatal Units

The lack of progress in improving ATAIN data is significant evidence of both clinically disconnected care and a lack of ability to deliver joint improvements. Dashboard data shows a term admission rate of 7.8% (2020/2021). This is above the Health Board's target of 6% and has been consistently above 7% from 2017 to present. Also of concern was the rising trend in term admissions in the first quarter of 2021.

Audit findings presented locally during October 2020 identified most term admissions were due to the need for the management of hypoglycaemia and management of respiratory distress, with 29.5% of these admissions assessed by the local team as being potentially avoidable. The 2020/21 ATAIN Action Plan has significant gaps in robust planning to reduce term admission rates, specifically reducing avoidable admissions due to hypoglycaemia and respiratory distress.

10.1.2 Transitional Care

The current provision for Transitional Care (TC) is a pathway of care rather than an established service model and is delivered on the postnatal ward. There is a local guideline for TC which has been operational since the end of 2020, although aspects of this have yet to be fully implemented and evaluated as to their effectiveness. The staffing model within the TC guideline differs from the staffing model currently in place and staff identified the sheer volume of work and a lack of dedicated resource as barriers to further development of an effective TC service. The review team did not view evidence of parental engagement in developing the emerging TC service.

Of particular concern is the proportion of babies admitted to the Neonatal Unit from the postnatal ward, together with the overall persistently high term admission rate to the Neonatal Unit. Audit evidence presented locally identified low compliance with completion of Newborn Early Warning Trigger and Track (NEWTT) assessment charts and monitoring of blood glucose levels for babies at risk of hypoglycaemia. The review team has seen confirmation that point of care testing for blood sugar monitoring is now available. Whilst this has completed the first transactional element on the workstream to improve management of hypoglycaemia, there needs to be clear evidence that this has contributed to a reduction in admissions to the Neonatal Unit.

10.2 Neonatal Improvement Plan/Programme

The Health Board established a formal Neonatal Improvement Team with a Neonatal Improvement-specific Director in 2020 to address neonatal recommendations arising from the Royal Colleges' report. These recommendations were not directly applicable to specific aspects of neonatal clinical care.

An overall Programme Director provides oversight, support and direction to the Neonatal and Maternity Improvement Programme. The review team examined a range of documents detailing the Neonatal Improvement Team's plan and was informed that these had been significantly revised during 2021.

10.2.1 Improvement Workstream Review

The review team identified and was informed that the Neonatal Improvement Programme at times achieved limited progress for a variety of reasons. These included the availability of staff resources and the effect of the COVID-19 response, which impacted staffing levels within the Improvement Team, as well as clinicians' capacity to be available and engage fully with improvement activities. This was identified within the programme risk register.

The capacity constraints appeared to create tensions between progressing improvement work and addressing the backlog of SI's requiring completion and closure. The review team was informed that additional resources had been identified to enable the Neonatal Improvement Team to support the progression of improvement work.

There are a significant number of workstreams being progressed by the improvement and clinical teams, with evidence of new actions being generated from many different processes including SI/Datix investigations, audit activity and management processes. Whilst it is positive that new actions are being identified, their number, the capacity to progress them as well as the processes for prioritisation and coordination do not appear to be consistently understood by all stakeholders. The review team was told that at times it felt as if there were different silos of work being progressed, with the clinical team on the Neonatal Unit perceiving change being "done to them" rather than being clinically led. The review team was advised that part of the Neonatal Forum's role is to ensure that all actions in progress or identified as requiring attention are visible and coordinated. At the next level, the ILG governance team coordinate risk and incident management processes including current neonatal incident reviews which generate new learning and improvement actions.

Evidence of disconnect between the improvement and clinical teams on the Neonatal Unit is recognised and felt by many stakeholders to be detrimental to progress. Whilst this has not yet been resolved, the review team was advised that these are acknowledged issues and work is being done to address them.

It was acknowledged that the initial improvement work was focused on very transactional "put right" actions. The review team had concerns that at times there was an acceptance of "putting the paper right, not practice". Whilst this is important and can be evidenced as complete, there was a lack of evidence visible to the review team that audit of guidelines/new documentation is systematically gathered to measure compliance and outcomes. The review team was concerned that the safety-critical aspects of care identified within the clinical case assessments, for example standards of documentation, drug prescribing practice, thermal management and endotracheal tube fixation, did not feature in the original Improvement Plan.

10.2.2 Neonatal Improvement Milestone Plan Review

The review team met with members of the Improvement Team and reviewed the Neonatal Improvement Plan and the work in progress to replace this with a Neonatal Improvement Milestone Plan. The review team was informed that the emerging plan in 2021 for neonatal service improvement had a much wider brief than the original 16 Royal Colleges' recommendations relevant to the service. The focus has shifted away from purely responding to recommendations and is continuously evolving in response to the improvement focus. This may include work packages and a Milestone Plan. The review team was advised that actions from the interim escalation action plan will be incorporated into this work as it progresses. Clearly once these processes are fully embedded, the next stage will be to audit outcomes.

The Milestone Plan will be revised following the publication of this report and it is anticipated that this will be the mechanism for progressing and providing assurance regarding the recommendations made. There is an awareness of the potential risk of overwhelming the team and this work is therefore being progressed in a way which will enable enhanced capacity to develop. The Maternity and Neonatal Improvement Board Huddle will oversee the progression of the improvement work, alongside reporting to internal and external stakeholders.

The Health Board has recognised that this work needs to transition into improvement that has been embedded into normal operational procedures which is centred upon the ILG and CSG structure. The review team was told that there was also an acknowledgement within the Health Board that in addition to the ILG structures, services provided in multiple ILG's will also need mechanisms to ensure consistency and coordination.

It was clear to the review team that staff are trying to make headway to deliver safe services but there was evidence of delays against improvement trajectories as well as a deterioration in some parameters such as mandatory training and job planning. Whilst this is true of most of the NHS during the pandemic response, the evidence reviewed as part of the deep dive did not provide the review team with confidence and adequate assurance that: a) the improvement workstreams were sufficiently mature to reduce the level of risk, and b) that the care provided in 2021 was safer than in 2020. This contributed to the decision to escalate concerns in August 2021.

The review team recognises that an unintended consequence of the Improvement Teams' structure reinforces the 'silo' working described previously. Evidence was reviewed which indicates that the neonatal and maternity elements of the improvement programme were progressing separately. It was noted that the workstreams are still described separately and the review team identified different perceptions of progress towards joint working by different stakeholders. It was explained that larger workstreams will be established, some of which will be across both maternity and neonatal services and it is hoped that this will help to facilitate improved joint working.

To date, a considerable proportion of the improvement work has been directed towards evidencing that the Royal Colleges' recommendations have been met. So far, work within the neonatal service has not demonstrated sustained changes in practice nor a positive impact on the standard of care provided. The review team was informed that there are also concerns that the reporting and governance around the improvement work and the Panel's assurance processes is causing tensions and consuming capacity and energy which could be better directed.

For the improvement plan to be of value it is vital that the metrics of success are based on the evaluation of outcomes of work completed, such as measurable clinical outcomes, embedded and sustained change in practice evidenced by audit, as well as visible improvement in national clinical audit results. These changes should translate into improved family experiences.

10.3 SUMMARY

The review team was not assured that adequate measures were in place to ensure:-

- effective team working at all levels;
- that babies outwith the NNU's admission criteria were born in the right place;
- effective identification and management of babies with enhanced care needs

It is essential that strong MDT links are established between the maternity and neonatal teams at all levels to improve effective functioning and the safety of the perinatal care provided.

10.4 RECOMMENDATIONS

In order to respond to the findings relating to Neonatal Unit functionality, the Health Board should address the following:

- There needs to be joint ownership of assurance and governance of aspects of care that are co-dependent on neonatal and maternity services via the Integrated Locality Group governance processes **(6.1)**.
- The working arrangements of the Neonatal and Maternity Improvement Teams should be reviewed to ensure effective joint working which addresses current issues related to silo working in clinical care **(6.2)**.
- Neonatal and maternity teams must work together at all levels to support changes in service delivery. These include appropriate place of delivery, reducing term admissions and developing Transitional Care provision; specified consultant staff should have named responsibility for each of these elements and should be led in conjunction with designated members of the nursing and midwifery teams **(6.3)**.
- All developments across perinatal care must involve an appropriately diverse service user voice at national, network and local levels **(6.4)**.

11. CLINICAL CASE ASSESSMENTS

To provide insight into the safety and effectiveness of the current clinical care delivered by the Health Board, the review team assessed the clinical care provided to a subset of infants admitted to the Neonatal Unit during the calendar year 2020. Cases were identified using a similar criteria as for the 2016-18 'look-back':-

- Those transferred out for intensive care;
- Infants requiring therapeutic hypothermia;
- Infants who died.

Using these criteria, 47 cases were identified by the Health Board and details of their gestational age and diagnoses shared with the review team. 25 cases were then selected for assessment as a representative sample due to constraints on time and Health Board resource in redacting patient and staff identifiable information within the case records. Assessments were undertaken using the clinical case review methodology adopted within the Panel's wider 2016-2018 'look-back' exercise.

The purpose of the clinical case assessments was to specifically explore the direct clinical care provided to babies by the neonatal team. The terms of reference (see *Appendix A*) did not include the remit to review any maternity care provided as this was outwith the scope of the deep dive review. Table 3 details the areas of clinical practice (modifiable factors) assessed for each case.

Table 3: *List of Modifiable Factor Areas*

List of Modifiable Factor Areas	
1. Supporting transition and resuscitation	**2.** Education, knowledge and training
3. Ongoing treatment	**4.** Policies and procedures
5. Clinical leadership	**6.** Admission and first hours
7. Communication	**8.** Discharge or transfer from care
9. Stabilisation and transfer to NNU	**10.** Documentation
11. Referral	**12.** Family

The review team attributed a significance rating to each of the modifiable factors (Table 4), which indicated to what extent they could reasonably be expected to have contributed to the outcome for the baby. If the factor did not affect the outcome, it was classified as wider learning to be shared with the Health Board.

Table 4: *Definition of Modifiable Factors*

No.	Modifiable Factors	Definitions
0	**No Modifiable Factor**	No issues with care identified.
1	**Wider Learning Factor**	Care issues identified which would have made no difference to the outcome for the baby.
2	**Minor Modifiable Factor**	Care issues identified which may have made a difference to the outcome for the baby.
3	**Major Modifiable Factor**	Care issues identified which were likely to have made a difference to the outcome for the baby.

It should be noted that any robust clinical case assessment should almost always identify learning. The review team wished to ensure wider learning was not seen as a negative but as an opportunity for the Health Board to confirm that the learning found by the review team matched that found within any local reviews undertaken. Where this was not the case, the Health Board should work in the future to ensure all clinical case assessments undertaken locally as part of risk management processes are able to identify appropriate learning to support ongoing improvement.

Alongside the clinical notes, the local neonatal governance/mortality review was also incorporated into the case assessment process to ensure the local team had identified learning. In 13 of the 25 cases the review team was advised that a maternity SI review was in progress. There is significant work being undertaken by the NHS Wales Delivery Unit to support the Health Board in completing a backlog of SI investigations. The local SI reviews pertaining to the clinical case assessments undertaken by the review team had not been completed ahead of the case assessments. As such, it is not yet clear what learning has been identified locally.

Each case was assessed using the neonatal assessment tool developed specifically for the Panel's 2016-2018 'look back' exercise. This was completed independently by an Advanced Neonatal Nurse Practitioner (ANNP) and a Neonatologist, who then jointly agreed their findings. A second Neonatologist and ANNP then completed a peer review of the case. All four clinicians discussed the findings pertaining to each case and agreed the learning identified, as well as the significance of any modifiable factors identified.

Any areas of immediate concern regarding clinical safety/competency were escalated to the deputy Medical Director and SRO for the Neonatal Improvement Programme using the Panel's existing escalation mechanisms. Further information on these mechanisms can be found within the Panel's Clinical Review Strategy.

11.1 Interim Escalation – Case Assessments

Following assessment of the first 14 cases provided to the review team there were significant concerns noted in three cases and these were escalated immediately to the SRO within the Health Board, in addition to several themes impacting on patient safety. The concerns regarding clinical safety and effectiveness fed into the interim escalation of concerns and were focused on the following areas:

- Aspects of direct clinical care including assessment, decision making and clinical practice:
    - A high number of patients referred for therapeutic hypothermia (cooling treatment for presumed birth-related brain injury) without adequately documented neurological assessment and decision-making around cooling activity.
    - An excess of unplanned extubations (displacement of breathing tube from the windpipe in infants requiring breathing support).
- Poor standards of prescribing, administration of medication and case note documentation:
    - Poor standards of prescribing and administration of medication.
        - Seven out of 14 cases had prescribing practice noted to be below safe standards.
    - Poor standards of case note documentation. This makes it difficult to assess whether resuscitation algorithms were followed appropriately, how interventional procedures were conducted and the rationale behind clinical decision-making.
- Poor and absent documentation of communication with families.
- A lack of standardised, appropriate review of clinical incidents (Datix), with little evidence of MDT discussion across maternity and neonatal services.
    - Whilst cases of term infants or those transferred out for therapeutic hypothermia were all reported by maternity/neonates there was no evidence of a multidisciplinary team discussion across maternity and neonatal services. There was a lack of learning noted in the evidence presented. Local Datix reporting on the Neonatal Unit appears to lack a robustness of thorough review with no learning captured via the Datix system.
- Concerns regarding standards of formal radiology reporting.

The issues identified were similar to those emerging from the Panel's wider 2016-2018 'look back' exercise, indicating that there has been no appreciable change in clinical practice in the intervening period of time.

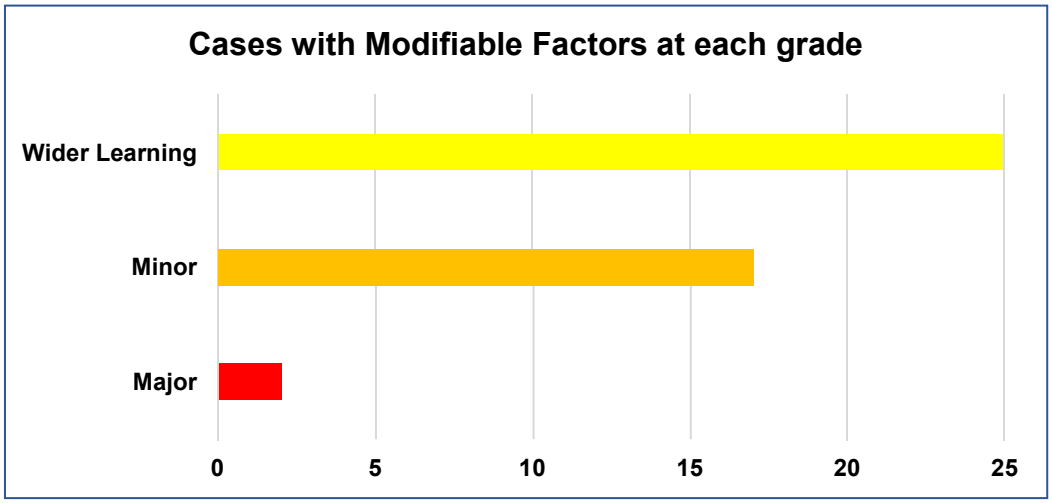
Additional detail regarding the themes identified within the escalation is available at *Appendix C.*

11.2 Thematic Analysis of Cases

Across the 25 cases the identified learning and themes, as well as details of modifiable factors were collated.

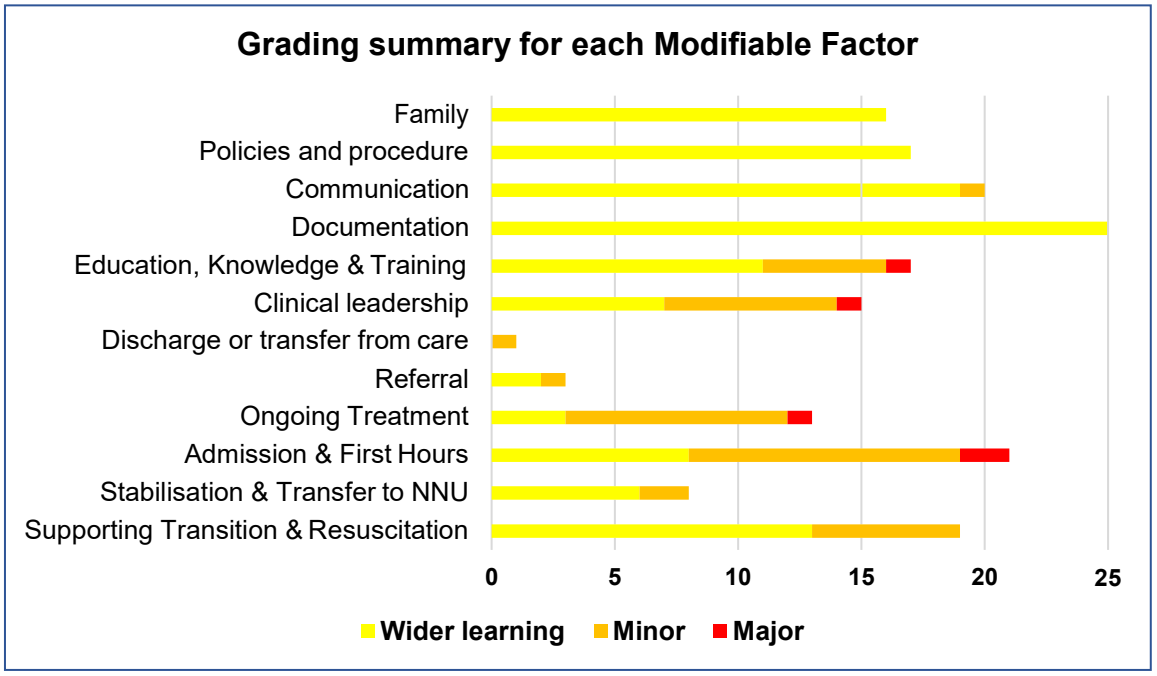
Figure 7 shows the level of significance of at least one modifiable factor in all cases.

Figure 7: *Grading Level for Modifiable Factors in Each Case*



All cases had more than one modifiable factor across the 12 areas of review. Cases ranged from four to ten modifiable factors.

Figure 8: *Significance summary for each modifiable factor*



By assessing the modifiable factors across each of the 25 cases, the review team was able to identify a number of key themes occurring across multiple cases.

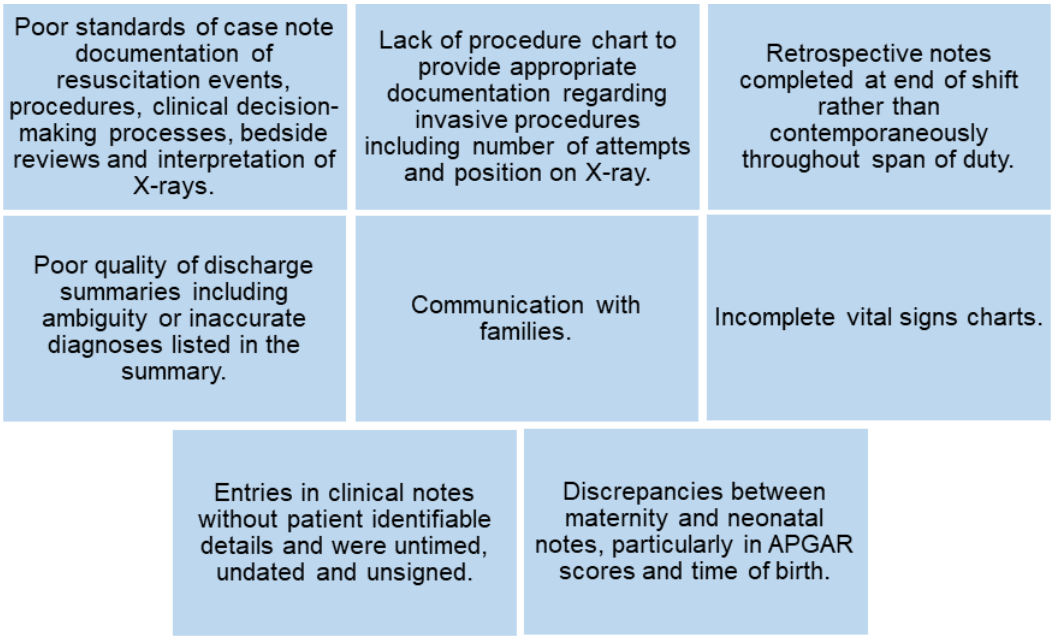
11.2.1 Documentation

In all 25 cases documentation was graded as wider learning. Standards of documentation were variable: this must be a key area of focus for improvement by the Health Board.

There are standards for documentation set out in both General Medical Council[29] and Nursing and Midwifery Council[30] guidance which were not adhered to in the majority of the cases assessed. As well as being clear, concise and contemporaneous, documentation must include clear information regarding clinical condition, actions taken and the rationale behind these clinical decisions. It was often not clear what had been done and why. A lack of reflective notes by senior clinicians to support differential diagnosis, lines of investigation and treatment was universal.

Documentation was poor across different areas of the clinical notes. APGAR scoring is a basic measure of neonatal condition at and shortly after birth. This score is subjective and should be agreed between the team present at delivery and during resuscitation, not assessed individually and documented as such in separate notes. Disparity in APGAR scores documented in the maternity and neonatal notes was frequently identified, highlighting poor communication between both teams. This provided further evidence of silo working between the neonatal and maternity teams.

Badgernet is a system used across neonatal services as a patient record and creates discharge documentation which is sent to other services involved in babies' care including the GP and is also shared with parents. Standards of Badgernet documentation were found to be poor with numerous areas of inaccuracy. This can result in poor handover of care to other services, as well as distress for families. A summary of documentation issues can be found below.



[29] Good Medical Practice. General Medical Council. 2019 (updated) (accessed 26/10/2021).
[30] The Code: Professional standards of practice and behaviour for nurses, midwives and nursing associates. Nursing and Midwifery Council. 2018 (accessed 26/10/2021).

11.2.2 Prescribing

Prescription charts were made available in 19 of the 25 cases assessed and poor standards of prescribing were evident in all of these. A key element of the interim escalation focused on immediate assurance regarding good prescribing practice. There must be immediate focus on prescribing standards and empowering all staff to promote a safe prescribing culture where prescriptions not meeting good prescribing standards are rejected.

Challenges with pharmacy provision for neonatal care to provide on the ground support in prescribing practice and medicines management has led to poor practice going unchallenged. In most cases reviewed, babies remained on the unit for a short period of time but were prescribed the highest risk drugs. These prescription charts would then not be available for local review by the MDT following transfer out, leading to issues being undetected.

The review team identified a lack of robust surveillance and monitoring of prescribing practice within the unit by the neonatal team, through mechanisms such as a Standard Operating Procedure for good prescribing standards, regular drug chart audit by clinical staff and post-acute transfer out clinical review. These concerns were highlighted within the interim escalation.

Issues with medicines management were also noted, with cases identifying drugs not being given due to a different strength of solution being available or an inability to obtain a drug. These incidents provide insight into a service with reduced awareness of safe effective practice around prescription and medication administration.

Datix reports were entered for some issues around drug errors. It was unclear that learning from these had been fully identified and addressed across the neonatal and pharmacy services, compounded by the limited time available for pharmacy support within the service.

The review team was informed that there exists a lack of uniformity in prescribing practices across the network leading to additional challenges for local teams and an increased risk of error.

A summary of the identified prescribing issues can be found overleaf.

Use of non-standard nomenclature, for example microgram written as mcg/ mic/ mics/ micro/ micros.	Drug infusions prescribed as 'double strength' or 'quadruple strength' without quantification of what this entailed.	Alterations to doses which were not signed for or rewritten.
Drug infusions prescribed without volume to be made up in or rate to be infused.	Cancelled prescriptions with no date/ name/ registration number of individuals cancelling the prescription.	Timing of doses often missing with drugs prescribed to be given as 'stat' or timing not prescribed at all. Other examples included drugs which were prescribed as 'morning'; 'afternoon' or 'evening' administration rather than a timed dose.
Units of dosing not prescribed (for example surfactant; vitamin K; heparinised saline; dextrose boluses).	Drugs documented as having been given in the clinical notes but not prescribed on a drug chart.	A lack of appropriate rounding, for example doses >10 rounded to nearest whole number.
	Poor handwriting was seen recurrently in the prescription charts.	

11.2.3 Clinical Leadership

Of the 25 cases reviewed, 15 had modifiable factors associated with clinical leadership. In cases where this was identified as a 'Major' or 'Minor' modifiable factor, this related to a lack of oversight regarding clinical decision-making at the level expected of a senior member of the medical team. In some cases, this related to a delay in escalating to the consultant for senior support in a timely manner. In others this related to a lack of consultant leadership in clinical management to support critical thinking and appropriate decision-making.

There were two key areas where clinical decision making appeared to be a theme - management of therapeutic hypothermia and respiratory management.

Table 1: *Summary of Clinical Decision-Making Issues*

Therapeutic Hypothermia *(7 out of 25 cases)*	**Respiratory Management** *(10 out of 25 cases)*
• Decision-making utilising set criteria as per national guidance.	• Management of hypocarbia.
• Initiating cooling before formal assessment when baby still on delivery suite.	• Saturation levels set inappropriate for gestational age.
• Lack of formal neurological examination.	• Escalation of support from High flow to CPAP or CPAP to ventilation.
• Use of active cooling without discussion with tertiary centre.	• Recognition of and early management for pneumothorax.
• Practice issues with use of cerebral function monitoring and cooling mattress.	• Escalation to tertiary centre for advice and support pretransfer.
• Lack of consultant oversight in local management of cooling cases and their subsequent review.	• Evidence of use of best practice in delivery room management.

In response to the escalation report, the Health Board has put in place a system for escalation and advice with a local NICU to support clinical decision-making. This action is welcomed, particularly for babies requiring more complex care prior to transfer.

11.2.4 Family Communication

Communication was identified as a modifiable factor in 20 out of the 25 cases, with Family identified in 16. This was a key theme and triangulates with what was heard through the Family Listening Exercise.

It is vital within neonatal care that the family are included in the neonatal journey from birth and this requires open, honest and regular communication which should be clearly documented.

In the majority of cases this was not evident within the clinical notes provided. Babies were regularly taken to the Neonatal Unit without a member of the neonatal team speaking to the family and on occasions, a number of hours passing before the family were updated. Families were kept away from the unit whilst procedures were undertaken, leading to several hours where families were unable to have access to their baby. There are clear impacts on a family's experience associated with these unnecessary gaps in access.

11.2.5 X-ray Interpretation

In all cases where X-rays were provided there was a lack of thorough interpretation in the clinical notes by the requesting clinician. In 10 out of the 25 cases the review team also identified issues with the formal radiology reporting. When an X-ray is requested there is an expectation that there will be documentation of initial findings within the notes by the supervising clinician. X-ray reporting was found to be of a poor standard in some cases.

The clinical X-ray reporting issues identified were as follows:-

- no or limited documentation of X-ray interpretation within the medical notes;
- actions required following X-ray interpretation not documented or carried out;
- central line tip position following insertion and confirmation of use was poorly documented;
- numerous cases were identified where no nasogastric tube had been inserted prior to the first X-ray in infants with respiratory symptoms;
- potentially misplaced endotracheal tubes not being recognised.

The formal radiology reporting issues identified were as follows:-

- formal reporting of line placements were inaccurate and actions missed;
- misidentification of lines;
- formal reporting documentation contained language errors.

11.2.6 Risk management

As the review team was unable to access the maternity SI reviews associated with these cases, it was difficult to assess whether the neonatal team had looked at those 13 cases alongside maternity and also identified the same learning as found by the review team.

The review team would have expected a detailed MDT review of all of the cases assessed as all met the criteria for incident reporting: born outwith admission criteria, term admissions and transfers out. Not all cases had an associated incident report and so the learning identified by the review team will not have been identified locally: unrecognised issues are likely to recur.

Available Datix reports did not provide assurance that the appropriate level of expertise was available to identify learning when reviewing locally. This links to challenges around the team's understanding of 'what good looks like', as well as the ability to reflect on clinical management and identify real time learning.

Opportunities to identify themes and areas for clinical improvement are lost if cases are not reviewed rigorously. Seven out of the 25 cases reviewed were noted to have unplanned extubations. This is a safety critical theme and requires focus locally to understand in greater depth. Robust incident reporting should allow for such themes to be identified and provide opportunities to seek support from the wider Health Board, network and local tertiary centres to support quality initiatives in this area.

11.2.7 Transport Service

Issues were noted during the clinical case assessments in relation to neonatal retrievals for intensive care uplift. Review of this service was not within the scope of the deep dive. However, the lack of a funded 24/7 neonatal transport service during 2020 impacted on the management of infants within PCH and it is therefore important to note some of the challenges faced.[31]

The issues identified include:-

- an inability to contact the transport service out of hours for advice/referral;
- local clinicians being asked to contact numerous transfer teams during one referral due to a lack of service provision;
- local clinicians being asked to locate a neonatal cot prior to transfer;
- delayed referrals due to the knowledge of a lack of service availability, potentially leading to a delay in requesting advice;
- multiple NICU clinicians involved in referrals leading to inconsistent advice;
- a lack of documentation in local case notes following the arrival of the transfer team despite the baby remaining on the unit for a moderate period of time.

11.3 SUMMARY

The clinical case assessments provided an insight into the safety and effectiveness of the clinical care provided by the neonatal team at PCH. There are key areas of clinical improvement required within the service and this will need support from experienced neonatal colleagues from within local NICU and network positions as well as leadership support from within the Health Board to aid the team in understanding 'what good looks like'. This will ensure future care provision is safe and that optimal care is delivered for babies and families using this service.

11.4 RECOMMENDATIONS

In order to respond to the clinical case assessment findings, the Health Board should address the following:

- Communication with families on the neonatal unit must be timely, open and honest and comprehensively documented **(7.1)**.
- Support is required from tertiary neonatal services to support immediate clinical decision making in cases where infants require short term stabilisation and intensive care. There should be clear escalation processes in place and a trigger list to support early recognition of the need to refer **(7.2)**.

[31] *During January 2021 the neonatal transport service provided across South Wales transitioned to a 24/7 interim model.*

- Prescribing standards must be improved with a continued focus at identifying, resolving and minimising prescription errors. There needs to be clear accountability for all staff involved in prescribing and administering medicines and should be supported through the additional pharmacy support on a daily basis **(7.3).**
- Management of therapeutic hypothermia should be supported with robust guidance in line with national best practice frameworks **(7.4)**.
- Standards of formal radiology reporting pertaining to the neonatal service should be audited **(7.5)**.
- Documentation standards must be improved in line with GMC/NMC requirements and there must be senior medical oversight of discharge summaries **(7.6)**.
- The incident reporting trigger list should be followed to ensure reporting and subsequent multidisciplinary review of all significant events, for example babies transferred out for tertiary level care, unplanned extubation and babies requiring therapeutic hypothermia **(7.7)**.
- There are several areas of focus for local quality improvement projects including reducing unplanned extubation and optimising perinatal care. National toolkits should be used locally, and multidisciplinary involvement is required for success in these areas **(7.8)**.
- External support should be used to ensure standards of robust review that support local learning and improvement **(7.9)**.
- Review should take place of the remaining 22 clinical cases from 2020 identified to the review team as fulfilling criteria for assessment, as only a representative sample (25 of 47) was examined **(7.10)**.
- Clear documentation of uncertainty and reflection within clinical decision-making should be encouraged and accepted as standard practice **(7.11)**.

12. RECOMMENDATIONS FOR THE HEALTH BOARD

The following recommendations apply to Cwm Taf Morgannwg University Health Board. These have been grouped into key themes to support the Health Board when considering the required actions:

1. FAMILY ENGAGEMENT AND SUPPORT

1.1. The Health Board should complete and implement its family involvement and engagement strategy at pace and provide a robust mechanism for family feedback that is compatible with the mature engagement approach developed across maternity services. The strategy should be personalised to the needs of women and families using perinatal services and build upon feedback from both current and past service users.

1.2. Current breastfeeding support should be reviewed to ensure there is sufficient capacity to meet the needs of service users.

1.3. Peer support networks should be developed for families both within neonatal services and following discharge.

1.4. The neonatal service should have dedicated psychological provision to support families and staff.

1.5. A framework for Family Integrated Care should be implemented and its impact evidenced.

2. GOVERNANCE, ASSURANCE AND ACCOUNTABILITY

2.1. Health Board governance processes need to demonstrate sustained achievement of improved safety and clinical effectiveness within the neonatal service.

2.2. The Health Board must improve its ward to Board assurance processes with specific focus on the quality of incident reviews and how any safety-critical findings are identified and shared through the Integrated Locality Group governance structures to the Board. This must demonstrate sustained advances in the safety and effectiveness of neonatal service provision at Prince Charles Hospital.

2.3. Evidence of detailed discussions taking place regarding clinical outcomes and clinical audit should be provided to the Integrated Locality Group and Health Board committees to ensure Executive level oversight of clinical performance and trajectory.

2.4. Clinical audit needs to be valued, resourced and utilised at all levels and must be of a high quality to promote confidence in applying findings to developing services.

3. NEONATAL SERVICE WORKFORCE

3.1. British Association of Perinatal Medicine (BAPM) standards should be adhered to for both nursing and medical workforce provision and structure.

3.2. Extra consultant time needs to be provided to allow for a consultant of the week pattern from 09:00 - 17:00. All consultants who cover the unit on call should have a minimum of four neonatal service weeks per annum.

3.3. There should be investment in a Neonatal Unit Senior Nurse position who is in part Matron and part Improvement Lead Nurse to ensure there is a stable senior nursing leadership structure with the specialist ability and leadership experience to know and deliver 'what good looks like'.

3.4. The Advanced Neonatal Nurse Practitioner team should be expanded with clear career progression including protected time for development within the four pillars of advanced practice. Tier 1, Tier 2 and nurse consultant roles should be explored.

3.5. There should be rotation of nursing and medical teams to exemplar Neonatal Units to support maintenance of competence in key clinical skills and decision making.

3.6. Additional investment is required for nursing quality roles. Resilience needs to be developed, for example by ongoing internal rotation of Neonatal Unit staff into these roles.

3.7. Additional investment is required to enable the nurse in charge role to be supernumerary.

3.8. There should be adequate provision for Allied Health Professionals for neonatal services in line with national recommendations. These roles should be integrated within the Neonatal Unit permanent workforce.

3.9. There needs to be an expansion of clinical pharmacist resource dedicated to the neonatal service, including capacity for networking to develop expertise and exemplar practice within the Neonatal Unit.

3.10. Mandatory training compliance needs to improve across all staff groups. This needs to be facilitated within working hours.

3.11. Nursing, midwifery and medical Newborn Life Support (NLS) instructors need to be identified within the Health Board to support robustness in NLS local training and simulation training.

3.12. A specific nurse teaching programme should be developed, linking into network nurse teaching.

3.13. There should be a robust system for clinical supervision within the workforce linked to annual appraisal and training needs analysis for the Neonatal Unit. This should be provided in a safe and supportive manner.

3.14. Simulation training should use case examples to support learning in practice as a perinatal multidisciplinary team. Scenarios including intubation with drug preparation must include all levels of nursing and medical colleagues.

3.15. Simulation training should be joint with all professionals involved within perinatal services locally and the wider perinatal network. Simulations should use case examples to support learning in practice.

4. NEONATAL UNIT SAFETY

4.1. Learning from incidents needs to ensure the context of the incident and potential for human factors are considered and explored.

4.2. Work to better understand and develop a culture focused on safety, awareness and communication across the perinatal multidisciplinary team needs to be undertaken.

4.3. Reflective practice must be included within unit learning and incident reviews. This can be both personal and multidisciplinary.

5. WALES AND NATIONAL REPORTING

5.1. The clinical team must ensure completeness and accuracy of Neonatal Unit data.

5.2. Neonatal dashboards should encompass a range of performance and quality metrics, supplemented with a narrative highlighting key points and identifying trends. The responsibility for this lies with the senior clinical team.

6. NEONATAL UNIT FUNCTIONALITY

6.1. There needs to be joint ownership of assurance and governance of aspects of care that are co-dependent on neonatal and maternity services via the Integrated Locality Group governance processes.

6.2. The working arrangements of the Neonatal and Maternity Improvement Teams should be reviewed to ensure effective joint working which addresses current issues related to silo working in clinical care.

6.3. Neonatal and maternity teams must work together at all levels to support changes in service delivery. These include appropriate place of delivery, reducing term admissions and developing Transitional Care provision; specified consultant staff should have named responsibility for each of these elements and should be led in conjunction with designated members of the nursing and midwifery teams.

6.4. All developments across perinatal care must involve an appropriately diverse service user voice at national, network and local levels.

7. CLINICAL CASE ASSESSMENTS

7.1. Communication with families on the Neonatal Unit must be timely, open and honest and comprehensively documented.

7.2. Support is required from tertiary neonatal services to support immediate clinical decision making in cases where infants require short term stabilisation and intensive care. There should be clear escalation processes in place and a trigger list to support early recognition of the need to refer.

7.3. Prescribing standards must be improved with a continued focus at identifying, resolving and minimising prescription errors. There needs to be clear accountability for all staff involved in prescribing and administering medicines and should be supported through the additional pharmacy support on a daily basis.

7.4. Management of therapeutic hypothermia should be supported with robust guidance in line with national best practice frameworks.

7.5. Standards of formal radiology reporting pertaining to the neonatal services should be audited.

7.6. Documentation standards must be improved in line with GMC/NMC requirements and there must be senior medical oversight of discharge summaries.

7.7. The incident reporting trigger list should be followed to ensure reporting and subsequent multidisciplinary review of all significant events, for example babies requiring therapeutic hypothermia.

7.8. There are several areas of focus for local quality improvement projects including reducing unplanned extubation and optimising perinatal care. National toolkits should be used locally, and multidisciplinary involvement is required for success in these areas.

7.9. External support should be used to ensure standards of robust review that support local learning and improvement.

13. RECOMMENDATIONS FOR WIDER CONSIDERATION

As noted in the body of the report, individual Neonatal Units do not sit in isolation but are linked to perinatal networks and allied paediatric services. The Welsh Government may wish to consider the following to support learning for other health services in Wales:

8. WIDER CONSIDERATIONS

8.1. A review of neonatal critical care services in Wales is suggested. This should include capacity, patient flows, transport services and the network's role within operational consistency and assurance.

8.2. Healthcare providers and commissioners need to actively look at high risk clinical services and seek assurance that outcomes are in line with national standards and that services are safe. Where standards cannot be met, this should be shared transparently within an organisation and escalated so that services can be supported to improve.

8.3. Maternity and Neonatal Networks should be responsible for oversight of outcomes and key safety metrics.

8.4. The Welsh Government may wish to consider the applicability of the recommendations made within this report to other neonatal services.

14. CLOSING COMMENTS

The Panel has identified several key themes during the review process, including a hierarchical, fragmented workforce. This appears to stem from a lack of MDT ownership of, and involvement in, the neonatal service at PCH and the absence of a clear vision for its development.

It is likely that the senior medical team have been affected by the uncertainties engendered by the reorganisation of paediatric services within the Health Board and the difficulties in filling the Tier 2 rota. This may have resulted in limited engagement by some of the workforce, potentially compounded by the pre-existing culture within the organisation as a whole.

The relative geographical isolation of PCH appears to have contributed further, whilst a lack of networking opportunities for staff may have prevented the development of an ethos of continual improvement to understand and achieve 'what good looks like'. Importantly, parental voices which are crucial to achieving this goal do not appear to be heard consistently.

The considerable organisational changes within the Health Board appears to have increased the disconnect between clinical staff and all levels of management, which in turn has adversely affected governance and oversight processes. This disconnect has prevented the provision of appropriate oversight, support and challenge to the neonatal service, allied to a lack of knowledge of 'what good looks like' in a small, highly-specialised clinical area.

Many of the Panel's recommendations apply to specific aspects of clinical care and governance processes: these should be instituted rapidly. Achieving cultural change within the Health Board and the wider health service will undoubtedly require sustained efforts and it will therefore take time for the necessary improvements to become fully embedded.

Following initial engagement with the clinical team, the Panel has worked closely with the Health Board to understand what has already been achieved to address the areas requiring immediate intervention in August 2021. In November 2021, the Health Board provided documentary evidence of the progress made since the escalation. A single, unified plan, incorporating the recommendations from the interim escalation as well as those detailed within this report, has been developed to support the Health Board in prioritising their improvement activity. This will ensure that the changes made are sustainable in the long term.

The Health Board has detailed the actions taken to date within their response to our report. This has been published on their website and can be accessed here. It is expected that the Health Board complete the action plan in full and report on progress via their established internal governance arrangements.

The Panel will continue to work with the Health Board and the Welsh Government to ensure effective oversight of the safety and effectiveness of the neonatal service.

Improvements in both neonatal and maternity services will be monitored through the Panel's established assurance mechanisms which supplement the Board's internal governance arrangements. An update on progress against the action plan and wider Maternity and Neonatal Improvement Programme will be provided in the Panel's next progress report.

It is important to emphasise that individual services within the UK's healthcare systems do not operate in isolation. The issues identified within the Health Board are very clearly multifactorial and as such, need to be addressed at multiple levels. The Panel's findings and recommendations provide a framework for local and wider NHS organisations to address these issues and moving forwards, be assured that the care provided is safe, effective, places patients at the centre whilst providing appropriate support and challenge to clinical service staff.

15. LIST OF APPENDICES

Appendix A - Terms of Reference

Appendix B – Neonatal Deep Dive Methodology

Appendix C – Interim Escalation Report (24 August 2021)

Appendix D – Escalation of Concerns – Action Plan Template

Appendix E – Family Listening Exercise Survey

APPENDIX A – TERMS OF REFERENCE

The scope and terms of reference for the deep dive were developed and agreed in April 2021 as follows:

1. Review the current provision of care within neonatal services in relation to national standards and indicators, as well as compliance with national reporting requirements.

2. Review how, through the governance framework, the Health Board gains assurance of the quality and safety of its neonatal services.

3. Assess the prevalence and effectiveness of a patient safety culture within neonatal services, including:

    a) The understanding of staff of their roles and responsibilities for delivery of that culture.

    b) Identifying any issues that may prevent staff raising patient safety concerns within the Health Board.

    c) Whether services are well led and the culture supports learning and improvement following incidents.
    d) The degree to which neonatal and maternity services are integrated, particularly with reference to clinical governance arrangements, serious incident management procedures and clinical audit.

4. In conjunction with and complementary to the existing IMSOP Clinical Review Programme and NHS Wales Delivery Unit support arrangements, review the Root Cause Analysis (RCA) investigation process including:

    - How SI's are identified, reported and investigated within the neonatal service.

    - How recommendations from investigations are acted upon by the neonatal service.

    - How processes ensure the sharing of learning amongst clinical staff, senior management and stakeholders

    - Whether there is clear evidence that learning is identified and embedded as a result of any incident or event.

5. Independently review a 'control group' of more recent episodes of neonatal care to assess the standard of care provided in order to determine whether issues identified retrospectively through the IMSOP Clinical Review Programme persist to date.

6. Assess whether there is a learning culture which extends beyond serious incidents to encapsulate a wider range of opportunities for continuous improvement (for example, complaints and concerns, feedback from service users, audit).

7. Review the current neonatal service workforce and staffing rotas in relation to safely delivering the current level of activity and clinical governance responsibilities. Assess whether the service works within the limitations set by its current designation.

8. Review the working culture within the neonatal service including inter-professional relationships, staff engagement and communication between health care professionals and their potential impact on improvement activities, patient safety and outcomes.

9. Assess the extent to which the neonatal service is integrated with the maternity service and the wider neonatal network to provide a seamless service for women and their families.

10. Identify whether there are any areas of leadership and governance that would benefit from further targeted development to secure and sustain future improvement.

11. Assess the level of engagement with and involvement of women and families in the neonatal service and determine if this is evident in all elements of planning and service provision. Assess whether services are family-centred, open and transparent for all users. In particular, review how effectively the service communicates with women and families when services fall below the standards expected or there are adverse outcomes.

12. Assess the experience of parents who have used neonatal services to understand their perspectives on the quality and safety of services, family support, information and involvement.

13. Adopt a phased approach to the implementation of the review which focuses early attention in those areas which have been identified through other sources (for example, the IMSOP Clinical Review Programme, the Health Board's serious incident and PMRT reviews, the neonatal peer review process, etc.) as being potential areas for improvement.

14. To build upon existing neonatal improvement work which is being undertaken by the Health Board and in particular to carry out an early assessment of the Neonatal Improvement Plan to determine whether it is relevant and fit for purpose and to what extent there has been appropriate delivery against it.

15. Identify if any safety or performance improvement related issues exist and escalate these immediately to the Health Board through the existing improvement frameworks agreed with IMSOP and the Welsh Government.

16. Make final recommendations based on the findings of the review to include any service improvements which are necessary and any measures which are required to make services sustainable in the longer term. Advise on future requirements for staffing and leadership, maintenance of quality, patient safety, governance and assurance mechanisms.

17. Support the long-term sustainability of the service by ensuring that, at the end of the deep dive process, the Health Board is left with the tools required to continue its improvement journey and the skills and knowledge needed to maintain and further strengthen the safety and effectiveness of the care provided.

APPENDIX B – NEONATAL DEEP DIVE METHODOLOGY

The methodology aims to support a detailed and timely review of current neonatal services, with a focus on improvement, within a setting of continued sustainable care quality, safety and expertise.

Personnel:

The Deep Dive will be led by the Neonatal Leads from the Independent Maternity Services Oversight Panel (IMSOP) in collaboration with the Health Board, the Welsh Government and the Community Health Council. In order to ensure an appropriate degree of rigor within the deep dive process, additional staff will be required alongside the IMSOP neonatal specialists. These individuals will be external to any previous work of IMSOP to allow a 'fresh eyes' approach to the Deep Dive. This is particularly important given that the Deep Dive arose, in part, in response to concerns raised by the IMSOP neonatal specialists as part of the 'look back' exercise. The inclusion of a team member with senior NHS organisational (Board level) expertise will further enhance the Deep Dive by bringing oversight to how the neonatal service sits within the Health Board and its structure, as well as focus to any change management required.

Team Members:

- IMSOP Neonatal Specialists: Neonatologist and Advanced Neonatal Nurse Practitioner
- Level 2 NNU Neonatologist
- Advanced Neonatal Nurse Practitioner
- Senior nurse with organisational overview expertise

Phases:

The Deep Dive will be phased to ensure maximum gain from the process ahead of the final report; work already undertaken as part of the current Cwm Taf Morgannwg neonatal improvement plan will be included in the process.

The initial focus will be a review of evidence available from the Health Board and wider stakeholders to demonstrate a safe and well led service. The evidence required is described below. The evidence review will form the basis of the next phase of the Deep Dive which will be to engage with a number of key stakeholders and staff groups regarding the current neonatal service.

In parallel to this, there will be a clinical review element of the Deep Dive to demonstrate the safety of clinical care within the current neonatal service. This will utilise the current IMSOP clinical case review methodology but will be undertaken by the neonatal Deep Dive team to reduce any impact on current IMSOP work. These cases will be a sample of those involving neonatal death or transfer out for on-going intensive care during the calendar year 2020.

If at any stage safety-related issues are recognised, these will be immediately escalated to the Health Board for early consideration and action using existing IMSOP processes. The Health Board will be responsible for driving change identified either through the escalation process described above or resulting from recommendations in the Deep Dive report.

Timeline:

The Deep Dive report timeline for publication is Autumn 2021. The Gantt chart gives high level oversight of the Deep Dive and timelines for each element of the process. Throughout the Deep Dive, the team will be in contact with the Health Board and neonatal colleagues. Regular meetings will support sharing of learning and feedback regarding the current neonatal improvement elements. The wider IMSOP will be updated through current meetings on a bi-weekly basis with escalations raised immediately through Panel members and recognised channels.

Phase 1 – Evidence Review

A review of evidence provided by the Health Board and wider stakeholders will be collated and reviewed in its entirety by the Deep Dive team.

Groups of Evidence Required:

<u>Wider Stakeholder Evidence</u>

- Neonatal Network Peer Review report and responses to Peer Review recommendations
- Neonatal Network data and audit and actions taken
- Documented evidence of the support undertaken and improvement initiatives commenced by the current external neonatal medical personnel
- CHANTS data specific to condition of infants at time of retrieval (temperature [including therapeutic cooling target], blood gas, need for immediate interventions)
- HIW report relevant to neonatal service and actions taken
- Evidence of engagement with Neonatal Network (engagement with meetings and educational opportunities)
- National reports featuring Cwm Taf Morgannwg and responses to recommendations of:
    - NNAP audits
    - MBRRACE-UK
    - NMPA
    - Each Baby Counts

Health Board Evidence

Evidence required from the Health Board will include layers of neonatal evidence in addition to wider organisational evidence of involvement and support for the neonatal service.

- Workforce:
  - Consultant job plans
  - Details of consultant supporting professional activities (SPA) allocation
  - Copy of medical rota for last 6 months
  - Medical staffing numbers and model to allow review against BAPM local neonatal unit / special care unit medical staffing standards
  - Number and skills of paediatricians at each tier with detail of whole time equivalent (WTE) specifically for neonatal unit, and compliance with All Wales neonatal and RCPCH workforce standards
  - Number of programmed activities for neonatal lead
  - Nursing workforce numbers including WTE and banding
  - Nursing rota for last 6 months
  - Nursing workforce gap as identified using an appropriate tool
  - Nursing workforce action plan to achieve BAPM staffing standards
  - Detail of non-clinical, quality nursing roles with any protected WTE
  - HR information regarding staff turnover and training across paediatric and neonatal areas as well as information regarding problems with recruitment
  - Appraisal policy and percentage completed, with sample personal development plans (if not available beforehand, it would be useful to view some of these and discuss with staff during the visit)
  - HEIW/GMC trainees survey reports for paediatric/neonatal unit
  - Evidence of support for nursing students/mentorship – number
  - Nursing workforce vacancies with recruitment activity and action plans for last 2 years
  - Clinical supervision strategy & evidence of implementation (e.g. audit & action plan)
  - Allied health professionals – evidence of involvement in neonatal service and referral processes

- Neonatal Governance:
  - Adherence to All Wales neonatal standards for unit activity and level
  - Risk management structure
  - Current risk register
  - Safeguarding documentation & annual report
  - Complaints & incident summaries (last 2 years)
  - Compliments (last 2 years)
  - SI reports (last 2 years)
  - Structure for reporting and reviewing neonatal deaths
  - Evidence of shared learning across services including local NICU
  - Clinical guidelines

- Wider Health Board Governance:
    - Risk management structure
    - Minutes of departmental/directorate meetings (last 12 months) where pertinent issues discussed

- Service Structure:
    - Service overview, management & clinical team structure
    - Service spec/commissioning contract
    - Departmental protocols/policies
    - Strategic planning documents/action plans
    - Links to or copies of reports from regulators/external reviewers with action plans & progress reports

- Clinical Outcomes:
    - Progress to Bliss Baby Charter and Neonatal Baby Friendly Initiative
    - Audit data (including QAF) & action plans (last 2 years)
    - Unit annual reports (last 2 years), including activity, deaths, admissions outside accepted criteria & transfers out
    - ATAIN report or equivalent (details of term admissions last 2 years)
    - Case reviews – mortality & morbidity (last 2 years) to include evidence from PMRT
    - Information about family feedback & involvement

- Current Improvement work:
    - Improvement plan submitted to IMSOP
    - Evidence to support response to Royal Colleges' recommendations

- Education and Training:
    - Statutory and mandatory training programme and figures
    - In-house teaching schedule (last 2 years)
    - Evidence of skills drills/simulation training (including joint drills with maternity)
    - Current medical staff compliance (%) with mandatory training and resuscitation skills (NLS and EPALS)
    - Nursing mandatory training level
    - Nursing Qualified in Speciality (QiS) training levels – adherence to national standard
    - Evidence of nurse education programme on the NNU
    - Equipment competency
    - Evidence of training around escalation and stabilisation/transfer

The evidence will give clear insight into how the service is led and feeds into the wider Health Board priorities. This will allow assessment of the safety and governance structures underpinning clinical practice and the safety of the neonatal service.

Phase 2 – Staff, Family and Stakeholder Engagement

Review of the evidence above will facilitate and guide discussions with staff, families and key stakeholders regarding the current neonatal service.

The Deep Dive team will take the opportunity to speak to stakeholders currently involved in the improvement of the neonatal service as well as team members providing direct clinical care to understand the current service provision and how this translates to staff providing care.

Discussions with individuals will take place via video conference and will be undertaken by members of the Deep Dive team. Minutes will be captured by administrative support external to the Health Board. All comments will be attributed to professional groups rather than to individuals or grades of staff to facilitate a full appraisal of services.

Minutes of each discussion will be shared with the individuals involved to ensure accuracy. They will be utilised to identify themes within the final report but no individual information will be shared and anonymity will be maintained where requested.

The Panel, Health Board and Welsh Government agreed that a “listening to women and families” exercise should be conducted alongside the clinical elements of the Deep Dive to understand how it feels for those in receipt of the services. The fundamental elements of this exercise will be a semi-structured parent survey complemented by a number of in-depth interviews.

Key Stakeholders Required for Discussions:

- Health Board Chair
- Health Board Chief Executive
- Health Board Medical Director
- Neonatal/Paediatric Clinical or Service Director
- Neonatal Clinical Lead(s) for the service
- Neonatal Improvement Director
- Consultant Paediatricians
- SAS and Trainee Paediatricians
- Neonatal Nurse Manager
- Neonatal Nurse Educator
- Allied Health Professionals
- Administration / clerical representative
- Obstetric Clinical lead or Service Director
- Head of Midwifery
- Health Board Safeguarding team
- Service and/or directorate manager(s)
- Clinical Governance / Risk management staff
- Non-Executive Member of Board responsible for safety/ champion for children
- Commissioner, network or service planner
- Community Health Council
- Local HM Coroner
- Chair, My Maternity My Way forum
- Network Manager/Clinical Lead
- HEIW

When it is possible under current restrictions for the COVID-19 Pandemic, a tour of the neonatal service will be undertaken by the review team.

Phase 3 – Clinical Case Reviews

In order to provide information regarding the safety and effectiveness of the current neonatal service a number of clinical case note reviews will be undertaken by the review team. The format for review will follow the current clinical review methodology utilised within the look-back clinical case reviews.

Cases will be identified using the same criteria as for the 2016-18 'look-back':

- Those transferred out for intensive care
- Infants requiring therapeutic hypothermia
- Infants who die.

Alongside clinical notes the local neonatal governance/mortality review will also be incorporated into the Deep Dive review process to ensure lessons have been learnt regarding the quality of local review and identification of learning.

A minimum of 12 cases will be reviewed to provide an opportunity to examine different aspects of care and clinical management. The Deep Dive team will require a list of all eligible cases between 1st January 2020 and 31st December 2020 inclusive of any internal or SI reviews which have been undertaken for each case. The initial clinical case reviews will be undertaken by the non-IMSOP members of the Deep Dive team. The IMSOP neonatal specialists will then undertake a peer review of these reviews to add a layer of assurance to the process.

Any areas of concern regarding clinical safety/competency will be escalated immediately following current IMSOP clinical case review processes.

Phase 4 – Report and Future Actions

The aim of the Deep Dive report is to provide an appraisal of the current neonatal service with a focus on safety and effectiveness. The report will identify key areas for improvement within the service and recommend actions to support both short and longer term organisational solutions. These in turn will be essential for developing organizational memory to sustain the improvement process and ensure that this occurs across all neonatal services within the Health Board.

APPENDIX C – INTERIM ESCALATION REPORT (24 AUGUST 2021)

1. A Neonatal 'Deep Dive', focusing on the neonatal service at Prince Charles Hospital (PCH), was commissioned by the Welsh Government as part of the Independent Maternity Service Oversight Panel's (IMSOP) assurance work in relation to Cwm Taf Morgannwg University Health Board. The work commenced in 2021 following discussion with the Health Board who also wished to seek further assurance about the quality and safety of the service.

2. The Deep Dive review has employed a multi-faceted approach to triangulate issues within the neonatal service, including assessment of clinical cases and documentation pertaining to management and governance, in addition to conversations with staff and a family 'Listening Exercise'.

3. The Neonatal Deep Dive commenced in May 2021.

4. In August 2021, the Neonatal Deep Dive team feel it appropriate to escalate concerns regarding the safety and effectiveness of the neonatal service to the Welsh Government and the Health Board in line with the terms of reference, based on the interim findings of their review.

5. The Neonatal Deep Dive team consider that the level of safety and effectiveness of the neonatal service at PCH does not consistently achieve the level we would expect for this type of service in the UK. Immediate intervention is required to improve safety and assurance in several areas.

6. This paper presents a summary of, and supporting evidence for those concerns along with an options appraisal for actions to be considered.

7. The Neonatal Deep Dive team recommend an immediate increase of consultant time concentrated within a smaller group of WTE clinicians on the neonatal unit along with immediate enhanced oversight by and input from the CHANTS neonatal retrieval service along with prioritisation of transfer of acutely sick or extreme preterm infants delivered at PCH. Additionally, where clinically appropriate, immediate in-utero transfer of mothers presenting in labour <32 weeks gestation (<34 weeks for twins) from PCH to a tertiary unit must be undertaken.

8. A standardised operating procedure for prescribing and administering medications must be introduced immediately.

9. In the short to medium term, additional daily direct clinical care from a senior medical and nursing team from the wider Wales Maternity and Neonatal Network to work alongside the Prince Charles team is required to provide support to improve services.

Summary

The Deep Dive team believe that the issues highlighted provide triangulation of several themes which impact on the safety and effectiveness of the neonatal service at PCH.

The concepts of safety and effectiveness within a healthcare service are effectively a continuum. However, the Neonatal Deep Dive team considered that the level of safety and effectiveness of the neonatal service at PCH did not consistently achieve the level we would expect for this type of service in the UK. Currently there is a lack of leadership specifically dedicated to the neonatal service and as a result a lack of 'ownership' of the issues that need addressing. In addition, there is an apparent lack of maturity within the oversight systems necessary to ensure learning and change.

The Neonatal Deep Dive team are concerned that there is an inability to recognise what a 'good' service should look like. We therefore recommend urgent action to improve the levels of safety and effectiveness.

The infants most at risk are those acutely unwell and those delivering unexpectedly at very preterm gestation or very low birthweight. The presentation of these infants is by their nature unpredictable, and the neonatal service must therefore be able to provide appropriate care at all times. In addition, given the interconnected nature and complexity of perinatal care, any proposed change should not:

1. Destabilise other parts of the service.
2. Increase the risk to mothers and infants.

Recommendation

The Neonatal Deep Dive team recommends the following**,** working with the other stakeholders including the Wales Maternity and Neonatal Network, the CHANTS neonatal retrieval service and the three tertiary neonatal services.

Changes to patient flows to mitigate risk

Currently, infants less than 32 weeks gestation (<34 weeks for twins) and/or less than 1500g birthweight are aimed to be delivered in one of the network maternity services with an associated tertiary neonatal centre (Swansea, Cardiff or Cwmbran). It is inevitable that a number of infants in this group may deliver at PCH (24 in 2020). Every effort should be made to organise urgent in-utero transfer for those women presenting acutely to minimise the numbers progressing to delivery at PCH.

For this process to achieve maximum impact, robust antenatal plans for high-risk pregnancies concerning place of delivery must be in place. In addition, antenatal telephone triage must be proactive in promoting early management and all high risk pregnancies should be assessed by appropriately senior personnel to expedite decision-making around in-utero transfer. This must involve cohesive communication between obstetric, midwifery and neonatal staff.

Increased priority should be given to babies born at PCH who need uplift for on-going intensive care by the CHANTS neonatal retrieval service, in effect providing remote supervision of babies requiring intensive care pending arrival of the transfer team. This would involve enhanced telephone or videoconference support regarding management for the clinicians at PCH during and following early referral until the retrieval team arrives. Retrievals from PCH should be prioritised in the short term, depending on concurrent referrals.

This option will reduce the numbers of very preterm and very low birthweight infants requiring neonatal care at PCH. In addition, enhanced support from the CHANTS retrieval service will improve the care delivered to infants presenting acutely unwell at PCH and will in turn improve overall clinical care.

This option could be implemented rapidly, would require relatively little additional resource and consequently have a rapid impact on safety for the sickest infants.
In addition to the rapid 'make safe' described above, wider, sustainable changes are required to the current delivery of neonatal care at PCH to provide both immediate and longer-term solutions to the safety concerns identified. These would include:

Increasing consultant time on the neonatal unit

Increasing the consultant time on the PCH unit so there is consultant continuity 09:00-17:00 Monday to Friday in addition to a lead consultant for neonatology. In the short term this would involve taking consultant time from other duties which in itself may carry risk. In the medium term this would require further consultant appointment.

Focusing the consultant experience into a smaller team

Consultant cover for the neonatal unit at PCH should be such that each consultant undertakes a minimum of 4 service weeks in neonatology a year in line with BAPM standards. This would involve altering job plans within the consultant team. A smaller number of the consultant body (3 or 4 individuals) would be allocated specific time within their job plans to lead and implement improvement work alongside the nursing team. The current Neonatal Improvement Team should work collaboratively with the clinical team to support this work.

Enabling the PCH team to mirror good practice

A time limited group of experienced consultants and senior nurses who are temporarily seconded from nearby health boards could lead ward rounds, update parents and supervise juniors including documentation, communicating with parents, teaching and reviewing incidents. There should be a focus on improving prescribing practice and medicines management within this mirroring of good practice which may be facilitated by pharmacy colleagues within a tertiary neonatal intensive care unit setting. This will help the PCH team to understand what good care looks like but will rely on cooperation of neonatologists and the surrounding health boards. This clearly has considerable resource implications. The PCH consultants and senior nurses should also attend on-going regular sessions to observe practice in the surrounding neonatal units, including case presentation, simulation and other teaching. Plans for nursing staff to spend time working within other neonatal units

that have been delayed due to COVID-19 should be progressed, with secondments to include to exemplar peer units as well as to level 3 units.

Focus on improving specific aspects of practice

i. Immediate work is required to improve collaborative multidisciplinary team-working within the perinatal service at PCH. This should encompass teaching and training (including skills drills and simulation training) between the maternity and neonatal services as well as team working within the neonatal service between medical and nursing staff. All grades of medical and nursing staff must actively participate in teaching, skills drills and simulation exercises.

ii. A program of simulation scenarios should be developed to include: acute resuscitation (on delivery suite, the Alongside MLU and postnatal wards) in preterm and term compromised infants, pneumothorax, meconium aspiration and management of hypoxic ischaemic encephalopathy.

iii. A Standard Operating Procedure for prescribing is urgently needed, which will need pharmacy engagement with the neonatal team. Priority should be given to regular drug prescription audit and checklists for nurses for safe checking and administration of medication. Electronic prescribing may be a longer-term goal within the Health Board.

iv. The unit's approach to therapeutic cooling requires urgent review, in particular the development of a proforma for neurological assessment and on-going clinical documentation.

v. A standard proforma should be developed for recording procedural notes (intubation; central lines, chest drains) which should include consultant verification of position and appropriateness for use. A standard proforma for use at PCH should also be developed to record all communication with the CHANTS neonatal retrieval service.

vi. The number of potentially avoidable admissions of term infants evident in the ATAIN data needs to be addressed as a priority. This work should be led by a multidisciplinary team with designated senior neonatal (medical and nursing), obstetric and midwifery personnel.

vii. Datix and incident reviews must have multidisciplinary involvement for cases with the appropriate personnel assessing the cases. There should be a standardised process for review and actions. We would also recommend network input into the review of these incidents in the medium term.

viii. Unplanned extubation - urgent review of current fixation process; all unplanned extubations should be entered on Datix as an untoward event. Staff competencies should be developed around endotracheal tube (ETT) fixation and regular checking of ETT position and security.

ix. Consultant notes should regularly include a reflective view on the situation in critically ill infants and should justify all interventions and treatments.

APPENDIX D – ESCALATION OF CONCERNS – ACTION PLAN TEMPLATE

Improvement Needed	Suggested Minimal Intervention[32]
The Health Board must introduce immediate make safes to support safe prescribing in practice.	• Good prescribing guide available and displayed for all staff groups to utilise. • Staff training. • Pharmacy oversight of all prescriptions. • Staff directive to refuse any prescription not following the good prescribing guide. • Appropriate local neonatal formulary available to include examples of the expected prescription for commonly used /high risk prescriptions /infusions. • Monthly prescription chart audit – to include all admitted infants drug charts regardless of length of stay. • Nursing crib sheet in bullet point form for checking steps for safe medicine administration.
The Health Board must show an improvement in the working relationship with maternity services in numerous areas.	• Clear plan for assessment and transfer in-utero of women with pregnancy at risk of requiring neonatal intensive care specifically those outside of the scope of practice for the Health Board's neonatal service. • Clear oversight of cases where IUT is not possible with evidence of rigorous review of factors associated with maternity decision making and management. • Ongoing audit and feedback mechanism to clinical teams, Board and network regarding cases. • Focus on multi-disciplinary team working and education including SIMS/skills drills with staff of all levels across the two disciplines. • Joint action plan – maternity and neonatal for reducing term admissions. • Named neonatal consultant for Transitional Care.
The Health Board must ensure consultant cover for the neonatal service is safe and effective.	• The number of consultants offering neonatal cover must be reduced to a manageable number to provide greater consistency to the neonatal team and babies experiencing care. • Consultant cover on the neonatal unit should be immediately extended to 9am-5pm Monday to Friday. • Consultants with neonatal interest must have protected time to ensure the neonatal service is covered by senior medical staff with an understanding of the expertise required to support a safe neonatal service and to acknowledge when escalation to NICU services is required for either advice or transfer.
The Health Board must ensure immediate improvements are implemented to support expert clinical decision making for the	• The referral threshold for advice from a nominated NICU should be clearly articulated for all clinical staff and should be at a level where any baby with complex needs or requiring ICU treatment are discussed at

[32] *The action plan template provided to the Health Board contained four additional columns for their completion: service action; responsible officer; timescale; and evidence to support action.*

sickest and most vulnerable patients in the service.	the earliest opportunity for colleagues to ensure clinical decision making is supported by expert clinicians immediately. • Early referral to CHANTS is required for all infants requiring ICU treatment to ensure timely transfer.
The Health Board must review its cooling practice in line with national frameworks and ensure local practice meets this standard.	• All staff must have in date equipment competency for all equipment utilised within cooling treatment. • Standards of documentation around decision making for cooling should include as a minimum: criteria met and how, full detailed neurological examination and full details of a conversation with NICU/CHANTS. • There should be cooling specific paperwork set out as a pathway including all medical and nursing documentation required to support the instigation of safe cooling practice. • All cases where an infant received cooling treatment must have a detailed MDT review alongside maternity.
The Health Board should immediately review all cases of unplanned extubation occurring in the service.	• Gain understanding of rates per 1000 ventilator days compared to nationally described incidence. • Discussion to support local QI work around this issue should be collaborative with a local NICU to understand practices and safeguards already available to be adapted for the service in the Health Board. • Datix for all unplanned extubations.
The Health Board must ensure clinical incident reviews, SI reviews and PMRT/Mortality reviews are carried out as an MDT with external support from colleagues within the local NICU to provide clinical expertise and questioning.	• Immediately set up arrangements with local NICU to support oversight of clinical reviews for robust clinical insight and to ensure cases are reviewed alongside the current clinical team to support local learning regarding what a good review looks like. • Ensure wider Health Board engagement in governance reviews. • Ensure timely feedback to staff reporting and also of lessons learnt to avoid repeated incidents of harm. • Agreed changes in practice must be described in context to ensure staff understand the rationale and expected outcome of changes. • Neonatal Datix Trigger list to be updated to include: transfers out, infants born <32/40, term admissions, unplanned extubations.
The Health Board must ensure a robust mechanism for reviewing all term admissions to the neonatal unit alongside obstetric and maternity colleagues.	• A nominated Obstetrician, Neonatologist, Midwife and Neonatal Nurse/ANNP must be identified to support weekly reviews of all term admissions. • Themes and learning from reviews must be disseminated to the wider teams and immediate interventions identified to reduce unnecessary term admissions should be implemented. • Coaching from the local NICU service where this process is well established should be utilised to allow sharing of resources such as review pro formas to allow this process to embed quickly. • Datix competed for every term admission.
The Health Board should review current formal radiology reporting mechanisms and request an external review by a paediatric	• Seek support from a paediatric radiologist from a tertiary centre to audit recent formal radiology reporting. • Ensure all X-rays are reviewed and interpretation documented by a consultant within the neonatal service.

radiologist with neonatal experience to highlight areas of concern.	
The Health Board must undertake and immediate documentation review and introduce supportive documents to assist in improving documentation standards.	• Documentation audit. • Directive for all staff regarding standards of documentation as per governing bodies. • Introduction of supportive documents such as: o Procedure chart with priority for intubation; central access and chest drains; o Chart for recording communication with NICU for advice; o Chart for recording referral to CHANTS for transfer; o Scribe sheet for managing resuscitation on the NNU and on DS.
The Health Board should consider actions to support working with families to understand the impact of the listening exercise and improving family involvement in the service.	• Local mechanism for collating family feedback should be available immediate with a mechanism for this to feed into improvement work. • Access to families post discharge to understand their experiences when they have had time to process their journey is vital. • Introduction of peer support to the unit to improve family experience. • Strategy to implement family integrated care.
The Health Board must improve the staff culture on the unit to ensure all staff feel valued and listened to.	• Team building. • MDT SIMS. • Staff listening exercise. • Undertake and repeat periodically a Safety Culture survey to allow demonstration of change/improvement.
The Health Board improvement hub and clinical teams must work together to understand the common goal of a safer service.	• Improvement team must work to engage the clinical team with the journey of improvement. • The clinical team must be supported to take ownership of the service and understand their role within improvements.
The Health Board must introduce a clear audit structure to monitor improvement and evidence the effectiveness of the service.	• The audit process must be simple and focussed on key clinical areas where improvement is required. • Support from the local NICU to demonstrate what an effective audit structure looks like should be accessed.
The Health Board should undertake an immediate review of the neonatal service risk register and ensure this is up to date and has relevant risks with mitigation and plans to reduce where appropriate.	• Review of risk register should be undertaken by someone with risk experience. • The risk register must be updated to reflect the current service.

APPENDIX E – FAMILY LISTENING EXERCISE SURVEY

Survey title: Listening to Parents about Neonatal Services in Cwm Taf Morgannwg

Survey description:

- We are the Independent Maternity Services Oversight Panel (IMSOP) established by the Minister for Health and Social Services to oversee improvements in maternity and neonatal services in Cwm Taf Morgannwg University Health Board.
- We would like to hear your experience of the neonatal service provided by the Health Board if your baby (or a baby close to you) has been in the **Royal Glamorgan or Prince Charles neonatal units since 01 October 2018** or in the **Princess of Wales unit since 01 April 2019**.
- Any experience (good or bad) helps us to learn about the service and will inform the Health Board's improvement journey.
- This survey is completely independent of the Health Board and all of the information will be returned to the Independent Maternity Services Oversight Panel only.
- Everything you tell us is completely confidential unless you chose to share your personal information at the end of this survey.
- We may use quotes anonymously. We believe that the words of families are powerful in capturing what is good or could be improved in maternity and neonatal services.
- We realise that some of you may have had a really poor experience and we appreciate that you telling us about this will be difficult. Thank you for taking the time to complete this survey.

Section 1: GENERAL INFORMATION ABOUT YOU

We want to get a picture of who is responding to our survey so that we can understand your experience.

1. Who has filled in this questionnaire?

    - A parent who has used neonatal services
    - A partner/relative/friend of a parent who has used services
    - Someone who talks to parents using neonatal services about their experiences

2. What year was the neonatal experience?

    - 2018
    - 2019
    - 2020
    - 2021

3. At which unit did this neonatal experience take place?

    - Prince Charles Hospital
    - Royal Glamorgan Hospital
    - Princess of Wales Hospital

Section 2: YOUR BABY'S TIME IN THE NEONATAL UNIT

Thinking about the time when your baby was in neonatal care, we want to hear about what helped you and what aspects of your care could have been improved.

1. Were you happy with the care provided throughout the time that your baby was in neonatal care?

    - Scale 1 to 5

2. Overall, did the neonatal service meet the needs of you, your baby and your family whilst you were in their care?

    - Scale 1 to 5

3. What do you think was good and worked well in care and support when using neonatal services?

    - Open text box

4. Is there anything that could have been improved or changed and if so, how?

    - Open text box

Section 3: HOW INVOLVED YOU WERE IN YOUR BABY'S CARE

Thinking about the time when your baby was in neonatal care, we want to hear about the atmosphere on the unit, whether you were involved as much as you wanted to be in your baby's care and if you always had as much information as you needed.

1. Did you and your family members feel welcomed to the Neonatal Unit by the staff and everyone you met?

    - Yes, definitely
    - Yes, to some extent
    - No

    If you want to, you can tell us more here (text box)

2. Did you always have enough information and feel involved in decisions about your baby's care?

- Yes, definitely
- Yes, to some extent
- No

If you want to, you can tell us more here (text box)

3. Were you updated regularly by the nursing staff on your baby's condition and management?

- Yes, every day
- Mostly, maybe once a week
- Rarely, once or twice during the stay
- Never, I did not get updates from the nursing staff
- Other: (free text)

5. Were you updated regularly by the doctors on your baby's condition and management?

- Yes, every day
- Mostly, maybe once a week
- Rarely, once or twice during the stay
- Never, I did not meet a doctor
- Other: (text box)

6. Did you always feel that you had enough time with the staff caring for your baby to talk about what was happening?

- Yes, definitely
- Yes, to some extent
- No

If you want to, you can tell us more here (text box)

7. Did you feel that staff were sensitive, listened to you and acted on your worries and concerns?

- Yes, definitely
- Yes, to some extent
- No

If you want to, you can tell us more here (text box)

Section 4: THE SUPPORT YOU WERE OFFERED

Thinking about the time when your baby was in neonatal care, we want to hear about the emotional and practical support you were offered.

1. Were you offered emotional support or counselling services and given information about parent support groups?

   - Yes, definitely
   - Yes, to some extent
   - No

   If you want to, you can tell us more here (text box)

2. If you wanted to breastfeed your baby were you given enough information and support?

   - Yes, definitely
   - Yes, to some extent
   - No
   - I did not want to breastfeed my baby
   - My baby was unable to breastfeed for medical reasons

   If you want to, you can tell us more here (text box)

3. Did you feel supported to get involved with caring for your baby whilst on the neonatal unit?

   - Scale 1-5

Section 5: THE THINGS PROVIDED TO MAKE YOU COMFORTABLE

Thinking about the time when your baby was in neonatal care, we want to hear about the things you were offered to make you comfortable, such as being able to stay with your baby, availability of food, privacy, security and space on the unit.

1. Did you have access to all the facilities you needed to make you comfortable during your baby's stay on the Neonatal Unit?

   - Yes, definitely
   - Yes, to some extent
   - No

   If you want to, you can tell us more here (text box)

2. Were you able to visit your baby on the unit as much as you wanted to?

   - Yes, definitely
   - Yes, to some extent
   - No

   If you want to, you can tell us more here (text box)

Section 6: GOING HOME

Thinking about the time when your baby was in neonatal care, we want to hear about leaving the neonatal unit, how the staff kept you up to date with what was happening, and how the staff helped you to feel ready to go home.

1. Did you feel prepared for your baby's discharge from neonatal care?

   - Yes, definitely
   - Yes, to some extent
   - No

   If you want to you can tell us more here (text box)

2. Did you feel that you had enough information from staff about what was happening with your baby around discharge?

   - Yes, definitely
   - Yes, to some extent
   - No

   If you want to, you can tell us more here (text box)

3. Were you given enough information on what to expect in terms of your baby's progress and recovery?

   - Yes, definitely
   - Yes, to some extent
   - No

   If you want to, you can tell us more here (text box)

4. Did you have enough support from outreach and community staff in the first days at home with your baby?

   - Yes, definitely
   - Yes, to some extent
   - No

   If you want to, you can tell us more here (text box)

Section 7: RAISING CONCERNS

Thinking about the time when your baby was in neonatal care, we want to hear about how any worries you had were dealt with.

1. If you had any worries did you know how to raise them and who to talk to?

    - Yes, definitely
    - Yes, to some extent
    - No
    - I didn't need to raise concerns or worries

    If you want to, you can tell us more here (text box)

2. If you wanted to raise concerns, did you need more information, communication and support in raising concerns or if things didn't go as planned?

    - Yes, definitely
    - Yes, to some extent
    - No
    - I didn't need to raise concerns

    If you want to, you can tell us more here (text box)

3. If you did raise worries and concerns were you satisfied with the way they were looked at, the explanation and response received?

    - Scale 1-5

4. Is there anything else you want to tell us about your experience of the neonatal unit?

Section 8: HOW WE WILL USE WHAT YOU TELL US

This survey is completely independent of the Health Board and all of the information will be returned to the Independent Maternity Services Oversight Panel only. Your experiences will inform our recommendations for change and improvement in maternity and neonatal services.

We may want to speak to you informally about your answers to this survey to find out more and understand your experience in more detail. If you are happy to be contacted by the Independent Maternity Services Oversight Panel then please leave your name and contact number or email address below:

- Open text box

16. ABBREVIATIONS

AHP	Allied Health Professional
ANNP	Advanced Neonatal Nurse Practitioner
APLS	Advanced Paediatric Life Support
ATAIN	Avoiding Term Admissions Into Neonatal units
AW	Audit Wales
BAPM	British Association of Perinatal Medicine
CHANTS	Cymru inter-Hospital Acute Neonatal Transfer Service
CHC	Community Health Council
CSG	Clinical Service Group
CTMUHB	Cwm Taf Morgannwg University Health Board
CYP	Children and Young People
GMC	General Medical Council
EPALS	European Paediatric Advanced Life Support
ETT	Endotracheal Tube
HEIW	Health Education and Improvement Wales
HIW	Healthcare Inspectorate Wales
ILG	Integrated Locality Group
IMSOP	Independent Maternity Services Oversight Panel
M&C	Merthyr and Cynon
MBRRACE-UK	Mothers and Babies: Reducing Risk through Audits and Confidential Enquires across the UK
MNIB	Maternity and Neonatal Improvement Board
MDT	Multidisciplinary team
NCA & ORP	National Clinical Audit and Outcome Review Plan
NDD	Neonatal Deep Dive
NEWTT	Newborn Early Warning Trigger and Track
NHS	National Health Service
NICU	Neonatal Intensive Care Unit
NLS	Newborn Life Support
NNAP	National Neonatal Audit Programme
NNU	Neonatal Unit
NMPA	National Maternity and Perinatal Audit
PCH	Prince Charles Hospital
PMRT	Perinatal Mortality Review Tool
PREMs	Patient Related Experience Measures
QAF	Quality Assurance Framework
QI	Quality Improvement
RCA	Root Cause Analysis
RCM	Royal College of Midwives
RCPCH	Royal College of Paediatrics and Child Health
RGH	Royal Glamorgan Hospital
RCOG	Royal College of Obstetricians and Gynaecologists
SI	Serious Incident
SRO	Senior Responsible Officer
TC	Transitional Care
UHB	University Health Board