The Independent Panel was established by Welsh Government in response to the findings of an independent review of maternity services in the former Cwm Taf University Health Board.
**KEY UPDATES SINCE LAST VERSION:**

- Change of terminology to ensure clarity between the IMSOP CLINICAL LEADS (Alan Cameron and Chris Bell) and the wider QUALITY ASSURANCE PANEL (including neonatal, anaesthetic, quality and safety and lay involvement).
- Confirmation of the inclusion of stillbirths between 24 and 26 weeks.
- Additional details on the work of the Quality Assurance Panel and the supporting Quality Assurance Team to ensure robustness and the consistency of reviews.
- Further clarity on the review scope and methodology including the terminology around the look-back exercises, information regarding local reviews and detail of the recruitment of independent multidisciplinary clinical review teams.
- Inclusion of the new neonatal case review form.
- Updated information on the Independent Women’s Advocacy Service support which is available from Cwm Taf Morgannwg Community Health Council.
- Additional information on the Self-Referral Process and the role of the IMSOP CLINICAL LEADS to support this process.
- Reference to the process to be followed where matters need to be reported to the Police.
- Updated details of the additional psychological support provided by the Health Board.
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1 BACKGROUND

1.1 THE ROYAL COLLEGES’ REVIEW

The Welsh Government commissioned the Royal College of Obstetricians and Gynaecologists (RCOG) and the Royal College of Midwives (RCM) to undertake a multidisciplinary review of aspects of the maternity service provided by the then Cwm Taf University Health Board following the discovery of under-reporting of Serious Incident (SI) cases. A look-back exercise to January 2016 had previously identified 43 cases for review. These 43 cases were subject to internal review which identified shortfalls in service delivery and were submitted to the Health Board during September 2018. By analysing the findings from a Datix search for stillbirths dating back to 2010, a Consultant Midwife also identified 67 stillbirths which had not been reported by the Health Board via Datix.

The Royal College assessors visited the Royal Glamorgan and Prince Charles Hospital sites within Cwm Taf University Health Board between 15 and 17 January 2019. The assessors found a service working under extreme pressure with sub-optimal clinical and managerial leadership. The Health Board’s identification of SI under-reporting had resulted in increased internal and external scrutiny, highlighting that basic governance processes were not properly in place.

The service was also expected to imminently merge two separate consultant-led units onto one site with a freestanding midwifery-led unit on the other site, with no evidence that clinical teams were engaged with and supportive of this decision and process. This was further compounded by a shortfall in the midwifery establishment, sub-optimal senior clinical leadership, a significant use of locum medical staff at both junior and consultant levels alongside a lack of established standards of practice. The service was also seen to be operating under a high level of public and media scrutiny.

As part of the RCOG/RCM review, a patient and public engagement event was held in the form of a public meeting. In addition to this, an online survey was developed (hosted by RCOG) which remained open for six weeks and one-to-one telephone interviews were conducted. The overriding message from women and their families was a desire to prevent the reoccurrence of their experiences. A full report of the findings from the public engagement process was later published, entitled Listening to women and families about maternity Care in Cwm Taf.

1.2 WELSH GOVERNMENT RESPONSE

The immediate concerns regarding the safety of the maternity service were escalated by the assessors at 13:00 on 16 January 2019 to the Welsh Government and the Royal Colleges. Feedback was provided to the Welsh Government and key members of the Health Board’s Executive Team on areas of concern requiring immediate action to ensure patient safety at 14:00 on 17 January 2019.
In response to the publication of the review the maternity services of the former Cwm Taf were placed into ‘special measures’ by the Minister for Health and Social Services. Consequently, an Independent Maternity Services Oversight Panel (IMSOP) was commissioned by the Welsh Government to provide the oversight necessary to seek assurance that the Health Board is implementing the recommendations of the RCOG/RCM report in a timely, open and transparent manner.

It should also be noted that services within the Bridgend locality, including Princess of Wales Hospital, merged with Cwm Taf on 01 April 2019 to become Cwm Taf Morgannwg University Health Board (CTMUHB). Maternity services at Princess of Wales are not subject to the ‘special measures’ arrangements, albeit that the Health Board’s Maternity Improvement Plan is designed to develop maternity services across all three sites in a consistent way.

1.3 IMSOP TERMS OF REFERENCE

− Provide oversight of CTMUHB Improvement Plans to seek assurance that the recommendations of the Royal Colleges are being implemented, including progress tracking against agreed milestones.
− Agree and establish an independent clinical review process as detailed below.
− Advise CTMUHB on the actions required for effective public and patient involvement and engagement in all aspects of the maternity improvement required and to rebuild public trust and confidence.
− Escalate any wider governance issues or concerns to the Board of CTMUHB and the Welsh Government.
− Advise the Minister on any other action the Panel considers necessary to ensure improvement in maternity services.

1.4 OVERARCHING AIM OF THE CLINICAL REVIEW STRATEGY

The Clinical Review Strategy seeks to ensure that:

− A robust clinical review process is in place;
− Identified findings/themes from the review process are reported back to CTMUHB in the form of a report to ensure learning and improvement;
− Mechanisms are in place to report cases to the Coroner or individuals to the NMC or GMC if required;
− Lessons are being learned by CTMUHB through the review of evidence to improve the safety, quality and responsiveness of the maternity service;
− Women and their families are engaged in the process and given feedback as required;
− Staff engagement occurs during the review process and that feedback is given regarding the outcome;
− Quality assurance of Serious Incident investigations that have occurred post-October 2018 is completed in order to validate the current ways of working as fit for purpose going forward;
− Women and their families can have confidence in the maternity services at CTMUHB.
In response, the Health Board have:

- Developed a comprehensive Maternity Improvement Plan which is work stream and pathway-led;
- Reviewed the maternity service governance structure with the establishment of The Quality, Safety & Risk Management Meeting for Maternity Services. The main purpose of the group is to receive and provide assurance of the quality and safety of maternity services, to monitor risks and, when appropriate, to escalate identified risks to the Maternity Improvement Board and the Health Board’s Quality and Safety Committee.
2 Scope and Purpose of the Independent Clinical Reviews

The independent review of all identified cases will be carried out by multidisciplinary teams of independent external reviewers who have experience of undertaking clinical reviews.

The REVIEW TEAMS will submit their findings to the QUALITY ASSURANCE PANEL. Membership of this panel includes the IMSOP CLINICAL LEADS, Alan Cameron and Christine Bell, as well as a Neonatal Lead and Anaesthetic Lead. It has been agreed that the NHS Delivery Unit will support this process and a Deputy Director will sit on the Panel as the Quality and Safety Lead. In addition there will be a Lay Member on the Panel supporting women’s advocacy. This position will be held by the Chief Officer of the Cwm Taf Morgannwg Community Health Council.

The QUALITY ASSURANCE PANEL will not be responsible for undertaking any of the reviews but will oversee and quality assure the process to ensure robustness and consistency.

There are four cohorts within the look-back review process:

1. The 01 January 2016 - 30 September 2018 cases identified in advance of the RCOG/RCM Review (previously referred to as the 43).

2. The 01 January 2016 - 30 September 2018 cases subsequently identified using the look-back inclusion criteria established by the IMSOP CLINICAL LEADS (see Appendix 1).

3. The 2010 to 2016 look-back. The criteria utilised for this group will be determined using the outcomes from the above two cohorts.

4. Those women and families who have self-referred will have a review of their care regardless of whether or not they fit the inclusion criteria, albeit that may not necessitate an independent clinical review. A separate process for considering self-referred cases has been agreed with the Health Board and will be managed separately.

Priority will be given in the order the different cohorts appear above. However, some self-referred cases may fall within the other criteria and hence will be considered within the relevant cohort. The initial reviews will cover cohorts 1 and 2 above. This will be termed the 2016-2018 look-back. The pathway for these reviews can be found at Appendix 2.

The REVIEW TEAMS will consist of a minimum of an obstetrician and a midwife in cases of stillbirth. Teams reviewing cases with a live born neonate will be comprised of an obstetrician, a midwife and a neonatologist. In specific cases where there are potential anaesthetic issues or in all cases where the mother was admitted to the Intensive Care Unit, an anaesthetist will form part of the multidisciplinary review team.
Recruitment for obstetric, midwifery, anaesthetic and neonatal clinical reviewers will be sourced through the appropriate clinical networks by way of expressions of interest. Expressions of interest will be screened by the IMSOP CLINICAL LEADS to ensure the recruitment of clinicians with the relevant skills and experience.

Prior to commencement of the reviews the REVIEW TEAMS will undergo an induction programme to ensure they are fully aware of the background to the review and understand their role in supporting the review process and are familiar with the methodology which will be applied.

2.1 INDEPENDENT ADVOCACY FOR WOMEN AND FAMILIES

It is important that the clinical reviews are fully informed by families (where they wish to do so) in order for learning to be identified from their experiences whilst helping to provide answers to any questions and concerns they may have. All women and their families will be offered the opportunity to tell their stories prior to their clinical review commencing and be able to put questions in writing to the team reviewing their care if they wish to do so. They will be provided with support by the Community Health Council’s Advocacy Service if they wish to take up the opportunity.

The independent advocates will be able to provide the support necessary to ensure that the woman’s journey as well as the overall experience of women and their families is brought into the heart of the review, alongside any safety and quality elements.

The Welsh Government will be responsible for procuring the clinical review teams and the independent advocacy service on behalf of and subject to the advice of the Panel.

2.2 POST-OCTOBER 2018 REPORTED SERIOUS INCIDENTS

All cases after 01 October 2018 are to be reviewed by the Health Board under normal ‘business as usual’ procedures. The Serious Incident investigations will be quality assured by the IMSOP CLINICAL LEADS to validate and, if applicable, provide assurance to the Welsh Government on the robustness of the Health Board’s governance processes. Additional professional expertise will be co-opted as necessary to inform this process.

2.3 SCOPE AND TERMS OF REFERENCE FOR THE 2016-2018 LOOK-BACK

The multidisciplinary REVIEW TEAMS will:

- Involve families in the review process should they wish to be included;
- Review the case notes to determine if there were any modifiable factors present and, if applicable, provide a decision on the significance of these factors utilising an agreed review mechanism;
For those cases where there was a local investigation (if applicable):

a. Identify whether the investigation appropriately addressed the relevant concerns and issues pertaining to those incidents and provided sufficient externality and independence of opinion;
b. Establish if recommendations were accepted and appropriate actions implemented within the timescales identified in the associated action plan;
c. Consider how the parents and families were engaged with during these investigations and how the results of the investigation were communicated to them;
d. Consider how staff members involved were engaged in the review process and how the outcomes/learning were shared either individually or throughout the wider maternity service and embedded into practice;

In cases where a local investigation was not completed but deemed necessary, the REVIEW TEAM may recommend that a further Root Cause Analysis (RCA) review is undertaken. This will be considered by the QUALITY ASSURANCE PANEL and an appropriate way forward will be agreed with the Health Board;

Present their findings of the review of each case to the QUALITY ASSURANCE PANEL for challenge and quality assurance monitoring.

2.4 SCOPE AND TERMS OF REFERENCE FOR THE 2010 TO 2016 LOOK-BACK

The multidisciplinary REVIEW TEAMS will:

- Involve families in the review process should they wish to be included;
- Review the case notes to determine if there were any modifiable factors present and, if applicable, provide a decision on the significance of these factors utilising an agreed review mechanism;
- For those cases where there was a local investigation (if applicable):

  a. Identify whether the investigation appropriately addressed the relevant concerns and issues pertaining to those incidents and provided sufficient externality and independence of opinion;
  b. Establish if recommendations were accepted and appropriate actions implemented within the timescales identified in the associated action plan;
  c. Consider how the parents and families were engaged with during these investigations and how the results of the investigation were communicated to them;
  d. Consider how staff members involved were engaged in the review process and how the outcomes/learning were shared either individually or throughout the wider maternity service and embedded into practice;

In such cases where a local investigation was not completed but deemed necessary, the REVIEW TEAM may recommend that a further RCA review is undertaken. This will be considered by the QUALITY ASSURANCE PANEL and an appropriate way forward will be agreed with the Health Board;

Present their findings of the review of each case to the QUALITY ASSURANCE PANEL for challenge and quality assurance monitoring.
2.5 SCOPE AND TERMS OF REFERENCE FOR SELF-REFERRED CASES

The IMSOP CLINICAL LEADS will:-

- Review the self-referral recommendations made by the Health Board’s Lead Midwife;
- Determine how a review of the care is best conducted taking into account women and families’ views;
- Consider the findings and recommendations of those cases which are managed by the Health Board and ensure these are shared with women and their families.

In those cases which are assessed as requiring an independent clinical review by the IMSOP CLINICAL LEADS, the multidisciplinary REVIEW TEAMS will follow the procedure set out in 2.4.

2.6 ROLE OF THE INDEPENDENT MATERNITY OVERSIGHT QUALITY ASSURANCE PANEL

The QUALITY ASSURANCE PANEL will include the IMSOP CLINICAL LEADS and an independent Neonatologist and Anaesthetist to provide expertise within their relevant clinical areas. Expertise in quality and safety will also be provided by the NHS Delivery Unit. Lay input and women’s advocacy will be provided by the Chief Officer of Cwm Taf Morgannwg Community Health Council. The QUALITY ASSURANCE PANEL will be supported by a QUALITY ASSURANCE TEAM.

The QUALITY ASSURANCE TEAM will:

- Review all completed clinical review tools to identify any immediate concerns, review for consistency between teams and flag up any areas where further detail is required;
- Assist preparations for the QUALITY ASSURANCE PANEL by collating themes from reviewed documentation and highlighting areas of good practice, identifying cases requiring QA and preparing the QA review tools;
- Attend the QA Panel meetings when possible, either in person or via video link. Meeting dates will be approximately every six weeks and will be diarised in advance to ensure attendance;
- Liaise with the Welsh Government and the NHS Delivery Unit to ensure momentum within the programme.

The QUALITY ASSURANCE PANEL will:-

- Provide QA of the overall process to ensure consistency and to inform actions needed in response to identified outcomes of the clinical reviews. To include:

  a. QA the review of all cases related to maternal mortality and morbidity;
  b. QA the review of those cases related to stillbirths and neonatal mortality and morbidity where modifiable factors have been identified or where the reviewers were unable to reach a consensus;
c. Further QA randomly selected sets of notes that have been reviewed (numbers yet to be determined) to continue to test the process and consistency of reviews. It is anticipated that this will be at least 20% of the remainder of case notes.

- Support the IMSOP CLINICAL LEADS by providing expertise within their relevant clinical areas to inform recommendations to the Health Board as well as feedback to families;
- Meet face-to-face unless in exceptional circumstances where prior agreement is reached in discussion with the Welsh Government and the IMSOP Clinical Leads.
3 ROLE OF THE HEALTH BOARD IN THE REVIEW PROCESS

3.1 WOMEN AND FAMILIES DATABASE

The Health Board will maintain a database of information to support the clinical review process and will be responsible for ensuring that the database is:

- accurate and contains all of the information required by Welsh Government and IMSOP;
- kept up to date and is compliant with GDPR principles;
- managed in a way which minimises the risk of reputational damage.

3.2 SUPPORTING THE CLINICAL REVIEW PROCESS

The Health Board will support the clinical review process by providing:

- Support during the review process to address queries/provide further information;
- Patient records including CTG’s;
- Investigation paperwork/supervisory reports/staff statements;
- Patient stories;
- Guidelines in place at the time of the event;
- Action plans in relation to the incident;
- Complaint referral paperwork.

Specific checklists for each area under review will be provided by the Health Board in advance.

Access to all documentation is to be compliant with the Health Board’s Information Sharing Protocol. Documentation will be shared with REVIEW TEAMS remotely through a Secure File Sharing Portal (SFSP). All documentation will be anonymised and compliant with the Health Board’s Redaction Policy.

3.3 SUPPORTING FAMILIES

- The Health Board is responsible for ongoing communication with women and families during the review process, providing support as required.
- Women and families who have or are experiencing bereavement will be treated with compassion and empathy with communication and support in line with the Stillbirth Pathway (NBC Pathway). They will be supported by appropriately skilled Bereavement Midwives, Counsellors and have access to SANDS and other services, including CHC advocacy, in order to provide feedback on their experiences and identify their continuing needs.
- Additional psychological support services will also be provided by the Health Board through an external independent counselling agency.
4 THE REVIEW PROCESS

The IMSOP CLINICAL LEADS will provide the REVIEW TEAMS with direction in relation to the conduct of the review to ensure that there is a consistent approach to each case. To achieve this, the REVIEW TEAMS will use an agreed review tool. The review tool will be based on the perinatal mortality review tool that was used in the Morecambe Bay inquiry (see Appendix 3). It has been agreed that this review tool is suitable for identifying modifiable factors in the care of both mothers and babies which sadly were stillborn.

The REVIEW TEAMS will also have access to a neonatal review tool which has been developed by the Neonatal Lead (see Appendix 4). This will ensure additional modifiable factors specific to the care of a neonate are highlighted through the review process.

The REVIEW TEAMS and the QUALITY ASSURANCE PANEL will give due consideration to the application of relevant policies and procedures that were in place both locally and nationally at the time of the incident, as well as during the subsequent investigation process. It is anticipated that the reviews conducted by the review teams will enable themes to be identified and these will be compared to the themes identified in other national inquiries such as Each Baby Counts and the Healthcare Safety Investigation Branch.

4.1 PROCESS FOR ESCALATING CONCERNS

In the event that the REVIEW TEAMS identify any material concerns requiring further investigation, review, referral to professional bodies or the Coroner, this should be escalated initially to the IMSOP CLINICAL LEADS. The Panel will advise the Health Board and ensure a referral is made.

The REVIEW TEAMS will be provided with a copy of the guidance ‘Referral of deaths to HM Coroner, South Wales Central’ (June 2019) as a guide. The IMSOP CLINICAL LEADS will provide the Health Board’s Medical Director with any referrals on a case-by-case basis to ensure the capture of any themes for further investigation. The Health Board’s Medical Director will then refer to the Coroner on a case-by-case basis.

Where it is felt that there is a case for referral to a professional body, this will be escalated initially to the IMSOP CLINICAL LEADS who will advise the Health Board’s Director of Nursing and/or Medical Director as appropriate. If the individuals are no longer employed by the Health Board the IMSOP CLINICAL LEADS will communicate directly with the appropriate professional body.

The IMSOP CLINICAL LEADS are working with the Safeguarding Board to ensure there is alignment between the clinical reviews and a number of safeguarding reviews being undertaken concurrently. Any safeguarding concerns identified during the review process will be escalated by the IMSOP CLINICAL LEADS to the Safeguarding Board.
It is also conceivable, albeit in extraordinary circumstances, that the clinical review process might identify information which would necessitate a referral being made to the Police to enable them to consider whether it would be appropriate to conduct a criminal investigation. A Memorandum of Understanding has been developed between IMSOP, South Wales Police and the Health Board which sets out the process to be followed if such a referral becomes necessary.

4.2 REPORTING

The QUALITY ASSURANCE PANEL will provide a report and recommendations of any actions required to the Health Board at the end of each of the review cohorts.
5 Key Principles of the Review

The review will be expected to:

- Engage widely, openly and transparently with all relevant individuals participating in the review process;
- Be respectful when dealing with individuals who have been impacted by the incidents being reviewed;
- Adopt an evidence-based approach;
- Acknowledge the importance of inter-professional cooperation in achieving positive outcomes for women and children; and
- Consider links to the time relevant national policy and best practice in relation to midwifery and investigation management.

The following questions will crucially inform each stage of the review process:

1. Did the Health Board have in place at the time of each incident mechanisms for the governance and oversight of maternity incidents? Does the Health Board now have these mechanisms in place?
2. Were incidents and investigations reported and conducted in line with the time relevant national and Health Board policies, including sufficient externality and independence?
3. Is there any evidence of learning from any of the identified incidents and the subsequent investigations?
4. Were staff members involved in the incidents engaged in the investigation process and were outcomes and learning shared?
5. Were families involved in the investigation in an appropriate and sympathetic way?
APPENDIX 1

INCLUSION CRITERIA FOR 2016-2018 CASES

Additional cases from 01 January 2016 – 30 September 2018 will be identified using the inclusion criteria set out below:

1. **MBRRACE** reported cases >24 weeks
2. **All Each Baby Count Cases**
3. **All maternal admissions to ICU**

To ensure wider learning, in addition to the above criteria, all cases of transfers out will be evaluated by the REVIEW PANEL to determine whether a clinical review is necessary. Therefore, the two additional criteria to be considered are:

4. **All cases where the mother was transferred out for delivery**
5. **All cases where the neonate was transferred out for further care**

Explanatory Notes

In order to achieve consistency it is crucial that the database of clinical cases has clear inclusion criteria. It is anticipated that the findings from this criteria will inform the criteria agreed for the 2010 look-back.

The most representative surrogate marker for quality care obstetric outcome is the criteria used in the Each Baby Counts (EBC) project at the Royal College of Obstetricians and Gynaecologists (RCOG). It is therefore recommended that the database includes all cases that have been reported to the EBC team.

The EBC criteria for eligibility are for babies born > 37 weeks gestation where the outcome was as follows:

1. **Intrapartum stillbirth**: when the baby was thought to be alive at the start of labour but was born with no signs of life.
2. **Early neonatal death**: when the baby died within the first week of life (i.e. days 0–6) of any cause.
3. **Severe brain injury** diagnosed in the first 7 days of life, when the baby:
   - was diagnosed with grade III hypoxic ischaemic encephalopathy (HIE);
   - OR
   - was therapeutically cooled (active cooling only); OR
   - had decreased central tone **AND** was comatose **AND** had seizures of any kind.
The definition of labour for EBC includes:

- Any labour diagnosed by a health professional, including the latent phase of labour at less than 4 cm cervical dilatation;
- When the woman called the unit to report any concerns of being in labour, for example (but not limited to) abdominal pains, contractions or suspected ruptured membranes;
- Induction of labour;
- When the baby was thought to be alive following suspected or confirmed pre-labour rupture of membranes.

The EBC definition of labour will be used for this inclusion criteria. The rationale for this is to have an inclusive definition of labour to include as many babies as possible and to identify babies who are affected in the latent phase of labour.

In addition to the EBC criteria, all cases of stillbirth at gestations > 24 weeks will be reviewed. These are the cases that are currently submitted to MBRRACE.

Cases where the mother was transferred out for delivery (e.g. prematurity) or cases where a baby was transferred out for further management will also be reviewed. This will ensure adverse outcomes on other sites following care in the former Cwm Taf UHB will be identified.

As a surrogate marker for maternal morbidity the panel will also review all cases where the mother is transferred to the Intensive Care Unit.
APPENDIX 2

CLINICAL REVIEW PATHWAY

1. You will get a letter to inform you that the care of you and your baby/babies is being reviewed as part of the clinical review programme.

2. You will have the opportunity to tell your story and ask any questions about your care. You will be supported by an advocate from the Community Health Council if you wish.

3. Your story will be sent to the Clinical Review Teams, with yours and your baby’s clinical notes, and any information from reviews by the Health Board or other local investigations.

4. The Clinical Review team members will individually review your notes and complete an agreed tool to help them to look at what went right, and what could have been done better.

5. The Clinical Review team members will then meet and discuss the care of you and your baby/babies. Together they will complete a report of their findings.

6. The report of findings will then go through a quality assurance process to ensure all possible learning has been gained.

7. Following quality assurance the review of your care will be discussed with the Health Board to ensure you have received the correct feedback and action to date.

8. You will receive a letter explaining the findings of your review and what, if any, actions are being taken forward.

9. The learning from your review and the reviews of other mothers, their families and babies will be compiled into a final report with the key themes.

10. Recommendations will be made to the health board on what they can do to improve their services in the future.

11. Your story (without your name) will be used to inform future maternity education, through training videos and other tools.

12. The final report and your story will be used to plan for the next stages of the clinical review programme.
APPENDIX 3

CLINICAL CASE REVIEW FORM – STILLBIRTH AND MATERNAL

Case reference:

Please add the name and profession of all reviewers:

Name of designated lead reviewer:

Please provide a brief overview of the case:

1. Were there modifiable factors present in this case?
   - Yes
   - No → If no, please go to Section 15

2. Please tick the category for each factor present in this case (you may tick more than one).
   - Pre-pregnancy or preconception care → Go to Section 3
   - Assessment or point of entry to care → Go to Section 4
   - Diagnosis or in the recognition of high-risk status → Go to Section 5
   - Referral to a specialist → Go to Section 6
   - Treatment → Go to Section 7
   - Clinical leadership → Go to Section 8
   - Education, Knowledge, Training → Go to Section 9
   - Documentation → Go to Section 10
   - Discharge or transfer from care → Go to Section 11
   - Communication → Go to Section 12
   - Policies and procedures → Go to Section 13
   - Woman and her family → Go to Section 14
FACTORS RELATED TO HEALTHCARE PROFESSIONALS

Pre-pregnancy or preconception care

3. Was there an avoidable factor / event during pre-pregnancy or preconception care?
   ☐ Yes
   ☐ No

3a. If yes, then please tick each relevant factor or event.
   ☐ Professional failed to provide pre-pregnancy counselling
   ☐ Professional failed to get complete medical history
   ☐ Other pre-pregnancy or preconception issue (please specify)

3b. Description of relevant issue.

3c. Were there national guidelines/standards related to the relevant factor or event?
   ☐ Yes ☐ No

3d. If yes, were they followed?
   ☐ Yes ☐ No

3e. Please note the relevant guidelines or standards.

3f. Please note the significance of this factor or event.
   ☐ Major
      Factor contributed significantly to the death. Different management would reasonably have been expected to alter the outcome.
   ☐ Minor
      Factor was a relevant contributory factor. Different management might have made a difference, but survival was unlikely in any case.
   ☐ Wider Learning
      Although lessons can be learned, it did not affect the eventual outcome.
3g. Please note the main clinician or health care professional responsible for this factor or event.

- [ ] GP
- [ ] Hospital Midwife
- [ ] Community Midwife
- [ ] Obstetrician
- [ ] Anaesthetist
- [ ] A & E physician
- [ ] Psychiatrist
- [ ] Ambulance paramedic
- [ ] ICU physician
- [ ] Nurse
- [ ] Other (please specify)

3h. Please designate the status or grade of the main clinician or health care professional responsible for this factor or event.

Assessment or point of entry to care

4. Was there an avoidable factor / event during assessment or point of entry to care?

- [ ] Yes
- [ ] No

4a. If yes, then please tick each relevant factor or event.

- [ ] Mother was denied access to care or appointment
- [ ] Professional failed to offer preventative treatment
- [ ] Professional delayed assessment/evaluation of patient
- [ ] Professional failed to get complete medical history
- [ ] Other assessment or point of entry to care issue (please specify)

4b. Description of relevant issue.

4c. Were there national guidelines/standards related to the relevant factor or event?

- [ ] Yes [ ] No
4d. If yes, were they followed?

☐ Yes ☐ No

4e. Please note the relevant guidelines or standards.

4f. Please note the significance of this factor or event.

☐ Major

Factor contributed significantly to the death. Different management would reasonably have been expected to alter the outcome.

☐ Minor

Factor was a relevant contributory factor. Different management might have made a difference, but survival was unlikely in any case.

☐ Wider Learning

Although lessons can be learned, it did not affect the eventual outcome.

4g. Please note the main clinician or healthcare professional responsible for this factor or event.

☐ GP
☐ Hospital Midwife
☐ Community Midwife
☐ Obstetrician
☐ Anaesthetist
☐ A & E physician
☐ Psychiatrist
☐ Ambulance paramedic
☐ ICU physician
☐ Nurse
☐ Other (please specify)

4h. Please designate the status or grade of the main clinician or healthcare professional responsible for this factor or event.
Diagnosis or in the recognition of high-risk status

5. Was there an avoidable factor / event during the patient’s diagnosis or in the recognition of high-risk status at any stage?

☐ Yes
☐ No

5a. If yes, then please tick each relevant factor or event.

☐ Inappropriate diagnosis or categorisation of risk status
☐ Inadequate monitoring of fetal growth
☐ Inadequate fetal heart rate monitoring during labour
☐ Delay in diagnosis or recognition of high-risk status
☐ Delay in ordering or checking investigations
☐ Delay in recognition of abnormal vitals
☐ Delay in recognition of surgical complications
☐ Other delay (please specify)
☐ Failure in recognition of high-risk status (including failure to recognise intrauterine growth restriction)
☐ Failure in ordering or checking investigations (including failure to do or to repeat glucose tolerance test)
☐ Failure in recognition of abnormal vitals
☐ Failure in recognition of surgical complications
☐ Other failure (please specify)

5b. Description of relevant issue.

5c. Were there national guidelines/standards related to the relevant factor or event?

☐ Yes ☐ No

5d. If yes, were they followed?

☐ Yes ☐ No

5e. Please note the relevant guidelines or standards.
5f. Please note the significance of this factor or event.

☐ Major
Factor contributed significantly to the death. Different management would reasonably have been expected to alter the outcome.

☐ Minor
Factor was a relevant contributory factor. Different management might have made a difference, but survival was unlikely in any case.

☐ Wider Learning
Although lessons can be learned, it did not affect the eventual outcome.

5g. Please note the main clinician or healthcare professional responsible for this factor or event.

☐ GP
☐ Hospital Midwife
☐ Community Midwife
☐ Obstetrician
☐ Anaesthetist
☐ A & E physician
☐ Psychiatrist
☐ Ambulance paramedic
☐ ICU physician
☐ Nurse
☐ Other (please specify)

5h. Please designate the status or grade of the main clinician or healthcare professional responsible for this factor or event.

Referral to a specialist

6. Was there an avoidable factor/event regarding the referral to a specialist?

☐ Yes
☐ No
6a. If yes, then please tick each relevant factor or event.
   □ Delay in referral
   □ Failure to refer
   □ Appropriate person was not available or did not respond
   □ Services not available

6b. Description of relevant issue.

6c. Were there national guidelines/standards related to the relevant factor or event?
   □ Yes □ No

6d. If yes, were they followed?
   □ Yes □ No

6e. Please note the relevant guidelines or standards.

6f. Please note the significance of this factor or event.
   □ Major
   Factor contributed significantly to the death. Different management would reasonably have been expected to alter the outcome.
   □ Minor
   Factor was a relevant contributory factor. Different management might have made a difference, but survival was unlikely in any case.
   □ Wider Learning
   Although lessons can be learned, it did not affect the eventual outcome.

6g. Please note the main clinician or health care professional responsible for this factor or event.
   □ GP
   □ Hospital Midwife
   □ Community Midwife
   □ Obstetrician
   □ Anaesthetist
   □ A & E physician
   □ Psychiatrist
☐ Ambulance paramedic
☐ ICU physician
☐ Nurse
☐ Other (please specify)

6h. Please designate the status or grade of the main clinician or healthcare professional responsible for this factor or event.

Treatment

7. Was there an avoidable factor/event regarding treatment?
   ☐ Yes
   ☐ No

7a. If yes, then please tick each relevant factor or event.
   ☐ No plan of care/management
   ☐ Delay in treatment (including delayed operation)
   ☐ Inappropriate treatment
   ☐ Poor diabetic management
   ☐ Failure to treat. If yes, then was the failure one of the following:
     ☐ Failure to act on high-risk situation/history
     ☐ Failure to act on intra-uterine growth restriction
     ☐ Failure to act on decreased fetal movements
     ☐ Failure to act on raised blood pressure and/or proteinuria
     ☐ Failure to act on suspicious antenatal cardiograph
     ☐ Failure to resuscitate a newborn

7b. Description of relevant issue.

7c. Were there national guidelines/standards related to the relevant factor or event?
   ☐ Yes ☐ No

7d. If yes, were they followed?
   ☐ Yes ☐ No
7e. Please note the relevant guidelines or standards.

7f. Please note the significance of this factor or event.

- **Major**
  
  Factor contributed significantly to the death. Different management would reasonably have been expected to alter the outcome.

- **Minor**
  
  Factor was a relevant contributory factor. Different management might have made a difference, but survival was unlikely in any case.

- **Wider Learning**
  
  Although lessons can be learned, it did not affect the eventual outcome.

7g. Please note the main clinician or healthcare professional responsible for this factor or event.

- GP
- Hospital Midwife
- Community Midwife
- Obstetrician
- Anaesthetist
- A & E physician
- Psychiatrist
- Ambulance paramedic
- ICU physician
- Nurse
- Other *(please specify)*

7h. Please designate the status or grade of the main clinician or healthcare professional responsible for this factor or event.

**Clinical leadership**

8. Was there an avoidable factor/event regarding *clinical leadership*?

- Yes
- No
8a. If yes, then please tick each relevant factor or event.

☐ Fail to check on junior’s work (e.g., senior did not attend)
☐ Fail to consult superior
☐ Inappropriate grade of staff involved in care

8b. Description of relevant issue.

8c. Were there national guidelines/standards related to the relevant factor or event?

☐ Yes ☐ No

8d. If yes, were they followed?

☐ Yes ☐ No

8e. Please note the relevant guidelines or standards.

8f. Please note the significance of this factor or event.

☐ Major
Factor contributed significantly to the death. Different management would reasonably have been expected to alter the outcome.

☐ Minor
Factor was a relevant contributory factor. Different management might have made a difference, but survival was unlikely in any case.

☐ Wider Learning
Although lessons can be learned, it did not affect the eventual outcome.

8g. Please note the main clinician or healthcare professional responsible for this factor or event.

☐ GP
☐ Hospital Midwife
☐ Community Midwife
☐ Obstetrician
☐ Anaesthetist
☐ A & E physician
☐ Psychiatrist
☐ Ambulance paramedic
8h. Please designate the status or grade of the main clinician or healthcare professional responsible for this factor or event.

Education, knowledge and training

9. Was there an avoidable factor / event regarding education of a health professional?
   □ Yes
   □ No

9a. If yes, then please tick the relevant factor or event.
   □ Lack of knowledge or training

9b. Description of relevant issue.

9c. Were there national guidelines/standards related to the relevant factor or event?
   □ Yes □ No

9d. If yes, were they followed?
   □ Yes □ No

9e. Please note the relevant guidelines or standards.

9f. Please note the significance of this factor or event.
   □ Major
   Factor contributed significantly to the death. Different management would reasonably have been expected to alter the outcome.
   □ Minor
   Factor was a relevant contributory factor. Different management might have made a difference, but survival was unlikely in any case.
   □ Wider Learning
   Although lessons can be learned, it did not affect the eventual outcome.
9g. Please note the main clinician or healthcare professional responsible for this factor or event.

- GP
- Hospital Midwife
- Community Midwife
- Obstetrician
- Anaesthetist
- A & E physician
- Psychiatrist
- Ambulance paramedic
- ICU physician
- Nurse
- Other (please specify)

9h. Please designate the status or grade of the main clinician or healthcare professional responsible for this factor or event.

**Documentation**

10. Was there an avoidable factor/event regarding documentation?

- Yes
- No

10a. If yes, then please tick each relevant factor or event.

- Poor documentation
- Failure to document/incomplete records

10b. Description of relevant issue.

10c. Were there national guidelines/standards related to the relevant factor or event?

- Yes
- No

10d. If yes, were they followed?

- Yes
- No
10e. Please note the relevant guidelines or standards.

10f. Please note the significance of this factor or event.

☐ Major
Factor contributed significantly to the death. Different management would reasonably have been expected to alter the outcome.

☐ Minor
Factor was a relevant contributory factor. Different management might have made a difference, but survival was unlikely in any case.

☐ Wider Learning
Although lessons can be learned, it did not affect the eventual outcome.

10g. Please note the main clinician or healthcare professional responsible for this factor or event.

☐ GP
☐ Hospital Midwife
☐ Community Midwife
☐ Obstetrician
☐ Anaesthetist
☐ A & E physician
☐ Psychiatrist
☐ Ambulance paramedic
☐ ICU physician
☐ Nurse
☐ Other (please specify)

10h. Please designate the status or grade of the main clinician or healthcare professional responsible for this factor or event.

Discharge or transfer from care

11. Was there an avoidable factor/event regarding during the post-delivery or discharge period?

☐ Yes
☐ No
11a. If yes, then please tick each relevant factor or event.

- Inappropriate transfer home
- Inappropriate discharge from care
- Failure to counsel patient
- Failure to arrange appropriate ongoing treatment / care
- Failure to follow up after transfer home
- Inadequate screening following a stillbirth
- Problems with the post mortem examination including failure to send samples
- Insufficient bereavement support

11b. Description of relevant issue.

11c. Were there national guidelines/standards related to the relevant factor or event?

- Yes
- No

11d. If yes, were they followed?

- Yes
- No

11e. Please note the relevant guidelines or standards.

11f. Please note the significance of this factor or event.

- Major
  Factor contributed significantly to the death. Different management would reasonably have been expected to alter the outcome.

- Minor
  Factor was a relevant contributory factor. Different management might have made a difference, but survival was unlikely in any case.

- Wider Learning
  Although lessons can be learned, it did not affect the eventual outcome.

11g. Please note the main clinician or healthcare professional responsible for this factor or event.

- GP
- Hospital Midwife
- Community Midwife
☐ Obstetrician
☐ Anaesthetist
☐ A & E physician
☐ Psychiatrist
☐ Ambulance paramedic
☐ ICU physician
☐ Nurse
☐ Other (please specify)

11h. Please designate the status or grade of the main clinician or healthcare professional responsible for this factor or event.

FACTORS RELATED TO SERVICES

Communication

12. Was there an avoidable factor/event due to communication problems?
   ☐ Yes
   ☐ No

12a. If yes, then please tick each relevant factor or event.
   ☐ Between doctors
   ☐ Between midwives and doctors
   ☐ Between nursing and doctors
   ☐ Between departments / specialists
   ☐ Between hospitals
   ☐ Between health professional and woman (including importance of changes in fetal movement not explained to woman)

12b. Description of relevant issue.

12c. Were there national guidelines/standards related to the relevant factor or event?
   ☐ Yes ☐ No
12d. If yes, were they followed?
   □ Yes □ No

12e. Please note the relevant guidelines or standards.

12f. Please note the significance of this factor or event.
   □ Major
   Factor contributed significantly to the death. Different management would reasonably have been expected to alter the outcome.
   □ Minor
   Factor was a relevant contributory factor. Different management might have made a difference, but survival was unlikely in any case.
   □ Wider Learning
   Although lessons can be learned, it did not affect the eventual outcome.

Policy or procedure problems

13. Was there an avoidable factor/event due to policy or procedure problems?
   □ Yes
   □ No

13a. If yes, then please tick each relevant factor or event.
   □ Regarding lab facilities or results
   □ Regarding oversight of others (e.g., no senior on call)
   □ Regarding scheduling and assessment
   □ Regarding emergency preparedness (e.g., ICU full or too distant, lack of theatre, lack of blood)
   □ Regarding patient education
   □ Regarding availability of records (e.g., at time of birth)
   □ Regarding staff workload
   □ Other (please specify)

13b. Description of relevant issue.
13c. Were there national guidelines/standards related to the relevant factor or event?

☐ Yes  ☐ No

13d. Please note the relevant guidelines or standards.

13e. Please note the significance of this factor or event.

☐ Major
Factor contributed significantly to the death. Different management would reasonably have been expected to alter the outcome.

☐ Minor
Factor was a relevant contributory factor. Different management might have made a difference, but survival was unlikely in any case.

☐ Wider Learning
Although lessons can be learned, it did not affect the eventual outcome.

FACTORS RELATED TO THE WOMAN AND HER FAMILY

14. Was there an avoidable factor/event due to the woman and her family?

☐ Yes  ☐ No

14a. If yes, then please tick each relevant factor or event.

☐ Non-compliance with medical advice (e.g., refused treatment, refused blood)
☐ Failure to seek care (including failure to report decreased fetal movements until after delivery)
☐ Failure to attend scheduled care, including inadequate antenatal care
☐ Substance misuse
☐ Other (please specify)

14b. Description of relevant issue.
14c. Please note the significance of this factor or event.

☐ Major
Factor contributed significantly to the death. Different management would reasonably have been expected to alter the outcome.

☐ Minor
Factor was a relevant contributory factor. Different management might have made a difference, but survival was unlikely in any case.

☐ Wider Learning
Although lessons can be learned, it did not affect the eventual outcome.

ASSESSMENT OF CARE

15. Does the panel think overall care of the mother and baby was optimal, adequate or poor?

<table>
<thead>
<tr>
<th>Antenatal Care</th>
<th>□ Optimal</th>
<th>□ Adequate</th>
<th>□ Poor</th>
<th>□ Insufficient information in notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intrapartum Care</td>
<td>□ Optimal</td>
<td>□ Adequate</td>
<td>□ Poor</td>
<td>□ Insufficient information in notes</td>
</tr>
<tr>
<td>Postpartum care</td>
<td>□ Optimal</td>
<td>□ Adequate</td>
<td>□ Poor</td>
<td>□ Insufficient information in notes</td>
</tr>
</tbody>
</table>

15a. Please highlight any particular instances of optimal care or care that went above and beyond expectations.

RECOMMENDATIONS AND LEARNING POINTS

16. Please summarise recommendations and learning points illustrated by this case.

INTERNAL REVIEWS

17. Was there a Serious Untoward Incident (SUI) triggered?

☐ Yes  ☐ No
18. Was there a Health Board internal review?
   □ Yes  □ No

18a. What was the conclusion of the internal review?

18b. Does the panel agree with the conclusion of the internal review?
   □ Yes  □ No

18c. Please specify.

WOMAN AND FAMILY’S QUESTIONS

Please provide a response to the woman and family’s questions:
APPENDIX 4

CLINICAL CASE REVIEW FORM – NEONATES

SUPPORTING TRANSITION AND RESUSCITATION

**Personnel**

1.1 Were paediatric staff present at delivery?

1.2 If not present, reason:

1.3 Consultant present at delivery?

1.4 If not present, time of arrival (mins) *(if never present state 'never')*

1.5 Tier 1 trainee present at delivery? *(includes ANNPs working as Tier 1)*

1.6 If not present, time of arrival (mins) *(if never present state 'never')*

1.7 Tier 2 trainee present at delivery? *(includes ANNPs working as Tier 2)*

1.8 If not present, time of arrival (mins) *(if never present state 'never')*

1.9 Neonatal nurse present at delivery?

1.10 If not present, time of arrival (mins) *(if never present state 'never')*

1.11 Notes:

**Events**

1.12 Gestation at birth (weeks)

1.13 Time of birth (hh:mm)

1.14 Delayed cord clamping?

1.15 Heart rate at birth (beats/min)

1.16 Respiration at birth

1.17 Colour at birth

1.18 Notes:

**Actions**

1.19 Was intervention given?
1.20 If yes, what was done? (tick all that apply)

<table>
<thead>
<tr>
<th>Action</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hat</td>
<td></td>
</tr>
<tr>
<td>Plastic bag-wrap (preterm)</td>
<td></td>
</tr>
<tr>
<td>Facial O2</td>
<td></td>
</tr>
<tr>
<td>Airway opening</td>
<td></td>
</tr>
<tr>
<td>Oropharyngeal suction</td>
<td></td>
</tr>
<tr>
<td>Inflation breaths</td>
<td></td>
</tr>
<tr>
<td>Ventilation breaths</td>
<td></td>
</tr>
<tr>
<td>Intubation (unsuccessful)</td>
<td></td>
</tr>
<tr>
<td>Intubation (successful)</td>
<td></td>
</tr>
<tr>
<td>ETT suction</td>
<td></td>
</tr>
<tr>
<td>Cardiac compression</td>
<td></td>
</tr>
<tr>
<td>Intravenous access</td>
<td></td>
</tr>
<tr>
<td>Blood transfusion</td>
<td></td>
</tr>
<tr>
<td>Drugs</td>
<td></td>
</tr>
<tr>
<td>Adjunct airway</td>
<td></td>
</tr>
<tr>
<td>Chest drain (needle)</td>
<td></td>
</tr>
<tr>
<td>Chest drain (formal)</td>
<td></td>
</tr>
<tr>
<td>Airway opening</td>
<td></td>
</tr>
<tr>
<td>Intubation (unsuccessful)</td>
<td></td>
</tr>
<tr>
<td>Intubation (successful)</td>
<td></td>
</tr>
<tr>
<td>ETT suction</td>
<td></td>
</tr>
<tr>
<td>Chest drain (formal)</td>
<td></td>
</tr>
<tr>
<td>Passive cooling</td>
<td></td>
</tr>
<tr>
<td>Passive cooling</td>
<td></td>
</tr>
</tbody>
</table>

1.21 First gasp (mins) (if never state 'never')

1.22 Time to regular respiration (mins) (if never state 'never')

1.23 Time to HR >100/min (mins) (if never state 'never')

1.24 Apgar score @ 1
Apgar score @ 5
Apgar score @ 10

1.25 Cord pH (if unknown, state 'unknown')

1.26 Notes:

Communication

1.27 Was there communication with the family?

1.28 When did this occur? (tick all that apply)

<table>
<thead>
<tr>
<th>Action</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>During resuscitation</td>
</tr>
<tr>
<td>Prior to delivery</td>
<td>Following resuscitation</td>
</tr>
</tbody>
</table>

1.29 Who undertook this? (list all that apply)

<table>
<thead>
<tr>
<th>Role</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Neonatal nurse</td>
<td>Tier 2 trainee</td>
</tr>
<tr>
<td>Tier 1 trainee</td>
<td>Paediatric Consultant</td>
</tr>
</tbody>
</table>

1.30 Notes:

Equipment

1.31 Were there equipment issues?

1.32 If yes, were these related to (tick all that apply)

<table>
<thead>
<tr>
<th>Issue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
</tr>
<tr>
<td>Available but inoperative</td>
</tr>
<tr>
<td>Other</td>
</tr>
</tbody>
</table>

1.33 Notes:
Documentation

1.34 Were entries legible?
1.35 Were entries signed?
1.36 Were entries dated?
1.37 Were entries timed?
1.38 Did documentation describe events adequately?
1.39 Notes:
1.40 Grading - Supporting transition & resuscitation

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>No suboptimal care</td>
<td></td>
</tr>
<tr>
<td>Some suboptimal care which did not affect the outcome</td>
<td></td>
</tr>
<tr>
<td>Suboptimal care – different care might have made a difference to outcome (possible avoidable death)</td>
<td></td>
</tr>
<tr>
<td>Suboptimal care – would reasonably be expected to have made a difference to the outcome (probable avoidable death)</td>
<td></td>
</tr>
</tbody>
</table>

1.41 If sub-optimal care, select member(s) of team and select reason(s).

<table>
<thead>
<tr>
<th>Member</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paediatric Consultant</td>
<td>R: Failure to recognise problem</td>
</tr>
<tr>
<td>Tier 2 trainee</td>
<td>A: Failure to act appropriately</td>
</tr>
<tr>
<td>Tier 1 trainee</td>
<td>C: Communications failure</td>
</tr>
<tr>
<td>Neonatal nurse</td>
<td>S: Failure to supervise</td>
</tr>
<tr>
<td></td>
<td>H: Any lack of human resource</td>
</tr>
<tr>
<td></td>
<td>E: Any lack of failure of equipment</td>
</tr>
<tr>
<td></td>
<td>O: Other (please specify)</td>
</tr>
</tbody>
</table>

1.42 Notes:

STABALISATION AND TRANSFER TO THE NEONATAL UNIT

2.1 Who was involved in transfer to NNU? (tick all that apply)

<table>
<thead>
<tr>
<th>Role</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neonatal nurse</td>
<td>Tier 2 trainee</td>
</tr>
<tr>
<td>Tier 1 trainee</td>
<td>Paediatric Consultant</td>
</tr>
</tbody>
</table>

Events

2.2 Was the baby stabilised prior to transfer to NNU? (if 'No', enter reason in 2.3)

2.3 Notes:

Actions

2.4 Was any new intervention given during transfer to NNU?
2.5 If yes, what was given? (tick all that apply)

<table>
<thead>
<tr>
<th>Facial O2</th>
<th>Ventilation breaths</th>
<th>ETT suction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airway opening</td>
<td>Adjunct airway</td>
<td>Cardiac compression</td>
</tr>
<tr>
<td>Oropharyngeal suction</td>
<td>Intubation (unsuccessful)</td>
<td>Intravenous access</td>
</tr>
<tr>
<td>Inflation breaths</td>
<td>Intubation (successful)</td>
<td>Blood transfusion</td>
</tr>
</tbody>
</table>

2.6 Notes:

Communication

2.7 Was there communication with the family?

2.8 When did this occur? (tick all that apply)

<table>
<thead>
<tr>
<th>Prior to transfer</th>
</tr>
</thead>
<tbody>
<tr>
<td>During transfer</td>
</tr>
<tr>
<td>After transfer</td>
</tr>
</tbody>
</table>

2.9 Who undertook this? (list all that apply)

<table>
<thead>
<tr>
<th>Neonatal nurse</th>
<th>Tier 2 trainee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier 1 trainee</td>
<td>Paediatric Consultant</td>
</tr>
</tbody>
</table>

2.10 Notes:

Equipment

2.11 Were there equipment issues?

2.12 If yes, were these related to (list all that apply)

<table>
<thead>
<tr>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Available but inoperative</td>
</tr>
<tr>
<td>Other</td>
</tr>
</tbody>
</table>

2.13 Notes:

Documentation

2.14 Were entries legible?

2.15 Were entries signed?

2.16 Were entries dated?

2.17 Were entries timed?

2.18 Did documentation describe events adequately?

2.19 Notes:
2.20 Grading - Stabilisation & transfer to NNU

<table>
<thead>
<tr>
<th>No suboptimal care</th>
<th>Some suboptimal care which did not affect the outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suboptimal care – different care might have made a difference to outcome (possible avoidable death)</td>
<td>Suboptimal care – would reasonably be expected to have made a difference to the outcome (probable avoidable death)</td>
</tr>
</tbody>
</table>

2.21 If sub-optimal care, select member(s) of team and select reason(s)

<table>
<thead>
<tr>
<th>Paediatric Consultant</th>
<th>R: Failure to recognise problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier 2 trainee</td>
<td>A: Failure to act appropriately</td>
</tr>
<tr>
<td>Tier 1 trainee</td>
<td>C: Communications failure</td>
</tr>
<tr>
<td>Neonatal nurse</td>
<td>S: Failure to supervise</td>
</tr>
<tr>
<td></td>
<td>H: Any lack of human resource</td>
</tr>
<tr>
<td></td>
<td>E: Any lack of failure of equipment</td>
</tr>
<tr>
<td></td>
<td>O: Other (please specify)</td>
</tr>
</tbody>
</table>

2.22 Notes:

ADMISSION AND FIRST HOURS

Personnel

3.1 Who was involved in admission and 1st hour?

<table>
<thead>
<tr>
<th>Neonatal nurse</th>
<th>Tier 2 trainee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier 1 trainee</td>
<td>Paediatric Consultant</td>
</tr>
</tbody>
</table>

Events

3.2 Temperature on admission (degrees C)
3.3 Heart rate on admission (beats/min)
3.4 Systolic blood pressure on admission (mm Hg) *(if unknown enter ‘unknown’)*
3.5 Mean blood pressure on admission (mm Hg) *(if unknown enter ‘unknown’)*
3.6 pH on admission
3.7 PaCO2 on admission
3.8 Base deficit on admission
3.9 Lactate on admission
3.10 Did the baby require on-going stabilisation?
3.11 Notes:
**Actions**

3.12  What actions were undertaken following admission? *(tick all that apply)*

<table>
<thead>
<tr>
<th></th>
<th>Umbilical venous catheter</th>
<th>Passive cooling</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPAP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intubation (unsuccessful)</td>
<td>Umbilical arterial line</td>
<td>Active cooling</td>
</tr>
<tr>
<td>Intubation (successful)</td>
<td>Intravenous fluids</td>
<td>Cranial ultrasound scan</td>
</tr>
<tr>
<td>Chest drain (needle)</td>
<td>Blood transfusion</td>
<td>Chest x-ray</td>
</tr>
<tr>
<td>Chest drain (formal)</td>
<td>Antibiotics</td>
<td>Abdominal x-ray</td>
</tr>
<tr>
<td>Intravenous access</td>
<td>Inotropic support</td>
<td>Vitamin K</td>
</tr>
</tbody>
</table>

3.13  Notes:

**Communication**

3.14  Was there communication with the family?

3.15  When did this occur? *(tick all that apply)*

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>Within 12 hours</td>
</tr>
<tr>
<td>Within 6 hours</td>
<td>Within 24 hours</td>
</tr>
</tbody>
</table>

3.16  Who undertook this? *(tick all that apply)*

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Neonatal nurse</td>
<td>Paediatric ST 3-4</td>
</tr>
<tr>
<td>Paediatric ST1-2</td>
<td>Paediatric Consultant</td>
</tr>
</tbody>
</table>

3.17  Notes:

**Equipment**

3.18  Were there equipment issues?

3.19  If yes, were these related to *(tick all that apply)*

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
</tr>
<tr>
<td>Available but inoperative</td>
</tr>
<tr>
<td>Other</td>
</tr>
</tbody>
</table>

3.20  Notes:

**Documentation**

3.21  Were entries legible?

3.22  Were entries signed?

3.23  Were entries dated?

3.24  Were entries timed?
3.25 Did documentation describe events adequately?

3.26 Notes:

3.27 Grading - admission & first hours

<table>
<thead>
<tr>
<th>No suboptimal care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some suboptimal care which did not affect the outcome</td>
</tr>
<tr>
<td>Suboptimal care – different care might have made a difference to outcome (possible avoidable death)</td>
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<tr>
<td>Suboptimal care – would reasonably be expected to have made a difference to the outcome (probable avoidable death)</td>
</tr>
</tbody>
</table>

3.28 If sub-optimal care, select member(s) of team and select reason(s)

<table>
<thead>
<tr>
<th>Paediatric Consultant</th>
<th>R: Failure to recognise problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier 2 trainee</td>
<td>A: Failure to act appropriately</td>
</tr>
<tr>
<td>Tier 1 trainee</td>
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<td></td>
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<td></td>
<td>E: Any lack of failure of equipment</td>
</tr>
<tr>
<td></td>
<td>O: Other (please specify)</td>
</tr>
</tbody>
</table>

3.29 Notes:

**ON-GOING TREATMENT**

**Personnel**

4.1 Who was involved in on-going treatment? *(tick all that apply)*

<table>
<thead>
<tr>
<th>Neonatal nurse</th>
<th>Tier 2 trainee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier 1 trainee</td>
<td>Paediatric Consultant</td>
</tr>
</tbody>
</table>

**Events**

4.2 Was the baby reviewed by a consultant within 12 hours?

4.3 Was the baby reviewed at least 12-hourly during admission?

4.4 If yes, by whom? *(tick all that apply)*

<table>
<thead>
<tr>
<th>Neonatal nurse</th>
<th>Tier 2 trainee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier 1 trainee</td>
<td>Paediatric Consultant</td>
</tr>
</tbody>
</table>

4.5 Did the baby receive on-going respiratory support?
4.6 If yes, tick all that apply

<table>
<thead>
<tr>
<th>Ambient oxygen</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPAP</td>
</tr>
<tr>
<td>IPPV</td>
</tr>
</tbody>
</table>

4.7 Did the baby receive on-going cardiovascular support?

4.8 If yes, tick any that apply

<table>
<thead>
<tr>
<th>Fluid bolus(es)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inotrope(s)</td>
</tr>
</tbody>
</table>

4.9 Did the baby receive fluid restriction?

4.10 Did the baby receive cooling?

4.11 Did the baby receive anticonvulsants?

4.12 Notes:

Actions

4.13 Were changes in blood gases acted upon promptly?

4.14 Were changes in blood gases acted upon appropriately?

4.15 Were changes in blood pressure acted upon promptly?

4.16 Were changes in blood pressure acted upon appropriately?

4.17 Were changes in renal output acted upon promptly?

4.18 Were changes in renal output acted upon appropriately?

4.19 Were seizures acted upon promptly?

4.20 Were seizures acted upon appropriately?

4.21 Were other acute events acted on promptly?

4.22 Were other acute events acted on appropriately?

4.23 Notes:

Communication

4.24 Was there on-going communication with the family?

4.25 When did this occur? (tick all that apply)

<table>
<thead>
<tr>
<th>12 hourly</th>
<th>48 hourly</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 hourly</td>
<td>&gt;48 hourly</td>
<td></td>
</tr>
</tbody>
</table>
4.26 Who undertook this? *(tick all that apply)*

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**Equipment**

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4.30 Notes:

**Documentation**

4.31 Were entries legible?

4.32 Were entries signed?

4.33 Were entries dated?

4.34 Were entries timed?

4.35 Did documentation describe events adequately?

4.36 Notes:

4.37 Grading - on-going treatment

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</tbody>
</table>

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### Notes:

**REFERRAL**

**Personnel**

5.1 Who was involved in referral? (tick all that apply)

<table>
<thead>
<tr>
<th>Neonatal nurse</th>
<th>Tier 2 trainee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier 1 trainee</td>
<td>Paediatric Consultant</td>
</tr>
</tbody>
</table>

**Events**

5.2 How old was the baby at the time of referral? (hours)

5.2 Reason for referral (tick all that apply)

<table>
<thead>
<tr>
<th>Advice only</th>
<th>Transfer – on-going IC/HD care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transfer – no capacity</td>
<td>Transfer - other specialist care</td>
</tr>
</tbody>
</table>

5.4 If transferred, was this within Network pathway?

5.5 Notes:

**Actions**

5.6 Was the referral made at an appropriate time after admission?

5.7 Was the baby stable at the time of referral?

5.8 FiO2 at time of referral (%)

5.9 Systolic blood pressure on admission (mm Hg) (if unknown enter 'unknown')

Mean blood pressure on admission (mm Hg) (if unknown enter 'unknown')

5.10 pH at time of referral

5.11 PaCO2 at time of referral

5.12 Base deficit at time of referral

5.13 Lactate at time of referral

5.14 Notes:

**Communication**

5.15 If transfer occurred were the family aware of the transfer?

5.16 How long after referral were they informed? (hours) (if never, state 'never')
5.17 Who informed them? (tick all that apply, if not informed leave blank)

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5.18 Were there problems making the referral?

5.19 If yes, list the problems (tick all that apply)

<table>
<thead>
<tr>
<th>Unable to contact referral centre</th>
<th>Transfer team unavailable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unable to contact transfer team</td>
<td>No cots in region</td>
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5.20 Notes:

**Documentation**

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