University Hospitals of Derby and Burton
NHS Foundation Trust

9 May 2024

PRIVATE & CONFIDENTIAL
Mrs Susan Evans
HM Area Coroner for Derby and Derbyshire
St Katherine's House
St Mary's Warf
Mansfield Road
Derby, DE1 3TQ

Dear Madam

Zachary Taylor-Smith: Regulation 28 Report Response

I am writing in response to the Regulation 28 Report dated 14 March 2024, following the Inquest into Zachary Taylor-Smith's sad death.

Conscious that Zachary's family will receive a copy of this response, I firstly want to begin by offering my deepest condolences to his parents and family. I am sorry the care we delivered to Zachary and his parents was not as it should have been.

We are determined to ensure the care our families receive is of the highest quality and our staff can deliver good quality care at all times. As such, our Women and Children's Division staff have collated the specific responses Zachary's case, but I also write to provide further assurance on the actions we continue to take, including through our wider Maternity & Neonatal Improvement Programme.

As a Trust we welcome working closely with our families, and having benefitted from Zachary's parents' continued engagement, I also wish to acknowledge and give thanks for their ongoing work with us over what are incredibly difficult events.

Scope

With our commitments to improve, the investments we have made, and the scale of the Maternity & Neonatal Improvement Programme, we note the matters of concern from the Regulation 28 Report, namely:-:

1. Staff lacking appreciation and proper understanding of the significance of the 4-hour period after birth in relation to indicators of a deteriorating baby and the potential over emphasis placed on the possible innocuous explanation for grunting in that period.
2. Staff lacking appreciation of the significance of the timing between rupture of membranes in a pre-term birth and birth and, therefore, failing to note or ask to be furnished with that information to inform their assessment of the risks of infection in babies.
3. The persisting cultural issues affecting the relationships and communication between maternity and neonatal staff.
4. Absence of an effective system in place to ensure required reviews remain live until completed.
5. Absence of a formal mechanism for reviewing whether it is safe for planned inductions to take place in the context of ward and neonatal units levels of activity and capacity.

Trust Response

Please find enclosed commentary that has been prepared to give assurance on the actions taken to address the points of concern you have raised and following the Regulation 28 Report.

Appendix 1 (attached) is the action plan which documents the actions already taken and those in progress. These include actions generated because of our internal investigations into Zachary's death, and additional actions because of your findings following Zachary's Inquest. This action plan creates a single location whereby actions can be monitored, and evidence of completion embedded, with continual review to maintain assurance into the longer term.

The Trust has over the last 2 years committed significant time and resource into improving the safety of care delivery in our maternity services. Internal and external reviews and reports have helped us identify our areas for focus. The extensive Maternity & Neonatal Improvement Programme in progress includes investment in additional staff, improved equipment and facilities, as well as embedding improvements to system and process. We have also strengthened the leadership roles we have to include the recently newly appointed Director of Midwifery, Divisional Director of Operations, and Divisional Medical Director with a Divisional Director of Nursing who has been in post for just over a year. We acknowledge that whilst we have already delivered on positive change, we are not complacent and are committed to acting openly and honestly, examining all the facts and with the determination to deliver improvements for future care. As such, in addition to individual incident reviews, we have proactively requested and welcomed reviews into our services, which are informing our work and delivering demonstrable improvements. We have also appointed 46 additional midwives and increased our medical establishment across obstetrics and anaesthetics.

The Maternity & Neonatal Improvement Programme contains 14 broad workstreams. Each workstream has its own clinical lead, project lead and operational lead that drive forward actions with set milestones, which are then monitored by the Board. Our patient experience manager also provides feedback received from our patient population into each workstream alongside input from our Maternity Voices and Neonatal Partnership Group.

The Trust is also working closely with NHS England and we are the only Trust that have proactively asked to enter the National Maternity Safety Support Programme. This provides the Trust with additional senior expertise/consultants through two Maternity Improvement Advisors: a very senior midwife/Director of Midwifery equivalent and an Obstetric Consultant. Their role is to give independent advice, verification/and or escalation of risks alongside the Trust to the Regional Chief Midwife, the ICB and the CQC which monitor progress of the Maternity & Neonatal Improvement Programme through the Regional Oversight Meeting.

I hope that this response demonstrates that the Trust is committed to making changes following Zachary's tragic death and to improving care for our future patients.

Yours sincerely

[redacted]

[redacted]
Executive Chief Nurse
University Hospitals of Derby and Burton

Response to concerns identified in the Regulation 28 Report to Prevent Future Deaths issued on 14 March 2023

1. **Staff lacking appreciation and proper understanding of the significance of the 4 hour period after birth in relation to indicators of a deteriorating baby and the potential over emphasis placed on the possible innocuous explanation for grunting in that period.**

Actions completed:

- **Implementation of the Newborn Track and Trigger 2 (NEWTT2) framework Immediate Care and Observations of the Newborn – Maternity / Neonatal.**

The NHSE Three Year Delivery Plan for Neonatal and Maternity stipulates roll out of NEWTT2 by 2025. Following this case, roll out of NEWTT2 was fast-tracked across UHDB and implemented on 5.9.23. NEWTT2 is specifically designed for the postnatal setting and immediate period following birth. It identifies at risk babies and provides an updated Newborn Early Warning chart aligning to current national recommendations for newborn care. The tool develops a more rigorous set of criteria than timing alone and the chart includes, for example, recording of parental concern to acknowledge the importance of the views of the family in addition to the wider multi-disciplinary team.

NEWTT2 also provides an escalation tool and a standard response and review tool for the multidisciplinary team to promote consistency between healthcare professionals and ensure that the team and family are involved in and fully informed of the actions required for a baby to receive safe care. The response tool facilitates the documentation of the response taken and subsequent actions required. In addition, use of this tool decreases the risks of professional disagreement and other team factors from impacting negatively on patient care - the institution of checklists/frameworks/tools which clearly describe not only assessment criteria and thresholds for concern, but also the pathway of care, escalation and intervention that is required as a result, reduces the likelihood of negative impact of normal human factors. Embedding the inclusion of the family in NEWTT2 further enhances the safety of the care at the bedside and its use and efficacy forms part of our ongoing audit programme.

Immediate learning from this case was cascaded via a learning vignette to all staff on 21.12.22 and has been included into mandatory training for the clinical MDT. Additional learning and sharing of the reports with clinicians involved in the case was completed.

Following learning from the Inquest a further amendment to NEWTT2 has been completed (see exert from guidelines below) and was implemented week commencing 15.04.24. This is to ensure consistency of escalation in babies with signs of respiratory distress and further support the recognition of babies at risk. Our amendment to guidance states:

> *'Babies may have some mild respiratory distress in the first 4 hours after birth. This can be due to normal physiological transition from in utero respiration through the placenta to breathing in air. Babies can have mild increase in respiratory rate, and occasional intermittent grunting in this period.*
>
> *'However, if the baby has features of respiratory distress and the NEWTT2 score indicates escalation to neonatal team, a review should be undertaken, and the baby reviewed as per the NEWTT2 guidance. Babies with such mild respiratory distress may not need to be screened for infections immediately if they are otherwise well but should be kept under close observation using the NEWTT2 charts. If the respiratory distress worsens or there are other risk factors or clinical indicators for early neonatal infection, tests for infection and antibiotics should be considered as per the Early Onset Neonatal Infections guidelines.'*

The tool is explicit in what action should be taken and within what timeframe based on the baby's clinical presentation and any concern raised by the parents. Communication of these changes to the guideline

were made to both the maternity and neonatal teams via multiple communication channels including message groups, staff email, verbal update at staff handovers, and in team huddles through week of 15.04.24. This is normal process for changes to guidance.

Actions in progress:

- **BadgerNet & Padlet app introduction**

Learning from incidents is already cascaded through a variety of formats including daily safety huddles and email bulletins. Implementation of BadgerNet (described in more detail below) represents a whole system change and is central to driving forward best practice in care planning, clinical care, patient access to information and audit. It is important to embed this properly within the teams but following this we also intend to explore the introduction of the Padlet App as a tool for shared learning, guideline updates, safety alerts and practice reminders for all staff to have access across Maternity and Neonatal services. Padlet is a secure visual communication board for content to be disseminated safely and so can be accessed inside and outside of the workplace. This would provide an additional medium for communicating with clinical teams.

2. **Staff lacking appreciation of the significance of the timing between rupture of membranes in a pre-term birth and birth and therefore failing to note or ask to be furnished with that information to inform their assessment of the risks of infection in babies.**

Actions completed:

- **Guidelines review**

Following this case, the guidelines for the management of Group B streptococcus, Induction of Labour, Labour Care and Pre-term Labour care were reviewed and updated on 14.3.23. This is to ensure clear and consistent guidance is available to all staff to support identification of babies at risk of infection related to time of rupture of membranes and time of delivery in both preterm and term babies and the ongoing care/management required.

As above, NEWTT2 was implemented on 05.09.23 to take into account as a risk factor the identification of babies born preterm with interval between rupture of membranes and time of birth over 18 hours, and these babies automatically trigger for enhanced observations under the NEWTT2 framework.

- **Communication**

Communication within a busy clinical setting can be challenging and to facilitate best transfer of information we are adopting multiple new ways of communicating with staff to ensure key messages can be communicated promptly and efficiently.

- 'Spotlight on maternity' is a new monthly communication to all staff, which commenced in April 2024. There will be a different theme and focus each month. April was focused on risk assessment, used to highlight the requirement for robust risk assessment of babies at risk of infection including the significance of timing between rupture of membranes and birth. May is focused on fetal monitoring. A 6-month programme has been agreed by the Division to reflect themes from clinical incidents.
- A 'daily safety brief' is used to communicate verbally at all handovers any contemporaneous safety/learning points in maternity and neonatology. This allows timely and prompt communication of important safety and learning issues with all clinical staff.
- We have improved and diversified the membership of our closed staff maternity group, extending to both obstetric, anaesthetic and neonatal teams to provide an alternative way to communicate with staff. This provides an additional forum for discussion and engagement

surrounding systems improvements with colleagues outside the Women and Children's Division, such as theatre staff and anaesthetic colleagues - audit of compliance for the administration of prophylactic intravenous antibiotics for pre-term vaginal births to be completed for all eligible cases giving birth in Quarter 1 24/25.

Actions in progress:

- **BadgerNet**

BadgerNet electronic patient record (EPR) launch is scheduled for 18.06.24. This will ensure the accurate and visible calculation of time between rupture of membranes and time of birth in both preterm and term deliveries reducing possibility of human error and flagging babies that are at risk. The system will support audit of completion of risk assessments and will form part of our extensive ongoing audit programme.

- **Parental experience**

Baby Zachary's parents, Hannah and Tim, have kindly agreed to support learning by taking part in a case study that can be shared will all staff and inform future education and learning, including the recording of a video. This case study will encompass all recommendations and learning identified in both local investigation and the inquest. We are incredibly grateful for the continued time and support that Hannah and Tim are investing in working with us.

- **Audit**

In response to work around the use of prophylactic antibiotics being administered for pre-term vaginal births we have developed an audit which will also form part of our ongoing audit programme for quarter 1 compliance 24/25 to ensure learning and actions have been embedded.

To measure improvement we will also be carrying out audits of maternity records. We will perform**:**

- Spot checks of records to audit completion of a holistic risk assessment.
- An audit over 12 weeks using a rapid safety proforma to ensure correct identification of preterm babies whose membranes ruptured over 18 hours to time of delivery. The proforma will audit time of rupture of membranes to time of delivery and measure compliance with identification of prolonged rupture of membranes (PROM) by risk assessment and also compliance with administration of antibiotics in preterm labour.

3. **The persisting cultural issues affecting the relationships and communication between maternity and neonatal staff.**

We acknowledge cultural issues and the need to address this. The implementation of checklists, guidelines and frameworks reduces the potential for a negative impact of human factors on care delivery, and we have prioritised completion of these actions in our improvement work as a result. Staff work hard, together, to deliver high quality care - having the right number of staff, with clear guidance and training, reduces stress and improves communication. Care for our staff through wellbeing support, access to training and education, peer support, appraisal, and visibility of leadership also impact - and we have prioritised all of these. We believe that when people feel psychologically safe within their working environment, we create the best possible culture that promotes respect and, importantly, service development and improvement.

Actions completed:

- **Culture and civility**

Culture and Civility within maternity and neonatal services is a Priority 1 project for the Trust Maternity & Neonatal Improvement Programme. The project, which commenced in August 2023, has a focus on improving staff behaviours across all staff and services that routinely provide maternity and neonatal care. This project is using information and recommendations from both national and local reports and surveys relating to culture within maternity and neonatal services, and has developed an action plan to deliver improvements that are identified to have an impact on culture and civility. Actions are tracked within the project group and the governance structure within which the Maternity & Neonatal Improvement Programme sits. There is wide project group membership including clinical and non-clinical staff who deliver maternity and neonatal services, and Trust experts in this field.

The Culture & Civility Work Programme hosted two Culture and Civility workshops with places offered to clinical staff in March 2024. The outputs from these workshops included 'what good culture looks like to me' and a good culture and civility charter. These are in the process of being published and socialised to the teams.

The Trust provides mandatory training using the Practical Obstetric Multiprofessional Training (PROMPT) package across our service. This model provides evidence-based training for maternity units with midwives, obstetricians and anaesthetists all attending study days together. The training is proven to have a significant positive effect on both maternal and neonatal outcomes as well as improve teamworking across the multiprofessional groups. Attendance is mandated annually, and Trust compliance is currently 85.81% (March 2024).

Actions in progress:

- **Improving performance in practice**

An Improving Performance in Practice (IPIP) Diagnostic culture survey was completed July 2023. IPIP are a team of experts with over 20 years' experience in organisational culture. They work in partnership with Denison Europe which supports organisations to develop high performing cultures. Both maternity and neonatal staff have completed the culture survey to provide a baseline reading of the service's culture and is being used to inform the organisational improvement taking place. The Trust team have met with IPIP and the proposed actions from them will be built into our wider improvement plans.

- **Staff engagement**

The NMC and GMC are hosting a joint cultural workshop at our request for divisional staff in May 2024, and with two further dates later in the year.

The staff members involved in the inquest will be invited to join the maternity and neonatal culture and civility project group, to support in ensuring that they can share their valuable experience, and that clinical staff voices are both heard and can actively contribute to improving the culture within maternity and neonatal services at the Trust. It is vital to listen to our staff group and use their experiences to drive improvements in the service.

- **Safety huddles**

It is recognised that safety huddles and multidisciplinary team (MDT) discussions did not consistently include neonatal services.

  - The maternity service has already adopted the Royal College of Obstetricians and gynaecologists (RCOG) Team of the Shift huddle. This huddle promotes excellence in teamwork, supports optimal communication, an understanding of team members' job roles

and encourages a shared mental model of the entire team's workload. Team of the Shift is now to be expanded to the entire MDT including Neonatal team members.
    - Daily safety huddles are carried out at 08:15 with the operational matron, flow co-ordinator and operational ward managers. Staffing and elective work is discussed, the OPEL sitrep is completed, and any potential issues raised. A second huddle takes place at 15:30 to review workload and staffing into the afternoon/evening.
    - A virtual cross-site safety briefing huddle takes place at 11:00 each day. It is mandatory for all professional groups to attend (MDT including neonatology, obstetrics, and anaesthetics). Workload across the maternity service is reviewed - Information and discussions are documented on a huddle proforma. A tracker is monitored and any non-attendance from a professional group challenged in real time, escalating to the operational Matron. Attendance is further reported and monitored the Business Unit governance meeting.

- **Junior doctor induction**

Junior doctors join the team every six months as a normal rotational cycle, creating a continuously evolving workforce. Given that the closest working relationships at the bedside are between rotational junior doctors and midwives, this is a relationship that needs particular attention to ensure rapid ability to work together effectively, with shared understanding of roles and responsibilities and understanding of how to work closely within newly formed teams. We have implemented a session in the junior doctor induction and training programme led by midwives to foster understanding of each other's roles and supportive ways of working.

4. **Absence of an effective system in place to ensure required reviews remain live until completed**

Actions completed:

- **Changes pending BadgerNet introduction**

Until BadgerNet EPR is implemented in June 2024, we have introduced a telephone consultation document to record all telephone consultations/discussions/requests for review between maternity and neonatal staff. This record includes date/time, patient details, problem discussed, advice given and the outcome. These records are reviewed at each handover (morning and night shift). This document is completed by the neonatal team member who receives any calls from babies in postnatal settings and any pending reviews will be handed over to the oncoming team. Communication from staff member to staff member is done using SBAR and AID format; both tools to support effective communication.

The Advice, Inform, Do (AID) communication tool is a national tool produced by Each Baby Counts/RCOG. The tool is utilised when escalating concerns in clinical practice to ensure clear, succinct communication with the right person at the right time. The tool is now included in maternity MDT mandatory training and practiced during simulated sessions to increase clinician confidence, and facilitate embedding into routine practice.

Actions in progress:

- **Whiteboard**

Neonatal reviews that are requested by the midwifery team will be recorded on a live whiteboard in the clinical areas so that outstanding reviews are visible to the whole team. Once the review has been completed this will be amended to state the review has taken place, including time and date. The whiteboards are utilised at all ward handovers and will flag/alert outstanding reviews that are still required. On the postnatal ward the whiteboard is in place electronically. All areas will have whiteboards by the end of June 2024.

Following the BadgerNet launch on 18.06.24, all requested reviews by midwifery staff will also be recorded using the SBAR escalation tool in the BadgerNet EPR system, and changes to management will also be recorded in the EPR.

5. **Absence of a formal mechanism for reviewing whether it is safe for planned inductions to take place in the context of ward and neonatal units levels of activity and capacity**

Actions completed:

- **Birthrate Plus / activity reviews**

Midwifery Services regularly undertake workforce review using Birth Rate Plus. This is an approved workforce methodology to ensure the right number of midwives to meet activity and acuity. Whilst the Trust is currently staffed above the latest 2021 recommendations, a review is underway with results expected in the summer.

A daily review of activity, staffing, acuity and planned elective activity including inductions of labour takes place at the cross site daily safety huddles. This is routinely attended by senior midwives, matron, the obstetrician on call and the neonatal team to provide senior operational oversite of activity and capacity.

Band 7 Flow maternity coordinators commenced March 2024, providing daily prioritisation, flow optimisation and coordination of all acute and planned activity.

Daily Sitreps are reported both internally and to the Midlands region by UHDB and all other East Midlands Units to ensure shared understanding of demand/capacity and any need for escalation and mutual aid requests through the Local Maternity and Neonatal system (LMNS) and the ICBs.

The internal escalation policy for both maternity and neonatal services has been reviewed and updated to ensure clear process of management of escalation, including delay of induction of labour if capacity is significantly reduced. This policy is reviewed regularly.

Actions in progress:

There is an ICB led regional escalation policy to inform system-wide decision-making around closing to admission/diverting to other units across the system. It is in place with evaluation ongoing.

Formalisation of Neonatal Sitrep within the Maternity Escalation policy is in progress. In addition senior Neonatal Clinical (medical and nursing) and Operational team members are involved in the planning of elective and non-elective activity, and this will be embedded into the current MDT planning process.

We hope this response provides you with a clear explanation of the actions taken to date and further actions planned or underway, not only in response to your findings, but also our wider improvement plans.

We believe that significant progress has already been made, but are deeply committed to continuing work that is required.

May we conclude by reiterating our sincere condolences to Zachary's parents. We are immensely grateful for their strength in their ongoing partnership with us in our improvement work.