

Inappropriate management of reduced fetal movements

Introduction

1. On 15 September 2023, the Health and Disability Commissioner (HDC) received a complaint from Ms A about the care provided by Health New Zealand | Te Whatu Ora Lakes District (Health NZ). In particular, Ms A raised concerns about the management of reduced fetal movements in February 2023, shortly before the tragic stillbirth of her son, Baby A, at 41 weeks' gestation.
2. In her complaint to HDC, Ms A also expressed concerns about Health NZ's management of its subsequent adverse event review process, including the long delays in her receiving information about the review. Ms A described the impact this lack of communication had on her mental wellbeing.
3. HDC's investigation has also highlighted issues with the interpretation and management of Ms A's abnormal CTG¹ shortly before Baby A's stillbirth and with the substandard level of clinical documentation.
4. In addition, and most significantly, the circumstances of this case highlighted systems issues with Health NZ Rotorua Lakes Maternity Service at the time of this event in 2023, with the availability and orientation of locum staff, the documentation in use, and the absence of guidelines or processes for staff to refer to for managing pregnant women all having had a bearing on the final outcome.
5. I acknowledge that, following the events, Lakes District put in place a clinical governance process with activities and follow-up to address the issues and that Health NZ undertook an external review to confirm the effectiveness of the interventions and the clinical governance process subsequently followed.
6. I extend my sincere condolences to Ms A and her family for the loss of their precious baby.

Background

7. Ms A was in her first pregnancy and had booked with her Lead Maternity Carer (LMC), Registered Midwife (RM) B, early on in her pregnancy. At the time, RM B was a recent midwife graduate, having commenced clinical practice at the start of 2022. RM B said that Ms A had a 'normal pregnancy' but had complained of reduced fetal movements on 1 January 2023 and again on 9 January 2023. There had also been concerns about slowing of fetal growth in January 2023.
8. RM B said that Ms A contacted her on Day1 February 2023 complaining again of reduced fetal movements. Ms A already had an appointment booked at her midwifery clinic for the

¹ A technique to monitor the fetal heartbeat and uterine contractions during pregnancy and labour using a cardiotocograph machine.

following day, but because Ms A was postdates at 41 weeks' gestation, and the concerns of reduced movements, RM B arranged for an appointment at Rotorua Hospital that day to perform a CTG.

9. Ms A arrived at Rotorua Hospital, and the CTG was commenced at 4.02pm. RM B said that the CTG showed a high baseline fetal heartrate, so at around 5.10pm she consulted the Obstetrics and Gynaecology (O&G) registrar, Dr C, who advised her to administer intravenous (IV) fluids and continue the CTG. At the time, Dr C was a junior registrar in her first year of training. Dr C needed to return to theatre and asked the O&G senior house officer (SHO), Dr D, to review Ms A. Dr C planned to review the CTG after she had returned from theatre. Neither Dr C nor RM B documented these discussions.
10. At 6.20pm, after administering fluids, RM B consulted a locum O&G senior medical officer (SMO), Dr F, who had just started his on-call shift. Dr F said that it was not an 'entirely normal' CTG but there were reassuring features. Dr F had received handover of patients but was leaving the hospital to attend to personal circumstances, and he asked to be phoned and updated after a further 30 minutes of monitoring to see whether the slight abnormal features would normalise. There is no documentation of this advice in the clinical notes.
11. At 7.00pm, Ms A was reviewed by Dr D, who noted the change in fetal movements and recorded her impression of fetal tachycardia. There is no mention in the clinical notes that Ms A had raised concerns about reduced fetal movements previously. Dr D documented that the CTG was borderline, so she planned to continue CTG monitoring and rediscuss with Dr F; however, there is no documentation of further discussion with Dr F having occurred.
12. RM B said that after half an hour of further monitoring, she discussed the CTG with a community LMC midwife colleague, RM E, as she was concerned about possible accelerations.² RM E told HDC that she considered the CTG to be normal, but the baseline heart rate was unusual. RM B said that they noted that the baseline was high (150–155bpm), but because the fetal heart rate had been on average 150bpm across the last six appointments, the high baseline 'seem[ed] normal for this baby'. Health NZ told HDC that the CTG at 7pm showed an apparent fetal heart rate deceleration with no return to the previous baseline, and then the CTG was stopped.
13. RM B did not document the actions taken between 4.15pm and 7.00pm, but at 7.13pm she documented that she had called Dr F to advise him that the CTG had normalised, and she had relayed her discussion with RM E. RM B said that she was advised by Dr F that Ms A could be discharged with clear instructions to re-present to hospital if she experienced further reduced fetal movements.
14. Dr F told HDC that he was advised that the CTG had been reviewed by a midwife who had been trained appropriately in interpreting CTGs, and he accepted the verbal report without reviewing the CTG himself. Dr F said that he advised RM B to book an induction of labour (IOL) in the first available slot. RM B put through a request that day. Ms A was discharged home at 7.30pm without being reviewed by an SMO or resident medical officer (RMO). Ms

² Periodic increases in fetal heart rate of 15bpm or more above baseline and lasting about 15 seconds.

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A recalls being sent home after being told that Baby A's heartrate was 'not great but not bad'.

15. According to Health NZ's subsequent Adverse Event Review (AER), the CTG performed on Day1 February 2023 was abnormal, and further medical staff review of the CTG should have occurred before Ms A was discharged home.
16. On Monday Day2 February 2023, Ms A had an ultrasound scan and was told that nothing significant had been picked up. She was booked for an induction on Wednesday Day4 February 2023.
17. On Day3 February 2023, Ms A phoned RM B to say that her waters had broken and that the fluid was green. RM B advised Ms A to attend the hospital immediately. Ms A arrived at Rotorua Hospital at 6.40am, and an initial assessment found no fetal heart rate on auscultation.³ A bedside ultrasound confirmed that there was no fetal heart activity, and no fetal breathing or movements were detected. A formal ultrasound was performed at around 10.30am. Sadly, this confirmed that Baby A was deceased.
18. Later that day, Ms A underwent a Caesarean for malpresentation (Baby A's brow and face were presenting).
19. Ms A was provided with inpatient postnatal care and given details of clinical follow-up, and she was advised that a formal review of her care would take place. Ms A was discharged home on Day4 February. Whilst the cause of Baby A's death has not been found, Ms A questioned the review process and the support she received following Baby A's birth.

Adverse Event Review

20. Ms A raised concerns about Health NZ's AER process. She considers that better systems should have been in place for accurate and more frequent communication. Health NZ advised that the AER process commenced in March 2023. Ms A told HDC that on 14 August she received a call from Health NZ advising her that the report was nearly complete and that it would be sent to her before the staff member went on leave for two months. Ms A said that she did not receive the report, and she waited a further three weeks for any contact from Health NZ, and in all she waited eight to nine months for the completed report. Ms A said that the AER process took significantly longer than the forecast four to six months, and this had a significant impact on her mental health due to the lack of communication and the way information was communicated to her.
21. Health NZ acknowledged that the review process took longer than expected and said that this was due to the need to ensure the accuracy and completeness of the review; the amount of information that was gathered (including clinical notes and external second opinions on scans); the obtaining of statements from individuals who no longer worked there; the unexpected workload of those involved; and staff absences due to leave. Health NZ said that it sought to produce a detailed report that provided 'critical insights and recommendations for enhancing the quality of care [it] provided'. However, Health NZ acknowledged that there were instances of miscommunication and lack of clarity on its part,

³ Listening to the sounds from the heart with a stethoscope.

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and that it did not fully appreciate the potential stress and uncertainty the situation may have had on Ms A. Health NZ extended its sincere apologies for this.

22. Health NZ's AER identified several systemic issues in the care provided to Ms A and included recommendations to address these. The following main issues were identified:

- Ms A presented with recognised risk factors for stillbirth, including being 41 weeks' gestation, and with a history of reduced fetal movements and borderline hypertension. Despite this, an SMO did not complete a thorough, documented review of Ms A's CTG prior to her discharge, which was a missed opportunity for alternative management of Ms A's care.
- The CTG performed on Day1 February 2023 was abnormal with baseline tachycardia of above 160bpm, unprovoked decelerations, and periods of reduced variability. The obstetric registrar and locum SMO assessed this to be an abnormal CTG, and therefore further medical staff review of the CTG should have occurred before Ms A was discharged home. A hospital admission with a view to timely induction of labour may have been required to mitigate the risks. However, at the time, there was no requirement for a previously abnormal CTG to be reviewed by an obstetric registrar or SMO prior to discontinuation of the CTG and patient discharge.
- The CTG was misinterpreted by staff, who also did not utilise the available CTG interpretation tool.
- There is no evidence of an offer by RM B, or a request by Dr F, for the CTG to be sent to him to view electronically before deciding on the ongoing care.
- At the time, no published clinical guideline was in place for fetal heart monitoring, nor any guideline for managing reduced fetal movements. Prior to the events, Health NZ had identified that staff required more tools to assist with CTG interpretation and that the CTG sticker tool needed to be revised to be aligned with RANZCOG⁴ guidelines. The lack of guidelines was considered to have contributed to inadequate medical assessment and planning of care. The interpretation of the CTG as having normalised when it was abnormal and Ms A being discharged home without further assessment were highlighted.
- The IOL guideline did not mention reduced fetal movements.
- There was a lack of documentation about previous concerns relating to reduced fetal movements.
- Reliance on locums and locum induction/orientation. There was no requirement that a locum SMO be onsite and orientating themselves to the activity in the unit or communicating with the team about the workload prior to then being based offsite.

⁴ Royal Australian and New Zealand College of Obstetricians and Gynaecologists.

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Response to provisional opinion

Ms A

23. Ms A was given an opportunity to comment on the ‘background’ section of my provisional opinion. Ms A advised that she has no further comments, and she appreciates that her concerns have been taken seriously by HDC.

RM B

24. RM B was given an opportunity to comment on relevant sections of my provisional opinion and advised she accepts the findings. RM B’s comments have been incorporated into the report where relevant.

Health NZ

25. Health NZ was given an opportunity to comment on my provisional opinion and advised it accepts the findings.
26. Health NZ Head Office advised that maternity and obstetric staff currently have access to online or face-to-face Fetal Surveillance Program training offered by RANZCOG and, in some areas, the K2 Perinatal Training Programme delivered via online learning. This is monitored by district educators who ensure Health NZ staff are meeting annual updates and certification requirements. This training is available for LMCs with Access Agreements, free of charge.
27. Health NZ Head Office said that mandating a specific multidisciplinary educative training function requires regulatory consideration and action. Health NZ said they are also currently reviewing how they align themselves with current legislation (the Primary Maternity Services Notice 2021) and accountability for care in relation to Access Agreements and care provisions.
28. In response to the recommendations, Health NZ Head Office said it is currently putting together an update from the Maternity National Clinical Network.

Opinion: Health NZ — breach

Provision of care

29. As a healthcare provider, Health NZ is responsible for providing services in accordance with the Code of Health and Disability Services Consumers’ Rights (the Code).
30. At the outset, I acknowledge the resource-constrained environment, particularly in obstetrics services both across the country and specific to Lakes District in 2023. Health NZ told HDC that the maternity service at Rotorua Hospital at the time was experiencing a shortage of obstetric SMOs and, as a result, Health NZ was reliant on locums to cover roster gaps, including over weekends. In addition, at the time of the events, the Maternity Ward and Birthing Unit at Rotorua Hospital had been relocated together to a temporary ward area to enable renovations to be carried out.
31. However, these factors do not diminish the responsibility of Health NZ to ensure that appropriate protocols were in place to guide staff and LMCs in their decision-making and in their provision of maternity care. As acknowledged by Health NZ in its AER, at the time of

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these events there were no guidelines or processes for staff and LMCs to refer to for management of reduced fetal movements, no guidelines for fetal heart monitoring, and no up-to-date CTG interpretation tool available for staff and LMCs.

32. I acknowledge that RM B (and her LMC colleague), who incorrectly interpreted Ms A's CTG on Day1 February 2023 as having normalised, were community LMC midwives not employed by Health NZ. However, RM B was providing services to Ms A in consultation with Health NZ clinical staff, and RM B was acting in accordance with Health NZ's guidance. It is clear that RM B was not working in isolation or in ways that were inconsistent with Health NZ's policies or processes (noting the absence of these described above).
33. In my opinion, the lack of relevant policies and guidelines in the maternity service at the time impacted on the decisions made about Ms A's care. I hold Health NZ responsible for these systemic failings. Accordingly, I find that Health NZ breached Right 4(1) of the Code for failing to provide services to Ms A with reasonable care and skill.
34. Health NZ has implicitly acknowledged and addressed the shortcomings in the guidance material it has since developed for the maternity service. The material applies to hospital clinical staff and LMCs who have an access agreement (as was the case for the LMC in this situation).

AER process

35. Ms A also raised concerns about the AER process, in particular the communication with her and the time taken to complete the review. I acknowledge the concerns raised by Ms A in this respect, particularly considering the enormity of the event and the sudden and unexpected loss of her son. Having reviewed Health NZ's AER, I am satisfied that an extensive investigation was conducted by Health NZ and that the review identified areas for improvement.
36. Despite the thoroughness of the review, I encourage Health NZ to reflect on Ms A's experience and ensure that in future there is transparency throughout the AER process, particularly when there are unexpected delays.

Opinion: RM B — adverse comment

37. As part of my investigation, I sought in-house clinical advice from Midwifery Advisor Nicholette Emerson (Appendix A) about the care provided by RM B. I am critical of certain aspects of RM B's care in relation to her standard of documentation and her management of an abnormal CTG.

Documentation

38. Ms A had complained of reduced fetal movements on 1 January and 9 January 2023. Whilst RM Emerson advised that the antenatal care provided by RM B met accepted midwifery standards, with all routine clinical assessments and investigations having been undertaken and evidence of appropriate midwifery response to reduced fetal movements, RM Emerson advised that the 'clinical narrative is minimal' in the clinical records and that the documentation on Day1 February 2023 does not detail that this was Ms A's third presentation for reduced fetal movements and does not record the care she provided between 4.15 and 7pm or her consultations with her colleagues. I accept RM Emerson's

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advice and agree that RM B's documentation lacks sufficient detail to provide a complete clinical picture of the care provided. I encourage RM B to reflect on RM Emerson's comments, and I have made recommendations in this respect.

CTG interpretation

39. Health NZ's AER identified that the CTG performed on Day1 February 2023 was abnormal and therefore further medical staff review of the CTG should have occurred before Ms A was discharged home. RM Emerson is critical that RM B removed the CTG without first consulting an obstetrician. I accept this advice and agree that Ms A should not have been discharged without medical review. However, my criticisms of RM B's actions are mitigated for the following reasons:

- a) I am aware that RM B consulted with another more experienced midwife regarding the interpretation of the CTG, and she received verbal acceptance on the phone from Dr F to discharge Ms A;
- b) Significantly, and as reflected in the AER, there were several systemic issues with the Health NZ Rotorua Lakes Maternity Service at the time, with the lack of policies and guidelines having some bearing on the decisions taken by RM B and other clinical staff, and this led to inadequate medical assessment and planning of care.

Concluding remark — CTG monitoring/interpretation

40. As noted in this report, Health NZ's AER highlighted issues with the interpretation and management of Ms A's abnormal CTG shortly before Baby A's stillbirth. It is important to recognise that inadequate CTG monitoring/interpretation has featured consistently as one of the most common issues seen in the more serious maternity-related complaints investigated by HDC over time.

41. HDC has repeatedly advocated for further work to be undertaken at a national level to implement mandatory multi-disciplinary fetal surveillance training. Unfortunately, this training has still not been implemented consistently across Aotearoa.

Changes made

Health NZ

42. Health NZ said that since the events it has implemented the following changes:

- A clinical guideline on decreased fetal movements has been developed, and staff (including LMCs) have been educated about the content of the guideline and how to access it.
- The Lakes Fetal Heart Monitoring Guideline has been developed, and the CTG Interpretation Tool (sticker) has been updated, and staff have been advised of the availability of these documents. The documents are accessible to staff, and they have been incorporated into staff education sessions.
- The Fetal Heart Monitoring Guideline has been updated to state that any abnormal CTG for which previous consultation has been sought must be sighted by an Obstetrics registrar or SMO prior to patient discharge.

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- The locum SMO contract wording has been revised to include that any SMO providing locum cover is required to be available and present for at least two hours from the commencement of their shift. This has been communicated to all locum SMOs currently contracted and is communicated to any subsequently contracted locum SMOs.
- The Induction of Labour Booking Request Form has been amended to include 'Reduced Fetal Movements' and a prompt for staff to indicate the number of presentations with reduced fetal movements. Staff have been made aware of the changes, and the updated form is now in use.
- The Induction of Labour Guideline has been reviewed and revised in line with the new national guidance and made available to staff, who have been educated on its content. The new guideline includes reference to reduced fetal movements as a possible indication for induction of labour.

RM B

43. RM B said that following these events she carried out a personal reflection of the care she provided as the LMC. RM B stated that she is now vigilant in ensuring that even if the specialist is not onsite, they are given a copy of the CTG. RM B said that she will continue to consult and seek the advice of other midwives when interpreting CTGs, but will ultimately follow her own judgement if that is what she feels is the correct course of action.
44. In addition, RM B said that in July 2023 she completed the Fetal Surveillance Education Program online training, and she plans to undertake a documentation workshop.

Recommendations and follow-up actions

45. I recommend that Health NZ provide a written apology to Ms A and her family for the failings identified in this report. The apology should be provided to HDC, for forwarding to Ms A, within three weeks of the date of this report.
46. I recommend that Health NZ evaluate the effectiveness of the new and updated policies implemented as a result of its AER by conducting an audit of compliance and provide HDC with the outcome report of any corrective actions to be implemented, within six months of the date of this report.
47. I recommend that RM B complete the 'Dotting the I's in a digital age: Record keeping for midwives' workshop offered by the New Zealand College of Midwives, or an equivalent professional development course in relation to clinical documentation. Evidence of completion is to be provided to HDC within six months of the date of this report.
48. In early 2025, Health NZ established a Maternity National Clinical Network (the Network) to provide national leadership and oversee the strategic direction, strategic priorities, and programme of work for maternity services across Aotearoa, including the development of national standards and models of care. I take this opportunity to request an update from Health NZ's National Chief Midwife on the Network's current priorities and will reinforce the importance of the Network progressing the implementation of mandatory multi-disciplinary fetal surveillance training.

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49. A copy of this report with details identifying the parties removed, except Health NZ Lakes District, Rotorua Hospital, and the advisor on this case, will be sent to the Perinatal and Maternal Mortality Review Committee and placed on the Health and Disability Commissioner website, www.hdc.org.nz, for educational purposes.

Rose Wall

Deputy Health and Disability Commissioner

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Appendix A: In-house clinical advice to Commissioner

The following in-house advice was obtained from midwife Nicholette Emerson:

'CLINICAL ADVICE — MIDWIFERY

CONSUMER: [Baby A] and (Ms [A])

PROVIDER: Health New Zealand-Lakes District at Rotorua Hospital midwives.

LMC RM [B]

FILE NUMBER: 23HDC02527

DATE: 26 May 2025

Thank you for the request that I provide clinical advice in relation to Ms [A] regarding the care provided by Health New Zealand-Lakes District at Rotorua Hospital midwives and LMC midwife RM [B]. In preparing the advice on this case, to the best of my knowledge I have no personal or professional conflict of interest. I agree to follow the Commissioner's Guidelines for Independent Advisors.

I have reviewed the documentation on file: Documents provided

- Complaint from Ms [A] 16 September 2023
- Complaint response and clinical records from RM [B], 10 November 2023 (includes text messages, statement from RM [E], midwifery clinical notes)
- Further response from RM [B] 22 October 2024 (including Adverse Event Review)
- Health New Zealand Te Whatu Ora 30 October 2024 — Lake's response (including recommendations, clinical records, Clinician statements — Adverse Event Review)
- Response Dr [F] 30 October 2024
- Statement from Dr [D] 9 December 2024

Background: At 34 yrs old this was Ms [A]'s first pregnancy. The pregnancy progressed to 41 weeks gestation when there was a 3rd episode of reduced fetal movements reported by Ms [A]. She was assessed and discharged from hospital, an induction of labour was booked, and an ultrasound scan was booked. The ultrasound scan 3 days after the hospital assessment appeared reassuring however Ms [A] broke her waters the following day and one day prior to her induction date. There was meconium present, and Ms [A] was advised to present urgently at the hospital. When Ms [A] was assessed in hospital sadly [Baby A]'s heartbeat could not be found. She went on to have a Caesarean later in the day for malpresentation ([Baby A]'s brow, face was presenting). Whilst an event causing [Baby A]'s death has not been found Ms [A] is questioning the process and support following [Baby A]'s birth.

Advice Request: Please review the response of the midwife and provide advice on the adequacy of care.

I have been asked to address the following:

1. The appropriateness of the antenatal care provided to Ms [A] by RM [B]. In particular, the response to the concerns of reduced fetal movement and the documentation of these concerns.

2. The appropriateness of the midwifery care provided to Ms [A] when she presented to the Rotorua Hospital Birthing unit on Day1 February 2023.
3. The adequacy of the guidance, education and policies in place at Rotorua Hospital at the time of the events, particularly concerning CTG interpretation, management and escalation of reduced fetal movements.
4. Any other matters you consider warrant comment.

At the onset, the profound loss of [Baby A] is acknowledged. It is also acknowledged that the process of review following [Baby A]'s death has been questioned by Ms [A]. I have been tasked to provide midwifery advice on the midwifery care provided to Ms [A]. I extend my heartfelt sympathy to Ms [A], Mr [A] and whānau for the loss of their precious [Baby A]. I hope that this report addresses some of their unanswered questions.

1. The appropriateness of the antenatal care provided to Ms [A] by RM [B]. In particular, the response to the concerns of reduced fetal movement and the documentation of these concerns.

In general, the antenatal care provided by RM [B] met accepted midwifery standards. All routine clinical assessments and investigations have been undertaken. There is evidence of appropriate midwifery response to reduced fetal movements, increased blood pressure, raised glucose challenge and static fundal height. Ms [A] has been referred appropriately as necessary and followed obstetric instructions. There are no departures in antenatal care identified.

Documentation

RM [B]'s documentation does not meet the accepted midwifery standards at times, and this is addressed separately further on in this advice.

2. The appropriateness of the midwifery care provided to Ms [A] when she presented to the Rotorua Hospital Birthing unit on Day1 February 2023.

On Day1 February Ms [A] contacted RM [B] to report a reduction in fetal movements. This was the third episode of reduced movements reported in the pregnancy. The first episode occurred on 30 December. According to RM [B]'s complaint response, fetal movements returned to normal and no further actions were taken.

The second episode occurred on 9 January [...]. The CTG and maternal observations are recorded as normal. Ms [A] has been discharged without obstetric input. On 10 January a follow-up ultrasound reports dopplers and liquor (waters) in the normal range but a reduction in fetal growth since the previous scan at 28 weeks' gestation. RM [B] referred to the obstetric team following the scan report; however, the referral was declined with obstetric advice via phone call to RM [B] to arrange to rescan in two weeks' time. Safety netting advice was provided to RM [B] and subsequently to [Ms A].

On 24 January [...], the recommended follow-up scan demonstrated a return to normal growth.

For women who present with decreased fetal movements (DFM) on a second or subsequent occasion, manage as per initial presentation and individualise care.

https://stillbirthcre.org.au/wp-content/uploads/2021/03/Element-3_DFM-Clinical-Practice-Guideline-1.pdf

*CTG should be performed to exclude fetal compromise, and an urgent medical review should be undertaken where findings are abnormal. c. **No further investigations are required for women if: (1) CTG and clinical assessment is normal; (2) no risk factors for stillbirth are identified; (3) it is the woman's first presentation for DFM and (4) there are no maternal concerns of DFM at time of assessment.***

A larger retrospective cohort study in the UK, involving 1234 women reporting DFM beyond 36 weeks' gestation, found that 16.6% of these had more than one presentation for DFM. Of women with repeated DFM episodes, 44% birthed a Small for Gestational age (SGA) baby, and they were also more likely to have had high second-trimester uterine artery Doppler resistance indices 131. This study concluded that women presenting with repeated DFM episodes should be considered at high risk for placental dysfunction irrespective of antenatal ultrasound or Doppler assessment results. While research is limited, with the potential for increased risk, closer surveillance should be considered for women with ongoing concerns of DFM. Any management strategy for DFM needs to take into account the presence of other risk factors and the gestational age (page 16).

On Day1 February at 41 weeks' gestation, Ms [A] again reported reduced movements and met RM [B] for clinical assessment in hospital.

4.15pm Ms [A] arrived in hospital prior to RM [B] and was seen by a staff midwife [...]. Maternal observations demonstrated a raised maternal blood pressure of 137/100 and 135/90 and a high maternal heart rate of 124bpm. Normal maternal temperature and respirations are recorded. A CTG was attached. This is in keeping with accepted midwifery care with no departures demonstrated.

4.50pm Preeclampsia bloods were taken in response to the raised blood pressure. Maternal heart rate is reported as settling to 85–90bpm (normal range) according to the adverse event report.

CTG

It's important to distinguish that different parameters determine a normal antenatal CTG from a normal intrapartum (in labour) CTG.

The CTG at 41 weeks was attached when Ms [A] was not in labour therefore is categorised as an antenatal CTG. The antenatal CTG should have the following features:

- A baseline of 110–160 beats per minute (bpm)
- Baseline fetal heart rate (FHR) variability 6–25bpm
- The presence of accelerations — (transient increases in FHR of 15bpm above the baseline and lasting 15 seconds at the baseline)
- No fetal heart rate decelerations – (transient decreases in the FHR below baseline lasting at least 15 seconds)

<https://www.tewhatauora.govt.nz/assets/Publications/Womens-health/Guidelines-and-policies-for-womens-health-in-Auckland/Antenatal-Fetal-Heart-Rate-FHR-Monitoring.pdf>

The final clinical judgement should be based on the entire clinical assessment with CTG forming a part of this holistic approach to pregnancy management.

Role of the midwife: The midwife is responsible for:

- *Acting as an effective advocate for the woman.*
- *Providing evidence-based information about fetal wellbeing assessment to the woman and her family.*
- *Check that the chosen method for fetal heart rate monitoring is appropriate for gestation and there is a documented action plan to follow.*
- *Respond and attend in a timely manner when requested to provide a fresh-eyes review for a colleague.*
- *Ensure that any clinical concerns about fetal wellbeing are appropriately escalated until a comprehensive review with appropriate action plan and follow-up plan is completed and clearly documented.*

Indications for performing an antenatal CTG includes decreased fetal movements.

RM [B] recognised during the assessment that the CTG had a raised baseline of 160bpm. This is referred to as fetal tachycardia. Appropriately RM [B] requested obstetric review.

There are no clinical notes recorded from RM [B] till Ms [A]’s discharge from hospital at 7.15pm; however, other clinician statements and clinician clinical notes collaborate with RM [B]’s statement regarding actions taken between 4.50pm and 7.15pm.

RM [B] consulted with Registrar [C] and was advised to give Ms [A] a bag of intravenous (IV) fluids (dehydration can elevate maternal and fetal heart rate). Dr [C] had briefly come into Ms [A]’s room to review the CTG. According to her statement she noted a baseline fetal heart rate at 160bpm,? (query) fetal heart decelerations and normal heart rate variability. Dr [C] then had to go back to theatre so requested the senior house officer (SHO) [D] review Ms [A]. RM [B] had consulted with locum Senior Medical Officer (SMO) [Dr F]. In his statement (30 October 2024), SMO [Dr F] affirms that he recalls that the CTG was not entirely normal but did have some reassuring features. He advised to continue the CTG. He was going off site and requested to be updated in half an hour. RM [B] then consulted with a midwifery colleague RM [E] (who has provided a verifying statement). RM [B] consulted with RM [E] as RM [B] was unsure that there were accelerations present on the CTG. RM [E] assured her there were. RM [B] states that because she is a new midwife she checks her CTGs with more experienced colleagues. She states that she trusted RM [E]’s experience and interpretation of the CTG.

Following a full clinical evaluation, contemporaneous clinical notes from SHO Dr [D] (7pm) request RM [B] continue the CTG, to re discuss with SMO [Dr F] and escalate concerns as required.

At 7.13pm RM [B] contacted SMO Dr [F] by phone to say the CTG had normalised and had been reviewed by a midwife who was trained to review CTGs. He accepted the verbal report. He provided safety netting advice to be relayed to Ms [A] regarding fetal movements.

Dr [C]'s clinical notes are retrospective due to acuity at the time. They are written at 1.30pm on Day3 February (4 days later). There are no contemporaneous or retrospective clinical notes from SMO [Dr F]. As stated previously there does not appear to be any discrepancies in the various clinician accounts of the clinical episode despite the sparse clinical documentation.

The adverse event report states the CTG had not normalised. On review of the CTG and in consultation (case anonymised) with another midwife advisor who has expertise in CTG analysis, I agree the CTG was not normal and should not have been removed.

On analysis of the CTG, the baseline was high for 41 weeks' gestation, at 160–165bpm. At 4.40pm there is a fetal heart deceleration. Normal fetal heart rate variability is accompanied by long periods of absent variability. No accelerations are present, noting that the technical definition of an acceleration is 15bpm above the baseline for 15 seconds or more. There is over an hour of abnormal CTG. From a reassuring perspective Ms [A]'s baby ([Baby A]) does appear to be moving well. Whilst the CTG has some reassuring features it is not a normal CTG and had not normalised and therefore was removed prematurely.

The following has been considered in forming an opinion on the appropriateness of the care provided by RM [B] when [Ms A] was evaluated on Day1 February for reduced fetal movements.

- Ms [A] was appropriately invited into hospital for clinical evaluation when she reported reduced fetal movements.
- The raised baseline was identified by RM [B], and she consulted regarding obstetric plan of action.
- In response to Ms [A]'s raised blood pressure preeclampsia bloods were taken (returning a normal result).
- RM [B] followed all obstetric instructions, inserting IV and commencing IV fluids, continuing with the CTG and referring for an induction of labour as requested. An ultrasound scan was arranged for Ms [A] by RM [B] at the soonest opportunity.
- RM [B] was aware of her limitations of experience and consulted with a more experienced midwife regarding whether the CTG was normal.
- The midwifery documentation from RM [B] does not meet accepted midwifery standards. Discussed separately in advice.

Standard Six NZCOM Handbook for practice

Midwifery Actions are prioritised and implemented appropriately with no midwifery action or omission placing the woman at risk.

RM [B] acknowledged the limitations of her experience, followed obstetric plan and based her decision to remove the CTG on advice from a more experienced colleague. It is noted, however, that midwives do regularly assess and remove CTGs without consultation as part of their routine work. However, I am critical of RM [B] removing the CTG without obstetric consultation having already consulted. RM [B] chose to remove the CTG having consulted with another midwife, she did, however, phone the SMO [Dr F] who was off site, and he accepted her verbal finding without viewing the CTG.

A “Fresh eyes” approach to the CTG that was accepted at the time (and now) was sought by RM [B].

At the time of event the guideline stated — *If staff are unable to agree the overall assessment, the CTG should be reviewed by the Obstetric Consultant (SMO) or Registrar. Midwives can refer directly to the consultant, if not in agreement with the advice about the CTG interpretation.*

RM [B] did agree with RM [E] at the time so therefore removed the CTG.

3. The adequacy of the guidance, education and policies in place at Rotorua Hospital at the time of the events, particularly concerning CTG interpretation, management and escalation of reduced fetal movements.

It has been acknowledged in the Adverse Event Review (February 2023) that at the time of the event there was no guideline for fetal heart monitoring at Health New Zealand Lakes District at Rotorua Hospital. In addition, there was no guideline for reduced fetal movement. There was no requirement at the time for a previously abnormal CTG to be reviewed by an Obstetric Registrar or SMO prior to removal and patient discharge. The adverse event report has outlined the following actions by Health New Zealand Lakes District at Rotorua Hospital in order to address and rectify a similar situation occurring in the future.

1. Development of full clinical guideline to assist staff in formulating appropriate management plans when women/people present with reduced fetal movements. **This includes full medical assessment by an Obstetric Registrar or SMO to determine risk factors for stillbirth and CTG assessment.**

In response a guideline for reduced fetal movements (RFM) has been developed and staff (including LMCs) have been educated about guideline content and how to access the guideline. February 2024.

2. A CTG interpretation tool (sticker) has been developed. Staff have been advised of the availability and [it has been] incorporated into staff education sessions.
3. The fetal heart monitoring guideline has been **updated to state that any abnormal CTG for which previous consultation has been sought, must be sighted by an Obstetric Registrar or SMO prior to discharge — even if the CTG is considered by Midwifery staff to have subsequently normalised.**
4. The locum SMO contract wording has been **revised to include the SMO is available and present for at least 2 hours from the commencement of their shift.** The purpose

is the familiarisation of the activity going on in the unit and effectively communicate with other members of the medical team and senior midwifery staff regarding the workload prior to relocating offsite.

5. **The Induction of labour (IOL) guideline has been amended to include “reduced fetal movements” and a prompt for staff to indicate the number of presentations with reduced fetal movements. (November 2023).**
6. The IOL guideline has been **revised in line with National guidelines including reference to reduced fetal movements as a possible indication for IOL.**

On consideration of the above changes outlined above, RM [B] did not depart from accepted midwifery practice at the time of the event. She sought and followed advice from her colleagues at the time of the CTG.

Scan

It is noted that an ultrasound scan was ordered by RM [B] as requested (on the Monday following the Friday CTG. The scan reported normal interval growth, normal liquor and normal fetal movements). An Induction of labour request was also submitted (which was subsequently reviewed and booked by Dr [C]). The morning following the scan Ms [A] reported her waters had broken and there was meconium present. RM [B] advised Ms [A] to attend hospital immediately and she would meet her there. These actions do not depart from accepted midwifery practice. The hospital was an hour’s drive from RM [B] and when she arrived at the hospital Ms [A] had been assessed and sadly [Baby A]’s heartbeat could not be found.

Documentation

On review of RM [B]’s documentation, it does not meet the accepted midwifery standard.

Midwifery Council Professional documentation and record keeping (2014) states that documentation should include:

- *Detailed assessments and clinical findings.*
- *Discussions of care and information provided with the woman.*
- *Discussions and consultations with health professionals, including care plans.*
- *Evidence of informed choice and consent.*
- *Care decisions with rationale.*
- *Any medication or treatment prescribed.*
- *All administrative requirements eg dates, time, identifying information.*
- *Name and designation of health professionals consulted and/or referred to.*
- *Any referrals.*

Documentation should occur at the time that care is provided. Notes written in retrospect should be identified as such.

The antenatal documentation does meet accepted midwifery standards overall; however, the clinical narrative is minimal and does not provide a full picture of the

referral and plan for static growth as discussed with the Obstetrician. The documentation does not record the result of preeclampsia bloods on Day1 February. All routine clinical assessments at antenatal appointments are recorded in the clinical notes, however. The clinical documentation of the hospital assessment on Day1 February does not meet accepted midwifery standards. Arrival time for RM [B], ongoing referral and care is not documented between 4.15pm and 7pm. As previously stated, all clinical statements collaborate, which is helpful in ascertaining the sequence of events; however, this is not evidenced in the midwifery notes. The discharge information from RM [B] does not state that this is a third presentation for reduced movements, administration of IV fluids, consultation with Dr [C], Dr [D] or RM [E] and the subsequent findings and plans. In addition, Ms [A]'s voice is not evident in the clinical narrative.

In all, there is a moderate departure from accepted midwifery documentation. Statement regarding changes to RM [B]'s practice since time of event.

- RM [B] has found the changes to the Induction of Labour form to be helpful in giving a full picture for the triaging team in planning an appropriate time for induction of labour.
- RM [B] is now vigilant in ensuring that a CTG copy is given to the specialist if off site.
- RM [B] has completed the Fetal Surveillance Education Programme (FSEP) online training 2023. This is the recognised and endorsed NZ multidisciplinary training for the interpretation of CTGs.
- RM [B] recognises the deficit in her documentation and intended to attend a documentation course at the time of writing her response (22 October 2024).

Summary

The care provided by RM [B] is in keeping with accepted midwifery practice given the guidelines at the time. The midwifery documentation departs moderately from accepted practice as outlined above.

Nicholette Emerson, BHSc, PG Dip-Midwifery

Midwifery Advisor

Health and Disability Commissioner'