Decision
12 December 2025

HEALTH & DISABILITY COMMISSIONER
TE TOIHAU HAUORA, HAUĀTANGA

Inadequate oversight and monitoring during induced labour

Background to complaint

1. Ms A was admitted to Tauranga Hospital (Health New Zealand | Te Whatu Ora Bay of Plenty [Health NZ]) for a post-dates (41 weeks and 4 days' gestation) induction of labour (IOL) on 15 November 2021. During this admission, she was administered prostaglandin[1] several times. Progression to labour was unsuccessful. On the morning of 17 November, Ms A underwent a CTG,[2] which showed concerning results, followed by obstetric review. She then underwent an emergency lower segment caesarean section (LSCS). Ms A's son Baby A was born in poor condition. He was transferred to the special care baby unit but continued to struggle and was then transferred to a neonatal intensive care unit, where he was diagnosed with meconium aspiration syndrome.[3] On 18 November, Baby A was transferred to the intensive care unit at Starship hospital, where he received specialist treatment, eventually going home on 23 December.

2. Ms A raised concern about the CTG monitoring, including that abnormal readings were rationalised as loss of contact and therefore not adequately responded to or escalated for review, and that her reports of reduced fetal movement were not acted upon.

Information gathered

3. Information was gathered from Ms A, Health NZ, ACC, independent advisor Dr Judy Ormandy (Obstetrics), and in-house advisor Ms Nicky Emerson (Midwifery). The core issues identified through the reviews relate to the care provided on 16 November crossing into 17 November until obstetrics review in the morning.

4. On the afternoon of 15 November, Ms A was admitted for IOL. Ms A was administered the first dose of prostaglandin, and the initial CTG was recorded as normal. Ms A reported some cramping overnight but did not progress to any signs of labour.

CTG monitoring and escalation morning of 16 November

5. On 16 November at 6.50am and 8.45am, Ms A underwent two CTGs, both of which were considered 'non-reassuring'. These were documented in the clinical notes as potentially 'loss of contact' or a crossover of the maternal heart rate. These CTGs were escalated for obstetrics review, who put a plan in place to continue the CTG until it returned to normal, after which time a further dose of prostaglandin could be provided.

6. The CTG subsequently returned to normal, and at 10.10am a further dose of prostaglandin was administered. The CTG was attached again at 10.44am and immediately showed

[1] A synthetic hormone used to induce labour by softening and opening the cervix.
[2] Cardiotocography (CTG) is a tool used during labour to monitor fetal heart rate and uterine contractions.
[3] Where a newborn baby has breathed in meconium just before or during birth. It can cause breathing problems and respiratory distress.

Names have been removed (except Health New Zealand | Te Whatu Ora Bay of Plenty and the clinical advisor on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

recovery from a deceleration.[4] The clinical notes rationalised the deceleration as being caused by Ms A lying flat. Ms A states she was told to lie flat, as there were no elastic bands available to hold the monitor in place and gauze bandages had to be used instead. The CTG eventually returned to normal, and CTG monitoring continued until 11.40 am, when it was removed.

7. The above midwifery clinical documentation was recorded in retrospect at 3pm by a student midwife. No contemporaneous records were made between 8.45am and 3pm.

Reduced fetal movements and CTG monitoring and escalation – evening of 16 November

8. Ms A told the Health and Disability Commissioner (HDC) that she reported reduced fetal movements on the afternoon of 16 November, and these concerns were not addressed. There is no record of this in the notes on 16 November, but documentation at 7.05am on 17 November records that Ms A 'continues to have reduced fetal movements'.

9. At 5.21pm on 16 November, a CTG was commenced, and a large deceleration occurred at 5.35pm. This deceleration was reported as 'loss of contact' and later reported as 'normal'.[5] Health NZ stated that it is not possible to categorise these decelerations as there was no TOCO (tocodynamometer) monitoring.[6] A statement from one of the midwives suggests that this CTG was escalated to the on-call register for review. However, there is no record of this review in the midwifery or other clinical records.

10. At 6.45pm, Ms A was administered a further dose of prostaglandin and continued to be monitored. Between 7.10 and 7.40pm, there are shallow decelerations with a non-reassuring trace, but this is not documented in the clinical record. At 7.50pm, the CTG is signed[7], but it is unclear who signed it. There is no sticker in the clinical documentation to describe or analyse the CTG, and the features of the CTG are not described in the body of the notes. The clinical documentation does not indicate whether the CTG was escalated for review by obstetrics. In a statement provided as part of the Health NZ review, one midwife stated that this CTG was reviewed by a registrar. There is no record of this review in the midwifery or other clinical records.

11. Between 7.45 and 8.05pm, the decelerations stop and the CTG has a normal baseline and variability. The CTG monitoring was stopped after this point. Documentation at 10pm states that Ms A was comfortable, not contracting, and transferred to settle overnight.

12. There are no records for a period of 11 hours overnight. Ms A did not have observations recorded, and no further CTGs were taken. There is no documentation to indicate what information was provided in handover from the afternoon staff to the overnight staff. There is no documentation to indicate any systemic oversight or management of Ms A's IOL.

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[4] A decrease in fetal heart rate observed during CTG.

[5] Clinical notes state 'pre-PGE (prostin) CTG normal. Loss of contact with crepe bandage'.

[6] A TOCO monitor is used to measure the intensity, frequency, and duration of contractions. When combined with a fetal heart monitor, this information helps assess fetal wellbeing during labour.

[7] According to Health NZ's internal combined Maternity, Obstetric and Neonatal Review completed in December 2021 it was signed off by the Midwife

CTG monitoring and escalation – morning of 17 November

13. At 7am, Ms A was woken up and a CTG commenced. There was an abnormal fetal heart rate of 160bpm with late deceleration.[8] This appears to have occurred during the shift handover. The night shift midwife stated that she advised the morning shift about the CTG. The morning shift midwife stated that, on review of Ms A's CTG, she noted it was non-reassuring, and she escalated her concerns to the clinical care midwife to ensure Ms A was seen by the obstetrics team first in their rounds. It is not clear from the records whether escalation to the on-call obstetrics team was considered at the time.

14. Ms A was reviewed by the Senior Medical Officer (SMO), with notes taken by the registrar. It is not clear what time this occurred as the consultation is not time stamped, and the notes are brief. The SMO stated that he likely saw Ms A somewhere around 9am although he cannot be sure. He recalls seeing her first on the rounds because of the midwifery concerns about the CTG and seeing a non-reassuring and 'quite alarming' CTG when entering the room. At 9am, the CTG was removed. It is not clear whether this occurred before or after the obstetrics review. Ms A was in the operating theatre by 10am and Baby A delivered at 10.17am.

ACC independent advice

15. An ACC report produced in 2022 assessed that Baby A had suffered an injury because of the birth process. The midwifery expert in that report considered that Baby A should have been delivered on the morning of 16 November (based on CTGs) but recognised this was a decision for obstetrics not midwifery. The expert did not agree with the notes in the clinical record that the decelerations may have been due to loss of contact or confusion with maternal pulse, as the CTG reading was noted to be of good quality.

Health NZ response and internal review

16. Health NZ told HDC that, on the day of admission, nine other IOLs were booked, and concerns were expressed regarding staffing availability, but Ms A was accepted. Health NZ records and statements from staff indicate that both workloads and acuity were high[9] across the ward during Ms A's induction process.

17. Health NZ acknowledged that the CTGs of the morning of 16 and 17 November should have been in place longer for ongoing fetal monitoring.

18. Health NZ's internal combined Maternity, Obstetric and Neonatal Review completed in December 2021 identified the following issues with Ms A's care:

- Inadequate communication and escalation to obstetrics.
- An LSCS should have been undertaken on the evening of 16 November 2021.
- Poor documentation and CTG analysis.

[8] Uniform, repetitive decreases of fetal heart rate with usually slow onset mid to end of the contraction and ending after the contraction.

[9] Referring to intensive or complex care.

- 16 November 7.50pm: CTG was signed off by the Midwife, and there was no documentation of analysis. On review, this was a concerning CTG and should have been communicated to the obstetric team for review.
- There was a period of 11 hours across 16/17 November where no observations, CTG, or assessments occurred.

19. This review recommended confirmation that the staff involved in Ms A's care had participated in the Fetal Surveillance Education Programme[10] and, if not, that they should be enrolled. Health NZ subsequently confirmed to HDC that all staff were up to date with the training.

Responses to provisional decision

20. Ms A was provided the opportunity to comment on the information gathered section of this report. Where appropriate I have included her comments in the report. Ms A also wished to reiterate her concern that her reports of reduced fetal movement were not documented or acted upon, and her agreement with ACC's advice that Baby A should have been delivered on 16 November.

21. Health NZ was provided with copy of my proposed decision and agreed with the decision as outlined below.

Decision Health NZ – breach

22. I would like to extend my condolences to Ms A, her partner, and Baby A and acknowledge the distress they experienced during and after the birth of Baby A. It is understandable that they have requested a review of the care provided.

23. In reaching my decision, I have considered in-house midwifery advice from a Registered Midwife (RM), Nicky Emerson (Appendix A), and independent obstetrics advice from Dr Judy Ormandy (Appendix B).

Inadequate documentation

24. There is a substantial lack of documentation in relation to the care provided to Ms A throughout 16–17 November until after the morning obstetric review. It is also quite telling of staffing at the time that reliance was placed on the midwifery clinical documentation to be recorded in retrospect by a student midwife on 16 November. The lack of documentation has made it difficult to establish with clarity what actions were taken and when, including escalation and review.

<u>Reported reduced fetal movements</u>

25. Ms A told HDC that she raised concern about reduced fetal movement on the evening of 16 November. There is no record of this; however, a note on 17 November records that Ms A 'continues to report reduced fetal movements'.

[10] Run by Royal Australian and New Zealand College of Obstetricians & Gynaecologists (RANZCOG), either in person or online.

26. Having reviewed all information, I accept that Ms A told staff that she was experiencing reduced fetal movements and that she raised this matter with staff on more than one occasion. However, disappointingly, because of the inadequate documentation, including overnight on 16 November, I am unable to reconcile when the reduced fetal movements commenced and were first reported. As a result, I cannot form an opinion on whether appropriate action was taken in a timely manner.

CTG monitoring and escalation: 17 November

27. Ms A had a non-reassuring CTG at 7am on 17 November, which was escalated to the clinical care midwife and flagged for the upcoming morning obstetrics ward round. Ms A was subsequently seen by obstetrics and was in surgery by approximately 10am. I accept that the CTG was escalated for review; however, in reviewing Ms A's care, I considered whether it was reasonable for review of the non-reassuring CTG to be deferred until the upcoming obstetric ward round or whether it should have been escalated with more immediacy (i.e. to the on-call obstetrician).

28. Records are inadequate, no time stamp was included for the obstetrics consultation, and staff were unable to recall relevant times. Subsequently I am unable to accurately establish the time gap between the CTG and its escalation and review and therefore whether it was reasonable to wait for the obstetric ward rounds.

Other concerns about documentation

29. Both RM Emerson and Dr Ormandy identified that the documentation is below accepted standards. Having independently reviewed the clinical records, I accept their views.

30. Dr Ormandy was critical of the CTG recording interpretation and analysis and the lack of record as to whether obstetrics was consulted on the evening of 16 November.

31. RM Emerson noted that most of the CTGs in Ms A's clinical records do not include the name of the reviewer, and nor were the designation and signature documented in the space provided on the sticker in the clinical notes (as required). Further to this, the body of the clinical notes includes no (or limited) descriptions of the CTG and features or analysis. Health NZ's internal review also identified that documentation and CTG analysis was poor. Consequently, ambiguity remains around the quality of the CTG interpretation and analysis and the appropriateness of any actions or decisions. I note that, on review by Health NZ and HDC experts, some of the CTGs were assessed as non-reassuring and requiring further monitoring or escalation, which did not occur at the time (or there is no record of this).

32. I acknowledge that, at the time of Ms A's admission, there were many inductions for the relatively small size of the maternity unit and that staff statements report high acuity and work levels for this time. I acknowledge that record keeping during such times may be challenging and accept that retrospective accounts may be provided where contemporaneous notes are not possible.

33. However, CTGs are a critical monitoring tool for the induction and labour process, allowing practitioners to identify and respond early to signs of fetal distress and identify whether escalation, review, and – ultimately – additional intervention is required. In the

circumstances of this case, the absence of documented analysis justifiably raises concerns about whether potential fetal distress was adequately identified and responded to.

34. I also consider it unacceptable that there is no clear monitoring of Ms A for 11 hours overnight between 16 and 17 November. I am particularly critical of this lack of oversight given that Ms A was post-dates, there was a lack of progression to labour, she had been provided a further dose of prostaglandin, and that earlier CTGs had been non-reassuring and had, in at least one instance, resulted in escalation to obstetrics.

Inadequate monitoring and escalation of CTG – evening 16 November

35. Both Dr Ormandy and RM Emerson consider that there were departures regarding the CTG analysis, monitoring, and response on the evening of 16 November.[11] Having independently reviewed the relevant information, I accept their views. The identified issues in the reports include:

- Pre-prostaglandin decelerations were incorrectly interpreted as loss of contact and recorded as 'normal'.
- Pre-prostaglandin decelerations and the absence of accelerations should have prompted escalation and review by obstetrics before a further dose was administered. There is no record of this occurring in the midwifery or other clinical notes.
- Post-prostaglandin, the CTG was non-reassuring, with shallow decelerations, but these were not marked.
- There is no record of analysis of the CTG. There is no sticker in the clinical documentation to describe the CTG, and the features of the CTG are not described in the body of the notes.
- There is no record of escalation to obstetrics for review before the removal of the CTG in the midwifery or other clinical notes.

36. On review, Health NZ acknowledged that, after the administration of prostaglandin, there was a non-reassuring trace that was not documented or analysed at the time, that CTG monitoring should have been continued for a longer period, and that this CTG was concerning and should have been escalated to obstetrics for review.

37. On this basis, I consider that Ms A was not provided with an appropriate level of care regarding CTG monitoring analysis and escalation.

Inadequate systemic oversight

38. Both Dr Ormandy and RM Emerson were critical of the apparent lack of systemic oversight for Ms A's care. Having independently reviewed information, I accept their views.

39. From the documentation provided, there is no evidence of an overall assessment of the induction progress and consequently no consideration of an earlier LSCS. Dr Ormandy considered that such an assessment was indicated on the evening of 16 November, taking into account that this was Ms A's first birth, her cervix remained unfavourable, she was not

[11] Between 5.15pm and 7.50pm.

in established labour, and the CTGs were borderline/non-reassuring. Health NZ also acknowledged that an LSCS should have been considered on 16 November.

Summary

40. Having reviewed all available information, I consider that Ms A experienced inadequate monitoring, analysis, and escalation of CTG on the evening of 16 November; inadequate documentation across her stay, including inadequate recorded analysis of CTG; and a lack of systemic oversight of her care and progression of the IOL.

41. The standard of documentation for her care is below standard, and I am critical that vital information such as CTG analysis, review, and potential referral were not recorded in any of the clinical records. I accept that, at the time of admission, staff were dealing with a high workload with high acuity, and I consider that this contributed to the lack of oversight of Ms A's care and meant that the concerning clinical picture that emerged during Ms A's IOL was not acted upon with sufficient urgency.

42. For these reasons, it is my provisional opinion that Health NZ did not uphold Ms A's right to have services provided with reasonable care and skill and, accordingly, breached Right 4(1) of the Code of Health and Disability Services Consumers' Rights (the Code).

Concluding remark — CTG monitoring/interpretation

43. The review of Ms A's care has exposed the effects of poor monitoring during an IOL process and the ramifications when clinical staff do not recognise and respond to an abnormal CTG. These events occurred for Ms A in November 2021. One of the reasons Ms A brought her concerns to HDC was to ensure formal processes and procedures were put in place to ensure that her experience never happened again to any other mother and child under the care of Health NZ. In the intervening four years since Baby A was born, HDC has advocated for further work to be undertaken at a national level to implement mandatory multidisciplinary fetal surveillance training. This is because inadequate CTG monitoring/interpretation continues to feature as one of the most common issues seen in the more serious maternity-related complaints investigated by HDC. Unfortunately, while I acknowledge the changes Health NZ has made, CTG training has still not been implemented consistently across Aotearoa. This remains a priority programme of work that HDC continues to advocate for.

Changes made since event

44. Health NZ told HDC that it has implemented a variety of changes since this event to address the identified shortcomings. These include:

- Clinical notes are now recorded electronically with the implementation of BadgerNet. Any change to a patient record is held as an individual record, and data contain date/time and the staff member name and occupation.
- The Clinical Communications Standards Policy enhances staff communication, and SBARR[12] handovers provide the Clinical Midwifery Coordinator and the Midwives or additional staff with key information on each patient before commencing care.

[12] Situation, Background, Assessment, Recommendation, Review.

- Documentation standards are included within the emergency skills training.
- Weekly CTG education sessions facilitated by an obstetric consultant have recommenced.
- A 'Fresh Eyes Review' has been implemented, which requires CTGs to be reviewed by another midwife or obstetric medical practitioner every two hours and recorded in the clinical notes.
- Electronically recorded CTGs via BadgerNet integration have now been purchased at Health NZ Bay of Plenty to replace all CTG machines.
- Computerised analysis via Dawes-Redman (DR) analysis is also available for Obstetricians at Health NZ Bay of Plenty to aid clinical management under specific circumstances.
- Clinical practice manuals, protocols, and policies have been reviewed and updated:
    - Fetal Surveillance – Intrapartum Protocol.
    - Induction of Labour Protocol.

Recommendations

45. I acknowledge the steps that Health NZ has already taken, including implementing a clinical midwifery coordinator on every shift, introducing electronically recorded clinical notes, improving handover processes between shifts, and improving and implementing their fetal surveillance policy. Health NZ told HDC that BadgerNet enables clinicians to view CTGs from the patient clinical record via the Regional Clinical Portal, which can be accessed from any location via phone or computer.

46. Other critical changes include the fresh eyes review, which ensures that CTGs are regularly reviewed (regardless of result) independently of the original assessor to systematically review the CTG trace along with the full clinical picture, categorise the trace, and decide upon an appropriate plan of care together.

47. I also note that computerised CTG analysis has been implemented. Health NZ told HDC that a comparison of computerised and traditional CTG analysis showed a significant reduction in perinatal mortality with the former. Therefore, replacement CTG machines with this feature are being purchased.

48. I consider that these changes address the systemic issues and definitions identified in this case. As such, I recommend that Health NZ:

    a) provide a written apology to Ms A for the deficiencies identified in its internal review, the HDC expert advisor's reports, and this report. The written apology is to be sent to HDC within 3 weeks of the final report for forwarding to Ms A;

    b) confirmation that all current staff have completed or are enrolled in the Fetal Surveillance Education Programme.

49. 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 will take this opportunity to reinforce the importance of the Network progressing its programme of work, including the implementation of mandatory multidisciplinary fetal surveillance training.

50. A copy of the final report with details identifying the parties removed, except Health NZ Bay of Plenty, and the advisors 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

Appendix A: In-house clinical advice to the Commissioner

The following in-house advice was obtained from RM Nicholette Emerson, Midwifery Advisor:

> Thank you for the request that I provide clinical advice in relation to the complaint from [Ms A] about the care provided by the former Bay of Plenty DHB midwives during her IOL. 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:**
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> - Complaint from Ms [A]
> - Complaint response from former Bay of Plenty DHB, 3 June 2022
> - RANZCOG Guideline for Use of Prostaglandins for Induction of Labour
> - RANZCOG Clinical Guideline for Intrapartum Fetal Surveillance Induction of Labour in Aotearoa New Zealand – A clinical practice guideline 2019
> - Bay of Plenty Clinical Practice Protocol for Induction of Labour 2019
> - Clinical notes for [Baby A]
> - Clinical Letter from Dr […] (14 June 2022)
> - Letter from RM B [Lead Maternity Carer] LMC midwife (not subject of complaint)
>
> **Background:**
> [Ms A] had an uneventful pregnancy under the care of LMC midwife RM [B]. A postdates [IOL] was arranged and commenced at the former BOPDHB, now Te Whatu Ora, at 41 weeks and 4 days' gestation. [Ms A] has raised concerns about the standard of CTG monitoring, coordination of care, and management of her induction. The IOL progressed to an emergency caesarean at Tauranga Hospital in 2021. Her son [Baby A] was born in a poor condition, and he was transferred for his further care.
>
> **Advice Request:**
> Could you please provide us with advice on this file? [Ms A] has raised concerns about the standard of CTG monitoring, coordination of care, and management of her induction – IOL then progressed to emergency caesarean at Tauranga Hospital in 2021. Can you please advise whether the following appears to be consistent with accepted practice?
>
> 1. The standard of maternal/fetal monitoring
> 2. Coordination of induction and labour (including the timeliness of escalating to obstetricians)
> 3. Any other points you consider warrant comment (DHB responded there was no evidence of meconium liquor)

1) The standard of maternal/ fetal monitoring and 2) Coordination of induction and labour (including the timeliness of escalating to obstetricians)

Questions one and two are addressed together in this advice. [Ms A] presented for IOL to Te Whatu Ora (the former BOPDHB) at 5.27pm on 15 November 2021. At the time, there was reported to be nine IOLs booked, and there were concerns expressed regarding staffing availability. Following discussions with [Ms A], RM [B] (LMC Midwife), and Dr […], [Ms A] was admitted, and her IOL commenced. LMC [RM B] left the hospital following hand over to core staff. [Ms A] was 41 weeks and 4 days' gestation, 33 years old, [body mass index] 20 (normal), and reported as fit and well.

Maternal baseline observations are documented, along with good fetal movements. A vaginal examination to assess cervical favourability for IOL resulted in 2mg of prostin being administered. According to the BOPDHB report 3 June 2022, the CTG was normal.

BOPDHB report 3 June 2022 states 15 November 2021 1758Hrs *(#06323): Dawes-Redman criteria initially met at 12 mins. Loss of contact for last 10 min. Normal CTG. Monitor for an hour post prostin.*

According to the Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) Clinical Guideline 2019, a normal antenatal CTG consists of the following features.

Baseline rate 110–160bpm (fetal heart rate)
Baseline variability 6–25bpm (fetal heart rate)
Accelerations (fetal heart rate) 15bpm for 15 seconds. There should be two accelerations in 20 minutes on an antenatal CTG.
No decelerations (fetal heart rate)

Monitoring of fetal movements are relevant to the overall clinical picture. In their response to [Ms A]'s complaint, BOPDHB, in reference to the antenatal CTG monitoring, refer to Dawes Redman criteria being met/not met.

Dawes Redman criteria
According to ADHB[1] (antenatal fetal monitoring 2021)
The Dawes Redman criteria is a feature of some Huntleigh CTG machines. The Dawes Redman CTG analysis can be used for antenatal CTG. It is valid for any gestation over 26 weeks but is not suitable for intrapartum (in labour) CTG analysis. Gestations below 32 weeks may take longer to achieve criteria due to immature central nervous system. If Dawes Redman is used, then the recording may be stopped before twenty minutes if all criteria have been met and the CTG has been visually reviewed and classified as normal; if normal and no other ongoing clinical concerns, the CTG can be discontinued.

Criteria met. This can be met in as little as 10 minutes. The CTG can be stopped subject to visual assessments and clinical judgement. Do not rely on the analysis in isolation. It

[1] Auckland District Health Board now Health New Zealand | Te Whatu Ora Bay of Plenty

may not always identify unusual or pathological patterns that may be more obvious from visual interpretation, holistic assessment of and knowledge of the whole clinical scenario.

In consideration of RANZCOG, Te Whatu Ora (former ADHB) guidelines, and the response from Te Whatu Ora (BOPDHB), the following has been considered.

BOPDHB report 15 November 2021 1758Hrs *(#06323): Dawes-Redman criteria initially met at 12 mins. Loss of contact for last 10 min. Normal CTG. Monitor for an hour post prostin.*

The review of the CTG features, reviewer, designation, and signature are not documented in the space provided on the sticker in the clinical notes.

BOPDHB report states 15 November 2021 1929Hrs *(#06328): Long CTG duration. Dawes-Redman Criteria met within the hour. Episodes of two sleep cycles. Normal CTG.*

Clinical notes record Dawes Redman criteria met at 58 minutes (8.30pm). The CTG does appear to show the features described above. At 8.30pm, [Ms A] is documented as settled for the night. This is in keeping with accepted midwifery practice. The CTG was removed at approximately 9pm according to the 'trace strip'.

The reviewer of the CTG, designation, and signature are not documented in the space provided on the sticker in the clinical notes.

16 November 2021
Some cramping occurred overnight, and [Ms A] was given pain relief and a heat pack (12.20pm, 3.45am, 4.40am) to relieve the cramps. Good fetal movements are documented at 3.45am. At 6.55, the cramping continued and a CTG was commenced.

BOPDHB report states: 16 November 2021 0651Hrs *(#06336): Long CTG duration indicating uterine activity, episodes of foetal re-activity and sleep cycles. Two decelerations were noted which may indicate cord compression therefore the CTG was continued until 0920hrs, and the trace returned to normal with no further decelerations. There was an Obstetric Consultant review at 0845hrs with the plan to continue with CTG monitoring, nil by mouth until CTG is normal, for prostin if CTG is normal for 30 mins. Reviewed by Obstetrics, CTG normal and the plan was to administer 2mg of prostin.*

Clinical documentation is in keeping with the above BOPDHB report and records that [Dr C] documented a plan, stating that the CTG showed ? 2x decels (2x decelerations of fetal heart rate); however, the documentation also states that this could be attributed to loss of contact or maternal heart rate (meaning the transducer had temporarily lost contact with the fetal heart or the transducer had temporarily picked up the maternal heart rate/pulse). The plan is to continue CTG till normal, remain nil by mouth until CTG normal and either administer further prostins if CTG is normal or artificially rupture membranes (break the waters). The CTG is reviewed by [Dr C], and 2mg Prostin is

administered at 10.10am, following review. Review of the CTG trace demonstrates 2x prolonged decelerations and 2x episodes of absent variability (possible sleep cycles)

To continue to induce labour following the decelerations does call into question the purpose of monitoring; however, the escalation, oversight, care plan, and instructions by the Obstetrician [Dr C] are in keeping with accepted midwifery practice in the circumstances, with no departures from midwifery practice identified.

At 3pm, retrospective midwifery clinical documentation records the above; however, there does not appear to be any midwifery clinical documentation between 8.45am and 3pm.

A CTG is attached at 5.25pm by a student midwife. Maternal observations are documented as recorded in the Maternal Early Warning [System] (MEWS) score chart. The MEWS score is 0, which is reassuring. At 6.45pm, the CTG is documented as having normal loss of contact with a crepe bandage. Another dose of Prostin is administered. CTG attached. [Ms A] is settled overnight with instructions to ring the bell with any concerns.

BOPDHB report states*: 16 November 2021 1721Hrs* *(#06363): Notes decelerations at 1735hrs, CTG is suggestive of shallow decelerations with tightens at 1800hrs. Ongoing CTG indicated further decelerations, but it is not possible to categorise as there is no (tocodynamometer) TOCO monitoring.*

Whilst it may not be possible to categorise decelerations in the absence of the TOCO (normally attached to record contractions), decelerations are present. Decelerations are relevant in any CTG reading, and TOCO placement will provide information regarding the nature of the decelerations and therefore actions necessary in response. At 7.50pm there is a signature on the CTG (not legible). The clinical documentation does not indicate whether the CTG has been escalated and reviewed.

The CTG is documented as "*Pre PGE* (prostin) *CTG normal. Loss of contact with crepe bandage. VE* (vaginal examination) *with consent. BS* (Bishop score) *1. PGE inserted into the posterior fornix"* (meaning further Prostins are inserted vaginally). Further documentation at 10pm states that [Ms A] is comfortable, not contracting and transferred to settle overnight.

It is noted that there is no sticker in the clinical documentation to describe the CTG, and the features of the CTG are not described in the body of the notes.

a) If it is accepted that the CTG was recording decelerations because of loss of contact as a result of using a crepe bandage instead of the usual TOCO straps, then removal of the CTG without Obstetric review is a moderate departure from accepted midwifery practice: This is of relevance in the context of an IOL, post-dates pregnancy, and the presence of non-definable decelerations.

b) If it is accepted that the CTG was escalated and obstetrically reviewed and signed off on the CTG trace prior to removal, then there is a moderate departure from accepted midwifery practice in not documenting these actions in the clinical notes.

17 November 2021

Documentation at 7.05am states that [Ms A] is woken to have CTG. Maternal observations are taken. Documentation records that [Ms A] continues to have reduced fetal movements. If reduced fetal movements have been previously discussed, there does not appear to be any clinical documentation recording this. In [Ms A]'s complaint, it is noted *On 16/11 I reported to midwife that I noticed reduced fetal movements in the afternoon, however these concerns were not addressed.*

a) If it is accepted that reduced fetal movements have been previously reported and discussed with the Obstetric team, then there is a mild departure in accepted midwifery practice to not have documented the reduction in fetal movements and the plan associated with fetal movements.

b) If it is accepted that previous reduction in fetal movements has been reported but not documented or escalated for review, then there is a moderate to severe departure from accepted midwifery practice in not escalating these concerns. This is especially relevant in the context of an IOL for a post-dates pregnancy, previous reassuring movements, and the presence of decelerations on previous CTG recordings.

The CTG is abnormal and is escalated at 7.30am. [Ms A] is taken to theatre, and an emergency caesarean is performed. [Baby A] is born in poor condition, with Apgars of 1, 3, and 5 at 1 minute, 5 minutes, and 10 minutes, respectively. [Baby A] is transferred to Waikato Hospital for further care.

In [Ms A]'s complaint, she states "*Throughout the duration of admission I was regularly connected to a CTG machine to monitor baby's vitals and help detect any adverse reaction to the induction process. Tauranga Hospital had run out of bands for the CTG designed to ensure a consistent, accurate result. Consequently, abnormal readings of the CTG were repeatedly disregarded by staff."*

On review of the documentation, abnormal readings were repeatedly rationalised by staff. My scope is to comment on the midwifery care only, and I am not able to comment on Obstetric decisions.

In Summary

Fetal heart decelerations are rationalised by either midwife or obstetrician as

- 15 November 5.58pm – loss of contact
- 6 November 6.51am – two decelerations noted, may indicate cord compression according to BOPDHB. Documented in clinical notes as? loss of contact? Maternal (heart rate/pulse)
- 16 November 10.44am – post Prostin deceleration – potentially [Ms A] lying flat.

- 16 November 5.21pm – note decelerations, CTG suggestive of shallow decelerations, not possible to categorise as there is no TOCO monitoring. Clinical notes document normal loss of contact with crepe bandage.
- 17 November 7am – Frequent decelerations from time CTG commenced. CTG removed at 8.50am and recommenced at 9.40am.

In consideration of the above, there does not appear to be any systemic oversight of care/CTGs during 16 November. Decelerations are variously explained. If there has been Obstetric review, this is not documented. Due to the paucity of documentation, it is not possible to establish what actions were taken. Retrospective midwifery notes were written at 3pm on November 16, and only one CTG sticker is present in the clinical notes. Usual practice would involve the inclusion of the features of the CTG when describing the CTG as normal. The removal of the CTG without TOCO monitoring is further concerning and a departure from accepted midwifery practice, especially in the context of decelerations.

It is noted that the BOPDHB states in their report that *the indication for induction of labour in an uncomplicated pregnancy is to reduce perinatal death. Postdates increases the risk factor of meconium aspiration due to the maturity of the bowel. No meconium-stained liquor was noted as [Ms A] had no rupture of her membranes.* Whilst not a midwifery consideration, questions are raised as to whether a bedside scan was considered to evaluate liquor volume during the IOL especially considering? cord compression 16 November 6.51am, as reported by BOPDHB in their response. The scan would not have identified meconium; however, reduced liquor is associated with more concentrated meconium and cord compression. Review of the clinical notes highlights difficulty identifying the writer. There is one clear entry of designation at 7.25pm on 16 November (student midwife). Overall, the documentation makes it difficult to establish if care was escalated in the evening or night of November 16. It is also difficult to establish what actions were taken in response to reported reduced fetal movements. It is also unclear what formal training midwifery staff have regarding interpretation of CTG? Should clarity arise, I would be happy to review my report.

Finally, my heartfelt sympathy is extended to [Ms A] and Mr [A] for their experience during and following the birth of their precious son [Baby A]. I hope that some of their questions or concerns are addressed in this report.

Nicholette Emerson, BHSc, PG Dip-Midwifery
Midwifery Advisor Health and Disability Commissioner'

Appendix B: Independent clinical advice to the Commissioner

The following independent advice was obtained from Dr Judy Ormandy, Obstetrician:

Complaint:	**Ms [A]**
Our ref:	**C22HDC01002**
Independent advisor:	**Dr Judy Ormandy**

I have been asked to provide clinical advice to HDC on case number **C22HDC01002**. I have read and agree to follow HDC's Guidelines for Independent Advisors.

I am not aware of any personal or professional conflicts of interest with any of the parties involved in this complaint.

I am aware that my report should use simple and clear language and explain complex or technical medical terms.

Qualifications, training and experience relevant to the area of expertise involved:	I am a Senior Lecturer in Obstetrics, Gynaecology & Women's Health at the University of Otago, Wellington, and a consultant obstetrician and gynaecologist at Te Whatu Ora Capital & Coast. I have worked as a specialist obstetrician & gynaecologist since 2012. My qualifications are MBChB (2001, Otago), Dip Obs (Dist) (2003, Otago), FRANZCOG (2012) and MClinEd (Hons) (Auckland 2017).
Documents provided by HDC:	1. [Ms A]'s letter of complaint dated 27 April 2022; 2. Health New Zealand – Te Whatu Ora – Hauora a Toi Bay of Plenty's (HNZ) response to HDC initial inquiries dated 3 June 2022; 3. [Ms A]'s clinical records 15–16 November 2021 – please note the CTG scans are contained in pages 100–136; 4. Statements from the staff on shift for [Ms A]'s stay – these were obtained approximately 3–4 weeks post birth; 5. HNZ Induction of Labour policy; 6. Induction of Labour in Aotearoa New Zealand – a clinical practice guideline 2019; 7. RANZCOG Clinical Guideline – Algorithm – Intrapartum fetal Surveillance
Referral instructions from HDC:	1. Whether [Dr C]'s assessment and management of CTGs on the morning of 16 November 2021 were reasonable. Please comment on: a. The CTGs, any decelerations, assessment and expected pathways b. The decision to continue induction.

Names have been removed (except Health New Zealand \| Te Whatu Ora Bay of Plenty and the clinical advisor on this case) to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

	2. Whether the remaining CTGs recorded on 16 November 2021 required any further obstetric action (and if so what); 3. Whether it was reasonable in the circumstances that the hospital did not have a policy for fetal surveillance at the time of events; 4. Any other comment on the standard of care on 16 November 2021.

Factual summary of clinical care provided complaint:

Brief summary of clinical events:	[Ms A] underwent a post-dates IOL. She received Prostin (a prostaglandin to ripen the cervix) on 15 November in the afternoon and two doses on 16 November. On November 17 in the morning, she had a lower segment caesarean section for an abnormal CTG. Her baby had meconium aspiration and a prolonged hospital stay. [Ms A] has complained about the standard of care she received during her IOL. I have been asked to comment on aspects of [Ms A]'s care on 16 November. I would like to acknowledge that the time after her baby's birth would have been extremely difficult for [Ms A].

Question 1: Whether [Dr C]'s assessment and management of CTGs on the morning of 16 November 2021 were reasonable. Please comment on: a. The CTGs, any decelerations, assessment, and expected pathways b. The decision to continue induction.	
List any sources of information reviewed other than the documents provided by HDC:	1. Intrapartum Fetal Surveillance Clinical Guideline – Fourth Edition 2019. The Royal Australian and New Zealand College of Obstetricians and Gynaecologists. https://fsep.ranzcog.edu.au/wp-content/uploads/FINAL-RANZCOG-IFS-Clinical-Guideline-2019.pdf
Advisor's opinion:	The CTG was commenced at 0650 on 16 November 2021. It is initially reassuring/normal with a normal baseline (140), normal variability (>6), and decelerations. At 0820 there was a prolonged

	deceleration and a further one at 0830. This is in the context of a previously normal CTG. [Dr C] has documented her review in the notes at 0844 and states "CTG N bar 2? decels versus LOC to mat heart rate". (N = normal, decels = decelerations, LOC = loss of contact). I think loss of contact is less likely as you can see the heart rate drop on the CTG, whereas with a loss of contact there is usually a gap/break in the heart rate tracing. Regardless, given that the prior CTG was normal, it is appropriate to monitor the situation. [Dr C]'s plan was to continue the CTG and monitor and to withhold Prostin unless the CTG normalised. I agree with this plan. The CTG continues to 0920. It returns to a normal baseline with normal variability. There are no further decelerations. This was assessed as normal, and there was a plan to give further Prostin. For a CTG to be normal in the antenatal period (i.e. not in labour), there should also be accelerations present. Given the prolonged decelerations, ideally I would have liked to see an acceleration on the CTG to assess it as normal. However, it is a non-hypoxic CTG, and the RANZCOG guidelines note that the absence of accelerations is unlikely to be associated with fetal compromise. I then have no CTG reading to review until 1045 when the next Prostin dose was given. There is a deceleration at the start, and the letter from Bay of Plenty District Health Board states that this may have been from lying flat for the Prostin administration. Following that, the CTG has a normal baseline (140–150) with acceptable variability. There is a possible short deceleration at 1115 (unlikely to be significant) and no accelerations. The CTG was removed at around 1145. I understand that the hospital review team recommended that the CTG should have remained on longer. Given the earlier decelerations, I would have liked to see some accelerations present prior to the CTG being removed. However, the CTG is non-hypoxic.

What was the standard of care/accepted practice at the time of events? Please refer to relevant standards/material.	The standard of care was acceptable.
Was there a departure from the standard of care or accepted practice? • No departure; • Mild departure; • Moderate departure; or • Severe departure.	There was no departure from the standard of care. While one could argue that there should have been accelerations on the CTG prior to it being removed. I don't think this meets the threshold for a mild departure from an accepted standard of care.
How would the care provided be viewed by your peers? Please reference the views of any peers who were consulted.	I believe that my peers would agree with me.
Please outline any factors that may limit your assessment of the events.	
Recommendations for improvement that may help to prevent a similar occurrence in future.	

Question 2: Whether the remaining CTGs recorded on 16 November 2021 required any further obstetric action (and if so what).	
List any sources of information reviewed other than the documents provided by HDC:	
Advisor's opinion:	There is a further CTG on 16 November that commences at around 1715. The baseline is 150, and there is a deceleration at around 1735. I interpret this as a deceleration and not loss of contact as I can follow the fetal heart rate dropping then increasing on the monitor. The baseline then returns to normal although

	wanders between 140 and 155. There remain no accelerations. The midwifery documentation in the notes is that the pre-Prostin CTG is normal. Given the deceleration at 1735 and absence of accelerations, I disagree with this interpretation. I would expect a medical review of this CTG prior to administration of Prostin. I would also have liked to have seen a more reassuring CTG prior to the Prostin being given. At 1845, a further dose of Prostin is given. From 1910 to 1940, the CTG is abnormal with shallow decelerations. I would describe this as non-reassuring. The CTG is signed, but I am unclear who signed it. In this situation, I would expect escalation of the CTG to medical staff. I note that the statement provided by Midwife […] was that the CTG was reviewed by the Registrar. I cannot find documentation of this, but at around 1950 the CTG is signed by ?SW / ?JW. From 1945 to 2005 the decelerations stop and the CTG has a normal baseline and variability. The criteria for an acceleration (15 beats for 15 seconds) is possibly met at 1949. Given the prior CTGs, I would have liked the CTG to stay on longer prior to it being removed. This would have been an ideal opportunity for a medical review and reassessment as to the overall progress of the IOL. We have a nulliparous person being induced with borderline CTGs. Her cervix remains unfavourable. Looking at the overall picture – both the CTG and that [Ms A] is not yet in established labour, the option of abandoning the induction and proceeding to a Caesarean section could have been considered. From the notes provided, I cannot see that anyone had the opportunity to assess the overall picture.
What was the standard of care/accepted practice at the	The standard of documentation I can see is not accepted practice. I cannot see an interpretation of the

time of events? Please refer to relevant standards/material.	CTG here (other than 'normal'), nor whether it was escalated. I note that the initials on the CTG are different to the midwife caring for [Ms A], so it seems likely that there was some escalation.
Was there a departure from the standard of care or accepted practice? • No departure; • Mild departure; • Moderate departure; or • Severe departure.	There was moderate departure from the standard of care with respect to the documentation in the notes and the CTG interpretation. If medical review of the CTG occurred, then I note the lack of documentation of the review. From the documentation provided, I cannot see that an overall assessment of the progress of the induction was considered. It is difficult to assess if there was, or the extent of, any departure from standard of care without knowing what medical input was sought the evening of 16 November. An important mitigating factor here would have been the workload. It is alluded to within the notes and staff statements that the clinical workload was heavy at the time of [Ms A]'s IOL. The letter from […] dated 3 June 2022 states that there were nine IOLs booked on 15 November. For a unit the size of Tauranga hospital, this is a large number of IOLs on one day. Many of the midwifery statements refer to high acuity and workload levels around the time of the IOL. High workload and insufficient staff to meet the workload inevitably impacts on the care that individual clinicians are able to provide.
How would the care provided be viewed by your peers? Please reference the views of any peers who were consulted.	I believe my peers would agree with me.
Please outline any factors that may limit your assessment of the events.	While I have carefully reviewed the notes provided to me, if there are CTG assessments/medical reviews documented that I have not located within the evidence bundle, then my advice would need to be reviewed and reconsidered. While I disagree with the midwife's assessment of the CTG on the evening of November 16, it would be more appropriate for a midwife to provide expert advice

	regarding whether standards of midwifery care were met. It should be recognised that, if inductions are proceeding without complication, with reassuring CTGs, then there wouldn't necessarily be 'routine' medical review. The key here is whether further medical review was sought.
Recommendations for improvement that may help to prevent a similar occurrence in future.	Many obstetric units use a stamp or sticker formatted to interpret CTGs, and there is one in the notes 'CTG interpretation and response' on 15 November (not completed). This (when filled out correctly) guides the clinician regarding whether further actions [are] required when interpreting the CTG – this can mandate a second opinion on the CTG. I wonder if, had these been utilised in the afternoon/evening of 16 November, the need for escalation of the CTG may have been clearer. However, I am not aware of any evidence that shows that using such aids improves outcomes.

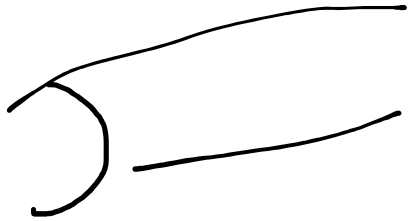
Question 3: Whether it was reasonable in the circumstances that the hospital did not have a policy for fetal surveillance at the time of events.	
List any sources of information reviewed other than the documents provided by HDC:	1. Intrapartum Fetal Surveillance Clinical Guideline – Fourth Edition 2019. The Royal Australian and New Zealand College of Obstetricians and Gynaecologists. https://fsep.ranzcog.edu.au/wp-content/uploads/FINAL-RANZCOG-IFS-Clinical-Guideline-2019.pdf 2. Bay of Plenty District Health Board Maternity Quality and Safety Programme Annual Report 2019-20. 3. Tsandila-Kalakou F, Wiig S, Aase K. Factors contributing to healthcare professionals' adaptive capacity with hospital standardization: a scoping review. BMC Health Serv Res. 2023 Jul 26;23(1):799. doi: 10.1186/s12913-023-09698-9. PMID: 37496014; PMCID: PMC10369840.
Advisor's opinion:	RANZCOG has an intrapartum fetal surveillance clinical guideline that was last updated in 2019 (1). This guideline provides recommendation for fetal surveillance, including indications, interpretation, and further management. Clinicians working on [the] birthing suite (O&G specialists and registrars) would be

	cognisant of these guidelines. I regard that these guidelines are sufficient and that there is some benefit in having 'national' guidelines (acknowledging these are Australasian) so that there is consistency when clinicians inevitably move around different hospitals. The Bay of Plenty District Health Board Maternity annual report (2) refers to hospital staff and LMCs completing the RANZCOG fetal surveillance training. With staff attending RANZCOG training and comprehensive RANZCOG guidelines available, it is acceptable that there are no hospital-specific guidelines.
What was the standard of care/accepted practice at the time of events? Please refer to relevant standards/material.	The standard of care is appropriate.
Was there a departure from the standard of care or accepted practice? • No departure; • Mild departure; • Moderate departure; or • Severe departure.	There was no departure.
How would the care provided be viewed by your peers? Please reference the views of any peers who were consulted.	I believe that my peers would regard the lack of hospital-specific guidelines as acceptable.
Please outline any factors that may limit your assessment of the events.	

Recommendations for improvement that may help to prevent a similar occurrence in future.	I will go further here and suggest that it takes a lot more than writing a new hospital guideline to improve clinical outcomes. There needs to be time for staff to be aware of and able to refer to guidelines and adequate resourcing of both the implementation of the guidelines and resources available to follow the recommendations of the guidelines. Factors that are known to reduce clinician adherence to guidelines include limited resources and increasing work pressure. (3)

Question 4: Any other comment on the standard of care on 16 November 2021.	
List any sources of information reviewed other than the documents provided by HDC:	
Advisor's opinion:	
What was the standard of care/accepted practice at the time of events? Please refer to relevant standards/material.	
Was there a departure from the standard of care or accepted practice? • No departure; • Mild departure; • Moderate departure; or • Severe departure.	
How would the care provided be viewed by your peers? Please reference the views of any peers who were consulted.	
Please outline any factors that may limit your assessment of the events.	
Recommendations for improvement that may help to	

prevent a similar occurrence in future.	

By signing this report, I agree to HDC correcting any formatting, spelling, or grammar issues on the proviso that the substance of the report and any quoted material remains unchanged.
 Signature:
Name: Dr Judy Ormandy
Date of Advice: 4 March 2025