Registered Midwife, RM B

Registered Midwife, RM C

A Report by the

Deputy Health and Disability Commissioner

(Case 20HDC00021)

Health and Disability Commissioner

Te Toihau Hauora, Hauātanga

Contents

Executive summary

1. This report concerns the care provided to a woman by two registered midwives in 2019.

2. When the woman went into labour, she contacted one of the midwives, but she did not attend the woman's home to review her until 17 hours later, by which time the woman was in full labour and close to giving birth.

3. The woman, who was in her first pregnancy, laboured at home without adequate care, support or assessment. The midwife did not provide the woman with appropriate or sufficient communication and information about the progress of her labour or her pain relief options. During the woman's postnatal period in hospital, neither of her midwives provided the woman with the expected level of support.

4. The report highlights the importance of midwives providing individualised care in partnership with women, and the importance of adequate documentation.

Findings

5. The Deputy Commissioner considered that the first midwife's failure to provide appropriate care, information and support amounted to a breach of Right 4(1) of the Code.

6. Further, the first midwife's failure to appropriately document relevant information amounted to a breach of Right 4(2) of the Code.

7. The Deputy Commissioner found that the second midwife did not breach the Code, but criticised an aspect of the postnatal care she provided.

Recommendation

8. The Deputy Commissioner recommended that the first midwife provide a written apology.

Complaint and investigation

9. The Health and Disability Commissioner (HDC) received a complaint from Ms A about the services provided to her by registered midwife (RM) B. The following issue was identified for investigation:

- *Whether RM B provided Ms A with an appropriate standard of care between Month3[1] and Month6 2019 (inclusive).*

10. The investigation was extended to include the following issue:

[1] Relevant months are referred to as Months 1-7 to protect privacy.

- *Whether RM C provided Ms A with an appropriate standard of care between Month1 and Month6 2019 (inclusive).*

11. This report is the opinion of Rose Wall, Deputy Health and Disability Commissioner, and is made in accordance with the power delegated to her by the Commissioner.

12. The parties directly involved in the investigation were:

Ms A	Consumer
RM B	Registered midwife/back-up lead maternity carer
RM C	Registered midwife/lead maternity carer

13. Further information was received from:

Te Whatu Ora (formerly district health board (DHB))[2]
Maternity clinic

Ms D	Ms A's sister-in-law

Also mentioned in this report:

RM E	Midwife

14. Independent advice was obtained from RM Nimisha Waller (Appendix A).

Information gathered during investigation

Background

15. Ms A became pregnant with her first child in 2019, when aged in her twenties. Ms A engaged a self-employed registered midwife, RM C, as her lead maternity carer (LMC).[3] Ms A's first appointment with LMC RM C was at 14+5 weeks' gestation.

16. At the time of the events, RM C worked in partnership with another midwife, RM B,[4] on a week on/week off basis with a shared patient list.[5] RM B was Ms A's back-up LMC, and saw her at alternate antenatal appointments. RM B was the on-call midwife when Ms A went into labour on 20 Month6.

[2] On 1 July 2022, the Pae Ora (Healthy Futures) Act 2022 came into force, which disestablished all District Health Boards. Their functions and liabilities were merged into Te Whatu Ora|Health New Zealand. All references to DHB in this report now refer to Te Whatu Ora.
[3] RM C holds a current practising certificate.
[4] RM B does not hold a current practising certificate.
[5] RM B and RM C worked together for several years. This relationship ceased.

17. This report focuses on the midwifery care RM B and RM C provided to Ms A during her labour and delivery and her postnatal period in hospital.[6]

Labour

18. On 19 Month6, Ms A attended an antenatal appointment with RM C at 38+5 weeks' gestation; this was her final antenatal appointment. RM C recorded in Ms A's notes that her observations were satisfactory, fetal movements were good, and a strong, regular fetal heart rate was heard.

19. RM C noted that Ms A was looking forward to her baby arriving, but did not want to deliver before 22 Month6 as her partner, Mr A, was away until then. RM C said that Ms A was aware that she was due to be off call until 7am on 22 Month6, with RM B on call in the meantime.

20. Ms A said that she began having mild, irregular contractions on 19 Month6.[7] She said that she only discussed this with Mr A, in terms of whether or not he should return straightaway.

21. At 5.04am the following day, 20 Month6, Ms A sent the following text to RM B:[8]

> "Need to run this past you and [RM C] said you [are] on call, I've had constant lower abdominal cramps come on every like 20–30 minutes lasting about a minute every time for about 7–8 hours straight now could this potentially be early labour or still Braxton hicks? It's definitely painful an[d] still hasn't stopped coming on yet, I just can't tell the difference?"

22. Ms A said that she sought advice about what the contractions meant because she was home alone and needed to plan for Mr A to get home in time for the birth. Ms A said that she texted RM C first, but "[RM C] was off duty so [she] was referred to her back up midwife", RM B.

23. RM C told HDC that she does not recall receiving a phone call from Ms A on the morning of 20 Month6. RM C made no mention of having received a text message from Ms A, and Ms A's notes contain no documentation of any communication from Ms A to RM C on this day.

24. RM B replied to Ms A's 5.04am text message as follows:

[6] After consideration of all relevant information, Ms A's antenatal care ultimately did not form part of this investigation; the investigation focused only on the midwifery care provided to Ms A from mid-Month6, during labour, delivery and the postnatal period in hospital.
[7] In her complaint to HDC, Ms A said that she went into prodromal labour on 18 Month6 ("precursor" labour, where contractions start and stop and do not progress), and contractions continued until she went into active labour and gave birth to her son on the evening of 20 Month6. Ms A later clarified that her complaint should only have referred to 19 and 20 Month6.
[8] Ms A provided screenshots of text messages from her phone to RM B on 20 Month6.

> "Could be early labour but way too early to be texting hon or timing we don't recommend timing till they are at least every five minutes we won't do anything till they … are three minutes apart lasting a minute so go to bed."

25. There is no record of the time at which RM B sent this message, although Ms A told HDC that it was an "immediate" response to her text.

26. Ms A replied to RM B's text, saying: "Okay sounds good! sorry was just starting to worry so needed to ask."[9]

27. RM B responded:

> "Don't worry you are getting due so would be normal to get some contractions you need to relax tho until they are coming much closer as you will be exhausted when they are actually close together if you are already timing them … so far apart."[10]

28. Ms A said that she had two phone conversations with RM B that morning after texting her, with the first call taking place around 6am.[11]

29. At that time, Ms A said RM B told her not to text her "unless [she] was three minutes apart and that [she had] woke[n] her up for no reason". Ms A said that RM B gave her no information, said she could not advise whether Mr A should return home early, and refused to visit to examine her as she could not "manually check" how dilated she was.

30. RM B told HDC that there was no good reason for Ms A to have woken her early. RM B stated:

> "[Ms A's] contractions were super far apart and all was normal but I certainly was not rude about it purely saying she had woken me up and I didn't see that text as warranting a five am wake up."

31. RM B said that in texting her when it was not an emergency, Ms A was not following the advice she was given antenatally.[12]

32. RM B said that during their telephone conversation, Ms A asked her whether Mr A should return home. RM B told HDC that her "exact" response was: "I have no crystal ball." She said that Ms A "was aware as any woman at 38 weeks is that baby could come any time". RM B said that it was not for her to decide whether Mr A should return home, and she was not responsible for him missing the birth.

---

[9] Time of text unknown.
[10] Time of text unknown.
[11] The available information does not include records of the phone conversations referred to by Ms A and RM B.
[12] Refers in part to information RM C provided to Ms A at an appointment on 24 Month4: a Birth Plan Choices form for completion; one page of information about birth plans; and a three-page leaflet (understood to have been created by RM B and RM C) entitled "When to call the midwife".

33. At 11.36am, RM B texted Ms A: "[Hey] hon what did you decide to do? Has there been a change in contractions?"

34. Ms A replied:

> "They haven't stopped an[d] just as painful but definitely changed to less frequently to like maybe once an hour or so which is good so you were right I stressed myself out an[d] my anxiety would of made me over think it to[o] much."

35. RM B replied: "Cool I think it sounds like you will be fine to wait obviously can't promise but labour pains tends to get closer together not further apart."

36. Ms A responded:

> "Yeah I agree don't think its early labour anymore so I'm not so panicked thank goodness! At least something's happening in there so hopefully he'll be ready to come out soon."

37. Ms A said that RM B called to check on her "maybe around midday". Ms A told RM B that she was tracking her contractions, which were getting worse. RM B advised her not to track the contractions "as it would make [her] overthink and that's what was bringing them on". Ms A stated: "[RM B] told me multiple times … [i]t was nothing, all in my head and if they were real contractions I wouldn't be able to talk to her on the phone due to the pain."

38. RM B told HDC that she spoke to Ms A at 3.35pm. RM B said that Ms A asked whether a vaginal examination would help her to decide whether her partner should come home. RM B said that she told Ms A that was "not a good reason to initiate a vaginal check". RM B stated:

> "[Ms A was] upbeat … coping well and reported she was still relatively comfortable in between contractions. She had no bleeding, no fluid and baby was active she was breathing through contractions which were 10 minutes apart and she still couldn't decide if they were braxton hicks or labour as they had not changed in intensity but had become closer."

39. This assessment is not recorded in the available documentation.

40. At around 5pm, Ms A's sister-in-law, Ms D, arrived at Ms A's home to support her. Ms A said:

> "[Ms D] was immediately concerned and made the call for my partner to get in the car an[d] drive 6 hours urgently back [home] … [Ms D] then continued to text and phone [RM B] on my behalf from then on."

41. Ms D stated:

> "[Ms A] began to feel] intense pain at roughly 6.30pm … at about 7.30pm/8.00pm [Ms A] began to feel a great amount of pain, the contractions became closer and more

> consistent. I rang [RM B] myself and [sought] her advice to which she responded with '[s]he is just overthinking and stressing because she is home alone, her contractions are not consistent enough for her to do anything'."

42. At 7.29pm, RM B texted Ms A: "Hey hon just checking in on how you are going?"[13]

43. Ms A replied: "Hey have family over they timing it, been timing for nearly 2 hours. First hour was 1:18 average duration and 7:21 average frequency. They are getting stronger too."

44. RM B responded: "Hmm I don't understand what u mean how far apart are they" and "is the bath helping hon? Is your partner going to head back."

45. RM B told HDC that she received a phone call from Ms A at 9pm advising that her contractions were starting to become closer and stronger, and she had decided to have a bath. RM B said that she told Ms A: "[M]aybe the labour is starting to establish and I am happy to do a check when needed."

46. Ms A stated:

> "[Ms D called RM B] a few times in between texts voicing her concerns of my pain level and exhaustion. [RM B] had usual responses of how to get comfortable. I continued to track and [d]ue to my contractions being irregular timings [RM B] continued to deny I was [i]n active labour."

47. Ms D sent RM B a text message from Ms A's phone, saying that Ms A was "in the bath it helped but still in heaps of pain and shaking constantly she's struggling to breathe she said".

48. RM B responded: "How regular are the pains? Slow deep breaths help some women hyperventilate in pain tell her to slow her breathing down."

49. Ms D replied: "Roughly 4ish minutes, a lot more pain and a lot of blood mucus."

50. RM B texted: "Cool hopefully heading in the right direction then."

51. Ms D texted RM B again: "Anything for pain relief she asked? We gave her paracetamol at 6."

52. RM B advised that Ms A could have more Panadol[14] at 10pm, and Ms D said that she would "keep [RM B] posted".

53. Ms A told HDC: "I later … started bleeding and … was crying for an ambulance." She stated: "I had no indication that [RM B] would be coming anytime soon despite constant calls and texts of urgency." Ms A said that RM B's response was that "'bleeding was normal … most

[13] From this point on, the time at which each text message was sent is unknown.
[14] A brand name for paracetamol.

likely mucus plug no concerns' and 'I didn't need an ambulance (implying I was being over dramatic) but to give me Panadol and go sit in the bath'".

54. RM B said that Ms D phoned her at 9.35pm to advise that Ms A "had some blood come out and was starting to become vocal with contractions". RM B told HDC that she asked for a photograph of the blood loss. She stated: "I do this routinely as I never expect a woman to be able to tell how much blood there was or if it was in normal range."

55. Ms D texted RM B a photo of Ms A's blood on a piece of tissue, saying: "This all just came out and keeps coming."

56. RM B replied, saying "Yeah the cervix has blood vessels so super common to have blood and mucus[15] come away especially when you wipe" and "It's called a bloody show."[16]

57. Ms D responded to RM B that Ms A was now dripping blood and was worried. Ms D asked if that was normal and attached a photo of blood drops on the floor. Ms A said: "At this point, I was crying for any pain relief possible and asking for an ambulance to be called."

58. Ms A told HDC that when she discussed labour and delivery with RM B and RM C, she "clearly said that [she was] open to the unexpected nature of labour and if [she] need[ed] medical support in any way that [would be] fine for the well-being of [herself] and baby". As examples of "medical support", Ms A referred to "emergency C-section, medications or other invasive medical intervention methods for a safe delivery". She said that she would prefer Entonox[17] as an option, and knew that if she delivered at the maternity clinic, which was her preference, an epidural would not be available.

59. Ms A advised that there was only one handwritten copy of her delivery plan, which she said was confirmed and signed with RM C at 35 weeks' gestation. Ms A no longer had the delivery plan at the time of this investigation, so she was unable to provide it to HDC.

60. Via texts with Ms D, RM B realised that Ms A lived "just around the corner". RM B told HDC that she decided to visit straightaway, as Ms A's blood loss appeared heavier than she would have expected with a normal "show".

61. Ms A said that RM B arrived at her home 10 minutes later. Ms A stated: "[RM B found me] 9–10cm trying to birth my son without my waters broken."

62. RM B said that she arrived at Ms A's home in seven minutes, and it was apparent to her that Ms A was in "strong labour". RM B said that she told Ms A that her contractions were not as far apart as she had described on the phone, and Ms A replied that she has a good pain tolerance. In her response to HDC, RM B said that Ms A's "plan was a drug free birth", and

[15] A plug of mucus in the cervical canal that protects the cervix from bacteria and infection.
[16] A "bloody show" occurs when the cervix starts to open and the mucus plug dislodges. Some of the blood vessels in the cervix, which is highly vascular, rupture and bleed. This blood and part or all of the mucus plug comprise the "bloody show".
[17] A medicinal gas used for pain relief, comprised of 50% oxygen and 50% nitrous oxide.

that was what eventuated. Ms A disagreed with this, saying that she "never once said or initiated that [she] wanted a drug free labour", and RM B's claim that she had is "100% false".

63. RM B said that Ms A consented to a vaginal examination. RM B stated that Ms A was 9cm dilated, the membranes were still intact,[18] and the baby's position was "minus".[19] RM B said that she made a clinical decision for Ms A to go to the public hospital and she considered that there would be plenty of time to make it there safely. Ms A said that she had her delivery plan in her hospital bag as advised, but RM B did not read it or confirm her pain relief preferences with her.

Delivery

64. Ms A arrived at the public hospital by her own transport at 10.25pm and was admitted into the Birthing Suite. She had a normal vaginal birth, with Entonox for pain relief, and delivered a healthy baby boy at 10.57pm.

65. As part of her birth plan, Ms A chose to have active management for delivery of the placenta.[20] Public hospital records show that the umbilical cord was clamped and cut at 11pm, Ms A was given oxytocin at 11.01pm, and her placenta was delivered via controlled cord traction (CCT) at 11.04pm.

66. Ms A said that RM B administered the oxytocin and "pulled immediately hard without allowing time for the hormone to work".

67. RM B said that a core midwife was in the room when she delivered the placenta, and the midwife "felt no fault in [RM B's] care". RM B stated:

> "We had spoken to [Ms A] prior to birth as to her preference re placenta birth physiological or active … I have never once pulled a cord off as I am very careful in how I birth the placenta."

68. At 11.10pm, RM B recorded in the public hospital notes: "Placenta checked appears intact. 3 vessel cord 2 x membranes. EBL (estimated blood loss) 250mls."

[18] The sac around the baby had not ruptured, and her "waters" (amniotic fluid) had not been released.
[19] Describes the position of the baby's presenting part (usually the head) in relation to the ischial spines (bony protrusions in the narrowest part of the pelvis). For example, when a baby's head is level with the ischial spines, the fetal station is 0. Once a baby's head fills the vaginal opening, the fetal station is +5.
[20] Active management is the alternative to allowing the placenta to birth naturally: the baby's umbilical cord is clamped and cut, oxytocin is given to make the uterus contract tightly and, once there are signs that the placenta has separated from the wall of the uterus, the cord is pulled gently to deliver the placenta.

Postnatal period

69. At 1.05am on 21 Month6, Ms A and her son transferred to the maternity ward at the maternity clinic. At 1.45am, once at the maternity clinic, Ms A's Modified Early Obstetric Warning Score (MEOWS) was zero.[21]

70. At around noon that day, the maternity clinic left a phone message for RM B to advise her that Ms A's son was having pasteurised donor breast milk. There is no record that RM B phoned the maternity clinic back in response.

71. Ms A said that RM B did not visit her once while she was in hospital, and on one day had asked a "friend" (of RM B) to visit on her behalf. RM B told HDC that she paid a colleague, RM E, to visit Ms A as a locum on 25 Month6 because RM C was unsure whether she would be able to see Ms A that day. RM B said that she informed Ms A of this plan in advance. Ms A said that the involvement of a locum was never discussed with her, and throughout her antenatal and postnatal care RM B and RM C did not mention having any connection with a locum midwife.

72. RM B said that she went off call "the morning after the birth so [RM C] visited hence why Ms A didn't see [RM B] in her hospital time". RM C told HDC that there was no requirement for her to see Ms A on 21 Month6, as she was off call until 7am the following day.

73. At 3.30pm on 22 Month6, Ms A began to feel unwell and had a MEOWS of 7. An obstetric registrar was consulted and, due to the acute onset of her symptoms, Ms A was transferred back to the public hospital for medical review. There is no record that RM C or RM B visited Ms A during the two days she was at the maternity clinic.

74. Ms A arrived at the public hospital at 5pm and was admitted to the maternity ward. Her clinical records note that she had developed a fever and passed clots that morning, and she was feeling lethargic, unwell and in pain from her waist to her legs. The clinical impression was "sepsis — likely endometriosis [differential diagnosis] appendicitis".[22] Ms A was commenced on intravenous (IV) antibiotics.

75. RM C visited Ms A at 4pm on 23 Month6. RM C documented that she had "no concerns" about Ms A, and that Ms A hoped to go home the next day.

76. On 24 Month6, Ms A was noted to be feeling much better. However, at 6pm, she reported feeling "hot and awful" and having abdominal pain. At 10pm, Ms A passed a "10cm string of

[21] The Modified Early Obstetric Warning Score (MEOWS) allows early recognition of physical deterioration in pregnant and recently delivered women by monitoring five physiological observations. Two consecutive MEOWS scores of zero is classified as "normal". Scores above zero will trigger some level of escalation and intervention. A score of 7 or more is classified as high.

[22] Postpartum endometriosis is inflammation or infection of the uterine lining after childbirth. It is distinct from the disease endometriosis, which is characterised by uterine tissue growing outside of the uterus. Retained placenta can lead to postpartum endometriosis.

membranes" (undelivered placental membranes). She was later documented as "now afebrile" and "feeling and looking a lot better".

77. RM B said that she inspected the placenta thoroughly and considered that it appeared whole. She said that it is routine to say "appears whole" if no piece is obviously missing, but it is never certain that there are not some retained products. She stated:

> "It is unfortunately very easy for a small piece of membrane to remain without us being aware … it is a risk which all women have postnatally and not one we can always control."

78. On 25 Month6, RM E visited Ms A. RM E documented that she was attending "for RM B", and that Ms A was sleeping.[23] RM B provided a text message trail from RM E dated 25 Month6, in which she states that she had been to visit Ms A.

79. At 7.15pm on 25 Month6, RM C visited Ms A at the public hospital but found her asleep. RM C noted that she left Ms A undisturbed but spoke to Mr A and was told that Ms A was in recovery.

80. Ms A was discharged from the public hospital at 10.43am on 26 Month6.

Impact and outcome sought by Ms A

81. Ms A said that she felt "so unsupported" by RM B, and that her labour experience and postnatal illness were "very unsettling and traumatic" and she has lost trust in the midwifery care system. Ms A told HDC: "The extent of how unwell I became with sepsis was completely avoidable but [RM B] failed to show me the time and thorough care needed when delivering a baby." Ms A said that she would like RM B's practice to be reviewed and observed to ensure that she can perform her role in a "professional and full manner".

Further comments

Ms D

82. Ms D told HDC:

> "Throughout the whole labour [RM B] made myself and [Ms A] feel as though we knew nothing and that we were overreacting … No patient should ever have to beg for care and it had gotten to the point where we had to send visuals to [RM B] so … she could see things were actually happening."

83. Ms D said that RM B did not think about the health of the baby throughout the whole process.

[23] RM E's notes are not timed, but the records indicate that it was likely between 10.30am and 3pm.

RM B

84. RM B stated that she did not put Ms A or her baby at risk. RM B said that Ms A feels that she did not have the birth she wanted "even though she had a drug free birth and her plan was a drug free birth".

85. RM B stated:

> "Antenatally we also discussed pain relief and [Ms A] was firm in her desire to have a drug free birth saying that she wanted to be as natural as possible. This was highlighted by her documented desire to birth at a unit which had no pain relief except Entonox available for the labour. She never cried for drugs and I firmly remember her saying she had a high pain tolerance and her surprise that she was 9cm dilated at home. She was happy that she had gotten to that point with … [no drugs] that was her plan."

86. There is no record in Ms A's available antenatal notes of a discussion about pain relief during labour and delivery.

87. RM B said that she did not refuse to attend Ms A's home — she refused to do a vaginal examination so that Ms A could decide whether Mr A should return home.

88. RM B advised HDC that she lost all "unsaved data" on her phone when it was later dropped by a child. She said that she asked her mobile provider whether it had kept any of her data, but it had not.

89. When this investigation was notified, RM B did not provide any further comments to HDC due to illness.

RM C

90. RM C said that she recalled visiting Ms A at the public hospital between 22 and 24 Month6, but she could not remember exactly which day she visited. RM C provided copies of the public hospital's clinical notes from 23 and 25 Month6 showing entries that documented her having visited Ms A.

91. RM C told HDC that her documentation in 2019 "was not to a satisfactory standard". She advised that she undertook the "Dotting I's and Crossing T's: Midwives and Record Keeping" course [in 2021].

92. RM C acknowledged that working a shared caseload with RM B "did sometimes have its pitfalls". RM C stated:

> "[I]t was probably somewhat confusing for the women and although it gave us a better work/life balance, there was no-one ultimately responsible and accountable for the care that women received."

Responses to provisional opinion

Ms A

93. Ms A was given the opportunity to respond to the "information gathered" section of the provisional opinion. She confirmed that she had nothing further to add.

RM B

94. RM B was provided with the sections of the provisional opinion that related to her, in addition to the "information gathered" section. RM B advised that she accepted the provisional opinion and recommendations.

RM C

95. RM C was provided with the sections of the provisional opinion that related to her, in addition to the "information gathered" section. RM C acknowledged the finding (in paragraph 148) that she was not Ms A's on-call LMC midwife postnatally until 22 Month6.

Opinion: RM B — breach

96. As the midwife on call when Ms A went into labour, RM B had a responsibility to provide care to her with reasonable care and skill, and in accordance with appropriate standards. I have concerns about some aspects of the care RM B provided to Ms A, as outlined below.

Support and care during labour

97. The analysis of RM B's standard of care during Ms A's labour is hampered by the lack of records. RM B did not document her text messages or telephone conversations with Ms A and Ms D on 20 Month6, or her assessments of Ms A based on those contacts (discussed further below). The text message trail was made available to HDC by Ms A.

Advice after early contractions

98. My independent midwifery advisor, RM Nimisha Waller, was critical of the advice RM B provided to Ms A in her first text message. RM B told Ms A: "[W]ay too early to be texting … we won't do anything till [contractions] … are three minutes apart lasting a minute so go to bed." Similar advice appeared in RM B and RM C's "When to call the midwife" leaflet (the leaflet), which they gave to Ms A. The leaflet stated:

> "TIME TO CALL THE MIDWIFE!
> - Contractions 3–4 minutes apart
> - Lasting 60–90 seconds
> - Unable to talk"

99. RM Waller advised that the New Zealand College of Midwives (NZCOM) philosophy and *Standards of Practice* focus on providing individualised care in partnership with women. Standard One of the NZCOM *Standards of Practice* provides that "the midwife works in partnership with the woman". RM Waller was clear that this partnership should allow a

woman to seek support from her midwife before established labour, regardless of any information about labour previously provided by her midwife, such as that received by Ms A about how to manage early labour and determine whether or not contractions are Braxton Hicks.[24] Further, RM Waller noted that the leaflet provided information that was not evidence-based about whether a baby is moving sufficiently, as women should not be advised that "at least 10 movements in 12 hours" is acceptable.

100. RM Waller said that there is no evidence that every woman follows the same pattern of contractions and, as every woman is different, there is no exact frequency of contractions that defines active labour. She said that a midwife intending to steadfastly wait for a woman's contractions to be three to four minutes apart before being in contact with her — as RM B indicated she would with Ms A — represents a moderate to severe departure from accepted practice.

Assessments

101. RM Waller advised that RM B should have assessed Ms A and her baby's wellbeing, including making a plan about further assessment and contact with her throughout the day. Such a plan helps to demonstrate that a woman has made informed decisions about the nature of the assessments and contact that will occur during labour, and provides evidence about her and her baby's wellbeing. RM Waller considered that the lack of such an assessment and plan in Ms A's case was a moderate departure from accepted practice.

102. Ms A was not assessed by RM B in person until around 10pm on 20 Month6, despite Ms A having contacted her approximately 17 hours earlier. RM Waller said that care during labour should be guided by the decision points in NZCOM's 2015 *Midwives Handbook for Practice* (the practice handbook). The practice handbook states: "The decision points provide a guide for midwives to be able to identify those times where there may be an assessment required during pregnancy and childbirth." Midwifery guidance regarding assessment is set out for each point.

103. For a woman beginning labour (the first decision point), the practice handbook has a strong focus on the midwife sharing information with the woman, including assessments of the frequency and length of contractions; the baby's movements and heart rate; whether she has had a show; and whether the membranes are intact. The midwife should also discuss the woman's general wellbeing and confirm that her partner or support person is present. The practice handbook states:

> "This information enables joint decisions to be made in relation to any change to the birth plan that may need to be made and whether the woman requires continuous or intermittent midwifery support."

104. The second, third and fourth decision points respectively concern the provision of intermittent midwifery support, continuous midwifery support, and the second stage of

[24] Braxton Hicks contractions are caused by the tightening of the uterine muscles in preparation for labour. Often referred to as "practice contractions", they usually stop after a while and do not increase in intensity.

labour. At these points, the practice handbook has a strong focus on the provision of information and reassurance, discussion with the woman, and regular assessments of her and her baby. The decision points at the third stage of labour and the immediate postnatal period are discussed further below.

105. I accept RM Waller's advice. RM B provided Ms A with rigid initial guidance, which was not evidence-based, about when it was appropriate for her to contact RM B again about her contractions and the progress of her labour. I consider that the support RM B then went on to provide to Ms A throughout the day while her labour established at home did not accord with NZCOM's partnership model or the level of assessment and support set out in the practice handbook. It appears that RM B did not anticipate that she would find Ms A in strong labour when she arrived at her home between 9.30 and 10pm, notwithstanding that it was close to 17 hours after Ms A had first contacted RM B. This would not have been unexpected had sufficiently regular assessments been carried out in the meantime. I am critical that these did not occur. Ms A had a right to expect more information from, and discussion with, RM B about her contractions, pain and how she would be monitored and assessed throughout the day.

Provision of information

106. It is notable that this was Ms A's first pregnancy, and her partner was away when she went into labour. I agree that it was not for RM B to decide whether Mr A should return home immediately. However, I am critical of the lack of support RM B gave Ms A in this respect. The handbook provides that midwives should try to ensure that a woman's birth partner is present once labour has begun. Ms A's birth plan stated that she wanted Mr A at the birth to cut the umbilical cord. RM B was in a position to have provided Ms A with more helpful information about the ways her labour could potentially progress. This would have allowed Ms A and Mr A to make a more informed decision about how urgently he should return home.

107. The inadequacy of the midwifery support Ms A received while in labour at home is concerning, and I accept that it contributed to her finding her labour and delivery traumatic.

Pain relief

108. Ms A no longer has her handwritten delivery plan, and there is no entry in the available antenatal notes concerning her preferences in terms of pain relief.[25] Ms A's evidence is that her delivery plan specified that she wanted Entonox available and that medications, an emergency caesarean or other invasive methods for a safe delivery were "fine for the well-being of [herself] and baby" given the "unexpected nature of labour".

109. Ms D stated that Ms A's pain was "intense" from 6.30pm on the day of delivery, and the text messages show that Ms A later asked about possible pain relief. Ms A told HDC that by

[25] A one-page "Birthplan Choices" form, which was completed in writing, is included in Ms A's notes. However, it does not make any reference to pain relief or include the signature/s Ms A said were on her delivery plan.

sometime after 9.30pm, she was "crying for any pain relief possible and asking for an ambulance".

110. RM B's evidence is that Ms A was clear that she only wanted access to Entonox for pain relief during labour and delivery. RM B said that Ms A feels that she did not have the birth she wanted, "even though she had a drug free birth and her plan was a drug free birth". RM B stated that Ms A "[n]ever cried for drugs" and she was happy to have progressed to 9cm dilated at home with no pain relief (except self-administered paracetamol).

111. The basis for RM B's belief that Ms A did not "cry for drugs" is unclear, as Ms A has explicitly stated otherwise. She is also definite that she did not request a drug-free labour or birth. If RM B had assessed Ms A according to the first decision point[26] in the practice handbook, a discussion should have taken place about whether any changes were required to her birth plan. Such a discussion would necessarily include a review of Ms A's pain relief preferences. This assessment was especially important as Ms A was in her first pregnancy, labouring at home without the support of her partner.

112. It is concerning that RM B considers that her care was appropriate because Ms A achieved a drug free birth. Not only is Ms A clear that this was not her request, she said that her pain level eventually meant that she would have accepted "any pain relief possible". RM B did not have sufficient understanding of the progress of Ms A's labour, which resulted in Ms A continuing to labour at home until she was 9cm dilated with only Panadol for pain relief (and without knowledge of its maximum dose).

113. I am critical that RM B did not assess Ms A's pain adequately, discuss her pain relief options with her, or review and discuss her delivery plan. It is also apparent that RM B did not objectively reflect on the adequacy of her actions in terms of pain relief, and recognise her shortcomings, when she responded to HDC about Ms A's complaint.

Use of text messaging

114. Following her response to Ms A's initial text message at 5.04am, RM B contacted Ms A (and latterly Ms D on Ms A's phone) by text message from late morning through until she decided to attend Ms A's home between 9.30 and 10pm. The Midwifery Council of New Zealand (MCNZ) 2016 guidance "Be Safe — Text messaging" states that text messaging can be used in midwifery practice. However, it makes clear that it should not be used during labour or to carry out clinical assessments. The guidance warns that text messages do not convey the same level of information about a woman's condition as a face-to-face meeting or telephone conversation. In this respect, RM Waller advised that it was not appropriate for RM B to have undertaken an assessment of Ms A's bleeding by text.

115. RM Waller considered that RM B's decision to assess Ms A's bleeding by asking for a photo of the blood to be texted to her represented a moderate departure from accepted practice.

[26] See paragraph 103.

I agree. RM B's decision to use text messaging for much of her communication with Ms A during her labour was inappropriate, and did not convey sufficient support.

Record-keeping

116. Professional, accurate clinical records are central to ensuring safe, effective and timely care, and are a requirement of midwifery practice. Standard Four of the NZCOM Standards of Practice provides that a "midwife maintains purposeful, on-going, updated records and makes them available to the woman".

117. MCNZ's 2018 "Be Safe — Documentation and Record Keeping" guidance sets out that "[p]rofessional record keeping includes all forms of recorded communication that supports the midwifery care provided in partnership with the woman". It advises that clinical documentation should occur at the time the care is provided; it must be accurate and clear; and records must be retained for a minimum of 10 years following the date of the last entry.

118. MCNZ's "Be Safe — Text messaging" guidance confirms that text messages are part of the clinical record. The key details from text messages should be transcribed in the midwifery notes, or an app can be used to transfer texts from phone to computer. The guidance advises that texts should not be deleted.

119. Aside from a copy of Ms A's initial 5.04am text message, RM B was unable to provide any documentation relating to her text or phone contact with Ms A during her labour, or any assessments carried out in that period.

120. RM Waller considered that RM B's failure to keep records of her interactions with Ms A during her labour at home was a moderate to severe departure from accepted practice. I accept this advice. The importance of professional healthcare documentation cannot be overstated. RM B reported that she lost data on her phone when it was dropped, but that occurred over four months after Ms A gave birth. Any data on the phone that related to Ms A's midwifery care should have been entered into Ms A's records at the time that care occurred.

Postnatal hospital visits

121. RM B's last contact with Ms A while she was on call was in the very early hours (between 1 and 2am) of 21 Month6, when Ms A and her baby transferred to the maternity clinic. RM B said that Ms A did not receive a visit from her while she was in hospital as she went off call "the morning after the birth".

122. However, RM B was Ms A's on-call midwife until 7am on 22 Month6, when RM C was due to take over. As RM B did not visit Ms A on 21 Month6, Ms A did not receive a visit from her LMC midwife on her first day postpartum. RM B also did not telephone the maternity clinic in response to the message she received about Ms A's son receiving pasteurised donor milk.

123. The practice handbook advises that the first decision point in the postnatal period is "immediately postpartum (up to and including the first 24 hours)". It states:

> "This timing provides an opportunity for the midwife to reflect on the birth experience with the woman and assess the health and wellbeing of the woman and her newborn baby. Facilitate and assist her transition to parenthood."

124. The practice handbook states that the assessment should include, in part, "physical assessment and observations of the woman … and postnatal plan in discussion with the woman in relation to her ongoing care; physical assessment and observations of the baby occurs following skin to skin and first feed".

125. RM Waller said that the "Primary Maternity Services Notice 2007", which applied when Ms A had her baby, requires a midwife to visit daily:

> "A LMC is responsible for ensuring that all of the following services are provided for both the mother and baby: …
>
> b) postnatal visits to assess and care for the mother and baby in a maternity facility and at home until 6 weeks after the birth, including— …
>
> (i) a daily visit while the woman is receiving inpatient postnatal care, unless otherwise agreed by the woman and the maternity facility."

126. RM Waller noted that RM B did not visit Ms A, and did not document any discussion with Ms A about her not requiring a visit on her first day at the maternity clinic. RM Waller considered that this represented a mild to moderate departure from accepted practice.

127. I accept that there are situations where a midwife cannot visit, or can only phone to check in, because of having to attend another labour or urgent call. However, RM B said that she did not visit Ms A because she was no longer on call, which was incorrect. Sharing a caseload week on/week off may have contributed to RM B incorrectly stating that she was not on call to visit Ms A on 21 Month6. However, with such a working arrangement, it is critical that collaboration and detailed handovers take place to ensure the seamless transition of responsibilities. Effective collaboration would likely also have ensured that Ms A was made aware that a locum midwife might visit her instead of either of her LMC midwives. I accept Ms A's evidence that, contrary to RM B's statement, she was not aware that a locum might be used. This should have been discussed with Ms A during the antenatal period, so that she was fully informed and could decide whether she was comfortable to see a locum midwife.

128. I acknowledge that RM B and RM C's working arrangement has ceased.

129. I am critical of RM B's failure to visit Ms A in hospital on 21 Month6. RM B was required to visit as Ms A's LMC midwife. The practice handbook emphasises the importance of providing midwifery support to the woman on her first day postpartum. This was likely to be a time when Ms A, as a new mother, most required that support.

Conclusion

130. In my view, RM B failed to provide services to Ms A with reasonable care and skill in the following respects:

a) The initial advice to Ms A to wait to contact RM B until her contractions were three minutes apart was inappropriate.

b) Inadequate information, support and reassurance was provided to Ms A throughout the day about her contractions, pain, the potential progression of her labour and further assessments and monitoring.

c) Text messaging should not have been used to communicate with Ms A during labour, or to make an assessment of her bleeding.

d) Ms A did not receive adequate communication about her postnatal care, and was not visited by RM B while in hospital on her first day postpartum.

131. As a result, Ms A did not receive the standard of midwifery care, support and information she was entitled to during her labour and her immediate 24 hours in hospital after delivery.

132. Accordingly, for the reasons set out above, I conclude that RM B breached Right 4(1) of the Code of Health and Disability Services Consumers' Rights (the Code).[27]

133. In addition, RM B's documentation fell short of acceptable standards on 20 Month6, and I find that RM B also breached Right 4(2) of the Code.[28]

Active management of placenta — no breach

134. The fifth decision point in the practice handbook concerns the third stage of labour, including the completion of labour with the birth of the placenta. It states, in part: "Respect the birth plan, discuss any reason for the need to change, particularly in relation to use of a uterotonic,[29] cutting the cord, care and inspection of the placenta." It further states that assessment and observation of the woman should include reviewing the "timing of the placental birth, condition of placenta, blood loss".

135. RM Waller noted that the umbilical cord was clamped and cut three minutes after the baby's birth, which was reasonable.[30] Ms A had requested a uterotonic in her birth plan as her preferred method for delivery of the placenta. RM Waller advised that this can be a painful experience for some women, as a uterotonic injection results in strong contractions to separate the placenta from the lining of the uterus. She considered that RM B's active management of the third stage accorded with the DHB guidance on umbilical cord clamping.[31]

136. RM Waller advised that the best way to check for ragged placental membranes is to hold the placenta up to see if the membranes have ruptured or the edges are ragged. RM B documented that she checked the placenta at 11.10pm and considered that it was whole.

[27] Right 4(1) provides: "Every consumer has the right to have services provided with reasonable care and skill."
[28] Right 4(2) provides: "Every consumer has the right to have services provided that comply with legal, professional, ethical, and other relevant standards."
[29] Uterine stimulant medication that causes a woman's uterus to contract, such as the oxytocin given to Ms A.
[30] Documented on the Labour and Birth Summary as happening 120 seconds after birth.
[31] DHB Maternity Guideline: *Umbilical cord clamping* (2019).

RM Waller said that there is a possibility that ragged membranes are occasionally missed at the time of checking the placenta and membranes, although she noted that the 10cm membrane Ms A expelled on 24 Month6 was a "reasonable size". RM Waller said that ideally the placenta would be checked with another person present so that there could be a consensus that it was complete, but that is not practised routinely.

137. I accept RM Waller's advice. Ms A found the birth of the placenta painful, and it is recognised that pain can occur with active management of the placenta using a uterotonic. However, there is no evidence of any failure by RM B during this process. I consider that the care she provided when delivering the placenta was appropriate.

Opinion: RM C — adverse comment

Postnatal hospital visits

138. RM C took over from RM B as Ms A's on-call LMC midwife at 7am on 22 Month6. Based on the available antenatal records, RM C did not visit Ms A at the maternity clinic on that day, or at the public hospital on 24 Month6.

139. RM Waller referenced the guidance provided by the decision points in NZCOM's 2015 *Midwives Handbook for Practice* (the practice handbook). The practice handbook states: "The decision points provide a guide for midwives to be able to identify those times where there may be an assessment required during pregnancy and childbirth." Midwifery guidance regarding assessment is set out for each point.

140. The practice handbook advises that the first decision point in the postnatal period is "immediately postpartum (up to and including the first 24 hours)". It states:

> "This timing provides an opportunity for the midwife to reflect on the birth experience with the woman and assess the health and wellbeing of the woman and her newborn baby. Facilitate and assist her transition to parenthood."

141. These expectations on midwives effectively continue for the remainder of a woman's inpatient postnatal care, as the "Primary Maternity Services Notice 2007", which applied when Ms A had her baby, requires a midwife to visit daily. It states:

> "A LMC is responsible for ensuring that all of the following services are provided for both the mother and baby: …
>
> b) postnatal visits to assess and care for the mother and baby in a maternity facility and at home until 6 weeks after the birth, including— …
>
> (i) a daily visit while the woman is receiving inpatient postnatal care, unless otherwise agreed by the woman and the maternity facility."

142. RM C did not document any discussion with Ms A about her not requiring a visit every day or on the specific days RM C did not visit her. RM Waller said that without any record of negotiation and a plan with the woman and her maternity facility, it would be a mild to moderate departure from accepted practice for an LMC midwife not to visit the woman.

143. I accept that there are situations where a midwife cannot visit, or can only phone to check in, because of having to attend another labour or urgent call. RM C did not provide an explanation for not visiting Ms A on either date.

144. In this respect, I find it significant that RM C told HDC that working a shared caseload with RM B gave them both "a better work/life balance, [but] there was no-one ultimately responsible and accountable for the care that women received". This is a frank but concerning acknowledgement of the shortcomings in the arrangement. It is possible that this issue identified by RM C contributed to the midwives' failure to co-ordinate to ensure that Ms A was visited daily while she remained in hospital.

145. I acknowledge that this working arrangement has ceased.

Conclusion

146. Overall, as noted above and guided by independent advice, I am concerned about aspects of the postnatal care RM C provided to Ms A. RM C was required to visit Ms A postnatally in hospital each day as her LMC midwife. However, she did not visit Ms A on 22 Month6, her second day postpartum, or on 24 Month6, when Ms A was ill and had returned to the public hospital. As these visits were not undertaken, Ms A did not receive the expected level of postnatal care and support from RM C.

147. While I am critical of these shortcomings in RM C's care as Ms A's LMC, I also accept that she was off duty at the time Ms A went into labour, and was not her on-call LMC midwife again until 22 Month6. As such, I am not holding RM C responsible for the standard of midwifery care Ms A received during her labour and delivery or in the immediate postnatal period in hospital.

Changes made

148. In August 2021, RM B told HDC that her practice at the time of Ms A's case was "completely different". She advised that she has since made the following changes:

a) She completed the "Dotting I's and Crossing T's: Midwives and Record Keeping" course in December 2020.

b) She began to work online, which has made a "huge difference".

c) She moved to a "supportive sustainable work life".

149. HDC is aware that RM B also engaged in other non-mandatory professional development activities in 2018 and 2019.

Recommendations

150. I recommend that RM B provide a written apology to Ms A for the deficiencies identified in this report. The apology should be sent to HDC, for forwarding to Ms A, within three weeks of the date of this report.

151. I recommend that the Midwifery Council of New Zealand consider my findings in this investigation in the event that RM B applies to return to practice as a midwife in future.

152. In making these recommendations, I have taken into account the above training RM B undertook, which occurred after she acted as Ms A's back-up LMC midwife in 2019. I have also taken into account that RM B does not currently have a midwifery practising certificate.

Follow-up actions

153. A copy of this report with details identifying the parties removed, except the independent advisor on this case, will be sent to the Midwifery Council of New Zealand, and it will be advised of RM B's and RM C's names in covering correspondence.

154. A copy of this report with details identifying the parties removed, except the independent advisor on this case, will be sent to the New Zealand College of Midwives and Te Whatu Ora, and placed on the Health and Disability Commissioner website, www.hdc.org.nz, for educational purposes.

Appendix A: Independent clinical advice to Commissioner

The following expert advice was obtained from RM Nimisha Waller.

"Thank you for your contact with the enclosed documents, requesting expert advice to the Commissioner on the midwifery care provided to [Ms A] by [RM C] and [RM B]. To the best of my knowledge, I have no personal or professional conflicts of interest. I have read and agree to follow the Commissioner's Guidelines for Independent Advisors.

I qualified as a midwife in the United Kingdom (UK) in 1982. I have been practicing in New Zealand (NZ) since 1996, National Women's Hospital (1996–2000); Senior Lecturer in Midwifery at AUT (from 2000–currently); as an LMC midwife (2004–2019) and a casual midwife within the DHB (from October 2019). I have been an Expert advisor since 1998.

As an LMC midwife from 2004 to 2019 I took a case load of 10–12 women a year while continuing to work at Auckland University of Technology (AUT) as a senior midwifery lecturer 4 days a week. I worked with three other midwives and we all supported women who wanted to birth at home, in a primary birthing unit or in a hospital. We used to hold a homebirth information/preparation evening for those interested in considering to birth at home. We have also supported women who wanted a waterbirth in any of those settings. We have looked after women in urban and semi-rural areas. At present I work as a casual midwife 2–3 days a month in a primary birthing unit to maintain my midwifery practice while continuing my work with AUT.

Background
[Ms A] was provided with antenatal care by [RM C] (LMC) and by [RM B] (back up LMC). When [Ms A] started experiencing contractions, she contacted back-up midwife [RM B], as her LMC [RM C] was not working at the time. Despite apparent signs of active labour, [RM B] did not attend nor instruct [Ms A] to go to the hospital. After several hours of experiencing intense pain and contacting [RM B] multiple times, [Ms A] sent [RM B] a picture of her blood loss at the midwife's request, and [RM B] then attended [Ms A] at her home for a check. [RM B] found [Ms A's] cervix to be 9cm dilated with membranes still intact, and in strong labour. [Ms A] was transported to [the public hospital] by a relative, and [RM B] met them there. [Baby A] was born small but healthy. Oxytocin was given, and three minutes later, the placenta was delivered via controlled cord traction. [Ms A] experienced a high level of pain with this. She was moved to [a maternity clinic] following the birth of [Baby A] but transferred back to [the public hospital] after [Ms A] started to feel ill. Upon return to [the public hospital], it was identified [Ms A] had retained products, a uterine infection and sepsis.

Advice Requested
In particular, I was asked to comment on:

1. Whether the antenatal care provided to [Ms A] by [RM B], and especially in relation to measuring foetal growth, was of an accepted standard.

2. Whether the antenatal care provided to [Ms A] by [RM C], and especially in relation to measuring foetal growth, was of an accepted standard.
3. Whether the care provided to [Ms A] by [RM B] during and following labour, was of an accepted standard.
4. The adequacy of [RM C's] antenatal documentation.
5. The adequacy of [RM B's] antenatal documentation.
6. Whether the post-natal care provided to [Ms A] by [RM C] was of an accepted standard.
7. Any other matters in this case that I consider warrants comment.

Sources of Information

In assessing this case I have read the following information that was provided for the review:

- Letter of complaint dated 20 [Month7]
- [RM B's] response dated [2020]
- [RM B's] further response dated [2020]
- Clinical records from [RM B] covering the period 4 [Month1] to 20 [Month6]
- Clinical records from the DHB covering the period 20 [Month6] to 26 [Month6]
- Clinical records from the maternity clinic covering the period 21 [Month6] to 22 [Month6]

[HDC] was contacted [in 2020] for the following clarification and additional information:

- The clarification of the Blood Pressure (BP) on 29 [Month5] being 147/87 as not clear in the copy I was sent.
- [RM B] to advise whether GROW software was used in the MMPO software.
- [The public hospital's] guideline/policy/protocol on assessing growth/ fetal wellbeing in pregnancy.
- Copy of the text message on 20 [Month1], if possible, and a copy of where it was documented.
- Whether [RM C] had any additional documentation to that of [RM B]
- I have requested a copy of the text messages [RM B] sent [Ms A] with relevant documentation
- Whether [RM B] had taken any further action when she did not get a response from [Ms A], and what her and [RM C's] usual practice is when a challenge such as this occurs during midwifery care and where this would be documented.

The following responses were received regarding further clarification/information:

- [HDC] was able to clarify that the BP on 29 [Month5] being 147/87.

- [RM C] indicated there was no further documentation than what was already provided by [RM B].
- The published guidelines that [the DHB] have in relation to fetal growth and wellbeing in pregnancy are the 'Antenatal Obstetric Ultrasound: indications for doppler assessment GLM0059' and 'Antenatal Ultrasound for Obstetric Indications GLM0006' that I could access online.
- Letter dated [2020] from [RM B] provided response regarding use of GROW Software (see under '1'), Record of Texts/Call logs, copy of text messages requested (see under '3' and '6') and postnatal contact and follow up (see under '6').

1, 2, 4 and 5 are responded together, that is, whether the antenatal care provided to [Ms A] by [RM C] and [RM B], especially in relation to measuring foetal growth, was of an accepted standard as well as the adequacy of [RM C's] and [RM B's] antenatal documentation.

[RM C] was the LMC midwife for [Ms A]. [RM C] provided antenatal care to [Ms A] on 4 [Month1] (14+5 weeks gestation), 16 [Month2] (20+5 weeks gestation), 24 [Month4] (30+5 weeks gestation), 5 [Month6] (36+5 weeks gestation) and on 19 [Month6] (38+5 weeks gestation).

[RM B] was involved in [Ms A's] antenatal care on 20 [Month3] (25 weeks gestation), 29 [Month5] (35+5 weeks gestation) and 12 [Month6] (37 weeks gestation).

The antenatal care provided by [RM C] and [RM B] has been documented in 'Antenatal Record' page of the Midwifery Maternity Provider Organisation (MMPO) clinical notes.

Body Mass Index (BMI) and healthy weight gain

There is no documentation of the conversation about diet and healthy weight gain in pregnancy during the first contact on the 4 [Month1] by [RM C] nor subsequently by [RM B] as a back-up midwife during first contact with [Ms A] on 20 [Month3] at 25 weeks gestation. The information shared about the appropriate weight gain suggested by the Ministry of Health should be based on [Ms A's] BMI. From my perspective it is not possible to have a reasonable discussion about healthy weight gain in pregnancy when a BMI (20.5kg/m^2 within healthy weight range) has not been calculated (MMPO notes) though the height (153cm) and weight (48kg) have been documented at the first antenatal visit by [RM C] (LMC Midwife). Apart from documentation of [Ms A's] weight at the first visit (48kg) there is no further documentation of [Ms A's] weight in pregnancy nor a discussion regarding an offer of monitoring weight gain in pregnancy irrespective of [Ms A's] BMI being within 'healthy weight' range. As part of informed consent (Health and Disability Commissioner (HDC), 1996), there has to be discussion of BMI, healthy weight gain and an offer of monitoring weight gain in pregnancy with [Ms A] and her decision documented. This would constitute a mild departure from expected practice for both [RM C] and [RM B].

Urine testing in pregnancy

[RM C] has not tested [Ms A's] urine at any of the antenatal visits while [RM B] has as part of antenatal care. There is no rationale provided by [RM C] of why the urine has not been tested in pregnancy. At the first visit (4 [Month1]) an offer of a urine sample being sent to laboratory is discussed with the woman to exclude bacteriuria in pregnancy which affects 20–35% of pregnant women. Urine is also tested at each contact to exclude presence of protein and glucose. There is no documentation of any discussion [RM C] would have had with [Ms A] to make an informed decision regarding excluding bacteriuria in pregnancy nor why she may not offer testing of protein and glucose at each antenatal visit. Urinary Tract Infection (UTI) in pregnancy increases the risk of preterm labour. The lack of informed consent relating to this assessment would be considered as moderate departure from expected practice as urine testing has not been discussed and offered to [Ms A]. Urine testing with dipsticks at each antenatal visit though it has limitations is still considered best practice in pregnancy.

Blood pressure (BP) in pregnancy

The BP on 29 [Month5] (35+5 weeks) has been documented as 147/87mmHg by [RM B]. Within the documentation there is mention of no evidence of protein in the urine, no oedema and no headaches so it appears that [RM B] may have considered the BP to be high however has not explicitly commented on this finding. There appears to be no consideration of further discussion with [Ms A] for an offer of a consultation or seek consent for [RM B] to have a discussion with the Obstetric specialist. The Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) (2017) defines gestational hypertension (also known as pregnancy induced hypertension) as:

- New onset hypertension occurring after 20 weeks' gestation (in a woman who had normal BP before 20 weeks gestation) AND
- Diastolic BP ≥90mmHg or systolic blood pressure ≥140mmHg, measured on two or more consecutive occasions at least four hours apart (the BP was next checked a week later (5 [Month6]) by [RM C] and was normal (112/75mmHg).

Hypertension (main symptom of pre-eclampsia, Code 4022, Ministry of Health, 2012) is defined as **equal** or **greate**r than 140/90mmHg. From my experience the systolic BP of 147mmHg would be considered as mild hypertension and diastolic BP of 87mmHg as borderline or at higher end of normal. In view of this either the BP needed to be rechecked prior to completion of visit or the following day and/or a conversation with [Ms A] on what the BP means and to gain consent for consultation with obstetrician regarding a plan of care, often done by phone. It is unclear if the recommendation in Code 4022 (p.26) of the Referral Guidelines (Ministry of Health, 2012) was discussed with [Ms A] as it is not documented. As the BPs have remained within normal limits subsequently during pregnancy this would be considered as a mild departure from expected practice. [RM B] needs to be vigilant in recognising subtle changes in the BP and fully informing women of what this means for their pregnancy and the need for consultation (HDC, 1996). This is supported by Standard two that states '*the midwife*

shares relevant information … and is satisfied that the woman understands the implications of her choices' (New Zealand College of Midwives (NZCOM), 2015, p. 19) and by Standard six NZCOM (2015) states '*the midwife identifies deviations from normal, and after discussion with the woman, consults and refers as appropriate'* (NZCOM, 2015, p. 23).

Documentation of the fetal heart rate as a range rather than single number

Both [RM C] and [RM B] have documented the fetal heart rate in pregnancy as a range, for example 150–160bpm. Documentation of fetal heart rate as a single number is considered to be 'best practice' and hence should be documented as a single number, that is, 150bpm. From my experience it is not reasonable to state or document fetal heart rate as 'being in expected range'. The use of single number is supported by the DHB (DHB) (2019), Maude et al. (2016), Tracy and Hartz (2015), Tracy (2019) and World Health Organization (WHO), (2018). This would be viewed with mild departure from expected practice.

Documentation of fetal movements during pregnancy

Fetal movements in pregnancy have been documented on the Antenatal Record page at each visit as a '++' by [RM C] suggesting baby was moving well (Grigg, 2015). [RM B] has used '2 ticks' to document fetal movements. There is no documentation of the importance of maternal perception of the baby's pattern of movements. DHB guideline (2016) under 'Routine antenatal care' bullet point 2 states that information shared on 'fetal movements should include description of changing pattern of movements as the fetus develops … (p.1).

[…]

My understanding is that there should be a discussion about the pattern of movements and that the documentation should state 'pattern of movement unchanged' or if changed in what way so it is no longer best practice to discuss fetal movements without inclusion of pattern of movements and the use of 'ticks' in any form of documentation is not considered as best practice — what does a 'tick' mean — that there was a conversation about fetal movements — what sort of conversation and what is the difference between one tick and two ticks? This would be viewed as a mild departure from expected practice.

Baby growth, scans and use of GROW in pregnancy

Apart from one measurement of fundal height by [RM B] on 29 [Month5] (35+5 weeks gestation) which was 35cm, at all other times [RM C] and [RM B] have documented '=D' meaning the fundal height measurement was equal to days of gestation. It appears that the baby's growth was assessed by palpation and not by measuring tape at each antenatal visit. This is no longer accepted as best practice (Grigg, 2015). Grigg (2015) suggests that landmark assessment by palpation is used initially to give an approximate gestational age on abdominal palpation but this method of palpation should not be used in isolation to assess baby's growth. [RM B] has once measured fundal height (only time in [Ms A's] pregnancy) on 29 [Month5] at 35+5 weeks gestation and documented this

as 35cm. However, it is not plotted on GROW to facilitate detection of small for gestational age (SGA) and intrauterine growth restriction (IUGR) babies as well as large for gestational age (LGA) babies in Australasia (Grigg, 2015).

[RM C] requested a growth scan for [Ms A] that was reported on 27 [Month4]. There is no documentation of the rationale for growth scan at 31+1 weeks. The radiologist in the report suggests that the Estimated Fetal Weight (EFW) of 1842g have been plotted on population based chart suggesting baby weight to be on 61 percentile (the population based charts are not recommended for use in practice) however recommended plotting the EFW on customised GROW chart and that if the EFW was <10 percentile to refer [Ms A] back for Dopplar studies on the baby. There is no inclusion of customised GROW chart with this suggested plotting in the information sent for review. It is unclear if [RM C] followed this recommendation or not, and has not documented her rationale for not plotting the EFW on customised GROW chart as recommended by the radiologist. When [HDC] asked on my behalf the question regarding the use of GROW when using MMPO notes the following response was sent on 3 July 2020 by [RM B]:

'Grow Software — The complaint does not concern the question of assessment of fetal growth. In order to address the matter appropriately, could you please advise the relevance of this question? As a general comment, I can state that our practice now uses a private radiologist that automatically prepares a customised growth chart and sends these with scan reports'.

The complaint does specifically ask me to comment on whether the baby's growth was monitored appropriately and hence I required the information asked on my behalf by [HDC]. [RM B] has stated above that the practice now uses a private radiologist who automatically prepares a customised growth chart and sends this with scan reports. So when is the scan organised by [RM B] or [RM C] and the customised growth chart generated? In early pregnancy, in second or third trimester? Is it not the role of the LMC/back-up midwife to monitor the growth of the baby in pregnancy and use the GROW chart to enable decision of whether a scan for growth is required? Therefore the GROW chart needs to [be] generated by the midwife as how does she otherwise make a decision that a scan needs to be offered?

From my experience not measuring fundal height consistently (every 2–3 weeks during pregnancy from 26 weeks of pregnancy) with a tape measure and not plotting the measurements on GROW to appropriately assess baby's growth will be considered as a mild departure from expected practice for both [RM C] and [RM B]. [RM C] not following the recommendation of plotting the EFW on customised growth chart following a scan on 27 [Month4] that she requested would be considered as moderate departure from expected practice.

Documentation

The antenatal documentation by [RM C] and [RM B] does not state the time of the documentation nor a designation, printed name or Midwifery Council of New Zealand Registration number at least once on each page. This would be viewed as a mild departure from expected practice. The documentation can also be further enhanced by indicating areas discussed under each topic under discussion.

3. Whether the care provided to [Ms A] by [RM B] during and following labour, was of an accepted standard.

According to [Ms A] her early contractions (prodromal contractions) commenced on the 18 [Month6], though she appears not to have contacted [RM C] or [RM B] at this stage. [Ms A] saw [RM C] for antenatal care on 19 [Month6]. According to [RM C's] documentation [Ms A] was looking forward to having her baby but not before Friday as her partner Mr A was away suggesting possibility of some conversation between them about labour. This is confirmed by [RM B's] response that [RM C] remembers this day very well because [Ms A] had so many questions re labour and birth (which is appropriate) that she ran late for the booked appointment and that [Ms A] was not contracting at all. This supports [Ms A's] statement of having prodromal contractions (contractions that stop and start) since 18 [Month6].

As her partner was away and the early contractions were still present, [Ms A] made contact with the [RM B] in the early morning (05.04am) of 20 [Month6] by text messaging. This is supported by text messaging forwarded by [RM B] in the response to HDC. [Ms A] in the text message also mentions she first called [RM C] before texting [RM B]. There is no documentation by [RM C] of receiving the call in the MMPO notes provided to HDC so it is unclear where [RM C] documents such conversations. Lack of such documentation is considered as a mild departure from expected practice however if cumulative it is considered as a moderate departure from expected practice.

According to [RM B] response 29 January 2020 [Ms A] continued to have irregular spaced out contractions through the day. There is no documentation of how [RM B] knew this — was it by text messaging and if so where are the text messages stored? [RM B] states that she spoke on the phone at '335' in the afternoon on the 20 [Month6] as [Ms A] wondered whether a vaginal check would help her decide on whether [Mr A] should come home. The phone call at 3.35pm was 10 hours and 31 minutes from initial text messaging at 05.04hrs and if [Ms A] was contracting on and off for 7–8 hours before 5.04am, that is, from 9 or 10pm on 19 [Month6] then the phone call at 3.35pm was 17 to 18 hours and 31 minutes since [Ms A's] early labour had commenced. This phone call (3.35pm) is not documented in the MMPO clinical notes so where does [RM B] document such conversations and what assessments were undertaken on phone/text messaging regarding [Ms A] and her baby's wellbeing including plan for assessment/ further contact on 20 [Month6]? This would be considered as a moderate departure from expected practice as the plan would have helped to demonstrate informed decision by [Ms A] and indicate her and her baby's wellbeing on 20 [Month6].

The information provided by [RM B] of [Ms A] not contacting her until her contractions are 3 minutes apart verbally as well as in the leaflet 'when to call the midwife' enclosed in information sent by HDC does not take into consideration that midwives work in partnership with women, women have a right to seek support before established labour irrespective of information shared about what are Braxton Hicks and established contractions or strategies to manage early labour have been discussed. The care in labour should be guided by the decision points in the New Zealand College of Midwives (NZCOM) Midwifery Handbook for Practice (NZCOM, 2015). There is no evidence that every woman follows the same pattern of contractions (3 minutes apart) in established labour as stated in the leaflet provided by [RM C] and [RM B] to women in their care and forwarded to HDC. Such information defeats the object of individualised care for women in New Zealand maternity system. Thorpe and Anderson (2019) state that there is no exact frequency of contractions to define active labour because every woman is different. To rigidly await for contractions to be 3–4 minutes apart before being contacted as a midwife or consider assessments for maternal and baby's wellbeing would be viewed as moderate/severe departure from expected practice.

My understanding is that assessments of bleeding/blood loss should not occur by text. The Midwifery Council New Zealand (MCNZ) in their 'Be Safe — Text messaging', Paper 02 (2016), under 'set clear boundaries for use of texting' states that you cannot do clinical assessments by texts.

https://www.midwiferycouncil.health.nz/common/Uploaded%20files/Be%20series/Be%20Safe%202%20Final%20for%20print.pdf

To undertake an assessment of bleeding by text would be considered as a moderate departure from expected practice. [RM B] did leave immediately to see [Ms A] once the text with blood loss was received, in this instance it was received in a time however text messages can also be delayed as stated in 'Be Safe — Text Messaging' information by the MCNZ (2016).

The text messages sent [to HDC] on [2020] by [RM B] were the same as once sent initially to HDC so they do not provide complete information regarding the contact between [Ms A] and [RM B] on 20 [Month6]. The response provided by [RM B] was as follows *'In my initial complaint reply to HDC, I forwarded some but not all texts snap shotted via my phone … my phone was [later] dropped by a woman's child and I lost all my unsaved data. As [Ms A] had been originally under [RM C's] care, I did not save her number. I have a receipt of my phone needing fixing. I have been to [the phone company] to see if it keeps any of this data and was told no. I was not asked for all the texts/logs in the original complaint and did not understand they were required'*.

Irrespective of this [RM B] and [RM C] need to be aware that according to MCNZ (2016) 'Be Safe — text messaging' texts are part of clinical records and the documentation needs to capture the text communication or midwives need to download an app that enables transfer of text messaging from phone to computer. This information has been

available since 2016 to keep midwives safe. Not maintaining these records can be considered as a moderate/severe departure from expected practice as it is likely that the texts would have enabled clarity of [RM B] and [Ms A's] communication during the whole day of labour on 20 [Month6] and whether this was reasonable or not. It is important that as text messaging is considered a part of the clinical record that the language used with women and between practitioners is professional as in instances such as this they can be viewed by other professionals as well as woman/whānau.

The discussion regarding the appropriateness of vaginal examinations and transfer to hospital during pregnancy need to be documented so they are available to revisit in labour to ensure clarity regarding the plan as well as opportunity to re-negotiate the plan initially made. Lack of such documentation even if verbally discussed is seen as not having occurred and can be viewed with moderate departure from expected practice. [RM B] has stated in her response that she refused to do the vaginal examination. My understanding is that under the HDC Code of Rights (1996) the role of any practitioner is to ensure that the woman has all the information to make a decision and if that decision is not one that is recommended then we should document as guided on p.18 of the Ministry of Health Referral Guidelines (2012).

The information in 'when to call the midwife leaflet' requires review and update with a date so it is clear that the information provided is current. The use of Panadeine in paragraph 2 of the leaflet needs to be removed. Midwives have not been able to suggest/prescribe Panadeine as it contains 8mg of codeine.

https://www.midwife.org.nz/wp-content/uploads/2019/06/Prescribing-Reminder-and-Medsafe-Alert.pdf

There is also no mention of the maximum dose of paracetamol tablets over 24 hours, that is, 8 tablets over 24 hours. Providing prescribing information that is not comprehensive as well as within midwifery scope of practice can be considered as a moderate/severe departure from expected practice.

The information also states that midwives can only take wāhine to hospital once the cervix is 3–4cm dilated. However, there are instances where the cervix may not dilate and require consultation in the latent phase of labour and the leaflet excludes support of women at home by midwives in the latent phase of labour. The information on 'is my baby moving as it should' is not evidence based. Women should not be advised to count movements and that at least 10 movements in 12 hours is acceptable. This information has not been evidence based for some time now and can be viewed as a moderate departure from expected practice.

Other information and language that requires review/further reflection, so it is appropriate for the woman/whānau to make an informed choice includes:

- monitoring in labour and birth — the leaflet only includes information re baby, there is no mention of monitoring of maternal wellbeing

- Close monitoring is only mentioned for epidural but not for use of Morphine

Care following arrival at [the public hospital]
In Labour and Birth summary there is an error on the top of the page regarding the time of admission to [the public hospital] — it states 20 [Month6] at 1300hrs. According to clinical notes [Ms A] arrived at 22.25hrs (20 [Month6]) and [RM B] arrived at 22.30hrs. The baby's heart rate and maternal pulse were assessed by [the public hospital] midwife. The membranes ruptured at 22.44hrs and the liquor was clear. Baby was born at 23.57hrs. No concerns at birth were evident.

Baby's cord was clamped and cut at 23.00hrs — 3 minutes after the baby was born which is reasonable. Uterotonic to actively manage third stage of labour as consented by [Ms A] was administered at 23.01hours. Placenta was delivered at 3 minutes following administration of uterotonic so at 23.04hrs (20 [Month6]). It can be a painful experience for some women as uterotonic injection results in strong contraction to separate the placenta from the lining of the uterus. The actions taken by [RM B] are supported by the DHB guideline on 'umbilical cord clamping' under active management of third stage.

[DHB website link]

Blood loss was 250mls and the placenta was checked at 23.10hrs — 6 minutes after placenta was delivered at 23.04hrs. It is unclear whether the placenta and membranes were checked with anyone present as it can help support the finding of it appearing to be complete when a situation such as endometriosis occurs as it did for [Ms A]. A 10cm long membrane was expelled by [Ms A] on 24 [Month6] at 22.00hrs. There is a possibility of occasionally ragged membranes being missed at the time of checking the placenta and membranes, though the length of membrane expelled on 24 [Month6] appears to be of a reasonable size. Ideally checking the placenta with another person is important though not routinely practised nor documented that the best way to check for ragged membranes is to hold the placenta up and see if membranes have ruptured and the edges are not ragged. Clear communication/explanation is essential for women/whānau to have a positive perception of their care especially as [Ms A] has perceived that [RM B] was watching the clock all the time. Communicating clearly/objectively should be part of midwifery practice to help reduce chances of negative perceptions. Such perceptions can lead to challenges in partnership between women and midwives.

There is a comment in HDC's letter of the baby being small. When [Ms A's] information of parity, ethnicity, height and weight as well as baby's gestation at birth, weight and gender are added on 'GROW Birth Centile' software for weight of 2875g (nearest to the birth weight of 2850g) the birth centile is 20% and with the weight of 2900g the birth centile is 24.1% (with NZ European ethnicity). When calculating using 'Māori' as an ethnicity for weight of 2875g (nearest to the birth weight of 2850g) the birth centile is 25.2% and with the weight of 2900g the birth centile is 30%. The birth centiles are below

50% (average), so baby can be considered as small male infant, though unlikely to face challenges that babies <than 10 percentile face in sense of hypoglycaemia (low blood sugars), hypothermia (low boy temperature) and hypoxia (low oxygen levels). As stated re GROW consistent fundal height measurement and plotting on GROW increases chances of identifying small babies or large babies (Grigg, 2015).

6. Whether the postnatal care provided to [Ms A] by [RM C] was of an accepted standard.

[RM C] visited [Ms A] twice while she was in [the public hospital], following transfer when she became unwell on 22 [Month6]. These were on 23 [Month6] and 25 [Month6]. RM E also visited for [RM B] on 25 [Month6] — no time documented of a visit, but [Ms A] was sleeping. There appears to be no postnatal visits by [RM C] and [RM B] on 21 and 22 [Month6] at the maternity clinic or on 26 [Month6] at [the public hospital]. The Primary Notice (Ministry of Health, 2007) under Module 'Services following Birth' DA29(b) states that there should be a daily visit while the woman is receiving inpatient care unless negotiated with the woman and maternity facility (p.1070). There is no documentation of such negotiation/ plan in the clinical notes reviewed. If there was no negotiation then this could be considered a mild/moderate departure from expected practice.

In response of 3 July 2020 [RM B] states that [Ms A] remained in hospital until 27 [Month6] — six days postnatal. [RM B] saw [Ms A] on [Month6] at home in the afternoon. The subsequent visits were on 29 [Month6], 3 [Month7] and 11 [Month7]. There is no documentation provided of these visits, so it is not possible to comment on the appropriateness of this documentation. On 17 of [Month7] [RM B] made contact with [Ms A] who reported she was out and busy. Again, there is no documentation provided of this contact to assess appropriateness of the documentation. According to [RM B] there was only one visit that was not provided. When there is no reply [RM B] mentions doing a cold visit. If there are concerns, they always consult initially with their booked GP and send a letter. According to [RM B] this does not happen very often. In a worst-case scenario [RM B] and [RM C] would report to Oranga Tamariki. A well child referral had been done with GP however this is again not provided in the documentation sent to HDC. In the case of [Ms A], [RM B] had no concerns regarding her ability to mother. The baby weights were apparently always very satisfactory (difficult to confirm as no documentation provided). [Ms A] was express feeding, so everyone was aware of the amounts of milk the baby was getting. However, it appears that [Ms A] was possibly not happy as she did not respond to [RM B] contact on 17th [Month7]. It is unclear if [RM B] or [RM C] have ever considered providing further information of what is available for women who may not be happy with care they have received, e.g. provide them with a feedback form, suggest use of a NZCOM Regional Resolution Committee or that they can make a formal complaint to HDC or MCNZ. It is also important for [RM C] and [RM B] to consider a special Midwifery Standards Review to reflect on care they provided, and any changes required in their practice.

7. Any other matters in this case that I consider warrant comment.

Child seat

Some District Health Boards encourage employed midwives in the facility to ensure that the baby is secured properly in the seat prior to leaving the facility. That is that the harness fits snugly where you are only able to fit one finger between the harness and the baby and that the baby is not wrapped in a blanket when fitting into the car seat. The harness has to be fitted firm against baby and blankets tucked in over top. It is not to check the car seat or how it fits in the car. Possibly this is what [Ms A] was expecting? Some midwives do share this information with women/whānau during pregnancy or following birth and hence input may be variable.

MEWS at the maternity clinic

At the maternity clinic on the 21st [Month6] at 15.30hrs [Ms A's] pulse was 108bpm which is tachycardia giving a MEWS score of 1. On the MEWS chart it states that when score is 1–2 frequency of this assessment should be increased. However the maternal pulse was not rechecked until [Ms A] felt unwell on 22nd [Month6] at 15.30hrs and then had to be transferred to [the public hospital] due to high temperature, high blood pressure and pain. This would be considered as a mild/moderate departure from expected practice.

Summary

There are areas of care highlighted that do not meet the expected standard of care. These include recognition of mild hypertension (systolic), communication being professional and documentation. Attending update on hypertensive conditions in pregnancy, enhancing communication skills and Dotting the 'I's and Crossing the T's' workshop would enhance these areas of practice further.

For the maternity clinic — reviewing follow up care when MEWS score is above '0'.

References:

[The DHB's [date] *Fetal Heart Monitoring*. Maternity Guidelines]

Grigg, C. (2015). Working with women in pregnancy. In Pairman, S., Pincombe, J., Thorogood, C., & Tracy, S. *Midwifery: Preparation for Practice* (3ed). Chapter 23, p.564–606.

Health and Disability Commissioner (HDC). (1996). *The HDC Code of Health and Disability Services Consumers' Rights Regulation*. https://www.hdc.org.nz/your-rights/about-the-code/code-of-health-and-disability-services-consumers-rights/

Maude, R. M., Skinner, J. P., & Foureur, M. J. (2016). Putting intelligent structured intermittent auscultation (ISIA) into practice, *Women and Birth*, Volume 29, Issue 3, p. 285–292. https://doi.org/10.1016/j.wombi.2015.12.001

NZCOM (2015)

Ministry of Health. (2007). *Notice Pursuant to Section 88 of the New Zealand Public health and Disability Act 2000*. July 1, Department of Internal Affairs. https://www.health.govt.nz/publication/primary-maternity-services-notice-2007

Ministry of Health. (2012). *Guidelines for Consultation with Obstetric and Related Medical Services (Referral Guidelines)*. Wellington. Ministry of Health. https://www.health.govt.nz/system/files/documents/publications/referral-glines-jan12.pdf

New Zealand College of Midwives (NZCOM). (2015). *Midwives Handbook for Practice.* NZCOM. Christchurch.

Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG). (2017). publication *Diagnosis and Treatment of Hypertension and Pre-eclampsia in Pregnancy in New Zealand: A clinical practice guideline*. The RANZCOG publication *Diagnosis and Treatment of Hypertension and Pre-eclampsia in Pregnancy in New Zealand: A clinical practice guideline* (2017).

Thorpe, J., & Anderson, J. (2019). Supporting women in labour and birth. In Pairman, S., Tracy, S., Dahlen, H., & Dixon, L. *Midwifery: Preparation for Practice* (4ed). Chapter 23 p.504–531.

Tracy, S. K., & Hartz, D. (2015). Interventions in pregnancy, labour and birth. In S. Pairman, J. Pincombe, C. Thorogood, & S. Tracy (Eds.), *Midwifery: Preparation for Practice* (3ed). Chapter 39, p.1041.

Tracy, S. K. (2019). Interventions in pregnancy, labour and birth. In S. Pairman, S. K. Tracy, H. G. Dahlen & L. Dixon (Eds.), *Midwifery: Preparation for Practice* (4ed). Chapter 37, p.890.

World Health Organization (WHO). (2018). *WHO recommendation on intermittent fetal heart rate auscultation in labour*. February. The WHO Reproductive Health Library; Geneva: World Health Organization."