Registered Midwife, RM B

Registered Midwife, RM C

A Report by the

Deputy Health and Disability Commissioner

Case 17HDC01980

Health and Disability Commissioner

Te Toihau Hauora, Hauātanga

Contents

Executive summary

1. This report concerns the care provided to a woman during her pregnancy, and highlights the importance of interpreting ultrasound scan reports accurately. The woman had a lead maternity carer (LMC) and a back-up LMC.

2. At 33 weeks' gestation, the LMC recognised that the fundal height (FH) was below that expected for her gestation, and ordered serial growth scans. The LMC did not make a plan to manage the anticipated risks of Intrauterine Growth Restriction (IUGR)/Small for Gestational Age (SGA), and did not commence a customised growth chart to record the growth. The growth scans showed discordant growth parameters, but the LMCs did not recognise this, and did not refer the woman to an obstetrician.

3. At 40 weeks' gestation, the back-up LMC ordered a repeat scan, which showed significant discord in growth parameters. However, the back-up LMC did not follow up the scan result, and the LMC did not recognise the risk of the declining centiles and discordant growth. Eleven days later, the woman went into labour. On admission to hospital, an emergency Caesarean section was carried out for fetal distress. The baby was born in poor condition and was found to have suffered a stroke.

Findings summary

4. The Deputy Commissioner found that the LMC breached Right 4(1) of the Code for failing to make a plan to manage the risks of IUGR/SGA, including the use of a customised growth chart after she recognised that the fundal height was below that expected for the gestation, for not recognising that the serial growth scans showed discordant growth parameters, and for not referring the woman to an obstetrician. The Deputy Commissioner also found that the LMC breached Right 4(2) of the Code for deficiencies in her documentation, and for not retaining a copy of the maternity records.

5. The Deputy Commissioner found that the back-up LMC breached Right 4(1) of the Code for not recognising that the serial growth scans showed discordant growth parameters, for not referring the woman to an obstetrician, and for failing to follow up the 40-week scan result.

Recommendations

6. The Deputy Commissioner noted the actions already taken by the Midwifery Council of New Zealand, and recommended that the LMC apologise and attend further training on documentation. In response to the provisional opinion, RM C provided evidence of further training attended and apologised in writing. The Deputy Commissioner also recommended that the Midwifery Council of New Zealand consider whether any further action in respect of the LMCs is warranted.

7. The Deputy Commissioner will consult with the New Zealand College of Midwives and the Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) regarding collaboration on an education package for LMCs to provide guidance on the interpretation of ultrasound scan reports.

Complaint and investigation

8. The Health and Disability Commissioner (HDC) received a complaint[1] about the services provided to Mrs A by Registered Midwife (RM) B. The following issue was identified for investigation:

- *Whether RM B provided Mrs A with an appropriate standard of care during her pregnancy in 2016.*

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

- *Whether RM C provided Mrs A with an appropriate standard of care during her pregnancy in 2016.*

10. 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.

11. The parties directly involved in the investigation were:

Mrs A	Consumer
RM B	Registered midwife/lead maternity carer (LMC)
RM C	Registered midwife/back-up LMC
Radiology service	Provider
District Health Board (DHB)	Provider

12. Also mentioned in this report:

Dr D	Radiologist

13. Further information was received from:

The Midwifery Council of New Zealand
The Accident Compensation Corporation (ACC)

14. In-house advice was obtained from RM Nicholette Emerson, and is included as Appendix A.

[1] The Midwifery Council of New Zealand received a notification from the Accident Compensation Corporation (ACC) about RM B. The Midwifery Council referred the notification to HDC under section 64 of the Health Practitioners Competence Assurance Act 2003. HDC advised Mrs A of the complaint, and Mrs A said that she would support the complaint.

Information gathered during investigation

Background

15. Mrs A, aged in her late thirties at the time of these events, was pregnant with her first child. She engaged a self-employed registered midwife, RM B, to be her LMC. Mrs A's first appointment with RM B was when Mrs A was 26+6 weeks' gestation.

16. RM B shares a caseload of women with RM C, who was Mrs A's back-up LMC and saw her at alternate appointments in the late stages of her pregnancy.

17. This report focuses on the care provided to Mrs A in the antenatal period by RM B and RM C.

Antenatal appointments and scan results

18. RM B saw Mrs A regularly following her initial booking appointment.

19. Mrs A had an uneventful pregnancy until approximately 32 weeks' gestation, when RM B identified that Mrs A's fundal height (FH)[2] was lower than expected,[3] and referred her for serial growth scans to monitor the baby's growth.

20. RM C saw Mrs A at 29+6 weeks' gestation. The notes for this appointment record the first FH measurement as "= D [equal to dates]".

21. RM B saw Mrs A at 32+6 weeks' gestation. RM B did not record the FH, and gave Mrs A a referral form for a growth scan.

22. At 34 weeks' gestation, the first growth scan reported a decline (compared to the anatomy scan performed at 24 weeks' gestation) in the estimated fetal weight (EFW) from the 77th centile[4] to the 30th centile, and a decline in the abdominal circumference (AC) from the 34th centile to the 11th centile. The conclusion of the ultrasound report stated: "[F]ollow up growth recommended."

23. RM B told HDC: "I called the registrar from the hospital after the 34-week scan and was asked to rescan in two weeks." This discussion is not documented.

24. At 35+6 weeks' gestation, the scan report noted that the EFW was on the 34th centile and there was a "slight further decline" in the AC to the 6th centile. On the same day, Mrs A had an antenatal appointment with RM C, who documented: "[H]ad growth scan this

[2] The fundal height is the measurement from the top of the uterus to the pubic symphysis (pubic bone) and roughly corresponds to gestational age. The NZ College of Midwives' guidelines at the time recommended that from 24 weeks' gestation the fundal-symphysis height should be measured and recorded in centimetres at each antenatal appointment.

[3] This could indicate intrauterine growth restriction or a small for gestational age baby.

[4] Centiles (equal to 100) measure growth parameters against the average — for example, if the estimated fetal weight is at the 75th centile at 34 weeks' gestation, then that weight is greater than 75% of other babies and smaller than 25% of other babies at 34 weeks' gestation; or if the EFW is at the 27th centile at 40 weeks' gestation, it means that 73% of babies weigh more, and 27% of babies weigh less.

morning and baby is within normal range." The FH measurement is noted to be equal to dates.

25. At 36 weeks' gestation, RM B documented in the maternity records: "[S]can given to follow up growth." No reason for the follow-up scan is given, and the FH measurement is not documented.

26. At 37+6 weeks' gestation, RM C noted "all well", but did not record the FH. RM C told HDC that not recording the FH must have been an oversight. She said that Mrs A informed her that her follow-up growth scan was booked for 38+2 weeks' gestation, her "antenatal observations were normal", and that she had "no concerns".

27. At 38+2 weeks' gestation, the scan report noted that the EFW had declined to the 27th centile, the AC had decreased to the 5th centile, and the head circumference (HC) was on the 75th centile. The report also noted a decline in the interval growth, predominately because the femur length had reduced from the 92nd centile to the 52nd centile.

28. At 38+6 weeks' gestation, Mrs A saw RM B, who documented: "[A]nother scan last Thursday — normal growth." The FH measurement is not documented.

29. At 40 weeks' gestation, Mrs A saw RM C, who documented that there were no concerns. The FH measurement is noted to be equal to dates. However, RM C ordered another scan for the following day, and noted the indication as "? IUGR, 40+1 weeks".

30. RM C told HDC:

> "I documented 'no concerns' because I didn't have any clinical concerns … I was reassured that [Mrs A] was having a scan the following day, which would show up anything that I couldn't see and I knew that Radiology would call me if there were anything I needed to refer about. I heard nothing so assumed all was ok."

31. RM C also stated:

> "I wrote '?IUGR, 40+1' because [Mrs A] had already had two scans for reduced growth and it is routine that we continue these every two weeks. On hindsight I should perhaps have written reduced growth and not ?IUGR. It is always easy to reflect on hindsight."

32. Mrs A had another scan at 40+1 weeks' gestation. The report is dated the following day and notes that the scan referral came from RM C, and that a copy of the report would be sent to RM B. The body of the report records the head circumference as being on the 58th centile, and the report concludes: "Appropriate Interval growth, EFW on the 22nd centile (27th centile at 38+2 weeks). AC is on the 3rd centile (previously 5th) …"

33. Regarding the conclusion of the report, the radiology service stated:

> "In retrospect, the terminology used in this report could have been a little clearer. Variations in the measurements between the last scan are within the expected limits

> of error but AC was smaller than expected on this scan and the previous scan. The reporting radiologists may have made the not unreasonable assumption that reporting the centile for AC would trigger referral, but this could potentially have been recommended."

34. At 41 weeks' gestation, RM B documented: "Clinic visit with Midwife [RM B]. … Overdue by a week now — hoping baby will come soon. Had scan last week and good interval growth." The FH measurement is not documented.

35. Despite having documented that there was good interval growth, RM B told HDC that she did not in fact receive the results of the 40-week scan until after the birth. She told HDC that it was "customary and standard practice" for abnormal results to be telephoned through to her by the radiologist. She stated:

> "It is unfortunate I was not called with the result of that 40 week scan. I know without a doubt that I would have called an obstetrician immediately and that may have changed the outcome. I did not receive this scan report. I absolutely, hand on heart, know this as I was aware that this 40 week scan was the one which showed absolute need for immediate referral …"

36. In relation to following up the scan report, RM C told HDC:

> "Scan reports whether requested by [RM B] or me get faxed to our office fax … if there is any cause for concern the Radiologist always calls us advising us of the concern and to seek an obstetric review. This is then documented on the scan report. Neither [RM B], nor myself, received any calls from any of the 5 growth scans that [Mrs A] had, advising us of any concerns.
>
> Midwives are not trained to read radiology reports. We mainly read the conclusion and follow any recommendations that are made on that report. In this case, the only recommendation ever made was: 'Suggest postnatal paediatric clinical assessment' (scan at 40+1 weeks' gestation), this means after the baby is born. This report was produced [the following day] at 10.24 and would have been faxed to us sometime that day. As I hadn't received any call from Radiology with concerns, I would have assumed everything was normal and therefore had no reason to go to the office and retrieve the scan report. The scan would have been picked up off the fax machine at [41 weeks' gestation], when [RM B] attended the clinic …"

37. The radiology service told HDC that the scan report of 40+1 weeks' gestation was dispatched to RM B the following day. It said:

> "Our policy is to phone critically urgent reports to referrers where there is <u>imminent risk to life or limb.</u> While there is a significant abnormal finding in this case, it is not mandated to ring this result through. It is expected that the referring clinician will receive the report and act on this result appropriately. In some cases, individual radiologists may choose to contact a referrer about abnormal findings on a scan that are not immediately life or limb threatening. This is at the discretion of the reporting

> radiologist. Sadly as busy health practitioners, it is not practical to contact every referrer about every abnormal report."

Labour and delivery

38. Mrs A told HDC that at 41+5 weeks' gestation, she telephoned RM B as she was experiencing painful contractions. She said that she was reassured by RM B and told to present to the delivery suite the following morning. The telephone call was not documented in the maternity records, but RM B told HDC that Mrs A did call her, "stating she was contracting irregularly but no concerns were noted".

39. Mrs A was admitted to the birthing unit at the public hospital at 9.50am at 41+6 weeks' gestation. She had been having three contractions within every 10 minutes at home. RM B documented that the growth scan showed that the baby was on the 23rd centile, and had normal dopplers. RM B told HDC:

> "When [Mrs A] came to birth we were not in the room long at all before I had called for help. In that brief rush to write her notes, I asked her can you remember what the growth was at the last scan. She gave me a number which I reported in the notes."

40. At 9.57am, bradycardia[5] was noted on the cardiotocograph (CTG),[6] and RM B rang the emergency bell. When the membranes were ruptured, fresh blood was noted in the waters, and Mrs A underwent an emergency Caesarean section for suspected placental abruption.[7]

41. Baby A was born in poor condition and transferred to the Neonatal Unit, where he was found to have suffered a stroke, possibly in the days leading up to his birth. Baby A weighed 3,060g at birth, which is in the 2nd to 9th centile on a population chart.

Further comment from Mrs A

42. Mrs A told HDC that she remembers RM B measuring the FH using a tape measure, but is unsure whether this was done at every appointment. Mrs A recalls that when she was about 31 or 32 weeks' gestation, RM B spoke to her about the growth of the baby, and told her not to worry, as they would keep an eye on it. Mrs A said that during the final scan she recalls the sonographer telling her that everything looked normal. She does not recall any discussion with RM B about the results of the scan at the subsequent appointment. Mrs A said that her husband, who also attended all the appointments, does not recall being told about any concerns.

43. Mrs A told HDC that she was not aware that there were any issues about the growth. She said that had she known there were concerns, she would have gone into hospital earlier than she did when she went into labour.

[5] A heart rate that is too slow and is a sign of fetal distress.
[6] An electronic machine that records the fetal heart rate and maternal contractions.
[7] Detachment of the placenta from the wall of the uterus before delivery.

Further information from RM B

Documentation

44. RM B was unable to supply HDC with a complete set of clinical notes for Mrs A. RM B explained that she left her set of clinical notes with Mrs A at her last visit, and asked HDC to retrieve them. The notes were retrieved from Mrs A and provided to RM B.

45. The records supplied by Mrs A are from the booking visit at 26+6 weeks' gestation until 41 weeks' gestation. Postnatal visits, lab results, scan results, and telephone calls between RM B and Mrs A are not recorded.

46. RM B stated that "at all antenatal appointments; urinalysis, fundal height measurement with a tape, blood pressure and baby's heart rate auscultation [were] undertaken".

47. RM B did not record FH measurements on five occasions. RM B told HDC that she did not document the FH measurements at some of the appointments because Mrs A was having serial growth scans.

48. RM B acknowledged that she did not record her postnatal visits, and stated:

> "Postnatally, I would leave upset praying that baby would be okay. In hindsight, my emotions took over and I overlooked my documentation responsibilities."

Referral for obstetric consultation

49. RM B did not refer Mrs A for an obstetric consultation. RM B told HDC:

> "[A]ccording to the Growth Referral Guidelines written when [Mrs A] was pregnant … the referral would have been expected after the 40 week scan but as I did not receive a call [with the results of the scan] … I was unaware of the need for a referral."

50. Regarding her understanding of reduced AC, RM B stated:

> "[T]his can be one of the first signs of growth restriction. I understand that the measurements were disproportionate and that alone should have meant I sent off a referral."

51. RM B told HDC that at the time she did not use customised growth charts[8] to plot scan results, and she acknowledged that had she used a growth chart for Mrs A, she would have "picked up the growth issues immediately". RM B stated:

> "I kept all [Mrs A's] scan reports in her notes but they did not portray the story as adequately as plotting the results on a growth chart. If I had put these results on a growth chart I do believe I would have referred her."

[8] Growth charts track the growth of a baby during pregnancy, based on the mother's individual characteristics, such as ethnicity, body mass index, etc.

52. RM B told HDC:

> "I did carry out appropriate care in recognising that the growth was dropping with the fundal height measurement but, in hindsight, acknowledge that a referral based [on] the guidelines was warranted. I offer my unconditional apology to [Mrs A] for that error."

Changes to practice/ongoing education

53. RM B told HDC that she has committed to apply learning from Mrs A's case into her practice. She has researched fetal growth issues; she routinely monitors and records FH measurements; she uses customised growth charts; and she has attended a fetal surveillance course. She also now ensures that scan results and blood tests are filed in the maternity records.

54. RM B told HDC that since this event she has kept a copy of her records from each visit in the woman's file in a locked filing cabinet in her clinic rooms.

Midwifery Council

55. The Midwifery Council undertook a competence review of RM B in 2018. The Midwifery Council advised that RM B "demonstrated her midwifery knowledge and application to practice within discussion of the referrals and case study she brought to the review". The key findings were that RM B "demonstrated ability to assess fetal growth and well being; demonstrated use of referral to allied and obstetric services … [and] undert[ook] education to enable interpretation of ultrasound scan reports".

56. RM B told HDC that she found the comprehensive case study very beneficial, and took away learning from the event and made improvements to her practice. She said: "I accept and understand that I should have referred [Mrs A] to the obstetric clinic and I very much regret mistakenly omitting to do so."

Response from the DHB to RM B

57. The DHB carried out an incident review, for which it sought obstetric and radiology input. The DHB advised RM B:

> "[Y]our work with [Mrs A] in her antenatal period, including the provision of a referral for Obstetric ultrasound scan investigations to be completed in the community, was recognised. It was further recognised that communication, by way of a phone call, was not made to you by the community radiology provider when there was a significant change in the ultrasound scan results. It has been established that such phone calls from radiology providers to Lead Maternity Carers (LMCs) have now become standard practice, allowing LMCs to be alerted to significant changes and therefore able to make timely referrals. As part of our discussions it was also acknowledged that your level of debrief with colleagues regarding this case was commendable and in line with caring, responsible practice."

Further information from RM C

Documentation of FH

58. On three visits, the FH measurement was documented as equal to dates, expressed as "=D". On one occasion, no FH is recorded. RM C told HDC:

> "'= D' means 'equal to dates'. This means that at 30 weeks [Mrs A's] fundus measured 30cm, at 36 weeks her fundus measured 36 weeks and at 41 weeks her fundus measured 41 weeks.
>
> If [Mrs A's] fundus had measured more than her dates, I would have written LFD (large for dates) and if her fundus had measured less than her dates, I would have written SFD (small for dates), followed by the measurement. ie. LFD = 36, SFD = 30.
>
> I am a UK trained registered midwife and this is how we were taught to document fundal height. There is some allowance made for measuring fundal height as we are using a tape measure so it is not an accurate science. The allowance is 2cm either way, ie, if it were to measure 2cm or more, above or below the gestation, they would be sent for a growth scan."

Referral for obstetric consultation

59. RM C did not refer Mrs A for an obstetric consultation. In relation to concerns regarding the growth of Mrs A's baby, RM C told HDC:

> "[Mrs A] was sent for [5 growth scans] as outlined above, in addition to her anatomy scan [at 24 weeks]. As this is not the norm, I think it demonstrates that there were concerns regarding growth. However, with the exception of [one scan] when [RM B] was telephoned about referring for dopplers, and [another scan] which recommended postnatal clinical assessment, neither myself or [RM B] was telephoned about any concerns at any other time and there were no recommendations made to suggest referral for obstetric review on any report."

60. RM C said that Mrs A had no clinical abnormalities requiring obstetric review, and that her scan at 38+3 weeks' gestation "only recommended postnatal paediatric clinical assessment".

61. RM C also stated:

> "I am not saying that the asymmetry of the fetus's growth should not have been picked up here, but I have since plotted all of [Mrs A's] scans onto a personalised growth chart … and this shows that [Mrs A's] baby was definitely not IUGR (Intrauterine Growth Restricted). The personalised growth chart specific to [Mrs A] shows that her baby was consistently growing on the 50th percentile + at 34, 36 and 38 weeks and only dropped slightly under the 50th percentile at the 40 week scan."

Changes to practice/ongoing education

62. RM C told HDC:

> "[RM B and I] are both very sorry for any distress caused to [Mr and Mrs A] and their precious little baby, [Baby A], during this unfortunate incident. We have made many changes since this incident and we are always continually reflecting and reviewing our practices to achieve a high standard of care."

63. RM C told HDC that she now uses personalised growth charts, has attended an NZCOM education evening on ultrasound dopplers, and is being extra vigilant in recognising any deviation from normal in ultrasound scan reports. In addition, RM C stated that she and RM B have implemented a communication book to alert each other of any concerns, have changed their work hours to minimise fatigue, and have joined Expect Maternity.[9]

Midwifery Council

64. The Midwifery Council told HDC that RM C underwent an "independent section 36 assessment", with the outcome that "RM C attends the Growth Assessment Protocol education and reflects on how she will incorporate this in her practise".

Responses to provisional opinion

65. Mrs A was given an opportunity to comment on the "information gathered" section of the provisional report, and found it "very detailed and very upsetting". She emphasised the impact this experience has had on her and her family.

66. RM B was given an opportunity to comment on the provisional opinion, and did not provide any further comments.

67. RM C was given an opportunity to comment on the provisional opinion, and she advised that she accepts the provisional opinion. RM C advised that she attended the GAP/GROW course in 2020 and that she engaged in a Midwifery Standards Review for two years (2018 and 2019) and that the reviewers were happy with her work.

Opinion: introduction

68. Mrs A was expecting her first baby and she engaged RM B as her LMC. RM C saw Mrs A at alternate appointments in the late stages of her pregnancy. I have a number of concerns about the care RM B and RM C provided to Mrs A — in particular, their failure to recognise that the serial growth scans showed discordant growth parameters, which resulted in Mrs A not being referred to an obstetrician.

[9] Maternity software that enables all client results to be downloaded as soon as they are produced, and allows access from mobile devices.

69. My consideration of any complaint is not to assess whether the actions of healthcare providers caused the outcome. Rather, my role is to assess whether, with the information available to the healthcare providers at the time the events occurred, those providers acted appropriately and in accordance with accepted standards of practice.

Opinion: RM B — breach

Care up until 34 weeks' gestation

70. RM B saw Mrs A regularly throughout the antenatal period. I have no concerns in relation to the care provided to Mrs A prior to 24 weeks' gestation.

Recognition of reduced fetal growth

71. At 32+6 weeks' gestation, RM B recognised that Mrs A's FH was below that expected for her gestation, and appropriately referred Mrs A for serial growth scans. However, RM B's management of Mrs A, and RM B's interpretation of the results of the growth scans after this point failed to meet accepted standards.

72. Interpretation of radiology reports is a basic midwifery competency, as evidenced by the New Zealand Midwifery Council *Competencies for the Entry to the Register of Midwives* (Competency 2.2), which provides:

> "2.2 confirms pregnancy if necessary, orders and interprets relevant investigations and diagnostic tests, carries out necessary screening procedures, and systematically collects comprehensive information concerning the woman's/wahine health and well-being."

73. The Ministry of Health 2012 *Guidelines for Consultation with Obstetric and Related Medical Services* (the *Referral Guidelines*) that applied at the time defined "IUGR/small for gestational age (SGA)" as:

> "Estimated fetal weight (EFW) <10th percentile on customized growth chart, or abdominal circumference (AC) <5th percentile on ultrasound, or discordancy of AC with other growth parameters, normal liquor."

74. The *Referral Guidelines* state that if any of these situations apply:

> "The LMC must recommend to the woman ... that a consultation with a specialist is warranted given that her pregnancy, labour, birth or puerperium (or the baby) is or may be affected by the condition."

75. My expert midwifery advisor, RM Emerson, advised that the scans of 34 weeks' gestation, 35 weeks' gestation, 38+3 weeks' gestation, and 41+1 weeks' gestation demonstrated "a continued discordance (asymmetry) of other growth parameters ... and this alone met the criteria for obstetric consultation".

76. RM Emerson stated: "Of particular relevance is the discordancy between the head circumference and the abdominal circumference" on the 38+3 week scan. RM Emerson noted that this discord continues to the 40+1 week scan.

77. RM Emerson advised: "In my opinion the asymmetrical growth was evident and warranted referral prior to the 40 week scan, at the latest at the [38 week scan]." RM Emerson said that, in her opinion, "it would have been prudent to discuss the declining growth with an obstetrician and initiate a management plan prior to 38 weeks".

78. In addition, RM Emerson was critical of the absence of a customised growth chart and the lack of documented evidence of any planning regarding the possible IUGR. I am critical that despite the initiation of serial review of Mrs A's baby, no action was taken in response to the results.

79. RM B told HDC that at the time she did not use customised growth charts to plot scan results. However, she acknowledged that had she used a growth chart for Mrs A, she would have "picked up the growth issues immediately".

80. I accept RM Emerson's advice. Although RM B correctly recognised the reduced fundal growth at 34 weeks' gestation and referred Mrs A for serial growth scans, RM B failed to identify and respond to the discordant growth parameters — in particular, the discordant head circumference and abdominal circumference measurements observed on the 38+3 week scan.

81. In the circumstances, RM B should have initiated a management plan for possible IUGR/SGA when growth scans demonstrated declining centiles and discordant growth parameters. This should have included the commencement of a customised growth chart. At the least, RM B should have recognised the discordant growth parameters following the 38+3 week scan, and, in accordance with the *Referral Guidelines*, RM B should have advised Mrs A that consultation with an obstetrician was warranted. There is no evidence that this was done. RM Emerson considers that the failure to do so was a severe departure from accepted midwifery practice.

82. I note that in hindsight, RM B accepts that referral based on the *Referral Guidelines* was warranted.

Response to scan at 40+1 weeks' gestation

83. Mrs A had a further growth scan. The body of the report records the head circumference as on the 58th centile. The report concludes: "Appropriate Interval growth, EFW on the 22nd centile (27th centile at 38+2 weeks). AC is on the 3rd centile (previously 5th) …"

84. RM Emerson advised that the 40+1 week scan showed continued discord between the head circumference and the abdominal circumference, which warranted referral to an obstetrician in accordance with the *Referral Guidelines*. This was the second scan that met the criteria for referral under the *Referral Guidelines*.

85. As noted above, RM B told HDC that in interpreting the results of the 40+1 week scan, she recognised that referral to an obstetrician was warranted. However, she said that she did not receive the scan results until after Mrs A went into labour. RM B stated:

> "It is unfortunate I was not called with the result of that 40 week scan. I know without a doubt that I would have called an obstetrician immediately and that may have changed the outcome. I did not receive this scan report. I absolutely, hand on heart, know this as I was aware that this 40 week scan was the one which showed absolute need for immediate referral."

86. The radiology service told HDC that the scan results were sent to RM B the day following the scan. In addition, in relation to the conclusion recorded on the report, the radiology service stated:

> "In retrospect, the terminology used in this report could have been a little clearer. Variations in the measurements between the last scan are within the expected limits of error but AC was smaller than expected on this scan and the previous scan. The reporting radiologists may have made the not unreasonable assumption that reporting the centile for AC would trigger referral, but this could potentially have been recommended."

87. RM B saw Mrs A for an antenatal appointment approximately one week after the 40+1 weeks' gestation scan. In relation to this appointment, RM B recorded in the maternity records:[10]

> "Clinic visit with Midwife [RM B]. … Overdue by a week now — hoping baby will come soon. Had scan last week and good interval growth. Discussed need to keep eye on movements …"

88. Mrs A told HDC that neither she nor her husband recall the results of the scan being discussed during this appointment.

89. Because RM B did not retain her own copy of the maternity records, and there is no record of any of the scan results on the copy obtained from Mrs A (discussed further below), it is unclear whether RM B had received a copy of the 40+1 weeks' gestation growth scan report at the time of the follow-up appointment. However, given the evidence — RM B's note in the maternity records at the follow-up appointment referring to the growth scan the previous week, her reference to the scan showing good interval growth, as recorded in the conclusion of the scan report, and her reference to the centile growth at the time Mrs A presented in labour — I find it more likely than not that RM B did receive the report.

90. RM Emerson advised that although the reference to "[a]ppropriate Interval growth" in the conclusion of the report may have misled RM B, she had a responsibility to interpret the relevant results herself.

[10] These records were provided to this Office by Mrs A, as RM B did not retain her copy (discussed further below).

91. Therefore, accepting that RM B did receive the scan report at the time of the follow-up appointment, RM B missed a further opportunity to recognise the declining centiles and discordant growth and to refer Mrs A for an obstetric review in accordance with the *Referral Guidelines*.

Documentation

FH measurements

92. The New Zealand College of Midwives consensus statement current at the time of these events, "Assessment of fetal wellbeing during pregnancy",[11] states:

> "From 24 weeks gestation it is recommended that the fundal-symphysis height should be measured and recorded in centimetres at each antenatal appointment, preferably by the same person."

93. RM B told HDC: "[A]t all antenatal appointments; urinalysis, fundal height measurement with a tape, blood pressure and baby's heart rate auscultation was undertaken." She said that she did not document the FH measurements at some appointments because Mrs A was having serial growth scans. Mrs A told HDC that she recalls her FH being measured with a tape measure, but said that this was not done at every appointment.

94. RM Emerson advised that FH measurement is "an expected midwifery competency to be used as an additional observation to clinical scans". She is critical of RM B's failure to record FH measurements at each appointment, particularly in light of the recognised reduced fundal growth from 34 weeks' gestation.

95. I accept RM Emerson's advice. RM B's failure to record the FH from 24 weeks' gestation, in the context of recognised reduced fundal growth, is concerning and a departure from accepted standards.

Telephone call

96. Mrs A told HDC that at 41+5 weeks' gestation, she telephoned RM B and advised her that she was experiencing painful contractions. RM B told HDC that Mrs A called her "stating she was contracting irregularly but no concerns were noted". The telephone call was not documented in the maternity records, and I am critical that this did not occur.

Maternity records

97. RM B left the maternity records with Mrs A at her last postnatal visit, and did not retain a copy. RM B told HDC that at all antenatal appointments, she undertook a urinalysis, FH measurements with a tape, blood pressure, and auscultation of the baby's heart rate, but did not record all the FH measurements because Mrs A was having serial growth scans. RM B also said that she filed all the scan results.

98. HDC obtained the maternity records directly from Mrs A. However, they contain no record of RM B's postnatal visits, laboratory results, scan results, or telephone calls.

[11] 22 February 2012.

99. RM B acknowledged that she did not record her postnatal visits. She stated:

> "Postnatally, I would leave upset praying that baby would be okay. In hindsight, my emotions took over and I overlooked my documentation responsibilities."

100. Clinical records are central to ensuring safe, effective, and timely care, and are a requirement of midwifery practice. The New Zealand Midwifery Council *Competencies for the Entry to the Register of Midwives* (Competency 2.16) requires that a midwife provide "accurate and timely written progress notes and relevant documented evidence of all decisions made and midwifery care offered and provided". Further, all records must be retained for 10 years following the last entry.[12]

101. RM B's failure to document all the FH measurements and her telephone call with Mrs A at 41+5 weeks' gestation and RM B's failure to retain a copy of the maternity records was a departure from professional and legal standards. RM Emerson considered that this would be viewed as a moderate to severe departure from accepted standards. I accept this advice.

Conclusion

102. As Mrs A's LMC, RM B had ultimate responsibility for her care. Overall, guided by the expert advice, I have serious concerns about the care provided by RM B to Mrs A, as outlined above.

103. By failing to recognise that the serial growth scans showed discordant growth parameters, RM B missed opportunities to initiate a management plan for possible IUGR/SGA and to refer Mrs A to an obstetrician. In my view, RM B failed to provide services to Mrs A with reasonable care and skill in the following respects:

a) After she recognised that the FH was below what was expected for gestational age, and commenced serial growth scans, RM B should have made a plan to manage the risks of IUGR/SGA, including the use of a customised growth chart.

b) As RM B failed to recognise that the serial growth scans showed discordant growth parameters, she did not refer Mrs A to an obstetrician. This should have occurred, at the latest, following Mrs A's 38+3 week scan.

c) RM B did not recognise the declining centiles and discordant growth and refer Mrs A to an obstetrician following the 40+1 week scan.

104. Accordingly, for the above reasons, I conclude that RM B breached Right 4(1) of the Code of Health and Disability Services Consumers' Rights (the Code).[13]

[12] The Health (Retention of Health Information) Regulations 1996.
[13] Right 4(1) states: "Every consumer has the right to have services provided with reasonable care and skill."

105. I also find that by not documenting Mrs A's FH measurements adequately, not documenting the telephone call with Mrs A at 41+5 weeks' gestation, and not retaining a copy of the maternity records, RM B breached Right 4(2) of the Code.[14]

Opinion: RM C — breach

Introduction

106. Whilst RM B was the named LMC, and retained ultimate responsibility, RM C saw Mrs A at alternate appointments at 29+6 weeks' gestation, 35+6 weeks' gestation, 37+6 weeks' gestation, and 40 weeks' gestation.

107. My in-house midwifery advisor, RM Emerson, advised that the antenatal care provided by RM C meets accepted midwifery standards with the exception of the measurement of FH and RM C's response to growth scans.

FH measurements

108. The New Zealand College of Midwives consensus statement (22 February 2012), "Assessment of fetal wellbeing during pregnancy", states:

> "From 24 weeks gestation it is recommended that the fundal-symphysis height should be measured and recorded in centimetres at each antenatal appointment, preferably by the same person."

109. RM C recorded FH measurements at 29+6 weeks' gestation, 35+6 weeks' gestation, and 40+5 weeks' gestation. The measurements are not recorded in centimetres; rather, RM C has documented "= D [equal to dates]". At 37+6 weeks' gestation, no FH is recorded.

110. RM C told HDC that "= D" meant that the FH at 30 weeks' gestation measured 30cm. She stated that she was trained in the UK, and that was how they were taught to document FH.

111. RM Emerson was critical of RM C's failure to record the FH in centimetres. RM Emerson advised:

> "'= to Dates' is still commonly used despite not being recommended practice …
>
> … In my opinion the writing of '= to dates' in the clinical notes has the potential to impact the care in the context of reduced fetal growth where more than one practitioner is assessing fundal height regularly. Given that there had been a referral for reduced fundal height by [RM C's] practice partner from 34 weeks it would seem reasonable to measure fundal height in cm. Neither practitioner has done so."

[14] Right 4(2) states: "Every consumer has the right to have services provided that comply with legal, professional, ethical, and other relevant standards."

112. I accept RM Emerson's advice. RM C's failure to record the FH at 37+6 weeks' gestation, and in centimetres, particularly in the context of recognised reduced fundal growth, is concerning, and a departure from accepted standards.

Recognition of reduced fetal growth

113. At 34 weeks' gestation, RM B recognised that Mrs A's FH was below that expected for her gestation, and appropriately referred Mrs A for serial growth scans. RM C saw Mrs A for three appointments after this time. At her appointment at 40 weeks' gestation, RM C gave Mrs A a form for her repeat growth scan.

114. RM Emerson advised that in her opinion, RM C was responsible for following up any scans/tests she ordered, and for reviewing the results of any scans/tests she had ordered for Mrs A since her last appointment.

115. RM C stated: "[M]idwives are not trained to read radiology reports. We mainly read the conclusion and follow any recommendations that are made on that report." However, interpretation of radiology reports is a basic midwifery competency, as evidenced by the New Zealand Midwifery Council *Competencies for Entry to the Register of Midwives*. Competency 2.2 provides:

> "2.2 confirms pregnancy if necessary, orders and interprets relevant investigations and diagnostic tests, carries out necessary screening procedures, and systematically collects comprehensive information concerning the woman's/wahine health and well-being."

116. The Ministry of Health 2012 *Guidelines for Consultation with Obstetric and Related Medical Services* (the *Referral Guidelines*) that applied at the time defined "IUGR/small for gestational age (SGA)" as:

> "Estimated fetal weight (EFW) <10th percentile on customized growth chart, or abdominal circumference (AC) <5th percentile on ultrasound, or discordancy of AC with other growth parameters, normal liquor."

117. The *Referral Guidelines* state that if any of these situations apply:

> "The LMC must recommend to the woman … that a consultation with a specialist is warranted given that her pregnancy, labour, birth or puerperium (or the baby) is or may be affected by the condition."

118. RM Emerson advised that the scans of 34 weeks' gestation, 35 weeks' gestation, 38+3 weeks' gestation, and 40+1 weeks' gestation demonstrated "a continued discordance (asymmetry) of other growth parameters … and this alone met the criteria for obstetric consultation".

119. RM C acknowledged that the asymmetry should have been picked up, but told HDC that she has since plotted Mrs A's scans onto a personalised growth chart, and considers that this shows that Mrs A's baby was not IUGR. However, RM Emerson advised that the

asymmetry alone constitutes an IUGR baby, and IUGR is not diagnosed solely on estimated fetal weight. RM Emerson stated: "Of particular relevance is the discordancy between the head circumference and the abdominal circumference" on the 38+2 week scan. RM Emerson noted that this discord continues to the 40+1 week scan.

120. RM Emerson advised: "In my opinion the asymmetrical growth was evident and warranted referral prior to the 40 week scan, at the latest at the 38 week scan." RM Emerson said that in her view, "it would have been prudent to discuss the declining growth with an obstetrician and initiate a management plan prior to 38 weeks".

121. I accept RM Emerson's advice. RM C failed to identify and respond to the discordant growth parameters — in particular, the discord in the head circumference and abdominal circumference measurements observed on the 38+3 week scan.

122. In the circumstances, RM C should have initiated a management plan for possible IUGR/SGA when the growth scans demonstrated declining centiles and discordant growth, at the latest following the 38+3 week scan. In accordance with the *Referral Guidelines*, RM C should have advised Mrs A that consultation with an obstetrician was warranted.

Failure to follow up scan at 40+1 weeks' gestation

123. Mrs A had a further growth scan. The body of the report records the head circumference as being on the 58th centile. The report concludes: "Appropriate Interval growth, EFW on the 22nd centile (27th centile at 38+2 weeks). AC is on the 3rd centile (previously 5th) …"

124. RM Emerson advised that the 40+1 week scan showed continued discord between the head circumference and the abdominal circumference, which warranted referral to an obstetrician in accordance with the *Referral Guidelines*. This was the second scan that met the criteria for referral under the *Referral Guidelines*.

125. RM C told HDC that she did not follow up on the scan results as she did not receive a telephone call from the radiologist alerting her of any concerns.

126. In relation to the conclusion recorded on the report, the radiology service stated:

> "In retrospect, the terminology used in this report could have been a little clearer. Variations in the measurements between the last scan are within the expected limits of error but AC was smaller than expected on this scan and the previous scan. The reporting radiologists may have made the not unreasonable assumption that reporting the centile for AC would trigger referral, but this could potentially have been recommended."

127. As the person who ordered the scan, RM C had a responsibility to follow up the test results in a timely manner, particularly in the context of known concerns of a potential growth restriction. I am highly critical that she did not do so. I am also very concerned about RM C's view that while midwives may order scans, they are not trained to read radiology reports. This view is clearly incorrect and, as occurred in this situation, places mothers and babies at risk.

Conclusion

128. RM Emerson advised that RM C's omission to follow up on the scan she ordered, and her lack of identification of the continued decrease in fetal growth parameters, represents a moderate to severe departure from accepted midwifery practice.

129. By failing to recognise that the serial growth scans showed discordant growth parameters, and by failing to follow up on the 40+1 week scan result, RM C missed opportunities to initiate a management plan for possible IUGR/SGA and to refer Mrs A to an obstetrician. In my view, RM C failed to provide services to Mrs A with reasonable care and skill by failing to:

a) Measure the FH in centimetres, and record the measurement at every appointment, particularly in the context of recognised reduced fundal growth;

b) Recognise that the serial growth scans showed discordant growth parameters and refer Mrs A to an obstetrician, at the latest following her 38+3 week scan; and

c) Follow up on the 40+1 week scan result.

130. Accordingly, I conclude that RM C breached Right 4(1) of the Code.

Other comment — ultrasound guidelines

131. In December 2019, the *New Zealand Obstetric Ultrasound Guidelines*[15] were implemented by the Ministry of Health to provide clarification and guidance on the reporting of abnormal results and the level of urgency. The document establishes detailed, quality guidelines for maternity ultrasound, as recommended by the Maternity Ultrasound Advisory Group,[16] to ensure that diagnostic ultrasound usage in New Zealand is nationally consistent, clinically appropriate, and of a high quality.

132. The Guidelines contains reporting recommendations, including alerts for conditions that require urgent or semi-urgent notification of referrers. The reporting alert for "small for gestational age (SGA) without abnormal Doppler" is the same day, and requires a "same-day phone discussion with [the] referrer".

133. The DHB's incident review into Mrs A's care identified that a telephone call was not made to RM B by the community radiology provider following the scan when Mrs A was 40+1 weeks' gestation. The report stated:

[15] Ministry of Health. 2019. *New Zealand Obstetric Ultrasound Guidelines*. Wellington: Ministry of Health.
[16] The Maternity Ultrasound Advisory Group was a subgroup of the National Maternity Monitoring Group. For more information, see: www.health.govt.nz/publication/national-maternity-monitoring-group-annual-report-2017.

> "[I]t has been established that such phone calls from radiology providers to Lead Maternity Carers (LMCs) have now become standard practice, allowing LMCs to be alerted to significant changes and therefore able to make timely referrals."

134. I acknowledge that telephone calls from radiologists to midwives are increasingly becoming standard practice where a significant change in the ultrasound findings is reported, and that the consultation document proposes a same-day discussion for SGA. However, I note that the responsibility for following up on, and understanding, an ultrasound report remains the responsibility of the midwife who requested the scan.

Recommendations

135. I note the actions/process already taken by the Midwifery Council of New Zealand, and I further recommend that RM B:

a) Attend the next available NZCOM documentation workshop "Dotting the I's and crossing the T's: Midwives and Record Keeping".

   RM B should provide evidence of her attendance within three months of the date of this report.

b) Provide a written apology to Mrs A. The apology should be sent to HDC, for forwarding to Mrs A, within three weeks of the date of this report.

136. I recommend that the Midwifery Council of New Zealand consider whether any further action in respect of RM B is warranted.

137. In response to the recommendations in the provisional report, RM C provided evidence of her attendance at the GAP/GROW course and apologised in writing to Mrs A. RM C also advised that she engaged in a Midwifery Standards Review for two years (2018 and 2019).

138. I also recommend that the Midwifery Council of New Zealand consider whether any further action in respect of RM C is warranted.

Follow-up actions

139. I will be writing to the New Zealand College of Midwives and RANZCOG to suggest collaboration on an education package for LMCs to provide guidance on interpretation of ultrasound scan reports.

140. A copy of this report with details identifying the parties removed, except the expert who advised 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 the covering correspondence.

141. A copy of this report with details identifying the parties removed, except the expert who advised on this case, will be sent to the District Health Board, RANZCOG, the Health Quality & Safety Commission, the New Zealand College of Midwives, the Ministry of Health, the Royal Australian and New Zealand College of Radiologists, and the Medical Radiation Technologists Board, and placed on the Health and Disability Commissioner website, www.hdc.org.nz, for educational purposes.

Appendix A: Independent advice to the Commissioner

The following in-house expert advice was obtained from RM Nicky Emerson:

"**1.**Thank you for the request that I provide clinical advice in relation to the notification from Midwifery Council regarding [Mrs A's] care provided by LMC Midwife [RM B]. In preparing the advice on this case to the best of my knowledge I have no personal or professional conflict of interest. I agree to follow the Commissioner's Guidelines for Independent Advisors.

2. I have reviewed the documentation on file: Notification from Midwifery Council regarding ACC notification ([2017]); Support of complaint from [Mrs A]; [DHB] notes for [Mrs A] and [Baby A] including anatomy scans, clinical letters and lab results. Letter from [RM B] to Midwifery Council [re ACC notification]; Email from [Dr D] — Radiologist 26 March, 12 June 2018; Letter from Charge Midwife Manager [DHB] 14 March 2018; Complaint response from [RM B] 29 March 2018, 17 September 2018; [the radiology service] imaging review, Letter to [RM B] from [the midwife co-ordinator] 10 January 2018; Letter to HDC from [the] (Clinical Director of Obstetrics and Gynaecology) 23 April 2018.

3. Background

[Mrs A] [a woman in her late thirties] was having her first baby. She booked with LMC midwife [RM B] at 26 weeks gestation. No medical or obstetric history of note. At 34 weeks gestation, fundal height measurements were below expectation. [RM B] referred [Mrs A] for serial growth scans. The serial growth scans demonstrated [Baby A] had a decreasing abdominal circumference and centile on a population chart was decreasing. [Baby A's] birth was by Category 1 caesarean for a suspected placental abruption. He was transferred to the neonatal unit. He remained in the neonatal unit [until discharge]. [Baby A] had suffered a stroke and its ongoing sequelae.

4. Advice Request

I have been asked to provide advice regarding the midwifery care received by [Mrs A] from [RM B].

In particular, I have been asked to comment on

- Whether the documentation meets the expected standard of care
- Whether [RM B] should have referred [Mrs A] for obstetric review
- Whether the planning made in relation to possible Intrauterine Growth Retardation (IUGR) meets the expected standard of care
- Whether the methodology used to monitor the growth of the baby meets the expected standard of care
- Where a departure from the accepted standard of care is identified please explain the level of departure and your rationale for your opinion

5. Advice

A. Whether the documentation meets the expected standard of care

In forming an opinion on whether [RM B's] documentation has met the expected standard I have considered the following

I. [RM B] has been unable to supply contemporaneous clinical notes for [Mrs A's] pregnancy. She states in her complaint response (17 September 2018*) [Mrs A's] notes are with her. I had kept visiting beyond the 4–6 week discharge as I was so interested in seeing the progress of [Mrs A] at home. This is why I overlooked obtaining my copy of the notes which is not my normal practice. I request that you seek my copy of the notes from [Mrs A] and provide them to me.*

II. *With [Mrs A] going to NICU every day, I carried out postnatal visits in NICU.* (complaint response 17 September 2018)

III. Notes supplied by [Mrs A] appear to be contemporaneous and extend from [Booking visit 26 weeks and 6 days to last antenatal appointment at 41 weeks' gestation]

IV. The notes supplied by [Mrs A] do not document postnatal visits, lab results, scan results or phone calls.

V. The notes do not contain fundal height measurements in centimeters. The notes have equal to dates (=D) at 29+6 days, 35 weeks and 6 days and 40 weeks and 5 days. There is no further recording of fundal height measurement at other appointments.

Regarding the above considerations

I. The type of Maternity notes (MMPO) used by [RM B] do contain duplicate copies. It is not an uncommon practice for women to hold their own notes and for the midwife to extract her own copies at discharge or as a page is filled. I am critical that [RM B] has not obtained a copy of these notes previous to her requesting that the notes are obtained by the HDC and sent to her (September 2018).

   New Zealand College of Midwives (NZCOM) Practice Standards (Standard Four) requires that *the midwife maintains purposeful, on-going, updated records and makes them available to the woman and other relevant persons. In addition; ensures confidentially of information and stores records in line with current legislation.* The current legislation in 2016 was that the records are stored by the midwife for 10 years following the last entry.

   Competency for the Entry to the Register of Midwives (NZ Midwifery Council) Competency 2 — *2.16 provides accurate and timely written progress notes and relevant documented evidence of all decisions made and midwifery care offered and provided*

II. I have been unable to find any contemporaneous clinical documentation of [RM B's] postnatal notes in the NICU notes provided (possibly elsewhere? as this is a record of [Baby A] and not [Mrs A])

III. The notes supplied by [Mrs A] do not contain scans, lab results, documented phone calls

IV. In her complaint response (29 March 2018) [RM B] states that *at all antenatal appointments; urinalysis, fundal height measurements with a tape, blood pressure and baby's heart rate with auscultation was undertaken.*

[RM B] has not recorded her fundal height measurement in centimetres in [Mrs A's] notes; instead she has annotated (= D — equal to dates) on 3 occasions (out of 9 appointments — no recorded fundal height for 6 appointments). [Mrs A's] fundal height could not have been equal to dates. This is particularly relevant as [Mrs A's] reduced fundal height was the prompt for serial growth scans. While it is common practice for some midwives to write '= to dates' in clinical notes as [RM B] has done when assessing fetal growth, this is not considered best practice.

> *First, the '1-week gestation = 1cm fundal height' rule does not represent a reliable correlation and does not apply across the maternity population. Second, the strength of fundal height assessment lies in the slope, the increment over multiple measurements over time, which requires graphical representation. As is the case with birthweight, fundal height varies with constitutional variables such as maternal weight and parity.*
>
> *Fetal growth screening by fundal height measurement (West Midlands Perinatal Institute 2009)*

In her complaint response (29 March 2018) [RM B] states that *I then ordered a scan at 38 weeks and 2 days, as fundal height measurement remained under recommended range for [Mrs A's] gestation*.

(*NZCOM Consensus statement — Assessment of fetal well being during pregnancy Feb 2012*)

From 24 weeks it is recommended that the fundal-symphysis height should be measured and recorded in centimetres at each antenatal appointment, preferably by the same person.

In assessing whether [RM B's] documentation meets the expected standard, I have considered the following.

[RM B] has been unable to supply clinical notes to the HDC. This report in part, is compiled from the antenatal notes supplied by [Mrs A] as these are the only available records of the period from booking to birth. These notes contain no lab results, documentation of phone calls or scan reports. Scan reports have been obtained elsewhere.

I. NZCOM Midwifery Standard four requires the *midwife maintains purposeful, on-going, updated records, ensures confidentially of information and stores records in line with current legislation*.

II. In her complaint response (17 September 2018) [RM B] states that *as a result of this case she and her practice partner now have a locked filing cabinet in the clinic and after every single visit, I immediately tear my copy of the notes out of the book and add it to the woman's file. My back-up keeps all our old notes in storage on our behalf.* [RM B] also states that she *overlooked obtaining my copy of the notes which is not my normal practice* (17 September 2018).

III. I remain concerned that despite the practice changes above, [Mrs A's] notes were not obtained by [RM B] to respond to the HDC review and investigation. The HDC notes obtained from [Mrs A] do not contain documentation of phone calls, scan or lab reports. At the time of writing this report, I have been unable to verify any record of the postnatal visits undertaken by [RM B].

[RM B] has not recorded fundal height in centimetres and has not documented fundal height at all antenatal appointments.

i. I accept that '= to Dates' is still commonly used despite not being recommended practice.

ii. I remain critical that in the context of reduced fundal height, necessitating referral for serial growth scans, that this practice continued in the documentation.

In consideration of the following,

- [RM B] has not retained a copy of [Mrs A's] notes containing copies of scans, blood tests, documentation of phone calls.
- [Mrs A's] notes have not been stored as per Midwifery Council Competency 2 — 2.2, or the Privacy Act (1993)
- Fundal height measurements have been omitted on several appointments. Considering the context of reduced fundal growth, fundal height is not recorded on 6 occasions or in centimetres.

In my opinion, the documentation requirements have not been met by [RM B] in relation to documentation for [Mrs A's] pregnancy and for the reasons above, represent a moderate to severe departure from accepted Midwifery practice.

B. Whether [RM B] should have referred [Mrs A] for obstetric review

In [RM B's] initial response to the complaint (29 March 2018) she states that *according to the referral guidelines at the time, the referral would have been expected after the 40 week scan but as I did not receive a call I was unaware of the need for a referral*.

The Guideline for consultation with Obstetric and Related Medical Services (referral guidelines — section 88) state (page 25/4011) consultation is required when

I. Estimated fetal weight (EFW) <10th percentile on customized growth chart,
II. or abdominal circumference (AC) <5th percentile on ultrasound,
III. Or discordancy of other growth parameters, normal liquor.

On review of the serial growth scans ([on four occasions]) it is correct that the EFW was not below the 10th centile (on a population chart), nor was the AC below the 5th centile until 40 weeks. However there had been a continued discordancy (asymmetry) of other growth parameters (A *III.*) and this alone met the criteria for obstetric consultation. Of note, the reported measurements were based on a population chart and had not been customized by [RM B] for [Mrs A].

- [34 week scan] reports a decline in the EFW from 77th centile to the 30th centile and a decline in the AC from the 34th centile to the 11th centile. (Previous scan [24 weeks' gestation])
- [36 week scan] reports EFW at 34th centile, an increase from the 30th centile two weeks previously. A decline in the AC is noted from the 11th centile to the 6th centile.
- [38 weeks and 2 days] report a decline in EFW from the 34th to the 27th centile. AC has decreased from the 6th centile to the 5th centile; Head circumference is on the 76th centile. Scan report comment states Decline in interval growth reported, prominently due to femur length (52nd centile, previously 92nd).
- [40 weeks and 1 day scan] reports a decline in the EFW from the 27th centile to the 22nd centile and a decline in the AC from the 5th centile to the 3rd centile. Head Circumference is on the 58th centile.

Of particular relevance is the discordancy between the head circumference and the abdominal circumference.

Interpretation of growth scans: Guideline for the management of suspected small for gestational age singleton pregnancies after 34 weeks gestation (New Zealand Maternal Fetal Medicine Network, Sept 2013)

Note: The abdominal circumference (AC) is usually the first fetal measurement to become reduced in SGA (Small for Gestational Age). Suboptimal fetal growth should be suspected when:

- *The abdominal circumference on the population chart is less than or equal to the 5th centile*
- *Discrepancy between head and abdominal circumference (e.g. HC 75th centile and AC 20th centile which suggests wasting)*
- *AC is >the 5th % but is crossing centiles e.g. 20% reduction*
- *EFW on GROW chart is <10th centile*

- *EFW on GROW chart is crossing centiles*

As outlined above there is discordancy (asymmetry) regarding the Head Circumference on the 76th Centile and the Abdominal Circumference on the 5th Centile at [38 weeks and 2 days].

This discordancy continues to the 40 week scan, reporting the Head Circumference on the 58th centile and the abdominal circumference on the 3rd centile.

In my opinion the asymmetrical growth was evident and warranted referral prior to the 40 week scan, at the latest at the [38 week scan].

A. In her response to the complaint (29 March, 17 September 2018) [RM B] maintains that she did not receive the results from the scan on [40 weeks and 1 day] and had she done so, she would have referred accordingly.

As previously stated, [RM B] has been unable to provide clinical notes to the HDC for [Mrs A's] pregnancy; however [Mrs A] has provided her copy of contemporaneous antenatal notes to the HDC.

The entry [at 41 weeks' gestation] states: *Clinic visit with Midwife [RM B]. [Mrs A] looking well today. Overdue by a week now — hoping baby will come soon. Had scan last week and good interval growth. Discussed need to keep eye on movements. Discussed induction — will book on Thursday to take place on Sunday/Monday. Form given for repeat dopplers.*

The entry above in contemporaneous clinical notes [at 41 weeks' gestation], it would suggest that the scan referred to 'in the previous week' would be the scan [at 40 weeks and 1 day] and contemporaneous documentation would therefore suggest [RM B] was aware of the results.

It is worth noting here that the scan report [40+1 weeks' gestation] does have a comment, *satisfactory interval growth* and this may have misled [RM B]. The radiology reports and the accompanying comments have been addressed below by [Dr D] (the radiology service) ([2017]).

[Dr D] acknowledges that the terminology in the last growth scan *could have been a little clearer* but concludes that *It is the responsibility of the referrer to initiate referral to an appropriate specialist (if clinically necessary)*.

[Dr D's] conclusion in the Radiology summary is supported by Competency Two (NZ Midwifery Council — Competencies for Entry to the Register):

2.2 *confirms pregnancy if necessary, orders and interprets relevant investigations and diagnostic tests, carries out necessary screening procedures, and systematically collects comprehensive information concerning the woman's/wahine health and well-being*

I have taken the above information into consideration before providing an opinion on whether [RM B] should have referred [Mrs A] for an obstetric opinion and I have considered the following:

- [RM B] identified that [Mrs A's] fundal height was below expected measurement for her gestation at 34 weeks
- [RM B] appropriately referred [Mrs A] for serial growth scans; however she does not appear to have acted on the reducing growth.
- [RM B] states that *I also read out all the scan reports to my back up as we often discuss reports and decide on course of action (complaint response 29 March 2018)*
- If [RM B] has read the scan reports to her back up as stated in her complaint response (29 March 2018) the scan reports all outline the reducing growth centiles
- All scan reports demonstrate a reducing centile for [Baby A's] AC. There are declining centiles and growth discordancy evident prior to the 40 week scan. The discordancy meets the criteria for referral at 38 weeks, however in my opinion, it would have been prudent to discuss the declining growth with an obstetrician and initiate a management plan prior to 38 weeks.
- In line with competency 2 above (2.2 — above) the responsibility remains with the referrer to order and interpret relevant investigations and tests.

In her complaint responses (29 March, 17 September 2018) [RM B] acknowledges

- Following ACC referral to Midwifery Council that she undertook a very comprehensive case review with a council appointed reviewer.
- She accepts and understands that she should have referred [Mrs A] to the Obstetric clinic and she very much regrets not doing so.
- Acknowledges in hindsight, that a referral based on the guidelines was warranted.
- Offers [Mrs A] unconditional apology for that error.
- She wholeheartedly believes that she has put safety measures in place to ensure that this does not happen again.

In consideration of the above and accepting the changes that [RM B] states she has made to her practice since the ACC referral, it remains my opinion that [RM B] has severely departed from accepted practice in not referring [Mrs A] for an obstetric opinion at the 38 week scan (at the latest).

B. Whether the planning made in relation to possible IUGR meets the expected standard of care

I have been asked to comment on whether in my opinion the planning made in relation to possible IUGR meets the expected standard of care.

I. [At 34 weeks' gestation] [RM B] identified that [Mrs A's] fundal height was lower than expected and appropriately referred her for a growth scan. In her complaint response (29 March 2018) [RM B] states that *I called the registrar from the hospital after the 34 week scan and was asked to rescan in two weeks.* I cannot find contemporaneous documentation regarding the phone call.

II. Further growth scans were performed at 36, 38 and 40 weeks gestation.

III. No referrals were made for an obstetric opinion regarding the reduced growth or growth discordancy following [Mrs A's] scans.

IV. Fundal height measurements are not consistently reported and are not documented in centimeters.

V. A Customised growth chart was not initiated or completed for [Mrs A].

VI. There is no documented plan or documented evidence of discussing the concerns regarding growth with [Mrs A].

In my opinion, [RM B] has identified a lower than expected fundal height, appropriately referred for serial scans and then taken no further action. At [the 38 week scan] [Mrs A's] baby met the criteria for referral for an Obstetric opinion. This has not occurred. A customised grow chart has not been completed for [Mrs A].

There is no documented evidence of any planning regarding the possible IUGR. I am critical of the initiation of serial review of [Mrs A's] baby and then no evidence of action in response to the results.

C. Whether the methodology used to monitor the growth of the baby meets the expected standard of care

The expected standard of Midwifery care following the identification of reduced fundal height would include

I. Sending the woman for a scan to either confirm the finding or reassure the midwife/woman

II. Follow up fortnightly scans/dopplers would be appropriate

III. Generation and plotting of a customised growth chart at the time of the finding — reduced fundal height (if the chart has not already been generated)

IV. Measurement and monitoring of fundal height by midwife

V. Discussion regarding non reassuring growth with an Obstetrician. Referral appropriate if baby small for gestational age, even with normal dopplers. (SGA guidelines MFMFMN Sept 2013, page 15)

VI. Advice from Midwife to woman regarding monitoring fetal movements.

VII. Advice from Midwife to woman regarding pre eclampsia symptoms

VIII. Early admission in labour as fetuses who are small for gestational age have an increased risk of acidosis in labour. (SGA guidelines MFMFMN Sept 2013, page11).

The Methodology used by [RM B] to monitor the growth of [Mrs A's] baby was:

I. [Mrs A] was sent for a scan following the finding of a reduced fundal height at 34 weeks — this is in keeping with accepted Midwifery standards

II. Follow up fortnightly scans/dopplers were arranged — this is in keeping with accepted Midwifery standards

III. A customised chart was not generated or plotted. In [RM B's] complaint response (17 September 2018) she comments that *Growth charts are a very informative tool, however along with a number of other midwives, we were not using them routinely in practice until last year. None of my degree involved the use of them ever.*

During the period of 2011–2014 all NZ midwives attended a study day regarding the identification and monitoring of Small for gestational age babies. Attendance to the study day once in the triennium was mandatory in order to obtain an annual practicing certificate (2011–2014 — Technical Skills). Course content included information regarding generation of customised growth charts and was approved by NZ Midwifery Council.

[RM B] states in her complaint response (17 September 2018) that *I whole-heartedly believe I have put safety measures in place to ensure that this will not happen again. I maintain the practice of routinely monitoring fundal height and am now using the growth charts.*

I. The issue of monitoring fundal height and documentation in centimeters has been addressed in question 5A above. I have nothing further to add here.

II. The guideline for the management of suspected SGA singleton pregnancies after 34 weeks (NZMFM — 2013) suggests (page 15 — algorithm) referral to a specialist for SGA babies even with normal Dopplers. [RM B] states that she spoke to the obstetrician following the 34 week scan and was advised to arrange a follow up scan in two weeks. [RM B] arranged this scan, no further conversations or referral occurred following this conversation.

III. Contemporaneous documentation supports regular discussion regarding the monitoring of fetal movements.

IV. Contemporaneous documentation supports appropriate measurement of vital signs and discussion regarding preeclampsia symptoms.

V. [Mrs A] began contracting the evening before she was admitted in labour. There is no contemporaneous documentation to support the conversation/s that took place between [RM B] and [Mrs A] from that time until hospital admission.

VI. It may have been appropriate to leave [Mrs A] overnight establishing in labour if her baby had not been small. In the circumstances, it would have been prudent to bring [Mrs A] into the hospital in early labour to monitor and discuss/plan with the obstetric team as recommended in the guideline (The guideline for the

management of suspected small for gestational age singleton pregnancies after 34 weeks) (NZMFM — 2013, page 11).

VII. In her complaint response (17 September 2018) [RM B] states that *she is committed to applying the learnings from this case into practice. Changes to [RM B's] practice include, monitoring fundal height and the use of growth charts, all high risk women are routinely sent for growth scans. Follow up for all scans involves a phone call to radiology.*

VIII. In her complaint response (17 September 2018) [RM B] states *I did carry out appropriate care in recognizing that the growth was dropping with the fundal height measurement but, in hindsight, acknowledge that a referral based on the guidelines was warranted. I offer my unconditional apology to [Mrs A] for that error.*

In summary it would appear that the methodology to monitor the growth of [Baby A] was to send [Mrs A] for serial growth scans when her fundal height was found to be below the expected height at 34 weeks. Following the scans at 36, 38 and 40 weeks no actions were taken by [RM B] to address the declining growth. In my opinion this is a severe departure from accepted midwifery practice for the following reasons.

Once identified, no actions were taken to follow up results, or to interpret or monitor reduced fetal growth. No obstetric opinion or plan was sought in relation to the reduced growth.

Final Summary
I have been asked to provide an opinion regarding the care provided by [RM B] to [Mrs A] throughout her pregnancy 2016.

In forming my response I have considered that in the intervening period between [these events] and 2018 [RM B] has undertaken a case review by Midwifery Council and states that she has made changes to her practice, reducing the likelihood of reoccurrence. [RM B] offers an unconditional apology to [Mrs A].

She states *I am devastated to have made this error and will be vigilant that it never ever happens again (17 September 2018)*.

I have been asked to provide an opinion on whether there is a departure from accepted Midwifery practice in the care provided by [RM B] to [Mrs A]. In my opinion, as outlined in my report there is a range of moderate to severe — severe departures of accepted practice on all questions I have been asked.

Finally, I would like to extend my heartfelt condolences to [Mr and Mrs A]. I wish their family well in the ongoing care of their precious son [Baby A].

I hope this report answers any remaining questions that they have.

Nicky Emerson BHSc — Midwifery
Midwifery Advisor, Health and Disability Commissioner"

The following further advice was obtained from RM Emerson:

"1.Thank you for the request that I consider the response from LMC [RM B] (4 February 2019) in relation to my clinical opinion (26 November 2018). I have been asked to consider whether the response changes my advice to the severity of the breaches and if so, the reasons why.

2. I have reviewed the documentation on file: Reply to Midwifery opinion from [RM B] (4 February 2019) Notification from Midwifery Council regarding [ACC notification]; Support of complaint from [Mrs A]; [DHB] notes for [Mrs A] and [Baby A] including anatomy scans, clinical letters and lab results. Letter from [RM B] to Midwifery Council re [ACC notification]; Email from [Dr D] — Radiologist 26 March, 12 June 2018; Letter from Charge Midwife Manager [DHB] 14 March 2018; Complaint response from [RM B] 29 March 2018, 17 September 2018; [radiology service] imaging review, Letter to [RM B] from [the midwife co-ordinator] (midwife Co-ordinator Quality) 10 January 2018; Letter to HDC from [the] (Clinical Director of Obstetrics and Gynaecology) 23 April 2018.

3. Background

[Mrs A] a [woman in her late thirties] was having her first baby. She booked with LMC midwife [RM B] at 26 weeks gestation. No medical or obstetric history of note. At 34 weeks gestation, fundal height measurements were below expectation. LMC [RM B] referred [Mrs A] for serial growth scans. The serial growth scans demonstrated [Baby A] had a decreasing abdominal circumference and centile on a population chart was decreasing. [Baby A's birth] was by Category 1 caesarean for a suspected placental abruption. He was transferred to the neonatal unit. He remained in the neonatal unit [until discharge]. [Baby A] had suffered a stroke and its ongoing sequelae.

4. Advice

Whether the documentation meets the expected standard of care
In her response (4 February 2019) [RM B] states *As a result of this case, I have changed my practice in many ways. I have reflected back on my previous practice and am very self-critical; however, I have taken this process as an opportunity to develop as a practitioner.*

In my advice (November 2018) I considered that [RM B] had moderately to severely departed from accepted midwifery practice regarding documentation for the following reasons:

- [RM B] has not retained a copy of [Mrs A's] notes containing copies of scans, blood tests, documentation of phone calls.
- [Mrs A's] notes have not been stored as per Midwifery Council Competency 2 — 2.2, or the Privacy Act (1993)

- Fundal height measurements have been omitted on several appointments. Considering the context of reduced fundal growth, fundal height is not recorded on 6 occasions or in centimetres.

In her response to my opinion (4 February 2019) [RM B] states:

- Following the case she keeps a copy of notes after every single visit. Bloods, scans are recorded in each woman's personal notes which are locked in a cabinet in the medical centre.
- *Postnatally, I would leave upset praying that baby would be okay. In hindsight, my emotions took over and I overlooked my documentation responsibilities.*
- *I did not report fundal height measurements at some of the appointments as we were doing serial scans.*
- [RM B] states in her response regarding the non measurement of fundal height in centimetres that I am aware of this mistake and have changed my practice.

I have considered [RM B's] response (4 February 2019) to my opinion (26 November 2018) and have considered the positive changes [RM B] has made to her practice. My opinion remains that [RM B] moderately to severely departed from accepted Midwifery practice in not retaining a copy of [Mrs A's] notes, not storing records as per Midwifery Council Competency 2 — 2.2, or Privacy Act (1993) and in not documenting fundal height at each appointment. I acknowledge that [RM B] has made positive changes to her practice since and now records fundal height in centimetres and stores her records in keeping with current legislation and competency.

Whether [RM B] should have referred [Mrs A] for obstetric review

In my advice (26 November 2018) I considered the following

- [RM B] identified that [Mrs A's] fundal height was below expected measurement for her gestation at 34 weeks
- [RM B] appropriately referred [Mrs A] for serial growth scans; however she does not appear to have acted on the reducing growth.
- [RM B] states that *I also read out all the scan reports to my back up as we often discuss reports and decide on course of action (complaint response 29 March 2018)*.
- If [RM B] has read the scan reports to her back up as stated in her complaint response (29 March 2018) the scan reports all outline the reducing growth centiles
- All scan reports demonstrate a reducing centile for [Baby A's] AC. There are declining centiles and growth discordancy evident prior to the 40 week scan. The discordancy meets the criteria for referral at 38 weeks, however in my opinion, it would have been prudent to discuss the declining growth with an obstetrician and initiate a management plan prior to 38 weeks.

- In line with competency 2 above (2.2 — above) the responsibility remains with the referrer to order and interpret relevant investigations and tests.

In her response to my opinion (04 February 2019) [RM B] states

- *It is unfortunate I was not called with the result of that 40 week scan. I know without a doubt that I would have called an obstetrician immediately and that may have changed the outcome. I did not receive this scan report. I absolutely, hand on heart, know this as I was aware that this 40 week scan was the one which showed absolute need for immediate referral.*

My opinion remains the same as my previous report (26 November 2018) for the following reasons:

- In line with competency 2 above (2.2 — above) the responsibility remains with the referrer to order and interpret relevant investigations and tests.
- All scan reports demonstrate a reducing centile for [Baby A's] AC. There are declining centiles and growth discordancy evident prior to the 40 week scan. The discordancy meets the criteria for referral at 38 weeks, however in my opinion, it would have been prudent to discuss the declining growth with an obstetrician and initiate a management plan prior to 38 weeks.

My opinion is unchanged, accepted Midwifery practice places the onus on the referrer to follow up results. The criteria for referral under Guidelines for Consultation with Obstetric and Related Medical Services (page 25, 4011) or *discordancy of AC (abdominal circumference) with other growth parameters*.

As outlined in my report (26 November 2018, Question B) discordant growth parameters were demonstrated prior to the 40 week scan and they met the criteria for referral.

My opinion remains that [RM B] has severely departed from accepted Midwifery practice in not referring [Mrs A] for an obstetric opinion at the 38 week scan (at the latest).

Whether the planning made in relation to possible IUGR meets the expected standard of care

In my report (26 November 2018) I considered the following:

In my opinion, [RM B] has identified a lower than expected fundal height, appropriately referred for serial scans and then taken no further action. At the [38 week scan] [Mrs A's] baby met the criteria for referral for an Obstetric opinion. This has not occurred. A customised grow chart has not been completed for [Mrs A].

There is no documented evidence of any planning regarding the possible IUGR. I am critical of the initiation of serial review of [Mrs A's] baby and then no evidence of action in response to the results.

In [RM B's] response (04 February 2019) she states *I believe I did pick up [Mrs A's] baby was growing at a small pace which is why I ordered the first scan. I will never ever send someone for multiple scans as I am aware that should have been my first clue that there was an issue.*

Whether the methodology used to monitor the growth of the baby meets the expected standard of care

In my report (26 November 2018) I concluded the following:

In summary it would appear that the methodology to monitor the growth of [Baby A] was to send [Mrs A] for serial growth scans when her fundal height was found to be below the expected height at 34 weeks. Following the scans at 36, 38 and 40 weeks no actions were taken by [RM B] to address the declining growth. In my opinion this is a severe departure from accepted midwifery practice for the following reasons.

Once identified, no actions were taken to follow up results, or to interpret or monitor reduced fetal growth. No obstetric opinion or plan was sought in relation to the reduced growth.

My opinion has not changed regarding the methodology used to monitor the growth of the baby not meeting the accepted Midwifery practice and still consider [RM B] to have severely departed from accepted midwifery practice in not referring [Mrs A] for obstetric review in relation to slowing of growth and growth discordancy.

Summary

I have considered my advice (26 November 2018) and [RM B's] response to it. I have maintained my previous opinion that [RM B] has departed moderate–severely and severely from accepted midwifery practice.

I acknowledge that [RM B] has been greatly emotionally affected by this case and states that she unconditionally apologises to [Mrs A] and her family. Furthermore she has changed her practice in the following ways:

- [RM B] has now devised a method for retaining scan results and blood tests in the clinical notes.
- Storage of clinical notes is now in keeping with current legislation.
- [RM B] now measures fundal height in centimetres and uses customised growth charts.
- She feels very self-critical of her previous practice but has taken this process as an opportunity to develop as a practitioner.

I have some remaining concerns relating to [RM B's] critical thinking in relation to this case. My concerns relate to:

- Non recognition of the need to follow up, interpret and act on the body of a report in relation to a larger clinical picture.

- Non recognition of the application of history to current clinical presentation.
- Non recognition that fundal height measurement is not an adjunct when serial scans are being undertaken for growth; it is an expected midwifery competency to be used as an additional observation to clinical scans.

In my opinion [RM B's] midwifery practice would benefit from supported education and reflection. She has demonstrated a willingness to consider and implement practice improvements.

Nicky Emerson BHSc — Midwifery
Midwifery Advisor, Health and Disability Commissioner"

The following further advice was received in relation to [RM C]:

"Thank you for the request that I provide clinical advice regarding [Mrs A's] care provided by Midwife [RM C]. 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: Notification from Midwifery Council regarding ACC notification ([2017]); Support of complaint from [Mrs A]; [DHB] notes for [Mrs A] and [Baby A] including anatomy scans, clinical letters and lab results. Letter from [RM B] to Midwifery Council re [ACC notification]; Email from [Dr D] — Radiologist 26 March, 12 June 2018; Letter from Charge Midwife Manager [the DHB] 14 March 2018; Complaint response from [RM B] 29 March 2018, 17 September 2018; [radiology service] imaging review, Letter to [RM B] from [the midwife co-ordinator] (midwife Co-ordinator Quality) 10 January 2018; Letter to HDC from [the] Clinical Director of Obstetrics and Gynaecology) 23 April 2018; Statement [RM C] 5 July 2019.

1. Background

[Mrs A] a [woman in her late thirties] was having her first baby. She booked with LMC midwife [RM B] at 26 weeks gestation. No medical or obstetric history of note. At 34 weeks gestation, fundal height measurements were below expectation. [RM B] referred [Mrs A] for serial growth scans. The serial growth scans demonstrated [Baby A] had a decreasing abdominal circumference and centile on a population chart was decreasing. [Baby A's birth] was by Category 1 caesarean for a suspected placental abruption. He was transferred to the neonatal unit. He remained in the neonatal unit [until discharge]. [Baby A] had suffered a stroke and its ongoing sequelae.

2. Advice Request; I have been asked to provide advice in relation to the statement by [RM B's] practice partner [RM C] regarding [Mrs A's] shared care. From the antenatal records it appears [RM C] saw [Mrs A] at alternative appointments ([four occasions]).

I have been asked to provide advice on the standard of care provided by [RM C] to [Mrs A]. In particular

1. The overall standard of care provided by [RM C] antenatally.
2. [RM C's] comments about her reliance on radiology advice by way of phone call and/or documented in the scan reports for referrals for the obstetric review.
3. [RM C's] use of '=D' to document fundal height.
4. Any other matters you consider warrant comment.
5. The division of responsibility between [RM B] and [RM C] and who had overall responsibility.

1. The overall standard of care provided by [RM C] antenatally

In her statement [RM C] states that she saw [Mrs A] on [four occasions]. I have reviewed the clinical documentation for the above dates.

In my opinion the antenatal care provided by [RM C] meets accepted midwifery standards with the exception of the measurement of fundal height and [RM C's] response to growth scans. Both of these issues are addressed separately in this report.

2. [RM C's] comments about her reliance on radiology advice by way of the phone

[RM B] states 5 July 2019 that 'at no time did the radiologist recommend referral to an Obstetrician, we are always telephoned by either the Radiologists themselves or the Radiology staff if there is any concern about the well-being of the fetus, and this telephone call is always documented on the report'.

In considering the above statement, I note that [RM C] has submitted Appendices 1, 2 and 3 (page 3 and page 5 of response statement) as examples of the relevant comments and phone calls made by radiologists.

These examples (Appendices 1, 2 and 3) submitted, are from 2019 scan reports.

[Mrs A's] midwifery care occurred in 2016 prior to radiology practice changes outlined by [RM C] above and [the DHB] complaint response below.

[The DHB's midwife co-ordinator] 10 Jan 2018 states (complaint response) *'It was further recognised that communication, by way of phone calls from [radiology service] providers to Lead Maternity Carers (LMCs) have now become standard practice, allowing LMC's to be alerted to significant changes and therefore make timely referrals'*.

In my opinion, it is reassuring to see the practice changes as they reinforce a safety net for the consumer, however it is my opinion that the responsibility to follow up and interpret a test result resides with the midwife who is ordering/viewing the result.

It is worth noting here that the scan report [40+1 weeks] does have a comment, *appropriate interval growth* and this may have been misleading. The radiology reports

and the accompanying comments have been addressed below by [Dr D] (radiology service) ([2017]).

[Dr D] acknowledges that the terminology in the last growth scan *could have been a little clearer* but concludes that *It is the responsibility of the referrer to initiate referral to an appropriate specialist (if clinically necessary)*.

[Dr D's] conclusion in the Radiology summary is supported by Competency Two (NZ Midwifery Council — Competencies for Entry to the Register).

> 2.2 *confirms pregnancy if necessary, orders and interprets relevant investigations and diagnostic tests, carries out necessary screening procedures, and systematically collects comprehensive information concerning the woman's/ wahine health and well-being.*

Both scans at 38 and 40+1 weeks demonstrate a continuing decline in fetal growth. (As did previous scans.)

The scan [at] (40+1 weeks) was ordered by [RM C].

In her response, [RM C] states that *Midwives are not trained to read radiology reports. We mainly read the conclusion and follow any recommendations that are made on that report.* She further states *In this case, the only recommendation ever made was: Suggest postnatal paediatric clinical assessment.*

The conclusion statements of scans at 38 weeks and 40+1 weeks include the following which highlight declining growth

- [38 weeks and 2 days] report a decline in EFW from the 34th to the 27th centile. *Decline in interval growth reported, prominently due to femur length (52nd centile, previously 92nd).*
- [40 weeks and 1 day scan] EFW declining from the 27th centile to the 22nd centile and a decline in the AC from the 5th centile to the 3rd centile.

In my opinion reading and interpreting radiology reports is a basic Midwifery competency as evidenced by (NZ Midwifery Council — Competencies for Entry to the Register):

> 2.2 *confirms pregnancy if necessary, orders and interprets relevant investigations and diagnostic tests, carries out necessary screening procedures, and systematically collects comprehensive information concerning the woman's/ wahine health and well-being*

In the context of Midwifery referral for serial scans based on reduced growth, in my opinion there is a severe departure from accepted practice in not following up on the scans at 38 and 40 weeks (at the latest). Criteria were met by the referral guidelines to refer based on discordancy and reducing fetal abdominal circumference.

The Guideline for consultation with Obstetric and Related Medical Services (referral guidelines — section 88) state (page 25/4011) consultation is required when

I. Estimated fetal weight (EFW) <10th percentile on customized growth chart,

II. or abdominal circumference (AC) <5th percentile on ultrasound,

III. Or discordancy of other growth parameters, normal liquor.

On review of the serial growth scans ([four occasions]) it is correct that the EFW was not below the 10th centile (on a population chart), nor was the AC below the 5th centile until 40 weeks. However there had been a continued discordancy (asymmetry) of other growth parameters (A *III.*) and this alone met the criteria for obstetric consultation. Of note, the reported measurements were based on a population chart and had not been customized by [RM B] or [RM C] for [Mrs A].

- [34 week scan] reports a decline in the EFW from 77th centile to the 30th centile and a decline in the AC from the 34th centile to the 11th centile. (Previous scan [24 weeks' gestation].)
- [36 week scan] reports EFW at 34th centile, an increase from the 30th centile two weeks previously. A decline in the AC is noted from the 11th centile to the 6th centile.
- [38 weeks and 2 days] report a decline in EFW from the 34th to the 27th centile. AC has decreased from the 6th centile to the 5th centile; Head circumference is on the 76th centile. Scan report comment states *Decline in interval growth reported, prominently due to femur length (52nd centile, previously 92nd)*.
- [40 weeks and 1 day] scan reports a decline in the EFW from the 27th centile to the 22nd centile and a decline in the AC from the 5th centile to the 3rd centile. Head Circumference is on the 58th centile.

Of particular relevance is the discordancy between the head circumference and the abdominal circumference.

> *Interpretation of growth scans: Guideline for the management of suspected small for gestational age singleton pregnancies after 34 weeks gestation (New Zealand Maternal Fetal Medicine Network, Sept 2013)*
>
> *Note: The abdominal circumference (AC) is usually the first fetal measurement to become reduced in SGA (Small for Gestational Age). Suboptimal fetal growth should be suspected when:*
>
> - *The abdominal circumference on the population chart is less than or equal to the 5th centile*
> - *Discrepancy between head and abdominal circumference (e.g. HC 75th centile and AC 20th centile which suggests wasting)*
> - *AC is >the 5th % but is crossing centiles e.g. 20% reduction*

- *EFW on GROW chart is <10th centile*
- *EFW on GROW chart is crossing centiles*

As outlined above there is discordancy (asymmetry) regarding the Head Circumference on the 76th Centile and the Abdominal Circumference on the 5th Centile at [38 weeks and 2 days].

This discordancy continues to the 40 week scan, reporting the Head Circumference on the 58th centile and the abdominal circumference on the 3rd centile.

In my opinion the asymmetrical growth was evident and warranted referral prior to the 40 week scan, at the latest at the [38 week scan].

Whilst [RM B] was the registered LMC both midwives saw [Mrs A] at alternative appointments. [RM C] ordered a scan [at 40 weeks' gestation] for [Mrs A]. She did not follow up the results.

I have been requested to comment specifically on the division of responsibility between [RM B] and [RM C] and will address this later in this report.

3. [RM C's] use of '=D' to document fundal height

[RM C] has not recorded fundal height in centimetres.

She explains in her statement that *'=to D' means that at 30 weeks [Mrs A's] fundus measured 30cm, at 36 weeks her fundus measured 36cm and at 41 weeks her fundus measured 41cm.*

In forming an opinion I accept that '= to Dates' is still commonly used despite not being recommended practice.

While it is common practice for some midwives to write '= to dates' in clinical notes when assessing fetal growth as [RM C] has done, this is not considered best practice.

The New Zealand College of Midwives (NZCOM) consensus statement on Assessment of fetal well being during pregnancy (February 2012 regarded as current in 2016 — being reviewed at time of writing this report 2019) states under recommendations (page 2, Recommendation 4):

> *From 24 weeks gestation it is recommended that the fundal-symphysis height should be measured and recorded in centimetres at each antenatal appointment, preferably by the same person.*

There is no evidence to support:

- *Assessment using abdominal palpation/inspection alone*

Fetal growth screening by fundal height measurement *(West Midlands Perinatal Institute 2009)*

First, the '1-week gestation = 1cm fundal height' rule does not represent a reliable correlation and does not apply across the maternity population. Second, the strength of fundal height assessment lies in the slope, the increment over multiple measurements over time, which requires graphical representation. As is the case with birthweight, fundal height varies with constitutional variables such as maternal weight and parity.

These constitutional variables referred to above are discussed in [RM C's] statement in reference to [Mrs A's] scan [at 40+1 weeks' gestation]. [RM C] states '*On the scan at 40+1, the EFW was 3295g which is on the 22nd centile. This scan was based on the normal New Zealand population chart and not on a personalised growth chart, which for [a woman of this ethnicity] is a relatively large baby and definitely not intrauterine growth restricted.'*

I remain concerned that in the context of a reducing estimated fetal weight (EFW), reducing abdominal circumference (AC) and discordancy between the fetal head circumference (HC) and (AC) that [RM C] maintains that the baby was relatively large at 40+1 weeks.

From 24 weeks gestation to 40+1 weeks the EFW had declined from the 77th centile to the 22nd centile.

The AC had declined from 34th centile to the 3rd centile.

HC was on the 76th centile at 38 weeks, AC on the 5th centile (Discordancy requiring referral).

HC was on the 58th centile at 40+1 weeks and the AC was on the 3rd centile. (Discordancy and AC <5th centile requiring referral.)

To comment on one EFW and reference it in isolation, based on ethnicity on a population chart, in my opinion demonstrates an omission in recognising the overall trending decline in fetal growth parameters over a period of time.

In my opinion the writing of '= to dates' in the clinical notes has the potential to impact the care in the context of reduced fetal growth where more than one practitioner is assessing fundal height regularly. Given that there had been a referral for reduced fundal height by [RM C's] practice partner from 34 weeks it would seem reasonable to measure fundal height in cm. Neither practitioner has done so.

Practice note: In my opinion fundal height measurement in centimetres is not an adjunct when serial scans are being undertaken for growth; it is an expected midwifery competency to be used as an additional observation to serial clinical growth scans.

4. The division of responsibility between [RM B] and [RM C]

Reviewing the response 5 July 2019 from [RM C] it is stated that the two midwives work in partnership, alternating appointments with women. [RM B] has registered [Mrs A] under her name and has addressed [Mrs A's] complaint separately.

I have discussed this division of responsibility (details of the case anonymised) with midwifery colleagues who work in the same type of partnership. In addition I have considered each midwife's individual professional responsibility.

It is accepted by my colleagues that the LMC who the woman is registered under accepts ultimate responsibility for the woman's care.

That said, I refer back to Midwifery council competency 2 which outlines the

> 2.2 *confirms pregnancy if necessary, orders and interprets relevant investigations and diagnostic tests, carries out necessary screening procedures, and systematically collects comprehensive information concerning the woman's/ wahine health and well-being.*

Whilst [RM B] was the named LMC, therefore based on my colleagues' opinions above, retained ultimate responsibility, however [RM C] saw [Mrs A] on 4 occasions, giving her a form for a repeat growth scan on [her due date].

It is my opinion that [RM C] was responsible for following up any scans/tests that she has ordered and reviewing the results of any scans/tests ordered for the woman since her last appointment.

5. Any other matters you consider warrant comment

I note that [RM C] acknowledges that [Mrs A's] case has highlighted some of the problems that can arise when two midwives are looking after the same woman and seeing her alternately.

As a result, she states the following changes have been implemented by her and [RM B] into their practice:

- A communication book kept in clinic highlighting any concerns, to be read by the midwife prior to clinic
- A change from MMPO midwifery notes to Expect Maternity. Results are now downloaded immediately to electronic devices so they can be reviewed without delay
- Increased awareness regarding asymmetrical growth (growth discordancy)
- Personalised growth charts for each woman

She concludes that she is now vigilant and has learnt from the experience. She states that she is very sorry for any distress [Mrs A] and her family have encountered from this.

Summary

In summary, [RM C] shared [Mrs A's] midwifery care with [RM B], seeing [Mrs A] on four occasions at alternate antenatal appointments. A feature of [Mrs A's] pregnancy was reduced growth which was identified by [RM B] at 34 weeks. Serial growth scans were arranged.

In my opinion [RM B] held ultimate responsibility for overseeing [Mrs A's] care however [RM C] did see [Mrs A] on four occasions and did order a growth scan at pregnancy term.

[RM C] states that she didn't follow up on the scan as she did not receive a phone call from the radiologist alerting her of any concerns.

Mitigating factors resulting in not following up the scan at [40 weeks and 1 day] include a radiology comment '*Appropriate interval growth*' however the entire comment '*Appropriate interval growth, EFW on the 22nd centile. (27th centile at 38+2 weeks). AC is on the 3rd centile (previously 5th)*.

AC on the 3rd centile alone warranted referral under the *Guideline for consultation with Obstetric and Related Medical Services (referral guidelines — section 88) (page 25/4011)*.

[Mrs A] was seen at the next appointment by LMC [RM B] and she has documented *'baby had a scan last week and good interval growth*'.

In forming an opinion, I have considered that [RM C] had limited responsibility for [Mrs A's] overall care however.

- [Mrs A] was seen by [RM C] on four occasions
- [RM C] was aware of the reduced growth but did not document fundal height growth in centimetres (in the context of two practitioners measuring and monitoring a growth restricted baby)
- [RM C] did not follow up the results on the scan she ordered at 40 weeks gestation. This scan and the previous scan provided criteria for referral under *The Guideline for consultation with Obstetric and Related Medical Services*

In my opinion, omission to follow up on the scan she ordered and an omission in identifying the continued decrease in fetal growth parameters represents a moderate to severe departure from accepted Midwifery practice.

My review suggests that there may be an issue with [RM C's] application of knowledge in respect to serial growth scans, interpretation of radiology results and use of the guidelines for consultation with Obstetric and Related Medical Services.

[RM C] identifies practice changes that have addressed some of these issues however I remain concerned. In my opinion [RM B's] midwifery practice would benefit from supported education. She has demonstrated a willingness to consider and implement practice improvements.

I hope this report addresses any remaining questions.

Nicky Emerson BHSc — Midwifery
Midwifery Advisor, Health and Disability Commissioner"

The following further advice was received in relation to [RM C]:

"Thank you for the request that I provide further clinical advice regarding [Mrs A's] care provided by [RM C]. In this context I am commenting on [RM C's] response to my original advice. 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: Response to HDC Midwifery advice from [RM C] 12 August 2019, [the radiology service] report for [Mrs A] [34 weeks' gestation], Retrospective Customised Growth Chart for [Mrs A].

1. Background

[Mrs A] a [woman in her late thirties] was having her first baby. She booked with LMC midwife [RM B] at 26 weeks gestation. No medical or obstetric history of note. At 34 weeks gestation, fundal height measurements were below expectation. [RM B] referred [Mrs A] for serial growth scans. The serial growth scans demonstrated [Baby A] had a decreasing abdominal circumference and centile on a population chart was decreasing. [Baby A's birth] was by Category 1 caesarean for a suspected placental abruption. He was transferred to the neonatal unit. He remained in the neonatal unit [until discharge]. [Baby A] had suffered a stroke and its ongoing sequelae.

2. Advice Request; we have received a response to the notification and your EA from [RM C]. I would be grateful if you could review the response and advise if it causes you to amend your initial advice in any way.

I have set out my response in order of the issues addressed in [RM C's] response.

1a) I have reviewed the antenatal notes for [Mrs A] and acknowledge that the omission of one fundal height measurement during an appointment could be an oversight on the part of [RM C] as she has recorded fundal heights at the other appointments where she has seen [Mrs A].

1b) In [RM C's] response to **'… omission to follow up on the scan she ordered and an omission in identifying the continued decrease in fetal growth parameters represents a moderate to severe departure from accepted Midwifery practice'**.

1c) 'there may be an issue with [RM C's] application of knowledge in respect to serial growth scans, interpretation of radiology results and use of the guidelines for consultation with Obstetric and Related Medical Services.'

[RM C] states the following:

- [An O&G consultant] acknowledges that the growth scan at 40 weeks and 1 day describes 'appropriate interval growth' and that an induction at 38 weeks could not have been guaranteed to change the outcome for [Baby A].
- The scan at 38 weeks + 2 days recommended 'postnatal paediatric clinical assessment'.

The issue of the misleading radiology comment regarding appropriate interval growth at 40 weeks and 1 day has been addressed in my original report and does not explain why declining growth was not recognised and acted on at the 38 week + 2 day scan. I agree with [the O&G consultant] that an earlier induction of labour could not have been guaranteed to change the outcome. My opinion remains that Midwifery care has departed from accepted practice in not recognising declining growth parameters and growth discordancy particularly in the context of Midwifery referral (for serial growth scans) based on a small baby on palpation.

In response to my advice [RM C] states:

> *I am not saying that the asymmetry of the fetus's growth should not have been picked up here, but I have since plotted all of [Mrs A's] scans onto a personalised growth chart **(Appendix Two)** and this shows that [Mrs A's] baby was definitely not IUGR (Intrauterine Growth Restricted). The personalised growth chart specific to [Mrs A] shows that her baby was consistently growing on the 50th percentile + at 34, 36 and 38 weeks and only dropped slightly under the 50th percentile at the 40 week scan.*

In response to [RM C's] comment above I remain concerned that whilst [RM C] acknowledges the asymmetry she does not recognise that this alone constitutes an IUGR baby and IUGR is not diagnosed solely on estimated fetal weight (EFW). The slight drop at the 40 week scan described by [RM C] represents a crossing of centiles as plotted retrospectively by [RM C] on a GROW chart.

I remain concerned that in the context of a reducing estimated fetal weight (EFW) by centile, reducing abdominal circumference (AC) and discordancy between the fetal head circumference (HC) and (AC) that [RM C] maintains that the baby was relatively large at 40+1 weeks.

- From 24 weeks gestation to 40+1 weeks the EFW had declined from the 77th centile to the 22nd centile
- The AC had declined from 34th centile to the 3rd centile
- HC was on the 76th centile at 38 weeks, AC on the 5th centile (Discordancy requiring referral)
- HC was on the 58th centile at 40+1 weeks and the AC was on the 3rd centile. (Discordancy and AC <5th centile requiring referral)

[RM C] refers to the MOH referral guidelines in her response stating that

> *As [per] page 3, (point 4.2), The New Zealand Maternal Fetal Network Guidelines state that 'Suboptimal fetal growth should be suspected when the abdominal circumference on the population chart is less than or equal to the 5th centile' and the Maternity Referral Guidelines (MOH 2012) advises that abdominal circumference of less than the 5th percentile on ultrasound, warrants a transfer of care from the LMC to specialist obstetric care.*

[RM C] is referring to part of the MOH guideline and part of the Maternal Fetal Network Guidelines.

- (MOH 2012) does advise that abdominal circumference of less than the 5th centile on ultrasound warrants consultation/transfer of care. However the guideline when read in full states:

The Guideline for consultation with Obstetric and Related Medical Services (referral guidelines — section 88) state (page 25/4011) consultation is required when

I. Estimated fetal weight (EFW) <10th percentile on customized growth chart,
II. or abdominal circumference (AC) <5th percentile on ultrasound,
III. Or discordancy of other growth parameters, normal liquor.

As mentioned in my previous report, the non recognition of the discordancy of growth parameters forms the basis for my concern.

- The NZ Fetal Medicine Network does say *Suboptimal fetal growth should be suspected when the abdominal circumference on the population chart is less than or equal to the 5th centile'*

It also says *Note: The abdominal circumference (AC) is usually the first fetal measurement to become reduced in SGA (Small for Gestational Age). Suboptimal fetal growth should be suspected when:*

- *The abdominal circumference on the population chart is less than or equal to the 5th centile*
- *Discrepancy between head and abdominal circumference (e.g. HC 75th centile and AC 20th centile which suggests wasting)*
- *AC is >the 5th % but is crossing centiles e.g. 20% reduction*

- *EFW on GROW chart is <10th centile*
- *EFW on GROW chart is crossing centiles*

In this case the discrepancy between head and abdominal circumference was evident and the abdominal circumference was less than or equal to the 5th centile.

The retrospective GROW chart plotted by [RM C] represents a crossing of centiles at 40 weeks.

2. Whether you have considered making any changes to your practice as a result of this incident and, if so, what.

[RM C] has outlined many practice changes as a result of this case. She has stated that *'We are both very sorry for any distress caused to [Mr and Mrs A] and their precious little baby, [Baby A], during this unfortunate incident'*.

3. Any other information you consider relevant.

[RM C] points out the following in her response.

- Chorioamnionitis (infection within the amniotic sac) was present

In addressing the above point, the chorioamnionitis is a retrospective finding at histology and may have been a contributor/cause of [Baby A's] final outcome however in my opinion this does not reflect the unrecognised declining growth of [Baby A] represented by the scans from 34 weeks gestation.

Summary

I note from [RM C's] response that appropriate remedial changes have been made to the way that [RM B] and [RM C] practise.

With the exception of the single missed documented recording of fundal height my opinion remains the same as in my original report.

In my opinion there were clear criteria for referral of [Mrs A] regarding the declining growth parameters of [Baby A] at the latest at 38 weeks. My opinion remains that omission to refer represents a moderate to severe departure from accepted practice.

Nicky Emerson BHSc — Midwifery
Midwifery Advisor, Health and Disability Commissioner"