

**Sonographer, Mr B**

**Radiologist, Dr C**

**Radiology Service**

**Radiologist, Dr D**

**Midwife, RM E**

**A Report by the  
Health and Disability Commissioner**

**(Case 15HDC00309)**



Health and Disability Commissioner  
*Te Toihau Hauora, Hauātanga*



## **Table of contents**

Complaint and investigation .....	3
Information gathered during investigation.....	4
Opinion: Dr D — breach.....	13
Opinion: Radiology Service 1 — no breach .....	14
Opinion: Mr B — adverse comment.....	15
Opinion: Dr C — breach.....	16
Opinion: RM E — breach .....	18
Recommendations.....	20
Follow-up actions.....	21
Appendix A: Independent radiology advice to the Commissioner.....	22
Appendix B: Independent sonography advice to the Commissioner.....	33
Appendix C: Independent midwifery advice to the Commissioner.....	35



## Executive summary

1. In 2013, Ms A found out that she was pregnant.
2. On 15 Month2<sup>1</sup>, Ms A had a uterine ultrasound scan at a radiology service (Radiology Service 1). Ms A's pregnancy was documented as being at eight weeks and six days' gestation. It was documented by the sonographer that the impression was of a monochorionic/diamniotic (MC/DA) twin pregnancy (one gestational sac with two fetuses). One of the fetuses was reported as having passed away at approximately seven weeks' gestation. The parents were told that the twins were in one sac and that one of the twins had passed away.
3. The radiologist, Dr D dictated the formal report and reported that the ultrasound was consistent with a dichorionic diamniotic (DD) twin pregnancy (two gestational sacs). One of the sacs was reported as containing a viable fetus with normal cardiac activity and good measurements, and a second gestational sac was reported as containing a smaller demised fetus with no cardiac activity. Dr D's dictation was typed up by a typist and Dr D verified the report.
4. On 30 Month2, Ms A had an antenatal visit with her lead maternity carer (LMC) RM E. No mention was made in the clinical record regarding the scan from 15 Month2. Mr A told HDC that RM E never discussed the scan reports with him and Ms A. In contrast, RM E stated: "Scan reports were discussed at the appointments following each scan."
5. On 31 Month2, Ms A had an obstetric ultrasound performed by sonographer Mr B at a second radiology service (Radiology Service 2). Mr B typed and wrote the formal report, and radiologist Dr C reviewed and signed it off. The formal report for this visit noted twin demise "within the single sac." No specific mention of chorionicity or amnionicity was given. There was no comparison with the previous report from Radiology Service 1. The word "monochorionic" was not used in the report.
6. RM E received a copy of the report. She told HDC that the first scan at Radiology Service 2 "did not indicate any change in the position [compared with the previous report from Radiology Service 1]".
7. On 13 Month3 (at 13 weeks), a further scan was undertaken at Radiology Service 2 by Mr B. The formal report signed off by Dr C documented that the ultrasound findings indicated that the deceased baby had increased in size. Mr B told HDC that the increase in size of the deceased twin was put down to oedema.
8. RM E was provided with a copy of Mr B's report. On 22 Month3, Ms A had an antenatal visit with RM E. Assessments were noted as normal. There is no documentation of any discussion relating to the ultrasound scans, and there is no comment regarding any consideration given to referring Ms A for specialist care.
9. On 24 Month4 Ms A had an anatomy scan performed by Mr B. Mr B's antenatal worksheet for this visit indicated that the deceased twin had increased in size, and queried whether this

---

<sup>1</sup> Relevant months are referred to as Months 1-6 to protect privacy.

might be due to oedematous changes. The worksheet stated that there was no vascularity present but that specialist review was recommended. The formal report, signed off by Dr C, documented Mr B's findings.

10. On 31 Month<sup>4</sup>, RM E sent a referral to the district health board's (DHB1) antenatal clinic. This was for Ms A to have a specialist obstetric review based on the advice given in the radiology report from Radiology Service 2 of 24 Month<sup>4</sup>.
11. On 16 Month<sup>5</sup>, Mr A, Ms A, and her mother attended an appointment with obstetrician and gynaecologist Dr F at the antenatal clinic. Dr F requested that the ultrasound pictures that had already been taken be sent to him for review, and it was documented in the reporting letter to RM E that Ms A was to have a further scan on 4 Month<sup>6</sup>.
12. On 3 Month<sup>6</sup>, Mr B performed a further scan. The scan indicated vascularity with umbilical artery flow toward the demised twin, and identified Twin Reversed Arterial Perfusion (TRAP) syndrome, therefore, specialist review was recommended.
13. On the same day, RM E arranged an urgent referral for review by an obstetrician at DHB1.
14. Ms A underwent a caesarean delivery at 27 weeks' gestation at DHB3.

### **Findings**

15. By failing to report clearly that Ms A's pregnancy was monochorionic, it was found that Dr D breached Right 4(1)<sup>2</sup> of the Code of Health and Disability Services Consumers' Rights (the Code).
16. Radiology Service 1 was not found directly or vicariously liable for Dr D's breach of the Code.
17. While it was accepted that referring to only a single sac in a sonographer's report "would be within the range of accepted practice", adverse comment was made that Mr B did not explicitly use the word "monochorionic" in his report, and did not state whether this was an MCMA twin or an MCDA twin pregnancy.
18. By failing to report clearly that Ms A's pregnancy was monochorionic, radiologist Dr C was found to have breached Right 4(1) of the Code.
19. Adverse comment was also made that, despite the increase in size of the demised twin at the 13 Month<sup>3</sup> appointment, Dr C did not recommend specialist referral.
20. Owing to the death of one twin, a discussion about referral was warranted at the 22 Month<sup>3</sup> visit. Such a discussion would have enabled Ms A to make an informed choice as to whether or when she would see an obstetrician. This was information that a reasonable consumer in Ms A's circumstances would expect to be told. For failing to recommend to Ms A on 22

---

<sup>2</sup> Right 4(1) states that every consumer has the right to have services provided with reasonable care and skill.

Month3 that a consultation with a specialist was warranted, it was found that RM E breached Right 6(1)<sup>3</sup> of the Code.

21. While it was acknowledged by both the sonographer and the radiologist at Radiology Service 2 that their reporting should have been clearer regarding the pregnancy being monochorionic, RM E should have appreciated the change in reporting. RM E should have been alerted, at the very least, to a potential difference in diagnosis, and she should have sought clarification from the radiologist. Accordingly, it was found that RM E breached Right 4(1) of the Code.

### Recommendations

22. It was recommended that Dr C arrange for a clinical peer review of the standard of his radiology reporting on multiple pregnancies, and provide a written apology to Ms A.
23. It was recommended that Dr D arrange for a clinical peer review of the standard of his radiology reporting on multiple pregnancies, and provide a written apology to Ms A.
24. It was recommended that the Midwifery Council consider whether a competency review of RM E is warranted. It was also recommended that RM E undertake further education and training on the midwifery guidelines and standards, in conjunction with the New Zealand College of Midwives, and provide a written apology to Ms A.

### Complaint and investigation

25. The Commissioner received a complaint from Mr A about the services provided to his partner, Ms A during her pregnancy. On 6 Month3 2015 the following issues were identified for investigation:
- *Whether Radiology Service 1 provided an appropriate standard of care to Ms A in Month2.*
  - *Whether Dr D provided an appropriate standard of care to Ms A in Month2.*
  - *Whether Mr B provided an appropriate standard of care to Ms A between 31 Month2 and 4 Month6.*
  - *Whether Dr C provided an appropriate standard of care to Ms A between 31 Month2 and 4 Month6.*
26. On 19 January 2017 the investigation was extended to include:
- *Whether RM E provided an appropriate standard of care to Ms A between Month1 and Month6.*
27. The parties directly involved in the investigation were:

Ms A

Consumer

<sup>3</sup> Right 6(1) states that every consumer has the right to the information that a reasonable consumer, in that consumer's circumstances, would expect to receive.

Mr A	Complainant
Mr B	Provider/sonographer
Dr C	Provider/radiologist
Dr D	Provider/radiologist
Radiology Service 1	Provider
Radiology Service 2	Provider
RM E	Provider/lead maternity carer/registered midwife

Also mentioned in this report:

Dr F	Obstetrician and gynaecologist
Dr G	General practitioner
Dr H	Maternal fetal medicine specialist

28. Information was also reviewed from: DHB1, DHB2, and a medical centre.
  29. Independent expert advice was obtained from radiologist Dr Rachael McEwing (**Appendix A**), sonographer Ms Naomi Rasmussen (**Appendix B**), and midwife Ms Suzanne Miller (**Appendix C**).
- 

## Information gathered during investigation

### Background

30. In 2013, Ms A found out that she was pregnant. On 30 Month1, Ms A registered with a community-based midwife, RM E, as her LMC. RM E was self-employed at the time.
31. During these events, Ms A was a patient at the medical centre. On 10 Month2, Ms A had an appointment with general practitioner Dr G. Dr G referred Ms A to Radiology Service 1 for her first ultrasound scan. The indication for ultrasound was noted as “LMP [last menstrual period] [date] for current gestation of 8 weeks 6 days and [estimated date] [date]. Severe morning sickness.”

### Radiology Service 1

32. At approximately 11.30am on 15 Month2, Ms A had a uterine ultrasound scan at Radiology Service 1. Ms A’s pregnancy was documented as being at eight weeks and six days’ gestation. The sonographer completed a sonographer’s obstetric worksheet, which documented that there was a single intrauterine gestation sac containing two fetuses with a dividing membrane.
33. There are two membranes surrounding a fetus in the womb: the inner membrane around the fetus is called the amnion; the outer membrane is called the chorion. In relation to identical twins:
  - Where each twin has his/her own placenta, chorionic and amniotic sac they are known as dichorionic/diamniotic;
  - Where the twins share the placenta and chorionic sac but have their own amniotic sac they are known as monochorionic/diamniotic;



- Where the twins share the placenta, chorionic and amniotic sac, they are known as monoamniotic/monochorionic.
34. The worksheet for this visit documented that the impression was of a monochorionic/diamniotic (MC/DA) twin pregnancy. One of the fetuses was reported as having passed away at approximately seven weeks' gestation. The worksheet stated that Ms A was informed of the findings.
  35. Mr A, Ms A's partner and father of the twins, told HDC that the sonographer told them that the twins were in one sac and that one of the twins had passed away.
  36. The process at Radiology Service 1 is that a radiologist reviews the sonographer's images and worksheet and issues a formal report.
  37. The formal report, dictated by consultant radiologist Dr D at 11.57am, reported that the ultrasound was consistent with a dichorionic diamniotic (DD) twin pregnancy — two gestational sacs within the uterine cavity. One of the sacs was reported as containing a viable fetus with normal cardiac activity and good measurements, and a second gestational sac was reported as containing a smaller demised fetus with no cardiac activity, with a crown-rump length (CRL) of 11mm. The report indicated that a follow-up review in two to three weeks' time could be considered to reassess appearances.
  38. Dr D's dictation was typed up by a typist and, at 12.23pm, Dr D verified the report. The report was sent to Dr G and copied to RM E. Ms A and Mr A were given a copy of the scans on a dvd.
  39. Dr D told HDC:
 

“I have been a practising general radiologist in [the area] for the last 19 years. ... I am very familiar with the sonographic differences between monochorionic and dichorionic pregnancy. I am also aware of the importance of distinguishing between the two with regard to risk stratification and management of the pregnancy.

I am at a complete loss to explain why I have dictated ‘dichorionic diamniotic’ when the pregnancy was clearly ‘monochorionic diamniotic’. Dichorionic diamniotic twin pregnancies are the type we most commonly encounter and perhaps I was distracted at the time of dictating, with the more common ‘dichorionic diamniotic’ phrase being dictated instead. I failed to note the error at the time of report verification, and am extremely disturbed with regard to any impact this may have had on the subsequent management of the pregnancy.

I cannot recall whether the sonographer spoke to me about the scan findings at the time. It would be usual practice for her to do so, unless I am with a patient performing a procedure.”
  40. Radiology Service 1 told HDC that another explanation for the error in the reporting on the type of twinning could be that its typist incorrectly transcribed Dr D's dictation as dichorionic, and the error was not picked up when Dr D verified the report prior to sending it out. However, Radiology Service 1 went on to say: “[A] transcription error is unlikely ... the

error was most likely made by [Dr D] at the time of dictating the report.” Radiology Service 1 also told HDC that it is now not possible to check the original dictation as, unless there is a reason to retain them, the dictation files are automatically deleted after a few weeks.

41. On 30 Month2, Ms A had an antenatal visit with RM E. No mention was made in the clinical record regarding the scan from 15 Month2. Routine assessments were noted as normal.
42. RM E told HDC that her documentation was sparse but that she considered the scan reports to be part of the client’s midwifery notes. Therefore, she did not “duplicate the information”. Mr A told HDC that RM E never discussed the scan reports with him and Ms A; in contrast, RM E stated: “Scan reports were discussed at the appointments following each scan.”

## **Radiology Service 2**

### *31 Month2*

43. On 31 Month2, Ms A had an obstetric ultrasound performed by sonographer Mr B at Radiology Service 2. Mr B is one of two directors at Radiology Service 2. He has been a sonographer for over 20 years.
44. The images show that vascularity (blood flow within blood vessels) was assessed using colour Doppler.<sup>4,5</sup> There were no images showing assessment of chorionicity and amnionicity.
45. Ms A’s pregnancy was documented as being at 11 weeks and one day’s gestation.
46. Mr B told HDC that at Radiology Service 2, the formal radiologist’s report was written and typed by him and reviewed and signed off by radiologist Dr C. Dr C provided radiology services to Radiology Service 2, and worked off-site.
47. In this case, Mr B typed and wrote the formal report, and radiologist Dr C reviewed and signed it off. The formal report for this visit noted that the demised twin had a CRL of 20mm. The report recorded that the viable fetus was showing regular movements, that adnexal review was normal, and that it was too early for a formal nuchal assessment. In addition, the formal report noted: “There was a twin demise noted within the single sac.” No specific mention of chorionicity or amnionicity was given. There was no comparison with the previous report from Radiology Service 1.
48. Mr B told HDC that he first confirmed that Ms A’s pregnancy was a monochorionic twin pregnancy at the first scan (at Radiology Service 2) by documenting that there was a single gestational sac. He said:

---

<sup>4</sup> A Doppler ultrasound test uses reflected sound waves to see how blood flows through a blood vessel.

<sup>5</sup> As is discussed in more detail below, in monochorionic twin pregnancies, colour Doppler is used to distinguish between whether one of the twins is demised or whether it was an acardiac twin (abnormally formed, usually without a heart or cardiac activity). If one of the twins is acardiac (as opposed to being a demised twin), a syndrome known as TRAP (also defined below) can result. With single twin demise there will be an absence of blood flow between the twins, but with TRAP there will be a demonstrable blood flow going from the live twin into the acardiac twin. TRAP will not always result in cases where there is an acardiac twin, but it is important to assess its possibility, and this is done through assessing vascularity via the use of colour Doppler.

“I do state there is single sac in the report and this would/should imply this is at least a monochorionic pregnancy. This remark did not delineate between a MCMA twin and a MCDA twin pregnancy. This I agree could have and should have been done better. I would expect better of myself as a sonographer to report and state this clearly. ... I should have clearly define[d] the amnioncity and chorionicity being the first visit of the patient to our clinic.”

49. Likewise, Dr C acknowledged to HDC that the word “monochorionic” was not used in the report, and stated this was an oversight. He told HDC, however, that the type of twinning was “obviously ascertained”. He stated that “the reporting of a ‘single sac’ does not leave any room for misunderstanding of the chorionicity”. He said that the term “single-sac” is not ambiguous and can only mean monochorionic. Furthermore, he said: “There is clearly and explicitly a single sac (i.e. monochorionic) pregnancy from the first time we scanned [Ms A].”
50. In response to my provisional opinion, Dr C said that when he signed off the scan report, he was unaware of the content of the initial scan obtained at Radiology Service 1. He said he did not know the report from Radiology Service 1 had described the twins as dichorionic diamniotic. Furthermore, he said: “If I had been aware of the earlier misdiagnosis of DCDA, I would certainly have been at pains to correct the diagnosis to MCDA.”
51. Dr C also said that the report is not a ‘template report’ but written in a bullet point style, often “quite terse and impersonal” ensuring the relevant data is included. He said “that switch between lay language to specialist medical terminology in the report sometimes fails to occur.”
52. Mr A told HDC that Mr B advised them both that the demised twin would be reabsorbed by Ms A’s body.
53. RM E received a copy of the report from Radiology Service 2. She told HDC that the first scan at Radiology Service 2 “did not indicate any change in the position [compared with the previous report from Radiology Service 1]”. She said:

“The ‘twin demise noted within the single sac’ did not alert me to any change. Both twins are in single sacs with DCDA pregnancies, which is what I thought was being reported. No mention was made of only one Chorion, or a change in diagnosis to MCDA. Had the report identified a change in diagnosis to Monochorionic Diamniotic that would have alerted me to the need for referral at this earlier time.”

### *13 Month3*

54. On 13 Month3 (at 13 weeks), a nuchal translucency assessment scan (to measure the clear space in the tissue at the back of the baby’s neck) was conducted by Mr B. A colour image was provided to HDC from this visit, which showed that vascularity was assessed by use of a Doppler test and, in this image, no vascularity was demonstrated.
55. The formal report signed off by Dr C stated that there was no vascularity or heartbeat noted.
56. The report also documented that the ultrasound findings indicated that the deceased baby had increased in size, the length being 28mm, and that some oedematous changes (swelling due to

excessive fluid) were noted. Mr B told HDC that the increase in size of the deceased twin was put down to oedema.

57. Dr C told HDC that the swelling of a fetus after demise is almost inevitable with post-mortem oedema. He said:

“It is one of the cardinal sonographic signs of a deceased or moribund fetus that it will exhibit subcutaneous oedema, and hence would be expected to enlarge, as it did between the first and second scans at [Radiology Service 2].”

58. Mr A said that Mr B told him that the demised twin increasing in size was normal, as it was the demised baby “breaking down”.

59. RM E was provided with a copy of Mr B’s report.

60. On 22 Month3, Ms A had an antenatal visit with RM E. Assessments were noted as normal. There is no documentation of any discussion relating to the ultrasound scans, and there is no comment regarding any consideration given to referring Ms A for specialist care. As noted above, Mr A told HDC that the scans were never discussed with him and Ms A at the antenatal visits. RM E, on the other hand, stated that each scan report was discussed.

61. RM E told HDC:

“I was unsure whether the Twin referral criteria applied with the demise of one twin, but was concerned about the growth of the second sac, so I made a phone-call to the Obstetric Team at [Hospital 1] for advice on when it would be appropriate to refer. The recommendation was for referral following the Anatomy scan<sup>6</sup> at around 20 weeks. This was not documented in the clinical notes as this was me seeking clarity around referral guidelines.”

62. On 20 Month4, a further antenatal visit was conducted by RM E’s colleague, a registered midwife. Assessments were noted as normal, but Ms A complained of a racing heart. The midwife documented that there was a suggestion of heart palpitations, and a “referral via GP for cardiac monitoring” was suggested. Ms A did not visit her GP for this, and no further action was taken.

63. RM E told HDC:

“No information was provided to [Ms A’s] GP during my care of [Ms A]. Midwives don’t generally provide information to GPs other than the referral with details about the baby after the midwifery care finishes at 6 weeks post-delivery.”

#### *24 Month4*

64. On 24 Month4 Ms A had an anatomy scan performed by Mr B. Ms A’s pregnancy was documented as being at 18 weeks and six days’ gestation. A colour Doppler test was taken.

---

<sup>6</sup> Performed between 18 and 22 weeks, this scan can ascertain the sex of the baby and is used to take measurements of the baby.

65. Mr B's antenatal worksheet for this visit indicated that the deceased twin had increased in size, and queried whether this might be due to oedematous changes. The worksheet stated that there was no vascularity present but that specialist review was recommended. The formal report, signed off by Dr C, documented Mr B's findings and stated that the deceased twin had increased in size, measuring 86 x 56mm long, "with hypoechoic [oedematous] changes". The report noted that there was no vascularity present, and recommended specialist review.
66. Dr C told HDC that at this scan, "further enlargement of the demised fetus was felt to be unusual".
67. RM E told HDC that at around this time (during Month4), Mr A first expressed his concern to her about the increasing size of the demised twin. She said that, prior to the anatomy scan on 24 Month4, her advice to Ms A and Mr A had been based upon the clinical information and recommendations provided by the radiologists. RM E told HDC: "It is not within my scope of practice to interpret or make recommendations following a scan, and even in hindsight, I had no reason to do so in this case."

### **First referral to antenatal clinic**

68. On 31 Month4, RM E sent a referral to DHB1's antenatal clinic. This was for Ms A to have a specialist obstetric review based on the advice given in the radiology report from Radiology Service 2 of 24 Month4. The referral outlined that one of the twins had died at approximately 7 weeks, but that remnants of the demised twin were growing (measurements from the last two scans were provided), and that the other twin was growing normally to date.
69. On 16 Month5, Mr A, Ms A, and her mother attended an appointment with obstetrician and gynaecologist Dr F at Hospital 1's antenatal clinic. Dr F documented that a DCDA twin pregnancy had been diagnosed at the first antenatal scan on 15 Month2, and that the current review had been prompted by the deceased twin increasing in size. Dr F noted that Ms A was generally well. He further noted that, while there were a few conditions that could be of concern, he tried to be reassuring at that stage. Dr F recommended further ultrasound scans so that he could watch the growth of the remaining twin, confirm the location of Ms A's placenta (which was low-lying), and continue to observe the remnants of the twin.
70. Dr F requested that the ultrasound pictures that had already been taken be sent to him for review, and it was documented on the reporting letter to RM E that Ms A was to have a further scan on 4 Month6.
71. On 17 Month5, Ms A had a further antenatal visit with RM E. Normal assessments were noted, daily movements were noted, and it was also documented that a scan had been booked for 3 Month6 "to assess growth and re-measure [the] twin sac".

### **The ultrasound service — 3 Month6**

72. On 3 Month6, Mr B performed a growth scan. Ms A's pregnancy was noted to be at 24 weeks and five days' gestation.
73. A Doppler test was taken, and Mr B's antenatal worksheet for this visit indicated vascularity with umbilical artery flow toward the demised twin, and identified Twin Reversed Arterial Perfusion (TRAP) syndrome.

74. TRAP is a very rare condition, occurring only in monozygotic (identical) twin pregnancies, and only when the twins share the same placenta (monochorionic). About 75% of affected twins have separate amniotic sacs (diamniotic twin) while the remainder share the same amniotic sac (monoamniotic twins). The diagnosis requires a normal appearing twin (the pump or donor twin), an abnormal appearing twin without a heart or any cardiac activity (the acardiac twin), and demonstration of arterial blood flow from the pump twin to the acardiac twin. While usually diagnosed in the first trimester of pregnancy, TRAP can be overlooked as a possible diagnosis when one twin of an identical pair is noted not to have visible cardiac activity early in gestation. However, rather than early single twin demise, it becomes clear on subsequent imaging that both twins are continuing to grow despite the absence of cardiac activity in one of the twins. Colour flow Doppler ultrasound is used to help to distinguish TRAP from single twin demise, as there will be absent flow in the setting of single twin demise compared to demonstrable flow in an acardiac twin (TRAP). Without intervention, the stress required to maintain two fetal circulations can lead to high-output heart failure in the pump twin (more likely when the acardiac twin is large), with death of the pump twin in about 25% of untreated cases.
75. Dr C told HDC that he “[h]ad never previously encountered this entity in over 20 years of obstetric ultrasound reporting”.
76. Dr C signed off the formal report for this scan. The report documented Mr B’s findings as noted above, and recorded that whereas the previous scan, dated 24 Month4, showed no vascularity, vascularity was now detected in the deceased twin, and the demised twin had grown further — 141mm x 63mm. The report stated: “Umbilical artery flow is toward the remnant twin and has a peak velocity of 30cm’s.” The report also documented that the viable fetus had an “isolated echogenic focus in the left ventricle”,<sup>7</sup> and stated: “The anatomy of the heart otherwise appears normal. There is no evidence of hydrops.”<sup>8</sup>
77. Dr C noted that TRAP was evident, and specialist review was recommended.
78. Mr A told HDC that during this scan, Mr B advised him and Ms A that something was not right, as the deceased baby appeared to be still growing. RM E told HDC that Mr B called her to advise her of this. In addition, Ms A also called RM E. RM E told HDC that she did not discuss TRAP with Ms A during this telephone call. RM E stated: “[This was because] I had never heard of TRAP, so was not in a position to explain the intricacies of the condition.”
79. On the same day, RM E arranged an urgent referral for review by an obstetrician at DHB1. The information contained in the referral notes included: “Initially noted diamniotic, dichorionic twin pregnancy with fetal demise on 8 week scan. Scan today showing vascularity and continued growth in sac of demised twin.” The reason for the referral was noted to be: “Twin pregnancy. Fetal demise. Twin Reversed Arterial Perfusion [TRAP].” RM E attached the scan report from this visit to the referral.
80. After arranging the referral, RM E provided no further care to Ms A.

---

<sup>7</sup> The scan showed a bright spot on the left ventricle of the heart.

<sup>8</sup> A serious condition where abnormal amounts of fluid build up in two or more body areas of a fetus or newborn.



### **Second referral to antenatal clinic — DHB1**

81. On 4 Month6, Ms A attended the antenatal referral appointment with an obstetrician and gynaecologist consultant. The consultant noted that the previous ultrasound scan indicated that the deceased twin had increased significantly in size and had a blood supply, and that the viable twin was growing normally but had an echogenic focus in the left ventricle. The consultant documented that he had not had any previous experience of a situation such as this and, accordingly, he referred Ms A to the Maternal Fetal Medicine Unit in DHB2 for assessment.

### **Maternal Fetal Medicine Unit — DHB2**

82. On 13 Month6, Ms A had a fetal well-being scan carried out by a maternal fetal medicine specialist (MFM), Dr H, at the Maternal Fetal Medicine Unit at Hospital 2. Dr H diagnosed an acardiac twin pregnancy<sup>9</sup> with the impression of an MCDA twin pregnancy. It was documented that Ms A's first scan report had described the pregnancy as DCDA, but that on review of the scans by DHB2 the early appearances were suggestive of an MCDA pregnancy. Dr H told HDC that she had access to all of the radiology reports relating to Ms A's ultrasound scans.
83. The fetal well-being scan recorded that the healthy twin was growing normally and doing well, but that there was a high chance that Ms A would need to deliver within the next month, owing to the significant risk of cardiac failure posed to the healthy twin.
84. In response to my provisional opinion, Mr A said that this was the first time they were informed about the TRAP diagnosis.
85. On 17 Month6, Ms A had a follow-up fetal well-being scan carried out by a sonographer at Maternal Fetal Medicine. It was noted that Ms A had experienced threatened preterm labour over the weekend, but that this had settled without treatment.
86. The report in relation to this scan documented: “[T]he heart is slightly generous in size. The acardiac measures 16 x 8 x 12 cm today, slightly larger than last week.”
87. An MFM specialist documented that she agreed with Dr H's assessment, which was that “in utero intervention would not be technically feasible and would present more risk than would be acceptable at this gestational age”. The specialist also documented that the healthy twin was beginning to show signs of deterioration, and it was thought that she was probably anaemic. The specialist and Dr H believed that, given the signs of deterioration (including developing hydrops), the healthy twin was showing that delivery was indicated.

### **Caesarean at 27 weeks' gestation**

88. On 19 Month6, Ms A underwent a Caesarean delivery (at 27 weeks' gestation) at DHB3. An obstetrics and gynaecology consultant assisted at the surgery, and documented on the operation note that DHB2 MFM recommended delivery as the best option, as they would be unable to perform ablation of the arterial shunt (the procedure used for removal of the deceased twin).

<sup>9</sup> Another term for TRAP syndrome (the term is also used to refer to the deceased twin of the pair).

89. Both twins were delivered. Baby A was born weighing 1052g and was referred to the neonatology team. Baby A was born with pulmonary valvula stenosis,<sup>10</sup> and suffers from feeding and growth development issues.

### **Further information**

#### *Radiology Service 2*

##### Vascularity not detected earlier

90. Radiology Service 2 told HDC that the reason the vascularity in the deceased twin was not detected until 3 Month6 may have been because of a “very low vascular flow which could not be detected early on”.
91. Dr C told HDC:

“The lack of evidence of demised twin perfusion did not allow the earlier diagnosis of TRAP. I defer to the technical expertise of the sonographer performing the scan who could show no blood flow to the second twin. I have rather less skill in the optimisation of Doppler scanning than [Mr B] who I have found to be a very experienced, careful and accurate sonographer. I understand that in hindsight, there may have been some technical adjustments made to enhance the demonstration of very low flow, but in my view, very low flow rates are very difficult to demonstrate and would be dependent on other scanning conditions at the time (patient body habitus, acoustic window quality, etc).”

#### *Radiology Service 1*

92. Dr D provided HDC with a copy of an email sent by him to Dr H after these events. In the email, Dr D said that the events had been discussed at a monthly meeting of radiologists as a reminder of the need for accuracy in both reporting and verifying reports. He also said: “The error is entirely mine. The sonographer’s note clearly stated the pregnancy was Monochorionic and the images are consistent with that.”
93. Radiology Service 1 said that it was unaware of any mitigating factors that may have contributed to a “suboptimal reporting environment for [Dr D]”. It outlined the following:
1. An adequate amount of time was spent performing the examination.
  2. The examination was well documented.
  3. There was no delay in the report being dictated.
  4. There was no delay in the typed report being available for verification.
  5. The report was made available to the referring clinician in an appropriate timeframe.
  6. It is standard practice for there to be direct discussion between the sonographer and radiologist in a situation like this.
  7. It is not possible to comment on whether Radiology Service 2 reviewed the initial examination performed at Radiology Service 1. Ms A would have received a CD copy of the examination prior to leaving the practice. It is noted that the first time that Radiology Service 1 sent a copy of the report to Radiology Service 2 was on 16 Month1 when one was requested.

---

<sup>10</sup> A defect that occurs because of abnormal development of the fetal heart.



94. Both Dr D and Radiology Service 1 were very apologetic for their role in these events, and told HDC that, as Radiology Service 1 did not scan Ms A later in her pregnancy, there was no opportunity to recognise the error.

### **Responses to provisional opinion**

95. Mr A and Ms A, Dr D, Dr C, Mr B, RM E and Radiology Service 1 were given the opportunity to respond to relevant sections of my provisional opinion.
96. Mr A and Ms A responded and their responses have been incorporated into this report where relevant.
97. Dr D responded. He said he accepted “fully the seriousness of the reporting error and deeply regret[ed] the chain of events that followed”. Dr C responded. He accepted that the use of the term ‘single sac’ was not clear enough and said his “incidence of failure to use the approved terms has dropped to zero”. Dr C further said: “I offer a heartfelt apology to [the family] for anything that I might have done differently that might have made a difference to the outcome.” Other responses from Dr C have been incorporated into this report where relevant.
98. Mr B had no further comment to make.
99. RM E responded. She said: “Upon reflection, I have changed my practice around management of twin pregnancies, and now refer twin pregnancies to the Obstetric Clinic immediately on diagnosis. I apologise to [Ms A] and [Mr A] for my error.” She also said that her documentation was poor in this case. She said there was a lot of discussion at each visit and that she should have documented more. She said: “This case has reminded me of the importance of documenting all discussions at each antenatal visit and will continue with this in my practice.” RM E also said that she has since updated her knowledge around TRAP.
100. Radiology Service 1 responded. It stated: “We accept the outcome of your thorough assessment of this difficult case.” It said that: “Unfortunately because of the sequence of events neither [Dr D], nor [Radiology Service 1] were party to any further assessment of this case, and had no further opportunity to alter the outcome.” It also said: “We have certainly taken the opportunity to ensure that all our sonographers and radiologists learn from this episode.”

---

### **Opinion: Dr D — breach**

101. On 15 Month2, Ms A had her first ultrasound scan. This was performed at Radiology Service 1. The sonographer documented Ms A’s pregnancy as being at eight weeks and six days’ gestation. The sonographer’s worksheet noted that there was a single sac containing two fetuses with a dividing membrane, and that the impression was of a monochorionic twin pregnancy. One of the fetuses was reported as having passed away at approximately seven weeks’ gestation.
102. At this appointment, Ms A and Mr A were informed that the twins were in one sac, and that one of the twins had died.

103. Dr D, Radiology Service 1's consultant radiologist, reviewed the sonographer's images and worksheet and issued a formal report. He reported that the ultrasound was consistent with a dichorionic twin pregnancy (two sacs), and that one of the sacs contained a viable fetus, and the second sac contained a smaller demised fetus with no cardiac activity. He suggested that a follow-up review in two to three weeks' time could be considered to reassess appearances.
104. Dr D's dictation was typed up by a typist, and a short time later he verified the report. It is now not possible to check the original dictation, as at Radiology Service 1 the dictation is deleted automatically after a few weeks. I accept Dr D's explanation as to the most likely cause for the error, and find that he dictated the type of twinning incorrectly. The reported findings of a dichorionic pregnancy are incorrect, and clearly differ from the sonographer's findings and imaging.
105. I note Dr D's response that he is very familiar with the differences between monochorionic and dichorionic pregnancies. I also note his comment that the pregnancy was clearly monochorionic, and that dichorionic twin pregnancies are the type most commonly encountered.
106. I am critical that this mistake was made. Dr D not only incorrectly dictated the wrong type of twinning, he elaborated on this finding and provided further details (detailing that one of the sacs contained a viable fetus and that a second sac contained a smaller demised fetus with no cardiac activity). Furthermore, Dr D failed to note the error when checking his report. By failing to report clearly that Ms A's pregnancy was monochorionic, Dr D failed to provide a reasonable standard of care to Ms A. Accordingly, I find that Dr D breached Right 4(1)<sup>11</sup> of the Code.

---

### **Opinion: Radiology Service 1 — no breach**

107. Radiology and Ultrasound clinics have a responsibility for ensuring that consumers receive an appropriate standard of care. In addition to any direct liability for a breach of the Code, under section 72(2) of the Health and Disability Commissioner Act 1994 (the Act), employing authorities are vicariously liable for any act or omission by an employee. However, a defence is available to an employing authority under section 72(5) of the Act, if it can prove that it took such steps as were reasonably practicable to prevent the act or omission.
108. In my view, Radiology Service 1 was entitled to rely on Dr D to report the ultrasound correctly. I accept Dr D's response that the error was entirely his, and that the sonographer's note clearly stated that the pregnancy was monochorionic. I also accept Radiology Service 1's response that there was no delay in the report being dictated by Dr D, and no delay in the typed report being available for verification by him. Overall, I do not consider that there were additional steps that would have been reasonably practicable for Radiology Service 1 to have taken to prevent Dr D's error. Accordingly, I find that Radiology Service 1 is not vicariously liable for Dr D's breach of the Code.

---

<sup>11</sup> Right 4(1) states that every consumer has the right to have services provided with reasonable care and skill.

## Opinion: Mr B — adverse comment

### Assessment of chorionicity and amnionicity

109. On 31 Month2, Ms A had an obstetric ultrasound performed by sonographer Mr B at Radiology Service 2. At Radiology Service 2, the formal radiologist's report was written and typed by the sonographer and then reviewed and signed off by a radiologist.
110. At this scan, Ms A's pregnancy was documented as being at 11 weeks and one day's gestation.
111. There were no images saved showing assessment of chorionicity and amnionicity. Mr B's report noted: "There was a twin demise noted within the single sac." There was no specific mention of chorionicity or amnionicity.
112. Mr B said that stating that there is a single sac "would/should imply this is at least a monochorionic pregnancy". However, he acknowledged that the words "single sac" did not outline whether this was an MCMA twin or an MCDA twin pregnancy. He said: "This I agree could have and should have been done better. ... I should have clearly define[d] the amnionicity and chorionicity being the first visit of the patient to our clinic."
113. As part of this investigation I obtained expert advice from sonographer Ms Naomi Rasmussen. Ms Rasmussen advised that as the report prepared by Mr B stated that there was a single sac, this means that the twins were monochorionic.
114. Ms Rasmussen further advised:
 

"From the still images, I can't determine if an amnio was looked for or identified. Accepted practice with viable twins is to describe whether they are Dichorionic Diamniotic, Monochorionic Diamniotic or Monochorionic Monoamniotic. Although the description of the chorionicity in this case could have been clearer, it was described and correct."
115. While I am critical that Mr B did not explicitly use the word "monochorionic" in his report, and did not state whether this was an MCMA twin or an MCDA twin pregnancy, I accept Ms Rasmussen's advice that referring to only a single sac in a sonographer's report "would be within the range of accepted practice".

### Assessment for vascularity in the deceased twin

116. At the examination on 31 Month2, the images show that vascularity (blood flow, in this case between the twins) was assessed using colour Doppler.
117. At the next scan, performed on 13 Month3 (when Ms A's pregnancy was at 13 weeks), a colour image showed that vascularity was assessed by use of a Doppler test, and no vascularity was demonstrated.
118. The formal report for this visit stated that there was no vascularity noted.
119. On 24 Month4, Ms A had an anatomy scan performed by Mr B. The pregnancy was documented as being at 18 weeks and six days' gestation. A colour Doppler test was taken.

120. Mr B's antenatal worksheet for this visit indicated that the deceased twin had increased in size, and queried whether this could be due to oedematous changes. The worksheet stated that there was no vascularity present, and that specialist review was recommended. The formal report, signed off by Dr C, documented the findings, including that there was no vascularity present.
121. On 3 Month6, Mr B performed a further scan. Ms A's pregnancy was noted to be at 24 weeks and five days' gestation. A Doppler test was taken, and indicated vascularity with umbilical artery flow toward the demised twin. TRAP syndrome was identified.
122. TRAP syndrome is a very rare abnormality. It follows the death of one of the fetuses in monochorionic twin pregnancies. The demised twin receives a blood supply from the live twin, thereby compromising the surviving baby's own blood supply and development. It can be diagnosed only on ultrasound, by observation of umbilical artery flow towards the dead twin.
123. Use of colour Doppler occurred at each of the examinations performed on 31 Month2, 13 Month3, and 24 Month4. Ms Rasmussen advised that assessment and documentation of vascularity in this way is accepted practice. However, I note Ms Rasmussen's advice that from reviewing the images, she cannot be certain how well the TRAP twin was assessed for vascularity, as "[u]ltrasound is a real time examination so it is difficult to be certain from still images if there was a thorough sweep through the TRAP with low flow settings".
124. At the examination of 3 Month6, vascularity was identified by Mr B, and a finding of TRAP syndrome made. Ms Rasmussen advised that a TRAP twin is very rare, and most sonographers would not encounter one in their career. She further advised that a diagnosis of TRAP could not be made until vascularity was demonstrated. Furthermore, she stated:
- “Looking for vascularity in the TRAP twin and looking for hydrops in the normal twin are the requirements to make the diagnosis and assess the effect on the pump twin [the live twin]. In this case from the static images that appears to have been done. I feel that the scans performed by [Mr B] are within the range of accepted standard of practice.”
125. Overall, I accept Ms Rasmussen's advice that it appears that “vascularity was looked for and not able to be detected”. I find that Mr B assessed vascularity adequately at each scan, and am not critical of the reporting of vascularity.
- 

## **Opinion: Dr C — breach**

### **Background**

126. At Radiology Service 2, the radiologist's report was written and typed by the sonographer and then reviewed and signed off by a radiologist. For Ms A's care, the radiologist was Dr C. Dr C provided radiology services to Radiology Service 2, and worked off site.

### **Reporting of chorionicity and amnionicity — breach**

127. On 31 Month2, Ms A had an obstetric ultrasound performed at Radiology Service 2. As per the practice at Radiology Service 2, following Ms A's scan the draft formal report was

written by sonographer Mr B, and reviewed and signed off by Dr C. Given Dr C's role, regardless of who drafted the report, he is responsible for its contents once he signs it off.

128. The report stated: "There was a twin demise noted within the single sac." No specific mention of chorionicity or amnionicity was made.
129. Dr C acknowledged that not using the word "monochorionic" in the report was an oversight. He told HDC, however, that the type of twinning was "obviously ascertained". He stated that "the reporting of a 'single sac' does not leave any room for misunderstanding of the chorionicity", and said that the term "single sac" is not ambiguous and can mean only "monochorionic".
130. As part of this investigation I obtained expert advice from radiologist Dr Rachael McEwing. Dr McEwing advised that not reporting chorionicity and amnionicity at these scans constituted a significant departure.
131. Chorionicity and amnionicity was not reported clearly in Dr C's report. While I note that a single sac was mentioned, owing to the significance of the finding and the possible implications of it, Dr C should have ensured that this was highlighted clearly in the final report. It is vital to state the type of twinning explicitly through the reporting of chorionicity and amnionicity. I find that the use of the term "single sac" was not clear enough, and was, as is demonstrated in this case, open to interpretation. I am critical that Dr C did not ensure that this had been reported clearly.
132. By failing to report clearly that Ms A's pregnancy was monochorionic, Dr C failed to provide a reasonable standard of care to Ms A. Accordingly, I find that Dr C breached Right 4(1) of the Code.

#### **Increase in size of decreased twin — adverse comment**

133. On 13 Month3 (when Ms A's pregnancy was noted as being at 13 weeks) Dr C's report stated that the ultrasound findings indicated that the deceased baby had increased in size, and that some oedematous changes were noted.
134. Dr C told HDC that the swelling of a fetus after demise is almost inevitable with post-mortem oedema. He said that at this stage it was an expected finding.
135. I note that at a further scan carried out at Radiology Service 2 on 24 Month4, Ms A's pregnancy was documented as being at 18 weeks and six days' gestation, and when further growth was noted in the deceased twin and again when it was queried whether this could be due to oedematous changes, that on this occasion, the formal report, signed off by Dr C, recommended specialist review. Contrary to the 13 Month3 scan, Dr C said that following the 24 Month4 scan, "further enlargement of the demised fetus was felt to be unusual".
136. Dr McEwing advised that "if there are unusual or unexplainable findings on scan it would be reasonable to expect that early referral would be recommended". I note Dr McEwing's advice that it is "extremely unusual" for a demised embryo to increase in size on follow-up scans. She also advised that this was a characteristic of TRAP syndrome.

137. Dr McEwing said that referral should probably have occurred following the 13 Month3 appointment. She stated that the deceased baby still growing at that stage was “a very unusual finding in a failed pregnancy”. Dr McEwing advised that owing to the increase in size of the demised twin, a specialist referral at the 13 Month3 appointment “would have been optimal”. I am concerned that this did not occur.
- 

## **Opinion: RM E — breach**

### **Background**

138. On 30 Month1, Ms A registered with midwife RM E as her lead maternity carer (LMC).

### **Discussion of scans and referrals**

139. Ms A had four scans during the time that she was being cared for by RM E, and all of the reports of those scans were sent to RM E:
- 15 Month2 — first ultrasound scan at eight weeks six days’ gestation. Incorrectly reported as dichorionic diamniotic (DD) twin pregnancy and report noted that one twin had died.
  - 31 Month2 — ultrasound ordered by RM E. Report stated “twin demise noted within the single sac”.
  - 13 Month3 — ultrasound ordered by RM E. Report noted that deceased twin had increased in size.
  - 24 Month4 — ultrasound ordered by RM E. Report noted deceased twin had increased in size and recommended a specialist review.
140. During this time, Ms A had antenatal visits with RM E on 30 Month2 and 22 Month3. Mr A told HDC that RM E never discussed any of the scans with him and Ms A. RM E told HDC that the scan reports were discussed at the appointments following the scans. However, there is no mention of any discussion in the clinical record. While it is concerning that Mr A and Ms A consider that RM E did not discuss the scans with them, and RM E did not document those discussions, given the conflict of evidence, I am unable to make a finding regarding the extent of any discussion about the scan reports.
141. I note that the Ministry of Health Referral Guidelines<sup>12</sup> mention multiple pregnancies (more than one fetus) as falling into the transfer of care category. My midwifery expert, Suzanne Miller, advised that the guidelines mean that the LMC must recommend to the woman that the clinical responsibility for her care be transferred to an obstetric specialist.
142. While I note that the Referral Guidelines in place at the time were not prescriptive on when transfer of clinical responsibility in such situations should occur, or when the referral should be made, there is no evidence that RM E had a discussion with Ms A about needing to refer her under the Referral Guidelines.

---

<sup>12</sup> *Ministry of Health Referral Guidelines* (MOH, 2012 Multiple pregnancies, Code 4018).



143. RM E had a conversation with the Obstetric Team at Hospital 1 regarding referral. She said that she was advised to refer Ms A at around 20 weeks' gestation, but did not record this in the clinical notes. In any case, the Referral Guidelines make it clear that the LMC must recommend to the woman that the responsibility for her care be transferred to a specialist given that her pregnancy is, or may be, affected by her condition. It is the woman's decision whether to have such a referral.
144. I further note that the Midwifery Standards in place at the time state that when the midwife identifies deviations from the norm, after discussion with the woman she is to consult and refer as appropriate.<sup>13</sup>
145. Ms Miller advised that owing to the death of one twin, a discussion about referral under the Midwifery Standards was warranted at the 22 Month3 visit. She advised that the implications of having had one twin die within the context of a twin pregnancy would warrant an initiation of consultation regarding referral. Ms Miller said that such a discussion would have enabled Ms A to make an informed choice as to whether or when she would see an obstetrician.
146. I consider that this was information that a reasonable consumer in Ms A's circumstances would expect to be told. For failing to recommend to Ms A on 22 Month3 that a consultation with a specialist was warranted, RM E breached Right 6(1) of the Code.
147. I am also concerned at RM E's comment that it was not within her scope of practice to interpret or make recommendations following a scan. Ms Miller advised that an LMC will use her own judgement regarding ongoing clinical decisions, taking into account the findings of investigations she has initiated, whether this be blood tests, scans, or any other antenatal assessment. In light of the Midwifery Scope of Practice,<sup>14</sup> which states that a midwife provides necessary support and advice, identifies complications that may arise, and accesses appropriate medical assistance, Ms Miller advised that an LMC will make clinical recommendations using the information at her disposal, and may be guided by recommendations from radiologists and other specialists. I am critical that this did not occur.

#### **Change in type of twinning not noted**

148. On 31 Month2, Ms A had an obstetric ultrasound performed at a different ultrasound clinic. The formal report for this visit documented: "There was a twin demise noted within the single sac."
149. No specific mention was made of chorionicity or amnionicity, and there was no comparison with the previous report from Radiology Service 1, which had (incorrectly) identified a dichorionic diamniotic twin pregnancy (two gestational sacs).
150. It has been accepted that the word "monochorionic" should have been used in the report, and that ideally amnionicity and chorionicity would have been defined clearly.
151. When RM E received a copy of this report, she told HDC that she did not think the scan indicated any change from the previous report. She said:

<sup>13</sup> The New Zealand College of Midwives (NZCOM) *Midwives Handbook for Practice 2008: Standards of Practice*, Standard six (2008 p 20).

<sup>14</sup> *Ibid*, p4.

“The ‘twin demise noted within the single sac’ did not alert me to any change. Both twins are in single sacs with DCDA pregnancies, which is what I thought was being reported. No mention was made of only one Chorion, or a change in diagnosis to MCDA. Had the report identified a change in diagnosis to Monochorionic Diamniotic that would have alerted me to the need for referral at this earlier time.”

152. RM E did not recognise that there was any change. However, Ms Miller advised that “[m]idwives would be expected to recognise this discrepant finding and appreciate the implications of the ‘new’ diagnosis for the ongoing pregnancy”. She considered this to be a moderate departure from reasonable care.
153. While I note that it has been acknowledged by both the sonographer and the radiologist at Radiology Service 2 that their reporting should have been clearer, I am critical that RM E did not appreciate the change in reporting. What was documented should have alerted her, at the very least, to a potential difference in diagnosis, and she should have sought clarification from the radiologist. For these reasons, I find that RM E did not provide Ms A with care of a reasonable standard, and therefore breached Right 4(1) of the Code.

#### **Increase in size of deceased twin**

154. On 3 Month6, during a further ultrasound scan at Radiology Service 2, the rare syndrome — TRAP — was identified, and the radiologist report recommended specialist review.
155. Mr B called RM E to advise her of the diagnosis and, following the scan, Ms A called RM E. RM E did not discuss TRAP with Ms A during her telephone call, as she said that she “had never heard of TRAP, so was not in a position to explain the intricacies of the condition”.
156. On the same day, RM E arranged an urgent referral for review by an obstetrician at DHB1.
157. While ideally RM E would have discussed the diagnosis of TRAP with Ms A, I note that this is a rare condition, which RM E told HDC she had never heard of. RM E referred Ms A to obstetric care appropriately at this time.

---

## **Recommendations**

158. I recommend that Dr C:
- a) Arrange for a clinical peer review of the standard of his radiology reporting on multiple pregnancies, and report back to HDC within three months of the final report being issued.
  - b) Provide a written apology to Ms A. The apology is to be sent to HDC within three weeks of the date of the final report, for forwarding to Ms A.
159. I recommend that Dr D:
- a) Arrange for a clinical peer review of the standard of his radiology reporting on multiple pregnancies, and report back to HDC within three months of the final report being issued.



- b) Provide a written apology to Ms A. The apology is to be sent to HDC within three weeks of the date of the final report, for forwarding to Ms A.
160. I recommend that the Midwifery Council consider whether a competency review of RM E is warranted.
161. I recommend that RM E:
- a) Undertake further education and training on the midwifery guidelines and standards, in conjunction with the New Zealand College of Midwives, within three months of the date of the final report.
  - b) Provide a written apology to Ms A. The apology is to be sent to HDC within three weeks of the date of the final report, for forwarding to Ms A.
- 

### **Follow-up actions**

162. A copy of this report with details identifying the parties removed, except the experts who advised on the case, will be sent to the Medical Council of New Zealand, and it will be advised of Dr D's and Dr C's name.
163. A copy of this report with details identifying the parties removed, except the experts who advised on the case, will be sent to the New Zealand College of Midwives, and it will be advised of RM E's name.
164. A copy of this report with details identifying the parties removed, except the experts who advised on this case, will be sent to the Royal Australian and New Zealand College of Radiologists.
165. A copy of this report with details identifying the parties removed, except the experts who advised on this case, will be sent to the Australasian Society for Ultrasound in Medicine, and the Health Quality & Safety Commission, and a copy will be placed on the Health and Disability Commissioner website, [www.hdc.org.nz](http://www.hdc.org.nz), for educational purposes.

## Appendix A: Independent radiology advice to the Commissioner

The following expert advice was obtained from Dr Rachael McEwing, radiologist:

### *“Complaint background*

On 15 [Month2], [Ms A] had an ultrasound at 8 weeks, 6 days gestation at [Radiology Service 1], reporting two gestational sacs, with one sac not showing any cardiac activity.

On 31 [Month2], at 11 weeks 1 day gestation an ultrasound at [Radiology Service 2] was performed, which indicated that there was only one sac. At each subsequent scan, it was noted that the demised twin had increased in size.

At 18 weeks 6 days, due to the increasing size of the demised twin, specialist review was recommended.

At 24 weeks 5 days gestation, vascularity was detected and a diagnosis of Twin Reversed Arterial Perfusion (TRAP) sequence was made.

[Ms A] attended multiple consultations with obstetricians, and it was explained to her that intervention was too risky.

She gave birth at 27 weeks, and the surviving twin, [Baby A], suffers multiple health conditions.

[Mr A] believes that earlier intervention may have resulted in [Baby A] being born closer to term and not experiencing such significant health issues.

### *[Mr B’s] response*

[Mr B] advises that a firm diagnosis of TRAP could not be made until 3 [Month6] when [Ms A] was 24 weeks 5 days gestation, as this was the first time he could detect vascularity.

I have reviewed the following:

- A CD with the ultrasound images from [Ms A’s] scan at [Radiology Service 1] performed at 8 weeks 6 days (by LMP) on 15 [Month2]
- A CD with the ultrasound images from [Ms A’s] scans performed at [Radiology Service 2]. Note although one of these studies has been labelled [13 Month3], it is a duplication of the scan from 31 [Month2], not the scan from 13 [Month3]. The study from 31 [Month2] contains a sonographer worksheet.
- A second CD with the scan performed on 13 [Month3] (sent August 2015).
- Copies of sonographer worksheets from [Radiology Service 1] and [Radiology Service 2] (supplied August 2015).
- A copy of [Mr A’s] complaint, [Radiology Service 2’s] response, and [Ms A’s] relevant clinical documentation.

Clinical Notes summarised (the supplied notes were not in chronological order and there were several duplications):

I note documentation of DC/DA –1 in the Antenatal Care Record — indicating a dichorionic, diamniotic twin pregnancy, (i.e. two separate sacs), with loss of one twin.

Referral from LMC to Antenatal Clinic for ‘Twin pregnancy with fetal demise of 1 twin (Low lying placenta at 20 w scan, for recheck at 32 w). Referral details document ‘Fetal

demise of one twin at approx. 7 wks. Remnants of demised twin measuring 86 x 56 mm on scan at 18 w 6 days on 24 [Month4] — previous 20 mm at 11 weeks and 11 mm at 8 wks.

Antenatal Clinic letter from [DHB1] at gestation 22 weeks 2 days, documenting the history of DCDA twin pregnancy with demise of one twin on scan at 8 weeks 5 days, and increase in size of the demised twin to 86 x 56 mm with oedematous changes. [Dr F] recommended serial scans to monitor growth in the surviving twin and to continue to observe the twin remnant. He requested the scan images for review. Next clinic appointment arranged for 13 [Month6] after [Ms A's] next ultrasound scan, which was booked for 4 [Month6].

LMC referral to Antenatal Clinic 3 [Month6] after the scan at 24 weeks 5 days for 'Twin pregnancy. Fetal demise. Twin Reversed Arterial Perfusion'.

Letter to LMC [RM E] from [an] Obstetrician at [Hospital 1] after review in Antenatal Clinic regarding the scan findings of an increase in size in the 'twin remnant' from 86 to 140 mm, and a blood supply flowing towards it.

[Fetal Medicine Service] referral made on 4 [Month6] by [Hospital 1] [Obstetrician].

7 [Month6] note written on referral that the referral had been received and triaged, and receptionist will ring [Ms A] ? on 10/7 (sic) or in 10/7 (10 days) to confirm appointment.

### **Ultrasound Scans:**

#### **1. Scan at [Radiology Service 1] dated 15 [Month2].**

Clinical information: LMP [date] for current gestation of 8 weeks 6 days and EDD [date]. Severe morning sickness.

The scans are transabdominal only, performed on a Toshiba Aplio 500 and are of adequate quality. The scan duration (inferred from times recorded on the images from start to finish) was 11 minutes. 15 ultrasound images were obtained.

LMP: [date], EDD by dates: [date]. Gestational age by dates: 8 weeks 6 days.

The images demonstrate an anteverted uterus containing a single chorionic sac with a fine separating membrane, indicating a *monochorionic, diamniotic* twin pregnancy.

Within one sac is a live embryo measuring approximately 21 mm, in keeping with a gestational age of 8 weeks 4 days (+/- 4 days). Cardiac activity has been assessed with an M (motion) wave Doppler. The embryo within the second sac is smaller, 11 mm, approximately 7 weeks 0 days (+/- 4 days). The M mode trace for the smaller embryo has been degraded by movement artefact and cannot be interpreted.

Sonographer's worksheet:

*Single IU (intrauterine) gestation sac containing 2 fetuses (sic) with a dividing membrane.*

*Fetus 1 CRL = 21 mm (8+5 weeks). FHR (Fetal heart rate) 176 bpm*

*Fetus 2 CRL = 11 mm. No cardiac activity.*

*Impression: MCDA (Monochorionic diamniotic) twin pregnancy with fetal demise of one of the foetuses. Pt (patient) informed. She would like to return for a further scan in 1–2 wks to check on viable fetus for peace of mind.*

The formal report summary reads:

*Ultrasound appearances are consistent with a dichorionic diamniotic twin pregnancy with foetal demise of one of the two twins.*

The report findings of dichorionic pregnancy are incorrect and differ from the sonographer's findings and imaging.

## **2. Scan at [Radiology Service 2] dated 31 [Month2]**

The referral reads:

NT ultrasound

Clinical information:

EDD from early scan is [date]. GA is 11 weeks 1 day

History of twin demise. Single viable foetus remains.

Transabdominal scans performed on a GE Loqiq S8, scanning time 6 minutes, 11 images obtained. There is a gap of almost 3 minutes from an image obtained at 12.14.52 (3<sup>rd</sup> image) to the next image (4<sup>th</sup> image) at 12.17.35, raising the possibility that not all images from this examination have been saved onto the CD.

Images show a live fetus, with crown rump length (CRL) measurements of 39 and 42 mm, in keeping with a gestation of 10 weeks 6 days–11 weeks 0 days. Cardiac activity has been documented with M mode.

The smaller demised twin has been labelled twin 2 and measured at 19.8 mm. A membrane is visible around the embryo. Vascularity has been assessed using colour Doppler. However, the settings have not optimised for low flow (the scale is set at 21 cm/sec). No power Doppler has been used.

There are no images showing assessment of chorionicity and amnionicity, and no mention of this in the (original) worksheet. The formal report documents a 'single sac' which implies a monochorionic pregnancy, but this is not explicitly stated in the report.

The sonographer worksheet has been scanned onto the images and is included at the end of this report.

Please note that this worksheet is substantially different from the one subsequently requested and sent to me (as it had been originally overlooked) on August 10 — Appendix B.

There is no mention on the (presumed) original worksheet of assessment for vascularity or heart beat in the demised embryo. The sonographer comment reads:

*History of twin demise. Rebooked for NT assessment. Remnant twin demise measures 20 mm.*

On the subsequently provided worksheet (provided August 10, 2015), the comment reads:

*Previous imaging at [Radiology Service 1]. Report obtained DCDA twins with demise of x 1 twin. Demised twin again noted, LS = 20 mm CRL, no FHR and no vascularity.*

*Viable singleton too early for NT assessment — rebooked*

*(remaining comment illegible)*

Ultrasound report:

There is no specific mention of chorionicity or amnionicity, nor comparison to previous reports or imaging.

The relevant report findings are as follows:

*There is a single viable fetus identified with regular movements. There is a twin demise noted within the single sac. The remnant twin measures CRL of 20 mm, no foetal heart beat.*

The report conclusion reads:

*Single viable fetus with remnant twin demise still evident. [Ms A] has rebooked for formal nuchal assessment.*

### **3. Scan at [Radiology Service 2] on 13 [Month3] at 13 weeks 0 days**

Clinical information:

*NT ultrasound*

Transabdominal ultrasound performed on a GE Loqiq E9. Image quality is satisfactory.

17 images provided, total scanning time 6 minutes (from 12.20.39 to 12.26.23). However, I note a gap of 3 minutes in the examination, from image 0014 on the CD, taken at 12.23.57 to image 0015, taken at 12.25.54. This comprises half of the entire length of the examination. Only one image of the demised twin has been supplied (image 0014), raising the possibility that further images were obtained but have not been copied onto the disc supplied for review.

The provided image has measured the crown rump length (CRL) of the demised twin at 28 mm, 8 mm more than on the previous scan.

A colour Doppler box has been placed over the demised twin and no vascularity has been demonstrated on this single image. However, I note that the colour Doppler has not been optimised for the situation (using a scale of 21 cm/s). In situations such as this, parameters should be adjusted to demonstrate low flow parameters, by reducing the scale, and by using power Doppler if necessary.

I would consider that any increase in CRL in the case of early embryonic demise would be highly unusual and would expect that this finding would prompt more thorough examination.

There is no documentation of chorionicity nor amnionicity.

Sonographer worksheet (note: not attached to the study, retrospectively provided August 2015)

*Live twin documented, CRL 65 mm, NT 1.4 mm*

*'Twin demise again noted, CRL 28 mm*

*? oedematous change*

*No vascularity detected,*

*No FHB (fetal heart beat)'*

Formal report relevant findings:

*There is a single viable foetus identified with regular movements. There is a remnant twin noted with no vascularity OR heart beat. Length is 28 mm with some oedematous changes noted.*

The worksheet and report do not document type of twinning (chorionicity and amnionicity).

#### **4. Scan at [Radiology Service 2] on 24 [Month4] at 18 weeks 6 days**

Clinical information:

History of twin demise with one twin remaining

Examination performed on a Logiq S8, 52 images, scan time 14 minutes. Scan detail is adequate. No request form nor sonographer worksheet has been scanned into this examination.

Anatomy assessment and measurements performed of the live fetus.

The demised twin has been measured at 86 mm length, 56 mm AP (anteroposterior dimension), including oedema surrounding the fetus. There are now bony structures evident within this fetus. A colour Doppler box has been placed over the fetus. On the images provided there appears to be a trace of vascularity at the periphery of the fetus/within the oedematous tissue surrounding the fetus, and in umbilical cord adjacent to the fetus. However, the latter has not been demonstrated entering the fetus. The trace of vascularity within the oedematous tissues of the fetus could possibly represent artefact. Colour Doppler settings have again not been optimised for low flow (a scale of 30 cm/s has been used, and no power Doppler images have been recorded).

Sonographer Worksheet (provided 10 August 2015):

Comments:

*Single viable fetus remains.*

*Remnant twin increased in size today 86 x 56 mm. No vascularity or heart beat  
? oedematous ? other — discuss — specialist review*

Scan Report Summarised:

‘Single viable fetus’, normal growth and anatomy. Heart not well visualised, and review of heart and face recommended at 24 weeks gestation.

Low lying placenta (*sic*), recommended review at 32 weeks.

‘Remnant twin’ 86 x 56 mm with oedematous changes. No vascularity present.

Specialist review recommended.

#### **5. Scan at [Radiology Service 2] on 3 [Month6] at Gestational age 24 weeks 5 days:**

Clinical information:

Growth and liquor review. History of twin demise but increasing twin remnant size. Previous scan dated 24 [Month4] measured twin remnant at 86 x 56 mm long. Previous serial scans showed no vascularity.



**Scan review:**

The examination has been performed on a GE Logiq S8. Adequate scan quality.

40 images obtained over a scan time of 22 minutes.

The scans have shown completion of anatomy not visualised at the earlier anatomy scan.

The 'demised' twin has shown further increase in size to 142 x 83 x 63 mm, with well developed bony structures internally. Pulsed wave Doppler waveforms have been obtained showing reversal of vascular flow through the umbilical artery of this twin, and normal flow away from the umbilical artery of the normal twin, findings characteristic of twin reversed arterial perfusion (TRAP) sequence.

Sonographer's Worksheet (note: not attached to the study, retrospectively provided August 10, 2015):

*Remnant twin with vascularity. Size 141 x 63 mm.*

*Live fetus no poly (polyhydramnios/increased fluid), no hydrops*

*Comments: Remnant twin is identified with vascularity with umbilical artery towards the demised twin — TRAP syndrome*

*Internal flow = 30 cm/sec.*

**Summary of Scan Report Findings:**

*Live fetus.*

*Remnant twin with increasing size, 141 x 63 mm and vascularity to the remnant twin.*

*Umbilical artery flow is toward the remnant twin and has a peak velocity of 30 cm/s.*

*Echogenic left ventricular focus, otherwise normal limited anatomy and growth parameters of the other 'viable' fetus, with estimated fetal weight (EFW) 62<sup>nd</sup> centile.*

*Normal amniotic fluid.*

**Conclusion:**

*TRAP with vascularity identified to remnant twin with increasing size.*

*Specialist review recommended.*

**Ultrasound Issues:**

It is essential to determine type of twinning at initial scan and to confirm at subsequent scans. This entails assessment of number of sacs, chorionicity and amnionicity. It is good practice to reassess chorionicity and amnionicity in the first trimester if multiple examinations have been performed. In the case that the original scan had not been performed at the same practice I would have expected this to be carefully reassessed and clearly documented. It is unclear as to whether the first report or images from [Radiology Service 1] had been obtained for review by the sonographer and radiologist involved in the subsequent scan. A worksheet provided in August 2015 for the first scan performed at [Radiology Service 2] differs significantly to the one included with the scanned images, and review of previous imaging or report is not mentioned in the (presumed) original worksheet.

In my opinion, failure to assess chorionicity and amnionicity in a first trimester twin pregnancy, regardless of whether there has been early demise of one of the embryos, departs from accepted practice.

Although the sonographer at the earliest scan performed at 8 +6 weeks at [Radiology Service 1] had correctly identified the pregnancy as monochorionic, diamniotic (MCDA), this had been incorrectly reported by the radiologist as a dichorionic diamniotic twin pregnancy. It is unclear for the reason for the discrepancy in the sonographer's impression and the formal radiology report, but may possibly represent a typographic error. Careful review of imaging and supporting documentation, as well as review of the formal report before it was issued to the referrer is an expectation in reporting of radiologic studies. Failure to do so constitutes a departure from accepted practice.

TRAP sequence can only occur in monochorionic twin pregnancies. It is possible that the incorrect initial report caused the sonographer and radiologist involved in the subsequent scans to discount evidence of an increasing 'remnant twin' size as secondary to oedema rather than as a pathologic process.

The second scan was performed at a different practice, and it appears that the first scan images had not been reviewed, whereby the diagnosis of MCDA twin pregnancy would have been evident. The type of twinning should have been ascertained at the second and subsequent scans if previous imaging was not available for review.

Not assessing, and not reporting, chorionicity and amnionicity at these scans, in my view, constitutes a significant departure from accepted practice.

TRAP sequence is a very rare complication of monochorionic twin pregnancies, occurring in approximately 1 in 35 000 pregnancies and 1% of monozygotic twins. The diagnosis could potentially be difficult to make if the sonographer was inexperienced in obstetric ultrasound. However, I would expect a sonographer performing a reasonable caseload of obstetric ultrasound to be aware of the diagnosis. Failure to diagnose a monochorionic pregnancy could potentially allow a sonographer and radiologist to discount the possibility of TRAP sequence.

**Advice requested:**

**Could vascularity have been detected in any of the ultrasounds prior to the scan of 3 [Month6]?**

Although the sonographer has shown that he has attempted to identify vascularity by colour Doppler at the scans prior to 3 [Month6], the colour Doppler settings have not been optimised for a low flow situation. Adjusting the scale and colour gain, and use of power Doppler may have allowed assessment of vascularity.

There is a gap in timing of image acquisition in two of the scans. It might be useful to assess the raw examination data to ensure that all images have been sent for review.

**When would it have been appropriate to have recommended specialist review?**

In my opinion, the increase in size of the acardiac twin (labelled 'twin remnant' in the [Radiology Service 2] worksheets and reports) from the first scan at 8 weeks 6 days on 15 [Month2] to the second scan 16 days later should have raised some concerns. This is a very unusual finding in early failed pregnancy.

The pregnancy should have been very carefully assessed at this stage for chorionicity and amnionicity. There is no evidence on the imaging provided, worksheet(s) nor report that this occurred.



The subsequent scan at 13 weeks had shown further increase in size of the acardiac twin, but again no evaluation of chorionicity. Referral at this stage, or earlier, would have been optimal.

However, I note that specialist referral was appropriately recommended at the anatomy scan, when the 'remnant twin' had increased significantly in size (although this increase in size was not specifically commented upon, measurements were provided in the report). The development of bony structures in the acardiac twin was also not commented upon, presumably not recognised.

The diagnosis of TRAP sequence is rare and may be difficult, particularly early in pregnancy. Failure to recognise that the pregnancy was monochorionic, and apparent failure to visualise vascularity within the acardiac twin have no doubt contributed to difficulty in making the diagnosis earlier in the pregnancy.

**What is the standard of care/accepted practice?**

Although TRAP sequence is very rare I would expect a sonographer performing a reasonable caseload of obstetric ultrasound to be aware of the diagnosis.

The standard of accepted practice regarding twin pregnancy requires careful assessment of type of twinning (chorionicity and amnionicity). This is essential for pregnancy management, even if there has been early demise of one of the twins, as appeared to be the case here.

The scan durations in the provided studies from [Radiology Service 2] appear rather short, raising the question of whether the sonographer was time-pressured and did not have adequate time to complete full assessment of the pregnancy at each appointment. It might be helpful to review the appointment times allocated for obstetric scans at this practice and to assess whether these conform to accepted guidelines.

**Has there been a departure from the standard of accepted practice? If so, how significant a departure?**

In my opinion, the lack of assessment of chorionicity and amnionicity represents a significant departure from accepted practice. I believe that this would be the view of my peers.

Lack of optimisation of colour Doppler settings constitutes a slight departure from accepted practice. I would expect an experienced sonographer with a reasonable obstetric ultrasound caseload to have the ability to optimise colour Doppler settings and to take the time to do so.

Scan durations are shorter than I would have expected, also possibly constituting a departure from accepted practice.

Sonographer worksheets constitute part of the clinical record, and guide the reporting radiologist to relevant findings. Alteration of these documents as appears to have occurred in this case (for the scan in 31 [Month2]), in my opinion, constitutes a significant departure from accepted practice. The other studies did not have worksheets attached to the images in the first CD and it is unclear whether the remaining supplied documents sent in August 2015 are original or not.

If images have deliberately been erased from the CDs of the ultrasound examinations sent for review, this would also constitute a significant departure from accepted practice.

I believe that my peers would share this opinion.

Dr Rachael McEwing, MBChB, FRANZCR  
Radiologist”

Dr McEwing was provided with [Dr D’s], [Mr B’s], and [Dr C’s] responses to her expert advice. After reviewing the responses, on 27 May 2016 Dr McEwing provided the following further comment:

“I have pondered the correspondence at length but I really have nothing to add to my previous report.

I note [Dr D’s] response and apology and that unfortunately this was human error.

[Mr B’s] comments about the differences in worksheets are noted and I would not expect the distributed report to look like the worksheet. As clearly outlined in my report, my concern was that there were two handwritten sonographer worksheets for the same examination which differed significantly in the description of the demised fetus — the one initially provided on the CD with the images made no mention of vascularity but the subsequently provided one did. I cannot think of a valid reason why this would occur.

My concerns regarding gaps in scan times remain but unless a forensic examination of the ultrasound machine was taken this would be difficult to prove either way. I accept there are valid reasons for apparent gaps in scan times but evaluating the scans provided still provokes concern.

Personally, if I had the misfortune to be involved in a significant mistake like this I would offer a heartfelt apology to the patient and her family, and ensure that I obtained better understanding so that I wouldn’t make a similar error in the future.

I acknowledge that this is a relatively rare occurrence but my expectation would be that the sonographer and reporting radiologist would be aware of the syndrome if they were involved in routine obstetric scanning.

If there are unusual or unexplainable findings on scan it would be reasonable to expect that early referral would be recommended.

Kind regards  
Rachael.”

Dr McEwing was provided with responses to her expert advice including an audit regarding how many scans were taken at each of [Ms A’s] visits. After reviewing this information, on 1 December 2016 she provided the following further comment:

“1. Discrepancy in the 2 handwritten worksheets — to my mind this has not been satisfactorily explained. It would be highly unusual for a sonographer to generate 2 worksheets for the same examination and ‘losing’ one seems very unlikely, particularly given that one was scanned into PACS along with the images. Unfortunately, this makes me concerned that a worksheet was generated subsequent to the complaint in this case.

2. There is discrepancy in the number of images uploaded to PACS as per the PACS administrator and those provided to me on CD for review.

— **31 [Month2]** 11 images sent, 13 uploaded to PACS

- **13 [Month3]** 17 images sent, 18 uploaded
- **24 [Month4]** 52 images sent, 53 uploaded
- **3 [Month6]** 40 images sent, 42 uploaded

It would be useful to have the entire set of images re-sent for review given this discrepancy.

3. [Mr B's] statement that it would be extremely unlikely for the normal fetus not to develop hydrops between 8 and 24 weeks is not supported by the literature nor my own experience.

I am disappointed that [Mr B] seems unwilling to apologise to the patient and her partner. Obviously this was a difficult case with unexpected adverse findings, and I suspect that [Mr B] works in an essentially unsupported environment, combined with lack of operator experience in complex obstetric pathology. However, the most helpful approach in my opinion would be to accept responsibility for the errors in interpretation, undertake further education and issue a heartfelt apology in order to minimise the probability of another adverse outcome.”

A further set of the ultrasound images was requested and re-sent to Dr McEwing. On 3 March 2017 Dr McEwing provided the following additional comment in relation to these images:

**“Scan from 31 [Month2]**

13 images provided labelled 0004–0016

It is unclear whether images 1–3 are missing or the remaining images have been labelled incorrectly.

No worksheet provided (was included with the original images on the first CD).

No further contributory information.

**2. Scan from 13 [Month3]**

18 images provided, labelled 0002–0019. It is unclear whether image 1 is missing or the remaining images have been labelled incorrectly.

No worksheet included.

No further contributory information.

**3. Scan from 24 [Month4]**

53 images provided labelled 0002–054. It is unclear whether image 1 is missing or the remaining images have been labelled incorrectly.

Colour Doppler flow entering the ‘demised’ twin via umbilical cord.

In my opinion, these would be diagnostic findings of TRAP syndrome if the operator was experienced.

#### **4. Scan from 3 [Month6]**

42 images, labelled 0000–0041.

Diagnosis of TRAP made.

In my opinion the diagnosis of TRAP should have been made on the scan at 18 weeks 6 days, if not earlier. It is extremely unusual for a demised embryo to increase in size on follow up scans.

The earlier scan colour Doppler settings were not optimized for low flow therefore the diagnosis was not made earlier. The increase in size of the ‘demised’ embryo before this was unusual and should have prompted very careful evaluation with optimization of colour Doppler settings.

The 18 week 6 day scan of 24 [Month4] shows vascularity which appears to be in the umbilical cord entering the ‘demised’ fetus, which has shown a significant increase in size from previous scan, has developed significant oedema and has shown internal development of bony structures, characteristic features of TRAP syndrome. An operator experienced in complications of twin pregnancy would be expected to have made the diagnosis based on the scan findings.

In summary, TRAP syndrome is a relatively rare condition and requires considerable operator experience to diagnose early in pregnancy. Hopefully [Mr B] has engaged in continuing education particularly around monochorionic twin pregnancy and will recognize the signs earlier in future.”

## Appendix B: Independent sonography advice to the Commissioner

The following expert advice was obtained from sonographer Ms Naomi Rasmussen:

“Thank you for asking me to review the scans performed by Sonographer [Mr B] at [Radiology Service 2]. As a Sonographer I will attempt to give my opinion with reference to what I understand is accepted practice in New Zealand.

*1. Whether chorionicity and amnionicity was clearly assessed and reported.*

The report on the 31/10/17 does mention there was a single sac. This means the twins were monochorionic. From the still images, I can't determine if an amnio was looked for or identified. Accepted practice with viable twins is to describe whether they are Dichorionic Diamniotic, Monochorionic Diamniotic or Monochorionic Monoamniotic. Although the description of the chorionicity in this case could have been clearer, it was described and correct.

This would be within the range of accepted practice.

*2. Whether an appropriate assessment for vascularity or heartbeat in the 'deceased' embryo was taken at the relevant appointments.*

In each of the examinations performed on 31 [Month2], 13 [Month3] and 24 [Month4] colour Doppler has been used to assess and document that no vascularity could be identified. On the 3 [Month6] when vascularity was identified with colour, Spectral Doppler was used to confirm this and the direction of blood flow.

This would be accepted practice.

*3. Whether you consider that vascularity should have been detected in any of the ultrasounds prior to the scan of 3 [Month6].*

The accepted way to look for vascularity is with colour Doppler and this was performed at each scan. Ultrasound is a real time examination so it is difficult to be certain from still images if there was a thorough sweep though the TRAP with low flow settings. My impression is that vascularity was looked for and not able to be detected.

No departure from accepted practice.

*4. Please comment on the timing of the TRAP diagnosis and on the sonographer's role in making this diagnosis.*

A TRAP twin is very rare and most sonographers would not encounter one in their career.

When it continued to grow a recommendation for specialist review was recommended at 18 weeks 6 days. There was no vascularity detected in the TRAP twin till 24 weeks 5 days.

A diagnosis of TRAP could not be made till vascularity was demonstrated.

No departure from standard practice.

5. *When you consider it would have been appropriate to recommend specialist review.*

Recommendation for specialist review would be made by the radiologist not the sonographer.

This had been made at 18 weeks 6 days before the diagnosis of TRAP because of the continued growth of the presumed demised twin.

No departure from standard practice.

6. *Whether relevant scans were taken.*

The static images recorded are within accepted practice.

Again as ultrasound is a real time examination and it is difficult to assess how carefully the TRAP twin was assessed for vascularity, but there appears to have been 3 mins on the 24<sup>th</sup> [Month4] when colour was used to look for vascularity in the TRAP twin.

No departure from standard practice.

7. *A TRAP twin is rare and most sonographers would not encounter one in their scanning career.*

Looking for vascularity in the TRAP twin and looking for hydrops in the normal twin are the requirements to make the diagnosis and assess the effect on the pump twin. In this case from the static images that appears to have been done.

I feel that the scans performed by [Mr B] are within the range of accepted standard of practice. Vascularity was assessed in the TRAP at each scan and specialist referral recommended when there was continued growth of the TRAP, even without vascularity at 18 weeks 6 days.

My only recommendation is that for future reports of twin pregnancies, even with fetal demise, to state the *chorionicity and amnionicity* using accepted terminology of Dichorionic Diamniotic, Monochorionic Diamniotic or Monochorionic Monoamniotic. (DCDA, MCDA or MCMA.)

Yours Sincerely,

Naomi Rasmussen.”

## Appendix C: Independent midwifery advice to the Commissioner

The following expert advice was obtained from midwife Ms Suzanne Miller:

“You have requested my advice concerning care provided to [Ms A] by Lead Maternity Care (LMC) midwife, [RM E] in the period between [Month1] and [Month6].

I have read the Commissioner’s Guidelines for Independent Advisors (June 2016 version), and can confirm that I have no personal or professional conflict which prevents me from providing an opinion on this case.

My name is Suzanne Miller. The following identifies my qualifications to provide this opinion:

My qualifications are Registered Midwife 1991, Registered Comprehensive Nurse 1988 and Master of Midwifery (Distinction) 2008 from Victoria University of Wellington. I have been practising midwifery continuously since 1991, firstly as a hospital-based midwife at Kenepuru Maternity Unit, and subsequently as an LMC midwife in both Auckland and Wellington. I have experience providing midwifery care across the spectrum from homebirth, through primary, secondary and tertiary maternity settings.

Since 2010 I have been employed by the Otago Polytechnic School of Midwifery, where I teach across both the undergraduate and postgraduate midwifery programmes. I continue to maintain a small midwifery caseload alongside my employment.

I am a member of the New Zealand College of Midwives (Wellington Region) and have held office both as treasurer (Auckland, Wellington) and Core Committee member (Wellington). I am currently a member of the Education and Research Committee of the NZCOM region. I was a Midwifery Standards Review midwifery reviewer for six years, a Midwifery First Year of Practice reviewer for two years, and currently mentor graduate midwives via the Midwifery First Year of Practice Programme. I hold a Ministerial appointment (nominated by NZCOM) to the Neonatal Encephalopathy Working Group of the Perinatal and Maternity Mortality Review Committee. I am an NZCOM-ratified expert midwifery advisor, and have been appointed as a panel member for the Midwifery Council of New Zealand Professional Conduct Committee.

I have received and reviewed the following documents:

- HDC letter dated 26 September 2016 outlining the background to the complaint and points to consider for my opinion.
- HDC website complaint form completed by [Mr A] (partner of [Ms A]) dated [date]
- Letter of response from [RM E], dated 8 July 2015 (via email to [HDC]).
- Clinical records of [RM E] pertaining to [Ms A’s] care (including combined first trimester screening result, ultrasound scan results, referrals and letters from parties referred to).
- Clinical records pertaining to the care of [Ms A] at [DHB1] and [DHB3]
- Email correspondence and further copies of clinical records from [DHB1] and [DHB3].



- Letter dated 13 September 2016 from [NZCOM Legal Advisor] to [HDC].

You have requested that I provide an opinion as to whether the care provided by [RM E] to [Ms A] was reasonable in the circumstances and why. Specifically:

- The general care provided to [Ms A] by [RM E]
- The appropriateness of [RM E's] management at the time the twin pregnancy was first identified, including
  - a) Whether [Ms A] should have been referred for specialist care at that time
  - b) Whether it was acceptable that, as stated by [Mr A], [RM E] 'never' explained the ultrasound scan reports to him and [Ms A]
  - c) [RM E's] view that the scan of 31 [Month2] 'did not indicate any change in the position' despite it referring to a single sac whereas the earlier scan referred to two sacs
  - d) Any other aspects of [RM E's] care I consider warrant any comment.

### **Background to [Ms A's] case: timeline of midwifery care**

[Ms A] attended a booking visit with [RM E] on 30 [Month1] and at this time signed a Registration with a Lead Maternity Carer form. At this visit a number of topics were discussed, including identification of the need for 'referral to clinic' (presumably an obstetric clinic) for assessment due to [Ms A's] previous vaginal repair surgery from a childhood accident. A note was made at this time to obtain the previous clinical record from the Starship Hospital. [Ms A] was 6 weeks and 5 days pregnant at this visit.

On 15 [Month2] (at 8 weeks and 6 days) [Ms A] underwent an ultrasound scan at [Radiology Service 1], having been requested by Dr G. The indication for ultrasound was noted as 'LMP [date] for current gestation of 8 weeks 6 days and EDD [date]. Severe morning sickness'.

This scan, as reported and copied to [RM E], identified a twin pregnancy, noted to be DCDA (dichorionic, diamniotic)\* with unfortunately one twin having died at approximately seven weeks gestation. The radiologist ([Dr D]) noted that 'assuming no clinical concerns follow up review in 2–3 weeks could be considered'.

30 [Month2] — antenatal visit with [RM E] (11 weeks) — it was noted that a further scan (as one component of combined first trimester screening) was scheduled for the following day. No mention was made in the clinical record regarding the previous scan findings, but other routine assessments were normal.

31 [Month2] — Scan at [Radiology Service 2], requested by [RM E] (11 weeks, 1 day). No clinical indication for this scan is given in the report. The report notes 'There is a twin demise noted within the single sac' with the remnant twin measuring CRL (crown-rump length) of 20mm and with no foetal heartbeat. The surviving twin was growing normally, but it was too early to assess the nuchal translucency measurement to complete the combined first trimester screening assessment and a further scan was booked at this time.



\* DCDA dichorionic, diamniotic refers to the situation where twins have separate gestational sacs, and may have either separate placentae, or a fused placenta.

13 [Month3] (13 weeks gestation). Scan (requested by [RM E]) at [Radiology Service 2] for nuchal translucency (NT) measurement (as follow-up from 31 [Month2] for combined first trimester screening). At this time the remnant twin measured 28mm and showed 'oedematous changes' and the report identified no vascularity and no heartbeat. The surviving twin was growing and moving as expected and NT was measured at 1.4mm.

The combined first trimester screening report issued on 18 [Month3] suggested a 'low risk' screening result, though the analytes were not included in the risk assessment because there was a suggestion they may be affected by the 'failed twin'.

22 [Month3] (14 weeks 2 days). Antenatal visit with [RM E]. Low risk result noted in the documentation with 'copies given' (? presumably to [Ms A]). A further scan for second trimester anatomy assessment was planned for 24th (? [Month4]). Other assessments normal.

05 [Month4] Documentation records a text being received from [Ms A] by [RM E] 'still has thrush' and a script for an appropriate medication was faxed to [the pharmacy].

20 [Month4] (18 weeks ?3 days). Antenatal visit with [RM E]. Some suggestion of palpitations recorded with [RM E] documenting that 'referral via GP for cardiac monitoring' was suggested. No further documentation relating to this was noted. A script for 'iron' was given (no indication mentioned). Other assessments were normal.

24 [Month4] Scan at [Radiology Service 2], requested by [RM E] (18 weeks 6 days). The remnant twin now measured 86mm x 56mm long (ie larger than previously) with oedematous change noted and no vascularity present. The placenta was noted to be anterior and low-lying. The surviving twin was growing normally and the anatomy assessment was essentially normal but with some features unable to be fully assessed due to the position of the foetus. A repeat scan for further review was recommended along with specialist review.

31 [Month4] Referral made by [RM E] to the [DHB1] Antenatal Clinic for specialist review as 'demised twin remnant now measuring 86 x 56mm on 18w scan'. No referral code was given on the referral form, the indication given was 'Twin pregnancy with fetal demise of 1 twin' and '(Low lying placenta @ 20 w scan, for recheck at 32w)'. Also noted was the past medical history of vaginal repair at age 7. Further detail was recorded about the serial growth of the remnant twin tissue on the referral form also.

17 [Month5] Antenatal visit with [RM E] (22 weeks). Normal assessments. Noted that [Ms A] had been seen the previous day in clinic, daily movements noted and scan booked for 3rd [Month6] 'to assess growth and re-measure twin sac'.

03 [Month6] Scan at [Radiology Service 2] (24 weeks 5 days). Clinical information 'Growth Scan — growth and liquor review. History of twin demise but increasing twin

remnant size. Previous scan dated 24 [Month4] measured twin remnant at 86 x 56mm long. Previous serial scans showed no vascularity. A review of viable foetus heart and face features’.

This scan revealed further growth of the remnant twin tissue (now 141 x 63mm) and vascularity with umbilical arterial blood flow toward the remnant twin tissue was noted.

Viable twin’s anatomy was noted to be normal with an echogenic focus in the left ventricle, normal facial features and normal growth.

TRAP sequence\* was evident but no polyhydramnios or hydrops were noted. Specialist review was recommended along with commencement of a customised growth chart.

\*TRAP (twin reversed arterial perfusion) occurs when there is a disruption to the normal vasculature between twins, where one twin has no heart (acardia) and so blood is pumped from the other (‘pump’) twin in an abnormal reversed sequence. TRAP is a rare condition, occurring in approximately 1 in 9500–11000 pregnancies, and 2.6% of monochorionic pregnancies (van Gemert, van den Wijngaard, & Vandebussche, 2015).

03 [Month6] Following a phone call from both [Ms A] and the sonographer at [Radiology Service 2], [RM E] discussed the situation with (? [Obstetric doctor]) and then faxed an urgent referral to the Antenatal Clinic noting the TRAP sequence and continued growth of remnant twin tissue. [RM E] has said she did not discuss TRAP with [Ms A] during this phone call.

No further care was provided to [Ms A] by [RM E] following this referral.

Issues identified in the complaint:

You have requested that I comment specifically on aspects of the care provided by [RM E] to [Ms A] and outlined above on page 2 of this report. The documentation I have been provided with regarding the complaint from [Mr A] does not concern [RM E]’s midwifery care, rather his complaint relates to the care provided by the sonographer. I therefore cannot address b) above because no documentation has been provided to me that relates to [Mr A]’s assertion that [RM E] ‘never’ explained the ultrasound reports to himself and [Ms A], so the basis of this part of his complaint is not clear.

I will comment on other aspects of [RM E]’s care in relation to the other points noted above.

### **Usual care in a twin pregnancy situation**

According to the Guidelines for Consultation with Obstetric and Related Medical Services (Referral Guidelines) (Ministry of Health [MoH], 2012) multiple pregnancy (Code 4018) falls into the Transfer category. This means that the LMC must recommend to the woman that the clinical responsibility for her care be transferred to an Obstetric Specialist. This does not preclude the LMC’s ongoing involvement in the woman’s care — decisions regarding the respective roles of the various health professionals ‘rest with

the specialist, taking into account the needs and wishes of the woman' (MoH, 2012, p. 12).

The Referral Guidelines themselves are not prescriptive about when the transfer of clinical responsibility must occur, or when the referral is made, suggesting that an individual LMC's clinical judgement along with the woman's informed consent, and availability of services will ideally effect a referral in a 'timely manner'. Some District Health Boards do give some guidance around timing of referral for multiple pregnancy: when a multiple pregnancy is monochorionic (which carries an increased risk of complications) it would be usual practice to offer referral to the woman 'on identification' but certainly by 16 weeks. In a normally progressing DCDA pregnancy, it would be usual practice to refer the woman following the anatomy scan at around 20 weeks. (Examples from [the] tertiary referral centre to which [Ms A] was ultimately referred, and [a secondary referral centre]).

### **General antenatal care provided by [RM E] to [Ms A]**

[Ms A] was seen by [RM E] on five occasions antenatally up to 22 weeks. The frequency of these visits was appropriate, with a Care Plan being initiated at the first visit at 6 weeks 5 days. An indication for referral was noted at this first visit ([Ms A's] previous vaginal repair surgery) although no specific Code in the Referral Guidelines covers this. This referral could have occurred at any stage of the pregnancy as there was no urgency at all — an intention to obtain the Clinical Record pertaining to this previous surgery was noted at this time.

The scan diagnosis and reporting of a DCDA twin pregnancy with identification of a deceased twin occurred at 8 weeks, 6 days. There is no documentation in [Ms A's] notes relating to acknowledgement of this, either in the narrative text 'Comments' section nor in the Antenatal Visits page entry for the following antenatal visit on 30 [Month2], which took place approximately two weeks after the scan. This does not necessarily indicate that no communication occurred between [Ms A] and [RM E] during this time. It is likely that [Ms A] would have had many questions regarding this diagnosis either during the time between visits or at the next visit, so some documentation outlining the substance of any discussion regarding referral and any decision-making in response to the diagnosis would be expected, enabling [RM E] to demonstrate meeting Standards Four and Five of the Standards of Midwifery Practice ('reviews and updates records at each professional contact with the woman' and 'facilitates and records outcomes of conversations related to the decision-making process' (New Zealand College of Midwives [NZCOM], 2008, pp 18–19).

On first identification of the twin pregnancy at 8 weeks 6 days, and reported to be DCDA, even considering the demise of one twin, it was reasonable that no referral was made at this time.

Usual care was provided in relation to other antenatal assessments and opportunities for screening. No blood test results (apart from the combined first trimester screen result) were included in the documentation provided to me but there is no suggestion that this testing did not take place.

### **Appropriateness of management following the 31 [Month2] ultrasound**

Following the scan on 31 [Month2] (at 11 weeks, 1 day) [RM E] states in her letter of response that the scan 'did not indicate any change in the position'. The scan report states 'a twin demise noted within the single sac'. Given that the previous scan had reported a dichorionic twin pregnancy, the finding of a single sac in this instance does indicate a discrepancy between the findings of these two scans. It would be usual in this circumstance for an LMC to contact the Ultrasound provider to clarify this discrepancy and attempt to obtain a clearer diagnosis, so that further discussion could take place with [Ms A] regarding both the recommendation for, and timing of, referral for a monochorionic twin pregnancy, which would typically occur sooner than for a dichorionic twin pregnancy.

In any case this circumstance was unusual due to the death of one twin, and in my opinion a discussion about referral and, if consented to by [Ms A], initiation of consultation was warranted at the following antenatal visit on 22 [Month3]. [Ms A's] clinical notes do not record any discussion regarding the scan result or referral — again this does not mean that no discussion took place, but none is evident in the documentation. Standard Five requires that 'midwifery care is planned with the woman' and Six that 'midwifery actions are prioritised and implemented with no midwifery action or omission placing the woman at risk' including that the midwife 'identifies deviations from normal, and after discussion with the woman, consults and refers as appropriate' (NZCOM, 2008, pp. 19–20).

On 31 [Month4], following the scan on 24 [Month4] which reported increased size of the remnant twin (but no vascularity) and recommendation for specialist review, [RM E] did complete a referral form and an appointment was arranged for 10 [Month5] with the Antenatal Clinic. [Ms A] was unable to attend this appointment due to being overseas but was seen on 16 [Month5] by [Dr F].

This LMC Referral document outlined the relevant medical history, and described the increasing measurements of the remnant twin across three previous scans. It does not specify the pregnancy chorionicity. It is noted that [RM E] described the situation as being 'distressing' for [Ms A] in her referral.

[RM E] saw [Ms A] on one further occasion the day after the Antenatal Clinic consultation had taken place. The notes record that a further scan was planned for [Month6] 3rd to 'assess growth and re-measure twin sac'. When this scan revealed the presence of vascularity and further growth of the remnant twin, an urgent referral was appropriately initiated.

[RM E] states that her care and advice were 'based upon the clinical information and recommendations provided by the Radiologists. It is not within my scope of practice to interpret or make recommendations following a scan'. On this point I disagree with [RM E]. An LMC will use her/his own judgement regarding ongoing clinical decisions, taking into account the findings of investigations they have initiated, whether this be blood tests, scans or any other antenatal assessment s/he or others perform. The Midwifery Scope of Practice states that 'The midwife works in partnership with women, on her (sic) own professional responsibility, to give women the necessary support, care and advice ...' and that 'she identifies complications that may arise in mother and baby, accesses appropriate medical assistance ... [and] provide[s] midwifery care in collaboration with other health professionals' (NZCOM, 2008, p. 4). As such an LMC will make clinical recommendations using the information at her/his disposal, and may be guided by, but

not obliged to comply with, recommendations from radiologists or any other specialist. The Midwifery Code of Ethics outlines that the woman herself is the ultimate decision-maker, once she has been provided with enough understandable information to make an informed choice to accept or decline the recommended approach (NZCOM, 2015).

General comment. Although [RM E] has documented each point of face to face contact with [Ms A], and on each occasion has provided some narrative text briefly describing the care provided, the absence of any documentation that refers to the scan finding of a twin pregnancy with one demised twin up until the first mention in the Comments section on 31 [Month4] at 20 weeks gestation is surprising.

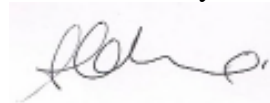
**Summary of opinion:**

With respect to the timing of the referral for consultation, in my opinion it was reasonable that no referral occurred at the time of the initial diagnosis of the twin pregnancy, because at this time [RM E] understood the pregnancy to be dichorionic, and even though one twin had died a follow-up scan in two weeks was a reasonable plan at this very early gestation (8 weeks 6 days).

When the possibility was raised (at 11 weeks 1 day) that the pregnancy was monochorionic rather than dichorionic, a discussion with [Ms A] should have taken place at the following antenatal visit in which the Referral Guidelines recommendation for transfer of clinical responsibility was outlined. It may be that [RM E] now considered this to be a singleton pregnancy, but a discussion about the scan findings would have enabled [Ms A] to make an informed choice as to whether or when she would see an obstetrician, to discuss her options regarding ongoing care. Even though the surviving twin was making normal progress at this time, the implications of having had one twin die, within the context of a twin pregnancy, would warrant an offer of consultation.

With respect to whether [RM E's] assertion that the 31 [Month2] scan 'did not indicate any change in the position' I conclude that [RM E] did not appreciate the implications of the change from an apparent DCDA twin pregnancy to a suggestion of a 'single sac' (monochorionic pregnancy) and that her subsequent care of [Ms A] did not reflect this possible change in circumstance. Clarification of chorionicity and referral at this time may not have changed the overall outcome but [Ms A] would have had further opportunity to make informed choices about her ongoing pregnancy management. Midwives would be expected to recognise this discrepant finding and appreciate the implications of the 'new' diagnosis for the ongoing pregnancy, and [RM E's] peers would conclude that a moderate departure from reasonable care occurred at this juncture.

Yours faithfully



Suzanne Miller  
Midwife  
MCNZ# 15-10430

## References

Ministry of Health (2012). Guidelines for Consultation with Obstetric and Related Medical Services (Referral Guidelines). Wellington: Author

New Zealand College of Midwives (NZCOM) Inc. (2008). Midwives handbook for practice. Christchurch, New Zealand: NZCOM.

New Zealand College of Midwives (2015). Code of Ethics. Retrieved from <http://www.midwife.org.nz/quality-practice/philosophy-and-code-of-ethics>

van Gemert, MJ., van den Wijngaard, JP., & Vandenbussche FP. (2015). Twin reversed arterial perfusion sequence is more common than generally accepted. *Birth Defects Research and Clinical Molecular Teratology* 103:641.”

Additional comment was made by Ms Miller on 31 October 2016:

“Please read this further comment in conjunction with my previous advice dated 17.10.16.

As requested by [HDC], I wish to make further comment about the above complaint with regard to [Mr A’s] assertion that LMC midwife [RM E] did not ever explain the scan findings to himself and his partner, [Ms A].

To briefly summarise: [Ms A] was referred for four scans by [RM E] during the period of antenatal care in which [RM E] was responsible as [Ms A’s] LMC. One further scan result (from the scan on 15 [Month2]), was also available to [RM E] although this one had not been requested by her, but by [Dr G].

Dates and gestations of scans:

15 [Month2] — 8 weeks and 6 days — scan report noted DCDA pregnancy with one demised twin

31 [Month2] — 11 weeks 1 day — scan reported ‘twin demise within the single sac’ and no foetal heartbeat with the remnant twin measuring 20mm.

13 [Month3] — 13 weeks — for completion of nuchal translucency assessment for combined first trimester screening. Remnant twin 28 mm, oedematous changes noted, no heartbeat and no vascularity identified.

24 [Month4] — 18 weeks, 6 days — remnant twin 86 x 56mm, oedematous changes, no vascularity.

03 [Month6] — 24 weeks, 5 days — remnant twin 141 x 63mm, vascularity present with umbilical arterial blood flow toward the remnant twin tissue, TRAP sequence identified. No polyhydramnios or hydops noted.

[Mr A] has told HDC that [RM E] ‘never discussed’ the scan findings with [Ms A] and himself.

## Expectations of communication regarding maternity tests and investigations

Professional guidance regarding the communication of results is contained in the New Zealand College of Midwives (NZCOM) Consensus Statement: Laboratory Testing/Screening (NZCOM, 2016)\*

‘If a midwife orders a laboratory test, she is responsible for following up on the results of the test in a timely manner, including:



- discussing with the woman the interpretation of laboratory/screening results and, if warranted,
- offering the woman a referral to the appropriate practitioner/specialist and initiating the referral (3,4)
- ensuring copies of test results are included in the clinical record and document any discussions/decisions regarding care relating to the test results’ (p. 1)

Although this consensus statement does not specifically mention ultrasound scans, midwives would generally understand this guideline to incorporate any test or investigation initiated by an LMC during pregnancy, birth or the postpartum period.

Further, more general statements within the Standards of Practice, Competencies for Entry to the Register of Midwives, Decision Points for Midwifery Care and Code of Ethics (NZCOM, 2008) outline the expectations of midwives in relation to the nature of the relationships they form with midwifery clients and the supportive care they are expected to provide.

Competency One requires that the midwife ‘communicates effectively with the woman/wahine and her family/whanau’ (1.9) and ‘provides up to date information and supports the woman/wahine with informed decision-making’ (1.10) (NZCOM, 2008, p. 6).

The Code of Ethics: (e) ‘midwives respond to the social, psychological, physical, emotional, spiritual and cultural needs of women seeking midwifery care, and facilitate opportunities for their expression’ (NZCOM, p. 12).

#### *Standards of Midwifery Practice*

Standard One includes the criteria that the midwife ‘facilitates open and effective communication and negotiates choices and decisions’ and ‘shares relevant information within the partnership’ (NZCOM, p. 15).

Standard Six ‘the midwife identifies deviations from normal, and, after discussion with the woman consults and refers as appropriate’ (NZCOM, p. 20).

The Decision Points for midwifery care outline the times when assessment should occur during pregnancy. These episodes of care should include information-sharing based on the outcomes of examinations and tests, in order that the woman’s choices for care can be discussed and informed decisions can be made. (NZCOM, p. 27).

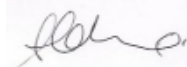
If, as [Mr A] has claimed, [RM E] never discussed the scan results with [Ms A] and himself, then this would be considered by [RM E]’s peers to be a moderate departure from reasonable practice, as it would have diminished their opportunity to reflect on the results, seek any additional information they required, and make any informed choices about their ongoing care. As noted in my previous opinion, there was no documentation relating to any of the scan findings in [Ms A]’s clinical record until 20 weeks (on the referral form on 31 [Month4]), despite four scans having been performed by this date.

[RM E] acknowledged that she did not discuss TRAP sequence during the phone conversation in which she told [Ms A] and [Mr A] that a specialist consultation was required (on 3 [Month6]), and this phone call appears to have been the last contact [RM E] had with the couple. It is likely that this was a distressing situation for [Ms A] and [Mr A] to find themselves in, and I consider that to not discuss this new finding at this



point, and then not have any further contact with [Ms A] and [Mr A], did not facilitate any opportunity for them to adequately express their needs (be they emotional, physical etc). [RM E's] peers would therefore consider this a mild departure from reasonable practice.

Kind regards



Suzanne Miller

### **Reference**

New Zealand College of Midwives (NZCOM) (2008) Midwives handbook for practice. Christchurch, New Zealand: Author

\*NZCOM (2016) Consensus Statement: Laboratory Testing/Screening. Retrieved from <https://www.midwife.org.nz/quality-practice/nzcom-consensus-statements> (previous versions, available since ratification in 1996, updated in 2002, refs updated in 2009, have contained similar wording to this version).”