Counties Manukau District Health Board

Obstetrician and Gynaecologist, Dr B

A Report by the

Deputy Health and Disability Commissioner

(Case 16HDC00719)

Health and Disability Commissioner
Te Toihau Hauora, Hauātanga

Table of contents

Executive summary 1

Complaint and investigation 2

Information gathered during investigation 3

Opinion: RM C — adverse comment 11

Opinion: Dr B 12

Opinion: Counties Manukau District Health Board — breach 13

Recommendations 16

Follow-up actions 17

Appendix A: Independent midwifery advice to the Commissioner 18

Appendix B: Independent obstetric advice to the Commissioner 23

Executive summary

1. Mrs A, aged in her thirties, was in her fourth pregnancy when an ultrasound scan identified a shortened cervical length and mild funnelling. The report recommended a specialist review. Mrs A's midwife, RM C, made an electronic referral on 23 Month2.[1] On the advice of the Senior Medical Officer, RM C requested that the grading midwife direct the referral to the Obstetric and Gynaecological Ultrasound Service (OGUS). The referral was forwarded to OGUS on 24 Month2, but was not reviewed until 29 Month2, as referrals to OGUS are not triaged over the weekend or on public holidays.

2. Mrs A was asked to attend OGUS for an ultrasound scan on 30 Month2. Mrs A stated that she assumed that it was a routine scan, as RM C had not informed her about the cervical shortening and the fact that a referral had been made.

3. The additional ultrasound scan was performed on 30 Month2. The report stated that the cervix was 3.6cm long and dilated approximately 1.2cm throughout its length, and that the external os was the only closed portion. Mrs A was admitted to hospital for a rescue cerclage, and underwent surgery on 31 Month2. Approximately three weeks later, Mrs A was reviewed by an obstetric registrar, Dr K. Dr K recorded an intention to review Mrs A at 35 weeks' gestation to discuss removal of the suture at 36 or 37 weeks' gestation, but there is no documentation of any discussion about what would occur if she gave birth before the baby was viable or at borderline viability.

4. At 23+0 weeks' gestation, Mrs A presented to the public hospital with contraction-like pain and yellow discharge. Mrs A was also tachycardic and had moderately elevated C-reactive protein levels, suggestive of infection. Obstetrician and gynaecologist Dr B reviewed Mrs A and advised that she should be given medication to suppress labour, that the suture might need to be removed, and that steroids should be withheld. Dr B told HDC that he understood steroids to be contraindicated in the presence of significant infection, as in Mrs A's case. Dr B also said:

> "I explained that her management would entail antibiotics, pain relief, intravenous blood fluids, doing blood swab and urine tests to ascertain the site of infection and listening to the fetal heart rate intermittently. I explained that at this gestation (23 weeks), babies do not survive and are not resuscitated by the neonatal team should she go on and deliver. [Mrs A] and her husband did not ask me any questions about resuscitation. I thought they understood and agreed with my management plan."

5. At approximately 8.43am, the suture was removed, and at 2.17pm, neonatal paediatrician Dr I discussed with Mrs A the outcome for the baby if he was delivered that day. He told HDC that he informed Mrs A and her husband that active treatment was an option, but that Mrs A was in an advanced stage of labour and he could not engage them in conversation.

6. At 3.13pm, Mrs A had a normal vaginal delivery of a live male baby weighing 715g. Mrs A stated that her baby lived for approximately five hours but was not reviewed by a doctor until after his death.

[1] Relevant months are referred to as Months 1–4 to protect privacy.

Findings

7. It was found that Dr B failed to advise Mrs A of the option of active intervention and the associated risks, which was information that a reasonable consumer in Mrs A's circumstances would expect to receive. Accordingly, Dr B breached Right 6(1) of the Code of Health and Disability Services Consumers' Rights (the Code).

8. Adverse comment was made about Dr B's failure to involve neonatal services in his discussion with Mrs A and her partner.

9. It was found that the nine days that elapsed between RM C's referral and the cerclage was not consistent with accepted standards of service delivery. By failing to assess and treat Mrs A in a timely manner, Counties Manukau District Health Board (CMDHB) breached Right 4(1) of the Code.

10. Adverse comment was made about the absence of detailed documentation about the conversations that occurred after the rescue cerclage and at the specialist obstetric appointment regarding the possibility of preterm labour. Comment was made about recent developments in the care of premature babies, including the detailed analysis undertaken by the Perinatal and Maternal Mortality Review Committee (PMMRC) in its 12th Annual Report. The Deputy Commissioner strongly supports the Consensus Statement on the Care of Mother and Baby(ies) at Periviable Gestations, which is being developed by the Paediatric Society of New Zealand and the New Zealand Newborn Clinical Network, and will be following its progression closely.

Recommendations

11. It was recommended that Dr B provide a written apology to Mrs A for his breach of the Code, and support CMDHB in reporting back to HDC on developments to make available appropriate information and counselling for parents and whānau about birth outcomes prior to 25 weeks' gestation.

12. It was recommended that CMDHB provide additional training to relevant staff on its guideline on the management of pregnancies at borderline viability, advise how it will act on the PMMRC's recommendation that lead maternity carers and district health boards employ strategies to reduce preterm birth by targeting identified high-risk groups, and make available appropriate information about birth outcomes prior to 25 weeks' gestation.

Complaint and investigation

13. The Commissioner received a complaint from Mrs A about the services provided to her and her baby by Counties Manukau District Health Board (CMDHB). The following issues were identified for investigation:

- *Whether Counties Manukau District Health Board provided Mrs A with an appropriate standard of care in 2016.*

- *Whether Counties Manukau District Health Board provided Baby A with an appropriate standard of care in 2016.*
- *Whether Dr B provided Mrs A with an appropriate standard of care in 2016.*
- *Whether Dr B provided Baby A with an appropriate standard of care in 2016.*

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

15. The parties directly involved in the investigation were:

Mrs A	Consumer/complainant
CMDHB	Provider
Dr B	Obstetrician/gynaecologist

16. Also mentioned in this report:

RM C	Registered midwife
RM D	Registered midwife
RM E	Registered midwife
Dr F	Clinical Leader of Newborn Services
Dr G	Obstetrician/gynaecologist
Dr H	Obstetric registrar
Dr I	Neonatal paediatrician
Dr J	Obstetrician
Dr K	O&G registrar
Dr L	O&G registrar
Dr N	O&G consultant

17. Independent expert advice was obtained from a registered midwife, Billie Bradford **(Appendix A)**, and an obstetrician, Dr Sornalatha Vasan **(Appendix B)**.

Information gathered during investigation

Background

18. Mrs A became pregnant for the fourth time. Her pregnancy history included a normal vaginal delivery, a first trimester surgical termination, and a miscarriage.

19. On 4 May 2015, obstetrician and gynaecologist Dr B saw Mrs A and her husband in the Perinatal Loss Clinic. Dr B's clinic letter stated:

> "They did enquire about cervical incompetence[2] and I have explained that from the history it does not seem that it was the cause of the miscarriage but she could have

[2] A condition where the cervix starts to shorten and open too early during a pregnancy.

> cervical length measurements in her next pregnancy. This is done normally every two weeks from 12 weeks onwards."

20. Cervical incompetence, also known as cervical weakness or cervical insufficiency, is the inability of the cervix to retain a pregnancy in the second trimester, in the absence of uterine contractions. It can be diagnosed on history alone or in combination with transvaginal ultrasound of cervical length.

21. The length of the cervix is measured from its internal opening on the inside of the uterus (internal os) to its external opening into the vagina (external os). Women with a shortened cervix during pregnancy are at increased risk of preterm birth. A shortened cervix is sometimes accompanied by cervical funnelling (the opening of the internal os with protrusion of the amniotic membranes into the cervical canal). In the case of a shortened cervix, surgical intervention in the form of cervical cerclage may occur, whereby a stitch is placed around the cervix to prevent it from opening too early and causing a preterm birth. It can also be performed as a salvage measure (a "rescue" cerclage) when a woman presents with premature cervical dilation. Rescue cerclage has a high complication rate and is associated with poor outcomes.

Monitoring for cervical shortening

22. On 16 Month1 (9+6/7 weeks' gestation) Mrs A had a booking appointment with registered midwife (RM) RM C. RM C is an employee of CMDHB and provides midwifery care to women in the community as a DHB case-loading midwife. In light of Dr B's letter, RM C referred Mrs A for specialist review.

23. Mrs A was seen by registrar Dr L on 7 Month2. Dr L provided the following instructions to RM C: "Please organise [ultrasound scan] cervical length every 2 weeks and review result. If funnelling or [shortening] <2.5cm please discuss with SMO on-call."

Referral to Obstetric and Gynaecological Ultrasound Service

24. An ultrasound scan performed on 8 Month2 did not show shortening or funnelling. On 22 Month2, Mrs A attended a further scan, and the radiologist reported a cervical length of 2.4cm and mild funnelling. Specialist review was recommended. The report was sent to RM C, who made an electronic referral the next morning. RM C said that she was uncertain whether she should have marked the referral as "urgent" and sought advice on the matter. The clinical notes state:

> "Phoned [RM E] re [Mrs A's] recent scan. She suggested I phone SMO to consult.
>
> Phone call to [Dr G] — SMO — suggested refer re grading referral and sending to [Obstetric and Gynaecological Ultrasound Service (OGUS)].
>
> Phone call to [the] grading midwife to advise of referral needing to go to OGUS. [The midwife] states she will do this as soon as possible."

25. Dr G said that she was in theatre when she received RM C's telephone call, and that as it was not an urgent referral, she asked RM C to direct it to OGUS. CMDHB stated that this was appropriate advice as "[Mrs A's] condition was not an obstetric emergency".

26. The referral was forwarded to OGUS at 1.19pm on 24 Month2. Dr G stated that referrals are normally triaged daily by an OGUS senior medical officer (SMO) or, if not, on the following day. However, because OGUS is a non-acute service, referrals are not triaged on weekends or public holidays. Consequently, the referral was not reviewed by an SMO until 2.50pm on 29 Month2.

27. Mrs A was asked to attend OGUS for an ultrasound scan on 30 Month2. She told HDC that she assumed that this was a routine scan as RM C had not informed her about the cervical shortening evident on the previous scan, or of the subsequent referral. RM C said: "It is my usual practice to inform women if there is an abnormal test result, but I regret that on this occasion I inadvertently overlooked doing so for [Mrs A]."

Cervical cerclage

28. The ultrasound scan was performed at approximately 4pm on 30 Month2. The report stated: "On transvaginal scan the cervix is approximately 3.6cm long and is dilated throughout its length approximately 1.2cm. The external os is the only closed portion." The notes record that cervical cerclage could not occur until the next day as the delivery suite was busy. Mrs A was admitted to the hospital, and a booking form for a rescue cerclage was completed at 9.55pm. Mrs A's case was assigned a priority three grading (urgent but non-critical, 6–8 hours).

29. The surgery commenced at 12.07pm on 31 Month2 (16+2 weeks' gestation). At the time the stitch was inserted, the membranes were visible from the external os, which raised concerns about the possibility of ascending infection. However, CMDHB stated that, without this intervention, "ongoing cervical dilatation and delivery in the next few days" was likely.

30. The operation note for the rescue cerclage identified that there was a high chance of failure as the cervix had already dilated. Postoperative documentation states that the prognosis was "a lot poorer" and that this was discussed with Mrs A.

31. Mrs A was discharged on 2 Month3. The discharge summary stated that Mrs A would need urgent review in the case of abdominal pain, vaginal bleeding, or fluid leak, and her suture would need to be removed in the event of impending miscarriage. It was again mentioned that Mrs A had been counselled about the fact that the procedure had a high chance of failure.

32. On 5 Month3, following advice from RM E, RM C cancelled further cervical length scans. RM E told HDC that it is common practice not to monitor the cervix once the cerclage is in place, as the intervention for preventing preterm labour has already occurred.

Abdominal pressure/pain

33. On 15 Month3 (18+3 weeks' gestation), Mrs A attended a routine antenatal appointment with RM C and complained of pressure in her lower abdomen. RM C said that Mrs A did not describe the pressure as pain. RM C documented that Mrs A's description of the symptoms was not consistent with uterine contractions, and there was no fluid loss. RM C carried out a mid-stream urine test to assess whether the pressure was caused by a urinary tract infection.

34. Mrs A told HDC that she said that she had a lot of abdominal pain, but was told by RM C that she would "have to live with this pain until [the] baby was born and it's all normal". RM C said that she did not make that statement.

35. On 18 Month3, Mrs A complained of pain and watery fluid loss. RM C arranged for Mrs A to be assessed at the public hospital. It was determined that Mrs A's membranes had not ruptured, and Mrs A was discharged the following day.

Specialist review

36. On 25 Month3 (19+6 weeks' gestation), Mrs A was reviewed by obstetric registrar Dr K. Dr K documented that Mrs A was well, and made a plan for growth scans at 28 weeks' and 32 weeks' gestation. The notes also record an intention to review Mrs A at 35 weeks' gestation to discuss removal of the suture at 36 or 37 weeks' gestation.

Preterm labour

37. On 16 Month4 (23+0 weeks' gestation), Mrs A developed contraction-like pain and presented to the public hospital at 5.30am. Obstetric registrar Dr H reviewed Mrs A and noted that there was yellow discharge but no obvious spontaneous rupture of membranes. The records show that Mrs A was tachycardic,[3] and that she had moderately elevated C-reactive protein levels (47mg/L),[4] suggestive of infection.[5] Dr H discussed the findings with the SMO on duty, Dr B, who advised that Mrs A should be given medication to suppress labour, that the suture might need to be removed, and that Mrs A was not for steroids,[6] as the fetus was still pre-viable. Dr B told HDC that he completed a full assessment of prognostic factors, and that the main factors of extreme prematurity in association with infection indicated a poor prognosis.

38. Dr H documented:

> "I have explained to [Mrs A] and her husband that there is a chance the labour will establish, or waters will break, in which case suture will need to be removed, with likelihood of delivery of baby, which even if alive will not be able to survive. They seem accepting of this."

39. According to Dr B, it would be usual practice to discuss with the parents the baby's poor prognosis, and if the parents wished for the baby to be resuscitated, to introduce a high dose of steroids prior to delivery. However, Dr B stated that he understood that steroids are contraindicated in the presence of significant infection, as in Mrs A's case.

40. Dr B said:

> "In these circumstances, I spoke to [Mrs A and her husband] and explained that we needed to look after her. I explained that her management would entail antibiotics, pain relief, intravenous blood fluids, doing blood swab and urine tests to ascertain the site of infection and listening to the fetal heart rate intermittently. I explained that at this

[3] A resting heart rate of more than 100 beats per minute.
[4] A C-reactive protein level above 10mg/L is indicative of active inflammation.
[5] The placental history and cytology report later confirmed severe chorioamnionitis (acute inflammation of the membranes and chorion of the placenta, typically caused by ascending bacterial infection).
[6] Medications that aid the maturation of fetal lungs.

> gestation (23 weeks), babies do not survive and are not resuscitated by the neonatal team should she go on and deliver. [Mrs A and her husband] did not ask me any questions about resuscitation. I thought they understood and agreed with my management plan."

41. Dr B stated that neither Mrs A nor her husband asked whether treatment could be provided to their baby, and, on reflection, he could see how what he said may have suggested to Mrs A and her husband that they were not able to question the treatment plan or to seek further information, and apologised if there was such a misunderstanding.

42. At 8am, Mrs A's care was handed over to the morning on-call consultant, Dr N. Dr N told HDC that, as part of the handover, "we were advised that [Mrs A] had had a discussion with [Dr B] about the level of prematurity, which could result in a live birth but not amenable for resuscitation, as per our protocol".

43. At approximately 8.43am, Dr N removed the suture, as Mrs A was contracting. It was explained to Mrs A that leaving it in situ could cause further trauma to the cervix, and that there were concerns about an infection.

44. Oral antibiotics, fluids, and pain relief were given. At 2.17pm, neonatal paediatrician Dr I discussed with Mrs A the outcome for the baby if he was delivered that day. Dr I recorded: "Unfortunately unable to offer any active resuscitation at this gestation (23 weeks) male no steroids not currently monitored." Dr I stated that he explained to Mrs A when she was in labour that the neonatal team would not normally intervene, as previous experience indicated less than 10% survival without severe handicap. Dr I clarified that he did not make a unilateral plan to withhold treatment, and that he did inform Mrs A and her husband that active treatment was an option. He said that he did all he could to engage with them, but it "was not possible because of the advanced stage of labour, and [Mr and Mrs A] did not wish to engage in the conversation".

45. At 2.28pm, registered midwife RM D recorded:

> "Have discussed birth process with [Mrs A and her husband]. Nil questions currently, aware that there will be no measures to resuscitate baby at this current gestation. If baby delivers would like to cuddle baby."

46. At 3.13pm, Mrs A had a normal vaginal delivery of a live male baby weighing 715g. The notes record that he was gasping for breath with weak respiratory effort, had a heart rate of 60 beats per minute,[7] and that he made occasional movements.

47. RM D told HDC:

> "[Mrs A] and her husband were understandably upset and crying after the birth. They asked if I was able to do anything to help save the baby. I responded that I was very sorry but as we had discussed earlier I was unable to provide any treatment as the baby had been born too early."

[7] The normal range for a newborn is 100–160 beats per minute.

48. Mrs A told HDC that her baby lived for approximately five hours but was not reviewed by a doctor until after his death.

Guidelines

49. CMDHB's guideline "Management of Pregnancies at Borderline Viability" in place at the time states:

> "All discussions regarding management of such pregnancies should involve the parents and members of both Neonatal and Obstetric services. Members of these services are available to discuss cases by telephone at any time …
>
> 23 weeks 0 days to 23 weeks 6 days:
>
> Recommended practice:
>
> - NICU [(Neonatal intensive care unit)] care not recommended because of high mortality and disability rates.
> - Steroids not recommended.
> - No fetal monitoring and therefore no caesarean section for fetal distress.
> - No attendance by Neonatal Team at resuscitation.
> - Neonatal Team input may be required for support or advice on palliation.
>
> If parents make a decision for active treatment after informed discussion:
>
> - Consider steroids.
> - Steroids at gestation of 23 weeks plus 5 days.
> - Neonatal Team called for delivery.
> - If birthweight > 500g and gestation appears appropriate, start resuscitation.
> - Stop early if response poor."

Further information

Dr I

50. Dr I told HDC the following:

- On the day in question, the neonatal unit had 32 patients (26 is 100% occupancy). There were no beds for level 3 patients in surrounding regions.
- 10 years of data from National Women's Hospital on all 23-week infants (95 cases without congenital abnormality) indicated approximately 33% died in labour, 33% had no resuscitation, 22% died with treatment (of whom around half were over 600g at birth) and 11% survived.
- Condition at birth appears to be a poor predictor of survival.

Dr B

51. Dr B stated that he did not involve neonatal services prior to his discussion with Mrs A as he had felt confident with his management plan, having had previous experience of similar cases where there was neonatologist involvement. He informed HDC that he was aware of the Guideline for the Management of Pregnancies at Borderline Viability. He added:

"[T]hese guidelines provide for the introduction of steroids which was not something that we could do in [Mrs A's] case. Guidelines are formulated to guide clinicians but have to give way, at times, to clinical judgment in the particular circumstances of a given case."

52. In support of his actions, Dr B provided HDC with a statement from CMDHB's Clinical Leader of Newborn Services, Dr F. Dr F noted that the baby had a high risk of death and would have had significant ongoing medical issues if he had survived. Dr F said: "Had I counselled this family prior to delivery I would have strongly advised against any intervention or active management on the part of our neonatal service."

CMDHB

53. CMDHB apologised for the lack of timely discussion with Mrs A and her family regarding the baby's poor prognosis and the option of intervention. CMDHB told HDC that currently there is national debate involving neonatologists and obstetricians about the gestation at which supportive measures and active resuscitation should be offered in cases of borderline viability, and whether it should be lowered to 23 weeks' gestation. CMDHB commented that this would have implications on the provision of care to other women, as there is already a national shortage of neonatal cots.

Dr J's advice

54. CMDHB obtained an external opinion from Dr J, an obstetrician, in relation to the care provided to Mrs A. Dr J advised the following:

- There are no widely accepted regional, national, or international guidelines to follow in relation to cervical length surveillance. It was appropriate to arrange for fortnightly surveillance and referral back for specialist review in the event of any issues.

- The 25mm measurement to define a short cervix is based on criteria selected in some randomised trials investigating the benefit of therapeutic interventions, and is "relatively arbitrary". Other trials have used measurements of 20mm and 15mm to define abnormal. A cervical length of 24mm should therefore be considered borderline. As Mrs A's cervical length was borderline, same-day review was not required, but she should have been seen within 1–3 days. A delay of eight days for review and nine days until cerclage placement may have impacted on the likely success of cerclage.

- It was very reasonable to offer Mrs A the option of rescue cerclage but with counselling on its likely chance of success/failure and the risks involved. Once a cervix is open and a decision has been made to perform a rescue cerclage, this should be performed without delay. The overnight delay was not acceptable even if it was after hours and busy — the more prolonged period of time that membranes were exposed to the vagina may have impacted on the likely success of the procedure. It is not clear that medical staff had a good understanding that this pregnancy should have been considered very high risk.

- Monitoring cervical length after cerclage is often performed, and provides guidance on the timing of the birth, but there is no evidence that the addition of progesterone or any other therapy additional to cerclage will delay delivery further. The cancellation of follow-up scans and lack of regular follow-up cannot be considered a serious deviation

from recommended practice. However, if there had been appreciation of the very high risk nature of Mrs A's pregnancy after rescue cerclage, further follow-up with a specialist prior to 23 weeks may have provided time for informed discussion and consideration of issues around care for a peri-viable fetus.

- Based on the prognostic factors available in Mrs A's case (early gestational age, male fetus, evidence of chorioamnionitis, lack of antenatal corticosteroids for fetal lung maturity, and magnesium sulphate for neuroprotection), the prognosis for the baby was "extremely poor". It was appropriate to remove the cerclage on 16 Month4. Ongoing contractions ultimately would have led to the cerclage pulling through, and maintaining pregnancy in the setting of chorioamnionitis would only worsen neonatal prognosis and significantly risk maternal well-being.

Responses to provisional opinion

55. Mrs A was provided with an opportunity to respond to the "information gathered" section of the provisional opinion.

56. RM C and Dr B were provided with an opportunity to comment on the relevant sections of the provisional opinion.

57. RM C had no additional comments to make.

58. Dr B emphasised that Mrs A's case was an extremely difficult clinical scenario. He reiterated that it would have been dangerous to administer steroids to Mrs A, in light of her serious infection, and that the baby had very low chances of survival with or without steroids. He stated that he believed that he made the clinically correct decision on resuscitation but apologised for his failure to communicate the choice to Mrs A.

59. Dr B also stated:

> "When I saw [Mrs A] on 16 [Month4], I did not expect imminent delivery (her cervix was not open and the cervical cerclage suture was intact (not removed)). If I notified the Paediatrician at the time, I knew, having worked at the unit for [many] years, that [Mrs A] would normally be seen at their morning ward rounds (0800–0830hrs).
>
> The above being said, I have reflected on this case, recent debate amongst obstetricians and [the] provisional opinion. In the future, I intend to involve a neonatologist as early as is practical, when having a thorough discussion about management options including active intervention and the associated risks. I can see that this may have assisted in my communication with [Mrs A] and her husband, providing them with an opportunity to understand all the management choices, related risks and benefits at that time when it was easier for an informed choice to be made."

60. CMDHB was provided with an opportunity to respond to the provisional opinion. CMDHB expressed its condolences to Mrs A and her partner. It told HDC that it has made a number of changes since Mrs A's complaint, including employing a maternal fetal medicine sub-specialist, which has resulted in a greater emphasis on ensuring that rescue sutures are placed without delay. CMDHB also stated that it has updated its guideline on borderline viability, and implemented a guideline entitled "Preterm Labour Antenatal Management of

Women at High Risk of Preterm Birth: Management of Threatened and Acute Preterm Labour (Including Cervical Cerclage Insertion)". Further, currently it is working towards implementing the Perinatal and Maternal Mortality Review Committee recommendations on strategies to reduce preterm birth.

Opinion: RM C — adverse comment

Communication

61. Mrs A's ultrasound scan on 22 Month2 revealed a shortened cervical length of 24mm and mild funnelling. The radiologist recommended specialist review. On receipt of the report, RM C made an electronic referral, but omitted to inform Mrs A about the result of the ultrasound scan or the fact that she had made a referral to OGUS. As a consequence, Mrs A was unaware that there were any concerns or that the scan she was attending on 30 Month2 was not a routine investigation.

62. RM C advised HDC that it was her usual practice to inform women if there was an abnormal test result, and she regretted inadvertently overlooking this for Mrs A.

63. My expert midwifery advisor, RM Bradford, advised:

> "[RM C] should have informed [Mrs A] of the scan result and her ensuing actions. However, when informing a patient about an abnormal result it is important to explain the implications and next steps in ongoing care. Decisions about how to manage a patient with a shortened cervix are not in the midwifery scope of practice and belong with specialist obstetrics. Although it was not ideal that [RM C] did not inform her client of these actions, the lapse is minor and in my view [RM C's] response overall was acceptable."

64. Timely communication of the results of tests and procedures is crucial, and enables a consumer to be a partner in his or her own care. While I acknowledge that discussion about management of the shortened cervix would have been limited by the fact that it was not within RM C's scope of practice, I am critical that Mrs A was not informed of the abnormal ultrasound result, and the actions taken, at the earliest available opportunity.

Assessment on 15 Month3

65. Mrs A told HDC that when she raised the issue of abdominal pain at her antenatal appointment on 15 Month3, RM C advised her that everything was normal and that she would have to live with the pain until the baby was born. In contrast, RM C denies saying that, and told HDC that Mrs A described abdominal pressure but not pain. RM C documented that Mrs A's symptoms were not consistent with uterine contractions, and that there was no fluid loss. RM C carried out a mid-stream urine test to exclude a urinary tract infection.

66. RM Bradford stated that the clinical care was appropriate for the symptoms documented by RM C; however, RM Bradford said that if RM C did respond in the manner described by

Mrs A, this would be a departure from the accepted standard of care. Given the conflicting evidence, I am unable to make a finding on this point.

67. I accept RM Bradford's advice that the documented clinical actions were appropriate.

Opinion: Dr B

Informed choice — breach

68. On 16 Month4, Mrs A was admitted to the public hospital with regular contractions. At 23+0 weeks' gestation, the fetus was considered to be on the borderline of viability. CMDHB's guideline on the management of pregnancies at borderline viability stated that discussions around management should involve the parents and members of both neonatal and obstetric services. Although the guideline did not recommend neonatal intensive care or steroids, it provided the following instructions where the parents have decided on active treatment after informed discussion:

> "
> - Consider steroids.
> - Steroids at gestation of 23 weeks plus 5 days.
> - Neonatal Team called for delivery.
> - If birthweight > 500g and gestation appears appropriate, start resuscitation.
> - Stop early if response poor."

69. As the obstetric SMO on duty at the time of Mrs A's admission, Dr B had overall responsibility for Mrs A's care. Dr B spoke to Mrs A and her husband in the morning regarding the baby's poor prognosis. He told HDC:

> "I explained that at this gestation (23 weeks), babies do not survive and are not resuscitated by the neonatal team should she go on and deliver. [Mrs A] and her husband did not ask me any questions about resuscitation. I thought they understood and agreed with my management plan."

70. Dr B stated that neither Mrs A nor her husband asked if treatment could be provided to their baby, and acknowledged that the information may have been presented in a way that suggested that Mrs A and her partner were not able to question the treatment plan.

71. Mrs A was entitled to make an informed choice about what care would be provided to her baby. It is not sufficient for a provider to present his or her preferred management plan, and to disclose other options only if the consumer makes active enquiries. In my view, and as per CMDHB's guidelines, Dr B should have specifically advised Mrs A about the option of active intervention and the associated risks, even if treatment in these circumstances was not

recommended. This was information that a reasonable consumer in Mrs A's circumstances would expect to receive. Accordingly, I find that Dr B breached Right 6(1) of the Code.[8]

Neonatologist involvement in early discussion — adverse comment

72. Contrary to CMDHB's guideline "Management of Pregnancies at Borderline Viability", Dr B did not involve neonatal services in his discussion with Mrs A and her partner. Dr B stated that this was because he felt confident with his management plan, having had previous experience of similar cases where there was neonatologist involvement.

73. In my view, this was not adequate justification for departing from the guideline, and I am critical that there was no involvement from neonatal services until after Mrs A was in advanced labour. I note the difficulties cited by Dr I in his attempts to engage the parents at such a late stage.

Opinion: Counties Manukau District Health Board — breach

Assessment and treatment for shortened cervix — breach

Delays between referral and assessment

74. On 23 Month2, RM C consulted with Dr G regarding the shortening and funnelling seen on Mrs A's ultrasound scan the previous day. Dr G considered that the matter was non-urgent, and requested that RM C direct the referral to OGUS. According to RM C's notes, she contacted the grading midwife and was told that the referral would be sent to OGUS "as soon as possible". The referral was forwarded to OGUS on the afternoon of 24 Month2 but owing to public holidays in that period, was not triaged until 29 Month2.

75. Mrs A was asked to attend OGUS on 30 Month2.

76. In the report submitted by CMDHB, Dr J stated that a cervical length of 24mm is a borderline case, and she did not view it as an emergency necessitating same-day review. However, she considered that Mrs A ought to have been seen within 1–3 days.

77. My expert advisor, Dr Sornalatha Vasan, acknowledged that Mrs A's shortened cervix was not an obstetric emergency, but advised that it was an urgent matter given the implications for the fetus. Dr Vasan commented:

> "An urgent referral has been communicated via phone conversation, referring that to routine triage and not checking it during [the holiday period] when most of the units function with skeletal staff was not appropriate care. I have discussed with my peers in New Zealand. Accepted practice is to review the patient same day and arrange cervical cerclage."

78. Dr Vasan advised that Dr G's advice to RM C was a significant departure from expected standards.

[8] Right 6(1) of the Code states: "Every consumer has the right to the information that a reasonable consumer, in that consumer's circumstances, would expect to receive, including … an explanation of the options available, including an assessment of the expected risks, side effects, benefits, and costs of each option."

79. Although there is no consensus of opinion on when Mrs A ought to have been seen by OGUS, both Dr J and Dr Vasan agree that the delay between the initial referral and specialist assessment was not reasonable and did not constitute timely care. I agree.

80. I am concerned by the sequence of omissions in the processing of RM C's referral:

- Dr G recommended that the referral undergo routine triaging through OGUS;
- RM C's request for the referral to be sent to OGUS was made on 23 Month2, but was not actioned until the next day;
- The referral was received by OGUS on 24 Month2 but was not reviewed on this date;
- As referrals to OGUS were not triaged on weekends or public holidays, the referral was not reviewed until 29 Month2. Despite the fact that a week had already elapsed since Mrs A's concerning ultrasound scan, she was not offered a same-day appointment.

81. These factors cumulatively resulted in a seven-day delay before Mrs A was seen by OGUS. In my view, this was not an acceptable timeframe, and amounted to a serious service failure, for which CMDHB is ultimately responsible.

Delay in cervical cerclage

82. Mrs A's ultrasound scan on 30 Month2 identified that her cervix was dilated throughout its length. She was admitted overnight and a rescue cerclage was performed the following day.

83. Dr J's report identified that the rescue cerclage should have occurred without delay once the cervix was noted to be dilated. Dr J stated that the overnight delay was not acceptable and may have impacted on the success of the procedure. I share Dr J's view that the cerclage ought to have been placed as soon as possible to maximise the chances of success, and I am concerned that Mrs A had to wait until the following day.

Cancellation of cervical length scans post-cerclage

84. No further cervical length monitoring was arranged for Mrs A following the cervical cerclage. RM E stated that follow-up scans were not required, as the intervention for preventing preterm labour had already occurred. Dr J agreed that there is no evidence that other therapy (in addition to cerclage) delays delivery further.

85. Dr Vasan and Dr J advised that there are no recommended standards for cervical length monitoring. Given the lack of applicable standards and the fact that additional scans would not have altered management, I am not critical that Mrs A's cervical length scans were cancelled post-cerclage.

Conclusion

86. As detailed above, Mrs A encountered a number of delays before she was finally seen by OGUS. Additionally, after the ultrasound scan identified that Mrs A's cervix had dilated at 16+2 weeks' gestation, there was a further overnight delay before the appropriate intervention occurred. At the time the stitch was inserted, the cervix had dilated further, and the membranes were visible from the external os. In total, nine days elapsed between RM C's referral and the cerclage, which was not consistent with accepted standards of service delivery. By failing to assess and treat Mrs A in a timely manner, I find that CMDHB did

not provide services with reasonable care and skill to Mrs A, and, as such, breached Right 4(1) of the Code.[9]

Provision of information to Mrs A — adverse comment

Documentation of discussions regarding prognosis following rescue cerclage

87. At the time of the rescue cerclage, it was recognised that there was a high chance of failure. It is stated in postoperative documentation and the discharge summary that this was discussed with Mrs A, but there is no detail about the content of any such discussions.

88. Approximately three weeks later, Mrs A was reviewed by an obstetric registrar, Dr K. Dr K recorded an intention to review Mrs A at 35 weeks' gestation to discuss removal of the suture at 36 or 37 weeks' gestation, but there is no documentation of any discussion about what would occur if she gave birth before the baby was viable or at borderline viability. Dr J commented that informed discussion and consideration of issues around care for a peri-viable fetus could have occurred prior to 23 weeks' gestation. It is disappointing that the notes lack specific detail of what conversations occurred after the rescue cerclage and at the specialist obstetric appointment. Threatened preterm labour is a sensitive and complex issue, and it is important that discussions are clearly documented to record the information provided and the views of the parents as the pregnancy progresses.

Discussions with Mrs A on 16 Month4

89. Counselling at an early stage about treatment options and potential outcomes for the baby at different gestations provides the groundwork for better planning, and enables the parents to be active and informed participants in their baby's care. As noted above, it is unclear how much information had already been provided to Mrs A during her pregnancy, but full information on the prognosis and the options should have been provided when the decision was being made to remove the cerclage.

90. I am very critical that Dr B did not discuss the option of active intervention with Mrs A on the morning of 16 Month4, and did not involve neonatal services in his discussion about the care that would be provided at this time. While I accept that Dr I did discuss the option of resuscitation with the family, this conversation occurred when Mrs A was in advanced labour and not in a position to process the information given. I note that discussion on the option of active intervention and the inclusion of a neonatologist in any discussion was set out in CMDHB's policy at the time. I am concerned that on this occasion the CMDHB policy was not followed.

Ongoing developments — other comment

91. Premature birth at peri-viability is an evolving area, and there have been significant ongoing developments in the care of premature babies since these events in early 2016. I note the detailed analysis undertaken by the Perinatal and Maternal Mortality Review Committee (PMMRC)[10] in its 12th Annual Report. The PMMRC identified that the survival of live-born babies from 23 to 26 weeks' gestation was statistically significantly higher for babies born at tertiary units than babies born at secondary units, and that there were significant differences in survival between tertiary units in New Zealand and inequities by ethnicity

[9] Right 4(1) of the Code states: "Every consumer has the right to have services provided with reasonable care and skill."
[10] 12th Annual Report of the PMMRC — Reporting mortality and morbidity 2015 (June 2018).

and by maternal age in a number of care areas affecting neonatal survival. These related to access to antenatal care, access to tertiary neonatal facilities, treatment with antenatal corticosteroids, and attempted resuscitation at extreme preterm gestations.

92. The PMMRC has recommended that the Ministry of Health establish a multidisciplinary working group to review current evidence for implementation of a preterm birth prevention programme, and that LMCs and DHBs employ strategies to reduce preterm birth by targeting identified high-risk groups. In addition, the PMMRC recommended that DHBs make available appropriate information, including appropriate counselling for parents and whānau about birth outcomes prior to 25 weeks' gestation, to enable shared decision-making and planning of active care or palliative care options.

93. I wholly endorse those recommendations and I note the important work being carried out by the Paediatric Society of New Zealand and the New Zealand Newborn Clinical Network in developing a Consensus Statement on the Care of Mother and Baby(ies) at Periviable Gestations. This is an important piece of work that will help to ensure that similar cases are treated consistently across district health boards. Of particular relevance to this case, the draft Consensus Statement includes a parent information and decision aid to guide shared decision-making. The Consensus Statement provides:

> "Decisions should be reached through a shared decision making approach that is ongoing and responsive to clinical events, especially increasing gestation. Shared decision making means that parents are at the centre of discussions about the uncertainties in prognosis and what treatment will mean. It should ensure that parental preferences are based on understanding the information shared. Informing parents is paramount to ensure they have a significant degree of ownership over the decisions that are made. It is important to bear in mind that decision making in this area is rarely one decision and is more typically an ongoing discussion and set of decisions for the care of extremely preterm infants."

94. I strongly support that statement and will be following the progress of these guidelines closely.

Recommendations

95. I recommend that Dr B:

a) Support CMDHB in reporting back to HDC on developments in his department to make available appropriate information, including appropriate counselling for parents and whānau about birth outcomes prior to 25 weeks' gestation, to enable shared decision-making and planning of active care or palliative care options.

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

96. I recommend that CMDHB:

a) Provide additional training to all relevant staff on its guideline on the management of pregnancies at borderline viability. In particular, CMDHB should emphasise the importance of involving the relevant specialists and care providers in discussions with the parents, and the importance of ensuring that these discussions are clearly documented to record the information provided and the views of the parents as the pregnancy progresses. Evidence of this having occurred should be sent to HDC within three months of the date of this report.

b) Within three months of the date of this report, advise how it will act on the PMMRC recommendation that LMCs and DHBs employ strategies to reduce preterm birth by targeting identified high-risk groups, and make available appropriate information, including appropriate counselling for parents and whānau about birth outcomes prior to 25 weeks' gestation, to enable shared decision-making and planning of active care or palliative care options.

c) Provide Mrs A with an apology for the deficiencies identified in this report. The apology should be sent to HDC within three weeks of the date of this report, for forwarding to Mrs A.

Follow-up actions

97. A copy of this report with details identifying the parties removed, except CMDHB and the experts who advised on this case, will be sent to the Medical Council of New Zealand and to the Royal Australian College of Obstetricians and Gynaecologists, and they will be advised of Dr B's name.

98. A copy of this report with details identifying the parties removed, except CMDHB and the experts who advised on this case, will be sent to the PMMRC, the Ministry of Health, the Midwifery Council of New Zealand, the New Zealand College of Midwives, and the Paediatric Society of New Zealand, and will be placed on the Health and Disability Commissioner website, www.hdc.org.nz, for educational purposes.

Appendix A: Independent midwifery advice to the Commissioner

The following expert advice was obtained from RM Billie Bradford:

> "Thank you for your request to consider [Mrs A's] complaint regarding care around the time of her son's birth in [Month4]. I have been a midwife since 1998 with experience across primary, secondary and tertiary care settings. I have worked for ten years as a midwife educator and have ten years' experience reviewing cases of adverse outcome including perinatal death. In addition to practising as a midwife I am currently a PhD candidate in Obstetrics and Gynaecology with a research focus on stillbirth prevention. I have familiarised myself with the patient records and associated documents provided by your office. I have no conflict of interest in this case and feel able to comment on the complaint and the standard of midwifery care provided.
>
> You have asked me to comment only on the standard of care offered by the midwives involved, [RM C], [RM E] and [RM D], addressing in particular the points numbered below:
>
> 1. The appropriateness of the actions taken by [RM C] following [Mrs A's] booking appointment;
>
> On the16th of [Month1] [RM C] booked [Mrs A] for maternity care. On noting the history of a previous pregnancy loss at 19 weeks gestation [RM C] responded by referring for specialist review. This was appropriate. [RM C] then reviewed the documentation of [Mrs A's] previous pregnancy and noted advice that fortnightly cervical length assessment be considered from 12 weeks onward in a subsequent pregnancy. On the 3rd [Month2] [RM C] documented a discussion with [Mrs A] about cervical length measurement, explaining the rationale and documenting that [Mrs A] consented to this. She then arranged to add cervical length assessment to the already planned nuchal translucency scan, faxing a request the same day. These were appropriate actions to take in the circumstances. On the 7th [Month2] [Mrs A] had a specialist consultation about her risk of further pregnancy loss and a plan for fortnightly cervical length scanning was made. The following day, the 8th [Month2] the first cervical length measurement was made and the result was normal.
>
> 2. The appropriateness of the actions taken by [RM C] in response to the abnormal ultrasound result of the 22nd [Month2];
>
> At the second cervical length scan on the 22nd [Month2] a small amount of shortening (24mm) and mild funnelling was reported. A change of this degree is not considered an emergency, but rather one that requires prompt follow-up. [RM C] became aware of the results the following morning and immediately referred to the specialist service. [RM C] has stated that this was the first case where she had provided care for a woman with a cervical suture and reports being concerned that her referral was urgent so that day telephoned another Midwife, [RM E], who worked in the maternal fetal medicine service for advice on ensuring the referral receive proper priority. [RM E] advised [RM C] to contact an Obstetrician by telephone for advice on expediting the response which she promptly did. On speaking to [Dr G] by telephone [RM C] was advised that she should ensure her referral was sent to the Obstetric and Gynaecological Ultrasound Service (OGUS). [RM C] then telephoned the referral grader and requested that the

referral be passed on to OGUS as instructed. [RM C] received no return communication from obstetric services but having taken every action to ensure the referral was prioritised reasonably assumed the referral would be actioned and [Mrs A] contacted by OGUS accordingly. [RM C] did not contact [Mrs A] and notify her of these actions at the time.

In my view [RM C] acted reasonably in this situation. She recognised the abnormal result, referred appropriately and took additional action to ensure her referral was received by the correct personnel. [RM C] should have informed [Mrs A] of the scan result and her ensuing actions. However, when informing a patient about an abnormal result it is important to explain the implications and next steps in ongoing care. Decisions about how to manage a patient with a shortened cervix are not in the midwifery scope of practice and belong with specialist obstetrics. Although it was not ideal that [RM C] did not inform her client of these actions, the lapse is minor and in my view [RM C's] response overall was acceptable.

3. The appropriateness of [RM E's] advice to [RM C] post-cerclage;

On the 31st [Month2] [Mrs A] had a cervical suture placed. [RM C] was not directly notified of the cervical cerclage or of any ongoing care requirements. Given that [RM C] had little experience in care of women with a cervical suture she sought further advice on this from [RM E] and was advised that the two weekly cervical length scans would no longer be required and that care could continue as normal.

A post-cerclage discharge letter is available in the file, but this was addressed to the patient's family doctor not the referring practitioner [RM C]. In any case, the letter stated that there were no particular ongoing requirements. The actions of both [RM C] and [RM E] in regards to [Mrs A's] care following discharge from hospital are appropriate and in particular demonstrate a proactive approach on the part of [RM C] in ensuring appropriate care.

4. The adequacy of [RM C's] response to [Mrs A's] abdominal pressure/pain between 15 and 18 [Month3];

At a routine appointment on the 15th [Month3] it was documented that [Mrs A] reported feeling 'pressure' in her abdomen. On assessment, [RM C] noted that the description of the symptoms was not consistent with uterine contractions, and there was no fluid loss p.v. (per vaginum). [RM C] then arranged for a mid stream urine (MSU) sample to be sent to the lab. These assessments would suggest that [RM C] has considered a number of possible causes for [Mrs A's] symptoms including preterm labour, preterm rupture of membranes, antepartum haemorrhage, and urinary tract infection and investigated these appropriately.

On the 18th [Month3] [Mrs A] contacted [RM C] complaining of pain and watery fluid loss. [RM C] documented these concerns and arranged for immediate assessment at the hospital for suspected preterm rupture of membranes. [Mrs A] was admitted overnight for observation/investigation of this complaint. An ultrasound scan conducted at the hospital was normal and the hospital team concluded that [Mrs A] did not have ruptured membranes. The pain was considered to be due to a urinary tract infection (UTI) and she was discharged home on antibiotics.

a) On [Mrs A's] version of events; [Mrs A] stated in her letter to your office dated 12th December 2016 that [RM C] responded to the reports of pressure/pain with the comment that she 'would have to live with this pain until baby was born and its all normal'. Had [RM C] responded in such a way to [Mrs A's] concerns this would be a departure from expected standard of care and such a response would be viewed very unfavourably by the majority of midwives.

b) On [RM C's] version of events; At the time of these events [RM C] documented undertaking a number of clinical assessments (timing verified by electronic time signature) to determine the cause of [Mrs A's] reported symptoms including ordering tests (15th [Month3]) and arranging for [Mrs A] to be seen at hospital (18th [Month3]). The clinical care documented in response to [Mrs A's] concerns on the 15th and 18th [Month3] is in my view appropriate for the clinical history symptom description. The diagnosis of UTI made at the hospital on the 18th [Month3] is in keeping with [RM C's] assessment of UTI as a possible cause of symptoms on the 15th [Month3].

5. The adequacy of [RM C's] response to [Mrs A's] vaginal discharge on 15th [Month4].

At a routine appointment on the 15th [Month4] [Mrs A] reported heavy vaginal discharge and occasional lower back and leg pain. [RM C] enquired further about the discharge, ascertaining that it was not watery or bloody. The description of the discharge was consistent with either heavy normal discharge (common in pregnancy) or infection. [RM C] took vaginal swabs and an MSU to test for possible infection and sent these to the lab. The response to these symptoms was reasonable and appropriate in my view.

6. The standard of [RM C's] documentation;

In her letter to you [RM C] has reflected that her documentation is sub-standard. I disagree. The documentation is of a reasonable standard and provides evidence of responsive midwifery care.

7. The adequacy of the care provided by [RM D] (including care provided to [Mrs A's] baby);

Sadly [Mrs A] went into labour at 23 weeks and 0 days gestation, presenting at hospital at 0530 on the 16th [Month4] with regular contractions. It is extremely rare for infants born at this gestation to survive without severe disability. Chance of survival is further reduced if the infant is a male, if the mother has not had a completed course of steroids (this requires two doses 24 hours apart) and most importantly when considering this particular case, if there is infection present. The issue of when to offer intensive care for very preterm babies is one that is controversial and continually debated in the perinatal care community. Some argue that it is unethical to subject a tiny preterm infant to separation from their family and numerous painful procedures (heel pricks, placement of intravenous lines etc) if there is not a genuine chance that the treatments will result in survival long term. It is generally accepted that care should be offered to babies after 24 weeks gestation.

Counties Manukau policy states that 'for births at 23+0 to 23+6 recommended practice is for no neonatal intensive care … and no attendance by the neonatal team at resuscitation'. The policy does make allowance for the option of treatment for babies between 23+0 and 23+6 days, following informed discussion with the parents. This is an option that, although not stated in detail in the policy, would only be considered on a case-by-case basis where all indicators of a favourable outcome are present and the parents understand and accept the high likelihood that their child would have severe disability. [Mrs A's] case was not one where indications for survival of very preterm birth were favourable. On assessment at hospital [Mrs A] had a raised heartrate and a raised C reactive protein (CRP) result in her blood tests, findings that indicate infection. The presence of infection and the fact that she had not previously received a full course of steroids (there had been no previous indication for steroids) meant that chance of survival at such an early gestation was virtually nil.

It is clearly documented in the patient records that it was explained to [Mrs A] and her husband by numerous staff members that their baby unfortunately would not survive being born so early, and that the hospital policy is not to resuscitate in these circumstances. The 24 week cut-off is not an arbitrary number chosen by the hospital staff but a policy based on research and expert experience of outcomes for very preterm infants, with due consideration given to the particular circumstances of each case.

At birth [Mrs A's] son showed signs of life. It is clearly documented in the patient file that [Mrs A] and her husband had been informed that this was likely to happen and that resuscitation would not be offered. These signs of life; a very slow heart-rate (a normal newborn heart rate is 120–160 beats per minute) and weak respiratory effort are in no way indications that the previously agreed plan for palliative care should have been changed. [Mrs A's] son was larger than anticipated but as the pregnancy dates were certain, he was known to be of very early gestational age. Further, on removal of the cervical suture it was noted to have contained pus and on delivery the placenta was noted to have an offensive smell, further confirming the presence of infection. Preterm babies are fragile and have limited ability to mount a response to infection. It would have been inappropriate for the midwives to go against the hospital policy, and the decisions of the senior obstetric and neonatal doctors and attempt to prolong the baby's life in these circumstances. In providing care for [Mrs A] during labour and following birth it is my view that the midwives acted in accordance with hospital policy and accepted best practice.

Despite the above, it is acknowledged that giving birth to a child that subsequently dies is a dreadful experience. The care documented by the midwives post birth indicates this terribly sad situation was handled with care and compassion. [Mrs A's] physical needs were taken care of including pain relief, antibiotics, food, and comfort measures. Her baby was wrapped and she was encouraged to hold him and share his short time in the world with visiting family. Condolences were offered to the family and they were encouraged to have photos taken and to create keepsakes in memory of their son. They were also offered specialist bereavement care services.

It is documented that the midwives gave [Mrs A] information about post-mortem examination and when post-mortem was declined, arranged for histology of the placenta and a detailed physical examination and medical photographs of baby. When a

post-mortem has been declined, such records can be extremely valuable for parents who later wish for more information about why their baby died.

In my opinion the care offered by the midwives involved in this case was of an acceptable and even very high standard. In terms of improvement, it is noted that the time elapsed between [RM C's] referral following cervical length scan and the cerclage procedure was long. However, this was not due to any inaction on [RM C's] part, but rather poor communication systems within the hospital. Following this case, it appears that hospital processes around triaging such referrals have been improved. It is regrettable that [RM C] did not inform [Mrs A] of the scan result and her subsequent referral. She has evidently reflected on this and declared that she would take extra care in ensuring she does this in future.

I would like to offer my condolences to [Mrs A] and her husband on the heart-breaking loss of their son. I hope the full investigation of this case goes some way in restoring their confidence in their local maternity service.

Thank you for the opportunity to consider this case.

Yours Faithfully,

Billie Bradford RM, MMid, PhD Candidate."

Appendix B: Independent obstetric advice to the Commissioner

The following expert advice was obtained from Dr Sornalatha Vasan:

> "I Dr Sornalatha Vasan have been asked to give opinion on this case — C16HDC00719: Expert advice request.
>
> I am a Fellow of the Australian and New Zealand College of Obstetricians and Gynaecologists and am on their Expert Witness Register as well as a fellow of the College of Obstetricians and Gynaecologists in South Africa from where I qualified as an Obstetrician and Gynaecologist in 1998.
>
> I work as a general O&G Specialist and I am an examiner for RANZCOG and supervisor for ITP trainees in New Zealand.
>
> I have no personal or professional conflict in this case.
>
> I have read the following documents you provided:
>
> Midwife and CMDHB notes from Admission on 30 [Month2] to 2nd [Month 3]
>
> Response from CMDHB
>
> Complaint from Mrs A
>
> Midwife and CMDHB notes from 05 [Month 3] to 17 [Month5]
>
> US report from 22 [Month2] and midwife notes up to referral to CMDHB
>
> You have requested me to provide opinion on the following issues:
>
> 1. Comment on the timeliness of [Mrs A's] elective admission and booking for cervical cerclage in relation to 22nd [Month2] US scan findings
> 2. Considering US scan finding on 30th [Month2], was a cervical cerclage still a reasonable intervention to be undertaken in [Mrs A's] case?
> 3. Was the provided post operative care and follow up planned for [Mrs A] appropriate?
> 4. Any other comments you may have concerning obstetric care provided to [Mrs A] during this admission
>
> **CLINICAL SUMMARY**
>
> [Mrs A], [aged in her thirties] G4 P1, had been seeing LMC from early pregnancy in the current pregnancy and was advised to have regular cervical length assessment due to previous pregnancy loss at 19 weeks in her 3rd pregnancy. In her first pregnancy she delivered a live baby at term (…Kgms) with no complication; had a surgical termination of pregnancy in second pregnancy.
>
> Normal booking bloods; Low risk MSS1; US scan at 16 weeks reported shortening of cervix and was referred to hospital but seen and treated in CMDHB after a delay of

nearly a week due to [a public holiday]. Had an emergency rescue cerclage which was successful; resumed normal work and activities in 1 week. Had regular LMC assessment but one clinic assessment (no notes available from clinic) before she presented on 16th [Month4] with uterine contractions. She was admitted and monitored. Continued to contract. Treated with oral antibiotic and tocolytic (to suppress contractions). When labour was inevitable suture was removed and she delivered soon after a live male baby weighing ? [715gm] certified dead after 5.5 hours of birth.

RESPONSE TO SPECIFIC ISSUES:

Comment on the timeliness of [Mrs A's] elective admission and booking for cervical cerclage in relation to 22nd [Month2] US scan findings.

[Mrs A] had a scan performed around 16 weeks — on 22nd [Month2] following recommendation from High risk clinic follow up after previous miscarriage at 19 weeks.

Scan reported cervix to be 24 mm long with mild funnelling. LMC contacted the public hospital maternity services and was advised to discuss directly with SMO following which she was advised to send the referral to OGUS for triaging. Due to public holiday triaging was acted on 28th [Month2] and a repeat scan was booked on 30th [Month2]. US reported funnelling of cervix with dilatation up to external os which was closed. She was subsequently admitted on the same day and cervical cerclage was booked urgently which was performed the next day due to business of Delivery suite which kept SMO busy overnight.

Accepted practice is for SMO to instruct LMC to bring patient for admission and discussion for emergency cervical cerclage with US evidence of cervical shortening and funnelling. **Referring to routine triage is serious departure from accepted practice.**

Recommended practice with previous pregnancy loss at 19 weeks is regular US scan from 16 weeks gestation for cervical length monitoring with view of cervical cerclage if there were signs of cervical shortening.

Considering US scan finding on 30th [Month2], was a cervical cerclage still a reasonable intervention to be undertaken in [Mrs A's] case?

It is an accepted practice to attempt a rescue cerclage even when cervix is open although risks of infection and preterm labour are higher when cerclage is applied after cervix starts opening.

Data available in the literature suggest that emergency cerclage, under ideal circumstances, can significantly prolong pregnancy and increase the chance of viable pregnancy outcome:

> Cockwell HA, Smith GN. Cervical incompetence and the role of emergency cerclage. *J Obstet Gynaecol Can*. 2005 Feb. 27(2):123–9. [Medline].

Owen J, Hankins G, Iams JD, et al. Multicenter randomized trial of cerclage for preterm birth prevention in high-risk women with shortened midtrimester cervical length. *Am J Obstet Gynecol*. 2009 Oct. 201(4):375.e1-8. [Medline].

Was the provided post operative care and follow up planned for [Mrs A] appropriate?

[Mrs A] was advised to resume normal work and activities a week following procedure and was instructed not to have any more US scans to monitor cervical length.

In a nonelective (emergency) cerclage, patients should be managed conservatively; physical activity and coitus should be avoided until a favorable gestational age of at least 32 to 34 weeks is reached.

Women are followed as outpatients on a regular basis with frequent visits for cervical checks. Transvaginal ultrasound assessment of the cervical length and dynamics (changes in length with and without pressure) may be useful for identifying those patients at highest risk for preterm birth.

In women with a short cervix, treatment with progesterone reduces the rate of spontaneous early preterm delivery. (ClinicalTrials.gov number, NCT00422526)

Cancelling follow up scans to assess cervix as documented in clinical notes and not arranging regular follow ups or giving clear documented recommendations regarding post operative care to optimise fetal outcome is a **serious deviation from recommended practice**.

Final results of the Cervical Incompetence Prevention Randomized Cerclage Trial (CIPRACT): Therapeutic cerclage with bed rest versus bed rest alone. Presented at the Twenty-first Annual Meeting of the Society for Maternal-Fetal Medicine, Reno, Nev, February 5–10, 2001.

Hedriana HL, Lanouette JM, Haesslein HC, McLean LK. Is there value for serial ultrasonographic assessment of cervical lengths after a cerclage? *Am J Obstet Gynecol*. 2008 Jun. 198(6):705.e1-6; discussion 705.e6. [Medline].

Sim S, Da Silva Costa F, Araujo Junior E, Sheehan PM. Factors associated with spontaneous preterm birth risk assessed by transvaginal ultrasound following cervical cerclage. *Aust N Z J Obstet Gynaecol*. 2015 Aug. 55(4):344–9. [Medline].

Fonseca EB, Celik E, Parra M, Singh M, Nicolaides KH. Progesterone and the risk of preterm birth among women with a short cervix. *N Engl J Med*. 2007 Aug 2. 357(5):462–9. [Medline].

COMMENTS:

For women with singleton pregnancy and a history of prior preterm birth who are found to have a short cervix on ultrasound, cervical pessary, vaginal progesterone or cerclage are reasonable treatment options.

Vaginal progesterone, cerclage or cervical pessary for preventing preterm birth in asymptomatic singleton pregnant women with a history of preterm birth and a sonographic short cervix

Authors Z. Alfirevic, J. Owen, E. Carreras Moratonas, A. N. Sharp, J. M. Szychowski, M. Goya Published Date 17 January 2013.

Progesterone: Use in the second and third trimester of pregnancy for the prevention of preterm birth — RANZCOG guidelines —

Progesterone therapy should be considered for all women with a singleton pregnancy who have a history of previous spontaneous preterm birth or who are found to have a short cervix at the time of the routine morphology scan. Current evidence suggests that progesterone reduces the risk of preterm birth in these women, with improvement in perinatal outcomes.	Consensus-based recommendations"

The following further advice was provided by Dr Vasan:

"I am providing further opinion on the care provided by Obstetrics and Gynaecology medical staff at Counties Manukau District Health Board to [Mrs A] between 16 [Month1] and 16 [Month4]; case-C16HDC00719; refer letter dated 10th February 2017.

I am a Fellow of the Australian and New Zealand College of Obstetricians and Gynaecologists and am on their Expert Witness Register as well as a Fellow of the College of Obstetricians and Gynaecologists in South Africa from where I qualified as an Obstetrician and Gynaecologist in 1998.

I work as a general O&G Specialist and I am an examiner for RANZCOG and supervisor for ITP trainees in New Zealand.

I have no personal or professional conflict in this case.

I have received and read the following documents sent from your office:

Letter of complaint … including attachment.

Email from [Mrs A] …

Email from [Mrs A] …

Email correspondence with [Mrs A] …

Midwife [RM C's] response … including clinical records.

Counties Manukau District Health Board's response … including clinical records.

Counties Manukau District Health Board's response … including attachments.

Background

[Mrs A] booked with [RM C], CMDHB case-loading midwife early in her current pregnancy. On 3rd [Month2] she was referred for pelvic US for assessment of cervical length following advice from her previous pregnancy loss at 19 weeks. She is [in her thirties], Gravida 4 Para 1; (1st pregnancy was full term, normal vaginal delivery, baby alive and well; followed by termination of pregnancy and miscarriage at 19 weeks).

On 7th [Month2] she was reviewed by O&G Registrar [Dr L] and advised LMC to arrange US for cervical length every 2 weeks and review result. If funnelling or cervical shortening <2.5 cm to discuss with SMO on call and planned to review her in Specialist clinic after morphology scan.

On 22nd [Month2] [Mrs A] had a cervical assessment scan reporting cervical length of 24mm with mild funnelling. Report was sent to [RM C] who sighted the report the following morning and referred the patient for Specialist review electronically. She then realised the referral should have been marked urgent, so consulted maternal fetal midwife [RM E] who advised her to contact Obstetric SMO on call for advice.

On call SMO — [Dr G] advised Midwife to send the referral to Obstetric and Gynaecological US service. [Dr G] states that the referral was not brought to her attention by the clinical administrator so presumed that another SMO had seen it and made necessary arrangements for [Mrs A]. [RM C] did not inform [Mrs A] of abnormal scan report or the referral.

Due to [public holidays] the referral was reviewed by OGUS SMO on the 29th [Month2] and recommended that [Mrs A] be seen in OGUS as soon as possible. A scan was performed next day around 4.30 PM by … who reported an abnormally dilated cervix and recommended admission for insertion of cervical suture.

[Mrs A] was admitted same evening at 8 pm to the public hospital for cervical cerclage and was reviewed by [Dr L] but due to busy delivery suite, the procedure was performed next day and cervix was found to be 1cm dilated with visible membranes. She was discharged home on 2nd [Month3].

On 5th [Month3] [RM C] sought advice from [RM E] for [Mrs A's] post procedure care plan and was advised to cancel further cervical assessment scans stating that it is common practice not to monitor cervix once the cerclage was in place.

On 12th [Month3] [a house officer] completed the discharge summary with following plans

1. Discharge home

2. If develops abdominal pain or PV bleeding or fluid leak, needs urgent review+/- removal of suture if impending miscarriage.

3. Outpatient Maternity clinic review in 2 weeks.

On 18th [Month3] [Mrs A] contacted [RM C] and complained of abdominal pain with watery discharge since the previous day. [RM C] called OGUS for advice and called [Mrs A] back advising her to attend emergency department at the public hospital.

[Mrs A] was assessed and admitted overnight. She was treated for urinary tract infection with antibiotics; clinical impression was that it was unlikely premature rupture of membranes.

On 25th [Month3] O&G Registrar [Dr K] reviewed [Mrs A] in the clinic and planned for growth scans at 28 and 32 weeks; glucose tolerance test at 28 weeks and for further review at 35 weeks to arrange removal of cervical suture. [Mrs A] was advised to contact [RM C] if she developed symptoms of urinary tract infection, PV loss or any concerns.

On 15th [Month4], [Mrs A] had a routine antenatal assessment with [RM C]. [Mrs A] had complained of lower back pain and pain in her thighs with heavy vaginal discharge but not watery or blood stained. [RM C] felt that the discharge could be due to infection or pregnancy itself and later obtained vaginal swab.

[Mrs A] presented to the public hospital at 5.12 am on 16th [Month4] with contraction like pain overnight. She was assessed by O&G Consultant [Dr B] and recommended that the Registrar check patient after lying down for 40 mts to rule out rupture of membranes; if not to start drugs to suppress labour and not for steroids as pre-viable still.

[The registrar] discussed with the couple that there is a chance labour will establish or rupture of membrane in which case suture will need to be removed with likelihood of delivery of baby which even if alive will not be able to survive. They seemed accepting of this and did not have any questions at that time.

After team review at 8 AM hand over at 8.43 SMO [Dr N] discussed with patient and her husband the risk of on-going contractions, trauma to cervix and infection and removed the cervical suture. The plan was to continue antibiotics and await delivery.

At 14.24 the same day [Dr I], paediatrician visited [Mrs A] to discuss outcome for the baby. He recorded in the clinical notes 'unfortunately unable to offer any active resuscitation at this gestation (23+ 0 weeks) male no steroids not currently monitored'. In his response to HDC he explained that babies born < 24 weeks have 10% survival in their experience and can have severe handicap and the hospital guideline is that no neonatal intervention offered for these babies.

At 14.28 Midwife [RM D] has recorded in clinical note 'Have discussed birth process with [Mrs A] and [her husband]. Nil questions currently, aware that there will be no measures to resuscitate baby at this current gestation. If baby delivers would like to cuddle baby, [husband] to cut cord and they consent for placenta to be sent for histology. Do not wish placenta to be returned.'

[Mrs A] has reported to HDC that there was no discussion prior to birth about what care would be provided to her baby.

At 3.15 pm, [Mrs A] had normal vaginal delivery of live male baby weighing 715gm. [Mrs A] told HDC that baby died at 8.45 pm. Baby was not reviewed by a Doctor until 2.51 AM following day but was seen by [RM D]. [Mrs A] complained that [RM D] told

her that she should let her baby go because it was born at 23 weeks and they only try and save babies born after 24 weeks.

CMDHB's guidelines on *Management of pregnancies at Borderline viability* states that for births at 23+0 to 23+6 weeks gestation, recommended practice is for no neonatal intensive care, no antenatal corticosteroids, no foetal monitoring and no attendance by neonatal team for resuscitation. However, the guideline also states that

> **if parents make a decision for active treatment after informed discussion:**
>
> Consider Steroids
>
> Neonatal team called for delivery
>
> If birth weight > 500 gm. and gestation appears appropriate, start resuscitation.
>
> Stop early if response poor.

Expert advice on:

Adequacy of [Dr L's] review and management plan on 7 [Month2]

[Dr L's] assessment and management plan on 7th [Month2] was very appropriate and adequate. (details in the background)

Appropriateness of advice [Dr G] gave to [RM C] on 23 [Month2]

[Mrs A] had lost a previous pregnancy at 19 weeks. At the pregnancy loss follow up assessment SMO had suggested regular US from 12 weeks in the subsequent pregnancy to monitor cervical length and for cervical suture if there was cervical shortening or funnelling. With this background if US reported shortened cervix with funnelling it was imperative to advise midwife to bring patient to the Hospital for assessment and management ASAP. This cannot be referred for routine triaging. Registrar who had seen [Mrs A] in Antenatal clinic in early pregnancy had advised that SMO on call be contacted in the event of shortening of cervix or funnelling due to need for urgent treatment.

Advising [RM C] to send the referral to OGUS was not appropriate and not making necessary arrangements to assure that [Mrs A] was assessed without undue delay was **significant departure from standard of care**.

Processing of referrals can take time and such patients are seen acutely in maternity assessment units to manage timely. If the SMO was busy she should have advised on call Registrar to arrange for the patient to be assessed acutely. Assuming that another SMO would have attended to it especially during impending Public holidays where no triaging was undertaken in the department is not appropriate management.

Reasonableness of the delay in the 23 [Month2] referral to OGUS being graded on 29th [Month2].

Public holidays can impair normal functioning of due processes but every unit will make provision for acute cover and urgent referrals especially in Obstetrics. It was unfortunate that [Mrs A] was left to be triaged in routine referral system. In such acute situations Practitioners are advised to discuss directly with SMO on call for timely

advice and management. **The delay in grading of the referral on 23rd [Month2] was not reasonable**.

This was a **serious departure from the standard of care**.

The reasonableness of the delay between the grading of the 23 [Month2] referral on 29 [Month2] and the 4.30 pm OGUS appointment the next day.

With [Mrs A's] past history and US finding patient should have been contacted with relevant information to come to Hospital for urgent assessment and further management. It is unclear from the clinical information provided to me the reason for the delay until next day evening.

In [Mrs A's] statement she mentions that she was not informed why she was coming to the Hospital again. She was at work when she was called and took time to get to the hospital. Again **the delay was not reasonable**. Appropriate and adequate communication with midwife and patient should occur in such situations to avoid delay.

The reasonableness of the delay between the US at 4.30 PM on 30 [Month2] and cerclage the next day, including:

- the reasonableness of the decision to wait until the next day (if this was because it was after hours and if this was because of the busyness of the delivery suite);
- the level of monitoring given the decision to wait until the following day.

Following assessment in OGUS [Mrs A] was informed of the situation and admitted immediately for cervical cerclage. But due to the busyness of delivery suite the procedure was deferred to following morning which could happen and is reasonable. This is **acceptable** if the patient does not have any signs of impending labour i.e. abdominal pain or vaginal bleeding.

Cervical incompetence can lead to unpredictable and rapid premature birth. Monitoring for signs of labour and infection should be undertaken although not too frequently if the procedure was delayed.

6. The reasonableness of the delay in the discharge plan being completed on 12 [Month3], 10 days after discharge.
Delay of 10 days in completing discharge letters is not unreasonable although it is ideal to complete at the earliest possible. During public holiday period due to presence of skeletal staff at work paper work can be delayed. Although 10 days is within reasonable time frame in this case follow up plan must be communicated with midwife which is routine practice in most of Obstetric units.

7. The adequacy of [the] discharge plan of 2 [Month3], including whether this should have commented on cervical length scanning and treatment with progesterone.
With Previous pregnancy loss at 19 weeks and finding of dilated cervix with visible membranes at cervical cerclage, standard widely practised care is to arrange regular

scans to assess cervical length and to consider or discuss treatment with Progesterone although there is some controversy around this.

There are no robust clear guidelines for management of cervical incompetence. There is wide variation of management among Clinicians and Institutions for cervical incompetence.

Assessment of the cervical length by trans-vaginal ultrasound after cervical cerclage may help predict the outcome of pregnancy. Studies have shown that the length of the endocervical canal and the length of the closed cervix above the suture predicted delivery before 36 weeks of gestation.

8. The adequacy of the Obstetrics and gynaecology medical care provided during [Mrs A's] 18–19 [Month3] hospital admission.
On 18th [Month3] [Mrs A] presented to Hospital with watery/clear vaginal discharge since the previous day with cramping period like pain for 2 days. No PV bleeding, no clots, no discolouration. She was admitted, investigated appropriately. She was started on intravenous Cefuroxime as empirical treatment for urinary tract infection. There were no signs of rupture of membranes or preterm labour. Pelvic US was organised which reported that the cervical canal appeared closed and liquor volume normal; normal foetal activity.

Following day she was assessed as fit for DC and prescribed oral trimethoprim. Urine culture reported No growth. Cervical and high vaginal swabs reported mixed genital flora only.

This is accepted practice.

She is at risk of ascending infection from vagina (from cervical stitch) which increases risk of preterm birth significantly which ensued in this case. In the absence of urinary infection broad spectrum antibiotics would be prescribed in these circumstances due to discharge and lower abdominal pain in the presence of cervical stitch. (Although swab reported mixed genital flora.)

Placental histology — reported severe chorioamnionitis with maternal and foetal inflammatory response.

9. The adequacy of [Dr K's] review and management plan on 25 [Month3]

[Mrs A] was assessed in ANC. She complained of on-going mild lower abdominal pain.

Since no cause was identified during her admission on 18th [Month3] and there was no plan for monitoring cervical length, [Dr K] advised fetal growth at 28 and 32 weeks; GTT at 28 weeks and for review at 35 weeks for suture removal. **This is the standard care** if there is no plan to monitor cervical length.

10. The adequacy of the Obstetrics and gynaecology medical care provided on 16 and 17 [Month4], including the decisions not to provide [Mrs A] with corticosteroids, not to monitor the fetus prior to birth and not to provide active

resuscitation of the baby following birth and regarding consultation with the neonatal team about these decisions

[Mrs A] was admitted in the early hours of 16th [Month4] with labour like contractions and vaginal discharge, not watery. Was assessed by [the] registrar and by [Dr B], SMO who explained to [Mrs A] concern about intrauterine infection and early labour with possible need for removal of cervical suture. The plan was to repeat speculum after 30 mts of being in recumbent position with Amnisure; await CRP and if both negative for tocolysis (stop contractions).

Amnisure was negative. She was started on Nifedepine — tocolysis; morphine for pain relief and intermittent auscultation of foetal heart. Not for steroids since baby pre-viable.

She was reviewed by oncoming SMO [Dr N] after handover in the morning. CRP 47, maternal pulse 130–138 (80 at admission at 5.20 AM); bedside scan — cephalic presentation.

[Dr N] discussed with [Mrs A] and her husband concerns regarding infection and need for the suture to be removed as contracting and if suture remains in situ can cause further trauma/damage to cervix.

[Dr N] removed the cervical suture, started on oral Erythromycin (allergic to penicillin), await events, call if any concerns.

[Mrs A] was monitored by midwifery staff with Sevredol for pain relief.

At 14.17 midwife [RM D] records 'Paeds in room ([Dr I]) to discuss outcome for the baby if delivered today as looking increasingly likely. Contractions now 3:10 and increasing in strength and frequency. FHR auscultated at 152bpm.'

At 14.24 [Dr I] records 'Unfortunately unable to offer any active resuscitation at this gestation (23 weeks) male no steroids, not currently monitored.'

[Mrs A] delivered a live male baby at 15.15 — membranes ruptured at the time of delivery. Baby weighed 715 gm (recorded as 280 gm. by [midwife] at 04.49 on 17 [Month4]). At 19.39 Midwifery staff has recorded 'able to palpate and auscultate baby's heart beat'.

[Mrs A] and baby were assessed by [obstetric registrar] at 02.51 on 17th [Month4] and assessed [Mrs A] having signs of Chorioamnionitis and started on intravenous Augmentin; recorded that baby has no signs of life.

Hospital Guideline for management of pregnancies at Borderline Viability states that all discussions regarding management of such pregnancies should involve the parents and members of both Neonatal and Obstetric services. Members of these services are available to discuss cases by telephone at any time.

There is no record of such discussion with [Mrs A] and her husband. Obstetric and Paediatric team decided that the outcome will be poor and managed accordingly

without knowing what the parents wanted especially when their unit has clear guidelines for Borderline viability. Watching their own baby slowly die in their arms is very traumatic. To know they had a choice and were not given is very unfair and unacceptable.

This was a serious deviation from accepted standard of care.

11. Any other comment you may wish to make on the Obstetrics and Gynaecology medical care provided to [Mrs A].

[Mrs A] had increased risk of miscarriage in this pregnancy and the team did not take adequate steps to delay or avoid premature birth. On admission a formal pelvic US to assess foetal weight and wellbeing needed to be organised and discussed options with parents by both Obstetrics and Paediatric teams.

References:

Factors associated with spontaneous preterm birth risk assessed by transvaginal ultrasound following cervical cerclage. Shirlene SIM,1,2 Fabricio DA SILVA COSTA,1,2,* Edward ARAUJO J UNIOR3 and Penelope M. SHEEHAN1,2 Australian and New Zealand Journal of Obstetrics and Gynaecology 2015; 55: 344–349.

A.Welsh and K.H.Nicolaides, 'Cervical screening for preterm delivery,' *Current Opinion in Obstetrics and Gynecology*, vol 14, no. 2, pp. 195–202, 2002.

M. J. Novy, A. Gupta, D. D. Wothe, S. Gupta, K. A. Kennedy, and M. G. Gravett, 'Cervical cerclage in the second trimester of pregnancy: a historical cohort study,' *American Journal of Obstetrics and Gynecology*, vol. 184, no. 7, pp. 1447–1456, 2001.

RANZCOG college statement C-Obs 27 — measurement of cervical length for prediction of preterm birth."

The following further advice was obtained from Dr Vasan:

"I have received and read the following documents sent from your office:

Staff reports from:

[The] Clinical Director of Women's Health (WH)
[Dr N], Consultant O&G
[Dr G], Consultant WH
[Dr I], Consultant Neonatal Paediatrician
[RM D], Registered Midwife
Expert report from [Dr J]
[Clinical director's] response: A,b,c.

Referring [Mrs A] to routine triage on 23 [Month2].

I quote [Dr J's] opinion — conclusion, page 6:

Delay in review and consideration of intervention once cervix was measured <25mm as an area of consideration and that is the only issue that may have altered the outcome of this pregnancy.

I have been asked to give expert advice addressing specific questions by the Commissioner, not a peer review or academic analysis of a clinical condition.

Cervical incompetence is dealt with by every Obstetrician even in the smallest units in New Zealand. This patient had suffered a second trimester pregnancy loss in the same Hospital not long ago. She was seen and counselled to have scans to watch for cervical shortening to consider cervical cerclage. When the patient showed cervical shortening with funnelling it was imperative to act without undue delay to give her optimal outcome. It was not an emergency (life threatening) but urgent due to implication for the foetus. An urgent referral has been communicated via phone conversation, referring that to routine triage and not checking it during [public holidays] when most of the units function with skeletal staff was not appropriate care. I have discussed with my peers in New Zealand. Accepted practice is to review the patient same day and arrange cervical cerclage.

Reviewing the referral a week later on 29th and not appreciating implications and risk to the patient, assessment was further delayed until next day.

This delay has impacted outcome of this pregnancy gravely.

My opinion stays the same, ***significant departure from standard of care***.

d. 'Follow up scans are not currently standard practice in New Zealand'

As stated in my earlier report there are no robust clear guidelines for management of cervical incompetence. There is wide variation of management among Clinicians and Institutions for cervical incompetence.

There is controversy around the routine ultrasound assessment of the cervix as a means of defining risk of preterm delivery in **low risk women.1.2**.

Mid-pregnancy cervical length assessment is of value in identifying women at increased risk of preterm birth who may benefit from interventions such as vaginal progesterone or cervical cerclage. This may be used to further stratify risk in women with other identified preterm birth risk factors.

The bulk of the evidence for short cervical length and risk of preterm birth is from studies using a single cut-off of either 20 or 25mm between 18 and 24 weeks gestation.

Both RANZCOG and NICE guidelines recommend monitoring cervical length from 16 weeks gestation although clinicians start monitoring much earlier (from 12 weeks).

Meta-analysis has also shown that a subgroup of women who have other risk factors for preterm birth, especially previous history of preterm birth, may benefit from vaginal progesterone or cervical cerclage.[4]

Although not without controversy, a meta-analysis of randomised controlled trials suggests that treatment of such women with vaginal progesterone reduces the risk of preterm delivery before 34 weeks or fetal death by 34% and significantly reduces neonatal morbidity.[3] Approximately 11 women need to be treated to prevent one preterm delivery before 34 weeks.

1. Society for Maternal-Fetal Medicine, McIntosh J, Feltovich H, Berghella V, Manuck T. The role of routine cervical length screening in selected high- and low-risk women for preterm birth prevention. Am J Obstet Gynecol 2016;215(3):B2–7.

2. Miller ES, Tita AT, Grobman WA. Second-trimester cervical length screening among asymptomatic women: an evaluation of risk-based strategies. Obstet Gynecol 2015;1206(1):61–6.

3. Romero R, Nicolaides KH, Conde-Agudelo A, O'Brien JM, Cetingoz E, Da Fonseca E, Creasy GW, Hassan SS. Vaginal progesterone decreases preterm birth ≤ 34 weeks of gestation in women with a singleton pregnancy and a short cervix: an udpated meta-analysis including data from the OPPTIMUM study. Ultrasound Obstet Gynecol 2016;48(3):308–17.

4. Celik E, To M, Gajewska K, Smith GC, Nicolaides KH; Fetal Medicine Foundation Second Trimester Screening Group. Cervical length and obstetric history predict spontaneous preterm birth: development and validation of a model to provide individualized risk assessment. Ultrasound Obstet Gynecol 2008; 31 (5): 549–54.

My earlier report:
[Mrs A] was admitted in the early hours of 16th [Month4] with labour like contractions and vaginal discharge, not watery. Was assessed by [the] registrar and by [Dr B], SMO who explained to [Mrs A] concern about intrauterine infection and early labor with possible need for removal of cervical suture. The plan was to repeat speculum after 30 mts of being in recumbent position with Amnisure; await CRP and if both negative for tocolysis (stop contractions).

Amnisure was negative. She was started on Nifedepine — tocolysis; morphine for pain relief and intermittent auscultation of fetal heart. Not for steroids since baby pre-viable.

At 14.24 the same day [Dr I], paediatrician visited [Mrs A] to discuss outcome for the baby. He recorded in the clinical notes 'unfortunately unable to offer any active resuscitation at this gestation (23+ 0 weeks) male no steroids not currently monitored'. In his response to HDC he explained that babies born < 24 weeks have 10% survival in their experience and can have severe handicap and the hospital guideline is that no neonatal intervention offered for these babies.

At 14.28 Midwife [RM D] has recorded in clinical note 'Have discussed birth process with [Mrs A] and [her husband]. Nil questions currently, aware that there will be no measures to resuscitate baby at this current gestation. If baby delivers would like to

cuddle baby, [husband] to cut cord and they consent for placenta to be sent for histology. Do not wish placenta to be returned.'

[Mrs A] has reported to HDC that there was no discussion prior to birth about what care would be provided to her baby. (This was not my comment.)

Hospital Guideline for management of pregnancies at Borderline Viability states that all discussions regarding management of such pregnancies should involve the parents and members of both Neonatal and Obstetric services. Members of these services are available to discuss cases by telephone at any time.

There is no record of such discussion with [Mrs A] and her husband by Obstetric and neonatal team on her admission with impending labour. Obstetric and Paediatric team decided that the outcome will be poor and managed accordingly without knowing what the parents wanted especially when their unit has clear guidelines for Borderline viability. Watching their own baby slowly die in their arms is very traumatic. To know they had a choice and were not given is very unfair and unacceptable.

CMDHB's guidelines on *Management of pregnancies at Borderline viability* states that for births at 23+0 to 23+6 weeks gestation, recommended practice is for no neonatal intensive care, no antenatal corticosteroids, no fetal monitoring and no attendance by neonatal team for resuscitation. However, the guideline also states that

> **if parents make a decision for active treatment after informed discussion:**
>
> consider Steroids
>
> Neonatal team called for delivery
>
> If birth weight > 500 gm. and gestation appears appropriate, start resuscitation.
>
> Stop early if response poor.

There is no record in the notes provided to me that this discussion occurred when she presented in labour at 5.20 AM on 16th [Month4].

It has been recorded by Obstetric team not for steroids or resuscitation since the baby is pre-viable.

(*Also reported by [Dr J] page 5 — 'it does not appear that an informed discussion was made with [Mrs A] and her partner to allow them to make a decision or that the neonatal team were consulted at this time'.*)

Neonatal team were involved when she was in advanced labour and was too late to make informed decision.

[Mrs A] and her partner were deprived of the choice to choose steroids and resuscitation (effect on outcome is not considered here) and this is a **significant deviation from accepted practice.**

My opinion is in regard to management and not the outcome."