Te Whatu Ora Waikato

A Report by the
Deputy Health and Disability Commissioner

(Case 19HDC02310)

Health and Disability Commissioner
Te Toihau Hauora, Hauātanga

Contents

Executive summary

1. This report concerns the care provided to a woman by Te Whatu Ora Waikato in 2019.

2. The woman presented to ED complaining of headaches and nausea. She was pregnant with twins. The woman was reviewed in ED and discharged the same day with the recommendation for GP follow-up in one week's time. She required acute management of early onset hypertension for her pregnancy and an effective plan for close monitoring in the community.

3. The woman was later admitted to hospital for monitoring, due to concerns about IUGR and an abnormal Doppler for one of the twins. The woman remained in hospital until the delivery of her babies. It was subsequently confirmed that only one fetal heartbeat was present, and the woman was told that one of her babies had passed in utero. That same day the twins were delivered by emergency Caesarean section.

4. The decision to deliver the babies needed to be considered in the context of the optimal gestational age for twin delivery and the risks associated with their premature birth, alongside the multiple episodes of abnormal CTGs, uncontrolled pre-eclamptic toxaemia (PET), the woman's non-compliance at times with treatment recommendations while under Te Whatu Ora Waikato's care, and, perhaps most significantly, the woman's preference to have her babies delivered sooner rather than later.

Findings

5. The Deputy Commissioner was critical of Te Whatu Ora Waikato's care in the following respects:

- Following the first ED review, an effective plan was not made for close monitoring in the community.
- Medical input was not sought when two separate heartbeats could not be identified clearly, and the woman was transferred back to the ward.
- The decision on whether to deliver the babies was not considered in the context of numerous abnormal CTGs and uncontrolled PET, and the expressed preference of the woman.

6. The Deputy Commissioner accepted that the circumstances were challenging, but she considered that the cumulative deficiencies in the care provided amounted to a failure to provide services with reasonable care and skill and therefore that Te Whatu Ora Waikato breached Right 4(1) of the Code.

7. The Deputy Commissioner was concerned about some aspects of Te Whatu Ora's cultural practices. Although Te Whatu Ora did offer cultural support at times, occasionally — especially when the woman was told that a baby had passed — Te Whatu Ora's cultural services and support were inadequate and did not meet the woman's cultural needs. However, in considering the emergent critical nature of the situation at the time, the Deputy

Commissioner considered that these inconsistencies did not amount to a breach of the Code.

Recommendations

8. The Deputy Commissioner recommended that Te Whatu Ora Waikato provide a written apology; schedule refresher training for all maternity and obstetric staff on the management and monitoring of hypertension and pre-eclampsia in twin pregnancies; and incorporate an anonymised version of this case as a basis for training staff.

9. The Deputy Commissioner also recommended that Te Whatu Ora Waikato provide a copy of its cultural/kaupapa training framework, outlining how the practice of tikanga with patients and their whānau is developed with all hospital staff. In addition, the Deputy Commissioner recommended that Te Whatu Ora Waikato outline to HDC how this framework aligns with the elements of Pae Ora.

Complaint and investigation

10. The Health and Disability Commissioner (HDC) received a complaint from Ms A about the services provided by Waikato District Health Board (now Te Whatu Ora Waikato).[1] The following issue was identified for investigation.

- *Whether Waikato District Health Board (now Te Whatu Ora Waikato) provided Ms A with an appropriate standard of care in 2019.*

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

12. The parties directly involved in the investigation were:

Ms A	Consumer
Te Whatu Ora Waikato	Provider
Dr B	Senior Medical Officer (SMO) Obstetrics and Gynaecology
Dr C	Obstetrics and Gynaecology registrar
Dr D	SMO Obstetrics and Gynaecology
Registered midwife	

13. Further information was received from two lead maternity carer (LMC) registered midwives.

14. Independent advice was obtained from obstetrician and gynaecologist Dr Sornalatha Vasan (Appendix A).

[1] On 1 July 2022, the Pae Ora (Healthy Futures) Act 2022 came into force, resulting in all district health boards being disestablished and Te Whatu Ora|Health New Zealand being established in its place.

Information gathered during investigation

Introduction

15. This report discusses the care provided to Ms A by Te Whatu Ora Waikato in 2019.

16. I thank Ms A and her whānau for taking the time to bring their concerns to the Health and Disability Commissioner. I also acknowledge the passing of the baby. E te atua, manaakitia mai te whanau e noho tonu nei i raro i te kapua o pouri. Noreira e te tamaiti moe mai koe i roto i nga ringa o te Atua.

Background

17. Ms A is of Māori heritage and lives with her young children. In Ms A's complaint she raised concerns around the standard of care provided to her by Te Whatu Ora.

18. Ms A, in her thirties at the time, was pregnant with twins. During Ms A's pregnancy she developed complications, including chronic hypertension,[2] pre-eclamptic toxaemia (PET),[3] and intrauterine growth restriction (IUGR).[4] Due to these complications, Ms A needed regular monitoring at the high-risk antenatal clinic.

19. On 13 Month5,[5] at 30 weeks and 3 days' gestation (30+3), cardiotocography (CTG) confirmed that there was no fetal heartbeat for Twin A and that she had died in utero. That same day, Ms A haemorrhaged with a suspected placental abruption, and underwent an emergency Caesarean section (C-section). The baby brother was born in good health.

20. In Ms A's complaint, she said that she had repeatedly raised concerns regarding the wellbeing of her babies, but doctors did not act on her concerns, and she was told that delivery could not happen because of staff shortages. Ms A said that Twin A died at 30 weeks despite her repeated requests to have her twins delivered early.

21. Ms A also raised concerns around Te Whatu Ora's communication with her, and that her cultural beliefs were not considered by Te Whatu Ora while she was an inpatient.

Events leading up to complaint

Monitoring of pregnancy by Te Whatu Ora from 12 weeks' gestation

22. The key clinical staff involved in Ms A's care at Te Whatu Ora were Dr B (Obstetrics and Gynaecology SMO), Dr D (Obstetrics and Gynaecology SMO), Dr C (Obstetrics and Gynaecology registrar), and a registered midwife.

[2] High blood pressure.
[3] A pregnancy-induced condition that can occur in the second half of pregnancy. It is characterised by high blood pressure, sudden swelling along with rapid weight gain due to fluid retention, and protein in the urine.
[4] In many cases, this is the result of a problem that prevents a baby from getting oxygen and nutrients. The lack of nourishment slows the baby's growth.
[5] Relevant months are referred to as Months 1–5 to protect privacy.

23. On 7 Month1, Ms A was referred to the Emergency Department (ED) by her LMC with complaints of headaches and nausea. Concerns with hypertension were noted. Ms A's pregnancy was 12 weeks' gestation at the time.

24. Ms A's ED discharge note states that on arrival at ED, Ms A's blood pressure (BP) was high at 160/122mmHg.[6] Ms A was monitored in the ED and administered oral labetalol 200mg.[7] After about one and a half hours, Ms A's BP decreased to 149/112mmHg. Ms A felt well and was advised to commence labetalol 100mg twice daily and aspirin 100mg daily. General practitioner (GP) follow-up was recommended in one week's time to monitor Ms A's BP and adjust the labetalol dose to a therapeutic level. Ms A was advised to seek medical advice if she was concerned, and she was then discharged that same day.

25. Dr B told HDC that the decision to discharge Ms A on 7 Month1 was made because at the time, Ms A had no significant symptoms apart from 'an increase of her tensional headaches that she even had prior to pregnancy'. Dr B stated that Ms A's physical examination was normal, and her blood and urine investigations were normal. Dr B said:

> '[Ms A] was diagnosed with chronic hypertension and her case was discussed with the Obstetric Registrar (no name documented) … Advice for a referral to our high risk pregnancy clinic should have been added and documented, however this may have been discussed with her [LMC] as she was indeed referred.'

26. In between hospital antenatal clinics, Ms A continued to be monitored by her LMC in the community. Ms A's antenatal records document that the LMC had discussions with Ms A about her concerns around her complex social issues.

27. Ms A was seen at the antenatal clinic at Te Whatu Ora approximately twice a month from 18+3 weeks' gestation up until her admission into the maternity ward on 29 Month4 (28+2 weeks' gestation). At these appointments, Ms A's blood pressure was monitored and her medication was reviewed. On 4 Month3 2019, Ms A was advised about the possible complications of a dichorionic diamniotic pregnancy (DCDA),[8] including the risks of PET, stroke, and IUGR. Ms A was noted to be reluctant to take any medications, and reportedly she had not been taking the labetalol recommended during the ED presentation in early Month1 as it made her feel sick.

28. On 12 Month3 2019 (21+3 days' gestation), Ms A's LMC raised concerns about Ms A's frontal and generalised headaches, variable ankle oedema (swelling), and intermittent right upper quadrant and abdominal pain. Ms A was admitted to the public hospital for BP monitoring and antihypertensive treatment. During this admission, nicotine replacement therapy (NRT) was offered but declined, and social worker support was offered and declined. Ms A said that she had support from an organisation that was arranging accommodation. Ms A's sister

[6] Normal blood pressure in pregnancy is under 120/80mmHg.
[7] Labetalol is a medication used to treat some heart problems and high blood pressure.
[8] A twin pregnancy where each twin has its own chorionic and amniotic sac.

was looking after Ms A's other children. On 13 Month3 2019, Ms A was discharged from hospital and was reminded to contact her LMC or GP if concerned.

29. On 1 Month4 (24+3 weeks' gestation), Ms A was seen in the antenatal clinic for review. Ms A advised that she had not been taking her aspirin. A plan was made with Ms A for her to re-commence aspirin and wear compression stockings, to have a repeat ultrasound scan in four weeks' time, and for her LMC to check her BP every two weeks.

30. On 29 Month4 (28+2 weeks' gestation), Ms A was seen in the antenatal clinic for follow-up and concerns about headaches, blurred vision, peripheral oedema, and protein in her urine. Investigations indicated IUGR and abnormal Dopplers[9] for one of the twins, Twin A, and Ms A was advised about her proteinuria[10] and pre-eclampsia, and the need for close surveillance and possible early delivery. Ms A was admitted to the ward and started on antihypertensive medications. Blood investigations were completed, monitoring was commenced, and she was provided with a letter for housing.

31. Ms A remained in hospital from 29 Month4 until the birth of her babies. Daily monitoring and observations were completed. Ms A's clinical notes record that on numerous occasions Ms A was not present on the ward, and that often she was difficult to locate when required for observations, which included CTGs.

32. Clinical and LMC reports note discussions with Ms A, both prior to and during admission, about the implications of smoking during pregnancy, and that options of support to quit were provided. The risks associated with smoking in pregnancy appear to be regular points of discussion, including in relation to Ms A's high blood pressure. In response to the provisional decision, Ms A said that she felt that Dr D 'had a grudge against [her]' because of her smoking.

33. The clinical records on 2 Month5 note that Ms A reported that one baby was not moving well but the other baby was. Ms A asked to talk to doctors regarding a plan for her babies. The clinical records note that Ms A was reviewed and further monitoring was planned, including twice-daily CTGs, biweekly Dopplers, and review of her antihypertensive (nifedipine) and aspirin.

34. On 5 Month5, an abnormal Doppler was noted. Ms A had a headache, tingling in her fingers, and photophobia.[11] CTG monitoring at 10.20am and 5.20pm showed normal findings for Twin A. However, Twin B's findings are recorded as 'Abnormal trace with reassuring features.' The CTG was recommenced at 10.20pm, and the babies were recorded as being 'very active during monitoring'.

35. On 6 Month5, Ms A reported reduced fetal movements, and a CTG was commenced. Following a review by Dr B, Ms A was moved to the delivery suite for monitoring. Ms A's

[9] A Doppler machine is an ultrasound device used to monitor an embryo's heartbeat.
[10] High levels of protein in the urine.
[11] Eye discomfort in bright lights.

clinical records note that during monitoring Ms A became very upset, as she felt that nothing was being done despite having been told that Twin A's condition was deteriorating.

36. Dr B told HDC that she was asked to review Ms A's CTG on 6 Month5, as it showed a tachycardia[12] and reduced short-term variability. Dr B said that the CTG was abnormal and showed signs of 'possible acute fetal compromise/abnormal CTG'. Dr B recommended moving Ms A to the hospital's Women's Assessment Unit (WAU) for the administration of steroids and magnesium sulphate for fetal neuroprotection[13] in the likelihood of delivery. Dr D told HDC that she reviewed Ms A on 6 Month5 and noted that management of the issues at the time was as per the DHB's Management of Hypertensive Disorders during Pregnancy Guideline and the Ministry of Health Diagnosis and Treatment of Hypertension and Pre-eclampsia in Pregnancy in New Zealand. Dr D said:

> 'Delivery was initially considered on [Month5] 6th based upon a segment of CTG trace of [Twin A] that was thought to have an elevated base rate (tachycardia) and show[ing] reduced short term variability. This however normalised. Remaining fetal and maternal condition were stable.'

37. On 7 Month5, a CTG was commenced at 7.35am and reported as normal. A CTG was repeated at 3.16pm. The clinical records note that at this time Ms A complained to the hospital midwife that she was upset at the thought that her baby girl was struggling, and she would like doctors to deliver her. A CTG was recommenced at 7pm, and the clinical notes record that at 9.16pm the CTG was normal and reassuring.

38. In response to the provisional decision, Ms A said:

> 'The sonographer explained to me that my baby's [Dopplers] hadn't changed, which meant she wasn't getting the necessary nutrients she needed from me, I voiced to everyone that I could that I was told that if her condition hadn't improved, they will deliver her. And they never did.'

39. On 8 Month5 Ms A's BP was elevated, and her labetalol was increased. Ms A complained of decreased fetal movements, and the hospital midwife had difficulty obtaining CTG recordings but could pick up a fetal heartbeat with ultrasound. A registrar obtained a CTG and reported that it was normal and that both heartbeats had been located.

40. In response to the provisional decision, Ms A spoke about not being heard by the nurses who administered the blood-thinning (anticoagulant) injections at the time. She said that on 9 Month5, after being administered the blood-thinning injection, every injection left big black bruises on her stomach, and the lower half of her stomach was black in bruises, more so on the side where her daughter was. Ms A said that the injections made her daughter tense up. Ms A stated that on 10 Month5 when the nurse wanted to administer another

[12] Fast resting heart rate, usually over 100 beats per minute in adults.
[13] Protection of the baby's nervous system.

blood-thinning injection, she told the nurse that she refused to go through it again, and that there was not room on her stomach where it was not bruised, and it caused too much pain.

41. Ms A said that the nurse forced the monitor on her after she had explained that she was tender and in severe pain around the bottom half of her stomach. Ms A also said that she explained to the nurse that the monitor was not registering her daughter's heart rate. Ms A stated: '[N]ot once did she pick up my daughter for 4 hours, in and out of consciousness I was begging for her to listen …' Ms A said that the nurse then administered the blood-thinning injection in what she described as the worst part of her stomach on her daughter's side after she had already said no.

42. In response to these concerns, Te Whatu Ora stated:

> 'Enoxaparin (clexane) has been used for many years and it has never been shown to be related to fetal distress. The medical team did try to reassure [Ms A] regarding this, explaining the reasons for thromboprophylaxis, as well as its safety profile. We are very sorry that [Ms A] was distressed regarding the administration of clexane and further apologise if staff did not address her concerns adequately.'

43. Te Whatu Ora also acknowledged that at times Ms A's monitoring was very challenging. Te Whatu Ora stated:

> 'We understand that [Ms A] often found having a CTG uncomfortable, and more so when the positioning of the loco probes to hear both babies' heart beats was difficult. Midwifery staff often needed to try several times to successfully place the probes, sometimes needing to call the registrars for assistance.'

44. Te Whatu Ora apologised if this caused Ms A pain and distress but stated that CTGs are considered a key component of the monitoring recommended with IUGR.

45. Te Whatu Ora was asked to comment on Ms A's concern about informed consent to the administration of enoxaparin. Te Whatu Ora stated:

> 'The Midwife Director met with the registered midwife (RM) who administered the Enoxaparin (Clexane) and together, they reviewed [Ms A's] clinical notes. While the RM does not recall the conversation specifically with [Ms A], her usual practice when administering medications is to ask for consent prior. Additionally the RM asks if the patient understands why they are receiving that medication.
>
> Regarding Enoxaparin specifically, it is the RM's normal practice to ask a woman to expose her abdomen to administer this. If the patient does decline medication, then this is documented in the clinical notes and the appropriate code used in the medication chart.
>
> We have reviewed the clinical notes and nothing has been documented in relation to this.'

46. Te Whatu Ora apologised that Ms A felt unheard on 10 Month5. Te Whatu Ora stated:

> 'We can only speculate that perhaps any communication at the time, was interpreted to relate to not wanting to have the CTG, as it had been difficult to place successfully and caused [Ms A] distress prior.'

47. Between 9 and 12 Month5, Ms A continued to be monitored, and it was recorded that the CTGs were reassuring.

48. At 2am on 12 Month5 (30+2 weeks' gestation), Ms A started contracting every 4–5 minutes. She was commenced on continuous CTG monitoring, made nil by mouth, given intravenous (IV) fluids, and transferred to the delivery suite.

49. In response to the provisional decision, Ms A disagreed that she was transferred to the delivery suite on 12 Month5 and said that she had been in the same ward for three days.

50. Dr C was the on-call registrar on the night of 11 Month5 until the morning of 12 Month5. He said that he reviewed Ms A following concerns that she might be entering preterm labour. Dr C told HDC that he noted Ms A's pregnancy as high risk, as Ms A was expecting twins and one of the twins was in a breech position, and the twins were very pre-term (30+2 weeks' gestation). Dr C stated:

> '[As] [Ms A's] contractions were continuing, there remained the possibility that she could still go into early labour. Given that, and given her high risk status, my plan was to move her to the delivery suite where she would be monitored …'

51. Dr C said that Ms A's observations were stable, there were no signs of infection and no report of fluid leakage, and there was no suspicion that her membranes had ruptured. He stated:

> 'Had I been suspicious that her membranes had ruptured, I would have undertaken an aminsure swab test, for confirmation of preterm [rupture of membranes]. However given that her contractions were palpable and that labour could be imminent, and as one of her twins was known to be in the breech position, I was concerned to assess her for possible umbilical cord presentation/prolapse, or other fetal malpresentation.
>
> On examination I found her cervix was long and posterior. Since I could not reach the external cervical os, I recorded in the notes "no membranes felt" … That I could not feel membranes then, gave me assurance that with a long and posterior cervix and no bulging membranes, the cervix was closed.'

52. By 4.25am Ms A's contractions had stopped. She remained stable and was transferred back to the ward on IV fluids. The plan was to continue with four-hourly observations and twice-daily CTGs, as well as twice-weekly Dopplers.

53. The clinical notes at 9pm on 12 Month5 report that a CTG was completed but could not differentiate between the two fetal heartbeats. At 11.40pm a CTG was noted as 'overall reassuring'.

Delivery

54. On 13 Month5 (30+3 weeks' gestation), Ms A was seen by the obstetric team on the ward. The plan was for a growth scan that day and four-hourly BP reviews, with further review if her BP rose above 160/100mmHg. Blood tests were repeated and twice-daily CTGs were continued. At 12pm, Ms A's BP was recorded as 155/95mmHg. The midwives were unable to obtain a satisfactory CTG, as Ms A was uncomfortable and was unable to tolerate the process. The obstetric registrar was contacted.

55. In response to the provisional decision, Ms A said that on 13 Month5 she voiced her concerns about her daughter to the doctor who was doing the rounds. Ms A said that the doctor told her that she just needed to rest. Ms A said that she barely had the energy to stay awake to voice her concerns, but she did. She stated that she tried ringing her midwife, who was overseas at the time, because the nurse was not listening to her. Ms A said that she told the nurse: '[M]y baby hadn't moved she was like dead weight on my pelvic bone.'

56. Ms A stated:

> 'I was in and out of consciousness ringing the bell it was getting turned off while I was sleeping rather than them checking my concerns about my daughter. [T]hey were still trying to monitor me all while I was in the worse pain imaginable, [I] woke up took the monitor off and told the nurse she just spent 12 hours and not once did she find my daughter she then proceeded to dig the monitor piece that goes onto my stomach into the right side of my stomach and I felt a burst and screamed cause I felt like I was dying and this is when they had no choice but to listen, by then it was too late and my daughter was dead and I was at risk as well.'

57. At 12.15pm, it was confirmed that only one fetal heartbeat was present. The consultant and registrar informed Ms A that Twin A had passed in utero. Ms A was distressed and wanted to go outside for a cigarette. She was advised against this because of the risk to herself and the live twin. However, a midwife assisted Ms A to go outside, at which time Ms A had an antepartum haemorrhage[14] with suspected placental abruption. The midwife took her back to the delivery suite immediately and activated the emergency alarm. CTG monitoring was commenced and a fetal heart rate of 140bpm[15] was detected.

58. Ms A was taken to the operating theatre for an emergency C-section. Both babies were delivered, and attempts were made to resuscitate Twin A. However, after 16 minutes of resuscitation efforts, a decision was made to stop, as there were no signs of life. Twin B was born in good condition and was transferred to the Neonatal Intensive Care Unit.

[14] (APH) bleeding from the birth canal in the second half of the pregnancy.
[15] A normal fetal heart rate is between 110 and 160 bpm, with a regular rhythm and an absence of decreases in the heart rate. See: https://www.midwife.org.nz/wp-content/uploads/2020/10/Practice-guidance-I.A.pdf.

Decision not to induce labour prior to 13 Month5

59. In Ms A's complaint she said she felt that nothing was being done, despite having been told that her baby was deteriorating. She stated that she would rather have her babies die out of the womb than in the womb, as she could not cope with a still birth. Ms A's clinical notes record her concerns that her baby girl was struggling, and her preference for doctors to deliver her. Ms A said that there were differing views as to whether the babies should be delivered. She stated that she was told different stories from different staff, but no one would explain to her why her babies were not being delivered when she voiced her concerns.

60. Te Whatu Ora told HDC that the reason why Ms A was not delivered before the time of her C-section was not related to staff shortages. Deciding the best timing of delivery was based on clinical indications, and although Ms A's scans confirmed severe IUGR, mainly for Twin A, the Dopplers and the CTG were never abnormal to the point of warranting earlier delivery.

61. Te Whatu Ora said that there were two occasions on which the medical team thought that Ms A's situation was deteriorating or changing. The first was on 6 Month5, when concerns regarding a CTG trace indicated the need for more intense monitoring. The second was on 12 Month5, when Ms A began to experience contractions (which subsequently resolved). Te Whatu Ora stated:

> '[O]verall there were no indications to deliver the babies at such a preterm gestational age as [Ms A's] pre-eclampsia remained reasonably stable and her babies showed no clear signs of fetal compromise until 13 [Month5].'

62. Te Whatu Ora said that medical staff explained to Ms A that delivering a pregnancy before 32–34 weeks' gestation needed to be based on strict criteria, weighing the risks related to prematurity against the risks of remaining in utero. Te Whatu Ora stated:

> 'Criteria for delivery in these circumstances are: Maternal uncontrolled blood pressure, deteriorating blood results, and/or severe symptoms such as those related to placental abruption. Fetal indications for preterm delivery are abnormal CTG's or severely abnormal dopplers indicating fetal acidosis[16] such as abnormal ductus venosus[17] which [Ms A's] ultrasound scans never showed any evidence of.'

63. Te Whatu Ora acknowledged the impact the intense monitoring had on Ms A, alongside the challenges she faced with her complex social concerns and the care of her young children while she was in hospital.

[16] An abnormal condition characterised by reduced alkalinity of the blood and of the body tissues.
[17] A temporary blood vessel that is part of the fetal blood circulation and connects two large vessels.

64. Regarding a Kleihauer test[18] for feto-maternal haemorrhage not having been performed on 8 Month5 despite maternal concerns of decreased fetal movements, Dr B referred to the RANZCOG[19]/PSANZ[20] guideline on decreased fetal movement, which states:

> 'Testing for fetal to maternal haemorrhage should be considered in the preliminary investigation of women with [decreased fetal movement (DFM)] where [feto-maternal haemorrhage] is suspected, particularly if there is a history of sustained or recurrent DFM … Where ultrasound facilities and appropriate expertise are available, assessment for fetal anaemia can be undertaken by Doppler measurement of the fetal middle cerebral artery (MCA) velocity.'

65. Dr B noted that the current guidelines (RCOG [21] and RANZCOG/PSANZ) regarding management of reduced fetal movements exclude multiple pregnancy. She said that in the context of a multiple pregnancy with pre-eclampsia, IUGR but normal Dopplers, the CTG was the test that seemed most appropriate to confirm fetal wellbeing.

Cultural safety

66. Ms A said that while under the care of Te Whatu Ora, she did not feel listened to or supported. She stated that she felt torn between providing childcare to her other children and staying in hospital for her babies to be monitored. She said that on 13 Month5 she knew 'something was wrong', and by 10am monitoring indicated that one baby had stopped moving.

67. Ms A told HDC:

> 'No one listened to me the night before, I felt my baby die inside of me. Against my will I stayed in that hospital for nearly 3 weeks listening and cooperating with every medical advice given when it concerned my baby's and still when I felt her die no one listened.'

68. Ms A said that upon being told that her baby had passed, she needed to ensure that her babies were taken care of. She said that her cultural need for family to greet and care for the babies was ignored. Ms A stated:

> 'Cultural needs for me is not only physically but spiritual also. When our [babies] are born they are imprinted on by the way they are held the heart they feel when they are born the spiritual exchange imprints on them forever.'

69. Ms A told HDC that she asked the staff for space to clear her mind. She said:

> 'I needed to figure out who I was [going to] ring to make sure my [babies] [were] not born alone [and] to make sure that while I was under[,] unable to see[,] hear or control

[18] A blood test used during pregnancy to screen maternal blood for the presence of fetal red blood cells.
[19] The Royal Australian and New Zealand College of Obstetricians and Gynaecologists.
[20] Perinatal Society of Australia and New Zealand.
[21] Royal College of Obstetricians and Gynaecologists.

> the movements of my children[,] dead or alive that someone was [going to] be right there to make sure my [babies] were spiritually safe …
>
> My pregnancy with my children was one of the hardest things I've ever had to experience and so culturally I needed[:] for one that they knew they were safe [and] two[,] that if not graced by me or [their] father, at least be graced by someone I trust with my life, they never gave me a chance … they tried to snatch my phone from me before I was able to contact anyone.'

70. In response to Ms A's cultural concerns, Te Whatu Ora said that the medical and midwifery team caring for Ms A were all genuinely concerned and tried their best to provide support through her grief, and they encouraged whānau to be with her at all times.

71. Te Whatu Ora said that following Ms A's complicated Caesarean section with postpartum haemorrhage[22] and coagulopathy,[23] Ms A's medical team supported the whānau's request for karakia while Ms A was in the Intensive Care Unit (ICU). ICU staff arranged for Ms A's deceased daughter to be beside her in a cooling cot.

72. Te Whatu Ora said that staff tried to accommodate Ms A and her whānau's requests wherever possible, and that as soon as it was safe for Ms A to do so, she was transferred to a room where whānau had free access to grieving patients 24 hours of the day. On 18 Month5, Te Whatu Ora facilitated a whānau hui, at which they worked with Ms A and her whānau to ensure that they were accommodated to pay their respects to the baby.

Subsequent events

Incident Review Report

73. Te Whatu Ora completed a multidisciplinary review on 20 June 2019. The review found that Ms A's condition and early gestational age impacted Twin A's birth. The findings were discussed with Ms A on 30 July 2019. Ms A expressed her concerns regarding the care provided by Te Whatu Ora staff while she was an inpatient. She later contacted Dr B, who then requested a serious event review (SER).

74. The SER report was completed on 9 October 2019. The following 'Care and delivery problems' were identified in the report:

> '**CTG Machines:**
>
> The availability of Huntleigh CTG machines which are recommended for high-risk women were limited and were not always available when [Ms A] was present on the ward.
>
> **CTG Interpretation:**
>
> On 12 [Month5] the midwife on the afternoon shift had indicated that the CTG was difficult to interpret and monitoring should continue. The midwife on the evening shift

[22] Severe vaginal bleeding after childbirth.
[23] A disease or condition affecting the blood's ability to coagulate.

deemed the CTG to be reassuring and discontinued the monitoring. The SER report identified that it was likely that the same twin was monitored twice. During the CTG fetal movements were not commented on. The following morning, [Ms A] voiced good fetal movements when she was reviewed by the obstetric team.'

75. The report concluded that despite Ms A being monitored as an inpatient, the baby died in utero. This was thought to be due to IUGR with the possibility of a concealed antepartum haemorrhage. Care and monitoring were further complicated by Ms A's complex social concerns.

76. The report made four recommendations following Ms A's complaint:

a) The Women's Health Service at Te Whatu Ora will raise awareness of CTG interpretation through 'Sharing the Learnings Newsletter', handovers and in-service education.

b) To ensure that discussions take place at ward level around the resource and support services available from Kaitiaki and Pacific Services, particularly for women with complex social situations.

c) To improve communication with women who have a diagnosis of pre-eclampsia, with written patient information.

d) To ensure that staff are aware of, and comply with, the need to document discussions about the risks of smoking, particularly in the presence of IUGR.

Responses to provisional opinion

Ms A

77. Ms A was given an opportunity to respond to the 'information gathered' section of the provisional opinion. Ms A reiterated her concerns about not being heard by the medical team treating her. She said that on the day she was admitted to hospital, she was promised a delivery plan, and taking each day as it came while waiting was not an option for her. Ms A said that she told her medical team that her baby was struggling and she needed to be delivered, but she was not heard.

78. Ms A stated that four years on from these events, every day is a struggle — financially, physically, emotionally, mentally, and spiritually for her as a mama.

Te Whatu Ora Waikato

79. Te Whatu Ora Waikato was given an opportunity to respond to the provisional opinion. Te Whatu Ora Waikato sincerely regrets failing to provide an appropriate standard of care to Ms A and her whānau. Te Whatu Ora Waikato is sorry for the distress Ms A experienced and is committed to working with HDC to implement the recommendations in improving the services for women and their whānau.

Opinion: Te Whatu Ora Waikato — breach

80. I acknowledge Ms A's and her whānau's hurt as a result of the services she received from Te Whatu Ora Waikato, and I recognise Ms A's courage to share her mamae, in bringing her concerns to the Commissioner.

81. I have undertaken a thorough assessment of the information gathered in light of Ms A's concerns, and I find that Te Whatu Ora Waikato breached Right 4(1)[24] of the Code of Health and Disability Services Consumers' Rights (the Code). The reasons for my decision are set out below.

82. I have focused on two areas of concern about the standard of care provided to Ms A by Te Whatu Ora:

1. The care provided to Ms A during her pregnancy from 12 weeks' gestation; and
2. Te Whatu Ora's cultural safety practices.

Standard of care — breach

7 Month1 ED review

83. On 7 Month1 Ms A presented to ED with complaints of headaches and nausea. She was reviewed in ED and discharged the same day with the recommendation for GP follow-up in one week's time. I acknowledge Te Whatu Ora's response as to why Ms A was not admitted on 7 Month1, and I note that Ms A was monitored for a period of time and had relevant tests completed in ED, at which time Ms A's BP did decrease and Ms A was discharged.

84. My independent advisor, Dr Sornalatha Vasan, noted concerns about Ms A not being admitted to hospital on 7 Month1. Dr Vasan advised:

> '[S]he needed to be admitted, stabilised adequately and discharged with regular close follow up/monitoring. Discharging her with BP 149/112 on Labetalol 100 mg orally twice a day and leaving her to be monitored by her GP was not accepted management.'

85. In reference to the Ministry of Health clinical practice guideline on 'Diagnosis and Treatment of Hypertension and Pre-eclampsia in Pregnancy in New Zealand'[25] (Ministry of Health guideline), Dr Vasan also highlighted that twin pregnancy, even as early as 12 weeks' gestation, with such high BP and symptomatic with no previous hypertension, necessitates admission for investigation and stabilisation of BP before arranging care in the community. Dr Vasan stated:

[24] Right 4(1) of the Code provides that every consumer has the right to have services provided with reasonable care and skill.

[25] Ministry of Health, 'Diagnosis and Treatment of Hypertension and Pre-eclampsia in Pregnancy in New Zealand: a clinical practice guideline' (2018): https://www.moh.govt.nz/notebook/nbbooks.nsf/0/749672322A57004ACC258328006E1117/$file/diagnosis-and-treatment-of-hypertension-and-pre-eclampsia-in-pregnancy-in-new-zealand-v3.pdf.

> 'Early onset severe hypertension in multiple pregnancy can lead to severe hypertensive disease increasing maternal morbidity and mortality. Severe hypertension in chronic hypertensives need[s] acute management of hypertension.'

86. I accept Dr Vasan's advice that Ms A needed to be admitted until her BP had stabilised, and I am critical that she was not. In addition, I am concerned that Ms A did not appear to have a clear plan for regular close monitoring in the community. In particular, there is no documentation to support the arrangement of care in the community. I note that Dr B stated (see paragraph 25): 'Advice for a referral to our high risk pregnancy clinic should have been added and documented, however this may have been discussed with her [LMC] as she was indeed referred.'

87. As outlined above, the Ministry of Health guideline identifies the need for acute management of early onset hypertension in multiple pregnancy. Te Whatu Ora had a responsibility to ensure that there was an effective plan for close monitoring of Ms A in the community, and, in my view, this was not achieved.

Clinical care during 29 Month4 admission

88. Ms A was admitted to hospital on 29 Month4 for monitoring, because of concerns about IUGR and an abnormal Doppler for one of her babies. Ms A remained in hospital until the delivery of her babies by Caesarean section. In considering Te Whatu Ora's clinical care during Ms A's admission, I acknowledge the difficulties Ms A's obstetric team faced with the need for consistent monitoring. While I consider that much of the care provided to Ms A during this admission was appropriate, I am concerned that aspects of Te Whatu Ora's monitoring of Ms A were assessed as isolated events rather than consideration being given to Ms A's numerous abnormal CTGs and continuing unstable PET.

89. On 2 Month5, Ms A raised concerns with her medical team about Twin A's reduced movement. Ms A was reviewed, and a plan was made for further monitoring, including review of her antihypertensive (nifedipine) and aspirin, twice a day CTGs, and biweekly Dopplers. On 5 Month5, an abnormal Doppler was noted, and on 6 Month5 the clinical records note that the CTG was abnormal and showed signs of 'possible acute fetal compromise/abnormal'.

90. On 8 Month5, Ms A's BP was elevated, and she complained of decreased fetal movements. The midwife had difficulty obtaining CTG recordings, but a registrar confirmed two fetal heartbeats and a normal CTG. On 12 Month5 (30+2 weeks' gestation), Ms A started to contract, and CTG monitoring was not able to differentiate between the twins. Eventually CTG monitoring was stopped, but there was no escalation of the concerns about the abnormal CTG.

91. Dr Vasan advised that Ms A showed signs of pre-eclampsia as early as 28 weeks' gestation, when she was admitted to hospital with headaches, blurred vision, peripheral oedema, and protein in her urine. Dr Vasan noted that although Ms A remained stable with no

deterioration of biochemical evaluation,[26] her BP was not controlled optimally, which is a significant risk factor for placental abruption and cerebral vascular accident (CVA) in twin pregnancy.

92. Dr Vasan advised:

> 'To continue conservative management [there] needed [to be] close monitoring with adequate CTG monitoring regularly which was difficult with [Ms A] since she was out of her room most of the time … heav[ily] smoking and [an] inability to get good CTG readings.
>
> …
>
> Both foetuses were showing signs of inadequate growth and abnormal dopplers as well as abnormal CTG.
>
> [Ms A] was certainly under immense stress with her [complex social situation].
>
> [The Ministry of Health guidelines] clearly advocate that timing of delivery in severe Pre-eclampsia should be decided considering ***Blood Pressure level and its treatment; health of mother & fetus and woman's preferences***.' (Emphasis in original.)

93. Dr Vasan advised that with the benefit of hindsight, considering the multiple episodes of abnormal CTGs, the uncontrolled PET, and Ms A's non-compliance with treatment recommendations, '[o]ne could be proactive and deliver sooner than later'.

94. I recognise that Ms A's obstetric team were faced with a difficult decision and needed to balance the clinical risks and benefits of a premature delivery against the merits of taking a more conservative management approach and allowing a potentially compromised pregnancy to continue. Ultimately, I agree with Dr Vasan that with the multiple episodes of abnormal CTGs, the uncontrolled PET, and Ms A's non-compliance at times, delivery sooner rather than later may have been an appropriate option. I also note that it was Ms A's preference to have her babies delivered, which clinicians were obliged to consider.

95. I also note the SER report finding that it was likely that the same twin was monitored twice on 12 Month5. Dr Vasan advised that when the midwife could not identify two separate heartbeats clearly on the CTG, there was an urgent need to obtain medical input, especially in the context of Ms A having had uterine contractions with an abnormal CTG earlier that day, and having left her room often and therefore not having had much monitoring during the day.

96. Dr Vasan was also concerned about the decision to transfer Ms A back to the ward from the delivery suite on 12 Month5 because of the challenges of monitoring her on the ward. He advised:

[26] No deterioration in her blood test results.

> 'Subsequent CTG recordings provided were very short period of recording to report or reassure that they were normal.
>
> Abnormal CTG in the background of IUGR, abnormal dopplers and Preeclampsia with uncontrolled hypertension warrants earlier delivery or close monitoring in Delivery suite. Transferring her back to ward from where she disappeared for long period of time without any monitoring was not appropriate management.'

Conclusion

97. I consider that Te Whatu Ora failed to provide an appropriate standard of care to Ms A for the following reasons:

- Following the 7 Month1 ED review, an effective plan was not made for close monitoring of Ms A in the community.
- On 12 Month5, medical input was not sought when two separate heartbeats could not be identified clearly, and Ms A was transferred back to the ward.
- On 12 Month5, the decision on whether to deliver Ms A's babies was not considered in the context of numerous abnormal CTGs and uncontrolled PET, and the expressed preference of Ms A.

98. I consider that these errors in practice by Te Whatu Ora contributed to an inadequate standard of care. I therefore find that Te Whatu Ora Waikato breached Right 4(1) of the Code.[27]

Communication regarding management plan — adverse comment

99. I note that on 2 Month5, Ms A reported that Twin A was not moving well but Twin B was. Ms A wanted to talk to doctors regarding the plan. She was reviewed by a medical officer, who explained the plan of management. While the clinical notes document the plan in terms of clinical management, I am concerned that there is no assessment of the support offered during this time to ensure Ms A's understanding of the plan.

100. The Ministry of Health guideline states: 'Make a clear management plan for all pregnant women with hypertensive disorders in pregnancy. The plan should include clinical responsibilities and reflect the pregnant woman's preferences.'[28] I note that the guideline outlines the need to assess and address barriers to effective communication with vulnerable groups of pregnant women, for example, literacy, language, geographical, socioeconomic and cultural barriers.[29]

101. Ms A had the right to be fully informed, which included an explanation of the options available to her to ensure that her preferences were considered, and she should not have come away feeling as though she had not been heard. Ms A was concerned that her baby

[27] Right 4(1) of the Code states: 'Every consumer has the right to have services provided with reasonable care and skill.'
[28] Page 11.
[29] Page 8.

girl was struggling, and Te Whatu Ora had a responsibility to Ms A to ensure that her concerns were heard and considered in developing the management plan for her care.

102. I note that social worker input was made available to Ms A to assist with her housing and care needs for her children while she was an inpatient. However, it appears that opportunities for Ms A to discuss her concerns, and for reflection or debrief following periods of monitoring that Ms A at times found painful, were lacking. Rather, Ms A felt the need to escape from the stress by leaving the ward for a cigarette.

103. In Te Whatu Ora's incident review, the need for support services from Kaitiaki and Pacific Services (particularly for women with complex social situations) was recommended. I support this recommendation. I also encourage Te Whatu Ora to address the barriers to communication, to ensure that women come away from any medical interventions feeling heard and empowered to continue to make the best decisions for themselves and their pēpē.

104. I accept that Te Whatu Ora had to balance the risks of pre-term delivery and the health of the babies in utero. From the records provided, it is clear that a management plan was created. However, what is not clear is whether Ms A was a partner in the making of that plan, and whether she was given sufficient opportunity to discuss and assess the risks associated with delivering her babies earlier. Ms A continued to feel not listened to, and that no one explained to her why her babies were not being delivered. I also acknowledge Ms A's concern that she was not listened to on 9 Month5 when she asked not to have further anti-coagulation injections because she was concerned about the impact this was having on her daughter. Clearly this was a distressing event for Ms A, and one that illustrates her overall experience of feeling powerless in the decisions that were being made.

105. While the decision not to deliver Ms A's babies prior to 13 Month5 may not have changed the tragic outcome, Te Whatu Ora had a responsibility to ensure that Ms A was fully informed, with an explanation of the options available for her to consider in terms of risks associated with delivering her babies early.

106. In my view, Ms A would have benefited from further explanation and support to understand the information that was being given to her about the options and associated risks in terms of earlier delivery of her babies. This would have provided her with clarity and a feeling of being heard when she raised her concerns about her babies, and her preference to deliver.

Cultural safety — adverse comment

107. To determine whether the care provided to Ms A by Te Whatu Ora was culturally safe and took into account her cultural beliefs, I have considered Te Whatu Ora's response alongside cultural practice standards.

108. In reference to the Treaty of Waitangi, the Ministry of Health guideline states:

> 'This guideline acknowledges the principles of partnership, protection and participation as an affirmation of the Treaty of Waitangi and the health system's responsibilities towards Māori as tangata whenua of Aotearoa New Zealand.

…

It is vital that, throughout the experience, health professionals fully inform women and their families and whānau and advise them of their options for care so that they are able to give fully informed consent.'[30]

109. I am concerned about aspects of Te Whatu Ora's practice relating to how Ms A was told that Twin A had passed. Whānau were not notified, nor was a cultural support person sourced to be with Ms A while she worked through the immediate aftermath of losing her baby.

110. Ms A told HDC that on hearing of Twin A's passing, she needed to ensure that her babies had whānau to care for them while she was unable to. She said that her cultural needs are not only physical but spiritual, and she needed to ensure that her babies were held and loved by whānau, as 'when they are born the spiritual exchange imprints on them forever'. In Te Ao Māori, the level of tapu surrounding birth and death is heightened. Māori belief is that the birth canal runs between the realms of Te Po and Te Ao Marama.[31] Māori refer to the maternal body as 'whare tangata',[32] where women are believed to be the custodian of the next generations and the māna of the whānau. As such, how this episode was handled had major ramifications for Ms A and her whānau.

111. I accept that when the Caesarean section was performed on 13 Month5 the clinical team were responding to an antepartum haemorrhage with suspected placental abruption. It required immediate lifesaving intervention, and, understandably, responding to this medical emergency became Te Whatu Ora's priority. Unfortunately, this meant that there was no opportunity for Ms A to contact her whānau and arrange for them to be with her babies during the Caesarean section procedure.

112. Following Ms A's complicated Caesarean section, for the most part the cultural support appears to have been appropriate. However, had Ms A's cultural needs been assessed and appropriate support options put in place earlier, she may not have been left feeling so powerless, with the sense that her concern for her unborn children had not been heard. She would not have felt that she was left to manage her own spiritual needs and those of her babies following the loss of Twin A.

113. The Māori Health Strategy|He Korowai Oranga was developed to address health inequities while delivering effective services that support Māori aspirations for health and wellbeing — pae ora.[33] Health inequities are a breach of Te Tiriti o Waitangi, and Te Whatu Ora had an obligation to ensure that its staff were 'culturally safe' with services that took into account Ms A's cultural beliefs, through the practices of tikanga.

114. I am critical of some aspects of Te Whatu Ora's cultural response. I find it concerning that Te Whatu Ora's response to Ms A's cultural needs was inconsistent. I consider that although

[30] Page 47.
[31] The 'perpetual night' and the 'world of light and life'.
[32] 'The house of human life', Mead 2016.
[33] He Korowai Aroha|Māori Health Strategy 2014.

Te Whatu Ora did offer cultural support at times, there were occasions, especially when Ms A was told that Twin A had passed, where Te Whatu Ora's cultural services and support were inadequate.

115. In the previous section on the communication of the management plan, I express concern about aspects of the clinical team's communication and the lack of involvement of Ms A in the development of her management plan. In some respects, this criticism also applies to the lack of engagement and forward planning undertaken to ensure that Ms A's cultural needs would be met in the event of an emergency situation (such as an acute Caesarean section). In hindsight, various episodes in the period leading up to 13 Month5 suggested there was a risk that emergency intervention would be required.

Changes made since events

116. Te Whatu Ora advised HDC of the following changes made since the events:

a) All Māori women are referred to Kaitiaki Support Services.

b) A new guideline, 'Management of Women with Twin Pregnancies', was developed and was published in March 2020. The guideline has been provided to HDC.

c) The fleet of Huntleigh CTG machines (22) was replaced, and additional CTG machines are purchased on an ongoing basis.

d) Following an SER or a traumatic birth, the woman and whānau are invited to meet with the Clinical Director of Obstetrics to discuss the birth/post-mortem findings/future pregnancies.

e) A patient information pamphlet on pre-eclampsia was developed and is provided to women.

f) The inpatient midwifery teams were reminded of the importance of documentation in the clinical records related to smoking, particularly referral to support from smoking cessation services, and any discussions with women about the risks of smoking.

Recommendations

117. Considering the changes made by Te Whatu Ora Waikato since the time of events, I make the following recommendations to ensure that improvements are made, and to reduce the likelihood of similar occurrences in the future. I recommend that Te Whatu Ora Waikato:

a) Schedule refresher training for all maternity and obstetric staff at Te Whatu Ora Waikato on the management and monitoring of hypertension and pre-eclampsia in twin pregnancies. In addition, Te Whatu Ora Waikato should incorporate an anonymised

version of this case as a basis for training staff, outlining how staff will be audited to show that they have completed the relevant training. Evidence of this training is to be provided to HDC within three months of the date of this report.

b) Provide a copy of its cultural/kaupapa training framework, outlining how the practice of tikanga with patients and their whānau is developed with all hospital staff. In addition, Te Whatu Ora Waikato is to outline how this framework aligns with the elements of pae ora. This is to be provided to HDC within three months of the date of this report.

118. Te Whatu Ora Waikato has provided HDC with a written apology to Ms A for the breach of the Code identified in this report.

Follow-up action

119. A copy of this report with details identifying the parties removed, except Te Whatu Ora Waikato and the independent advisor on this case, will be sent to Te Whatu Ora|Health New Zealand, Te Aka Whai Ora|Māori Health Authority, Te Tāhū Hauora|Health Quality & Safety Commission, and the Royal Australian and New Zealand College of Obstetricians and Gynaecologists, and placed on the Health and Disability Commissioner website, www.hdc.org.nz, for educational purposes.

Appendix A: Independent clinical advice

'Dr Sornalatha Vasan
MBBS FCOG FRANZCOG
Senior specialist Obstetrician and Gynecologist
Hutt Valley DHB
Lower Hutt

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

I have been working as a general O&G Specialist since 2004. I have been an examiner for RANZCOG since 2016 and supervisor for ITP trainees in New Zealand since 2008.

I have no personal or professional conflict in this case. I have read HDC guidelines and agree to follow them.

I have received and read the following documents sent from your office on 23.11.2020

1. Letter of complaint dated [2019]
2. DHB's response dated 24 January 2020
3. Unit level Incident review dated 9 January 2020
4. Clinical records

I have been asked to give expert advice on whether care provided to [Ms A] by Waikato DHB was reasonable in circumstances and why.

1. The adequacy of the monitoring of [Ms A's] pregnancy from 12 weeks gestation when she was under the care of the DHB
2. The actions taken by staff when only one fetal heart beat was heard and [Ms A] left the ward and subsequently suffered antenatal hemorrhage on 13 [Month5]
3. Whether there was any indication to induce labour earlier and whether this should have been considered.
4. The level of communication with [Ms A] about the intended care plan.
5. Any other matters you consider amount to a departure from accepted standards

Background:

[Ms A] was referred to Emergency Department ([Waikato DHB]) on 7th [Month1] with hypertension, BP 160/122 mmHg by her LMC (midwife) following her booking antenatal visit at 12 weeks gestation.

[Ms A] is [in her thirties] New Zealander Māori woman; G6 P3 currently 12 weeks pregnant with Di amniotic di-chorionic twin pregnancy following spontaneous conception with same

partner as previous pregnancy. She delivered [previous] term babies at … weeks gestations … She was smoking about 30 cigarettes daily.

ED notes — 7th [Month1].

C/O headaches; vomited previous night with intermittent diarrhoea. BP 169/108; Systemic exam normal. Urine trace blood and trace protein. CBC/UEC normal. ED SMO along with Obstetric Registrar administered oral Labetalol 200 mg stat. 1.5 hours later BP **149/112** mmHg.

Felt well and discharged home. Advised her to take Labetalol 100 mg orally twice a day with Oral Aspirin 100 mg daily and for GP follow up in a week for BP review and titrate Labetalol as required.

[Ms A] attended ANC on 4th [Month3] when she was 15 +5 weeks pregnant after being referred by her LMC.

BP 125/81mmHg. She CO (complained of) epigastric pain; had not been taking Labetalol since it made her feel sick. Counselled about risk of PET, IUGR, and stroke. Advised to continue Labetalol and Aspirin. She was to be reviewed in 4 weeks.

On 12th [Month3] she was brought to WAU — Waikato by her LMC for review.

[In her thirties] P3 at 21+3 with DC DA twins CO frontal and generalised headaches, variable ankle oedema, intermittent right upper quadrant abdominal pain. Had not been taking Labetalol. … Sister looking after children when she is in Hospital. Currently smoking 30 cigarettes per day.

OE

BP 140/100 (not medicated); Abdomen soft and non-tender; no peripheral oedema, normal reflexes nil clonus.

CBC, LFT, urate normal. PCR — 13.4.

[Ms A] was admitted to ward for monitoring, working diagnosis uncontrolled chronic Hypertension. She was started on Nifedipine 10 mg orally daily along with Aspirin 100 mg daily. On 13 [Month3] BP 127/82mmHg, asymptomatic.

US reported normal growth of both twins Twin A weighed 687 gm; Twin B 751 gm with normal dopplers.

[Ms A] was discharged home to continue Nifedipine, Aspirin daily; weekly BP check with LMC. Repeat PET bloods and US in 2 weeks and for further review in ANC in 4 weeks. Referred to smoking quit line. NRT offered but declined.

Social worker referral made but was not assessed by their team before DC but confirmed that [Ms A] was supported by [an organisation] who were arranging accommodation.

Referral was also made to Waikato DHB Child Advisory Protection & Education team (CAPE) to follow up.

On 29th [Month4]

[Ms A] was reviewed in ANC at 28+3 weeks gestation CO headaches blurred vision, peripheral oedema.

BP 140/104 mmHg, 2+proteinuria; reflexes normal, tender right upper quadrant of abdomen. CBC, Renal and liver functions normal. Urine PCR 134.

Twin A footling beech growth at 16th centile. UAPI >95th centile. MCA normal and CPR <5th centile.

Twin B at 42nd centile. UAPI >95th centile. MCA normal, CPR 5th centile. Admitted for PET superimposed on chronic hypertension, twin A IUGR with abnormal dopplers.

Planned to monitor 4hourly BP; CTG twice a day.

Steroids.

Nifedipine 10 mg PO twice a day; Aspirin 100 mg daily; twice weekly dopplers. Discussed with [Ms A] need for close surveillance and possible early delivery.

30 [Month4]

Feeling unwell, constant headache, puffy eyes.

BP 130/90, pulse 105; absent reflexes, no clonus. Right upper quadrant tender. Bloods normal.

CTG — some deteriorations noted

Transfer care to high risk team

Advised to alert staff if she deteriorates or decreased Foetal movements.

Consider clexane; TEDS (Thrombo embolic deterrent stockings)

For US-doppler twice a week

1 [Month5]

Clinically stable; no concerns. Worried about housing. Letter sent requesting urgent housing for [Ms A] and children.

At 23.00 C/O abdominal pain, intermittent? Contractions, No PV bleeding or rupture of membranes.

OE: Abdomen soft Speculum-cervix long closed Multip os long and thick.

CTG difficult to locate foetal hearts. US to locate foetal hearts.

Foetal fibronectin test done, started Magnesium sulphate; oral Nifedipine to cover Magnesium sulphate, recommended to transfer [Ms A] to WAU for continuous CTG.

23.50.

Contractions 2:10, mil BP — 142/95mmHg. [Ms A] not keen to be moved to WAU

00.15: No further contractions.

2 [Month5]

[Ms A] reported Twin A not moving well but Twin B was. Wanted to talk to Doctors re plan.

Reviewed by SMO and explained plan of management. Bloods normal. CTG reassuring. Balance between premature delivery and close monitoring with conservative management with antihypertensive (Nifedipine), Aspirin, twice a day CTG, biweekly dopplers.

3 [Month5]

Constant headache BP 134/90–92.

CTG monitoring difficult due to babies' movements.

4th [Month5]

[Ms A] advised Registrar that she is torn between providing care for her other children and staying in Hospital for monitoring of current pregnancy.

5th [Month5]

[Ms A] — SMO review:

29+2 weeks gestation; PET, Twin-A IUGR with abnormal Doppler. [Ms A] feeling unwell with ongoing headache/photophobia; BP still labile — 154/98. No abdominal pain.

Twin-A cephalic and Twin-B transverse

BP after Nifedipine 144/94mmHg. Normal reflexes, no clonus.

? Symptomatic PET

To start IV fluids

Repeat PET bloods, Group & Hold.

Nil by mouth from now; recheck BP

14.00:

SMO review

Bloods normal. BP still up; still has headaches.

Can eat & drink; increase Nifedipine to BD

17.15 BP 142/100 mm Hg.

CTG Twin A: HR 150bpm

STV (short term variability) 6–25 beats

Accelerations (A) present; No decelerations (D).

Twin B: HR — 150–155 bpm; STV 6–25 beats; A — none; D — none abnormal trace with reassuring features.

[Ms A] continued to have Headaches not settling; tingling in fingers with photophobia

? Migraine requested medical opinion. BP diastolic 98mmHg.

(Not seen by medical Registrar since [Ms A] was not in the ward when Medical Registrar arrived and waited for 30 minutes.)

On 6th [Month5]

[Ms A] was assessed by SMO following abnormal CTG — Twin B tachycardia, an assessment of severe IUGR with possible acute foetal compromise was diagnosed and transferred to delivery suite. Rescue steroid given; Magnesium sulphate started for foetal neuroprotection. Nifedipine was stopped and started Labetalol 200 mg TDS.

13.40 CTG

Twin A: HR normal STV normal no decelerations, nil contractions

Twin B FHR 160 bpm; STV normal accelerations present; variable decelerations reported.

[Ms A] was very tearful. She said "I would rather have my babies die outside and not inside my womb. I would not cope with still born babies". She feels nothing has been done despite being told baby's deteriorating.

US was repeated for dopplers.

14.00:

BP 152/100mmHg

US: Twin A breech presentation AFI normal; UAP > 95th centile CPR <5th centile; MCA normal.

Twin B cephalic, UAPI normal, AFI normal.

3 PM Registrar review: BP 137/97mmHg. CTG both twins normal. Bloods stable.

Plan: To transfer back to ward.

07 [Month5]: 08.00 [Provider initials]

BP 152–135/109, on Labetalol 200mgm TDS;

CTG normal, reflexes normal; **clonus minimal**.

Impression: stable.

13.15 BP 160–150/100–106, continue Labetalol 200mgm PO TDS.

15.10: [Ms A] complained to Midwife that she is upset at the thought that her baby girl is struggling and **preferred doctors to deliver her**.

08 [Month3]

BP elevated. Labetalol increased to QID. **CO decreased foetal movements.**

11.55. Unable to get CTG recordings but could pick up FH with US.

13.15 CTG obtained by Registrar and reported normal.

09 [Month3]. 10.04 AM. [Provider initials]

29+5 weeks; Well with good foetal movements. CTG normal. BP 140/90

For US and repeat bloods.

10 [Month3]. 9 AM. [Provider initials]

Patient not in room CTG normal.

11 [Month3]

Asymptomatic; BP 130–139/78–90.

Bloods normal. CTG normal.

12 [Month5]

02.05 [Ms A] contracting every 4–5 minutes, Twin-A breech.

Observations stable; Abdomen soft; palpable contractions.

Impression? Preterm Labour.

Transfer to WAU.

Intra venous fluids; Nil by mouth; continuous CTG; speculum examination in WAU.

VE (vaginal exam) Cervix long and posterior; **NO membranes felt (Registrar)**

03.20. Contractions stopped

Plan: Continue CTG until 5.00; if not contracting back to ward.

03.45: CTG Twin A HR 140 bpm; SVT normal; Accelerations present, decelerations absent.

Twin B: 140 bpm, SVT normal, acceleration nil; variable decelerations, rapid recovery. BP — 144/100.

04.15

CTG Twin A — 140 bpm, SVT-N; A+ve, D — nil;

Twin B — 140bpm; SVT N; A +ve; D — nil. Transfer to ward.

[Provider initials]

30+2 weeks gestation.

BP: 156–142/104–84; Asymptomatic; CTG normal. [Ms A] not in her room. Stable PET/ IUGR

Plan: CTG BD; Doppler twice a week: TED stocking; clexane.

At 21.00 CTG unable to differentiate twins separately. (No medical input recorded)

23.40: CTG discontinued reported as normal.

13 [Month3]

SMO: BP 130–156/89–104. Bloods **LFT** normal; Urate 0.52; Hb 114; Platelets 314.

Went home yesterday (…) not in her room. Preterm labour, settled.

No headaches or visual disturbances. Puffy eyes and feet. Good FM.

Plan: Growth scan today. CTG — BD; QID Labetalol; review if BP > 160/100.

11.20 [Ms A] in her room. BP 160/100. CO headache and abdominal pain.

12.00. Unsure if getting both Foetal hearts. [Ms A] uncomfortable with CTG probes, asked to stop monitoring. Registrar called in.

Registrar could not find second heart beat; called SMO.

SMO informed [Ms A] that Twin 1's heart beat not seen. [Ms A] very distressed crying wanted to go out for smoke. She was advised not to go but to be transferred to WAU. With extensive counselling compromise reached to go in wheel chair with registered midwife, to have a smoke on the way to Delivery suite.

Soon after rushed to Labour ward with vaginal bleeding ? Abruption. Rushed to theatre for category 1 CS under GA.

CS under GA, Twin 1 no heartbeat, no response to resuscitation which was stopped after 16 minutes. Twin B, good APGAR sent to NICU. Retro placental clot. Intra operative blood loss 3700 ml. Cryo, Platelets and FFPS given along with packed cell transfusion. Abdomen packed, not closed sent to ICU with vac drain.

Laparotomy next day, good haemostasis, packs removed abdomen closed.

Post op recovery uneventful

1. The adequacy of the monitoring of [Ms A's] pregnancy from 12 weeks gestation when she was under the care of the DHB

[Ms A] was referred to Emergency Department ([Waikato DHB]) on 7th [Month1] with hypertension, BP 160/122 mmHg by her LMC (midwife) following her booking antenatal visit at 12 weeks gestation.

ED notes — 7th [Month1].
C/O headaches; vomited previous night with intermittent diarrhoea. BP 169/108; Systemic exam normal. Urine trace blood and trace protein. CBC/UEC normal. ED SMO along with Obstetric Registrar administered oral Labetalol 200 mg stat. 1.5 hours later BP **149/112** mmHg.

Felt well and discharged home. Advised her to take Labetalol 100 mg orally twice a day with Oral Aspirin 100mg daily and for GP follow up in a week for BP review and titrate Labetalol as required.

Early onset hypertension in twin pregnancy is high risk for maternal and foetal morbidity/mortality. [Ms A] had very complicated social circumstances which increases her risk in pregnancy significantly. She needed to be admitted, stabilised adequately and discharged with regular close follow up/monitoring. Discharging her with BP 149/112 on Labetalol 100 mg orally twice a day and leaving her to be monitored by GP was not accepted management.

Since her admission on 29th [Month4] at 28 weeks gestation she had been symptomatic (headaches, visual disturbance intermittently, non-dependant oedema) with BP very labile not controlled optimally which increases maternal and foetal morbidity and mortality. She also CO decreased foetal movement of Twin A few times. [Ms A] was torn between caring for her [children] and caring for her current pregnancy with hypertension and IUGR. [Social situation] kept her on edge most of the time.

On the background of abnormal dopplers, decreased foetal movements and difficulty in monitoring with adequate CTG recordings (Needing US most of the time) any abnormality in CTG should trigger delivery. She was given steroids and Magnesium sulphate for foetal neuroprotection. Chance of foetal survival after this at 30 weeks is higher than in utero with labile hypertension, IUGR and abnormal dopplers.

On 6th [Month5]

[Ms A] was assessed by SMO following abnormal CTG — Twin B tachycardia, an assessment of **severe IUGR with possible acute foetal compromise was diagnosed and transferred to delivery suite**. Rescue steroid given; Magnesium sulphate started for foetal neuroprotection. Nifedipine was stopped and started Labetalol 200 mg TDS.

13.40 CTG

Twin A: HR normal STV normal no decelerations, nil contractions

Twin B FHR 160 bpm; STV normal accelerations present; variable decelerations reported.

[Ms A] was very tearful. She said "I would rather have my babies die outside and not inside my womb. I would not cope with still born babies". She feels nothing has been done despite being told baby's deteriorating.

14.00:

BP 152/100mmHg

US: Twin A breech presentation AFI normal; UAP > 95th centile CPR <5th centile; MCA normal.

Twin B cephalic, UAPI normal, AFI normal.

3 PM Registrar review: BP 137/97mmHg. CTG both twins normal. Bloods stable.

Plan: To transfer back to ward.

I admit I have **benefit of hindsight in my analysis**.

With multiple episodes of abnormal CTGs with uncontrolled PET, non-compliant patient one could be proactive and deliver sooner than later. To continue conservative management one needed close monitoring with adequate CTG monitoring regularly which was difficult with [Ms A] since she was out of her room most of the time (maybe Hospital) heavy smoking and inability to get good CTG readings. BP was not well controlled most of the times.

07 [Month5]: 08.00 [Provider initials]

BP 152–135/109, on Labetalol 200mgm TDS;

CTG normal, reflexes normal; **clonus minimal**.

Impression: stable.

13.15 BP 160–150/100–106, continue Labetalol 200mgm PO TDS.

15.10: [Ms A] complained to Midwife that she is upset at the thought that her baby girl is struggling and **preferred doctors to deliver her**.

08 [Month3]

BP elevated. Labetalol increased to QID. **CO decreased foetal movements.**

11.55. Unable to get CTG recordings but could pick up FH with US.

13.15 CTG obtained by Registrar and reported normal.

She had raised BP with minimal clonus and CO decreased Foetal movement. ***Kleihauer Test was not performed.***

Recommendation 11. **Perinatal Society of Australia and New Zealand still birth and Neonatal death alliance**.

Testing for feto-maternal haemorrhage (Kleihauer Test) should be considered as the preliminary investigation of women with decreased foetal movements along with US to assess foetal wellbeing/dopplers.

Recommendation 3:

Maternal concerns of decreased foetal movements (DFM) overrides any definition of DFM based on numbers of foetal movements.

12 [Month5]

02.05 [Ms A] contracting every 4–5 minutes, Twin-A breech.

Observations stable; Abdomen soft; palpable contractions.

Impression? Preterm Labour.

Transfer to WAU.

Intra venous fluids; Nil by mouth; continuous CTG; speculum examination in WAU.

VE (vaginal exam) Cervix long and posterior; **NO membranes felt (Registrar)**

03.20. Contractions stopped

Plan: Continue CTG until 5.00; if not contracting back to ward.

03.45: CTG Twin-A HR 140 bpm; SVT normal; Accelerations present, decelerations absent.

Twin B: 140 bpm, SVT normal, acceleration nil; variable decelerations, rapid recovery. BP — 144/100.

If no membranes felt attempt **to rule out rupture of membrane** was not done. Elevated BP; rupture of membranes with abnormal CTG and contractions prompts delivery or continuous monitoring until foetal wellbeing is confirmed with US. ***Delivery should have been considered under these circumstances.***

Moderate to severe deviation from standard of care under these circumstances.

2. The actions taken by staff when only one fetal heart beat was heard and [Ms A] left the ward and subsequently suffered an antenatal hemorrhage on 13 [Month5]

Actions taken on 13th [Month5] after twin1 demise was confirmed were very appropriate, well managed and adequate.

3. Whether there was any indication to induce labour earlier and whether this should have been considered.

As highlighted in question 1; on the 6th [Month5] and on 12th [Month5] delivery should have been considered for reasons elaborated above.

Although there were no clinical signs of deterioration of foetal growths (dopplers) uncontrolled hypertension and stressful social circumstances where she was not coping with other children in motel, heavy smoking and probably noncompliance with antihypertensive are major risks to this pregnancy i.e. Abruption; CVA (Cerebrovascular accidents).

Target BP once on antihypertensive is 135/85 mmHg or less (RCOG guidelines for management of hypertension in pregnancy).

Ministry of Health New Zealand — Clinical guidelines in management of Hypertension in pregnancy & preeclampsia clearly advocate that timing of delivery in severe Pre-eclampsia should be decided considering ***Blood Pressure level and its treatment; health of mother & fetus and woman's preferences***. [Ms A] had almost begged to be delivered and explained explicitly that she won't cope with still birth especially on two occasions where she was transferred to Delivery suite with an intent to deliver acutely.

Since the leading twin was not cephalic she needed to be delivered by CS.

Moderate to severe deviation from standard of care.

4. The level of communication with [Ms A] about the intended care plan.

Twice when [Ms A] complained with concerns for wellbeing of her Twin girl, both SMO and Registrar have documented discussing intended care plan and reasoning behind it. [Ms A] had informed repeatedly that nothing had been done in spite of being told the babies were not doing well. It is not clear from documents provided the extent of discussion and [Ms A's] understanding of the condition.

Ministry of Health guideline state that educational tools be available to help women understand issues relating to Hypertension in pregnancy & Pre-eclampsia. Such tools should take into consideration women's different levels of health literacy and demographic diversity.

Mild deviation from standard of care.

5. on 12th [Month5]

At 21.00 CTG unable to differentiate twins separately. (No medical input recorded)

23.40: CTG discontinued reported as normal.

With high-risk pregnancy (severe preeclampsia), twins with difficulty in monitoring if staff are unsure of CTG, medical review should be obtained without delay to avoid Morbidity/ mortality.

Moderate deviation from standard of care.

References:

Stillbirths: ending preventable deaths by 2030 The Lancet 13–19 February 2016. Luc de Bernis Mary V Kinney Joy E Lawn

Ministry of Health — Diagnosis and treatment of Hypertension & preeclampsia in New Zealand Clinical practice guidelines.

NICE guidelines

RANCOG/SOMANZ guidelines for hypertension in pregnancy

Perinatal Society of Australia and New Zealand Still Birth and neonatal death alliance'

'**Further advice on [Ms A] ref: 19HDC0231 — Waikato District Health Board (WDHB)**

I have been asked to report any change in my initial report of these events in Waikato DHB after assessing following responses from Waikato DHB and clinicians in response to my report in January 2021 on the above complaint.

I have perused the following documents provided by your office very carefully.

1. WDHB's response dated 14 May 2021 and statements and policies (received later in December 2021).
2. Midwifery clinical records covering the period [of the pregnancy].

The responses to my report do not change my original advice except

1. The adequacy of the monitoring of [Ms A's] pregnancy from 12 weeks gestation when she was under the care of the DHB

[Ms A] was referred to Emergency Department ([Waikato DHB]) on 7th [Month1] with hypertension, BP 160/122 mmHg by her LMC (midwife) following her booking antenatal visit at 12 weeks gestation.

ED notes — On 7th [Month1].

C/O headaches; vomited previous night with intermittent diarrhoea. BP 169/108; Systemic exam normal. Urine trace blood and trace protein. CBC/UEC normal. ED SMO along with Obstetric Registrar administered oral Labetalol 200 mg stat. 1.5 hours later BP 149/112 mmHg. Felt well and discharged home. Advised her to take Labetalol 100 mg orally twice a day with Oral Aspirin 100 mg daily and for GP follow up in a week for BP review and titrate Labetalol as required.

Even as early as 12 weeks gestation, twin pregnancy with such high BP, symptomatic with no previous HO Hypertension warrants admission, investigation and stabilisation of BP before arranging ambulatory care in community. Early onset severe hypertension in Multiple pregnancy can lead to severe Hypertensive disease increasing maternal morbidity and mortality. Severe hypertension in chronic hypertensives need acute management of hypertension —

Page 14. 'Diagnosis and treatment of Hypertension and preeclampsia in New Zealand'

Also refer to:

Waikato Management of Hypertensive Disorders during Pregnancy — guidelines.

Management of acute onset of severe hypertension:

Systolic BP ≥ 170 & /or Diastolic ≥ 110 X2 10 minutes apart

OR

Systolic BP ≥ 160 &/or Diastolic ≥ 100 X2 20 minutes apart

1. Call Obstetric Registrar. If not contactable, contact on call consultant.
2. Monitor 15-minutely BP until <150/100 for 1 hour, then 2x30 minutes, then 1hrly for 4 hours.
3. Obtain IV access + PET blood screen + PCR MSU if no prior proteinuria, ensure valid Group and Screen
4. Continuous CTG if > 24 weeks

On 12.05.22 When [Ms A] was assessed by Registrar it was documented that Cervix was long and posterior and no membranes were felt.

'If no membranes felt attempt to rule out rupture of membrane was not done. Elevated BP: rupture of membranes with abnormal CTG and contractions prompts delivery or continuous monitoring until foetal wellbeing is confirmed with US. Delivery should have been considered under these circumstances'.

In Obstetric documentation 'no membranes felt' refers to absent membranes in front of presenting part. As [Dr C] described in the response bulging membrane had to be documented if that was addressed. Clear description of findings is important.

BP of 144/100 and above throughout the period of admission is uncontrolled hypertension. I want [Dr C] to refer to:

RCOG guidelines for management of hypertension in pregnancy — Target BP once on antihypertensive is 135/85 mm Hg or less. Uncontrolled hypertension, with superadded Pre-eclampsia and twin gestation was significant risk to this pregnancy i.e., Abruption; CVA (Cerebrovascular accidents).

Ministry of Health New Zealand — Clinical guidelines in management of Hypertension in pregnancy & preeclampsia clearly advocate that timing of delivery in severe Pre-eclampsia should be decided considering Blood Pressure level and its treatment, health of mother & foetus and woman's preferences.

Both foetuses were showing signs of inadequate growth and abnormal dopplers as well as abnormal CTG.

Mother was certainly under immense stress with [complex social situation].

Subsequent CTG recordings provided were very short period of recording to report or reassure that they were normal.

Abnormal CTG in the background of IUGR, abnormal dopplers and Preeclampsia with uncontrolled hypertension warrants earlier delivery or close monitoring in Delivery suite. Transferring her back to ward from where she disappeared for long period of time without any monitoring was not appropriate management.

SGA with abnormal UA Doppler — a low threshold for delivery is recommended if there is any concern about maternal or foetal well-being.

Following the episode of uterine contraction, hypertension, abnormal CTG midwife could not get two distinct foetal heart tracings and did not get any medical assistance. No clear CTG recording of both twins since coming to the ward until following day when twin A was found to have no FH.

Moderate deviation from standard of care — with regard to adequacy of the monitoring of [Ms A's] pregnancy from 12 weeks gestation when she was under the care of the DHB.

From clinical notes provided, on 02 [Month3] and 08 [Month3] [Ms A] clearly complained of absent foetal movement of 1st twin and was very upset and tearful requesting explanation from doctors and on both occasions, it has been documented that she was reassured that both twins were doing well and due to prematurity it wasn't safe to deliver.

RANZCOG Clinical Practice Guideline for the Care of Women with Decreased Fetal Movements October 5, 2016, targets women with singleton pregnancy but does not exclude twin pregnancy. In the absence of clear guidelines for twin pregnancy guidelines for singleton is adopted in association with clinical judgement.

A report of decreased foetal movements should be investigated with attention to the presence of risk factors for stillbirth (5) https://www.ogmagazine.org.au/15/4-15/prevention-is-cure/#:~:text=STILLBIRTH%20AND%20PERINATAL,FRANZCOG%20CMFM.

Uncontrolled hypertension with preeclampsia and severe growth restriction are risks for placental abruption and it is prudent to rule out fetomaternal haemorrhage with recurrent reduced foetal movements.

Stillbirths are often preceded by maternal perception of decreased foetal movement (DFM), which is frequently the first sign of foetal compromise. The *Lancet Stillbirth* series identified awareness and timely evaluation of women reporting DFM as a stillbirth research priority.

Guidelines for management of Preeclampsia — SGA is mostly based on Singleton pregnancies. Multiple gestation with early onset severe hypertensive disorder has greater maternal and foetal morbidity and mortality. [Ms A] showed signs of preeclampsia as early as 28 weeks (Hypertension with IUGR). Although she remained stable with no deterioration of biochemical evaluation her BP was not controlled optimally which is a significant risk factor for abruption and CVA in background of twin pregnancy.

Unexplained APH is unpredictable as [Dr B] reiterates in her response.

In the absence of any clearly effective therapy, the mainstay of management following the diagnosis of FGR is close surveillance and timely delivery. In early-onset FGR owing to placental insufficiency, the risks of prematurity need to be weighed against the risks of antenatal hypoxia, acidosis, asphyxial injury and stillbirth.

The TRUFFLE trial randomised 503 women with severe early-onset FGR to delivery according to the results of ductus venosus waveform analysis, or CTG short-term variability monitoring. While the final outcome (infant development at the age of two years) is still pending, preliminary data on the cohort has been published, confirming 92 per cent survival and 70 per cent survival without major morbidity. These outcomes are better than that reported in similar historical cohorts, which suggests outcomes in severe early-onset FGR are optimised when there is a standardised management strategy until 32 weeks.

On 12 [Month3] while attempting CTG midwife could not clearly identify 2 separate heart beats. This is an urgent need to get medical input — refer to Waikato twin pregnancy guideline. (Although it is mentioned only during labour). [Ms A] had uterine contractions with abnormal CTG earlier that day. She was also disappearing from her room often and had not had much monitoring during the day. It was imperative to get medical assistance so US could have located the foetuses for adequate monitoring/assessment.

Moderate deviation to standard of care.

Guideline for management of SGA endorsed by Waikato (from MFM guideline) is for gestation beyond 34 weeks.

Adopting study conclusions can lead to variations in interpretations and managements. Need to have clear guideline for the unit.'