Obstetrics Registrar, Dr B

Obstetrics Consultant, Dr C

Capital & Coast District Health Board

A Report by the

Health and Disability Commissioner

(Case 13HDC00093)

Health and Disability Commissioner
Te Toihau Hauora, Hauātanga

Table of Contents

Executive summary

Relevant facts

1. In 2012 Mrs A was pregnant with her first child. Mrs A had an unremarkable pregnancy under the care of her Lead Maternity Carer (LMC), a registered midwife.

2. When Mrs A was 40 weeks plus 9 days' gestation, she was admitted to a public hospital (the hospital) for Prostin priming.[1] An induction of labour (IOL) was planned for the following day, but that evening Mrs A went into labour. At approximately 11pm Mrs A's waters broke. At 11.17pm cardiotocography (CTG) monitoring[2] showed deep fetal heartbeat decelerations. At 11.55pm Mrs A was reviewed by obstetrics registrar Dr B.

3. At around 12am Dr B rang the on-call obstetrics and gynaecology consultant, Dr C. Drs B and C have different recollections of the telephone conversation, but both recall that the plan was to attempt a trial of forceps and, if unsuccessful, proceed to a Caesarean section. Dr B understood that she was to carry out the procedures unsupervised, while Dr C understood that he was to attend the trial of forceps and the Caesarean section (if a Caesarean section proved necessary).

4. At 12.40am Dr B commenced a trial of forceps unsupervised, which was unsuccessful. Dr B then proceeded to commence a Caesarean section unsupervised, but was unable to deliver the baby, whose head was impacted in the pelvis.

5. Dr C had arrived in the delivery suite when Dr B commenced the above procedures, but was intercepted on his way to Mrs A by another obstetrics emergency.

6. At approximately 1am Dr C attended Mrs A, and was able to flex and deliver the baby's head. At 1.02am Baby A was born, white and floppy, with the umbilical cord wrapped around her neck and shoulder. It took the neonatal resuscitation team five and a half minutes to resuscitate Baby A, who was then transferred to the Neonatal Intensive Care Unit. Baby A was taken off life support and, sadly, passed away, having sustained hypoxic ischaemic encephalopathy[3] secondary to perinatal hypoxic ischaemic insult.[4]

Commissioner's findings

7. Capital & Coast District Health Board's (CCDHB's) policies and procedures were not followed. Furthermore, CCDHB's orientation and induction of Dr B were not appropriate, in that she was unaware of the level of supervision she required. For not ensuring that its obstetric policies and procedures were followed, and for failing to provide appropriate orientation, induction and supervision for Dr B, CCDHB was

[1] A hormone-like substance that causes the cervix to ripen and may stimulate contractions.
[2] Cardiotocography is a technical means of recording the fetal heartbeat and the uterine contractions during labour.
[3] Acute or subacute brain injury due to asphyxia (deficient supply of oxygen).
[4] An event causing the restriction of blood flow to the brain.

found in breach of Right 4(1) of the Code of Health and Disability Services Consumers' Rights (the Code).[5]

8. Midwife Ms D should not have proceeded with Mrs A's IOL until she had discussed her plan with an obstetrics consultant.

9. As the on-call obstetrics consultant at the time, Dr C was responsible for supervising Dr B. For inappropriate supervision of Dr B, Dr C was found in breach of Right 4(1) of the Code.

10. Dr B inappropriately attempted an unsupervised trial of forceps and a Caesarean section on Mrs A. However, as Dr B was guided by the advice of her consultant, her actions were not found to be in breach of the Code.

Complaint and investigation

11. The Commissioner received a complaint about the services provided to Mrs A during the birth of her baby at a public hospital. The following issues were identified for investigation:

- *The appropriateness of the care provided to Mrs A by Dr B in 2012.*
- *The appropriateness of the care provided to Mrs A by Dr C in 2012.*
- *The appropriateness of the care provided to Mrs A by Capital & Coast District Health Board in 2012.*

12. The parties directly involved in the investigation were:

Mrs A	Consumer
Mr A	Consumer's husband
Dr B	Obstetrics/gynaecology registrar
Dr C	Obstetrics/gynaecology consultant
Capital & Coast District Health Board	Provider

Also mentioned in this report:

Dr E	Obstetrics and gynaecology consultant
RM F	Associate Charge Midwife Manager

13. Information was also reviewed from Lead Maternity Carer (LMC) midwife Ms D.

14. Independent expert advice was obtained from specialist obstetrician and gynaecologist Dr Jennifer Westgate (**Appendix A**).

[5] Right 4(1) of the Code states: "Every consumer has the right to have services provided with reasonable care and skill."

15. Independent expert advice was obtained from midwife Ms Joyce Cowan (**Appendix B**).

Information gathered during investigation

Background

16. In 2012 Mrs A, aged 35 years, was pregnant with her first child. Mrs A was in good health throughout her pregnancy. The results of all antenatal screening were normal and there was no significant concern at any of Mrs A's antenatal appointments with her LMC, community-based self-employed midwife Ms D.

17. In the latter stages of Mrs A's pregnancy, Ms D discussed with Mrs A the options for managing a postdates pregnancy. Ms D encouraged the use of walking, a Swiss ball, and yoga positions to assist the baby to engage deep in the pelvis. In addition, Ms D encouraged Mrs A to use Optimal Fetal Positioning[6] principles to aid the baby into the correct position for birth.

18. At 40 weeks plus 2 days' gestation and 40 weeks plus 4 days' gestation Ms D attempted to encourage the onset of Mrs A's labour by undertaking stretch and sweep[7] procedures; however, Ms D was unable to reach the cervix on either occasion.

40 weeks plus 8 days' gestation

19. At 2.45pm, Ms D met Mrs A and her husband, Mr A, at the delivery suite at the hospital. The purpose of that appointment was for Ms D to assess Mrs A and to arrange an Induction of Labour (IOL)[8] for Mrs A, as per the Capital & Coast District Health Board's (CCDHB's) "Induction of Labour" policy (OB IP-09). IOL was planned in the event Mrs A had not delivered by 40 weeks plus 10 days' gestation. Mrs A's Bishop's score[9] was recorded in the clinical notes as 4.

20. Following the examination, Ms D booked Mrs A for an IOL two days later. The plan was for Mrs A to be admitted to the antenatal ward and for Prostin gel to be inserted into the vagina by ward midwifery staff at that time in preparation for the IOL the following day.

[6] Optimal Fetal Positioning involves tilting the pelvis forward, rather than back, and ensuring the knees are lower than the hips when sitting, to encourage the baby into an anterior position (when the baby's head is facing the mother's back) for delivery.

[7] An internal examination where a health practitioner sweeps a finger around the cervix to encourage the separation of the membranes of the amniotic sac from the cervix. This separation releases a hormone (prostaglandin) that starts labour.

[8] A procedure used to stimulate uterine contractions during pregnancy before labour begins on its own.

[9] A Bishop's score is a pre-labour scoring system to assist in predicting whether induction of labour will be required. It has also been used to assess the odds of spontaneous delivery. A number of criteria are given a score of 0–2 or 0–3. The highest possible score is 13, meaning that the odds are high of a spontaneous delivery.

21. Ms D telephoned Dr E, the obstetrics and gynaecology consultant who was due to be on duty on the day of Mrs A's induction, to discuss Mrs A's planned IOL. Dr E was not able to be reached, as he was in theatre, and requested that Ms D call again later. Ms D rang a second time and was unable to get through to Dr E. As such, the clinical notes record that Ms D left a message on Dr E's mobile phone with details of the IOL and instructions to call her back if he wished to discuss the IOL. Ms D advised HDC that she did not receive a call back, and "did not expect to as this was a straight forward post-dates induction".

40 weeks plus 9 days' gestation

Admission to hospital

22. In the late afternoon Mrs A was admitted to the antenatal ward for Prostin gel insertion. According to Ms D, the ward staff were very busy at that time, and so Ms D was called in to the hospital to insert Mrs A's Prostin gel.

23. At around 5pm Ms D arrived at the antenatal ward. At that time Mrs A advised Ms D that she had had some spotting that day. Ms D recorded in the clinical notes that she queried whether this was a show.[10] Ms D also noted that Mrs A reported experiencing period-type pains the previous night, and loose bowel motions. Mrs A was monitored using cardiotocography (CTG).[11] The fetal heart rate (FHR) was 130 beats per minute (bpm),[12] with some variability (increases of 5bpm). In addition, the fetal movement was "apparent with reactivity". Ms D noted that, at 5.50pm, "there were some non painful tightenings picked up by CTG while baby was moving".[13]

24. At around 6.35pm Ms D inserted 2mg of Prostin gel. Ms D advised that, at that time, "there was no current uterine activity on the CTG unless the baby moved". Ms D further stated that "the internal examination showed no change from the previous day and a Bishops Score remained 4". Accordingly, and in accordance with CCDHB protocol, she administered 2mg of Prostin, "as there was no current uterine activity and the Bishops Score was < 7".

25. Ms D advised HDC that, based on Mrs A's parity and Bishops score, she "absolutely did not expect [Mrs A] to go into labour overnight". Ms D expected that Mrs A's waters would need to be broken and oxytocin[14] administered the following day (the procedure for an IOL).

26. At 6.50pm Ms D reviewed Mrs A's CTG (which had been left on) and recorded in the clinical notes that the "CTG remain[ed] reassuring". Ms D then handed over care of Mrs A to the ward staff, and asked the staff to inform her if Mrs A went into labour.

[10] A brownish or blood-tinged mucus discharge (bloody show), which indicates early labour.
[11] Cardiotocography is a technical means of recording the fetal heartbeat and the uterine contractions during pregnancy.
[12] The normal FHR in the third trimester is between 120 and 160bpm.
[13] Ms D's retrospective note was made at 6pm at 40 weeks 9 days' gestation.
[14] A hormone used in the induction of labour.

Antenatal ward/Mrs A goes into labour

27. Between 6.50pm and 10.00pm two hospital midwives reviewed Mrs A and recorded that she had "tightening but no bleeding or spontaneous rupture of membranes". In addition, the clinical notes record that staff reminded Mrs A of "danger signs and when to call".

28. At 10.00pm a midwife recorded that Mrs A was experiencing "tightening 1:5 — having to breathe through these for 20–30 seconds". The contractions were "mild to palpation",[15] and there was "no spontaneous rupture of membranes, no bleeding". Mrs A was given Panadol syrup to assist with the pain (she was unable to swallow tablets).

29. At 11.10pm Mrs A rang the call bell. The clinical notes record "buzzed — spontaneous rupture of membranes. Clear liquid on pad. CTG commenced to assess fetal wellbeing. [Mrs A] feeling more uncomfortable — contractions strong on palpitation".

30. At 11.17pm the FHR was recorded as "120bpm with variable decelerations down to 50bpm taking one minute to baseline — transferred to delivery suite". The CTG was discontinued while Mrs A was transferred. A midwife on the ward contacted Ms D and advised her that Mrs A was being transferred to the delivery suite.

Delivery suite/Dr B arrives

31. At 11.25pm Mrs A arrived at the delivery suite, and CTG monitoring was again commenced. A registered midwife (RM) recorded in the clinical notes that the FHR would decrease to 60bpm with contractions and then recover to 120bpm over one minute. The clinical notes record that Mrs A was 8cm dilated. In addition, the head station[16] was recorded as +1 and a thick bloody show and meconium were noted.[17]

32. At 11.40pm RM and Associate Charge Midwife Manager (ACMM) RM F wrote in the clinical notes: "[Mrs A] now fully dilated and encouraged to push with contractions. Meconium stained liquid draining. Left to speak to registrar on call about situation — decelerations on CTG." The obstetrics and gynaecology registrar on call was Dr B.[18] RM F also wrote in the clinical notes: "[R]egistrar was busy in room 1 — asked her to come to room 5 as soon as possible and I would phone if needed urgently."

[15] A measure of the strength of uterus contractions. The health practitioner presses into the uterus during a contraction to determine how strongly the uterus is contracting.

[16] The station refers to the position of the baby's head in relation to the pelvis, and is recorded as a number between –5 and +5. Zero station means that the head is engaged and has entered the vaginal canal within the pelvic bones. A negative number (–5 to 0) means that the head is not engaged in the pelvis. A positive number (0 to +4) means that the baby's head is moving down the pelvis, and +5 means that the baby is crowning (being born).

[17] Meconium is an infant's first stool, which normally is stored in the infant's bowels until after birth. If meconium is present in the amniotic fluid prior to birth, it can be a sign of fetal distress.

[18] In 2012 Dr B was in her third year as an obstetrics and gynaecology registrar. Dr B commenced employment at CCDHB two weeks prior to these events. She was on her first set of nights at the hospital, and was on her sixth night of duty.

33. The clinical notes record that Ms D arrived at 11.50pm, and Dr B arrived at 11.55pm. At that stage FHR decelerations were variable down to 40bpm, there was a rapid progression of labour, the head station was +1, and the baby's position was deflexed[19] right occipito-posterior.[20] Dr B applied a fetal scalp electrode (FSE).[21] Dr B recalled:

> "I assessed [Mrs A's] CTG as follows: baseline rate about 110–120, variability 15, no accelerations. Deep decelerations to 50–60 bpm lasting 60 seconds.
>
> On examination of the patient, I found [Mrs A] to be very distressed from pain and pushing with her contractions. The abdomen had a scaphoid appearance typical of an occipito-posterior position (OP) … there was 1/5th fetal head palpable abdominally. Vaginal examination revealed that the cervix was fully dilated, presenting part deflexed OP with caput and moulding. The presenting part was palpated 1cm below the ischial spines. I applied a fetal scalp electrode to obtain a direct connection to the baby. I confirmed the presentation with a bedside ultrasound scan. Following this I went to speak to the on-call consultant on the phone."

34. Dr B advised HDC:

> "Whilst it was obvious that the labour had progressed rapidly, I did not conclude that this was a hyperstimulated labour at the time. Also as [Mrs A] was fully dilated, pushing and had such a rapid labour, I was hopeful that she would be able to spontaneously deliver her baby vaginally."

40 weeks plus 10 days' gestation

Dr B's call to Dr C

35. At around midnight, Dr B left the room and called the on-call obstetrics and gynaecology consultant, Dr C[22] (Dr C has told HDC that he recalls the conversation being between 12.05am and 12.10am). Dr B's and Dr C's recollections of the conversation differ, and are set out below.

36. Dr B advised HDC as follows:

> "I explained that [Mrs A] was a primiparous woman who had commenced induction of labour with prostin earlier that evening for a post-dates pregnancy. She had spontaneously ruptured her membranes with meconium liquor and rapid labour.
>
> I informed [Dr C] of my findings on examination: Patient had no analgesia and was pushing. CTG showed a baseline rate of 120–130 with good variability, deep decelerations to 50–60bpm lasting 60 seconds. There was 1/5th fetal head palpable

[19] "Deflexed" means the baby's chin is pointed up upon entry into the vagina. A deflexed head can make labour more difficult than when a baby has its chin tucked in.
[20] The baby is in the posterior position, facing down, forward (spine against the mother's spine) and right.
[21] Monitors the FHR continuously during the birth.
[22] Dr C is a consultant obstetrician and gynaecologist.

per abdomen. The cervix was fully dilated, presentation deflexed OP [occipito-posterior] with caput[23] and moulding[24] at station +1.

[Dr C] discussed these findings with me stating that 1/5th palpable fetal head per abdomen was too high to deliver vaginally. I was advised to move the patient to the operating theatre and reassess her after the spinal-epidural was placed. If the head were to come down then I could try a forceps delivery. If the baby were not to be delivered after one pull then we were to proceed to a Caesarean section."

37. In a retrospective note, Dr B recorded: "[D]iscussed with [Dr C] — reexamine in OT [operating theatre]. If head descends — for trial of instrumental delivery. If not then LSCS [lower segment Caesarean section]."

38. Dr B advised HDC that, following her call to Dr C, she returned to Mrs A's room and advised the midwives to prepare Mrs A for the operating theatre, with a possible trial of forceps. Dr B recalls that she obtained Mrs A's consent to a trial of forceps with or without a Caesarean section and that, at that time, there was a prolonged deceleration in the FHR to 60bpm, lasting three and a half minutes, during which Mrs A was rolled onto her left side. The clinical notes record: "[P]lan — FSE [fetal scalp electrode], to operating theatre for trial +/– C [Caesarean] Section, and Epidural."

39. Dr C's recollection of his conversation with Dr B is somewhat different. The relevant extract from his response is set out below:

"When [Dr B] contacted me, she informed me that the foetus was in an occipito-posterior position, and that there was no evidence of disproportion (minimal caput and moulding), and my memory was that she informed me that the head was at station +3, no head palpable abdominally. I advised her that my plan was to undertake a trial of forceps in the operation theatre — one pull, and if not delivered, I would proceed to a Caesarean section. From the information as I understood it at the time, I anticipated a trial of forceps was likely to be successful but suggested this be in the operating theatre as a precaution in view of the OP position. On my instruction [Dr B] arranged for [Mrs A] to be transferred to the operating theatre so I could undertake a trial of forceps on my arrival. […] It was neither my instruction nor my expectation that [Dr B] would carry out the trial of forceps."

40. In response to my provisional opinion CCDHB advised that RM F was not clear from communications with Dr B or Dr C that supervision was required for Mrs A's delivery.

Additional call to Dr C

41. At 12.15am Dr B and RM F went to assess another woman in labour on the delivery suite. At 12.17am RM F called Dr C (who had not yet arrived at the delivery suite) to advise him that a second woman was fully dilated with fetal distress.

[23] Soft, puffy swelling on the scalp in a newborn infant.
[24] The temporary reshaping of the fetal head as it passes through the birth canal during childbirth.

42. In response to my provisional opinion CCDHB also advised that it was RM F's "understanding and recollection of events … that the RMO [Registered Medical Officer – Dr B] could perform [Mrs A's] trial of forceps unsupervised, so there was no need to call a second SMO".

43. Dr C advised HDC that he received the above call from RM F when he was on his way to the hospital (following the initial call from Dr B). He advised that leaving for the hospital took longer than normal because, as he was leaving in his car, he was called again and returned to the house to take the second call.

Mrs A arrives in operating theatre

44. At 12.26am, Mrs A arrived in the operating theatre. Dr B provided HDC with the following comment regarding Mrs A's condition at that time:

> "On review of the CTG, I found the fetal baseline rate to be 130–140bpm, variability 5–10bpm. There were deep decelerations to 60[bpm], recovering to baseline after 60–90 seconds.
>
> On examination, there was no fetal head palpable abdominally. Vaginal examination as follows: cervix fully dilated, deflexed direct OP [occipito-posterior], presenting part at station +2, or 2cm below the ischial spines.
>
> I felt that the fetal head had descended in the interim and that the quickest delivery for the baby would be a forceps delivery if this were to be successful."

Dr C arrives at hospital

45. Dr C advised HDC that he arrived at the hospital at around 12.40am (ie, between 30 to 40 minutes after the initial phone call from Dr B). Dr C advised that this was the normal travelling time from his home to the hospital.

46. Upon arrival, Dr C was diverted to another woman in labour and performed a forceps delivery. Dr C told HDC:

> "At about 00h42 I was in the delivery suite, on my way to the operating theatre to undertake an assessment of [Mrs A] with a view to my conducting a forceps delivery based on the information provided, when I was contacted by the midwife about [another woman] ([Ms X]), who was fully dilated, and also had fetal distress (a baseline fetal heart rate of 180bpm with decelerations to 100bpm). This was the first time that I was made aware of this patient. As I was very concerned about the fetal condition I proceeded to conduct a forceps delivery on [Ms X]; the delivery was accomplished in about 10 minutes, with delivery of the baby at 00h52.
>
> During the process of delivering [Ms X], I was informed by the ACMM that [Dr B] had already attempted a trial of forceps on [Mrs A] at 0040 according to the time written on the CTG. This was probably just before I arrived in delivery suite. Following the failure to deliver the baby with the forceps, the midwife informed me that the registrar was proceeding to a Caesarean section. This discussion occurred while I was delivering [Ms X]. I agreed that that was appropriate (ie

> proceed to a Caesarean section) and assumed that [Dr B] would prepare [Mrs A] for a Caesarean section on my arrival at the operating theatre. I did not anticipate that [Dr B] would commence the Caesarean section herself."

47. In response to my provisional opinion Dr C additionally advised HDC that "based on the information that Dr B had provided to me I did not consider [Mrs A] as being as urgent as patient [Ms X]". Dr C acknowledged that on arrival to the delivery suite he did not ask about Mrs A before deciding to assist Ms X first.

Operating theatre

48. At 12.40am, in the absence of Dr C, Dr B commenced the trial of forceps. In response to my provisional opinion Dr B advised HDC:

> "I decided to proceed with delivery as a result of my concerns about the state of the baby and therefore did not consider that I could wait to deliver due to the evidence of fetal compromise. Allied to this I also was aware that the consultant, while on site, was attending to another delivery. Unfortunately I did not appreciate the complexity of the case and therefore did not recognise that I was out of my depth."

49. Furthermore Dr B advised "I did not advise [Dr C] of the deterioration of the fetal heart rate pattern that occurred after I spoke with him at 11.55pm and I very much regret this".

50. Dr B pulled once with a contraction but there was no descent of the baby. At 12.42pm Dr B removed the forceps, and Mrs A was repositioned for a Caesarean section, which Dr B went to scrub for.

51. At 12.45am the FSE fell off. CCDHB advised HDC that an abdominal transducer[25] was subsequently used, but no FHR was recorded after 12.45pm.

52. At around 12.48am, again in the absence of Dr C, a Caesarean incision was made by Dr B. It was discovered that the baby was deeply impacted in the pelvis, in a deflexed occipito-posterior position. At approximately 12.48am a surgical assistant left the room to advise Dr C of the impacted head. In the meantime, Dr B asked that a dose of sublingual glyceryl trinitrate[26] be given to relax Mrs A's uterus. Dr B then asked RM F to push up from below to disimpact the baby's head. The baby's head was disimpacted, but Dr B was unable to flex or rotate the baby's head out of the pelvis. A second dose of sublingual glyceryl trinitrate was given to try to further relax Mrs A's uterus.

Dr C arrives at operating theatre/baby delivered

53. At 1.00am Dr C entered the operating theatre and took over Mrs A's care. Dr C was able to flex and deliver the baby's head. At 1.02am Baby A was born, white, floppy, and not breathing, with the umbilical cord wrapped around her neck and shoulder.

[25] An external instrument used to monitor maternal contractions and fetal well-being.
[26] Used to slow uterine contractions.

Baby A's Apgar score[27] was taken three times, and was 0, 0 and 2. No heart rate was audible upon birth. Dr C recalls Baby A's birth as follows:

> "By the time I arrived in theatre, the registrar had in fact already commenced the Caesarean section but was having difficulty delivering [Mrs A]. When I got to the operation, the ACMM was attempting to disimpact the fetal head from below, while the registrar was struggling to deliver the baby through the incision. I asked her to stop, and asked the anaesthetist to administer glyceryl trinitrate to relax the uterus. At the time I noticed the cord around the fetal shoulder and neck. I flexed the fetal head, and disimpacted the head, which then resulted in the delivery of the baby."

Care provided by neonatal resuscitation team

54. The neonatal resuscitation team was present in the operating theatre when Baby A was born. Baby A was intubated within one minute of delivery, cardiopulmonary resuscitation was commenced, and oxygen was given. At 1.05am adrenaline was given via an endotracheal tube.[28] At 1.06am another dose of adrenaline was given via an umbilical venous catheter. Thirty seconds later another dose was given, as well as bolus saline.[29] At 1.07am chest compressions continued, another dose of bolus saline was given, and an FHR was audible at approximately 30bpm. Chest compressions continued. Baby A's oxygen saturation was at 70 percent. At 1.10am a dose of glucose was given via the umbilical venous catheter. Compressions stopped at approximately 1.12am as the FHR was in the eighties. Another dose of bolus saline was given. Vitamin K[30] was also given.

Care provided by Neonatal Intensive Care Unit

55. At 1.12am Baby A was transferred to the Neonatal Intensive Care Unit (NICU). Baby A was cooled[31] and had a BRAINZ monitor[32] attached to monitor brain function. A dose of phenobarbitone[33] was given.

56. At 4am Mrs A was taken to NICU to visit Baby A, and was then settled into a delivery suite room. Mrs A found the location in the delivery suite "very traumatic", given all that was occurring with Baby A; Mrs A advised HDC that she could "hear other mums giving birth".

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[27] The Apgar score is a simple method to assess the health of a newborn baby immediately after birth. The Apgar scale is determined by evaluating the newborn baby on five criteria on a scale from zero to two, then summing up the five values obtained. The resulting Apgar score ranges from zero to 10. The five criteria are summarised using words chosen to form an acronym: Appearance, Pulse, Grimace, Activity, Respiration.

[28] An endotracheal tube is inserted through the mouth into the trachea (the large airway from the mouth to the lungs).

[29] Used to increase blood pressure.

[30] Newborn babies have a low amount of vitamin K in the body at birth. Vitamin K helps blood to clot to prevent serious bleeding.

[31] Brain hypothermia, induced by cooling a baby to around 33°C for three days after birth, is a treatment for birth asphyxia (deficient supply of oxygen to the brain).

[32] A bedside monitor used for continuous brain monitoring of newborns.

[33] Phenobarbitone is used to prevent seizures.

Retrospective note by Dr C

57. The following morning, Dr C made a brief note of the events that occurred and his recollection of the information given to him over the telephone by Dr B. Dr C's note reads as follows:

> "I was the obstetric consultant on call [that night]. At around midnight I received a call from the registrar, [Dr B], about a 35 year old primigravida who was undergoing a pre-induction cervical ripening in the antenatal pod. She had received 2mg of prostaglandin,[34] and was now fully dilated with fetal distress. The fetal heart beat was around 60bpm. I was informed that there was no evidence of disproportion (minimal caput and moulding, and the head was at station 3+, no head palpable abdominally). I recommended a trial of forceps — one pull, and if not delivered, to proceed to a Caesarean section."

Update on Baby A's condition

58. Around 2pm, a NICU paediatrician came to discuss Baby A's condition with Mr and Mrs A. The Acting Charge Midwife (ACM) on the ward had called NICU requesting the visit, as Dr C had raised concern with the ACM that staff from NICU had not provided information on Baby A's condition to the family.

59. Baby A was moved to an individual room in NICU, the plan being to remove her life support. At 5.30pm the following day Baby A was taken off life support and, sadly, passed away at 7.37pm that evening. Baby A's cause of death was recorded as hypoxic ischaemic encephalopathy[35] secondary to perinatal hypoxic ischaemic insult.[36]

60. Mrs A was moved to the postnatal ward, and was discharged a day later. A funeral was held for Baby A at the hospital.

Counselling offered by CCDHB

61. Following the above events, CCDHB offered Mrs A counselling at a CCDHB Women's Health Service's clinic. This clinic provides abortion services, including pre- and post-abortion counselling. Mrs A found the location of the counselling sessions distressing and insensitive to her loss.

Subsequent communication between the parties

62. Mr and Mrs A met with senior managers from CCDHB's Women's Health team. During that meeting Mr and Mrs A were informed that a reportable event had been lodged regarding the care provided to Mrs A, and that a formal review would be undertaken. The terms of reference for that review stated that the Adverse Event Review Report (the report) would be completed in approximately three months' time.

63. One of the managers advised HDC that, before the date the final report was due, she emailed Mr and Mrs A advising them that the report would be delayed. She advised

[34] Prostin.
[35] Acute or subacute brain injury due to asphyxia (deficient supply of oxygen to the brain).
[36] An event causing the restriction of blood flow to the brain.

HDC that she did not receive a response to the email, but "was aware that [Mrs A] had not long returned to work and perhaps had not responded as she was getting back to some normality".

64. Because of the apparent lack of contact from CCDHB regarding the report, Mrs A sought assistance from the Nationwide Health and Disability Advocacy Service (the Advocacy Service). Approximately two months after the report was due, assisted by the Advocacy Service, Mrs A made a formal complaint regarding the standard of care she had received and the DHB's follow-up processes. In order to resolve Mrs A's concerns, it was agreed that a meeting between the parties would occur after the release of the report.

CCDHB Adverse Event Report

65. Approximately two weeks after Mrs A made a formal complaint the report was finalised and made available to Mr and Mrs A. The report outlined the events that took place, as well as the review team's findings and recommendations. The report highlighted a number of issues about the care provided to Mrs A. Those issues are summarised as follows:

- Care on the antenatal ward: The review team noted that there was a breakdown in communication between Ms D and Dr E when Mrs A was booked for an IOL. Furthermore, Ms D did not discuss the IOL with the on-call consultant.
- Uterus hyperstimulation: At 11.55pm the CTG had been running long enough to indicate uterine hyperstimulation. This was not recorded in the clinical notes, and the option of tocolysis[37] was not considered as an alternative to proceeding with delivery. However, the report noted that in view of the normal FHR baseline at that time, expediting delivery was a reasonable alternative to tocolysis.
- Emergency prioritisation category: During Mrs A's delivery there were two times (when Dr B identified the abnormal CTG and called Dr C, and when the CTG results deteriorated) when prioritisation categories for Mrs A should have been called. The review team considered that at 12am a category 2 (baby to be delivered within one hour) should have been called, and that at 12.17am a category 1 delivery (baby to be delivered within 20 minutes) should have been called. The prioritisation categories referred to by the review team are outlined in the CCDHB's "Obstetrics Surgery/Procedures Trial" policy. Further details of the policy are outlined below.
- Implementation of cascade process: At 12.15am the obstetrics unit was aware of two concurrent obstetric emergencies, and should have implemented the DHB's cascade process, in which an additional senior clinician attends so that a senior clinician can be present for each emergency.
- Supervision of Dr B: At the time of these events, Dr B was in her second week of working as an obstetric registrar at CCDHB. She was oriented to CCDHB the week prior to these events, but that orientation did not include specific information

[37] Decreasing uterine contractions.

> regarding the attendance of SMOs at operative deliveries. However, Dr C was aware that he was required to be present for all operative vaginal deliveries in theatre, including a trial of forceps.

Recommendations

66. The review team made five recommendations at the conclusion of the report. These recommendations included that CCDHB apologise to Mr and Mrs A, and review registrar training and credentialling, the SMO cascade implementation, and CCDHB's "Induction of Labour" policy.

Meeting with CCDHB

67. Approximately a week after the report was finalised Mrs A, Mr A and an Advocacy Support representative again met with senior managers from CCDHB's Women's Health team. In addition to discussing the findings of the report, a number of other concerns were discussed, including the following:

- Delivery suite stay: managers explained that this had occurred to keep Mrs A close to NICU, but said that the decision would be followed up to ensure that it did not happen again.
- Location of counselling services: managers acknowledged that a different location should have been chosen, and said that she would arrange for Mr and Mrs A to be offered counselling at a different location.

68. During the meeting, Mr and Mrs A were also offered future fertility treatment, should that be needed. Additionally, for future deliveries, Mr and Mrs A were offered an obstetric consultant of their choice, as well as an elective Caesarean section.

CCDHB follow-up

Review recommendations

69. CCDHB advised HDC that it has completed all of the recommendations set out in the report.

Changes to practice — Dr B and Dr C

Dr B

70. In responding to the complaint, Dr B made the following comments regarding the impact of the events in question on her and, specifically, the changes she has made to her practice as a result:

> "My confidence has been shaken significantly following this event. I have a much lower threshold when asking for consultant help and advice. I am also clearer when asking consultants to attend and assist me. I now insist on having a consultant present when undertaking a trial of an instrumental delivery in theatre and would not attempt a vaginal operative delivery in the room unless I was confident that the baby could be delivered vaginally and only in the occipital anterior position.
>
> […]

> As a consequence of this event, I have had a period of increased consultant supervision and support. My own practice has changed as outlined. Also since moving from [the] Hospital, I have asked for increased consultant support in my current place of work."

71. In response to my provisional opinion Dr B advised "as a consequence of this matter I ensure that I am clearer when asking consultants for advice and assistance". In addition Dr B advised she "regularly attends and participates in Continuing Professional Development courses and conferences. I have attended an update of the Fetal Surveillance Education Programme following this event, to refresh my knowledge regarding CTG interpretation."

Dr C

72. On the above issue, Dr C advised HDC:

> "I often relive the events of that night and try to fathom how I might have acted differently to make the outcome favourable. The events have left me quite traumatised and devastated at the outcome.
>
> You have asked whether I have made changes to my practice in any way. One change that I have made is to ensure that management plans over the telephone are relayed back so that there is no misunderstanding."

73. In response to my provisional opinion Dr C advised HDC that "I have also changed my route to the hospital to avoid traffic lights, and park in a call-back parking space rather than the dedicated underground obstetrician parking bay".

Relevant CCDHB policies/processes

74. CCDHB provided HDC with copies of relevant policies in place at the time, set out and/or summarised as follows.

Induction of Labour policy

75. CCDHB's "Induction of Labour" policy states:

> "All induction bookings must be agreed by a consultant — preferably the consultant on call for the intended day of IOL will be contacted; otherwise, the consultant on call the day arrangements are being made is satisfactory."

Obstetric Surgery/Procedures Triage policy

76. CCDHB's "Obstetrics Surgery/Procedures Triage"[38] policy in place at the time of the events in question outlines that "when there are clinical indications for obstetric surgery, the obstetric registrar and/or specialist obstetrician will determine the clinical urgency and advise the ACMM." The policy delineates four obstetric surgery/procedure prioritisation categories. The first two prioritisation categories are relevant for unplanned emergencies. These prioritisation categories are as follows:

[38] W&CHD OB IP-13.

"1. Immediate/'crash'
- Significant acute risk of maternal/perinatal morbidity or mortality e.g. for caesarean — delivery to be achieved within 30 minutes

2. Emergency — unplanned
- Delay in delivery would significantly increase risk of maternal and/or perinatal morbidity e.g. for caesarean — delivery required as practical as possible"

77. In addition to what is set out in the above policy, CCDHB advised HDC that "the DHB has a requirement that an obstetric consultant is able to attend the hospital within 20 minutes of being called". (Dr C advised HDC that he was not aware of this requirement.)

SMO cascade process

78. CCDHB has an emergency cascade process in place whereby the ACMM will discuss unfolding emergencies with the on-call obstetrician and determine who to call when extra SMO support is required. The emergency cascade is outlined in poster form in the delivery suite. During the period of Mrs A's delivery, no additional consultant support was called for.

Credentialling and supervision of registrars template

79. CCDHB advised HDC that its registrars are credentialled six monthly to determine the level of supervision required.[39] However, at the time of these events, the credentialling process for Dr B had not been finalised.

80. The obstetrics and gynaecology department completes a template for each registrar outlining the level of supervision required for each procedure. CCDHB provided the template to HDC, but advised that, as Dr B was new at the time she provided care to Mrs A, a template had not been completed for her. CCDHB does not have a supervision of registrars policy.

81. Despite what is set out above, the notes from an SMO meeting prior to the events in question, recorded that Dr B was relatively inexperienced and needed supervision. In particular, the minutes noted that Dr B required direct supervision when performing elective Caesarean sections. Dr C was not at that meeting, but he did receive a copy of the minutes, and CCDHB advised HDC that Dr C was aware that Dr B was "relatively inexperienced and needed supervision". There is no evidence that the decision was ever formally communicated to Dr B, or that Dr B received any instructions from CCDHB about the procedures she was permitted to undertake unsupervised.

82. In response to the provisional opinion, Dr B stated: "Up until this matter I was not aware of CCDHB's policy that consultants were expected to be present during trials

[39] Credentialling is a process to assign specific clinical responsibilities to medical practitioners on the basis of their training qualifications, experience and current practice within an organisational context. CCDHB's Policy QLR-06 states: "[Credentialling] is an employer responsibility with a professional focus that commences on appointment and continues throughout the period of employment."

of instrumental deliveries and that I required supervision for Caesarean sections and instrumental deliveries. Had I known this I would not have proceeded in the absence of the consultant."

Orientation Notes for Registrars

83. CCDHB provided its "Orientation Notes for Registrars — Obstetrics & Gynaecology" to HDC. There is no mention in the notes of registrar credentialling or supervision requirements. However, CCDHB advised HDC that its expectation is that registrars are credentialled prior to undertaking unsupervised operative vaginal deliveries and Caesarean sections.

84. In response to my provisional opinion CCDHB also provided its obstetrics and gynaecology registrars' "Women's Health Service Run Description" to HDC. This "Run Description" was in place in 2012 but again contains no mention of credentialing or supervision requirements for instrumental deliveries (except those for extreme prematurity or placenta praevia[40]). The "Run Description" does outline that SMOs are "available immediately by pager and can at all times attend within 20 minutes".

CCDHB changes

85. In response to my provisional opinion CCDHB advised that "since this event we have set up a process for ACMMs to be informed of RMOs' professional scope of practice".

Responses to provisional opinion

86. Responses to my provisional decision are included in the information gathered section above. In addition to comments above, Dr B stated: "On reflection of this matter I recognise that I did not stand back and comprehend the situation in its entirety, rather I reacted to events as they unfolded. I very much regret not seeking further assistance from [Dr C] … and not recognising that the situation had changed and therefore the management too should have changed as a consequence."

87. CCDHB also provided the following comments.

Communication between Dr C and Dr B

88. In regards to communication between Dr C and Dr B at around midnight, CCDHB "acknowledge problematic communication between the RMO and SMO which impeded a clear path for [Mrs A]". Furthermore, CCDHB:

> "…acknowledge that clearer communication regarding expectations is the key issue involved in precipitating the outcome of this event. [Dr C] had been notified of the decision to supervise [Dr B] during instrument deliveries and therefore [Dr B] would need supervision and support when undertaking instrument deliveries.

[40] An obstetric complication in which the placenta is inserted partially or wholly in the lower uterine segment.

> The Women's Health Service is reviewing the orientation process as part of an ongoing process of improving orientation, including the transition between DHBs, and encourages more in depth orientation to significant parties."

Procedure and policy adherence

89. Regarding whether or not CCDHB staff appropriately follow policies and procedures, CCDHB advised:

> "It is our opinion that this event does not reflect a general breakdown of current and existing practices in our tertiary level maternity care unit, where maternity emergencies are not isolated events."

90. CCDHB additionally advised:

> "The arrival of the on-call SMO [Dr C] within the required timeframe from when first contacted may have averted the two emergencies unfolding simultaneously. As a consequence a timely arrival may have prevented the cascade process being required, or enable clinical reassessments to trigger the cascade."

Quality initiatives

91. CCDHB advised HDC that its maternity service has the following quality processes in place:

> "[A]t SMO meetings and Quality & Safety Forums the SMOs are regularly reminded about their professional responsibility in providing and promoting a safe and evidence-based journey for mother and baby.
>
> The Maternity Quality & Safety forums are well attended by SMOs, RMOs, LMCs and core midwives, who are invited to specially discuss policy updates, case reviews and topics of interest."

Delivery suite stay

92. CCDHB "regrets that [Mrs A] was kept on Delivery suite for the two days after the delivery of [Baby A]. It was done with the intention of keeping her close to the neonatal unit… Our current process is to move woman with babies in NICU to the Antenatal Gynaecology area on the ward, to prevent distress at being surrounded by woman with babies".

Counselling

93. CCDHB advised that "the counselling service … can now utilise a variety of rooms outside the [counselling's] department to ensure consideration of the patient's history when organising the counselling session".

Communication from NICU

94. CCDHB also stated: "NICU is looking at ways it might be able to update families at earlier opportunities in the future … This includes engagement with midwives and the woman's medical team."

Preliminary comment

95. Overall, it is my view that Mrs A was provided with suboptimal care. I accept the advice of my obstetric expert, Dr Jennifer Westgate, that the departures from expected obstetric standards were severe. My specific comments regarding the care provided are set out below.

Opinion: Capital & Coast District Health Board

96. CCDHB was responsible for ensuring that Mrs A was provided with services that complied with the Code. It was required to have in place adequate systems, policies and procedures, and to ensure compliance with those policies and procedures, so that the care delivered to Mrs A was safe, appropriate and timely. In my view, there were a number of failures on the DHB's part to ensure that its staff were sufficiently supported and policies followed, as demonstrated by these events. My specific comments are as follows.

Compliance with policies and procedures — breach

"Obstetrics Surgery/Procedures Triage" policy

97. CCDHB's "Obstetric Surgery/Procedures Triage" policy outlines that prioritisation categories are to be called by the obstetrics registrar and/or specialist obstetrician when there are clinical indications for obstetric surgery. At approximately 12am both Drs B and C agreed that a trial of forceps with a possible Caesarean section was indicated. At that point, according to the "Obstetrics Surgery/Procedures Triage" policy, a prioritisation category should have been called because of the possibility that a Caesarean section would be required. However, a prioritisation category was not called.

98. Furthermore, the CCDHB review team outlined in their report that at 12.17am, Mrs A's CTG results deteriorated and there were clinical indications that a category one delivery (Immediate/"Crash") was required. Again, a prioritisation category was not called.

99. It is clear that neither Dr B nor Dr C were following the "Obstetrics Surgery/Procedures Triage" policy. The policy was in place to ensure that all staff involved in a given situation were aware of the level of urgency and could assist appropriately, guaranteeing that resources and support were available.

Cascade process

100. The CCDHB review team noted in its report that another baby being delivered in the delivery suite at that time had fetal tachycardia with decelerations. The review team concluded that "there was a significant risk of fetal compromise for both deliveries". At that point it would have been appropriate for staff in the delivery suite to initiate the CCHDB's SMO cascade process for more than one consultant to attend. If the

cascade process had been initiated, a separate consultant may have been able to attend for each of the unfolding emergencies.

101. I consider that ACMM RM F, in consultation with Dr C, should have initiated the cascade process when the second emergency arose. This decision should have been made when Dr C was called for a second time at approximately 12.15am. However, neither RM F nor Dr C made the decision to initiate the cascade process.

Summary

102. As this Office has stated previously, failures by multiple staff to adhere to policies and procedures suggest an environment and culture that do not support and assist staff sufficiently to do what is required of them.[41] As this Office has also stated previously, without staff compliance, policies become meaningless.[42]

103. CCDHB staff failed to comply with the "Obstetrics Surgery/Procedures Triage" policy and the SMO cascade process. CCDHB advised that they consider "this event does not reflect a general breakdown of current and existing practices in our tertiary level maternity care unit". However, I remain of the view that the failures by CCDHB staff to follow the relevant policies and procedures in this case affected the care provided to Mrs A, and CCDHB is responsible for this. Accordingly, in these circumstances CCDHB did not provide services to Mrs A with reasonable care and skill and breached Right 4(1) of the Code.

Orientation, induction and supervision of Dr B — breach

104. As this Office has stated previously, DHBs are responsible for providing adequate supervision and support to staff.[43] This includes ensuring that staff are aware of the level of supervision they require, if any, in respect of any given procedure. In my view, for the reasons set out below, CCDHB failed to provide adequate supervision and support to Dr B.

105. At the time of these events, Dr B had been working at CCDHB for two weeks. She was in her third year as a registrar, and was noted by CCDHB to be relatively inexperienced.

106. CCDHB advised HDC that its registrars are credentialled six monthly to determine the level of supervision required, and that the obstetrics and gynaecology department uses a template for each registrar outlining the level of supervision required for each procedure.

107. A supervision of registrars template had not been completed for Dr B, and CCDHB advised HDC that the credentialling process had not been finalised for Dr B at the time of these events. Although it had been identified at an SMO meeting prior to these events that Dr B was relatively inexperienced and needed supervision, including direct supervision when performing elective Caesarean sections, there is no evidence

[41] Opinion 10HDC00308 (29 June 2012).
[42] Opinion 09HDC01974 (21 June 2012).
[43] Opinion 12HDC00932 (20 February 2014).

that the decision was ever formally communicated to Dr B, or that Dr B received any instructions from CCDHB about the procedures she was permitted to undertake unsupervised. Indeed, in response to the provisional opinion, Dr B advised that she was not aware that she required supervision for Caesarean sections and instrumental deliveries. However, Dr C knew of the decision made at the SMO meeting.

108. At the hospital at which Dr B had worked previously, she had been approved to carry out operative vaginal deliveries and Caesarean sections unsupervised. Nothing in Dr B's CCDHB orientation or induction signalled that she would need to be credentialled through CCDHB processes before performing such procedures at CCDHB.

109. Furthermore, during the events in question there was no policy at CCDHB that outlined supervision requirements for registrars or documented the need for registrars to practise in accordance with a personalised template setting out their supervision requirements.

110. I consider that during Dr B's orientation and induction, CCDHB should have ensured that she was made aware of the level of supervision she required. In the absence of this guidance (and as this case demonstrates), Dr B was unclear on the expectations regarding supervision, and relied on her previous experience. The orientation and induction of Dr B as the registrar involved in Mrs A's delivery was inadequate. It was also the responsibility of CCDHB to ensure that Dr B was supervised appropriately in accord with its assessment of her requirement for supervision. Accordingly, I consider that CCDHB did not provide services to Mrs A with reasonable care and skill and breached Right 4(1) of the Code.

Communication from NICU — adverse comment

111. After Baby A was born at 1.02am she was taken to NICU. A paediatrician from NICU did not attend to discuss the seriousness of Baby A's condition with Mr and Mrs A until after 2.00pm that day. This occurred only after the Associate Charge Midwife requested that someone from NICU visit the family. I consider that the time it took for someone from NICU to inform Mr and Mrs A of the seriousness of Baby A's condition was suboptimal, and led to additional stress for the parents.

Delivery suite stay and counselling — adverse comment

Delivery suite stay

112. I consider that following Baby A's delivery, CCDHB should have found an alternative location for Mrs A that would have allowed her access to NICU but removed her from the delivery suite. Keeping Mrs A in the delivery suite for two days was inconsiderate, and caused further distress to Mr and Mrs A.

Counselling

113. Mrs A was offered counselling at a CCDHB Women's Health Service's clinic. As outlined above, this location is also CCDHB's clinic for the termination of pregnancy. Mrs A found the location of the counselling sessions distressing and insensitive to her loss. CCDHB accepted that a different location should have been chosen.

Opinion: Ms D

114. Ms D was Mrs A's LMC. At 2.45pm at 40 weeks plus 8 days' gestation, Ms D met Mr A and Mrs A at the delivery suite at the hospital. The purpose of the appointment was for Ms D to assess Mrs A and to arrange an IOL, as per CCDHB's "Induction of Labour" policy. The IOL was planned in the event Mrs A had not delivered by 40 weeks plus 10 days' gestation. Mrs A's Bishop's score was 4.

115. Following the examination, Ms D booked Mrs A for an IOL for two days' time. At around 4pm, Ms D telephoned the obstetrics and gynaecology consultant rostered on duty on the planned day of induction, Dr E, to discuss Mrs A's planned IOL. Dr E was not able to be reached, so Ms D left a message on his mobile phone with details of the IOL and instructions to call her back if he wished to discuss the IOL. As she did not hear back, she assumed she could proceed. My expert midwifery advisor, Ms Joyce Cowan, advised that Ms D should have followed up the voicemail to ensure that Dr E had received the message.

116. Mrs A was admitted to the antenatal ward for Prostin gel insertion. Ms D was called into the hospital to insert the Prostin gel. Mrs A's baby's head had not descended into the pelvis. In addition, Mrs A had had some spotting that day, and her Bishop's score was 4. Ms D inserted 2mg of Prostin, as she considered that there was no current uterine activity and the Bishop's score was <7. I accept Ms Cowan's advice that Ms D's decision to insert 2mg of Prostin was appropriate.

117. The CCDHB guidelines require that the obstetric team be made aware of women who are admitted for induction. Ms Cowan advised that Ms D should have discussed her plan with a registrar or consultant before proceeding with the induction. Ms Cowan advised that Ms D's lack of consultation would be viewed with mild disapproval by her peers.

118. In my view, Ms D's actions were suboptimal in that she should not have proceeded with the IOL without adequate medical consultation.

Opinion: Dr C

Communication with Dr B — breach

119. Dr B rang Dr C following her 11.55pm assessment of Mrs A. At that time, Dr B recognised that fetal distress was evident and that senior input from Dr C was necessary. I consider it appropriate that Dr B called Dr C at that time.

120. Drs B and C have different recollections of the conversation that occurred at around midnight. Dr B recalls telling Dr C that the baby's head was at station +1, whereas Dr C recalls Dr B telling him that the baby's head was at station +3. Furthermore, at the conclusion of the conversation, Dr B understood that she was to proceed with carrying out a trial of forceps and/or a Caesarean section unsupervised, whereas Dr C recalls

that he instructed Dr B to transfer Mrs A to the operating theatre so that he could undertake the trial of forceps and/or Caesarean section.

121. As the CCDHB adverse event report outlined and Dr C himself identified, Dr C was aware that he was to supervise Dr B for the trial of forceps and/or Caesarean section in theatre.

122. The lack of clarity in regard to the above conversation, and significant differences regarding each party's recollection of what was discussed, demonstrate the importance of medical staff communicating clearly with one another. However, despite the differences set out above, it appears that Dr B communicated the nature of Mrs A's condition sufficiently, as both parties recall that Dr C advised that either a trial of forceps and/or a Caesarean section would be necessary in the circumstances.

123. My expert advisor, Dr Jenny Westgate, advised that Mrs A's presentation was "complicated enough to require senior and experienced obstetric involvement", and that "it was not appropriate for [Dr B] to attempt an unsupervised trial of forceps in [Mrs A's] case".

124. Dr C may not have intended Dr B to proceed to carry out the trial of forceps and/or Caesarean section alone. However, I note that his action in attending the other birth without first obtaining an update on Mrs A's condition suggests that he anticipated that Dr B would take the appropriate action in his absence. In any event, in light of the misunderstanding that occurred, I do not consider Dr C to have been sufficiently clear in his instructions to Dr B.

125. Dr C did not clarify with Dr B that he would be present for these procedures once he arrived at the hospital. He gave no instructions about what to do should Mrs A's condition or that of her baby deteriorate in the meantime, and did not instigate the cascade procedure. In addition, I note that Dr C's retrospective note of the conversation (made the following morning) is similarly ambiguous regarding whether he intended Dr B to proceed with the trial of forceps and/or Caesarean section unsupervised.

126. I consider that during the telephone conversation with Dr B at around midnight, Dr C should have called a category as per CCDHB's "Obstetrics Surgery/Procedures Triage" policy. Calling a category would have alerted Dr B, and the wider obstetrics team, of the urgency of the situation.

127. Once Dr C arrived at the hospital at approximately 12.40am, he was diverted to another emergency delivery. Dr C advised HDC:

> "During the process of delivering [Ms X], I was informed by the ACMM that [Dr B] had already attempted a trial of forceps on [Mrs A] at 0040 according to the time written on the CTG. This was probably just before I arrived in delivery suite. Following the failure to deliver the baby with the forceps, the midwife informed me that the registrar was proceeding to a Caesarean section. This discussion occurred while I was delivering [Ms X]. I agreed that that was appropriate (ie to

proceed to a Caesarean section) and assumed that [Dr B] would prepare [Mrs A] for a Caesarean section on my arrival at the operating theatre. I did not anticipate that [Dr B] would commence the Caesarean section alone."

128. Again, I note Dr C's troubling ambiguity in regard to his instructions to Dr B. At that time, Dr C was aware that Dr B had proceeded to a trial of forceps unsupervised, and if, as he asserts, he had instructed Dr B not to proceed unsupervised, then he would have been aware that his instructions were not being complied with. At this point I consider that Dr C should have issued clear instructions to Dr B as to whether or not she was to proceed with the Caesarean section unsupervised given the clinical context.

129. As this Office has stated previously, "[c]onsultant oversight and input provides an important safety net".[44] As the senior clinician supervising Dr B, Dr C had a responsibility to ensure that his instructions were communicated clearly, and understood, particularly given Dr B's relative inexperience. By not supervising Dr B appropriately, I consider that Dr C did not provide services to Mrs A with reasonable care and skill, and breached Right 4(1) of the Code.

Decisions between 12.00am and 12.45am — adverse comment

130. Dr B called Dr C at approximately 12am, and Dr C arrived at the hospital at approximately 12.40am. CCDHB advised HDC that it has a requirement that an obstetric consultant is able to attend the hospital within 20 minutes of being called. Although Dr C advised that he was not aware of such a policy at the time, I am concerned about the time it took for him to travel the 1.3km from his home to the hospital that evening and that, as the on-call consultant, he was not more immediately available, particularly when he was expecting to perform a trial of forceps delivery.

131. After Dr C's conversation with Dr B he received an additional call from RM F about a second woman in labour with fetal distress. Although the CCDHB cascade policy identifies that the ACMM is to initiate the cascade process in discussion with the on-call consultant, I consider that Dr C should have signalled at this time that it was appropriate to initiate the cascade process. Instead, there is no record that the cascade process was discussed.

132. After arriving at the hospital, Dr C attended an obstetrics emergency in the delivery suite. Dr C did not assess the situation with Mrs A before attending the second woman. While I understand that Dr C's involvement in the second emergency was critical, I consider that he should have received an update on Mrs A before attending the second woman. By 12.40am the information Dr C had received about Mrs A was at least 30 minutes old. Without such an update, he was not in a position to prioritise the two obstetric emergencies.

[44] Opinion 12HDC00932 (20 February 2014).

Opinion: Dr B

Uterine hyperstimulation — adverse comment

133. During Dr B's initial assessment of Mrs A at 11.55pm, the CTG showed indications of uterine hyperstimulation. However, the clinical notes give no indication that uterine hyperstimulation was considered. If uterine hyperstimulation had been considered, stopping contractions may have been an alternative to proceeding directly to delivery.

134. Dr B advised HDC:

> "Whilst it was obvious that the labour had progressed rapidly, I did not conclude that this was a hyperstimulated labour at the time. Also as [Mrs A] was fully dilated, pushing and had such a rapid labour, I was hopeful that she would be able to spontaneously deliver her baby vaginally."

135. Dr Westgate observed that stopping contractions may have been of significant benefit, as Mrs A did not deliver for over an hour following the 11.55pm observation. I agree with Dr Westgate that it would have been appropriate for Dr B to consider stopping Mrs A's contractions.

Delivery — adverse comment

Introduction

136. At around midnight Dr B rang Dr C because, following her 11.55pm assessment of Mrs A, Dr B had recognised that fetal distress was evident and senior input from Dr C was necessary. I consider it to have been appropriate for Dr B to call Dr C at that time.

137. Drs B and C have different recollections of the conversation. Dr B recalls telling Dr C that the baby's head was at station +1, whereas Dr C recalls Dr B telling him that the baby's head was at station +3. Furthermore, at the conclusion of the conversation, Dr B understood that she was to proceed with a trial of forceps and/or a Caesarean section unsupervised, whereas Dr C recalls that he instructed Dr B to transfer Mrs A to the operating theatre so that he could undertake the trial of forceps and/or Caesarean section.

138. The lack of clarity in regard to the above conversation, and significant differences regarding each party's recollections of what was discussed, demonstrate the importance of medical staff communicating clearly with one another.

139. Despite the differences set out above, it appears that Dr B communicated the nature of Mrs A's condition sufficiently, as both parties recollect Dr C advising that either a trial of forceps and/or a Caesarean section would be necessary in the circumstances. On that basis, and accepting that (a) Dr B believed that she was to undertake the trial of forceps and/or Caesarean section unsupervised, and, (b) Dr C did not arrive for 30 to 40 minutes following the telephone call, my comments on the subsequent care provided by Dr B are as follows.

Proceeding with delivery unsupervised

140. Dr B recalls that when she spoke to Dr C at around midnight, Dr C told her that the baby was too high to deliver vaginally, and that he advised her to move Mrs A to the operating theatre and reassess her. Dr B recalls that Dr C recommended that she try a forceps delivery if the baby's head had come down. Dr B reassessed Mrs A in the operating theatre and ascertained that the baby was at station +2, in a deflexed direct OP position. In addition, the CTG indicated fetal distress. Dr B proceeded to attempt to deliver Mrs A's baby unsupervised.

141. My expert obstetric advisor, Dr Jenny Westgate, advised me that Dr B should not have proceeded with the delivery of Mrs A's baby without supervision. Dr Westgate stated that this case "was complicated enough to require senior and experienced obstetric involvement". Dr Westgate further noted that Dr B did not advise Dr C of the deterioration in the fetal heart rate pattern following her call with him at midnight. Dr Westgate stated: "It seems to me that [Dr B] did not appreciate the importance of the further deterioration in the fetal heart rate pattern and the need to escalate the scenario to a category one delivery and to reconsider the mode of delivery."

142. I accept Dr Westgate's advice that Dr B should not have proceeded with the delivery of Mrs A's baby unsupervised. Dr B was out of her depth, and I consider that she should have recognised that. As this Office has stated previously, "[j]unior doctors … must recognise and work within their limitations and level of experience".[45]

143. However, I am mindful that Dr B had been employed by CCDHB and working at the hospital for only two weeks before she attended Mrs A. At the hospital where Dr B had worked previously, she had been permitted to carry out unsupervised operative vaginal deliveries, as well as Caesarean sections. Dr B had not been informed of CCDHB's expectation that registrars are credentialled to undertake unsupervised operative vaginal deliveries or Caesarean sections, nor had she received instructions from CCDHB about the procedures she was permitted to undertake unsupervised. Furthermore, Dr B believed that Dr C had advised her to proceed with a trial of forceps if the baby's head had descended, and/or a Caesarean section unsupervised. In addition, the fetal presentation was worsening and no senior consultant was available immediately.

144. While I consider that Dr B should not have proceeded with the delivery unsupervised, I accept that there were mitigating circumstances in this case, as set out above. Accordingly, I do not find her in breach of the Code.

Trial of forceps

145. Mrs A arrived in the operating theatre at 12.26am. At that time the FHR was 130–140bpm with deep decelerations to 60bpm, recovering to the baseline after 60–90 seconds. On examination, the fetal head had descended to station +2. Following her assessment of Mrs A, Dr B felt that the fetal head had descended appropriately, and the decision was made to proceed with a trial of forceps.

[45] See Opinion 10HDC00855.

146. Dr Westgate advised me that the assessment of head station and identification of the most suitable mode of delivery is one of the most difficult aspects of intrapartum[46] obstetrics. Dr Westgate advised that Dr B should not have proceeded with the trial of forceps in light of Mrs A's clinical presentation at the time the trial of forceps was commenced. Dr Westgate advised that "potentially difficult instrumental deliveries are not recommended in cases with severe FHR abnormalities". Furthermore, "applying unsuccessful traction on the baby's head during a vaginal delivery attempt will often result in the baby's head descending further into the pelvis making it harder to deliver abdominally". Dr Westgate considers that Mrs A's baby could have been delivered earlier had a Caesarean section been performed rather than a trial of forceps.

147. I agree with Dr Westgate and consider that irrespective of Dr C's earlier instruction, in the circumstances of Mrs A's presentation at the time, Dr B should have recognised that an unsupervised trial of forceps was not appropriate. After reassessing Mrs A, Dr B should have identified the further deterioration in Mrs A's baby's condition and, in respect of the FHR, recognised that the baby was compromised. At that point, Dr B should have concluded that her earlier instructions from Dr C no longer applied and sought further assistance from Dr C. Instead, Dr B proceeded to the trial of forceps.

148. Dr B's clinical judgement failed when she decided to proceed with an unsupervised trial of forceps, rather than an immediate Caesarean section. However, as Dr Westgate advised, this was a difficult clinical call for Dr B to make. Dr B was presented with a baby in significant distress, and was acting on her understanding of her consultant's instructions. As such, while I do not condone Dr B's actions, I do not find her in breach of the Code.

Recommendations

149. I recommend that CCDHB:

a) Provide a written apology to Mr and Mrs A for its breaches of the Code. That apology should be sent to HDC, for forwarding to Mr and Mrs A, within **three weeks** of the date of the report.

b) Liaise with Mr and Mrs A to ascertain whether they would like to meet with the staff involved in Mrs A and Baby A's care (whether they are currently employed by CCDHB or not) and representatives from CCDHB, in order to address the content of this report, within **three weeks** of the date of the report.

c) If Mr and Mrs A do wish to meet with CCDHB and its staff, arrange for that meeting to occur, and report to HDC on the outcome of the meeting, including the minutes of the meeting, within **two months** of the date of the report.

d) Review and update its policies to ensure that consultant attending times are outlined clearly and staff are advised of these requirements. Evidence that this has

[46] The period of labour and birth.

occurred should be provided to HDC within **three months** of the date of the final report.

e) Provide an education seminar on calling categories, as per its "Obstetrics Surgery/Procedures Triage" policy, including examples of when it is to be used, to all obstetric consultants and registrars. Evidence that this has occurred should be provided to HDC within **three months** of the date of the report.

f) Provide an education seminar on the cascade process, including examples of when it is to be used, to all obstetric consultants and associate charge midwives. Evidence that this has occurred should be provided to HDC within **three months** of the date of the report.

g) Develop a supervision of obstetric and gynaecology registrars policy, similar to the DHB's "Credentialing of Senior Medical Officers" (QLR-06). Evidence that this has occurred should be provided to the HDC within **three months** of the date of the report.

150. I recommend that Ms D provide a written apology to Mr and Mrs A for her failings identified in this opinion. The apology should be sent to HDC, for forwarding to Mr and Mrs A, within **three weeks** of the date of the report.

151. I recommend that Dr C provide a written apology to Mr and Mrs A for his breach of the Code. The apology should be sent to HDC, for forwarding to Mr and Mrs A, within **three weeks** of the date of the report.

Provisional opinion recommendation and response

152. In my provisional opinion I recommend that Dr B provide a written apology to Mr and Mrs A for her failings identified in this opinion. Dr B has completed this recommendation and apologised to Mr and Mrs A.

Follow-up actions

153.
- A copy of this report with details identifying the parties removed, except CCDHB and the experts who advised on this case, will be sent to the Medical Council of New Zealand and the Royal Australian and New Zealand College of Obstetricians and Gynaecologists, who will be advised of Dr B's and Dr C's names.

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

Appendix A — Independent expert advice from Dr Jennifer Westgate

The following expert advice was received from specialist obstetrician and gynaecologist Dr Jennifer Westgate on 30 May 2013, with additions on 4 October 2013 shown in italics.

"Thank you for asking me to provide an opinion on this case. I have read the complaint by [Mrs A] detailed in various letters, the hospital notes, the Hospital Review of the events, the notes made from meetings between [Mrs A], [Mr A] and CCDHB representatives and the midwifery notes. I will not summarise the clinical events as this has been done repeatedly and the events are not in question.

I will first outline four areas in which I have concerns about the management of [Mrs A's] case. All of these areas have been identified in the Review performed by the Hospital.

1. Induction of labour process.

1.1 Consultation. The current CCDHB guidelines require a discussion between the LMC and the on call Obstetrician. In this case that discussion did not occur because the consultant was in theatre when telephoned and has no recollection of being contacted about [Mrs A].

This policy of arranging non urgent inductions has two potential problems which concern me. The first is that if the on call consultant is busy with acute workload they will be either unable to take the call, as occurred here, or they will be distracted from the acute workload to give an opinion over the phone about a non urgent matter.

The second concern I have is that there is no requirement for the woman who is to be induced to be formally reviewed by a member of the medical staff. Indeed this may be impossible if the on call staff are busy. Induction is a medical intervention which carries risk, as is well illustrated in this case. In complicated situations, a telephone consultation does not allow as robust assessment of a woman and her problems as an actual clinical assessment. Combine that with the distraction of being on call and the possibility of miscommunication is increased further.

It is my view that women who require non urgent induction are preferably dealt with through the Antenatal Clinic or similar with dedicated staff who are not also on call.

1.2 Management of post dates pregnancies. Women are offered induction after 41 weeks because the perinatal mortality rate increases with increasing gestation thereafter. The usual management of post dates pregnancies involves a clinical review and assessment of the woman at around 41 weeks and fetal assessment with CTG and an ultrasound to assess liquor volume. Some hospitals also request a full growth scan to identify cases of poor fetal growth. I reference [a DHB's] Postdates Guidelines as an example. In [Mrs A's] case, to my knowledge, there

was no ultrasound assessment of liquor volume at 41 weeks and this concerns me. The ultrasound provides the opportunity to identify pregnancies with low liquor who are significantly at increased risk of intrapartum hypoxia and therefore need very close monitoring and assessment. Although it does not seem that this factor played a role in this case, the potential remains for other cases.

1. Induction of labour process.
The DHB have already instituted a number of changes in practice relating to induction of labour, namely priming occurs on the Delivery Suite, all women being induced have to have a medical review before the induction is commenced and prostaglandins must be charted by a doctor prior to being given. They are also reviewing their processes for induction of labour including their protocol for postdates induction with respect to the need for assessment of liquor volume assessment at 41 weeks. I believe that this action should address the issues raised by [Mrs A's] experiences.

Overall, my opinion that the management of [Mrs A's] induction process was a severe departure from an accepted level of practice is unchanged. Primarily this was due to actions of the midwife who did not follow existing protocols. However, the DHB has recognised that aspects of their policies and practices allowed the midwife to proceed with the induction without medical staff knowledge or involvement. They have now taken steps to minimise the likelihood of that occurring.

1.3 Consultation with on call obstetric team on the day of induction. The CCDHB Guidelines seem to me to suggest quite rightly that the on call obstetric team be made aware of women who are admitted for induction. I cannot see any evidence that this occurred in [Mrs A's] case. Furthermore, [Baby A's] head had not yet descended into the pelvis. In my view this was not a straightforward induction and a medical assessment was required.

1.4 Administration of Prostin. The CTGs performed [at 40 weeks 8 days' gestation] (1445 onwards) and [at 40 weeks 9 days' gestation] (1745 onwards) clearly show regular uterine activity. In addition the LMC notes [at 40 weeks 8 days' gestation] stated '[Mrs A] is experiencing regular, not painful strong Braxton Hicks already.' On vaginal examination the LMC could not reach the cervix adequately to assess it completely as it was very high and posterior but in one place she described the cervix as being short and thick and in another it was soft and it admitted a finger. The CCDHB guidelines do not specify a dose of Prostin to be administered when the Bishop's score is less than 7 but uterine activity is present but they do suggest consulting with medical staff. It is my view that a 2 mg dose was contraindicated both due to the presence of uterine regular activity and the fact that the LMC could not thoroughly assess the cervix. I believe the administration of 2 mg of Prostin to [Mrs A] and the resulting hyperstimulation was the initiating factor in the sad loss of [Baby A].

1.5 Fetal monitoring once regular contractions occur. [Mrs A's] description of the painful uterine contractions she experienced at 2200 and the midwifery entry in the notes are clearly discordant. Sometimes it can be difficult to ascertain when labour becomes established during an induction. There are many factors which may have contributed to this discordance, for example workload in the unit and staffing levels. I do not have any information to comment on these factors but I hope they have been considered by CCDHB. The CCDHB Review Report considered 'that CTG monitoring and or a VE at this time may have possibly resulted in an earlier transfer to DS [delivery suite].' I agree that this is very likely to have been the case. However the report writers do not believe that this would have altered the outcome. I am not so sure. A longer period of CTG recording may have led to an earlier medical staff review and more time for considered management. An epidural may have been inserted which would have facilitated operative delivery and avoided a delay due to the establishment of anaesthesia when the situation became urgent. I agree that this is speculation but the events I outlined as possible occurrences are well within the bounds of Delivery Suite practice.

2. Recognition of abnormal CTG

2.1 Fetal heart rate abnormalities and their progression. Although fetal heart rate decelerations were clearly occurring, a good quality CTG recording of the fetal heart rate (FHR) was not achieved until 0005 due to, firstly the unavailability of the registrar to attend when called at about 2330 and secondly the inability of midwifery staff to apply a fetal scalp electrode (FSE). The registrar arrived at 2355, examined [Mrs A] and then applied an FSE. The first good recording of the FHR that I have access to starts at around 0005. The appearance is of a severely abnormal FHR pattern with decelerations lasting 60 to 90 seconds, reduced heart rate variability and instability of the FHR in between large decelerations. But it may well be that the registrar had left the room by this stage to call the consultant and was not aware of the severity of the FHR appearance and therefore did not introduce this into the discussion so it did not factor in the decision making process.

2.2 Hyperstimulation of the uterus. The CCDHB Review Report notes that the hyperstimulation of the uterus was not obviously recognised and therefore not treated. They believe that as [Mrs A] was fully dilated to proceed to delivery was an acceptable alternative. Unfortunately, delivery did not occur for over one hour and in retrospect, tocolysis (stopping contractions) may have been of significant benefit.

3. Communication between registrar and consultant regarding mode of delivery.

This is an area of great concern for there are significant discrepancies between what the Obstetric consultant believes he was told and the information recorded by the registrar in the notes. The CCDHB Report claimed that these inconsistencies would not have altered the course of events but I beg to differ. The assessment of station of the head and suitability of mode of delivery is, in my

view, the most difficult aspect of intrapartum obstetrics. The vaginal delivery of a term baby in the direct OP position from station +1 in a primigravid woman may well be achievable but will usually require two to four contractions and significant traction to overcome soft tissue resistance. This is not the type of delivery a compromised baby requires and not the type of delivery to advise an unsupervised third year registrar to perform. I believe that such advice would be an unacceptable standard of practice. But this is not what the consultant recalls being told. In the alternate scenario he recalls, the baby being OP at station +3, failure to achieve vaginal delivery could be expected to be followed by a very difficult CS as the head of the baby would be very low in the pelvis. Again not a delivery for a third year registrar to attempt alone. The consultant states that he made his way into the hospital after that call. The CCDHB Review considered that he arrived about the time the forceps were removed from the unsuccessful forceps delivery attempt, say 0042. I do not know the exact time the consultant was advised of [Mrs A's] case but it seems likely to me to have been about 0005 and 0010. He was telephoned about another woman in DS at 0017 and was then already on his way in. This suggests that the consultant took about 30 minutes to arrive at the hospital. This seems to me to be a long time given that by that stage the consultant knew his third year registrar was doing a potentially difficult trial of forceps and there was another woman in labour who required immediate assistance. The DHB I work at requires on call consultants to be able to attend an emergency within 20 minutes. Travel time at night is frequently quicker than during the day. Does CCDHB have an expectation of consultant response time for obstetric emergencies?

4. Consultant support for registrars.

The CCDHB Review noted that the Registrar had commenced work at the DHB two weeks prior and had not yet completed a credentialing process. It is my understanding that the Registrar was in her third year of training having completed two and one half years of obstetrics. I understand that she had not worked at registrar level prior to commencing the training program. I do not know if the consultant on call had worked with the registrar prior to that day and whether he was aware of her level of training or had observed her work to assess for himself her level of competence. The DS seems to have been busy when [Mrs A] arrived and continued to be so. The CCDHB Review agrees that consultant supervision should have been available for [Mrs A's] delivery and would have been but for a concurrent emergency. I note that given his estimated time of arrival, the consultant would have been present for the CS but not for the attempted forceps delivery, which is a significant and important point. They note that in retrospect the Cascade process to call in another obstetric consultant should have been activated so the registrar could have had the appropriate level of supervision. Some key questions remained unaddressed — when was the consultant last present on the Delivery Suite, was he aware of what was going on and, given the workload and the fact that he had a new-to-the-hospital relatively junior registrar, should he have been on site a couple of hours earlier to help sort things out and provide more support to the Registrar? I do not have the information to be able to address these questions but the local RANZCOG Training Supervisors and

RANZCOG NZ Training Committee should know whether the appropriate level of support is being offered to registrars at CCDHB.

2. Supervision of and communication with registrars in training.

The difference in accounts of the telephone conversation between [Dr B], the registrar and [Dr C], the consultant on call persist. [Dr C] has suggested that [Dr B's] documentation of the station of the fetal head was made retrospectively (page 5, line 4 of his letter to the HDC). I have checked the notes and it appears to me that [Dr B] recorded this prospectively in her entry into the notes was dated [40 weeks 9 days' gestation], timed at 2355. There is no indication in any part of that entry that she has made it retrospectively, although I do note that she has not commented on the appearance of the CTG. [Dr B] made another entry in the notes timed at 0139 or 0159 (the photocopy is not clear) in which she reviewed the events in more detail.

For what ever reason, [Dr C] clearly did not appreciate or was not made aware of the severity of the situation for [Mrs A] and her baby during his telephone call with [Dr B]. I am unsure why or how this occurred. I acknowledge that subsequently he was not advised of the deterioration in [Baby A's] fetal heart rate pattern. However, I remain unsure why [Dr C] took 30 to 35 minutes to arrive in the hospital if he was expecting to perform the trial of forceps and also knew that another woman required an urgent delivery. I acknowledge that the need for this woman to be delivered distracted him from attending theatre and that by that stage his presence may have only resulted in a 10 to 12 minute earlier delivery.

It seems to me that [Dr B] did not appreciate the importance of the further deterioration in the fetal heart rate pattern and the need to escalate the scenario to a category one delivery and to reconsider the mode of delivery. Given her level of training, this may reflect her experience to that time, the hour of the day and her unfamiliarity with the hospital, she may have been distracted by having to attend the other woman who required delivery in the second stage, and, in her own words, she did not really appreciate 'that the primiparous woman with a malposition is not straightforward and likely to be a difficult assisted delivery'. (Letter to HDC, page 3, second to last paragraph). This confirms to me that [Dr B] did in fact require direct supervision to assist with management of a case such as this.

The DHB have documented their process around credentialing of registrars and have reinforced the importance of 'a higher level of supervision, until their clinical practice is observed and credentialing is complete'. (Point 4, 3, page 5 letter to HDC). It would seem to me from their comments that they did have the appropriate framework in place prior to this case. However, they have also subsequently engaged a CCDHB psychologist to explore team relationships and optimise communication (4th paragraph, page 4, letter to HDC).

Having considered the responses from the DHB, [Dr B] and [Dr C], my opinion remains that the management of [Mrs A's] delivery fell below an acceptable standard and the departure was severe.

Response to specific questions.

1. Could the baby have been delivered earlier?
The answer is definitely yes, if a CS had been performed rather than a trial of forceps. Applying unsuccessful traction on the baby's head during a vaginal delivery attempt will often result in the baby's head descending further into the pelvis making it harder to deliver abdominally. Furthermore, a close examination of the CTG showed a nearly 3 minute period of bradycardia with application of the forceps. The CTG record was then discontinued and the fetal heart rate was unable to be auscultated with the sonicaid while [Mrs A] was being repositioned for the CS. The application of forceps and traction on the fetal head can result in stimulation of central chemoreceptors (or by traction on a short cord) causing prolonged bradycardia. This would add further to the hypoxia already due to the hyperstimulation and may well have been the terminal event in this case. This is why potentially difficult instrumental deliveries are not recommended in cases with severe FHR abnormalities.

2. Was it appropriate to attempt a trial of forceps first, rather than proceeding directly to emergency CS?
No, it was not appropriate for the Registrar to attempt an unsupervised trial of forceps in [Mrs A's] case for the reasons given above. Had the consultant been present it would have been very reasonable for him to quickly re-examine [Mrs A] in theatre after the epidural spinal had been inserted. If there had been significant descent and rotation of the head such that an easy outlet delivery could be achieved, then this could be undertaken quickly and safely. Had the findings been otherwise I believe that most consultants would have proceeded directly to CS. Management of this case is amongst the most difficult in intrapartum obstetrics and requires the presence of senior and experienced staff.

Finally, I believe the key issues where management of [Mrs A's] case did not meet an acceptable standard are:

1. Management of the induction process from booking the induction to administration of Prostin. Hyperstimulation of the uterus secondary to Prostin was the initiating event in this sad outcome. I view the departures from an acceptable standard of practice as severe.

2. Supervision of and communication with Registrars in training. Two key aspects of the events which occurred in [Mrs A's] delivery are firstly that a registrar performed an unsupervised trial of forceps in a case which was complicated enough to require senior and experienced obstetric involvement and secondly, no consultant assistance was available for the subsequent very difficult delivery of the baby at caesarean section. Whatever the reasons that this happened, the

consequences of the absence of consultant expertise have been disastrous for [Baby A] and her parents. The departure from an acceptable standard of care is severe."

Appendix B — Independent expert advice from Ms Joyce Cowan

The following expert advice was received from midwife Ms Joyce Cowan on 3 September 2013, with additions on 23 December 2013 shown in italics:

"My name is Joyce Cowan. I am a registered midwife and my New Zealand Midwifery Council Number is [x]. I registered as a midwife in 1972 and have worked in various settings including Lead Maternity Care (LMC) practice for 22 years. I am currently employed as a senior lecturer in undergraduate and postgraduate midwifery studies at Auckland University of Technology. I am a competence assessor for the Midwifery Council and have been an advisor for the Health and Disability Commissioner (HDC) for approximately 10 years.

I have read the Health and Disability Commissioner's Guidelines for Independent Advisors and the following documentation concerning the care provided to [Mrs A]: —

- Clinical notes
- Capital and Coast District Health Board (C&C DHB) Guideline for induction of labour for nulliparous women
- Midwife [Ms D's] account of her midwifery care for [Mrs A]
- Record of the Nationwide Health and Disability Advocacy Service meetings and correspondence
- SAC2 Adverse event report
- Correspondence from [Mrs A] to [the] Consumer Experience Facilitator, C&C DHB
- Record of meeting requested by C&C DHB with [the] family

I have been asked to comment on the following two questions after reading the additional documents provided as follows: —

- *Capital and Coast District Health Board's (the DHB's) response to the Commissioner's notification of investigation dated 9th August 2013 (including all enclosures)*
- *The preliminary expert obstetrics advice referred to in the DHB's response to the notification of investigation, insofar as it relates to the DHB's comments on the midwifery care provided, dated 30th May 2013*
- *HDC's Guidelines for Independent Advisors*

In considering the extra information I have focussed on how this might affect my advice on the issues addressed in my original report. I have not included the summary of background to the complaint in this document as I assume it will be accessible to the reader in my original report, which is attached.

I have been asked to address the following two questions specifically: —

1. *Whether the information enclosed with this letter causes me to confirm, change, amend, add to, qualify or depart from my preliminary advice regarding the care provided by LMC [Ms D] in any way.*
2. *Advise on the standard of care provided by the hospital midwives involved in [Mrs A's] labour/delivery and whether it was reasonable in the circumstances.*

I will address these questions separately under the following headings:—

1. Antenatal Care
2. Induction of labour process
3. Communication with on call obstetric team regarding the induction

1. Further consideration of preliminary advice

I will address the 3 issues which I considered in my original report, as well as the matter of uterine contractions (point d. below) raised by Dr Westgate, and addressed by the DHB in their response to her letter: —

a. Antenatal Care
b. Induction of Labour process
c. Communication with obstetric team regarding the induction
d. Uterine activity

1. Antenatal care
[Ms D] provided comprehensive antenatal care and documented this in detail. There were no concerns antenatally apart from the high fetal head at term, which is common when the fetal head is occipto-posterior. [Ms D] encouraged optimal fetal positioning through instructing [Mrs A] in postural techniques to facilitate the correction of fetal position to a normal occipito-anterior position. This means that the baby fits into and through the pelvis more easily with smaller diameters presenting.

If the fetus is in a well-flexed position with the occiput positioned anteriorly in the pelvis, descent into the pelvis is more likely as is timely onset of labour. Cervical stretch and sweeping of the membranes is often used to encourage onset of labour at term and this was attempted with [Mrs A's] permission on two occasions past the due date.

When labour had not commenced spontaneously by 40 weeks and 8 days, an induction was planned for 40 weeks and 10 days. This is the suggested induction gestation in most hospitals in New Zealand.

The antenatal care provided by [Ms D] was of a good standard and well documented.

a. My opinion about the antenatal care provided to [Mrs A] is unchanged.

When [Mrs A] was just past her due date, a cervical stretch and sweep of the membranes was attempted with consent. [Ms D] then offered [Mrs A] an induction of labour when she was between 41 and 42 weeks. The DHB induction of labour policy, OB IP-09, under 'Pre-induction assessment', page 3, supports this practice.

I consider that the antenatal care, including the plan made for induction of labour following two unsuccessful attempts at membrane sweep, was appropriate.

2. Induction of labour process

[Mrs A] and her husband were informed about the process and had agreed to induction. [Ms D] followed the C&CDHB protocol for induction of labour (appendix 4 in notes from HDC). The first action in the protocol is 'Decision to induce. Referral/Consultation'. I will comment on this in point 3 below.

[The day before] the start of the planned induction, [Mrs A] was seen by [Ms D] in hospital for assessment prior to induction. At this time the required documentation was filled out and the induction was booked with the delivery suite Acting Charge Midwife. A phone call was made to the consultant obstetrician Dr E — see point 3 below.

[Ms D's] assessment of [Mrs A] included taking temperature, blood pressure and pulse, urinalysis, performing a CTG to monitor the fetal heart and a vaginal examination to assess the Bishop's score. Assessing the Bishop's score is a method of ascertaining the probability of successful induction based on the state of the cervix and the lie, presentation, position and descent of the fetus as below.

BISHOP SCORE htt://Medchrome.com Online Medical Magazine

BISHOP SCORE =…….. (total)			Date of Bishop Score: ……/…../…..	
Score	0	1	2	3
Dilation	Closed	1 - 2	3 - 4	5
Length	> 4	3 - 4	1 – 2	0
Consistency	Firm	Medium	Soft	—
Position	Posterior	Midline	Anterior	—
Head: station	-3	-2	-1, 0	+1,+2

On this occasion [Ms D] found that [Mrs A] had a posterior thick cervix, intact membranes, and the baby was in a vertex (head) presentation still high at station minus three, which is unengaged. The baby's head was reported as being ballotable above the pelvic brim. The Bishop's score was assessed at dilatation 1, length 2, consistency 1, position 0 and station 0, total 4. A Bishops score of 4 is

low, with higher numbers predictive of a straightforward labour. The drug Prostin, a synthetic prostaglandin is used to prepare the cervix for labour.

The CTG was reported as normal, and a record of the phone call to the consultant [Dr E] is in the clinical notes in the form of an ISBAR communication tool. This covers **I**dentification of the person making the call, **S**ituation regarding reason for the call, **B**ackground to the reason, **A**ssessments, which have been carried out, and **R**equest. In this case the situation was a consultation regarding the planned induction of labour [at 40 weeks 10 days' gestation]. The background was a normal pregnancy, 34 yr old; G1P0 (first pregnancy), GBS (Group B Strep) negative and Bishops score of 4/16. The ISBAR sticker in the notes is signed at 1615hrs [at 40 weeks 8 days' gestation].

Once the assessments were concluded and the booking arrangements completed, [Mrs A] went home until she was re-admitted the following evening. Before she left, [Ms D] organised for the core midwife to administer the Prostin the following day, if available.

[The following day], [Mrs A] came back to the hospital antenatal ward. [Ms D] came to start the induction as she had been called in when there was no core midwife available to administer the Prostin. [Mrs A] had been experiencing some period like pains overnight, had some loose bowel motions and had possibly had a show. She was reported to be having the 'odd isolated non painful tightening'. A CTG was commenced and continued for 30 minutes to assess fetal well being. A palpation was carried out to ascertain position and descent of the fetal head and a vaginal examination confirmed that there was no change in the Bishop's score from the previous day.

[Ms D] proceeded to administer 2mg Prostin vaginal gel to [Mrs A] and monitored her for a further 45 minutes. The CTG was reassuring following the Prostin insertion and [Ms D] arranged for the core midwife to continue care until labour was established when she would come back to provide intrapartum midwifery care.

The care provided by [Ms D] was reasonable in the circumstances as she correctly monitored her client before and after the administration of Prostin gel. She explained the procedure and possible side effects of the drug, and she administered the appropriate dose according to the protocol for nulliparous women (women who have never given birth). For nulliparous women the protocol states that 2mg Prostin is to be given if the Bishop's score is less than 7, and there is no uterine activity. There was no significant regular uterine activity recorded on the CTG at the time of the Prostin administration.

In summary, the clinical care provided during the induction process was appropriate for the circumstances.

b. [Ms D] carried out each step of the Induction of Labour process according to policy OB IP-09 with the exception of an agreement with a consultant at the time of booking. My opinion that the induction process was appropriate, with the exception of the communication issue, remains unchanged.

3. Communication with on call obstetric team regarding the induction
According to the SAC2 Adverse Event Review Report, the obstetrician ([Dr E]) was in theatre when [Ms D] called him to discuss the planned induction. He requested that she call him back but when she did this he was still in theatre so she left a detailed message on his voice mail outlining the woman's details and the plan for induction. She left her contact number for him to call her if he wanted any further information and when she did not receive a call she assumed there was no problem and continued with booking and commencing the induction. Dr E does not recall this message.

[In some DHBs] there is **no requirement for the midwife to involve a consultant or any member of the medical staff for an induction when the only indication is post-dates**. This is usually at 40 weeks and 10 days to 42 weeks. However, as the protocol at C&CDHB does state that a referral or consultation is made at the time of decision to induce, [Ms D] should have followed up the voice mail to ensure [Dr E] had received the message.

At the next point of assessment and planning [which happened prior] to Prostin administration a consultation with the obstetric team was warranted according to the protocol. I do not know how strictly this is adhered to in C&CDHB but according to the protocol, [Ms D] should have discussed her plan with a registrar or consultant. Having said this, I do not consider that the plan would have differed had she consulted.

In summary, I consider that the care provided during the planning and commencement of the induction process was reasonable and all clinical care was carried out according to the C&CDHB protocol. It would have been better had [Ms D] checked that [Dr E] [received her message] and that she had followed protocol by consulting with the team of the day before proceeding with the induction.

However, because protocols for midwifery management of induction vary between DHBs, and in the first instance [Ms D] attempted to contact the obstetrician twice, leaving a detailed message and asking for a call back if there was any need to discuss further, I consider that her lack of consultation would be viewed with only mild disapproval by peers.

Additional expert advice provided by Ms Cowen on 23 December 2013

I consider that while [Ms D] assumed that consultant [Dr E] had received her phone message with information about the planned induction, and had concluded that lack of response signified agreement, she should have endeavoured to contact him again or speak to the on duty obstetrician to discuss the plan, according to policy OB IP-09. As [Ms D] assessed and monitored [Mrs A] according to recommended protocol and followed the procedure in the flow chart that applies to nulliparous women, it is likely that had she discussed her plan with a registrar or consultant they would have agreed with her management.

Therefore, as [Mrs A] met the criteria for induction of labour and had no complications during her pregnancy, my opinion that this departure from the expected standard would meet with mild disapproval from peers remains unchanged. As I mentioned in my original report, in some DHBs…it is not mandatory for an LMC to discuss induction with a consultant providing the required process is followed, and the woman is booked for an induction at an appropriate time, usually through a clinical charge midwife.

d. Uterine activity and dose of Prostaglandin

There has been discussion, both by Dr Westgate in her letter to [the HDC complaints assessor], dated 30th May 2013; and in the report by the DHB dated 9th August 2013 about whether [Mrs A] was experiencing uterine contractions prior to the induction. It is important to avoid hyperstimulation of the uterus and response to Prostaglandin varies between individual women.

According to the induction of labour flow chart for nulliparous women, (Appendix 2 in OB IP-09), if there is a Bishop's score of < 7, no fetal concerns, and no uterine activity, 2mg Prostaglandin should be used.

At the time of the administration of Prostaglandin, the summary of clinical findings in the clinical notes (on the CTG sticker) states that there were ***0 contractions in 10 minutes*** *(1734hrs) while an entry in the clinical notes at 1720hrs states that there were 'odd isolated non painful tightenings', and there had been 'period type pains' the previous night.*

There were some erratic tightenings recorded on the CTG trace earlier in the day (approx 1500 to 1540hrs), and they are recorded as being 2 in 10 minutes and non painful on the CTG sticker in the clinical notes. Had they been painful, it would have been prudent to use a smaller dose of Prostaglandin but there is no documentation stating that there were any painful contractions prior to the commencement of the induction. With an unfavourable Bishop's score (4) and absence of painful contractions 2 mg was an appropriate dose of Prostaglandin for a nulliparous woman.

The induction policy states on page 5 that prostaglandins are to be used cautiously when there is ***significant uterine activity****. From my impression, based*

on the clinical notes, there was no significant uterine activity ***at the time of insertion*** *of Prostaglandin.*

It is common to have erratic tightenings prior to the onset of labour and [Mrs A] did experience these. However, it was not until 2200hours, around 4½ hours following the insertion of Prostaglandin, that the tightenings were reported as being painful. In the clinical documentation it is stated that the 'tightenings' were every five minutes and [Mrs A] was having to breathe through them.

In conclusion on this point, [Ms D's] decision to administer 2mg of Prostaglandin was appropriate. My opinion is based on the fact that tightenings before the commencement of the induction were documented as being erratic and described as non-painful (in fact there were none at all present at the time of administration of the drug). I have discussed this with [a respected and very experienced clinical charge midwife] at a labour and birthing assessment unit in a large DHB (also an advisor for HDC), and she has agreed with this opinion. I would expect that peers would view this decision as reasonable in the circumstances.

Care provided by the Hospital Midwives

I have considered the care provided for [Mrs A] by the hospital midwives, from the time [Ms D] handed over care of her client in the antenatal ward. Following administration of Prostaglandin to [Mrs A], [Ms D] carried out a further 45 minutes of electronic fetal heart tracing before she left her client in the care of the hospital midwives. [At 1850hrs] she documented in the clinical notes ' CTG remains reassuring, handover care to core midwives'.

At this point on the CTG there were no significant contractions, however by 1857hrs the CTG indicates that [Mrs A] was having regular 'tightenings', approximately 2–3 in 10 minutes. It is not possible to know whether the tightenings recorded on the CTG were in fact painful contractions as there are many factors that influence the recording. Manual palpation of the uterus is a better way to determine strength of contractions. The CTG recording was stopped at 1930 hrs presumably to allow [Mrs A] to go for a walk.

At 2010 hrs, a core midwife introduced herself to [Mrs A]. She documented that [Mrs A] was going to go for a walk and was having tightenings.

At 2200 hrs, a further entry in the notes was made reporting that the tightenings were 1:5 (every five minutes), lasting 20–30 seconds, mild to palpate, and that [Mrs A] was having to breathe through them. It was recorded that [Mrs A's] husband was to stay in the room overnight. This suggests that the midwife did not expect [Mrs A] to be established in labour for some time as once in established labour women are transferred to the labour ward.

At 2310hrs [Mrs A] rang the call bell as her membranes had ruptured. [A midwife] responded and found the liquor was clear. She started a CTG to monitor fetal well being, documented that [Mrs A] was feeling more uncomfortable, and that the contractions felt strong on palpation. Seven minutes later, [the midwife]

documented that the heart rate had a baseline of 120 beats per minute; there was good variability but there were now decelerations down to 50 beats per minute (bpm) taking 1 minute to return to baseline. At this point the LMC was called and [Mrs A] was transferred to the labour ward.

At 2335 [another midwife] took over care of [Mrs A] in the labour ward. She examined her and found her to be 8cm dilated, there was a thick blood stained show and meconium in the liquor. The CTG was continued in the labour ward and the fetal heart was shown to be dropping to 60 bpm with contractions.

Five minutes later at 2340 hours it was documented that [Mrs A] was fully dilated and pushing. The fetal heart was continuing to drop to 60 bpm with recovery to 120 bpm over one minute. The room was prepared for delivery, and the LMC arrived at 2350 hrs, followed by the registrar who had been asked to review the trace.

At 2355hrs, the registrar reviewed the trace, examined [Mrs A], confirmed full dilatation with the baby's head deflexed and presenting in a posterior position, and made a plan to do a trial of forceps, proceeding to caesarean section if necessary in theatre under epidural anaesthetic.

The CTG trace contains an entry stating 'into OT' at 0024hrs, and a spinal anaesthetic was commenced 8 minutes later, followed by the trial of forceps at 1240hrs. This was unsuccessful so a caesarean section was commenced at 1248hrs, but the baby's head was impacted in the pelvis making delivery difficult and the consultant was called. He delivered the baby at 0102hrs.

In summary, there was no indication to monitor [Mrs A] continuously prior to rupture of the membranes and the commencement of painful contractions. [Mrs A] was transferred immediately to the labour ward once her membranes ruptured and the CTG trace was abnormal. The labour ward midwife examined [Mrs A] on admission, continued the CTG and called the registrar to review [Mrs A], and the doctor arrived within 10 minutes.

There does seem to be some delay before it was recorded that [Mrs A] arrived in theatre but that would most likely have been beyond the control of the midwives.

My opinion is that the care provided by the hospital midwives was reasonable given the very difficult situation.

Joyce Cowan. RM. MHSc. (Hons)."