Midwife, Ms B

Registrar, Dr C

Waitemata District Health Board

A Report by the

Health and Disability Commissioner

(Case 04HDC04652)

Health and Disability Commissioner
Te Toihau Hauora, Hauātanga

Parties involved

Baby A	Consumer (deceased)
Ms A	Complainant/Baby A's mother
Mr A	Complainant/Baby A's father
Ms B	Provider/Midwife/Lead Maternity Carer
Dr C	Provider/Obstetric registrar
Dr D	Obstetric registrar, North Shore Hospital
Dr E	Consultant obstetrician, North Shore Hospital
Ms F	Midwife/Delivery Unit Co-ordinator
Ms G	Hospital midwife
Dr H	Anaesthetist
Ms I	Midwife
Ms J	General Manager Adult Services
Dr K	Clinical Director Obstetrics
Ms L	Acting Manager Maternity Services
Dr M	Director of Nursing and Midwifery
Dr N	Senior Obstetrician and Gynaecologist at the Hospital

Complaint

On 12 December 2003, the Waitemata District Health Board (the DHB) forwarded a report to Ms A and Mr A following an investigation into the death of their baby son, Baby A, born at North Shore Hospital (the Hospital) on 5 November 2003.

The DHB investigation was conducted by Ms J, General Manager, Dr K, Clinical Director Obstetrics, and Ms L, Acting Manager Maternity Services. In their opinion, Baby A should have been delivered "one to two hours earlier", possibly by Caesarean section, and obstetric registrar Dr C and lead maternity carer (LMC) midwife, Ms B, "do not appear to have appreciated the severity of the abnormality on the CTG trace".

On 2 February 2004, the Nursing Council of New Zealand (the Council) received a complaint, pursuant to section 40 of the Nurses Act 1977, from Dr M, Director of Nursing and Midwifery at the DHB, about the services provided by Ms B. As required by section 48C of the Nurses Act, the Council forwarded the complaint to the Commissioner on 5 February.

On 8 March, Ms A and Mr A provided the Commissioner with a copy of their son's autopsy report from the Coroner and a list of questions that the DHB report did not address.

After reviewing all the information the Commissioner commenced an investigation into the following issues:

Ms B

- *Whether Ms B, midwife, provided services of an appropriate standard to Ms A and to Baby A during Ms A's labour and the delivery of Baby A on 5 November.*

Dr C

- *Whether Dr C provided services of an appropriate standard to Ms A and to Baby A during Ms A's labour and the delivery of Baby A on 5 November.*

Waitemata District Health Board

- *Whether there was any unreasonable delay in commencing a Caesarean section once the decision had been made to perform it.*

An investigation was commenced on 9 August 2004.

Information reviewed

- Ms A's antenatal records
- Ms A's labour and birth records
- Baby A's resuscitation records
- DHB investigation report
- Independent expert advice from obstetrician Dr William Ridley and midwife Mrs Joan Skinner
- ACC investigation finding, including reports by obstetrician Dr Digby Ngan-Kee (Appendix 1) and midwife Terryll Muir (Appendix 2)
- Report to Ms A and Mr A by obstetrician Professor Peter Stone (Appendix 3)
- Report to the New Zealand College of Midwives by midwife Ann Yates (Appendix 4)
- Medical Council of New Zealand 'Guidelines for Maintenance and Retention of Patient Records and Information' (2001)
- Ministry of Health Maternity Services Notice (2002)
- New Zealand College of Midwives 'Handbook for Practice' (2002).

Information gathered during investigation

Overview

Ms A's and Mr A's first baby, Baby A, was born by Caesarean section at 2.31am on 5 November at the hospital birthing unit. Baby A was described as "flat" following birth, and, following resuscitation, he was transferred to another public hospital's neonatal intensive

care unit. Baby A died several days after he was born. The autopsy report indicated that he was a large baby who appeared anatomically normal. The cause of death was "hypoxic ischaemic encephalopathy grade 3" precipitated by fetal distress.

Background
Ms A was 37 years old and pregnant with her first child, due on 23 October. Her LMC was independent midwife Ms B. Ms B had an access agreement with the DHB. Ms B registered as a midwife in August 2000 and has been practising as an independent practitioner since then. She averages about four deliveries a month as she likes to give quality care.

Antenatal care
Ms A's antenatal period was normal. She underwent routine blood tests, pregnancy scanning and amniocentesis. Scans performed on 8 May and 12 June showed a normal, healthy male child, with consistent fetal growth. On 19 May, at 17 weeks' gestation, Ms A's blood pressure and urinalysis were normal, a pattern that continued throughout her pregnancy. All of the routine blood tests throughout the pregnancy were within the normal range, and the fundal height measurements were at least consistent with the estimated gestation.

On 28 October, Ms A was 40 weeks + 5 days' gestation. Ms B referred Ms A to a consultant obstetrician at the Hospital, stating that the pregnancy had been uncomplicated, but Ms A was now post dates, and that she was seeking advice on induction of labour. An ultrasound performed on 30 October estimated a fetal weight of 4.3kg (considered a large baby).

Ms A was 41 weeks + 4 days' gestation when she saw obstetric registrar Dr D on 3 November. Dr D completed a full assessment and discussed induction with consultant obstetrician Dr E, and Ms B, by telephone. The plan was to induce Ms A the following day under Ms B's care. Dr D warned of the risk of shoulder dystocia[1] as the baby was large. Ms A was to be continuously monitored during labour with active management of the third stage; the registrar was to attend the birth; and a paediatrician was to assess the baby following birth.

Admission for induction
On 4 November, at about 7.30pm, Ms A was admitted to the delivery suite for induction. On Ms A's admission, Ms B assessed her, noting a "possible spontaneous rupture of the membranes at around 11.30am … show but no contraction". The baby was a cephalic presentation with his head two-fifths into the pelvis. On vaginal examination Ms B reported a "Bishops score of 4" (an estimate of how favourable the cervix is for induction), considered "relatively unfavourable", and that no amniotic fluid was visible on speculum examination.

[1] Halt in spontaneous delivery because the baby's shoulder becomes wedged behind the mother's pubis.

CTG recording

Ms B commenced cardiotocograph (CTG) recording at 7.37pm and ran a continuous recording of uterine activity and fetal heart rate (FHR) until 9.06pm. She discussed the mode of induction with Dr D at 8.28pm. Neither Dr D nor Dr E personally assessed Ms A, although Dr D did review the CTG tracing. Dr D ordered 2mg of prostaglandin gel per vagina to commence induction. Ms B noted two uterine contractions, two shallow variable decelerations[2] and a variable heart rate deceleration on the CTG recording. Ms A's observations before induction began were: B/P 130/80, pulse rate 90 bpm, and temperature 36.3°C.

Dr D completed duty at 9.30pm, and handed over to obstetric registrar Dr C. Dr D did not report on Ms A's labour to Dr C. Dr C recalled that the hospital was busy:

> "On 4 November […] I came on night duty at 21.30hrs. It was my 5th night of my seven-night duties. I met the Registrar on call for the evening, [Dr D], in the Birthing Suite to receive the on-call pager and get a hand-over of patients and the work to be done.
>
> [Dr D] had been busy that evening and as a result there were 2 women with possible ectopic pregnancies still waiting to be assessed in the Emergency Care Centre (ECC). There were also a number of women in the Birthing Suite to attend to.
>
> As soon as I came on duty, I was asked by the Birthing Suite co-ordinator midwife [Ms F] to immediately stitch a vaginal tear, since the apex of the mucosa tear was very high. I was then asked to assess another patient and apply ventouse on a baby, as the mother was pushing for a long time in the 2nd stage of labour. However, when I came into her room, she had managed to push well and deliver normally."

Labour

Ms A began to experience "niggly pains" in response to the prostaglandin at 9.10pm. Ms B gave her two Panadol tablets at 9.20pm and pethidine (analgesic), metoclopramide (anti-nausea) and Halcion (sedation) at 9.30pm. At 9.40pm Ms B discussed the CTG tracing, which she considered "had for a time been non-reassuring", with Dr C. Dr C then assessed Ms A for the first time, noting "CTG showing dips pst [post] prostin3 but good pick-up" and ordered hourly CTG recordings "till a good trace obtained without dips".

Ms B intended to go home, but before doing so handed over to hospital midwife Ms G. Ms B documented Dr C's orders in the notes and advised Ms G about recording the CTG hourly. Whether she told Ms G about the analgesia and CTG abnormalities is uncertain. Ms B went home soon after 9.40pm.

---

[2] Sign of advancing fetal compromise. The fetus is not always able to fully recover from a physical stressor and is becoming more stressed. The oxygen levels fluctuate from normal to abnormal.

[3] Prostin is a type of prostaglandin.

Ms G did not go into Ms A's room until 10pm. She found Ms A very distressed with pain and asking for an epidural. Ms G recorded the fetal heart rate at 134–138 bpm, and performed a vaginal examination, noting that Ms A was 7cm dilated with a thin cervix and feeling pressure on her perineum. Ms G asked Ms F, the Delivery Unit Co-ordinator, to contact Dr C about the epidural and to telephone Ms B and ask her to return. Dr C approved the epidural by telephone and the anaesthetic registrar, Dr H, was called to insert the epidural. Ms G then moved Ms A from the induction room to the birthing unit. At 10.30pm Dr H inserted an IV luer, and by 10.55pm had completed the insertion of the epidural.

Ms B returned to the unit at 10.45pm. She noted that no CTG had been recorded in her absence and reapplied the CTG at 10.57pm. Ms B said that at 11.10pm the CTG showed some "early decelerations"[4] and Ms A was lying on her left side, feeling comfortable, and had a normal blood pressure. At 11.20pm Ms A was fully dilated and the baby's head was at the level of the ischial spines (outlet of the pelvis). Ms B could feel no membranes and noted some blood-stained vaginal loss. She detected no abnormalities. She did not record the baby's position. Ms B encouraged Ms A to push with each contraction in view of the early decelerations. However, the decelerations continued and Ms B contacted Dr C to review Ms A's progress.

Dr C's review and administration of Syntocinon
There is a dispute about the time of Dr C's arrival in the delivery suite and her subsequent departure.

Ms F recalled what happened but did not remember the precise time of Dr C's arrival or departure. Ms F advised that Ms B asked Dr C to review the CTG and thought it was about 11.25pm when Dr C arrived. Ms F, Dr C and Ms B were all in the office at the time. Ms B showed the CTG to Dr C, who handed it to Ms F for her interpretation. In Ms F's opinion the CTG showed a baseline of 140bpm, variability of greater than 5bpm with some "early variable decelerations down to 60 for 30 seconds with pushing but recovery back to baseline". The contractions were not clearly defined as pushing on the CTG trace. She recalled that Dr C went into Ms A's room and returned "about 10 minutes later". Dr C said she had ordered Syntocinon augmentation,[5] and that she was leaving the ward but would return in one hour and, in the meantime, if there were any problems, Ms B should call her or Ms F.

Ms B said that at 11.30pm she asked Ms A to push "in view of the early deceleration", and she discussed her concerns about Ms A's progress with Dr C at 11.50pm. Dr C provided the following statement:

[4] Sign of early fetal compromise. The fetus is currently reacting normally to physical stressors and the oxygen levels in fetal blood are normal.

[5] Used to enhance uterine activity when labour has stalled.

> "I was called at 2330 by [Ms B] to see [Ms A] as she had been pushing for 20 minutes only and not making any progress. On internal examination I found the cervix was fully dilated and the head was at the level of the spines.[6] The liquor was clear. I catheterised her [Ms A's] bladder and inserted an IDC (indwelling catheter) and noted clear urine. There was a short trace of 35 minutes showing moderate variable decelerations compatible with second stage pushing. I was with the patient until 2350 when I finished the internal examination. I advised [Ms B] to start Syntocinon as the mother was making little progress in pushing. An epidural had only recently been inserted and I actually could not palpate any contractions. The CTG at 2350 confirms that. I left clear instructions with [Ms B] to commence Syntocinon as per protocol,[7] to get 3 contractions in 10 minutes, and to reassess in 1 hour, or earlier if there was any fetal heart abnormality. I also advised her to contact [Ms F], who was on duty in the Birthing Suite, if she had any concerns about the trace. I left the Birthing Suite to go to the ECC [Emergency Care Centre]."

Dr C said that she left the birthing unit at about midnight and told Ms B that she was leaving.

According to the medical records, Ms B asked Dr C to review Ms A's progress at 11.50pm. Ms B said that she told Dr C about the abnormal CTG trace, in particular the "reduced variability",[8] decelerations and her "further concerns of the possibility that the uterine actions were in-coordinate and the fact that the baby's size was estimated at 4.3kg".

Ms B's records show that at 12.15am she commenced the infusion at the rate of 3ml/hour, as ordered by Dr C, and required by hospital protocol. There is some confusion about whether Dr C was in attendance at the time. Ms B said that she had checked the Syntocinon with a core midwife beforehand but was not satisfied with the decelerations showing on the CTG recording and asked Dr C to review the tracing again before running the Syntocinon. Ms B said that Dr C had not left the birthing unit and was in the office. Ms B alleges that she had further discussions with Dr C before increasing the Syntocinon rate at 12.31am, and recorded "Discussed CTG again w[ith] [Dr C] — in view of lack of reactivity. She advises she is happy to continue at present." Ms B said that Dr C was aware that she had increased the Syntocinon at 12.31am because she was present and must have left the unit at about 12.40am. Ms B topped up Ms A's epidural at 12.40am, and increased the Syntocinon infusion to 12ml/hour at 12.45am. Ms B did not know that Dr C had left the unit and was expecting her to come into Ms A's room to review the situation. It was when she went to

[6] The crown of the head is level with the outlet of the pelvis.

[7] Waitemata DHB protocol states that the indication for Syntocinon augmentation is to enhance slow progress in labour where cervical dilatation is less than 1cm per hour and the cervix 3cm dilated and fully effaced. Syntocinon is commenced at 1ml unit/minute with 15-minute increments of 3ml unit/minute, until labour is established or maximum dose reached (in this case 40 ml unit/minute).

[8] Signs of advanced fetal compromise. The fetus is no longer able to fully recover from physical stressors.

find Dr C at about 1.20am that she became aware that Dr C had left and she asked Ms F to review the tracing. Ms B stated:

> "[Dr C] was present with me in the delivery room from 0015hrs until at least 0040hrs, during which time the Syntocinon infusion was increased at her behest, under her supervision and whilst she observed the CTG.
>
> The midwifery clinical notes are contemporaneous and sequential — there can be no dispute that she was present.
>
> [Dr C] left sometime after 0040hrs to review another patient. She did not advise me that she was leaving the unit, or that she was particularly busy. The family were present and aware of her comments and were expecting her early return as I was."

In Ms A's notes, Dr C's recording of her assessment at 11.30pm appears on a new page after Ms B's notation at 12.40am. Ms B's 1am notation follows Dr C's 11.30pm report. Ms B alleges that Dr C recorded her assessment of Ms A after Baby A's birth. This allegation is discussed in more detail below under the heading *'Discrepancies in medical records: 11.30pm'*.

Dr C cannot recall talking to Ms B by telephone (between midnight and 12.40am) and said that she was definitely not in the birthing unit when Ms B commenced the Syntocinon infusion at 12.15am. She advised that between midnight and 1am she was busy seeing acute patients in ECC and the Maternity and Gynaecology Wards. Dr C said that she would not wait for the infusion to be set up and there was no need for her to do so. Ms B could call her or discuss any problems with Ms F. It is usual practice for LMCs to monitor their patients "independently", with intervention from hospital staff when requested by the LMC. Dr C expected Ms A to deliver normally within the hour, and did not return to the birthing unit until she was called by Ms F at about 1.20am. Dr C stated:

> "[A]t 0015 hours when she [Ms B] commenced Syntocinon the CTG tracing was beginning to show signs of deterioration, which [Ms B] failed to notice. [Ms F] and I were not made aware of this situation by [Ms B]. I did not review any CTG traces at this time. Nor was I asked to.
>
> If the contractions were becoming more frequent with deteriorating trace [Ms B] should have turned the infusion off. Instead she administered increasing doses at 0031, without my knowledge and despite evidence of hyper-stimulation and rapidly deteriorating fetal heart rate pattern."

Ms B recorded that at 1am she reduced the Syntocinon rate to "6mls/hour" (from 12ml/hour) owing to "more prolonged deceleration". Ms A was not pushing at the time. At 1.20am the CTG was still showing "early decelerations" and Ms B discussed the situation with Ms F because Dr C had not returned. Ms F telephoned Dr C, who arrived in the birthing unit at 1.25am. Dr C stated:

> "At 0100 hours [Ms B] records that she decided to decrease Syntocinon 'due to more prolonged decelerations'. She did so without showing the traces to or seeking advice from [Ms F] or from me.
>
> It was only at 0125 hours that I was contacted by [Ms F] to come immediately to the Birthing Suite as she clearly recognised the signs of fetal distress.
>
> [Ms F] and I were not aware of [Ms B] increasing and decreasing the Syntocinon infusion which continued until 0120 hours. At this time [Ms B] recorded 'CTG showing early deceleration', when in fact the trace had deteriorated significantly. It was at this late stage she decided to seek help from [Ms F], who in turn called me."

Although Dr C stated that she was contacted by Ms F at 1.25am, her clinical notes record the following:

> "1.00am [fetal heart] showing decelerations, on vaginal examination cervix is fully dilated and the fetal head still at zero station."

Dr C diagnosed "a big baby in fetal distress" and cephalo-pelvic disproportion, and ordered a lower section Caesarean section (LSCS). She obtained consent, organised the theatre and anaesthetist, and discussed the situation with Dr E. She decided to take Ms A to theatre for an emergency LSCS. Dr C's lawyer advised:

> "The decision to proceed to Caesarean section was made at approximately 0145 hours. The theatre was informed at 0147 hours. The anaesthetist saw the patient in the Birthing Suite, obtained consent for the anaesthesia for the Caesarean section, and topped up the epidural, at 0155 hours. In the meantime [Dr C] had proceeded to the theatre to prepare for the operation. When she arrived she discovered that the theatre had not yet sent an orderly to bring [Ms A] to the theatre. [Dr C] instructed that this be done immediately. [Ms A] arrived outside theatre eight minutes later at 0204 hours, where she was checked by theatre staff. She was transferred to the main theatre at 0211 hours. The patient's skin was prepared and the patient draped at 0218 hours. The Caesarean commenced at 0221 hours."

During the surgery Dr C had difficulty removing the baby from Ms A's pelvis. Ms A required nitroglycerin spray to relax the uterus, and additional pressure was applied to push the baby from the vaginal entrance. The records indicate that surgery commenced at 2.11am. Baby A was born at 2.31am and weighed 4,530gm. Dr E was called to the hospital because Dr C noted a "cut extension on the right side", which she described as "normal".

At birth, Baby A was described as "flat" with APGAR scores of 1, 4 and 4 respectively at 1, 5 and 10 minutes. Resuscitation was commenced by a paediatrician, and Baby A was admitted to Intensive Care. He was transferred to another public hospital's neonatal intensive care unit on 5 November, but died several days later.

Additional information

Discrepancies in medical records: 11.30pm
Ms B said that she consulted Dr C three times: at 11.50pm, 12.15am (before starting the Syntocinon) and soon afterwards when she was still dissatisfied with the CTG pattern. Ms B stated:

> "[Dr C's] entry at '23.30' is extremely important — the time was added to the notes after delivery. This entry was made after my entry at 0040hrs and prior to my entry at 0100hrs. I have repeatedly stressed the importance of this discrepancy, and the fact that my notes are clearly contemporaneous and sequential.
>
> I believe [Dr C] has deliberately denied being present after her consultation at 2350hrs until 0100hrs in order to suggest that she was unaware of the situation.
>
> This is categorically untrue — she was present for much of the time (as per my statement) and the family were aware of her continued presence until approximately 0045hrs.
>
> She could not have made an entry in the notes without being present between my entries."

I sought clarification from Ms B about her allegations. She stated that the '23.30' entry had been made by Dr C but no time recorded next to it. She believes that the time was added after the delivery.

Dr C said that Ms B telephoned her at 11.30pm to see Ms A. She remained until 11.50pm and "the CTG confirms that", leaving the birthing unit just before midnight. However, there is no record on the CTG by Dr C. Dr C's record for 11.30pm appears as the first entry on a separate page — the previous notation by Ms B is 12.40am and the following entry is at 1am, also by Ms B. Dr C, through her lawyer, explained why her notation for 11.30pm was not in time sequence:

> "[Dr C] instructs that at the time at North Shore Hospital it was common practice for a midwife to reserve a page of the clinical records for her own notes. (In fact their own notebooks, rather than in the hospital records.) As a result the hospital staff would be required to start a fresh page of notes. That appears to have happened here."

The medical notes recorded before and after 11.30pm show Dr C's recordings interspersed with Ms B's.

Ms B said that Dr C was with Ms A for quite a long time after she was called at 11.50pm; she performed an abdominal palpation and vaginal examination, inserted a urinary catheter, assessed the baby, reviewed the CTG recording and ordered Syntocinon. Ms B said she asked Dr C about Syntocinon augmentation again before commencing the infusion. Ms B was not satisfied with the decelerations. She began the infusion at 12.15am and asked Dr C,

who was still in the unit, whether she should increase the dosage before doing so. Ms B recorded "00.15 Syntocinon infusion commenced as [ordered] @ 3ml/hr. Discussed CTG again w[ith] Dr C — in view of lack of reactivity. She advises she is happy to continue at present."

Mr A recalled Dr C's arrival just before midnight. He remembers the time because of a bet about the date of birth he had with a friend. He asked Dr C when she expected Baby A would be born. He could not recall how long Dr C remained in the room or the number of times Ms B consulted her.

Ms F said that Dr C asked her to review the CTG trace at about 11.30pm and then went into Ms A's room. Dr C was with Ms A for about 10 minutes. Dr C came out of the room and told Ms F that she had prescribed Syntocinon. Ms F estimates that Dr C would have left the unit before midnight.

Discrepancies in medical records: 1am
Ms B stated that Dr C's decision to perform a Caesarean section was made at 1.40am, rather than 1am (as shown in the records) and that she did not arrive until 1.25am. According to Ms B, Dr C was considering a ventouse extraction and contacted Dr E to discuss the mode of delivery. There are two notations on the CTG tracing: one at 1am, which states "stop Syntocinon — for LSCS", and the second at 1.10am stating "Consent for LSCS". Dr C later acknowledged that the times of both notations are incorrect and that she wrote them retrospectively.

The DHB's internal review
After the LSCS, Ms B looked at Ms A's medical records and CTG tracing and suspected the records had been altered/added to by Dr C. She immediately spoke to Dr E, who undertook to speak to Dr C.

After Ms B spoke to Dr E about the records, a meeting was held at the DHB on 6 November at 5pm. In attendance were Dr K (Clinical Director Obstetrics), Dr N (a senior obstetrician and gynaecologist at the hospital), Dr C, Dr E, Ms J (General Manager Adult Services), Ms L (Acting Manager Maternity Services), Dr D, Ms B and her support person, midwife Ms I.

Ms I provided the following statement:

> "Prior to beginning the meeting we were all given a copy of the clinical notes and the CTG. [Dr K] read out all entries in the notes and during this process she questioned the discrepancies in the time, on two separate pages. [Ms B] stated that the times were written by [Dr C] following delivery, not when she was in attendance. [Dr K] questioned [Dr C] about the truth of this and she acknowledged she had written the times in, retrospectively. It is very clear that the notes were written sequentially and contemporaneously so the time discrepancies with [Dr C's] entries were obvious to all.

> [Dr K] then asked for a note to be made of this information and [Ms J] stated that Waitemata DHB would 'get advice' about dealing with this.
>
> The CTG was then addressed. [Ms B] stated that [Dr C] had made no notes on the CTG at all during labour but it had been written on following the birth in three places. [Dr C] was again questioned about this and admitted that her entries on the CTG were written following delivery not at the time of attendance and also the times were incorrect. All the staff present were very shocked at her admission especially [Dr K]."

There is a discrepancy in the information about the clinical notes reviewed as noted above. Ms I stated that two pages of clinical notes and the CTG tracing were discussed at the meeting. Ms J referred to only one page of clinical notes in her statement and advised that there were no minutes from the meeting. She later found a record of the meeting and provided a copy of this document. Ms J emphasised that the primary focus of the meeting was "on what happened to [Baby A], why this had happened and what we needed to do next". She advised that the meeting was not specifically called to address clinical documentation issues and that there was only a brief reference in the meeting notes to a discussion about the documentation issues.

Ms J clarified that the time Dr C decided to take Ms A to theatre would have been approximately 1.25am "as the operating theatre was notified by telephone at 1.47am of the impending transfer of [Ms A] for caesarean section". No information was provided by the DHB in relation to Dr C's entry at 11.30pm. Ms J stated:

> "With regards to [Ms B's] statement regarding changes to the clinical records we have the following information. On investigating the death of [Baby A] we identified a discrepancy in the timings recorded in the clinical record. Please find attached the page referred to in this matter. As you can see the times recorded by [Ms B] appear to have been altered. Our investigation at the time identified these changes were amendments made at the time of writing. There was no advantage or disadvantage to any party from the changes.
>
> The matter that was fully investigated was the recording of the time 1am on the CTG as the times of decision for c-section. This time was also recorded on the CTG tracing itself. This time is clearly out of sequence with the earlier recordings made by [Ms B] in the clinical record. [Dr C] identified that she did copy the time from the clinical record onto the CTG tracing at a later time, this is not uncommon nor inappropriate."

Ms J said that "we were fully satisfied that the error made by [Dr C] was genuine". She could not recall any further discussion about the timing of other entries by Dr C and neither Dr K nor Dr N remembered such discussion. Ms J stated that there was some discussion of changes made to the timing of Ms B's later entries but that she had concluded that these were made contemporaneously and did not disadvantage anyone. Ms B explained that her changes were made because she had noted the incorrect 24-hour clock time (eg, 13.25 instead of 1.25).

After the DHB investigation, Ms B protested the times in Dr C's report. After reviewing the records, Ms J, Dr K and Ms L (Acting Manager Maternity Services) stated:

> "At 00.15hrs Syntocinon infusion was commenced as per protocol. [Ms B] noted that she discussed the CTG with [Dr C] because of 'lack of activity' and was advised to continue as present. This consultation would have occurred at 23.50hrs."

On 19 November, Ms B's lawyer advised Ms J that the information contained in the DHB's preliminary investigation report was factually incorrect. On 5 January, upon receipt of the DHB's final report, Ms B, through her lawyer, advised the following:

> "…
>
> 5.4 The report is inaccurate:
>
> - In her entry at 2350 hours [Ms B] recorded that [Dr C] would review again later, not in one hour as stated in the report.
>
> 5.5 The report is inaccurate:
> - Twenty minutes later at 0015 hours [Ms B] <u>again</u> contacted [Dr C] to discuss the lack of reactivity on the CTG. This was <u>not</u> the same consultation as that at 2350 hours as stated in the report, but a further discussion.
> - [Ms B] recorded that [Dr C] was happy to continue at present. [Ms B] estimates [Dr C] was in the room for 20–30 minutes. She would therefore have left the room between 0035 and 0045 hours. [Dr C] advised that she would return shortly.
>
> 5.4 The report is incomplete:
> - As [Dr C] had not yet returned, at 0120 hours [Ms B] asked [Ms F] to review the CTG.
>
> <u>8. Key Issues</u>
>
> <u>8.2 Speed of Labour</u>
>
> 8.2.2 The report is inaccurate:
> - As already pointed out in our letter of [19 November], there was no vaginal examination in the antenatal clinic on [3 November]. It is therefore inaccurate to state in the report that there had been a change in the cervix from the examination in the antenatal clinic on [3 November].
> - There were no indications that labour had already started.
>
> Of particular concern is the erroneous conclusions drawn, that [Ms B] failed to appreciate the severity of the abnormality in the CTG trace. As pointed out above she consulted three times in that 1½ hour period from 2350 hours until 0120 hours. The first

two consultations were with [Dr C] within a 25 minute period. The third was with [Ms F] when [Ms B] became too concerned to wait any longer for [Dr C's] expected return.

We ask that you consider the problems identified above and urge you to amend the report and your resulting conclusions accordingly. …"

Dr C's registration

The Medical Council advised that in December 2001 it granted Dr C general registration with conditions restricting her to practise in obstetrics and gynaecology, family planning and sexual health. At that time, the Council noted that Dr C was "not practising at the level expected of an independent obstetrician and gynaecologist, but was working well in a supervised environment and was a competent practitioner in obstetrics and gynaecology".

Waitemata DHB confirmed that Dr C commenced employment in 1999 as "Class 4 Probationary Registrant". After a period of review, Dr K (Clinical Director of Obstetrics) advised the Medical Council that it was not appropriate for Dr C to be vocationally registered as an obstetrician and gynaecologist but that she was competent at the level of a registrar or Medical Officer Special Scale (MOSS). In Dr K's opinion Dr C needed general oversight. The DHB provided the following statement:

"[Dr K] and her senior colleagues provided general oversight to [Dr C] including regular formal meetings with [Dr C]. … [S]he participated in the learning sessions for all registrars including Mortality & Morbidity meetings and quality activities. In addition a senior medical officer was always on call when [Dr C] was the registrar on duty. Her practice and the practice of all registrars were regularly discussed at obstetric consultant meetings."

After Baby A's delivery, Dr C was to have "a formal assessment of her clinical practice by [Dr K]". When preparing for the assessment, Dr C advised Dr K that she wished to withdraw from obstetric practice. Dr C has reduced her role to colposcopy services and family planning. As she had withdrawn from obstetric care, no formal review was undertaken.

ACC "medical error" findings

Ms A and Mr A made a claim to ACC on behalf of their son, Baby A, for medical error. The ACC decision, dated 8 June, found medical error in that "he suffered fatal hypoxic ischaemic encephalopathy as a result of mismanagement of labour by [registered nurse] [Ms B] and [Dr C]".

Ms A and Mr A also made a claim to ACC on behalf of Ms A for medical misadventure arising from "maternal mental injury following death of son due to medical error", which was accepted as medical error on the part of Dr C and Ms B (decision dated 1 February).

Responses to provisional opinion

Response from Dr C
Dr C's lawyer responded to the provisional opinion. Dr C's lawyer acknowledged the gravity of the outcome for Baby A and his parents, but submitted that it would not be appropriate to refer Dr C to the Director of Proceedings. Dr C's lawyer listed the following factors in support of his submission:

"1. This is a one-off event, in that she has no prior complaints against her.

2. This event has affected [Dr C] very deeply. Consistently she has demonstrated insight and empathy. Following this event she completed the fetal surveillance study at North Shore Hospital, and attended a number of relevant conferences and teaching sessions.

3. Perhaps most importantly, of her own volition, [Dr C] has opted out of the acute registrars' roster, at a loss of approximately half of her working hours and income. Consequently she does not do any obstetric deliveries or operations. She is now doing Colposcopy clinics at North Shore Hospital under the oversight and supervision of […] the Clinical Director of Gynaecology.

4. On the evening of the incident, [Dr C] was extremely busy. She had a high workload, almost total lack of back-up, and was in an extremely difficult environment for providing safe practice. Contrary to the […] Ministry of Health Guidelines for Duty of Care, at handover the specialist on call was not involved, and [Dr C] was not informed about this particular patient by the departing Registrar.

5. That evening [Dr C] was confronted by many complex medical decisions. She was extremely busy with two potential ectopic pregnancies, other labouring women to look after, vaginal tears to suture, as well as routine work to perform. All of this she had to prioritise without the support of junior staff. Although her specialist was available on call, she did not feel able to call for his assistance, except as a last resort.

6. [Dr C's] care must be assessed in the context of systemic failures by the Hospital and the failures of other health professionals. The failures of [Ms B] in particular have been addressed in the provisional report, and I do not intend to rehearse them here in any details. But for example:

    - The fact that the patient had already had a show and subsequently developed hyperstimulation, cast doubt on [Ms B's] Bishop score of 4. Quite possibly that score was higher than it should have been, in which case the 2mg of Prostaglandin may have contributed to the hyperstimulation and rapid labour.

- [Ms B's] decision to transfer responsibility for the patient's care to the hospital midwife after commencing induction unnecessarily interrupted the patient's continuity of care. It has not been explained satisfactorily.

- Despite [Dr C's] advice, there was a prolonged period when the patient was not monitored with the CTG. When the CTG recommenced at 22.57 hours it was already abnormal, and may well have been abnormal for the entire period that the baby had not been monitored. My advice is that CTG monitoring can be performed during an epidural insertion. Again, no satisfactory explanation has been given for this failure.

7. Having looked in the circumstances of this case, recently the Medical Council resolved not to require [Dr C] to undergo a competency review."

Dr C's lawyer provided a copy of a letter to Dr C from the Medical Council dated 20 April. The Medical Council informed Dr C that at a meeting on 10 April it had decided not to carry out a review of her competence to practise medicine. The reason given for its decision was that there were several systemic issues affecting Dr C's ability to perform her job at the time. The Council noted that: there had since been a review of the systems at the Hospital; Dr C was fully aware of the errors she made in the management of Ms A's case; Dr C had made changes to her practice; and Dr C was no longer practising obstetrics.

Dr C also responded to the provisional opinion. She stated that in her view there were a number of factors and events that contributed to this tragedy and that she is one of many who need to review their practice to ensure such things do not happen again. Dr C has "thought about this case so many times that it is difficult to count". She has reviewed her "management and taken note of the opinions of a large number of senior obstetricians". Dr C also indicated that she has apologised to Ms A and Mr A in her communications with the Medical Council. Dr C has also acknowledged the areas where she should have acted differently. Dr C provided a copy of her letter to the Medical Council of 31 March, in which she lists six things that she would have done differently in hindsight, the professional education she has undertaken since, changes to her practice and issues relating to the "management system".

Dr C reiterated that she was not with Ms A between midnight and 1.25am and was not contacted by Ms B. Dr C stated that Ms B's recollection of the meeting on 6 November is "grossly flawed" and there was never any allegation, dispute or even any discussion about the correctness of her entry in the notes at 11.30pm. Dr C provided a list of six patients whom she saw between midnight and 1.35am to support her statement that she was not with Ms A at that time. Dr C informed me that after Baby A's delivery she had been advised to make a record of her movements, and that she made the list of patients at that point.

Dr C stated that as she was the only obstetrics and gynaecology doctor in the hospital at the time and it was a busy night, she had no reason to stay with Ms A for the amount of time that Ms B suggests she did. Dr C stated that her version of events was supported by Ms F's

account and report to ACC. Dr C notes that Mr A could not recall how long she remained in the room. She also suggests that Ms B's statements are inconsistent as they refer to calling Dr C, Dr C actually being present in the delivery room, and Dr C being in the office of the birthing unit. Dr C also advised that she was not at a particular place where she could be telephoned; instead she would have to have been paged and would have then called the person from the nearest phone. As far as she is aware, no one recalls Ms B paging her.

Dr C stated that she had freely admitted making a retrospective entry onto the CTG and that she copied the time from her entry in the clinical records where she had recorded seeing Ms A at 1am. This was an error as she saw Ms A at around 1.35am. Dr C does not understand why she entered the wrong time — it was a mistake made in an emergency situation. She notes that the DHB's view is that retrospective recording is "not uncommon or inappropriate" and that her error was genuine.

Dr C referred to Ms B's allegation that her entry at 11.30pm is out of sequence and was added after delivery (ie, after 3.45am) and queried how this would be possible given that Ms B made an entry after hers at 1.00am. Dr C emphatically denied Ms B's allegation and advised that it was the first time she had heard any question raised as to the timing of this consultation. She reiterated that it was usual practice to start a new page and leave room for the LMC to make notes. Dr C noted that there was no evidence that she had altered the time of this entry by amending it or crossing out the time. In her view, the timing has no bearing on the final outcome, and in no way would falsifying the time advantage her defence.

Dr C stated that the DHB documents do not refer to her tampering with the notes; nor do the ACC reports. She advised that Ms B had ample opportunity to raise this allegation but had not done so (as far as she was aware).

Dr C advised that when she made the decision to commence Syntocinon, she had only a 35-minute CTG trace available after the epidural had been inserted, and Ms A had been pushing for 20 minutes. She could not palpate any contractions herself and Ms B told her that Ms A had not been making any progress in pushing. It is not uncommon for contractions to "go off' after an epidural, especially in the second stage, and that is why she prescribed Syntocinon. Dr C thought the decelerations at that point were typical second-stage pushing decelerations.

In hindsight, Dr C realises that she should have assessed the CTG for longer, assessed the fetal condition with fetal blood sampling, or come back to the room herself a little later to assess the fetal condition rather than relying on Ms B to call her. However, the fact that there were a lot of patients to see elsewhere in the hospital was very much on her mind, and she would not have expected any independent midwife to overstimulate the uterus in such a fashion or to ignore a progressively abnormal fetal heart rate pattern.

Dr C advised that once she was called back to the Birthing Suite by Ms F, she immediately recognised that the baby needed to be delivered by LSCS. She never contemplated a ventouse delivery, as suggested by Ms B. In her discussions with Ms A and her partner Mr

A, she felt she needed to tell them that although Ms A was in the second stage of labour, she needed an LSCS and could not deliver by ventouse. Dr C tried to make everyone aware of the urgency of the situation but accepts, in retrospect, that she should have made it clearer.

Dr C further advised that around the time of these events trainee interns working with Dr N, a senior Obstetrician and Gynaecologist, did an audit of "decision to delivery times" for an LSCS at the hospital. They reported:

> "The time taken to deliver EMCS's in the setting of Fetal Distress is distributed in a more normal fashion around a mean of approximately 45 minutes. Interestingly, only one of these deliveries was performed under the 30-minute guideline."

In another section of the report they noted:

> "When the results are categorised in terms of urgency (immediate, semi-urgent etc.), rather than by indication (FD or FTP etc.) we see that in all categories except 'non urgent' the median and mean times taken are well above (approximately double) the target times."

Dr C stated that the "immediate" category of LSCS should be delivered within 20 minutes but the report showed that this group were delivered in double that time. While she agrees that she might have done more to get Baby A delivered more quickly, it can be difficult to mobilise so many people to act quickly and she believes that this is a also problem for other registrars, and not just for her.

Dr C advised that the following factors affected her performance on the night in question:

- it was her fifth night in a row on call;
- she was the only O&G doctor in the hospital; and
- she had a very busy workload looking after the whole O&G Department and ECC.

Dr C stated that these events led directly to the DHB employing a full complement of house officers on a 24-hour call roster as it recognised the workload at night was excessive for one doctor. She provided a copy of a letter to Ms J, General Manager Adult Services, dated 22 October from herself and other registrars, expressing concern about their workload and the need to have support from house officers.

Dr C advised that she has re-evaluated her practice and decided not to do acute call and has come off the registrar roster. She has reduced to a part-time MOSS role at the DHB with a considerable loss of income, as she would rather do this than be involved in such a tragic case again.

Dr C stated:

> "This sad case has affected me very deeply. I have reflected upon my practice and admitted where I should have done better. I understand the issues that affected my performance that night, and have made major changes to my employment to ensure that I do not contribute to any similar cases again.
>
> WDHB have also recommended that there were contributing systemic issues and have made many changes in light of this event."

Records of six patients seen by Dr C

I have examined the records of the six patients whom Dr C states that she saw on 4/5 November. I note the following points:

Patient 1: Dr C recorded seeing this patient at 10pm on 4 November.
Patient 2: This patient arrived at ECC at 4.10pm on 4 November. She was waiting to be seen by the gynaecology registrar. This consultation occurred at 10.15pm. The nurse recorded that the patient was seen, placed on "nil per mouth for OT (theatre) at 24.00 — awaiting gynae bed". The gynaecology registrar did not record the assessment.
Patient 3: This patient was admitted to the gynaecology ward at 11.45am on 4 November. There is no record of this patient needing to see a doctor or being seen by a doctor overnight.
Patient 4: This patient was admitted to the Birthing Suite on 3 November at 5.55pm. Dr C was asked to see the patient at 00.20am on 4 November and recorded her findings. The patient delivered vaginally and Dr C took her to theatre for retained placenta. There is no record of Dr C seeing her between midnight and 1am on 4/5 November.
Patient 5: This patient was seen by Dr C soon after 10.40pm on 3 November. The baby had fetal distress and Dr C performed an urgent Caesarean section but did not record the time. The nurse noted that the patient was in the ward at 1am on 4 November. There is no record of Dr C seeing her between midnight and 1am on 4/5 November.
Patient 6: Patient arrived at ECC at 9.30pm on 4 November. She was to be seen by the gynaecology registrar. It seems that she was seen by the gynaecology registrar at 1am because the nurse recorded the event and the patient complained that the examination was painful. The registrar ordered an ultrasound in the morning. There is no record of the gynaecology registrar's examination.

Response from Ms B

The Legal Advisor to the New Zealand College of Midwives responded to the provisional opinion on behalf of Ms B. The Legal Advisor submitted that it was "harsh" to find Ms B in breach of the Code. She noted that the opinion of Ann Yates (Appendix 4) did not support such a finding, and that Ms Yates is experienced and well respected in the midwifery field. The Legal Advisor stated that Ms Yates understood the significance of the presence of a MOSS in this case and that they are "in effect treated as obstetricians". The Legal Advisor suggested that my midwifery advisor, Ms Skinner, may not be familiar with the MOSS system as it does not operate in Wellington where she is based.

The Legal Advisor stated that Ms B was not at any time advised by the DHB that Dr C was under supervision. In her view, Ms B was entitled to treat Dr C (a MOSS) as a person with superior and more specialist knowledge, and did so.

The Legal Advisor stated that the provisional opinion rightly acknowledged the current and very real confusion in maternity services with regard to shared-care arrangements and co-ordination of care, and surrounding responsibility and accountability for patients. Given this confusion, the Legal Advisor submitted that it is "particularly harsh" to hold Ms B accountable "to the degree envisaged" when it is clear that many health professionals in her position would not have done anything differently. The Legal Advisor further submitted that it would be more appropriate for a breach of the Code to be found subsequent to the promulgation of clear rules regarding respective roles and responsibilities in the maternity/obstetric setting.

In relation to the comments about Ms B's use of analgesia and sedation, giving these medications was common practice in such cases at the Hospital amongst both DHB employees and independent midwives. The medication helps primiparous women get a good night's sleep prior to what is often a long day of labour. Ms B does not accept that she left Ms A and went home to sleep. It is standard practice at the Hospital for women to be cared for by hospital midwives until they are in established labour, which often takes many hours. Ms B acknowledged that while Ms A in fact had a precipitate labour, Ms B did not know that when she left to go home. In relation to the time taken to return to the hospital, Ms B was living in a semi-rural part of the country and it could take 30–40 minutes to get to the Hospital. On this occasion she was still on her way home when contacted and asked to return. She immediately turned her car around and returned to the Hospital — it did not take her an hour to arrive back.

The Legal Advisor advised that Ms B has reviewed her practice and has openly acknowledged that she would do things differently next time. This has been a learning experience for Ms B and it seems "entirely unnecessary" to take the matter further by way of referring the case to the Director of Proceedings. The Midwifery Council has considered the case and decided that Ms B does not pose a risk of harm to the public. The Legal Advisor provided a copy of the Midwifery Council letter to Ms B dated 24 June 2005. The letter states that the Council will review the decision once the outcome of my investigation is known. A further reason not to refer Ms B to the Director of Proceedings is the fact that a financial settlement has already been reached between the Ms A, Mr A, Dr C and Ms B.

Ms B is drafting a letter of apology to the family, in the event that she is found to have breached the Code. Ms B recently completed an RANZCOG one-day course on CTG interpretation and is "very open to any further training considered necessary by her profession".

The Legal Advisor submitted that punitive and disciplinary action should be reserved for health professionals whose behaviour is "reckless, unethical, wilful or criminal". Ms B's actions in this case were none of these things and "were made in the peculiar setting of

interface between LMC/obstetrician which seems to beset and create a number of problems in this country".

Response from Waitemata District Health Board
Ms J, General Manager Adult Services, responded to the provisional opinion on behalf of the DHB. Ms J clarified that the primary purpose of the meeting held on 6 November was to commence an initial review into the events surrounding Baby A's death. The meeting was not called to address clinical documentation issues. Ms J explained that until receiving the provisional opinion it was unclear what the issue was regarding the discrepancies in Ms A's medical records. Ms J stated that she had worked hard on behalf of the Board to deal with this tragic situation in an open and transparent way. In her view, "the 'bottom line' remains that [Baby A] should have been delivered earlier".

Independent advice to Commissioner

Obstetric advice
The following expert advice was obtained from Dr William Ridley, obstetrician and gynaecologist:

> "Thank you for your letter dated 2nd March and for the subsequent copy of the clinical notes that were almost as illegible as the first lot. However I was able to sift through them and hopefully have not missed anything (eg, [Ms A's] weight and height — referred to in the report). My report is outlined as below. I have added in my own comments with the background to the case and aspects that I question in my interpretation and answer to your questions.
>
> **REPORT RE EXPERT ADVICE, 04/04652/WS**
>
> **REQUEST —** To provide expert advice on whether [Ms A] received an appropriate standard of maternity care during labour and delivery [on 4/5 November].
>
> In the background I wish to note that the baby was said to be large, but I could see no evidence of glucose tolerance tests performed to help establish potential cause of this. An observation I made is when the Obstetrician, [Dr D], examined [Ms A] a Bishop score of 4 was noted at 1930 hours on [4 November]. There were three critical issues relating to this lady's labour:
>
> 1. There was an almost pathologically precipitate labour from the time of insertion of the prostin at 8.35pm and reaching cervical dilatation at 2200 hours.
>
> 2. CTG certainly whilst being reactive and reassuring to start with became abnormal with a pattern of mixed, late/variable decelerations developing. No tracing for a critical period of time during this rapid dilatation from 2110 to 2212

hours. This can happen with a precipitate labour potentiated by the use of prostin.

3. The use of Syntocinon after a precipitate labour was noted.

Also my additional concerns regarding the CTG tracings are now further described at the risk of repeating myself as bullet points, in order and related to the entries in the patient clinical records.

- No notes entry until 1930.
- CTG performed 11 hours earlier (0830hrs) in the day seemed reactive. No note entry, my interpretation.
- 1930 CTG non-reactive with 1 deceleration.
- 2030 hours further deceleration with some reactivity i.e. accelerations in the heart rate.
- 2110 hours notes CTG now reactive then immediately discontinued to 2257 hours, remembering this is during a time of rapid cervical dilatation with hypertonus and prostin effect and potentially bad effects to the fetus.
- 2140 hours — repeat CTG later [Dr C] but not informed until 1½ hours later.
- Epidural inserted without CTG monitoring.
- CTG clearly abnormal with mixed late decelerations prior to Syntocinon being started.
- 2110 hours note entry says early decelerations, this is a wrong interpretation the pattern to me is one of a mixture of late and variable decelerations.

Advice required: to advise the Commissioner whether in your opinion [Ms B], [Dr C] and Waitemata District Health provided maternity services of an appropriate standard, and in addition provide the following information.

1. **What particular standards apply in this case?**
   Clearly this is a big baby requiring Syntocinon at 41+ weeks. Induction is required but with secondary leading and close monitoring.

2. **In broad terms did the care provided to [Ms A] reach those standards? If not how were the maternity services inappropriate?**
   There is a lack of recognition of fetal distress and the use of Syntocinon augmentation with this lack of recognition, I think was clearly unjustified and clearly inappropriate. There generally seemed to be a lack of careful care at a critical period of time, one between insertion of the prostin and the patient reaching 7cm dilatation, and a lack of haste and urgency at the time when the caesarean section decision was made. The unit appeared to be very busy, from my deduction and from time delays of staff etc., and there was lack of the required monitoring of an induced labour.

3. **Would the CTG tracings indicate fetal distress at any stage of labour?**

My answer is Yes. This was obvious from the CTG tracings when the CTG was applied after the gap from 2130 hours to 2251 hours. However undoubtedly it [fetal distress] was there in the 'gap' time as well.

4. **Would fetal blood samples or fetal scalp electrodes be warranted?**
   My answer is Yes. But even without the fetal scalp blood sample which is not available in all units in New Zealand, the CTG shows clear evidence of fetal distress.

5. **What is the safe delivery option for a late for dates baby and a primigravid woman?**
   Induction is the usual standard of care required at term +10–12 days. It is recognised that 42 weeks is a prolonged pregnancy in this situation.

6. **Comment on the signs of cephalopelvic disproportion (CPD), whether it was considered in this case?**
   Ultrasonic evidence suggested a large baby. The mother's size and height are not clearly recorded in the file notes that I have (refer to my comment re legibility at the beginning of my letter). Facts and my interpretations to note are
   - clearly to me a precipitate labour was unfortunate and would have contributed to this baby's hypoxia,
   - the sudden change in the labour pattern from rapid progress to full dilatation and lack of head descent etc. and poor uterine activity was evidence of CPD,
   - the only comment I could see in the notes in relation to the mother was that she appeared to be moderately obese noted in a comment made by the anaesthetists in their assessment,
   - can only assume that the uterine contraction monitoring was difficult but that is a vague assumption,
   - there was CPD that was not appreciated in the management.

7. **What was the value of the Apgar scores at birth?**
   The numerical value was 1, 4, and 4 at respectively 1, 5 and 10 minutes, which would suggest quite severe asphyxia. These Apgar scores would suggest severe asphyxia confirmed from the low cord blood pH estimations.

8. **Please comment on the uterine monitoring interpretation?**
   This question has already been answered above. As the patient was obese I think that the uterine monitoring was probably difficult and inadequate and was a critical factor in titrating the use of Syntocinon and what had been happening in labour. I assume that there was fetal distress when she was given the epidural.

9. **Please comment on the internal examinations and recordings?**
   Nothing particular but as already stated. To note here that the delays in some of the assessments being made would suggest that the unit was under stress and busy, that there had been a lot of other events occurring, both in the labour ward and the

gynae ward, that involved the registrar, and two the maternity staff that were supplying hospital care, and they were not to be able to give 1 to 1 attention this woman needed in advanced labour.

10. **Should the decision to perform a caesarean section have occurred before 1.25am and if so when should this decision have been made?**
    I think there is little doubt that there is a lack of appreciation of this baby being in trouble and that there were some warnings and clues of this in the CTG pattern. I think the timing of the caesarean section should have been earlier, closer to 11pm, i.e. before the Syntocinon was used, and from the time the caesarean section was decided there should have been less of a delay. Whether this would have made a critical difference is hard to be certain but I think it would have.

11. **Once the decision was made to take [Ms A] to the theatre was the delivery timely?**
    I think probably the decision there is that it was too late, therefore not timely.

In answering all these questions my concern regarding the standard of care that was supplied is —

1. **[MS B]:** For [Ms B] to have left the premises and then be called back a half an hour later. It is possible that at the moment of leaving she still had not had the effect of the prostin, but it is amazing to see in 1½ hours the cervix going from a Bishop score of 4, often considered an unfavourable cervix, to 7cm dilatation. It did seem to take her a long time to return. I therefore remain uncertain as to the wisdom, especially given the apparent busy state of the labour room. Also from the moment [Ms B] was called it seemed to take more than an hour, a long time, but no apparent expression in note as to any urgency.
2. **[DR C]**: [Dr C] should have been at a level of experience to be able to deal with this labour situation, large baby, possibly occipito-posterior position, the use of prostin, interpretation of the tracing etc. However from the notes she seems to have not to have provided an adequate and appropriate standard of care in this situation. I would say she was relatively busy and having to do other work, and it is clear to me that she was unable to attend promptly when requested to do so.
3. **HOSPITAL:** The apparent over busy state of the unit and subsequent risk to patient safety is an issue for the hospital to deal with."

Midwifery advice
The following expert advice was obtained from Joan Skinner, midwife:

"**Name and qualifications**
Joan Skinner RM MA (Applied) I have been a practicing midwife for 27 years in both hospital and independent practice. I am currently a lecturer at the Graduate School of Nursing and Midwifery at Victoria University of Wellington and a consultant midwife. I have been providing midwifery advice for ACC, the Health and Disability Commissioner, the Coroner's Court and the Nursing Council for the past 8 years. I am a reviewer for

the New Zealand College of Midwives' Standards Review Process. I continue to hold an annual practicing certificate and currently offer a locum midwifery service in the Wellington area. I have been asked to provide an opinion to the Commissioner on Case number 04/04652. I have read and agree to follow the Commissioner's Guidelines for Independent Advisors.

Preamble

At the outset I would like to comment that this case shows the extraordinary importance of skilled collaboration once maternity care becomes complex. The midwife, no matter what her employment or LMC status, relies on competent and skilled decision-making on the part of the doctor; the doctor continues to rely heavily on the skilled assessments and decision-making of the midwife. To a great extent this system also provides a two-way back up. When the system works well, if one practitioner fails to appreciate the seriousness of a problem then the other can draw attention to it. In this case it is my opinion that both practitioners failed to appreciate the severity of the baby's condition and the implications of the uterine hyperstimulation, both the precipitate first stage and the inappropriate use of Syntocinon in the second stage. I note that both [Dr C] and [Ms B] have subsequently withdrawn from providing care in similar circumstances.

Having carefully reviewed the documentation provided as detailed above I concur with the summary of the labour and birth provided. My concern about the midwifery care provided by [Ms B] relates to two areas of the care that she provided are directly related to the questions posed above.

Sedation provided after the Prostin insertion

My first concern relates to fact that [Ms B] administered both Pethidine and Halcion to [Ms A] 1 hour after the Prostin was inserted. [Ms A] had Panadol at 2120hrs and ten minutes later was given Pethidine, Halcion and Metochlopromide. Within 1 hour of the Prostin insertion [Ms A] was beginning to have 'niggly pains'. This would indicate to me that there was a possibility that labour would begin quite quickly. [Ms B] appears not to have appreciated this and seemed keen to get [Ms A] to sleep and to go home herself. I think she was too hasty in her post-prostin assessment. The sedation she provided was very heavy. [Ms B] stated in the clinical notes that these medications were for pain relief. If this was so, I fail to see why she also gave Halcion and why she then went home. If [Ms A] was in such pain that Pethidine was required, then [Ms B] should have stayed and should not have given Halcion. My impression is that these medications were probably given to put [Ms A] to sleep as she waited the onset of labour. In my opinion the medications administered were too hasty and too heavy for night sedation even in the presence of 'niggly pains'. If the medications were for pain severe enough to require Pethidine, then [Ms B] should have stayed longer to assess whether in fact the pain relief worked and/or whether labour was beginning. I think [Ms B's] decision-making processes in this instance were not well thought out and her care is below a standard reasonably to be expected. The standard that applies in this case is Standard Six of the New Zealand College of Midwives' Standard for Practice: 'Midwifery actions are prioritised and implemented appropriately with no midwifery action or omission

placing the woman at risk'. I believe [Ms B's] peers would view her conduct with mild disapproval.

Management of Syntocinon and interpretation of CTG

My second concern is the more serious one and relates to [Ms B's] ability to appropriately assess fetal well-being from CTG recordings and to manage a Syntocinon infusion. After Prostin was inserted, [Dr C] requested hourly CTGs 'till a good trace obtained without dips'. The only dip of any interest was as the Prostin was being inserted. In the presence of good reactivity, this is not concerning. The baby at this stage seems to be in good condition. It is very much a normal and reactive trace. A small period of inactivity can be also considered normal especially when it is followed by reactivity. It would seem that there was over-response to a normal trace, and then under-response to the abnormal trace later in the labour. I do not think that Pethidine was contraindicated by the earlier, normal, trace.

[Ms B's] care was complicated by the fact that [Dr C] also seemed to lack the skills required to assess CTG recordings and was, I think, hasty in her decision to commence a Syntocinon infusion. [Ms A's] baby was large and post-mature, and her labour had been precipitate. The baby's descent had not progressed past the ischial spines, although this was not necessarily a problem given that the second stage at 2330hrs (when assessed by [Dr C]) had only been present for 10 minutes. The notes record full dilatation at 2320hrs. In the 25 minutes prior to the Syntocinon being commenced the contractions are recorded on the CTG as being 3–4 every 10 minutes. This does not reflect a slowed labour. I do note however that there were already some worrying decelerations. The labour had already been precipitate and it is difficult to understand why [Dr C] decided to provide yet more stimulation to the uterus. She seemed to think that there were no contractions and ordered a Syntocinon infusion 'as per protocol to get 3/10 contractions'. The infusion, once commenced, needed to be done extremely carefully with a low level of tolerance for discontinuing it should there be any signs of over stimulation of the uterus or of fetal distress. What progressed was anything but. My reading of the CTG would indicate to me that within 10 minutes of Syntocinon having been commenced the contractions were very frequent (almost every minute) and that the fetal heart was not fully recovered after each contraction. In my opinion, by 0030hrs the Syntocinon should have been stopped.

My comments on the actions of [Ms B] from now on must be provided in the context of two scenarios as there is a significant dispute about whether [Dr C] was present between 0015hrs and 0040hrs. [Dr C] denies any interaction at this time. [Ms B] states that [Dr C] was not only consulted but that she attended and was present for 20–30 minutes. There is not sufficient information in the documentation provided for me to determine the probability of whether or not [Dr C] was present during these times.

The first scenario is that [Dr C] was not present but was consulted over the telephone. In this scenario [Ms B] consulted with [Dr C] three times between 2350 and 0120. At approximately 2350 [Dr C] was asked to review the progress and decided to commence a Syntocinon infusion. I am left to wonder how long [Dr C] spent with [Ms A] at this

stage actually palpating the contractions. At 0015hrs [Ms B] again consulted with [Dr C] in view of 'a lack or reactivity'. At this time however there was not only a lack of reactivity but also frequent contractions and significant decelerations. This should have been related to [Dr C] and the Syntocinon infusion should not have commenced. Once the Syntocinon was commenced however, there was uterine hyperstimulation and a deteriorating fetal heart. As stated previously the Syntocinon infusion should have been stopped at this stage and [Dr C] notified of this. However the infusion was continued, and increased, and no further consultation took place for an hour and 10 minutes despite deterioration in the CTG tracing.

The second scenario was that [Dr C] was called at 0015hrs because 'lack of reactivity' and was present until 0040hrs and it is this scenario that poses a very difficult challenge for the midwife. In this scenario [Dr C] was 'happy to continue' with a Syntocinon infusion that was clearly overstimulating the uterus and was present when it was increased to 6mls per hr while the fetal heart was beginning to show signs of severe distress. When she left, saying she would be back soon, the midwife was left to continue the infusion. She actually increased it to 12 mls per hr at 0045 and did not stop it or even decrease it until 0100hrs. By this time the trace has further deteriorated. It seems that in this scenario neither the registrar nor the midwife appreciated the severity of this trace. The midwife had been concerned enough about the trace to summon the assistance of the registrar three times but it seemed that she either did not appreciate the severity of the trace or she felt that it was not her place to challenge the decisions of an experienced registrar who was present and in control of the decision-making. The issue here is whether or not it was reasonable for the midwife not to challenge the decision making of an experienced registrar. Had she appreciated the severity of the trace (which she should have done) I believe that it was her professional duty to say this to the registrar and to document this. In my opinion she should firstly have discussed her ongoing concerns about the trace with the registrar and if the registrar had not agreed with her she should have consulted with the midwife coordinator and requested the consultant be called. This should have happened, at the latest, soon after the Syntocinon was commenced. It seems however that she was somewhat reassured by the presence and decision-making of the registrar and proceeded to continue the infusion despite quite clear indications of fetal distress. In this scenario both professionals have failed to appreciate the implications of the CTG recording.

There is considerable discussion in the documentation provided about the meaning of clinical responsibility. I note that in the opinion of midwife Ann Yates [College of Midwives expert advisor], [Ms B] acted appropriately in that she did consult three times. However I do not entirely agree with her as I think that [Ms B] failed to appreciate the severity of the trace with or without the presence of the registrar. I appreciate the difficulty in challenging the decision of an obstetric registrar but in this case the tracing was so poor that I believe that [Ms B] should have been aware of this and discussed this, firstly with [Dr C], and if needs be with the coordinating midwife and the on call obstetrician. She refers in her documentation to 'lack of reactivity' and 'early

decelerations'. Not once did she document the seriousness of the CTG. It would appear that she did not appreciate it and was reassured by the registrar.

The notion of 'transfer of clinical responsibility' should not be used to pass responsibility for assessments and clinical action on to another health professional. When care becomes complex and medical decision-making is required, the midwife must still be responsible for her own ongoing clinical assessments and actions. In both of the scenarios I have proposed, I believe that the midwife did not practice at a level of skill reasonably to be expected in the circumstance. The standard that applies in this case is Standard Six of the New Zealand College of Midwives' Standard for Practice: 'Midwifery actions are prioritised and implemented appropriately with no midwifery action or omission placing the woman at risk'. In the first scenario, where [Dr C] was not present between 0015hrs and 0040hrs, I believe [Ms B's] peers would view her actions with moderate disapproval. In the second case where [Dr C] is thought to have been present from 0015 to 0040rhs, I believe [Ms B's] peers would view her actions with mild disapproval.

Assessments and Documentation
Apart from the issues mentioned above, [Ms B's] assessments from admission to delivery are of a standard reasonably to be expected. Her documentation is adequate although I do note that it is important to provide detail about what was said in the consultations with medical staff and to detail when they are present, if they have neglected to document this themselves. This omission does not relate to the quality of care provided.

Other areas of concern
There are no other areas of concern."

Code of Health and Disability Services Consumers' Rights

The following Rights in the Code of Health and Disability Services Consumers' Rights are applicable to this complaint:

RIGHT 4
Right to Services of an Appropriate Standard

1) *Every consumer has the right to have services provided with reasonable care and skill.*

2) *Every consumer has the right to have services provided that comply with legal, professional, ethical, and other relevant standards.*

Other relevant standards

Medical Council of New Zealand 'Guidelines for the Maintenance and Retention of Patient Records' (2001):

"Introduction

Records form an integral part of any medical records; they help to ensure good care for patients and also become critical in any future dispute or investigation.

1. Maintaining patient records

(a) Records must be legible and should contain all information that is relevant to the patient's care.

(b) Information should be accurate and updated at each consultation. Patient records are essential to guide future management, and invaluable in the uncommon occasions when the outcome is unsatisfactory."

Ministry of Health Maternity Services Notice issued pursuant to section 88 of the New Zealand Public Health and Disability Act 2000:

"3.0 OBLIGATIONS OF LEAD MATERNITY CARERS

…

3.8 The Lead Maternity Carer will exercise wise clinical judgement about the service s/he provides, taking into account the limits of her or his own competency and the Referral Guidelines. Where a consultation occurs with a Specialist, any decision regarding ongoing clinical roles and responsibilities will be documented and will involve a three way process between the Specialist, the Lead Maternity Carer and the woman concerned. The outcome for the health of the woman and baby will be the paramount consideration.

3.9 Where responsibility for the woman's care transfers to Secondary Maternity after Established Labour, the Lead Maternity Carer will continue to be available to support the woman (except where this is unreasonable because of a lengthy labour or because the Lead Maternity Carer has accompanied the woman by air/road ambulance and the Lead Maternity Carer needs to return in the ambulance).

3.10 Where there is a transfer of care to either the Secondary Maternity or Specialist Neonate service, clinical responsibility for the woman/baby transfers to the Secondary Maternity or Specialist Neonate services until such time as there is a transfer of care back to the Lead Maternity Carer. Any transfer of care will be documented in the clinical notes."

The New Zealand College of Midwives 'Handbook for Practice' (2002) states:

"**Standard six**

Midwifery actions are prioritised and implemented appropriately with no midwifery action or omission placing the woman at risk.

Criteria

The midwife:

- plans midwifery actions on the basis of current and reliable knowledge and in accordance with Acts, Regulations and relevant policies
- ensures assessment is on-going and modifies the midwifery plan accordingly
- ensures potentially life threatening situation take priority
- demonstrates competency to act effectively in any maternity emergency situation
- identifies deviations from the normal, and after discussion with the woman, consults and refers as appropriate
- works collaboratively with other health professionals and community groups as necessary
- has the responsibility to refer to the appropriate health professional when she has reached the limit of her expertise
- can continue providing midwifery care in situations where medical skills are required if this is appropriate
- demonstrates awareness of her own health status and seeks support to ensure optimum care for the woman is maintained
- has easy access to appropriate emergency equipment
- acknowledges every interaction with the woman as a teaching/learning opportunity."

Overview

There are a number of important lessons to be learned from this tragic case, well summarised in the following statement by my midwifery expert, Joan Skinner:

"[T]his case shows the extraordinary importance of skilled collaboration once maternity care becomes complex. The midwife, no matter what her employment or LMC status, relies on competent and skilled decision-making on the part of the doctor; the doctor continues to rely heavily on the skilled assessments and decision-making of the midwife. To a great extent this system also provides a two-way back up. When the system works well, if one practitioner fails to appreciate the seriousness of a problem then the other can draw attention to it. In this case it is my opinion that both practitioners failed to appreciate the severity of the baby's condition and the implications of the uterine hyper-

stimulation, both the precipitate first stage and the inappropriate use of Syntocinon in the second stage. I note that both [Dr C] and [Ms B] have subsequently withdrawn from providing care in similar circumstances."

Opinion: Breach — Ms B

Ms A's complaint raises two issues about Ms B's care: whether her management of the induction and labour were appropriate; and whether she identified fetal distress and transferred labour management to secondary services appropriately.

Labour induction
On 28 October, Ms A was about 11 days overdue with her first baby. He was known to be a large baby and presented a real risk of complications during labour and delivery. Ms B's referral to secondary care services at North Shore Hospital for advice about inducing labour was appropriate.

Following discussions between Dr D (the obstetric registrar), Dr E (the consultant obstetrician), Ms A and Ms B it was decided to admit Ms A to hospital for induction the following evening. Ms B was to manage the induction and labour and, because of the risk of shoulder dystocia (obstructed labour), Ms A was to be monitored closely, with an obstetric registrar in attendance and a paediatric assessment of the baby at birth.

Ms A and Mr A went to the hospital for induction at about 7.30pm on 4 November. Ms B assessed Ms A, commenced continuous CTG tracing at 7.37pm, and discussed the options for induction with Dr D at 8.28pm. Dr D viewed the CTG tracing at that time, but neither she nor Dr E personally assessed Ms A before Dr D prescribed 2mg (the highest dose) of prostaglandin. Ms B noted two uterine contractions, two shallow variable decelerations and a variable fetal heart rate deceleration on CTG. Whether this was discussed with Dr D before the prostaglandin was inserted at 8.35pm is unknown. However, Dr D did personally review the CTG tracing and would have noted the decelerations. Ms B's care of Ms A at this time was appropriate, and in accordance with professional standards.

Monitoring Ms A and response to CTG tracing
Ms B discontinued CTG monitoring at 9.06pm, even though she described the tracing as "non-reassuring" and did not seek a second opinion of the tracing until about 30 minutes later.

Ms A's labour commenced rapidly and she experienced "niggly pains" for which she was given Panadol (at 9.20pm) followed by pethidine and Halcion (at 9.40pm). My expert obstetrician, Dr Ridley, described Ms A's labour as "pathologically precipitate … which can happen with prostin". Yet at this point Ms B chose to hand over to Ms G (hospital midwife) and went home.

My advisors, Joan Skinner and Dr Ridley, questioned whether Ms B's decision to go home was appropriate. Using prostaglandin to induce labour is known to be unpredictable, and mother and baby require close monitoring. Moreover, Ms A's labour was not without risk — she was post dates with her first baby, known to be large — and the effect of the induction was not known at the time Ms B left, when, according to our advisors, Ms A appeared to be in labour. My midwifery advisor commented that it would have been wise to remain until the full effect of the prostaglandin on Ms A's labour was known. I agree.

The sedation administered by Ms B was in excess of what would usually be given simply to relieve pain. As noted by my midwifery advisor:

> "[Ms B] appears not to have appreciated this [rapid onset of labour] and seemed keen to get [Ms A] to sleep and go home herself. … [S]he was too hasty in her post-prostin assessment. The sedation she provided was very heavy. [Ms B] stated in her clinical notes that these medications were for pain relief. If this was so, I fail to see why she also gave Halcion, and why she then went home. If [Ms A] was in such pain that Pethidine was required, then [Ms B] should have stayed and should not have given Halcion. … [Ms B] should have stayed longer to assess whether or not the pain relief worked and/or labour was beginning."

Standard Six of the College of Midwives 'Handbook for Practice' states that a midwife prioritises and implements her actions so that no action or omission places the woman at risk. I share my expert's view that Ms B did not meet this standard.

In my opinion, Ms B's clinical decisions and actions were inappropriate and not of the standard expected of an LMC midwife. Ms B displayed a lack of clinical judgement when she ceased CTG recording, which she had found "non-reassuring", yet waited 30 minutes before seeking a second opinion or discussing this with Dr C. Furthermore, she had not satisfied herself that all was well with the baby, or the effect of the induction, before going home. I accept that Ms B handed over to another midwife, which is common practice for an LMC who intends to return when labour is established. However, in the circumstances, considering that Ms A had been administered pain relief and sedation (which would mask signs of progress of the labour), Ms B should have continued CTG recording and stayed with Ms A until the effects of the prostaglandin, sedation and pain relief were fully known.

In my opinion, Ms B did not manage Ms A's induction with reasonable care and skill, or in compliance with the standards expected of an LMC and, accordingly, breached Rights 4(1) and 4(2) of the Code.

Managing fetal distress and transfer to secondary care

There is a "gap" in CTG recording between 9.07 and 10.57pm (1 hour and 50 minutes) when Ms B returned to the hospital and reconnected Ms A to the cardiotocograph, despite the clear instructions from Dr C to take hourly CTG recordings because of the "non-reassuring" tracing. The CTG was showing signs that all was not well with the baby at 9.06pm when Ms B stopped monitoring and, by 10.57pm, the fetal heart recording had deteriorated further. In Dr Ridley's opinion it was reasonable to assume that sometime

during the insertion of the epidural the baby became compromised, which Ms B failed to recognise.

The College of Midwives' advisor, Ann Yates, stated: "Given the non reassuring nature of the pre-prostin CTG, it would have been prudent to continue monitoring until reassured. Hourly CTGs as requested by [Dr C] may not have picked up any deterioration until too late." Furthermore, I am not satisfied that Dr C's order for hourly CTGs was given on current information. The tape she was asked to review at 9.40pm had been stopped by 9.10pm. The gap in CTG recording may also have missed significant abnormalities, particularly as Dr Ridley noted a mixture of late and early decelerations at 9.10pm and obvious signs of fetal distress when the CTG was reconnected at 10.57pm. In Dr Ridley's view, uterine monitoring was "probably difficult and inadequate and was a critical factor in titrating the use of Syntocinon and what was happening in labour".

Between 10.57 and 11.50pm Ms A's labour had established (she was fully dilated and requiring pain relief), and the CTG recorded contractions at the rate of 3 to 4 every 10 minutes. The baby was showing signs that he was not coping with the labour (a clearly abnormal CTG with mixed to late decelerations) and he had not progressed past the ischial spines. It may have been appropriate for Ms B to encourage Ms A to push at 11.20pm, but she should not have waited 30 minutes or so before seeking a second opinion from Dr C at 11.50pm.

Ms B consulted Dr C at 11.50pm because she was concerned about "decelerations" and "in particular the reduced variability". She claims that she told Dr C "of the possibility that uterine actions were in-coordinate", but there is no record of this conversation. She stated that "the Syntocinon was commenced as per [Dr C's] orders and hospital protocol". However, the hospital protocol warns that Syntocinon should not be administered within six hours of prostaglandin (in this case prostaglandin had been given less than four hours previously) and is contraindicated in the presence of fetal distress. The CTG was abnormal with late decelerations (fetal distress), there were possible signs of CPD (obstructed labour), the labour had been "pathologically rapid", and the uterus did not require any further stimulation. Clearly, Syntocinon was not indicated in this case, and should not have been administered. As noted by my midwifery advisor, the infusion, once commenced, needed to be done extremely carefully with a low level of tolerance for discontinuing it should there be signs of over-stimulation of the uterus, or fetal distress. In fact, there was a conspicuous lack of care. My advisor commented:

> "My reading of the CTG would indicate to me that within 10 minutes of Syntocinon having been commenced the contractions were very frequent (almost every minute) and that the fetal heart rate was not fully recovered after each contraction. … by 0030hrs the syntocinon should have been stopped."

Yet, the Syntocinon was not stopped; rather, it was increased at 12.31am and not reduced until 1am, despite signs of increasing fetal distress.

There are conflicting accounts from Ms B, Dr C and Ms F (Midwife/Delivery Unit Co-ordinator) about what happened between 11.30pm and 1.25am on 4/5 November. Ms B said that Dr C was with her in the birthing room from 12.15am after the Syntocinon was commenced, and reviewed the CTG and told her "she was happy to continue" (documented in the records) and did not leave until 12.45am (by which point the Syntocinon had been increased). According to Dr C, she left the birthing room before midnight to attend patients in ECC and the Maternity and Gynaecology Wards and was not contacted again until 1.25am, by Ms F.

Ms F said that Dr C and Ms B were in the office and asked her to review the CTG at about 11.30pm. Dr C then spent some time with Ms A, inserting a urinary catheter, completing a vaginal examination, fetal assessment and CTG, before returning to the office. She told Ms F that she had ordered Syntocinon because Ms A's contractions had "gone off", and that she was leaving the unit and would return in about an hour.

I am satisfied that Dr C was with Ms A at 11.50pm and that she saw a patient at ECC at 1am. Where she was in between those times has not been established. Irrespective of the conflicting accounts, Ms A was clearly mismanaged over this period, and did not receive services of an appropriate standard.

Ms B argued that, at the relevant time, labour management had become the responsibility of the secondary services obstetrician, and she was only acting under doctor's orders. I accept that Ms B was acting under Dr C's instructions when she set up the Syntocinon infusion and continued to consult Dr C about the augmentation. However, the hospital protocol for induction is quite clear. Ms B had a duty of care to Ms A to personally comply with the protocol or ensure that Dr C was aware of the protocol, rather than simply following doctor's orders.

There is no clear evidence that Ms B had transferred responsibility of Ms A's labour and delivery to secondary services, although Mr A and Ms A understood that responsibility for the labour, from the time Dr C ordered Syntocinon, was shared between the LMC and secondary services. The Maternity Services Notice requires any transfer of care to be documented. No transfer was documented. Dr C had other patients in various parts of the hospital and (according to the records) said she would be back later, and no other midwife was appointed in the meantime. Ms B commenced the Syntocinon, whether or not Dr C was in attendance at the time, and *prima facie* Ms B continued in the role of LMC.

As to the extent to which Ms B was acting on Dr C's instructions, there are two evidential irregularities here. It would be highly irregular for an LMC to document a discussion with a medical practitioner that did not occur. However, it would not be routine practice for an obstetric registrar to wait while an LMC set up an infusion, particularly if busy elsewhere in the hospital. I note that Ms F's recollection supports Dr C's statement that she left the Birthing Suite before Ms B commenced the infusion.

Even if Ms B was acting on Dr C's instructions, there is a point at which a midwife needs to consider her own professional responsibilities to the patient, particularly when the patient's

safety is at risk. Terryll Muir (ACC advisor) and my midwifery advisor, Joan Skinner, noted that Syntocinon should not have been commenced, and that Ms B should have recognised this was an inappropriate decision on Dr C's part and questioned the order. My advisor stated:

> "The midwife had been concerned enough about the trace to summon the assistance of the registrar three times but it seemed that she either did not appreciate the severity of the trace or she felt that it was not her place to challenge the decisions of an experienced registrar who was present and in control of the decision-making. The issue here is whether or not it was reasonable for the midwife not to challenge the decision- making of an experienced registrar. Had she appreciated the severity of the trace (which she should have done) I believe that it was her professional duty to say this to the registrar and to document this. In my opinion she should firstly have discussed her ongoing concerns about the trace with the registrar and if the registrar had not agreed with her she should have consulted with the midwife coordinator and requested the consultant be called. This should have happened, at the latest, soon after the Syntocinon was commenced. It seems however that she was somewhat reassured by the presence and decision-making of the registrar and proceeded to continue the infusion despite quite clear indications of fetal distress. …
>
> The notion of 'transfer of clinical responsibility' should not be used to pass responsibility for assessments and clinical action on to another health professional. When care becomes complex and medical decision-making is required, the midwife must still be responsible for her own ongoing clinical assessments and actions. In both of the scenarios I have proposed, I believe that the midwife did not practice at a level of skill reasonably to be expected in the circumstance."

I note that Ms Yates provided a contrary view when the College of Midwives sought advice. In Ms Yates' opinion Ms B did recognise fetal distress but Dr C did not. Ms Yates appears to be advising that, at this point, Ms B considered that she had handed over care to secondary services, implying that Ms A was the responsibility of Dr C. I do not agree with Ms Yates' view.

I accept Mrs Skinner's advice that Ms B should have questioned Dr C's orders and, if unsuccessful in changing the decision, discussed the matter with Ms F or the consultant. In setting up the infusion, Ms B was taking responsibility for its management and was responsible for Ms A's care. Ms B's management of Ms A at this time fell below the standard of a responsible and careful practitioner.

Summary

The evidence suggests that Ms B had little understanding of what was happening in Ms A's labour from the time the CTG was recommenced at 10.57pm. Ms B contacted Dr C at 11.50pm about decelerations that had been present since 10.57pm, and recorded "early decelerations", which were no different from those occurring over the preceding 10 to 20 minutes; she commenced Syntocinon in the presence of fetal distress and painful precipitate labour even though prostaglandin had been administered less than four hours previously;

and she increased the Syntocinon to stimulate contractions when the CTG showed contractions every two minutes (rather than three contractions in 10 minutes as planned). At 12.15am Ms B sought a second opinion "in view of lack of reactivity". She claimed that she told Dr C about the reduced variability, decelerations, and her concerns about the possibility that the uterine actions were in-coordinate. However, the documentation refers only to "lack of variability".

It appears that Ms B did not have the skills to provide appropriate services in this situation and should have passed Ms A's care to the secondary care team. Ms B's care did not meet professional standards, whether Dr C was in the room or not. In these circumstances, Ms B did not provide midwifery services of an appropriate standard and breached Rights 4(1) and 4(2) of the Code.

Opinion: Breach — Dr C

The issue for determination is whether Dr C appropriately managed Ms A's labour, particularly whether it was appropriate to order Syntocinon augmentation. However, before commenting on Dr C's standard of obstetric care, I will provide my opinion on the discrepancies in the medical records.

Alteration of medical records
Ms B said that after Ms A's Caesarean section she found that the records had been added to, and she reported the matter to Dr E (consultant obstetrician). Dr C acknowledged that her 1am notation in the records and CTG tracing was retrospective and that these times were incorrect. Ms B alleges that Dr C altered the records, particularly the 11.30pm notation, to protect herself.

Ms B stated that the timing of events that occurred between 11.50pm and 12.40am is particularly important. She claimed that Dr C remained in the birthing unit when she (Ms B) set up the Syntocinon infusion at 12.15am. Ms B remained concerned about the abnormalities in fetal heart rate and uterine activity showing on the CTG tracing, and questioned Dr C about whether Syntocinon was appropriate. Ms B said that she questioned Dr C again before increasing the rate, and was told to continue for the time being (as recorded in Ms B's notes). According to Ms B, Dr C knew the Syntocinon had been increased, and knew about the irregularities in CTG recording, as she had been consulted three times.

Dr C stated that she was absent from the birthing unit from about midnight, and did not return until after 1.25am, when she received a telephone call from Ms F (Midwife/Delivery Unit Co-ordinator). Dr C stated: "At 0100hrs I received a call from ECC to urgently review another patient … I went immediately from the Maternity Ward to ECC to see this patient." She was very busy that night but knew she had not seen Ms A or the CTG tracing because

"I always document any review of the CTG, and [I] note that there is no record of this discussion [with Ms B at 12.15am]."

Dr C provided a list of six patients whom she saw between midnight and 1am on 4/5 November. The records of those patients do not substantiate her account. Dr C did see a patient at 10pm 4 November, and the nurse recorded that the gynaecology registrar saw a patient in ECC at 1am, examined the patient and ordered an ultrasound in the morning. There is no other documentation to support Dr C's statement that she was not with Ms A from midnight to 1.40am, as reported by Ms B. Dr C said that this was the first she heard of this allegation even though Ms B raised the issue with the DHB from the time it issued its draft report (released on 18 November).

There is a question of the accuracy of Dr C's documentation. It appears that Dr C had reviewed the CTG tracing on several occasions that night. The only notation she made on the tracing was after she completed Ms A's surgery, when she recorded the times of her assessment of Ms A and the decision to proceed to LSCS. She documented that this took place at 1am but later acknowledged that this was incorrect. It would appear that although Dr C said that she always documents on the tracing after reviewing the CTG, she did not do so that night.

Nevertheless, there are records of discussions between Ms B and Dr C, albeit brief. Ms B recorded discussions with Dr C twice at 11.50pm and before increasing the infusion rate at 12.31am. Ms B submitted that she had no reason to record events that did not happen, since she did not anticipate the adverse outcome. Her records are sequential and, according to Ms B, contemporaneous. In my view, it is unlikely that Ms B would record discussions that did not take place. Dr C's records are not sequential, were added to after the outcome for Baby A was known, and are inaccurate. The evidence is that Ms B was simply following her usual practice of recording events as they happened, and Dr C was not following what she described as her usual practice (which was to record her review of the labour and FHR on the CTG tracing at the time).

In summary, Dr C was responsible for patients in various parts of the hospital and relied on her records to recall the timing of events. She has acknowledged adding to the records retrospectively and incorrectly. Dr C supplied the names of six patients she said she saw between midnight and 1am, but this cannot be substantiated. Only two of the six patients were reported as needing to be seen by the gynaecology registrar that night.

Ms B remained responsible for the management of Ms A's labour and delivery. She stayed with Ms A and documented directly into the records as events happened. There is no evidence that she kept her own set of records, as suggested by Dr C. After the LSCS, when Ms B noted additions to the records and CTG tracing, she talked to Dr E and attended a meeting with senior hospital personnel the following day. Ms B disputed the DHB's investigation conclusions because of the time discrepancies.

The DHB does not accept Ms B's recollection of events. Ms J (General Manager Adult Services) said that the meeting was called to have preliminary discussions about what happened during Baby A's birth. The DHB provided a copy of notes taken during the meeting. It was not, as Ms B claimed, called to discuss Dr C's changes to the records. Ms J informed me that discrepancies in the notes were noted during the investigation rather than being brought to their attention immediately after the LSCS, and only one page (not two) was disputed and discussed at the meeting on the day after Baby A's birth.

Accurate recording of medical records is an ethical obligation in patient care, and an important aspect of professional practice. In some situations it is acceptable to make records retrospectively, but such records must be accurate, and the fact that a retrospective alteration has been made must be noted. I am not satisfied with Dr C's explanation of her documentation and do not accept that her records are an accurate record of the specific care she provided to Ms A on 4/5 November. In my opinion, Dr C did not fulfil her ethical obligation or the Medical Council guidelines, and breached Right 4(2) of the Code.

Labour management

At 9.40pm Dr C assessed Ms A for the first time because Ms B found the CTG "non-reassuring". The CTG had been discontinued at 9.06pm. It showed a mixture of late and variable decelerations. Dr C recorded "CTG showing dips pst [post] prostin but good pick up. P[plan] CTG hourly, till good trace obtained without dips". It would appear that both Ms B and Dr C failed to appreciate the significance of the tracing. Dr C did not seek a recent recording to assess the present situation. However, she did recommend hourly CTG recordings.

At 11.50pm Dr C was called to assess Ms A for the second time. Dr C said that she found Ms A was now fully dilated with the baby's head at the pelvic outlet; the uterine contractions "had become infrequent and not detectable on palpation" and "CTG showed some decelerations that I described as 'dips on pushing' in the notes. These occurred only on pushing and the fetal heart rate recovered quickly." Dr C attributed the general slowing down of uterine activity to the pethidine administered to Ms A at 9.30pm and the effect of the epidural analgesia. She ordered Syntocinon because she "did not consider any other intervention necessary".

There is consensus of expert opinion (supported by the DHB protocol) that the use of Syntocinon was contraindicated in this case because prostaglandin had been administered less than four hours earlier and there were signs of fetal distress. Between 8.50pm and 9pm there was some evidence of fetal compromise, and clear deterioration in the baby's ability to cope between 10.57 and 11.10pm. There was also evidence of cephalopelvic disproportion (CPD). Dr Ridley explained that signs of CPD — sudden change in labour pattern from rapid progress to full dilatation, the baby's head not descending into the pelvis, and poor uterine activity — were present and not recognised. In his view "the use of Syntocinon augmentation with [the] lack of recognition [of fetal distress] … was clearly unjustified and clearly inappropriate".

Professor Stone provided expert advice to Ms A and Mr A. He stated that the uterus had been very efficient at achieving rapid dilatation and pushing the baby's head to the ischial spines, fetal heart monitoring was not normal, and the position of the baby had not been established or the presence of "moulding" noted. He could not understand why Dr C ordered Syntocinon. The use of Syntocinon should only be considered once the baby's welfare is established and when the problem is thought to be insufficient uterine action. In this case there had not been prolonged second stage, and Professor Stone wondered if "[Dr C] was attempting to rotate the baby's head into a position for delivery".

Dr C was sufficiently qualified and experienced (as an obstetric registrar of four years' experience) to handle this situation but it would appear that her clinical decision-making failed to take into account the overall situation. I accept that she was particularly busy that night, attending to patients in various parts of the hospital, without the assistance of a house surgeon and relying on the LMC to contact her when necessary. This cannot disguise her failures. Dr C did not comment at all on uterine activity, did not correct Ms B's interpretation at 9.40pm, and misread the tracing at 11.50pm. She seemed to have had no clear picture of the baby's position, did not comment on CPD and uterine hypertonia until 1.25am, and (according to Professor Stone) was unclear about what she was trying to achieve when she prescribed Syntocinon. She failed to indicate clearly the urgency of the Caesarean section.

In my opinion, Dr C failed to provide maternity care of the standard expected of an obstetric registrar with four years' experience, and breached Right 4(1) of the Code.

No further action — Waitemata District Health Board

As a health care provider, the DHB is subject to the Code, and had a duty to provide Ms A with maternity services of an appropriate standard.

Delay in Caesarean section
In Dr Ridley's opinion, the decision to deliver Ms A's baby by Caesarean section should have occurred before Syntocinon augmentation commenced. Dr Ridley further noted that there was "a lack of haste and urgency at the time when the Caesarean section decision was made". Dr Ngan Kee advised ACC that the delay (from decision to carry out a Caesarean section to delivery) was "unacceptably long".

The DHB protocol on Acute Obstetric Cases required that in obstetric cases categorised as "immediate" the baby should be delivered within 20 minutes, and in "urgent" cases the baby should be delivered within 40 minutes. Severe fetal distress is categorised as an obstetric emergency. In fact, it took at least 51 minutes from the decision to carry out a Caesarean section (made at around 1.40am) until delivery (at 2.31am).

It is not clear whether Dr C considered that Baby A's delivery should be categorised as "immediate" or "urgent". The only indication is the operation report noting "emergency LSCS". There is evidence that Dr C did not fully appreciate the severity of fetal distress, and her documentation throughout the evening provides little explanation of her understanding of what was happening with Ms A's labour or the degree of fetal compromise.

The only evidence of delay attributable to the DHB's system is the delay in the theatre orderly bringing Ms A to theatre, once Dr C called the anaesthetist and theatre staff. The audit findings referred to by Dr C indicate that "decision to delivery times" for Caesarean sections at the Hospital routinely exceeded DHB guidelines. This is of concern. However, there is insufficient evidence to conclude that the DHB breached the Code in this case.

Vicarious liability

In addition to any direct liability for a breach of the Code, employing authorities may be vicariously liable under section 72(2) of the Health and Disability Commissioner Act 1994 for acts or omissions of their employees or agents. Under section 72(5) it is a defence for the employing authority to prove that it took such steps as were reasonably practicable to prevent the employee from doing or omitting to do the thing that breached the Code.

Ms B

Ms B is an independent midwife and was working under an access agreement with the DHB at the time of these events. I note that the DHB access agreement states:

> "**2.3 Relationship between the Maternity Facility and the Practitioner**
>
> The relationship between the Maternity Facility and the Practitioner gives the Practitioner access to the Maternity Facility upon these terms and conditions and is not to be construed as one of employment or a contract for service by the Practitioner. The Maternity Facility shall not inquire into or specify matters relating to the operation or administration of the Practitioner's practice.
>
> **2.4 Policies & procedures**
>
> All relevant administrative policies of the Maternity Facility are to be available to the Practitioner in the facility. Any clinical policies will be developed and agreed by both the Maternity Facility and the Practitioner (or by a representative of the Practitioner's professional organisation)."

It appears that Ms B was not regulated by the DHB policies. It is clear that Ms B was not an employee of the DHB, nor do I consider that there was a relationship of agency (expressed or implied) between Ms B and the DHB. Accordingly, the DHB is not vicariously liable for Ms B's acts and omissions in this case.

Dr C
Dr C was employed by the DHB at the time of these events. The DHB is therefore potentially vicariously liable for her acts and omissions. Dr C had general registration and therefore required oversight by a senior obstetrician. In fact it was the DHB's obstetrician, Dr K, who advised the Medical Council that Dr C was not at the level of an independent obstetrician but was working well in a supervised environment. In Dr K's opinion Dr C was competent to practise at a MOSS/obstetric registrar level and it was in this capacity that she was employed by the DHB.

It has been submitted that Dr C was too busy to accurately assess and comprehend what was happening with Ms A. She was on duty for the fifth night in a row, and must have been tired. Dr C was the only obstetric registrar on duty on 4/5 November and did not have the assistance of a house surgeon. She saw patients in the Emergency Care Centre (ECC), Maternity Ward, Gynaecology Ward and Birthing Suite, all of which were in different parts of the hospital. Dr C saw Ms A for the first time at 9.40pm on 4 November. Ms A had been under the medical oversight of Dr D (obstetric registrar). Dr C did not receive any information about Ms A from Dr D.

According to Dr C, these tragic events led to the DHB employing a full complement of house officers on a 24-hour call "as they recognised the workload at night was excessive for one doctor".

Dr C had worked as a MOSS/obstetric registrar for four years and was considered a senior registrar at North Shore Hospital. However, Dr C's decision to augment Ms A's labour (based on her assessment of Ms A and an incorrect interpretation of the CTG recordings) departed from the DHB's guidelines. A consultant, Dr E, was available on call if Dr C needed assistance. Given that the DHB had guidelines in place and Dr C was aware of them, and that on-call consultant support was available, I am (with some hesitation) prepared to accept that the DHB had taken such steps as were reasonably practicable to prevent Dr C's omissions. Accordingly, the DHB is not vicariously liable for Dr C's breach of the Code.

Other comments

Departures from DHB policies
At the time of these events, the DHB had in place a number of policies setting out some of its requirements for induction and labour management. Its policy for Induction of Labour states that consultant obstetricians "assume clinical responsibility for all inductions" and that women being induced "should be reviewed by the registrar or consultant obstetrician on call before the administration of prostaglandin". Dr D (obstetric registrar) did not personally assess Ms A (but did review the CTG tracing) before she ordered the higher dose of prostaglandin, relying on the LMC midwife's assessment.

The relieving hospital midwife (Ms G) found Ms A in acute distress, 7cm dilated and requesting epidural analgesia. Epidural analgesia has the potential to change the normal physiology of labour and delivery for mother and baby. The midwife listened to the FHR but she did not record a current CTG and, it appears, did not check the previous tracing (showing signs of fetal distress) recorded almost one hour previously, despite Waitemata DHB policy (based on College of Anaesthetists' guidelines) which notes that the stage and progress of labour can influence fetal physiological processes. It is well known that epidural analgesia can have harmful effects on the baby. It would surely have been prudent to carefully check that the fetus could cope with the procedure.

Dr C gave permission for an epidural over the telephone without assessing Ms A's suitability or the baby's welfare. No CTG was recorded. Had a CTG been taken before the epidural was inserted, fetal distress might have been detected earlier.

In relation to the decision to commence Syntocinon augmentation, the DHB policy lists four contraindications to oxytoxin augmentation, two of which were present: a CTG that was not normal, and prostaglandin administered less than six hours beforehand. The policy also lists five precautions, two of which were evident or needed to be considered: suspected CPD and intact membranes. The policy further states that the lie and position of the baby should be recorded. This did not occur.

In relation to uterine hyperstimulation, the DHB policy defines hyperstimulation as contractions occurring every two minutes or more frequently or lasting longer than 70 seconds, and states that in cases of rapid dilatation after prostaglandin insertion, hyperstimulation should be suspected. In cases of hyperstimulation of the uterus, the Syntocinon infusion should be decreased or stopped, and steps taken to deliver the baby if compromised. This did not occur.

Collective responsibilities and lack of clarity

The DHB policies on management of labour in place at the time set out some of the responsibilities applicable in this case. The DHB Induction of Labour policy is consistent with the Maternity Services Notice, which states that the LMC *must* recommend specialist consultation in level 2 cases: large for dates baby, a maternal age greater than 37 years, gestation more than 37 weeks, and induction of labour. After consultation with secondary services there is no *requirement* to transfer patients to the responsibility of secondary services. The LMC retains responsibility for development of the labour plan and "during normal labour". However, normal labour by definition does not include induction. In this case, Ms B referred Ms A to secondary services then resumed responsibility after the consultation.

I acknowledge Professor Stone's comments on failure of co-ordination of care and confusion about who was responsible for Ms A. These issues are not confined to Waitemata DHB and are relevant to maternity services throughout New Zealand.

I intend to send a copy of this report to the Royal Australian and New Zealand College of Obstetricians and Gynaecologists and the New Zealand College of Midwives with a

recommendation that they develop a joint statement to their professions on primary, secondary and shared maternity care responsibilities.

Access agreement
Ms B had an access agreement with Waitemata District Health Board, granting her access to the Hospital's maternity facilities. The agreement was in the standard form specified in the Ministry of Health Maternity Services Notice (see Appendix 5).

I find it concerning that under the agreement, "[t]he Maternity Facility shall not inquire into or specify matters relating to the operation or administration of the Practitioner's practice". The maternity facility's policies are "available" to the practitioner, but she or he is not required to comply with them. Indeed, the only "safety" obligation imposed on the practitioner by the access agreement is to ensure the "cultural safety" of the woman.

The current approach puts practitioner autonomy ahead of patient safety. It is artificial to think that midwives and other lead maternity carers who use public hospital maternity facilities to deliver babies can function (legally or practically) as "independent" practitioners. As this case demonstrates, there needs to be a high level of co-operation and co-ordination between the LMC and secondary maternity services. This principle is affirmed in Right 4(5) of the Code of Consumers' Rights, which states that "[e]very consumer has the right to co-operation among providers to ensure quality and continuity of services".

It may be specified in the national access agreement, and accepted wisdom amongst maternity service providers, that public hospitals that grant access to independent practitioners have neither the power nor the responsibility to ensure that the practitioner is clinically safe and competent. However, it is my view that this blinkered approach is a disservice to maternity service consumers in New Zealand. Women in this country deserve better.

I note that under the access agreement, the LMC is "fully accountable for his/her own professional practice" and is required to comply with all relevant statutes and regulations. I appreciate that the Midwifery Council has regulatory oversight of all registered midwives, and that the Health Practitioners Competence Assurance Act 2003 provides "mechanisms to ensure that health practitioners are competent and fit to practise their professions" (section 3(1)). I also realise that the national Maternity Services Notice requires an LMC to "exercise wise clinical judgment about the services s/he provides, taking into account the limits of her or his own competency and the Referral Guidelines" (clause 3.8). However, I do not regard these various mechanisms as adequate protection.

District Health Boards should be empowered to ensure that an individual LMC is competent to provide maternity services at a maternity facility in the same way as a private hospital "credentials" individual surgeons and anaesthetists before they are granted "visiting privileges" at the hospital. The DHB should be able to require the provision of information about the LMC's practice, to satisfy itself about the practitioner's competence. LMCs

should be specifically credentialled to undertake particular procedures that carry greater risk, such as managing induction of labour or the use of prostaglandins.

I recommend that the Ministry of Health review the national maternity services access agreement to ensure that it specifies:

1. the duty of the LMC to ensure the clinical safety (not just the cultural safety) of the woman and baby;
2. the duty of the LMC to work co-operatively and collegially with secondary maternity services to ensure that the woman and baby receive well co-ordinated, high quality care;
3. the duty of the LMC to comply with the DHB's information and credentialling requirements;
4. the duty of the LMC to comply with all relevant DHB policies and procedures; and
5. the duty of the LMC to participate in relevant DHB quality assurance, audit and review processes.

Actions taken

Ms B
Shortly after these events, Ms B sought professional review of her practice. I note that Ms B has withdrawn from providing maternity care to women requiring Syntocinon augmentation. I understand that Ms B has reviewed her practice in light my findings and the experts' advice, and taken re-education programmes on CTG interpretation.

Dr C
Shortly after these events, Dr C was transferred out of the acute obstetrics roster and now works duty hours in the colposcopy clinic and family planning. Dr C has apologised to Ms A and Mr A. Dr C has re-evaluated her practice and made major changes to her employment.

Recommendations

Ms B
I recommend that Ms B:

- apologise in writing to Ms A and Mr A for breaching the Code. The apology is to be sent to this Office and will be forwarded to Ms A and Mr A

- confirm that she will provide the DHB maternity facility where she currently has an access agreement with a copy of this report.

Dr C
I recommend that, should Dr C decide to practise acute obstetric care, she obtain supervision from the Royal Australian and New Zealand College of Obstetricians and Gynaecologists, to oversee her proficiency in CTG monitoring and interpretation and her record-keeping.

Colleges
I recommend that the Royal Australian and New Zealand College of Obstetricians and Gynaecologists and the New Zealand College of Midwives develop a joint statement to their professions on primary, secondary, and shared maternity care responsibilities.

Ministry of Health
I recommend that the Ministry of Health review the national maternity service access agreement to ensure that the agreement specifies the matters noted at page 43 above.

I recommend that the revised access agreement be implemented nationally by 1 July 2006.

Follow-up actions

- A copy of this report will be sent to the Medical Council of New Zealand, the Midwifery Council, the Royal Australian and New Zealand College of Obstetricians and Gynaecologists, the New Zealand College of Midwives, the Minister of Health, the Director-General of Health, the Perinatal and Maternal Mortality Review Committee, and the Auckland Coroner.

- A copy of this report, with details identifying the parties removed (except North Shore Hospital and Waitemata District Health Board), will be sent to all District Health Boards, the Royal New Zealand College of General Practitioners, the New Zealand Medical Association, and the Maternity Services Consumer Council, in light of the issues of national importance relating to maternity services.

- A copy of this report, with details identifying the parties removed (except North Shore Hospital and Waitemata District Health Board), will be placed on the Health and Disability Commissioner website, www.hdc.org.nz, for educational purposes.

Appendix 1 — Report from Dr Digby Ngan Kee to ACC

"INTRODUCTION

[Ms A] was in her first pregnancy and was under the care of an independent midwife, [Ms B]. Her pregnancy had progressed normally until she became post-term. She was then referred for consultation to the antenatal clinic at North Shore Hospital and was seen at 41 weeks and 4 days. [Ms A] saw [Dr D], Obstetric Registrar [3 November]. Induction of labour was discussed and [Ms A] was booked for induction on [4 November] under the care of her midwife.

[Ms A] was admitted to the Delivery Suite at North Shore Hospital at 1930 hours on [4 November]. She was assessed by [Ms B] who noted that [Ms A] had had a show, and that there was a history of possible rupture of membranes at 1130 AM. However no liquor was seen on speculum examination. A vaginal examination revealed a relatively unfavourable cervix with a bishop's score of 4. The findings were discussed with the registrar, [Dr D] who advised the insertion of 2mg of Prostin E2 gel. This medication was inserted at 2035 hours. A CTG was carried out prior to insertion of prostaglandin and revealed three small decelerations. The baseline rate was normal, with normal reactivity. There is no indication in the notes that [Ms B] communicated the presence of these decelerations to [Dr D] at the time.

At 2140 hours [Ms B] consulted with the Registrar, [Dr C]. [Dr C] noted that there had been some decelerations on the CTG following insertion of the prostaglandin, but that there had also been a good recovery of the fetal heart. She requested hourly CTG's until labour was established and then continuous monitoring. At this point [Ms B] handed over care to the hospital staff and left the delivery unit. It appears that [Ms A] began to labour rapidly, and was noted by the hospital midwifery staff to be very distressed at 2200 hours. Vaginal examination revealed [Ms A] to be 7cm dilated. [Ms A] requested an epidural, and [Ms B] was called back to the delivery unit. She arrived back at 2235 hours.

An epidural block was inserted and the CTG monitoring commenced at 2257 hours. This trace revealed a normal baseline of 140beat/min with frequent variable decelerations. At 2320 hours [Ms B] carried out a vaginal examination and found that [Ms A] was fully dilated with the head at the level of the ischial spines. She was urged to push at this point and pushing was commenced at 2330 hours.

At 2350 hours [Ms B] asked [Dr C] to review progress. [Dr C] carried out a vaginal examination and confirmed the earlier findings. [Dr C] thought that the CTG was satisfactory and felt that the contractions were becoming infrequent. At this point the CTG revealed a normal baseline with frequent variable decelerations. [Dr C] advised a Syntocinon infusion as per protocol to get 3 contractions in 10 minutes. She also advised [Ms B] to contact her, or [Ms F], the senior secondary care midwife if there were any concerns about the fetal heart. [Ms B] recorded that [Dr C] would review in 1 hour.

[Ms B] commenced the Syntocinon infusion at approximately 0010 hours. At this point the CTG tracing shows a change from the previous pattern. The baseline had risen to 150 beats/min with reduced variability. The variable decelerations had become broader and deeper, and had begun to exhibit delayed recovery to the baseline (late decelerations). These changes were evident prior to commencement of the Syntocinon. The notes indicate that at 0015 hours [Ms B] was concerned about a lack of reactivity in the CTG and discussed this with [Dr C]. She recorded that [Dr C] advised to continue at present. However this discussion is disputed by [Dr C] who is adamant that she was not called by [Ms B] following commencement of the Syntocinon.

[Ms B] increased the Syntocinon infusion rate at 0031 hours and 0045 hours as per protocol. During this time the CTG shows broadening and deepening of the decelerations with continuing delayed recovery. At 0100 hours [Ms B] reduced the Syntocinon dosage as she noted more prolonged decelerations. The CTG at this point shows broad late decelerations with a falling baseline. There is some recovery when the Syntocinon dosage is reduced but the decelerations are still broad and late. At 0120 hours [Ms B] recorded that the CTG still shows early decelerations. She asked the Delivery Suite coordinator, [Ms F] to review the tracing at this point. [Ms F] was concerned about the tracing and called [Dr C] to review the situation.

[Dr C] returned immediately and arrived at 0125 hours. She assessed the situation and advised proceeding to an emergency Caesarean section on the basis of fetal distress, a big baby and cephalopelvic disproportion. The Syntocinon infusion was stopped and arrangements made to carry out a Caesarean section under epidural anaesthesia. [Ms A] was transferred to theatre and the Caesarean section commenced at 0220 hours. [Baby A] was delivered at 0231 hours and was immediately unwell. [The paediatrician] notes that the baby was floppy and had no respiratory effort. The initial heart rate was less that 40 beats/min. The baby was resuscitated with bag and mask ventilation and was intubated at 10mins of age. Apgar scores were assessed at 1 at 1 minute, 4 at 5 minutes and 4 at 10 minutes. The arterial cord gas revealed a pH of 6.94 with a base excess of –15.5.

[Baby A] was admitted to the neonatal unit and was placed on mechanical ventilation. At one hour of age he was very jittery, with increased tone in his body and limbs and clonus in his hands and feet. The baby's condition was thought to be consistent with severe hypoxic ischaemic encephalopathy and arrangements were made to transfer the baby to another public hospital's neonatal intensive care unit. The infant remained very unwell and an MRI scan was carried out on […] that revealed extensive bilateral acute ischaemia involving the cerebral cortex, basal ganglia and brainstem. After discussion with the parents intensive care was withdrawn at 3 days and 9 hours. The infant subsequently passed away.

A pathologist carried out a post-mortem examination on the instruction of the coroner. Her general conclusions were that the brain and other organs showed signs of acute, extensive, hypoxic ischaemic injury. The pathologist also concluded that the baby was probably in good condition at the commencement of induction, and that the hypoxic injury occurred during labour and delivery.

In view of these events [Ms A] has made a claim for medical misadventure. She desires compensation including loss of wages, funeral costs and a lump sum. She also has concerns about the standard of care she received at North Shore Hospital, and believes that the decision to deliver her baby by Caesarean section was made too late.

Has physical injury occurred as* a *result* of *medical treatment?

[Ms A's] pregnancy appeared to progress normally, and a post dates assessment revealed a normal CTG. The CTG carried out prior to the administration of prostaglandin did reveal some small decelerations, but the baseline was normal with normal reactivity. The decelerations were probably due to oligohydramnios resulting from placental dysfunction and subsequent cord compression. There were, in my opinion no indications that [Baby A] was significantly compromised or hypoxic prior to induction of labour.

[Baby A] was born asphyxiated and severely acidotic. He subsequently suffered from hypoxic encephalopathy resulting in death. This is clearly an injury that I believe is due to the medical treatment his mother received.

[Ms A] was induced with prostaglandin gel, which resulted in a precipitate labour. She progressed from 1–2cm dilated to full dilatation in a little under 3 hours. It is probable that the precipitate labour produced some degree of fetal compromise that resulted in the subsequent CTG abnormalities. The level of compromise was then compounded by subsequent events.

Syntocinon augmentation was commenced when the CTG was non-reassuring (Rising baseline and severe variable decelerations with delayed recovery). It is likely that the increased contractions resulting from the Syntocinon infusion produced further fetal compromise and contributed to [Baby A's] injury. The Syntocinon dosage was increased, and the CTG became even more abnormal until a decision was made to carry out a Caesarean section 74 minutes after the commencement of the Syntocinon infusion.

Once the decision to carry out a Caesarean section had been made, a further 66 minutes elapsed before the baby was delivered. There is no clear reason for this delay, but I believe this period is unacceptably long, given the evidence of severe fetal distress on the CTG. The American College of Obstetricians and Gynaecologists have a benchmark of 30 minutes maximum until the fetus is delivered following a decision to carry out an emergency Caesarean section. The National Health Service in the UK has also published a report stating that a 30min decision delivery time is an acceptable audit standard (1). The Royal Australasian College of Obstetricians and Gynaecologists takes a more pragmatic approach, stating that each case should be managed according to the clinical merits of urgency. Waitemata Health's own guidelines state that an immediate Caesarean section should be carried out within 20 minutes and urgent Caesarian section within 40min. Clearly their own guidelines were not adhered to in this case.

It is likely that [Baby A] was neurologically intact prior to induction, and that the induction of labour, Syntocinon augmentation and delay in carrying out a Caesarean section were

largely responsible for his injury. Furthermore if the decision to carry out a Caesarean section had been made earlier, there is a very high probability that [Baby A] would not have suffered any neurological damage.

It is therefore my opinion that, on the balance of probabilities the injury [Baby A] received (hypoxic encephalopathy), was the result of medical treatment.

Was a registered health professional involved in the provision of treatment?

The medical treatment that resulted in [Baby A's] injury was given by [Dr C], Obstetric Registrar, and Midwife [Ms B]. Both are registered health professionals.

If so was the injury caused by medical error on the part of a registered health professional?

In my opinion, medical error on the part of [Dr C] and [Ms B] is largely responsible for the injury [Baby A] received. The decision to induce labour with prostaglandin gel was reasonable in view of the cervical score. Precipitate labour resulted, but it is well known that response to prostaglandin is unpredictable. Monitoring following insertion of the prostaglandins and once labour commenced was adequate, and until full dilatation was reached I do not believe that there was any clear indication to intervene.

I believe that the first error was [Dr C's] decision to commence a Syntocinon infusion at 2335 hours. When looking at the overall picture of the labour there are clear indicators of abnormality, and a prudent course would have been to carry out a Caesarean section at that stage. [Ms A] was significantly post-term with a large baby by clinical and ultrasound assessment. A CTG prior to induction was abnormal with small decelerations and following induction no significant loss of liquor per vaginum was noted. This is an indication of oligohydramnios resulting from placental dysfunction. [Ms A] then had a precipitate labour that would have further impaired placental function and compromised the baby. When full dilatation was reached the head was high and the contractions began to diminish. This is a pattern of events that can indicate cephalopelvic disproportion. At this point the CTG tracing was also showing frequent, severe, variable decelerations. This is a suspicious tracing and taking into account the other adverse fact I believe it was unwise of [Dr C] to have recommended a Syntocinon infusion.

The second error is [Ms B's] interpretation of the CTG tracing in conjunction with commencement, and then increase in dosage of the Syntocinon infusion. Between the time that [Dr C] carried out her assessment and the time that [Ms B] commenced the Syntocinon infusion there is a clear deterioration in the CTG tracing. The decelerations had by this stage become more severe with late recovery, which is clearly non-reassuring. The Syntocinon infusion should not have been commenced in view of this tracing. The Waitamata Health protocol for Syntocinon infusion states that a contraindication to an infusion is fetal distress, and that a prerequisite for a Syntocinon infusion is a normal CTG. Furthermore despite a persistent and worsening pattern of late decelerations [Ms B] increased the Syntocinon dosage, resulting in further deterioration in the tracing and probable fetal compromise.

There is a discrepancy in the record of events in that [Ms B] recorded that she had rung [Dr C] about reduced variability on the CTG tracing and that she was told to continue. [Dr C] denies having received such a call. Regardless of this issue, at 0120 hours [Ms B] records that the CTG tracing shows early decelerations. This is a clear misinterpretation of the CTG, as late decelerations had been present for some time. It is only at 0120 hours that [Ms B] asks the delivery suite coordinator to review the tracing and the seriousness of the CTG abnormality is recognised.

If [Ms B] was managing a Syntocinon infusion I believe that it should have been within the scope of her practice to recognize the abnormalities in the CTG, which by 0100 hours had reached an ominous pattern. If she was unsure or uneasy about the tracing she should have handed over to a more experienced secondary care midwife and definitely not have increased the Syntocinon dosage.

Both [Dr C] and [Ms B] made serious errors in judgement during their management of [Ms A's] labour. These errors in judgement, in my opinion, resulted in severe fetal compromise and the injury sustained by [Baby A]. On balance there was a failure of health professionals ([Dr C] and [Ms B]) to observe a standard of care and skill reasonably to be expected in the circumstance.

Are there any issues of competency, which ACC needs to refer to the relevant professional body and the Health and Disability Commissioner for investigation?

I believe that the errors and their consequences are of such a serious nature that [Dr C] and [Ms B] should have their competency as health professionals reviewed by their relevant professional bodies and/or the Health and Disability Commissioner.

SUMMARY

Prior to labour [Ms A], in all probability had a healthy fetus. Medical errors in the management of her labour resulted in severe injury to her fetus and death. Different decisions by her medical professionals, and earlier Caesarean section might well have resulted in the birth of a healthy fetus. It is my opinion that [Ms A's] claim should be accepted on the basis of medical error.

REFERENCES

1. Caesarian section. Clinical guideline — NHS national institute for clinical excellence. 2004. (www.nice.orq.uk/CGO13NICEquideli)
2. Decision to delivery interval for Caesarean section, RANZCOG statements November 2002."

Appendix 2 — Report from Terryll Muir to ACC

"Thank you for the request for independent advice on a medical misadventure claim regarding:
[Baby A] DOB: [5 November]
Date of injury: [5 November]
Medical specialty: obstetrics & midwifery

I have reviewed this claim with reference to sections 32–34, 38, 62 and 284 of the Injury Prevention, Rehabilitation and Compensation Act, 2001.

Background: As there are numerous issues in this case I have made some comments in bold while discussing the background information.

[Ms A] is the mother of [Baby A]. [Baby A] was [Ms A's] first child. She was cared for during her pregnancy and birth by her Lead Maternity Carer [Ms B]. [Ms B] is a registered midwife. Two obstetric registrars at North Shore hospital, [Dr D] and [Dr C] also provided care.

The pregnancy was uneventful except for a suspicion that the baby was large. [Ms B] consulted with [Dr D] regarding the induction of labour. [Ms A] was induced at 41.3 weeks gestation with 2mg prostaglandin gel.

The baby was known to be large, [Ms A] was now 10 days overdue, the decision to induce labour was an appropriate one.

[Ms A] was admitted to the Birthing Suite at 1930 hours [4 November] for the induction. [Ms B] examined her and after a consultation with [Dr D] a decision was made to start the induction with 2mg prostaglandin gel.

This decision was appropriate given the circumstances but it is often recommended to give 1mg as an initial dose to avoid hyperstimulation in those individuals who are sensitive to prostins.

A CTG was taken prior to the insertion of the prostaglandins. 2035 hours — the prostins were inserted. The cervix was noted to be 1½ cm dilated at this time and the fetal head was at station –2. [Ms A's] blood pressure (BP) was 130/80. A CTG was taken after the prostin insertion. There were three decelerations noted on the CTG during and immediately following the prostins being inserted. The one at 2033 hrs was attributed to [Ms A] lying on her back during the insertion, the other two were at 2043 hrs and 2047 hrs [and] are not recorded as decelerations.

The protocol for induction of labour was followed, the linking of the deceleration to Posture is common and acceptable. The other two decelerations were not related to Posture.

2100 — [Dr C] came on shift.

2110 hours — [Ms B] prescribed and administered 100mg pethidine, maxolon 10mg and halcion 0.25mg to [Ms A] to help her cope with the discomfort from the prostins and to give her some sleep.

2130 hours — [Ms B] handed care over to the hospital staff until labour established.

2140 hours — [Ms B] consulted with [Dr C] as she was unhappy with the CTG tracing. The poor trace was attributed to the pethidine given and the advice from [Dr C] was that the CTG was to continue until it improved.

2200 hours — [Ms A] was becoming very distressed and requested an epidural. [Ms G], a Core midwife, examined [Ms A], she was now 7cm dilated. [Ms F], another core midwife contacted [Ms B] and a decision to have the epidural was made. [Ms B] was on her way back.

2245 hours — the epidural was sited. The CTG was put back on at 2157 hours.

The care given is appropriate, it is usual practice for a CTG not to be connected during the insertion of an epidural as the straps cover the insertion site.

2310 — [Ms B] noted early decelerations. [Ms B] turned [Ms A] onto her left side. She also comments that the epidural was working well.

The Waitemata DHB policy for 'monitoring the fetal heart in labour' states as action 1: 'consider any recent action — epidural top-up, change or position and act accordingly — increase fluids, change position etc.' as an immediate action if there are signs of severe fetal distress. The treatment provided by [Ms B] was appropriate.

2320 hours — [Ms B] examined [Ms A] and found her to be fully dilated. The fetal head was at station 0, which indicated the baby's head had descended in the pelvis. The CTG showed frequent decelerations from 140 ↓ 80 and frequent contractions.

[Ms A] has progressed precipitately, that is much faster than you would normally expect. The precipitate labour is probably a result or hyperstimulation due to the prostaglandins.

2330 hours — [Ms B] was getting [Ms A] to push because of the decelerations. BP — 130/80.

If fetal distress is more than transient, delivery will be expedited (Myles, 1999). It is usually recommended to wait for at least an hour in second stage prior to pushing when a woman has an epidural sited. As there is no pain, the contractions are used to bring the baby as low in the pelvis as possible before pushing is initiated. It is recommended to do this when both the conditions or the mother and baby are fine.

[Ms B] recognised the decelerations as a concern at this stage, encouraging pushing early was appropriate.

2350 hours [Ms B] asked [Dr C] to review [Ms A's] progress. [Dr C] came, performed a vaginal examination and a cathetorisation and then requested the commencement of a Syntocinon infusion. The plan was for [Ms B] to reassess [Ms A] in 1 hour or earlier if there was any fetal abnormality. [Dr C] has indicated that she believed the contractions had slowed due to the epidural, which is a common effect of epidurals. She felt that the fetal distress occurred only with pushing, which is a common occurrence during second stage when a woman is pushing. Based on these assumptions, she felt that using Syntocinon would expedite delivery.

Syntocinon is contraindicated when there is fetal distress present and when there is a possibility of cephalopelvic disproportion (CPD). The fetal distress existed prior to [Ms A] pushing. The CPD was not recognised at this stage.

CPD is when the fetus is large in relation to the pelvis or the pelvis may be contracted. The early signs of CPD are slow dilation of the cervix and failure of the fetal head to descend in the pelvis (Myles, 1999), neither of these signs were present.

Fetal distress occurs when the fetus suffers oxygen deprivation and becomes hypoxic. Severe hypoxia may result in the baby being stillborn or he may be asphyxiated at birth and suffer brain damage (Myles, 1999).

Between 2345 and 2400 hours there are 7 decelerations occurring with contractions. The fetal heart is sitting at a baseline of 150, it drops to 70–90, with a quick recovery. The 7 contractions occurred, in a space of 15 minutes, that is 1 contraction every 2+ minutes. [Ms A's] labour had been precipitate up to this stage, she dilated in 2 hours 45 minutes, which is very fast for a woman having her first baby.

If [Dr C] felt the contractions had slowed down in frequency then the decelerations were occurring between contractions and not just with pushing, this would have indicated fetal distress and Syntocinon would be contraindicated. If the decelerations were only occurring with contractions then [Ms A] was having 7 contractions in 15 minutes, she would not have needed Syntocinon.

Augmentation (the use of Syntocinon) of labour occurs to correct slow progress in labour (Myles, 1999).

The most common treatment for intrapartum fetal distress is prompt delivery (Enkin, 1996).

The decision by [Dr C] was inappropriate. [Ms B] should have recognised this as an inappropriate decision.

[5 November]

0015 hours the Syntocinon infusion was commenced at a rate of 3mls per hour. The decelerations continue (150 ↓ 90) [Ms A] was pushing with each contraction, the fetal heart rate did return to its baseline[9] each time.

[Ms B] discussed the CTG again with [Dr C] 'in view of lack of variability'. [Dr C's] advice was to continue at present.

The CTG continues to show decelerations of the fetal heart rate every 2–3 minutes and the only thing [Ms B] consulted on was the lack of variability between the decelerations, this is concerning.

[Dr C] should have come to see [Ms A] in person, it is inappropriate to have done the assessment over the phone, however she does not remember the phone call. It is likely that the phone call was made but she does not recall it as she was very busy, also the notes indicate the lack of variability as the reason for the consult not the decelerations, which may have been why [Dr C] [chose] to give advice over the phone.

The presence of decelerations is showing possible fetal distress and still the Syntocinon infusion was commenced. The Waitemata DHB policy for the administration of Syntocinon clearly states 'a normal CTG pattern' as a prerequisite. The actions by [Ms B] are not appropriate, this CTG pattern was not normal.

One of the hazards of oxytocin administration is that the blood flow to and from the placenta may be affected, which will reduce fetal oxygenation (Enkin, 1996).

0031 hours the Syntocinon was increased to 6mls per hour as per protocol. The decelerations continue (150 ↓ 70) [Ms A] was pushing with each contraction, the fetal heart rate had not been returning to its baseline. BP 160/100.

As soon as the Syntocinon infusion commenced the fetal heart pattern on the CTG changed, there was no longer a settled baseline between decelerations. The Waitemata DHB policy for 'monitoring the fetal heart in labour' clearly states as action 3: 'stop Syntocinon' as an immediate action if there are signs of severe fetal distress. The CTG pattern was showing probable signs of severe fetal distress. Local policies and protocols should be followed for the administration of oxytocin (Myles, 1999).

The decision to increase the Syntocinon as per protocol was not appropriate.

0040 hours the epidural top up given as treatment.

[9] The median (most common) fetal heart rate.

0045 hours the decelerations continue (150 ↓ 70). The Syntocinon was increased to 12mls per hour as per protocol. [Ms A] was pushing with each contraction, the fetal heart rate did return to its baseline each [time].

0100 hours the decelerations were becoming prolonged and the fetal heart was not returning to the baseline, [Ms B] noted one deceleration that occurred between contractions. She decreased the Syntocion infusion to 6mls per hour BP 150/100.

The Waitemata DHB policy for 'monitoring the fetal heart in labour' clearly states as action 3: 'stop Syntocinon' as an immediate action if there are signs of severe fetal distress. The Syntocinon infusion should have been stopped rather than reduced.

When signs of fetal distress occur the Syntocinon must be stepped (Myles, 1999).

0120 hours [Ms B] asked for an opinion from the delivery suite coordinator, core midwife [Ms F]. [Ms F] made the decision to call [Dr C] immediately.

0125 hours [Dr C] arrived. The decelerations continued (150 ↓ 60) and are more prolonged. [Dr C] performed a vaginal examination, which showed the cervix to *still* be fully dilated, and no further descent of the fetal head. [Dr C] asked for the Syntocinon infusion to be stopped. The CTG clearly shows that the baby is being compromised.

0145 hours the decision was made to go to theatre for a Caesarean section.

This decision to perform a Caesarean section was appropriate and based upon the CTG recording of the fetal heart rate should have occurred as quickly as possible.

0200 hours [Ms A] was transferred to theatre.

15 minutes is an appropriate time to prepare someone for Caesarean section in an emergency.

0220 hours the Caesarean section was commenced.

0231 hours [Baby A] was born, apgar scores of 1, 4 & 4 at 1 minute, 5 minutes & 10 minutes.

0310 hours [Baby A] was transferred to [another public hospital].

[several days later]

0900 hours [Baby A] passed away.

1. Has a physical injury occurred as a result of medical treatment?

Yes. [Baby A] died from cerebral damage, which occurred as a direct result of treatment given and not given to his mother [Ms A] during her labour and birth of [Baby A].

2. Was a registered health professional involved in the provision of treatment?

Yes, both [Ms B], the LMC midwife and [Dr C] were involved in the care of [Ms A] and [Baby A].

3. If so, was the injury caused by medical error on the part of a registered health professional?

Yes, the injury was caused by medical error on the part of [Ms B].

Yes, the injury was caused by medical error on the part of [Dr C].

a) Was the treatment appropriate?

No.

The CTG was put on following the insertion of the epidural, from this point on the baby was showing signs of distress, the care provided to [Ms A] from 2300 hours until 0120 hours was inappropriate for the following reasons.

1. At 2310 the decelerations had been present since the CTG was commenced at 2300, the examination should have occurred at this time.

Fetal distress could occur as a result of reduced placental perfusion due to maternal hypotension (Myles, 1999), however this was unlikely to be the case in this instance as [Ms A's] BP had remained normal.

2. At 2350 hours, 50 minutes after the decelerations were evident, [Ms B] notified [Dr C], this action should have occurred within a short time of the examination at 2320 hours. It was within reasonable standard of care to try pushing first, but it would have been apparent quite quickly if this was going to result in a rapid delivery.

When signs of fetal distress occur the midwife must call a doctor (Myles, 1999).

3. The decision by [Dr C] to prescribe a Syntocinon infusion was inappropriate based on
a) the presence of fetal distress prior to pushing,

b) the frequency of the contractions at the time.

The Waitemata DHB policy for the administration of Syntocinon clearly states 'a normal CTG pattern' as a prerequisite.

It is possible [Dr C] did not take the time to assess the situation adequately due to how busy she was.

4. As an LMC midwife [Ms B] had the responsibility of deciding whether or not to take [Dr C's] advice and to question this advice if she felt it was inappropriate. [Ms B's] inaction at this time was inappropriate.

Midwives take appropriate action if an act by colleagues infringes accepted standards of care (Code of Ethics, Midwives Handbook for Practice).

5. [Ms B] should have recognised that the advice was inappropriate and phoned the obstetrician on call for a second opinion.
6. [Dr C] should have reviewed the CTG in person when asked to do so at 0015 hours, instead she gave advice to continue with the Syntocinon after a phone discussion only.

b) **Was the treatment provided correctly?**

No.

The midwife has the responsibility to refer to the appropriate health professional when she has reached the limit of her expertise (Midwives Handbook for Practice, Standard six).

[Ms B] set up and commenced the Syntocinon infusion, by doing this she was taking responsibility for its management. If she felt that she was inexperienced she should have handed over care. [Ms B's] management of the Syntocinon was inappropriate.

Local policies and protocols should be followed for the administration of oxytocin (Myles, 1999). The protocol was clear ...

a) The Syntocinon should never have been commenced as the CTG pattern was not normal and fetal distress is a contraindication.
b) The Syntocinon should not have been increased as the CTG pattern was not normal and fetal distress is a contraindication.
c) The Syntocinon should have been discontinued at each time it was increased and decreased as the CTG pattern was not normal and fetal distress is a contraindication.

c) **Was there a possibility that this injury may have occurred by another treatment or action?**

No.

It is quite likely that if a Caesarean section had been the prescribed treatment instead of Syntocinon the baby would have lived. If no Syntocinon had been prescribed and [Ms A] had continued to push she would still have required delivery by Caesarean section, the outcome would have depended on how soon that decision was reached.

4. Was the error caused by medical error on the part of an organisation?

No.

The care given by the core midwives at North Shore Hospital was appropriate. [Dr C] was extremely busy and although that is no excuse for care given below a reasonable standard I feel North Shore Hospital should have guidelines for staff on how to get backup care when the on call registrar is busy. In this case [Ms B] should have called the obstetrician on call for a second opinion.

5. Does the claim meet the criteria for medical mishap?

No.

6. Are there issues of competency which ACC should refer to the professional body and the Health and Disability Commissioner for investigation?

Yes.

[Ms B] has not provided a reasonable standard of care to [Ms A].

The midwife recognises that she is an autonomous practitioner, regardless of setting, and is accountable for her practice (Midwives Handbook for practice, Standard seven).

[Dr C] has not provided a reasonable standard of care to [Ms A].

7. **Does the claim raise any issues that in the public interest ACC should report to the appropriate authority?**

No.

Reference list:

Bennett, V. & Brown, I. (1999). *Myles Textbook for Midwives* (13th ed.). London: Harcourt and Brace Company Limited.

Enkin, M., Kierse, M., Renfrew, M. & Neilson, J. (1999). *A Guide to Effective Care in Pregnancy & Childbirth* (2nd ed.). New York: Oxford University Press."

Appendix 3 — Report from Professor Peter Stone

"Re: Report on labour and delivery of [Ms A], […]

This report is in two parts. The first is a description of factual material derived from reading the notes from North Shore Hospital (Waitemata District Health Board), the notes from [another public hospital] ([another District Health Board]) and the report by the pathologist, who performed a coroner's post mortem on [Baby A]. This post mortem was ordered by the Coroner and was done [several days after Baby A died].

Included in the North Shore Hospital notes were statements from [Dr C, obstetric registrar] to the Medical Misadventure Unit of the ACC and also a letter from [Ms F], the Midwife Co-ordinator of the Birth Suite at North Shore Hospital, also addressed to the Medical Misadventure Unit.

At the time of the pregnancy in question [Ms A] was a healthy 37 year old woman in her first pregnancy.

She had undergone early pregnancy scanning and amniocentesis which had been done [on 8 May]. The result of which showed a normal male karyotype 46 XY.

[On 12 June], a full fetal anatomy scan was performed which was reported as normal and showed that there had been consistent fetal growth since the earlier scanning. Thereafter from a photocopy of the patient's antenatal records which has been appended to the ACC claim for [Baby A], the pregnancy is recorded as having progressed normally on the entry of [25 October]. There was a comment relating to possible reduced fetal movements and the advice given. [On 19 May] at 17 completed weeks the patient's blood pressure was normal at 110/65. The urine analysis was normal and this pattern continued throughout the pregnancy. [On 28 October] at 40 completed weeks the urine analysis remained normal, the blood pressure was 125/80. The maximum blood pressure recorded throughout the pregnancy was 130/75 and at all times the fundal height measurements were at least consistent with the estimated gestation. All the routine blood testing in the pregnancy was within the normal range.

[On 28 October], the midwife [Ms B] referred the patient to the 'Consultant Obstetrician' Antenatal Clinic, North Shore Hospital stating that the patient had an uncomplicated pregnancy but was now post dates and 'would like to discuss induction of labour'.

[On 3 November] at 41 + 4 calculated maturity the patient was seen (it appears by registrar [Dr D]) there was a full assessment and discussion about the process of induction of labour and this plan was also discussed with the specialist [Dr E]. On the night Baby A was born, the patient was admitted to the delivery suite at North Shore Hospital around 1930 hours for induction of labour.

At that admission it was noted that there had been possible spontaneous rupture of the membranes at around 11.30am in the morning with a 'show but no contractions',

examination showed that the baby was in a cephalic presentation the head descended two fifths into the pelvis and the vaginal examination with a speculum showed that there was no amniotic fluid visible, this assessment being done by the midwife [Ms B]. After discussion with the registrar [Dr D] at 2035 hours that day, 2mg of prostaglandin gel were inserted into the posterior fornix. Prior to the insertion of the tocograph settings were on low amplitude but it appears as though there were two uterine contractions in 10 minutes. Two shallow variable decelerations are noted prior to the insertion of the prostaglandins and at insertion of the prostaglandins a variable fetal heart deceleration was noted with the comment that the patient was 'flat'. The cardiotocograph was discontinued at around 2110 hours according to the notes and the timer on the CTG, the instruction being given to repeat later and at 2130 hours the previous LMC midwife handed over to the hospital midwifery staff until labour had established.

At 2140 hours pain relief in the form of Pethidine was given and the situation was discussed with [Dr C], the Medical Officer of Special Scale (MOSS working as the Obstetric Registrar). The advice received from [Dr C] was for one hourly CTG 'until happy that CTG remains reactive at all times'. At 2200 hours it is recorded that the patient was very distressed and was feeling pressure in the perineum. Vaginal examination was performed which showed the cervix to be 7 centimetres dilated and the cervix was recorded as being thin. The patient was requesting an epidural and the hospital midwife involved in this assessment informed the LMC midwife [Ms B]. At 2255 hours [the anaesthetic registrar] wrote in the notes about the patient's request for epidural which was inserted.

The obstetric analgesia chart states that the epidural was inserted at 'second pass' and it was noted that there was blood in the catheter. In the clinical notes the record states third pass. The LMC has recorded in the notes at 2245 hours epidural being sited and at 2310 hours the patient was feeling comfortable and the statement of early decelerations noted as being entered at that time.

The cardiotocograph which had stopped at 2110 hours was recommenced at 2257 hours and shows up to 5 uterine contractions in 10 minutes and repetitive variable fetal heart rate decelerations.

At 2320 hours the patient was examined vaginally and it was determined that the cervix was fully dilated. The fetal head stated as 'ceph, at ischial spines no membrane felt, some blood stained loss, PV noted, no abnormality felt'. At 2330 hours the patient was encouraged to push with contractions 'in view of early deceleration'. At 2350 hours [Dr C] was asked to review progress and it is stated 'she VE, inserted catheter and then requested commence Syntocinon infusion she will review again later'.

On [5 November] at 0015 hours the Syntocinon infusion was commenced as prescribed and in the notes it is stated that the CTG was again discussed with [Dr C] in view 'of the lack of reactivity'. It is recorded that [Dr C] advised that she was 'happy to continue at present'. At 0131 hours the Syntocinon was increased to 6 mls per hour as protocol and it is recorded in the note by [Ms B] that the contractions were 2–3 in 10, though referral to the cardiotocograph would show this to be at least 5 in 10. At 0040 hours the epidural was

topped up and at 0100 the Syntocinon is recorded in the notes as being reduced to 6 mls per hour though on the cardiotocograph shortly thereafter the Syntocinon is stopped. The reason being stated 'due to more prolonged decelerations and (not pushing when these happened)'. In the notes thereafter there has been an amendment to the times given however between 0100 and 0125 with the cardiotocograph still showing what were stated as early decelerations, the situation was discussed with the delivery suite co-ordinator [Ms F] and she phoned [Dr C] to ascertain how long it would be before [Dr C] was able to review the CTG and it is recorded that she arrived at 0125 hours. However below this entry is a time of 0100. [Dr C] arrived as stated and the patient was re-examined showing that the cervix was fully dilated. The vertex (fetal head) was at station 0, diagnosis of 'big baby with fetal distress' was made and a decision was made to proceed to Caesarean section. The specialist, [Dr E], was informed and is stated that he agreed with this plan.

From the anaesthetic record it stated that the skin incision for the operation commenced at 0220 hours, the uterus was opened at 0229 hours and the baby was delivered according to the midwifery notes at 0231 hours.

Operation notes stated that the head was 'wedged in the pelvis' and difficulty was encountered delivering a baby and nitro-glycerine spray was administered by the anaesthetist after which the baby's head was delivered followed by the body. The baby was described as 'flat' and was handed over for paediatric resuscitation. The operation was complicated by an extension of the uterine incision on the patient's right side and specialist [Dr E] was called and he attended and assisted with repair of the uterine extension. The subsequent course of the baby has been subject to detailed reports. The baby was born in poor condition as evidenced by the initial apgar scores, the time required to resuscitate the baby and the fact also that the arterial umbilical cord gases showed a pH of 6.94 with a base excess of –15.5.

On the morning of the [5 November] both [Dr E] and also the paediatricians had spoken to [Mr A and Ms A] about the events surrounding the labour and the delivery and in the afternoon [Ms A] was transferred to [another public hospital] where [Baby A] had been admitted for intensive neonatal care.

In the second part of this report, I would now like to assess the details of the above management on the evidence available in terms of both the antenatal record and the (albeit) short cardiotocograph taken the day before induction. It is likely that [Baby A] was a healthy normal fetus prior to labour. Certainly on the short CTG available [on 3 November] there is no sign of fetal heart rate patterns which are associated with hypoxia. With the benefit of the coroner's post mortem and MRI scan done prior to the baby's death, it is apparent that there is no evidence of a congenital neurological abnormality to explain the baby's poor condition at birth though of course these findings would not have been available to the attending clinicians and a pregnancy such as [Ms A's] would be managed on the basis that the baby was entirely normal.

On admission for induction of labour the history from [Ms A] of possible ruptured membranes and a show is evidence that labour may be imminent. The fact that at the

biophysical assessment done prior to induction, the amniotic fluid volume was normal would make it less likely that the membranes had ruptured as generally a woman would be aware if a large amount of fluid had leaked, though a hind water rupture with the loss of a small amount of fluid could not absolutely be excluded. However there was no evidence during the labour or indeed postnatally that the baby or the mother were infected and therefore prolonged rupture of the membranes with possible infection is not a likely reason for the outcome in this case.

The pre prostaglandin CTG would accurately be described as reactive as there are certainly fetal accelerations of >15 beats per minute and lasting more than 15 seconds. But due perhaps in part to the way the tocograph had been set up it is difficult to ascertain how many spontaneous uterine contractions the patient was having prior to the prostaglandin. This is an important point because in the presence of spontaneous uterine activity care needs to be exercised when using agents such as prostaglandins which are intended to cause both cervical change and uterine activity. The caregivers did in fact note 2 decelerations on the CTG prior to the insertion of prostaglandins but based on the cervical assessment it was then considered appropriate to insert 2 mg of prostaglandins and within 65 minutes of doing so the patient was requiring pain relief. The response to prostaglandin can be unpredictable but [Ms A] did have a precipitate labour which I would define as progressing from 1 to 2 cm dilated to fully dilated and or delivered within three hours. It is known that in such circumstances this is a stress even for a healthy mother and baby.

It is noted that despite the need for pain relief and the rapid progress in labour, the fetal heart monitoring was not recommenced after 2110 hours until 2257 hours — a total of 1 hour and 47 minutes. This is of concern for two important reasons, the first being that there is no record in a baby undergoing a precipitate labour and secondly there has been no fetal heart recording prior to the insertion of the epidural and it is unclear from the notes exactly when the epidural was inserted. It is well known that the profound haemodynamic effects that epidural may have can compromise the utero placental circulation and can lead to fetal compromise particularly in the situation where the baby is already under stress. It is noted that when the CTG was recommenced at 2257 hours it was abnormal. It would be important to know whether North Shore Hospital and Waitemata District Health Board has a policy for the use of fetal monitoring during the induction period and also a policy concerning the use of fetal monitoring prior to and during the insertion of an epidural.

At 2320 hours when the midwife examination showed the cervix to be fully dilated with the fetal vertex at the ischial spines it was decided to allow and encourage the woman to push. There is no comment in this examination as to the position of the fetal head. This is important because if the vertex is at the spines, the head by definition is in the mid cavity and unless the head is in an occipto-anterior position or less favourably an occipito-posterior position, pushing is likely to be ineffective in effecting a rapid delivery.

The evidence also is that there can be considered two parts of the second stage of labour. The first is a passive part when the head is descending and rotating spontaneously and the second is when the head is on the pelvic floor and is an active or an expulsive phase during which maternal effort should lead to further descent and ultimately delivery.

The fetus will become progressively hypoxic and/or acidaemic in the expulsive phase but in the normal situation time spent in the passive non pushing part of the second stage will not lead to an acceleration in fetal compromise in a fetus which is otherwise healthy. The issue here is that the fetal monitoring was not normal and it would therefore have been prudent to have taken a number of steps prior to commencing the final management. Either to expedit[e] delivery by pushing and/or the use of instrumental delivery or alternatively to use oxytocin (Syntocinon) to try and increase the uterine effort to bring the baby's head down into the pelvic outlet, rather than resorting to Caesarean section as determined by the assessment of maternal fetal welfare.

It is unclear from the notes as to why the registrar was asked at 2350 hours to review progress 20 minutes after pushing had begun. The examination that was performed by the registrar which appears to have been entered into the notes subsequent to other recordings was not recorded on the partogram and again the registrar's examination did not describe the position of the fetal head or whether there was any moulding. However following that assessment it was decided to use oxytocin. There was no comment though as to the reason for using oxytocin. This is important because clearly the uterus had been very efficient in achieving rapid progress to full dilatation and getting the fetal head to the ischial spines and therefore the use of oxytocin at this point is an important and serious decision to be made only where both the fetal welfare is deemed to be satisfactory and where it is actually thought that inefficient uterine action is a problem. In this case there had not been a chance for there to have been a diagnosis of delay in second stage made because the second stage had not been prolonged and neither the midwife nor the registrar commented on the fetal position so it is not possible to determine whether or not they were using oxytocin to try and effect rotation of the fetal head into an occipito-anterior position.

There is also a concern that the midwife has labelled the decelerations for a considerable part of the first stage of the trace as early decelerations where as in fact careful analysis of these will show that they are largely variable decelerations. There is no comment in the notes from the registrar about her interpretation of the CTG at any phase at all in the management, there is also no comment overall about the fetal welfare and indeed at 2330 hours the registrar wrote 'Syntocinon as per protocol to get 3 in 10 contractions if not then reassess in one hour or earlier if any fetal heart abnormality'. This would suggest that the CTG at the time was not thought to be abnormal in the way that required any investigation or other action.

At around 0100 hours the midwife stated that there was a prolonged deceleration but in fact the decelerations in their duration were no different from those occurring over the previous 10–20 minutes and again they were incorrectly labelled as early decelerations whereas in fact they are quite abnormal and variable decelerations with loss of reactivity and also lack of any evidence of recovery of a normal heart rate pattern between the contractions which were now coming much more frequently than the usually recommended maximum of 4 contractions every 10 minutes.

The delivery suite co-ordinator was consulted and it is stated that she phoned [Dr C] the registrar but there is no record in the note about why she felt this was necessary nor what

she said except that a short time after this the registrar arrived and again, although the timing is not sequential, sometime around 0125 hours a decision for Caesarean section was made. Any commentator would describe the cardiotocograph as grossly abnormal with uterine hyperstimulation and repetitive deep variable decelerations with loss of fetal heart rate variability, a pattern that had been present for a considerable period of time but really at least from the commencement of the Syntocinon at 0015 hours or thereabouts. There appears to have been a failure on the part of a number of caregivers to recognise the gravity of the abnormality on the cardiotocograph both the uterine activity and the grossly abnormal fetal heart rate pattern.

It is unclear exactly when the decision for Caesarean section was made but the case notes state that [Dr C] arrived at 0125 hours and subsequent to this entry in the notes there is something written stating 0100 when [Dr C] assessed the patient and at that point the decision was made for Caesarean section. The best judgement would appear to be the timing around 0125 hours. From this time the fetal heart rate monitoring continued and was grossly abnormal with the final recording ceasing at around 0207 when the patient was in theatre. This is 82 minutes after the assessment from [Dr C] according to the operation records. The Caesarean section began at 0220 hours which is a further 13 minutes and then the baby was born at 0231 hours 13 minutes after the commencement of the Caesarean section. Given the recorded difficulty in disimpacting the fetal head from the maternal pelvis the total timing from commencement to delivery of the baby is not necessarily prolonged. However given the overall clinical situation and the reason for the Caesarean section being recorded as fetal distress and cephalopelvic disproportion then a time in excess of 80 minutes after the decision to deliver to actually effect delivery suggests that there was no particular urgency felt by the clinicians involved, or there were system delays.

This case illustrates a number of problems which unfortunately are not unique in maternity care in this country at present but unfortunately in this situation the feto placental reserve was such that the baby did not tolerate the labour and delivery.

It is unclear from the records who exactly was responsible for the woman's management particularly once the induction process had begun. It is noted that the lead maternity care giver midwife performed the cervical assessment prior to induction and inserted the prostaglandin. It was stated that she spoke to the obstetric registrar but the content of that discussion is not documented. Following that procedure at 2130 hours she handed over care to the hospital midwifery staff who then continued the management. It is unclear from the record which midwife was responsible for arranging the insertion of the epidural but during that insertion the lead maternity care midwife was present and from the record it is assumed that she resumed responsibility at least from 2245 hours. On two occasions she did request the obstetric registrar to review progress but it would be normal practice in New Zealand now for that review to be done without a transfer of care of overall clinical responsibilities, however this issue becomes unclear when it becomes apparent that intervention such as Caesarean section is necessary.

The next issue relates to the induction management and the fact which is not possible to resolve now as to whether the patient was already having significant spontaneous uterine

activity. Nevertheless based on the cervical assessment (Bishop's score) a decision was made by the obstetric registrar (who had appeared not to have actually seen the patient on the day of admission) to use the higher dose of prostaglandins — that is 2 mgs — the result of which was a precipitate labour.

The next point is the accurate interpretation of the cardiotocograph and as detailed above this has not been done accurately in that there are both errors in the assessment of the uterine activity as well as inaccurate descriptions of the fetal heart rate decelerations. These errors may have misled the clinicians into misinterpreting the fetal status.

One of the overall problems in the case is the inadequate documentation which suggests that the clinicians have failed to interpret the whole clinical situation of a post term 37 year old primigravid woman undergoing an induction with a clinically well grown to large baby with a relatively high head and unfavourable cervix at the start of the induction process. This situation calls for vigilance and close surveillance. Other inadequate details include no mention at all at any stage of the fetal position as assessed by vaginal examination and whether the fetal head was becoming moulded[10] by the uterine activity without head descent. As the labour progressed there does not appear to be either an understanding of the cardiotocography nor any degree of urgency when action was needed. There is no mention in the record of the amniotic fluid colour for many hours and there was no attempt to further assess fetal welfare such as fetal scalp blood sampling.

In summary, therefore at this point there is an impression of collective responsibilities but a lack of an understanding about what was happening in this case.

At this point having reviewed the notes in detail and the cardiotocograph I then proceeded to review the coroner's post mortem and comments from the independent assessor Dr Digby Ngan Kee.

With regard to Dr Ngan Kee's report I would have to agree with it almost in its entirety and certainly the first 5 pages and also the brief summary. However I would suggest that the comments on pages 6 and 7 defined as the first error and the second error are actually events which occurred later on in an already compromised situation and effectively made matters worse. Therefore whilst the details of the said errors are in my opinion reasonable deductions, the actions taken at the stages detailed in these errors were not prudent given both the overall clinical situation and the failure to further assess fetal welfare prior to attempting to prolong the second stage by the use of oxytocin.

Turning to the coroner's pathology report, again this illustrates that there was inadequacy in documentation and that there was no mention of the position of the baby's umbilical cord in that whilst this would not have altered the outcome it may have provided a partial explanation for the abnormalities on the CTG. Unfortunately also the placenta was not

[10] Moulding: Overriding of the fetal skull bones to reduce the diameter of the baby's head. It is a process enabling the baby's head (largest diameter) to manoeuver through the birth canal.

retained for examination and it should be an absolute policy in all obstetric hospitals that wherever a baby is born prematurely or has a potentially adverse outcome that the placenta is available for examination. The pathology report has confirmed the clinical and radiological impressions about the reasons for the baby's poor condition and subsequent death and has given a pathological explanation for this.

The final part of this report relates to the reports written in […] by [Dr C] and midwives [Ms F] and [Ms B]. Clearly these reports were written some time after the events and need to be viewed in the light of this of the full clinical situation.

It is apparent that up until the second stage of labour, [Dr C] was behaving as any hospital based obstetric registrar would in the current maternity care environment where much consultation appears to occur over the telephone. In [Dr C's] comment on page 2 of her report she states that she gave permission for the epidural on the telephone and the hospital midwife did not mention anything about the fetal heart. One would however expect an experienced obstetrician or experienced registrar to request some basic information including the fetal heart rate and the maternal condition such as the state of hydration, the blood pressure and indeed in this case given the precipitate labour whether in fact the midwife thought it was likely that the patient was progressing so rapidly that she would be soon fully dilated. It is apparent from [Dr C's] comments about the request from [Ms B] at 2230 hours and also comments in the case notes that at that point the midwives did not express, or at least make clear, any concerns that they have had about the fetal heart rate.

It is also apparent that [Dr C] was required in other parts of the hospital and therefore had not assumed overall responsibility for the management of the patient. It is also clear that on page 3 of [Dr C's] report that there is an unresolvable difference of opinion as to whether or not [Ms B] did indeed discuss the CTG at 0015 hours. However the interpretation of the situation that [Dr C] made at 2330 hours even in retrospect is somewhat superficial and whilst there are situations where second stage oxytocin is useful this has to be done with caution and in the light of the full clinical situation. It is clear that none of the caregivers appear to have appreciated the CTG abnormalities. The remainder of her report is non contributory in terms of adequate explanations as to what happened thereafter. Issues that could fruitfully be taken from the report relate to [Dr C's] skills and abilities. It is stated that she has worked in the hospital for four years and that would imply that she could be expected to be regarded in a senior capacity. It is important that registrars are able to prioritise their acute work and also have clear lines of back up such as from the specialist and know when to call for extra assistance when they are busy. Although in the current environment lines of responsibilities are blurred, it would be fair to say that at least after 2330 hours or thereabouts when [Dr C] became actively involved in the management by deciding to use oxytocin that she is then at least in part responsible for the care and outcomes thereafter.

Turning to the report from [Ms F], the midwife coordinator at North Shore Hospital at the time in question. It is clear that in the evening between 1900 hours and 2200 hours [Ms F] as coordinator was busy and although it had been the intention that the patient be managed

by the lead maternity carer once in active labour, it appears that the midwife coordinator was involved in all of the organisation of the epidural for [Ms A].

It would appear between 2330 hours and 0120 hours on [5 November], [Ms A] was being managed by her lead maternity carer who had involved [Dr C] as previously detailed. It would appear that at 0120 hours in [Ms F's] report that she resumed some involvement, expressing concern about the clinical situation and she states that it was she who called [Dr C] back for the final assessment that would lead to Caesarean section.

My interpretation of [Ms F's] report is that it is a description typical of a midwife coordinator in a delivery unit where responsibilities are shared. In essence if the midwife coordinator becomes concerned and calls the doctor directly rather than suggesting to the lead maternity carer that she consult again, the midwife coordinator is exercising what she sees as an overarching duty of care to the mother and her baby which is a difficult situation in the current clinical environment.

Turning now to the report of [Ms B] of [7 January].

The initial assessment of the patient on admission [4 November] was adequate and thorough. The discussion with the registrar however typifies the inadequate nature of telephone conversations and it is really unclear what is being gained by such as on the one hand, as the midwife had done the assessment she could be deemed to be in the best position to determine the dose of prostaglandins and on the other hand the registrar [Dr D] gave general advice over the telephone not having examined the patient but describing what is usually the dose given to primigravid women with a cervix as described on the midwife's examination. It is a little surprising that the midwife left knowing that the CTG had been described as non reassuring because it is unclear what plan except trying to devolve responsibility to the registrar was put in place. Whilst the rationale for [Dr C's] suggestion of hourly CTG's is unclear, in the event, the patient went into precipitate labour and was requiring analgesia before one hour had expired from the 2140 hours when the midwife left. It would appear from [Ms B's] report that she was expecting [Dr C] to provide her with support or indeed lead the management at least from 0015 hours. North Shore Hospital will need to advise the complainant what the policy is in this situation and what the hospital registrars should expect i.e. whether there is a formal transfer of care or whether it is then appropriate for the registrar to continue with the LMC and if so who is taking responsibility. In [Ms B's] report she comments that the times in the case notes written by [Dr C] are not correct and it is not possible from the record to resolve this issue.

[Ms B's] report, similar to that from the other clinicians involved in the case, is more descriptive than incisive and similarly does not reflect an understanding of the overall clinical situation.

In summary, therefore in common with many adverse outcomes in obstetrics there has been a series of poor managements which are below the expected standards of care [and] there has been a failure at interpretation of cardiotocography. There have been some failures in documentation though these notes are fuller than many notes that are written in obstetrics

and there has been a failure to understand the whole clinical situation such that a baby who on all available evidence was a healthy well grown post term fetus underwent a precipitate labour during which the baby developed both progressive hypoxia (as shown by the cardiotocograph) and the hypoxia actually led to acidaemia and the sequel to this was the fatal damage that the baby sustained. It is failure of any one of the caregivers involved to understand the gravity of the situation or for any one of those to speak out and consider alternative approaches that led to this outcome.

At the time that the stage was being set for the subsequent adverse outcome, the lead maternity caregiver was assuming ultimate responsibility and the consultations were of a peripheral nature (this illustrates yet again the risks of this approach). However, as [Dr C] became involved at 2140, there was shared responsibility from this time. As the labour progressed and particularly beyond 2330 hours responsibility must be considered to be that of the Obstetric Registrar and therefore the hospital. As the Obstetric Registrar works within a hospital, the hospital systems, policies, specialist, back up and availability and also assessment of the registrar's own ability (credentialing) all need to be considered as potentially playing a part in this outcome."

Appendix 4 — Report from Ann Yates

"My name is Ann Yates, I am a New Zealand General and Obstetric Nurse and Registered Midwife. I have been appointed by the New Zealand College of Midwives as an expert witness. I am currently the Midwifery Leader at National Women's Hospital, Auckland.

I have been a midwife since 1977 and practiced in a variety of settings both in NZ and abroad since then. I commenced a domiciliary practice in the Bay of Plenty in 1988 attending women rurally and in urban homes and hospitals. In 1990, I gained an access agreement and continued to provide care for women in a secondary unit when they required it. My caseload for 12 years was 65–75 annually, and included teaching undergraduate students and mentoring new midwives. During this time my practice was reviewed annually by the Midwives Standards Review Committee.

I have held the position of Midwifery Leader at National Women's since 2000, providing professional leadership to 150 employed midwives within Auckland District Health Board. I have been a founding member of the NZ College of Midwives and actively support midwifery issues at a National level. This includes a ministerial appointment as Chair of Maternity Advisory Committee, National Negotiating team — section 51 and referral guideline group; Roadside to Bedside committee, National Health Committee — HIV screening; Clinical Guidelines Group — Vaginal Birth after Caesarean. I have been appointed on to the Health Practitioners Disciplinary Tribunal and am currently an executive midwifery member of Women's Hospitals Australasia.

I have been asked to review the ACC findings concerning the care of [Baby A] (D.O.B. [5 November]: D.O.D. [several days later] and his mother [Ms A], against [Ms B] a Registered Midwife who provided Lead Maternity Carer services from her [Midwifery Practice].

I have read the:

- Antenatal records of [Ms B]
- Waitemata DHB Clinical Notes (including CTG)
- Waitemata Report to ACC on the labour and delivery of [Ms A]
- Letter to ACC from [Dr M], Director of Nursing Waitemata DHB
- Clinical Notes [Baby A], Waitemata DHB
- Medical Report from [a Specialist Neonatologist at a public hospital].
- Post mortem report [several days after the death of Baby A], [pathologist] Waitemata DHB and Obstetric recommended best practice guidelines
- Waitemata debrief notes of meeting with [Ms A and Mr A] on the [20 November].
- Reports by [Ms B] and [Dr C].

HISTORY

[Ms A] was a healthy 36 year old in her first pregnancy. Her due date was [23 October]. She booked with Midwife [Ms B] at 17 weeks gestation, her pregnancy remained normal until full term. [Ms A] went past her due date. She was reviewed at 41 weeks for a biophysical profile which was normal, but noted there was a large baby (estimated fetal weight 4.3kgs, with small hydrocele).

[3 November]

CTG monitor strip from 0837 hours to 0857 hours. Variable heart rate with a normal baseline and acceleration. No contractions seen on tracing.

[4 November]

[Ms A] reports vaginal show and possible rupture of her membranes to 1130 hours her midwife [Ms B] reassures her after a discussion and they await the onset of labour.

1930 Hours

After a discussion with [Ms A], they decide to come to hospital for a planned induction of labour.

[Ms B] examines her cervix and abdomen and performs a CTG. The CTG commences at 1937 hours and continues through to 2110 hours. The first 20 minutes no contractions are evident. Baseline fetal heart rate (FHR) is approximately 138. The variability is reduced for the first 20 minutes of the tracing. There are small decelerations present at 1952 hours and 2018 hours. She consults with the on-call Obstetric Registrar [Dr D] North Shore Hospital, re mode of induction.

2035 Hours

Prostin gel 2mgs is inserted vaginally as prescribed by [Dr D]. [Ms B] notes the cervix is 1.5cms dilated and gives a Bishop score of 4.

The CTG shows a long deceleration occurring at the time the prostins are inserted when [Ms A] is lying flat, the FHR returns to baseline. There are several variable decelerations with good recovery to baseline until the CTG is discontinued at 2110 hours. There appears to be uterine activity or small contractions occurring every 3–4 minutes after insertion of the prostin gel. The FHR baseline is variable at 140BPM.

2120 Hours

Given paracetamol for discomfort.

2130 Hours

Prostin contractions niggling. [Ms B] prepares to hand over to hospital midwife until labour established.

2140 Hours

Given pethidine 100mgs and maxolon 10mgs, and halcion 0.25mgs to settle pain.

[Ms B] discusses care with on call registrar [Dr C]. [Dr C] reviews management and writes in clinical record. She requests hourly CTG's until CTG remains reactive — instructs to call her if any problems.

She notes the CTG shows 'dips post prostin but good pick up'.

2200 Hours

Staff midwife [Ms G] reports in clinical notes that [Ms A] has become very distressed and is feeling pressure ++ in her perineum. She examines her and finds she is 7cms dilated with a thin cervix. She listens to the fetal heart, but does not do a CTG. The fetal heart rate is 134–148.

She calls [Ms B] to attend and arranges the insertion of an epidural requested by [Ms A].

2230 Hours

IV luer is inserted and nitrous oxide and O_2 given.

2245 Hours

[Ms B] arrives while epidural in progress by [Dr H] anaesthetist.

2257 Hours

CTG is commenced by [Ms B]. She notes early decelerations in clinical notes.

The CTG shows there are contractions occurring 4–6 in 10minutes, baseline FHR 140. Variability reduced (up to 5BPM). No accelerations seen, decelerations occurring with contractions lasting less than one minute down to 80BPM. Some decels occur after the contraction peaks.

2320 Hours

[Ms B] performs vaginal exam to assess progress. Cervix now fully dilated.

2330 Hours

[Ms A] is encouraged to push in view of early decelerations.

2350 Hours

[Ms B] request [Dr C] review progress.

The clinical note recorded by [Ms B] at the time states 'she VEs inserted catheter, and requested commence Syntocinon infusion. She will review again later'.

[Dr C] has entered a record in the clinical notes relating to this assessment, some time later — after [Ms B's] entry at 0040 hours. She notes 'CTG shows dips when pushing but recovering' she writes instructions to give 'synto as per protocol to get 3:10 contr. — if not then reassess in one hour or earlier if any FH abnormality'.

[5 November]

0015 Hours

Syntocinon infusion commenced at 3mls/hr. This is also marked on the CTG recording.

[Ms B] enters in the notes 'discussed CTG again with [Dr C] in view of lack of reactivity. She advises she is happy to continue at present'.

0030 Hours

Syntocinon increased to 6mls/hr, contractions recorded as 2–3 in 10, however the CTG shows contraction to be frequent, 5–6 in 10 minutes with deep sometimes late decelerations, no variability and a baseline rise to 150bpm. (Toco is hard to decipher as [Ms A's] expulsive efforts are interfering with the tracing.)

0040 Hours

Epidural top up.

0045 Hours

Syntocinon increased to 12mls/hr (as recorded on CTG). Syntocinon reduced to 6mls/hr due to more prolonged decelerations ([Ms A] not pushing when these happen).

0100 Hours

CTG discussed with Delivery Unit coordinator [Ms F], who phones [Dr C] to see how long before she returns to review.

0125 Hours

[Dr C] arrives.

The clinical records show a discrepancy in the time that [Dr C] records her final visit, as it states 0100 hours which is before she was called to reassess [Ms A] by midwives [Ms B]

and [Ms F]. The CTG also has handwriting other than [Ms B's] at 0100 hours 'stop Syntocinon' then 'for LSCS'.

0130 Hours

CTG shows wide prolonged deceleration to 70BPM. Baseline 160, contractions indecipherable.

???? [Dr C] does vaginal exam. She writes 'Big baby with fetal distress For LSCS for fetal distress + CPD'.

She informs [Dr E] (consultant on call) who agrees she should take her to theatre.

After this time there is no further record by [Ms B].

0155 Hours

Prepped in theatre.

0206 Hours

CTG discontinued.

0211 Hours

Operation commenced. Difficulty extracting fetal head from vagina. [Ms B] given nitroglycerine spray to relax hypertonic uterus.

0231 Hours

[Baby A] delivered. Pale floppy and requiring resuscitation by paediatric team. APGARS = 1at 1min; 4 at 5mins; and 4 at 10mins.

1130 Hours

[Baby A] transferred to [a public hospital's neonatal unit].

[Several days later]

1123 Hours

[Baby A] died at [the public hospital].

Post mortem examination carried out by [a pathologist] revealed a well grown term infant. There is no evidence of pre labour compromise. Normal anatomy with evidence of hypoxic ischaemic changes to the brain consistent with acute near total asphyxia. There was no evidence of infection or meconium aspiration.

She also comments that the length of time the uterus is open before delivery would have further compromised an already distressed baby.

ISSUES:

1. Non reassuring pre prostin CTG.

COMMENT

Loss of variability is the most indicative factor of increased risk since it may be the cumulative result of previous non reassuring factors and may indicate decompensation of the fetal compensatory mechanism. When accompanied by late or variable decelerations, decreased variability increases the possibility of fetal acidosis and low APGAR scores if it remains uncorrected.

The amount of variability is affected by the fetal state and there are other causes other than uteroplacental insufficiency. Normal babies can have decreased variability with no known cause. Sleep cycles of 20–40 minutes may cause a decrease in FHR variability. Medication including analgesics, anaesthetics, and tranquilisers may also induce quiet periods on the FHR pattern without fetal compromise.

Given the non reassuring nature of the pre-prostin CTG, it would have been prudent to continue monitoring until reassured. Hourly CTG's as requested by [Dr C], may not have picked up any deterioration until too late. At around the time of the prostin insertion, [Ms A] was not thought to be in labour, however, she rapidly required pain relief and showed uterine activity and variable decelerations almost immediately the prostins were inserted.

2. No CTG between 2110–2257 hours.

3. Despite this request by both [Dr C] and [Ms B] — this did not occur.
Rapid progress to 2nd stage in primigravida following insertion of prostin gel (2 hours 45 minutes).

Accompanied by signs of fetal distress — reduced variability, and late decelerations.

4. Decision by [Dr C] to augment labour in 2nd stage labour when contractions appear on CTG to be occurring 4–6 in 10 minutes.

5. Failure to identify fetal compromise.

6. Discrepancies in the time entered by [Dr C] and [Ms B] in the clinical notes and on the CTG.

COMMENT

Having read both accounts of events and attempts to interpret these by various people, I have some difficulty accepting that [Ms B's] clinical record times were anything other than

contemporaneous. The times are continuous with events being described and there are no gaps or omissions in the way they are recorded. They are also reflected in the comments on the CTG.

It is inconceivable that she would write that she had consulted [Dr C] further at 0015hrs regarding her concerns about the fetal heart rate, if in fact this did not happen.

It is unfortunate that she did not record the times she recalls that [Dr C] was present in the room. It would appear that communication was an issue as [Dr C] claims not to have been made aware of any concerns and [Ms B] claims she was unaware that [Dr C] had left the unit and was fully expecting her to review [Ms A's] progress.

[Dr C's] explanation of events seems contradictory in that she claims to have been in the ECC dept attending an ambulance patient at the same time as she writes in the clinical notes she was reviewing [Ms A's] progress and deciding to go to theatre for a Caesarean.

The comment on the CTG at 0100 hours to 'stop synto' and 'for LSCS' are also contrary to events as they are recalled in the clinical notes by [Ms B]. It is unlikely that it would have taken a further 1 hour 35 minutes to deliver [Baby A] in an emergency or even urgent situation.

As it was, the time from decision to Caesarean section to delivery was over 1 hour in an emergency.

There is a lack of accurate documentation in clinical notes (no documentation by [Dr D] or Delivery Unit co-ordinator who was consulted twice regarding the CTG).

OPINION REGARDING MIDWIFERY CARE

Midwives have a responsibility to refer to secondary care and seek medical help when the progress of labour and birth become abnormal.

The system in NZ allows for the LMC midwife to continue providing midwifery care under the direction of a specialist obstetrician when a woman's labour becomes abnormal. Care is managed collaboratively using the experience and expertise of both medical and midwifery knowledge to bring about a good outcome for the mother and baby.

[Ms B] appears to have consulted appropriately throughout the induction and labour process. She fully expected that the registrar on call was appropriately experienced and qualified to make assessments and decisions when asked, and to respond in emergencies when required.

[Ms B] documented her concern regarding the CTG after [Dr C] ordered the labour be augmented with Syntocinon. She made three requests for obstetric review in 1½ hours, all of which were to express concern and elicit help. She also requested advice from the senior midwife co-ordinating Delivery Unit.

In total there were 5 consultations by 3 midwives with [Dr C] regarding the labour management of [Ms A]. It is unlikely [Dr C] was unaware that there was a concern for [Ms A] and her baby.

Some maternity facilities employ a 'MOSS', who is an experienced medical officer, who is not a specialist, but whose career is based within the hospital environment. This system is somewhat confusing for midwives. The uncertain qualifications and experience have potential to lead to the erroneous assumption that they are consulting with a specialist obstetrician. Similarly, hospitals employing registrars invariably do not distinguish between junior and senior registrars or level of experience. Midwives are often left to second guess based on behaviour, as to how competent the registrar or MOSS actually is.

Regardless of seniority it would be expected that a registrar or MOSS would be working under delegation from a specialist obstetrician. The obstetrician bears responsibility to delegate care appropriately and ensure that the person delegated to is appropriately skilled and capable, that there is a system for referral and an agreed level of communication regarding the complexity of care carried out. Matters of concern would also be dealt with as part of the supervisory responsibility.

It is my opinion that [Ms B] did identify fetal distress, but [Dr C] did not, nor did she follow an appropriate course of action, which was questioned by [Ms B] at the time. The delays in getting [Baby A] delivered would have undoubtedly contributed to his fragile state — this cannot be attributed to any act of [Ms B].

In hindsight it is reasonable to question why neither of them consulted the on call obstetrician [Dr E] if there was not agreement on the management of second stage. [Ms B] refers to [Dr C] as an 'experienced specialist on whose advice I felt I could rely'.

In this case it is clear that [Dr C] despite concerns being expressed by the midwife, continued without consulting the obstetric specialist. [Ms B] also appears to have made the assumption that she was already working under the direction of a specialist.

A senior midwife, more familiar with the system of delegation by specialists, may have known [Dr C's] limitations and sought advice directly from [Dr E, the consultant obstetrician]. However, an independent midwife, not directly employed within the hospital and with a relatively new qualification may be under the impression that the instructions given by [Dr C] were non negotiable. Such is the entrenched culture in hospitals that many midwives would not question the opinion of a medical specialist.

When I asked midwives within [the public hospital] what they would do under similar circumstances, there were a variety of responses. Only the most senior midwives considered they would go over the authority of the registrar or refuse to follow instructions. Though most agreed they would question what they considered an unsafe decision. All said they would consult with the midwifery co-ordinator.

WDHB PROTOCOLS

North Shore Hospital has submitted protocols and policies which provide guidelines and instructions for acceptable management. The protocol on Syntocinon administration states that oxytocin infusion is contraindicated in the presence of fetal distress and suspected cephalo pelvic disproportion.

Both these factors were drawn to [Dr C's] attention by [Ms B] during the course of labour. The protocols stipulate that a normal CTG pattern is a prerequisite for oxytocin augmentation and that in the event of fetal distress occurring the oxytocin should be stopped.

Had [Dr C] shown regard for the protocol Syntocinon would never have been ordered.

Waitemata Health also has a policy regarding the management of acute obstetric cases in theatre.

The categories of urgency state that:

Immediate — baby delivered within 20 minutes

Urgent — baby delivered within 40 minutes

Semi Urgent — baby delivered within 60 minutes

Non Urgent — baby delivered within 6 hours

Having identified fetal distress, [Baby A] was not delivered until 1 hour later. It is unclear in the clinical record whether this was regarded as an Immediate or Emergency situation.

This delay cannot be attributed to [Ms B] and would almost certainly have further compromised [Baby A's] chances of survival.

OPINION

Having read the evidence I am of the opinion that [Ms B] acted appropriately in seeking medical assistance when she identified a deviation from the normal progress of labour. The tragic outcome of poor decision making by the MOSS [Dr C] whom she believed was an experienced specialist, should not be seen as a failure of the midwife to take appropriate action.

The midwife cannot be held responsible for the decision making of a doctor, she is accountable for her own practice.

[Dr C] had every opportunity and a responsibility to observe and diagnose an abnormal labour and fetal distress when her attention was brought to this.

There is no evidence that the midwife gave incorrect information or failed to communicate her concern. If [Dr C] was uncertain she could have consulted with the specialist obstetrician on call. [Ms B] questioned [Dr C's] decision to augment labour, but this made no difference to the directive given to continue on."

Appendix 5 — Ministry of Health Maternity Services Notice

STANDARD TERMS AND CONDITIONS OF ACCESS TO A MATERNITY FACILITY OR BIRTHING UNIT

1.0 PURPOSE

The applicant ["the Practitioner"] is an Authorised Practitioner as defined by the Maternity Notice (2002) issued pursuant to Section 88 of the New Zealand Public Health and Disability Act 2000. The Practitioner has requested that [name of facility provider] ["the Maternity Facility"] grant the Practitioner access to the following facilities for the purpose of providing Labour & Birth and Inpatient Postnatal Care to the Practitioner's maternity clients.

[Name of facility/facilities] .....

This Access Agreement provides the Practitioner with access to the services that are specified in the Maternity Facility service specification issued by the Ministry of Health on the terms and conditions set out in the following clauses.

2.0 OBLIGATIONS OF BOTH PARTIES

2.1 Cultural safety

i) Services to Maori will be provided in a way that is consistent with the Treaty of Waitangi, recognising the status of Maori as tangata whenua and the status of Maori women within the context of their cultural values, beliefs and practices.

ii) Maternity services will be provided in a manner that recognises cultural differences and is sensitive to the cultural traditions, protocols and customs of the woman.

2.2 Referral Guidelines

Both parties will take into account the Referral Guidelines.

2.3 Relationship between the Maternity Facility and the Practitioner

The relationship between the Maternity Facility and the Practitioner gives the Practitioner access to the Maternity Facility upon these terms and conditions and is not to be construed as one of employment or a contract for service by the Practitioner. The Maternity Facility shall not inquire into or specify matters relating to the operation or administration of the Practitioner's practice.

2.4 Policies & procedures

All relevant administrative policies of the Maternity Facility are to be available to the Practitioner in the facility. Any clinical policies will be developed and agreed by both the Maternity Facility and the Practitioner (or by a representative of the Practitioner's professional organisation).

2.5 Complaints management

2.5.1 Where a woman has identified an issue as a complaint, the party receiving the complaint will advise the woman of the appropriate avenues for complaint.

2.5.2 If both parties to this Access Agreement share responsibility for the service complained about then, with the consent of the woman, the party who receives the complaint shall discuss the issue with the other party.

2.6 Dispute management

2.6.1 If any issue arises between the Practitioner and the Maternity Facility in relation to interpretation, obligation or compliance by either party to the terms of this Access Agreement, the Practitioner and the Maternity Facility shall use their best endeavours to settle the dispute by agreement. Any review of any issue needs to apply a process that is mutually agreed by both parties.

2.6.2 The relevant professional organisation should be considered as a resource in preventing or managing any dispute.

2.7 Suspension

2.7.1 The General Manager of the Maternity Facility shall have the right and complete discretion to immediately suspend access by the Practitioner to the Maternity Facility in the event of a serious complaint being made of gross misconduct, negligence, or a substantial or repeated breach of this Agreement.

2.7.2 Within 48 hours of the suspension, the Maternity Facility will provide the Practitioner with written reasons for the suspension.

2.7.3 Management of the suspension is then to follow clause 2.6 of this Access Agreement.

3.0 OBLIGATIONS OF THE PRACTITIONER

3.1 Professional responsibilities

The Practitioner accepts that s/he is fully accountable for his/her own professional practice. The Practitioner will participate in a Professional Review Process. The Practitioner will explain to the woman the relationship between the self-employed Practitioner and the Maternity Facility.

3.2 Compliance with Statutes and Regulations

The Practitioner undertakes and agrees to comply with all relevant statutes and regulations on the provision of healthcare.

3.3 Qualifications

3.3.1 The Practitioner shall at all times maintain the following qualifications:

(a) be vocationally registered as an Obstetrician in the register of medical practitioners maintained by the Medical Council of New Zealand and hold a current annual practising certificate issued by that Council;

(b) be vocationally registered as a General Practitioner in the register of medical practitioners maintained by the Medical Council of New Zealand and hold a current annual practising certificate issued by that Council and have a Diploma in Obstetrics (or equivalent, as determined by the New Zealand College of General Practitioners); or

(c) be a Midwife whose name is included in the register maintained by the Nursing Council of New Zealand and hold a current annual practising certificate issued by that Council.

3.3.2 The Practitioner will inform the Maternity Facility of any change in his/her practising status or any conditions attached to his/her practising certificate.

Other than North Shore Hospital, Waitemata District Health Board, and advisors, names have been removed to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

3.4 Indemnity Protection

The Practitioner shall maintain appropriate professional indemnity protection at all times during the term of this agreement.

3.5 Students

The Practitioner shall be responsible for any student accompanying the Practitioner, in conjunction with the School of Midwifery or the School of Medicine.

3.6 Availability

The Practitioner shall provide 24-hour availability if acting as a Lead Maternity Carer or have arranged availability of another Practitioner who has a current Access Agreement with the Maternity Facility.

3.7 Administrative Requirements

The Practitioner will meet any reasonable administrative requirements of the Maternity Facility to the extent necessary to enable the Maternity Facility to run an efficient and co-ordinated service.

3.8 Contact Details

The Practitioner shall notify the Maternity Facility of any changes in contact details.

4.0 OBLIGATIONS OF THE MATERNITY FACILITY

4.1 Orientation

The Maternity Facility shall provide the Practitioner with an orientation to its facility at a time mutually agreeable to both parties.

4.2 Education Forums

The Maternity Facility will enable the Practitioner to have access to educational forums held by the Maternity Facility.

4.3 Administrative Requirements

The Maternity Facility shall facilitate the Practitioner's compliance with any administrative requirements.

4.4 Availability of Facilities

The Maternity Facility shall ensure that reasonable notice is given prior to any reduction in or cessation of facility services.

5.0 ENTIRE AGREEMENT

These terms and conditions form the entire agreement between the Maternity Facility and the Practitioner.

6.0 TERM

6.1 This agreement is continuous, subject to an annual sighting of the Practitioner's current practising certificate and indemnity protection.

6.2 The Practitioner may terminate this agreement by giving notice to the Maternity Facility.