Obstetrician, Dr B

A Report by the

Health and Disability Commissioner

(Case 05HDC16711)

Parties involved

Baby A	Consumer
Mrs A	Consumer/Complainant
Mr A	Complainant
Dr B	Provider/Obstetrician
Dr C	Provider/Obstetrician
Ms D	Provider/Midwife
A District Health Board	Provider

Complaint

In June 2002 the Commissioner received a complaint from Mr and Mrs A regarding the services provided to Mrs A and Baby A by Dr B. The Commissioner did not take action on the complaint in 2002 as, based on the information that was available at the time, there did not appear to be an apparent breach of the Code of Health and Disability Services Consumers' Rights (the Code).

Mr and Mrs A provided new information (ie, ACC's review decision accepting this claim as "medical mishap" following advice by obstetrician Dr Jenny Westgate) for the Commissioner to consider in 2005. The Commissioner re-assessed the complaint and sought preliminary expert advice. As a result of that review, the Commissioner decided to investigate the complaint. The following issues were identified for investigation:

Whether Dr B provided services of an appropriate standard to Mrs A and Baby A during Mrs A's labour and the delivery of Baby A on 10/11 February 2001. In particular:

- *The use of syntocinon during the first stage of labour;*
- *The monitoring of Mrs A and Baby A during the second stage of labour.*

An investigation was commenced on 18 November 2005.

Information reviewed

Information provided by:
- Mr and Mrs A
- Dr B
- Ms D (midwife)
- Dr C
- A District Health Board
- ACC

Independent expert advice obtained from Dr Michael East, obstetrician.

Information gathered during investigation

Background
Mrs A was under the care of obstetrician Dr C and midwife Ms D for her second pregnancy in 2001. Mrs A had experienced complications during the birth of her first daughter in 1998. That labour was induced because of Mrs A's high blood pressure. She failed to progress beyond 5cm after 19 hours of labour, resulting in a delivery by emergency Caesarean section due to early warning signs of fetal distress. With this clinical history, Dr C and Mrs A discussed the risks and benefits of attempting a vaginal delivery, and Mrs A agreed to a trial of labour.

Dr C planned to take a period of leave in February 2001 and arranged for his colleague, Dr B, to provide cover for his maternity patients during this time. Mrs A was aware of this arrangement to cover Dr C's absence. Dr C advised ACC that during his handover he provided Dr B with a verbal report, Mrs A's antenatal card and a handwritten note (which is no longer available).

Early signs — 10 February 2001
Mrs A went into early labour on 10 February 2001. She experienced a spontaneous rupture of membranes at home at about 0830 and called Ms D at 0852. Ms D advised her to go to the delivery suite at a public hospital for assessment. Ms D met Mrs A at the hospital at 0955 and confirmed that Dr B would be providing obstetric care as Dr C was still away. Mrs A was not yet experiencing contractions, and the baby was noted to be in the occipito-posterior position.[1]

[1] That means the back of the baby's head is towards the rear of the pelvis. This is back-to-front from the normal lie of the fetus.

Mrs A first met Dr B at 1135 in the Delivery Suite. Mrs A advised me that she asked Dr B if Dr C had told her about how her labour was to be managed and Mrs A's previous history, and that Dr B said "yes, a little", then walked away to do something else in the room. Mrs A said that they (both Mrs A and her husband) then explained the complications surrounding their first daughter's birth in 1998 so that Dr B was aware of their concerns. Mrs A was concerned that Dr B appeared preoccupied with preparing the delivery room and was not listening. However, Dr B did note in the clinical record that Mrs A was very anxious.

In response to my provisional opinion, Dr B said she does not recall being distracted. She claims that her practice is "to offer her patients full attention at every feasible time" and she regrets if that was the impression.

A cardiotocograph (CTG)[2] was applied and described as reactive and normal. Dr B explained the options for progressing labour in a situation where the membranes have ruptured but contractions have not started. The options were to augment the labour immediately or leave Mrs A for 48 hours to see if labour developed naturally, provided there was no illness, raised temperature or bleeds in the interim. Dr B advised me that she counselled Mrs A on how to monitor fetal movements, and the options for augmenting the labour if there was no progress. The "wait and see" option was agreed and Mrs A went home.

Dr B recorded "agrees with all counselling" in the notes and advised me that this means the patient has been given a full verbal explanation of the options and has agreed with the points discussed. Dr B, in her response to my provisional opinion, has stated that she believes the option of a Caesarean section was discussed on 10 February 2001. However, she acknowledges that she did not keep detailed notes of the discussion. I note that in Dr B's response to ACC in 2001, no mention is made of the option of a Caesarean being discussed at this time.

Early labour — 10/11 February 2001

Mrs A was admitted to Delivery Suite again at 2120 as she was experiencing contractions. Mrs A was assessed by Ms D, and Dr B was notified that Mrs A had been admitted.

Mrs A's baseline temperature and blood pressure were recorded and a CTG was commenced. The fetal heart rate was recorded as 150 bpm at 2120 and 140bpm at 2300. Contractions were 2:10 (2 contractions in a 10-minute period), which can be an indication of very early labour. In consultation with Dr B, Mrs A was given 100mg of pethidine for pain, and Maxolon for nausea. At 2330 Mrs A was transferred to the ward for monitoring, and Ms D went home to await progress.

[2] A machine used to monitor the fetal heart rate and the strength of contractions during labour. A monitor is placed on the maternal abdomen and kept in place with a strap for continuous monitoring.

At 0150 on 11 February 2001, Mrs A was re-admitted to Delivery Suite as her contractions were increasingly intense. Ms D was called back to the hospital. Mrs A's blood pressure and observations were recorded as normal. The CTG recorded a baseline fetal heart rate of 140 bpm at 0230. Pinkish liquor was detected. Contractions were still 2:10, lasting 45–50 seconds.

At 0415, Mrs A requested a progress update. Ms D noted that the cervix was soft and effacing. The fetal heart rate was recorded as 130bpm and liquor was clear. After discussing pain management, Mrs A decided to opt for an epidural. At 0500, an epidural was inserted and Syntocinon augmentation of 2ml/hr began at 0540. This was increased to 4ml/hr at 0615.

At 0630 contractions were occurring at the rate of 3:10 and lasting 60 seconds. The contractions were moderately strong but Mrs A was noted to be comfortable. The fetal heat rate was recorded as 130–140 bpm. The epidural was topped up at 0655. Some shallow decelerations were noted.

At 0800 contractions were occurring at the rate of 4:10. Syntocinon was reduced to 2ml/hr. Dr B was advised of Mrs A's re-admission and progress.

At 0830, another doctor reviewed Mrs A on behalf of Dr B. Persistent shallow type 1 decelerations were noted and the fetal heart baseline was recorded as 140–150–120. An epidural top-up was given.

Syntocinon was increased to 4ml/hr at 1030. A contraction rate of 3:10 is recorded at 1000 and 5:10 at 1130.

Active labour — 11 February 2001
Dr B saw Mrs A at 1115 in the Delivery Suite. Mrs A was recorded as being in active labour (3.5 cm dilated). Dr B wrote in the notes: "should aim to deliver within 6–8 hours".

Dr B decided the contractions were reasonable but needed to be augmented by an increase in Syntocinon. Ms D confirmed to ACC that the labour was slow to establish and Mrs A consented to Dr B's plan for augmentation and epidural administration. An epidural top-up was provided at 1045 and Syntocinon was increased to 8ml/hr at 1100. A contraction rate of 5:10 with shallow decelerations was recorded at 1130.

At 1145, Syntocinon was decreased to 6mls/hr and persisting type 1 decelerations were noted. An epidural top-up was provided at 1230 and the baseline fetal heart rate was recorded as 145 at 1245.

At 1300 Mrs A reported an increasing pressure in the rectum, which is usually a sign that the labour is progressing to second stage (pushing). The notes record 7cm dilation at 1315 and the fetal heart rate at that time was 136–140 bpm, with continuing shallow dips. A further epidural top-up was provided at 1400. Ms D

advised ACC that she discussed the continuing type one decelerations and the rate of Syntocinon with Dr B at various times, and that Dr B advised her to slowly increase the Syntocinon. However, the labour was still slow to progress.

Mrs A advised me that she was not given any alternatives to progressing with the induced labour, and that the option of Caesarean section was not discussed. In response to my provisional opinion, Dr B stated that she did mention the option of a Caesarean section throughout the first stage of labour. However, there is no record of such discussions noted in the clinical record.

At 1440 Dr B reviewed Mrs A and noted her (Dr B's) plan to increase Syntocinon to 8mls/hr. Mrs A advised me that she was not involved in this decision, as Dr B called Ms D out of the birthing room to discuss this plan. Mrs A recalls that Ms D and Dr B returned to the birthing room but that Ms D looked concerned, opened Mrs A's Matpro book to the birth plan page and left it on the side of the bed. Mrs A said she asked, "Are you alright [Ms D], what is wrong?" Mrs A advised me that she got no response from either Ms D or Dr B. Mrs A said that Ms D opened her antenatal book to what Mrs A believes was her birth plan.

In response to this investigation, Ms D advised me that communication with Mr and Mrs A was open, honest and friendly. Ms D could not recall handing the Matpro book to Mrs A, but stated that if she did so, there was no intention to communicate any message or to dissent from Dr B's management of care.

Syntocinon was increased to 8mls/hr at 1440, 12mls/hr at 1455, 16mls/hr at 1510 and 20mls/hr at 1540. A contraction rate of 5:10 is recorded at 1455 and 1540, with a baseline fetal heart rate of 145–150bpm. No abnormalities were recorded.

Mrs A was again reviewed by Dr B at 1600. Mrs A was fully dilated and the plan was to start pushing in 30–45 minutes. Contractions had increased to 6:10 by 1630. The partogram records an increase in fetal heart rate to 160 bpm by 1630. The CTG tracing ends at 1720. Dr B advised me that, at this stage, Mrs A had been in labour for six hours, which was consistent with the birth plan discussed earlier at 1115.

At 1730, Dr B noted that Mrs A had been actively pushing for one hour with some late decelerations but good recovery so far. Dr B described the CTG in the clinical notes as "ok". In her response to this investigation, Dr B described the CTG tracings as showing "good recovery from decelerations and did not show a pattern of fetal asphyxiation". However, I note that in Mrs A's discharge summary dated 13 February 2001, the CTG is described as "abnormal".

It was agreed that Dr B would use a ventouse-assisted delivery, and Mrs A was transferred to a delivery theatre. A CTG machine was not available initially in the delivery theatre as all of the mobile units were in use. The CTG machine that had been used in the labour room was fixed to the wall and could not be transferred with Mrs A. Ms D negotiated with a hospital midwife, and a CTG machine was eventually

provided. The fetal heart rate was then monitored with intermittent auscultation[3] between contractions.

At 1745 the notes record an epidural top-up in preparation for the ventouse delivery. The notes record the fetal heart rate as 140, 126 and 119 bpm. The heart rate is then recorded as 129 just prior to the application of the ventouse (time not available).

Birth — 11 February 2001
Dr B applied the ventouse and rotated the baby's head. The baby descended over four contractions. Mrs A then pushed over the next three contractions and Baby A's head was delivered. The contraction frequency and time taken to deliver is not recorded. Fresh meconium was noted after delivery of the fetal head, and Baby A was suctioned. Baby A was fully delivered at 1820.

There are conflicting reports of Baby A's condition at birth. Dr B advised ACC that Baby A had a good heart rate (100 bpm) and was very pink but not crying. Ms D describes her as having a good heart rate but being quite floppy. The paediatric team was "crash bleeped" and Baby A was placed on the resuscitaire. A hospital midwife continued to suction Baby A while Ms D assisted her breathing with bag ventilation. Ms D then describes Baby A as "pinking up" quite quickly.

The paediatric registrar described Baby A as apnoeic,[4] unresponsive, pale and atonic.[5] She was intubated at three minutes of age, and took her first gasp at five minutes. Her Apgar scores were 2 (at two minutes) and 5 (at five and ten minutes). The cord blood gas showed metabolic acidosis, with a pH of 6.875, base excess of –19.5, and lactate of 10.94.

Mrs A recalls that after delivery, Baby A was placed on top of her and appeared to be floppy, blue-grey in colour and lifeless. She was then taken away and Mrs A asked whether she was all right. Mrs A recalls Dr B saying repeatedly, "she's pinking up" and "don't worry, she will be all right".

I have considered the conflicting reports of those who assessed Baby A in the moments shortly after her birth. Although it is not necessary to make a final determination on this point, I am satisfied that she was in a serious condition requiring active resuscitation.

[3] Placing the CTG machine on the maternal abdomen at intermittent intervals rather than leaving it on continuously.

[4] Not breathing.

[5] Without normal muscle tone or strength.

Baby A was admitted to the neonatal unit shortly after her birth. Her progress was slow and complicated by seizures. She remained in the neonatal unit for two and a half weeks. She has since been diagnosed with spastic quadriplegic cerebral palsy.

Dr B advised me that she visited Mrs A a few times on the postnatal ward and talked with her openly, acknowledging her empathy and deep feelings. Dr B summarised the delivery to me as follows:

> "With no persistent decelerations, no clinical overt and serious fetal asphyxiation visible on routine and normal assessments, maternal consent taken at each stage and a relatively quick, efficient instrumental delivery that has been recorded as having been "easy", we still had a situation where [Baby A] was born as we term it on delivery suites — 'flat'."

ACC review

Mr and Mrs A subsequently made a claim to ACC for compensation on the basis of medical misadventure. This claim was initially declined. Mr and Mrs A appealed that decision and provided a report from obstetrician Dr Jenny Westgate, which indicated that there was a causal link between Baby A's birth and her subsequent injuries. ACC subsequently accepted the claim as medical mishap.

During ACC's consideration of this claim, it became apparent that the CTG tracings were missing from Mrs A's clinical records. ACC was therefore relying on the description of the CTG tracings in the notes, which did not indicate any abnormalities, when the claim was declined.

As part of this investigation, I asked the District Health Board to forward any relevant information. In responding to this request, the missing CTG tracings were located and provided to my Office. In response to my provisional opinion, Mr and Mrs A noted their disappointment that the CTG tracings were misplaced and that this hindered their claim to ACC.

Dr B reviewed the CTG tracings and advised me:

> "There was continuous monitoring of the labour and delivery until the last few moments …
>
> The CTG in the 1st stage is not out of the normal limits for an augmented labour …
>
> The CTG in the 2nd stage of labour, whilst pushing, shows some 'early' decelerations. These are sharp, down to 100 beats per minute and recover quickly to the normal baseline of between 140–160 bpm.
>
> The CTG just prior to the Ventouse extraction, in the very last minutes of the 2nd stage, when the head was on the perineum, shows classic "last minute" type decelerations that recover."

In response to my provisional opinion, Mr and Mrs A advised that they were concerned about Dr B and Ms D being tired and overworked on the day of Baby A's delivery. Mrs A said she expressed her concerns to Ms D throughout the day and asked if there was anyone who could replace her. Ms D dismissed these concerns by saying, "No, I'll be all right."

Trial of labour

A side issue arose as part of my investigation into the care provided by Dr B.

Mrs A advised me that, due to her difficulties with her first daughter's birth in 1998, she discussed her concerns with Dr C during antenatal consultations. Mrs A wanted to attempt a vaginal delivery but, in light of her previous Caesarean section, only if it was a safe option. Dr C advised Mrs A that she could attempt a trial of labour.

Mrs A was adamant in her communications with me that she agreed to a trial of labour only on the condition that it would be limited to 10 hours. She states that the ten-hour limitation was recommended by Dr C. Mrs A assumed that this agreement had been recorded in her notes and passed on to Dr B. Mrs A advised me that Ms D was also aware that she had only agreed to a 10-hour trial of labour.

During the ACC investigation, Dr C confirmed that a trial of labour had been discussed but made no reference to any agreed time limits. Similarly, Ms D could not recall any discussions about the trial of labour being limited to 10 hours. If a 10- hour time limit was agreed, it was not recorded in the notes and was not communicated to Dr B.

It is not necessary for me to resolve this issue as it is not directly relevant to the care provided by Dr B on 10 and 11 February 2001. It does, however, give an indication of Mrs A's state of mind during her labour. In my view, it is clear that while Mrs A wanted to attempt a trial of labour, she was unlikely to be insisting on a vaginal delivery.

Dr B's practice

Dr B advised me that she voluntarily underwent a practice review audit in October 2003 as one of the pilot audits by a select Royal Australian and New Zealand College of Obstetricians and Gynaecologists committee, and that her practice was favourably reported on all aspects, including safety. I have reviewed a copy of this report and confirm that it reports favourably on Dr B's practice. Dr B advised that she has ceased her involvement in obstetric care and now practises solely in gynaecology.

Independent advice to Commissioner

The following expert advice was obtained from Dr Michael East, obstetrician:

"I have been asked to give an opinion as to whether Dr B provided services of an appropriate standard to [Mrs A and Baby A] on 10/11 February 2001.

Complaint I have been specifically asked to comment with regard to

- *The use of Syntocinon during the first stage of labour.*
- *The monitoring of [Mrs A and Baby A] during the second stage of labour.*

Expert Advice Required

Primary Issues

1. *In your professional opinion, was the service [Dr B] provided to [Mrs A and Baby A] appropriate? Please give reasons for your opinion.*

2. *What standards apply in this case?*

3. *Were those standards complied with?*

Secondary Issues

4. *Was the use of syntocinon appropriate during the first stage of labour?*

5. *Was the monitoring of [Mrs A and Baby A] during the second stage of labour appropriate in the circumstances?*

6. *Are there any comments about the time taken to effect the first and second stages of labour?*

7. *Was the decision to use ventouse appropriate and are there any comments to be made about the time taken to effect the ventouse delivery?*

Supporting Information

- Letter of complaint from [Mr and Mrs A], received by this Office on 12 June 2002, marked with an 'A'.
- Response from [Dr B] to ACC dated 16 July 2001, marked with a 'B'.
- Response from [Dr B] to the Commissioner dated 29 November 2005, marked with a 'C'.
- Response from [Dr B] to the Commissioner dated 11 January 2006, marked with a 'D'.
- Response from [Ms D] to ACC dated 20 July 2001, marked with an 'E'.

- Response from Ms D to the Commissioner dated 24 January 2006, marked with an 'F'.
- Response from [the DHB] to the Commissioner dated 14 December 2005, marked with a 'G'.
- Copy of Oxytocin (Syntocinon) protocol from [the DHB], marked with an 'H'.
- Example of access agreement between obstetrician and [the DHB] from 1999, marked with an 'I'.
- Copy of [Mrs A's] clinical notes and CTG tracings from 10 and 11 February 2001, marked with a 'J'.
- Neonatology report: [by a specialist neonatal paediatrician at the public hospital]

OPINION

[Dr B] attended [Mrs A] within a reasonable timeframe following her admission to the Delivery Suite on 10 February 2001 with spontaneous rupture of membranes pre labour. The initial clinical assessment was competent. Note was made that [Mrs A] was not in labour, she was afebrile, the uterus was of an appropriate size for full term and the presentation was cephalic and that the diagnosis of spontaneous rupture of membranes was confirmed and swabs taken.

With regard to the initial management, [Mrs A] was offered two reasonable management options, namely

1. To watch and wait over the first 48 hours providing there was no change in the clinical parameters to give rise to concern but if labour did not commence spontaneously then for augmentation with syntocinon ± the use of prostaglandin gel.

2. To proceed immediately to augmentation (in fact it would have been induction — strictly defined) of labour.

In my view a third option ought to have been offered, that being to proceed to Caesarean section on the grounds that the head was unengaged, the membranes had ruptured pre labour which is usually a bad prognostic sign with regard to orientation of the fetal head. The fact this option was not discussed can only be considered to be a minor issue as one would have to take into consideration the expectations of [Mr and Mrs A]. It may for example have been clear to [Dr B] that a trial of labour was the option that they wished to pursue and therefore only options regarding how such a trial ought to be conducted would therefore need to be detailed.

With regard to the duration of the first stage of labour one can define labour as the onset of painful contractions associated with the observation of progressive dilatation of the cervix. Labour therefore by definition is a retrospective diagnosis and even the definition given only allows for a 'best guess' opinion,

for example if one imagines an occipito-posterior presentation poorly applied to the cervix simply because of the head ill fitting in the pelvis then significant 'labour' contractions may occur without the cervix dilating. A long 'latent' phase of labour must always then be considered a warning sign for cephalopelvic disproportion be it absolute or relative relating to orientation of the fetal head. If contractions already seemed to be adequate then the use of syntocinon to augment the first stage would be questionable for fear of causing rupture of the lower segment of the uterus given the past history of Caesarean section. If contractions were considered to be inadequate (lack of cervical dilatation alone cannot be used to assess the adequacy or inadequacy because of the factors already mentioned above) then a cautious use of syntocinon after a full discussion with the woman concerned and other care givers is a reasonable option. […] I would state that the character of the first stage of labour was definitely dysfunctional due to slow progress and even after syntocinon was commenced along with epidural anaesthesia at 0500 hours on the 11.2.2001 progress thereafter still fell short of an accepted 'normal' rate of progress. This should be qualified by saying that providing [Mrs A] was still focused on achieving a vaginal delivery, providing she understood the risks of the use of syntocinon and providing the option of abandoning attempt at a vaginal delivery and proceeding to a Caesarean section was available then it was reasonable to continue as there was no evidence of a CTG abnormality until 1600 hours on 11.2.2001. At 1600 hours variable decelerations presented which gradually deteriorated in character up until the CTG tracings were discontinued at 1728. Variable decelerations, particularly if deep and wide, can be associated with fetal hypoxia. There is a high false positive diagnostic error rate, therefore if delivery is not imminent, fetal blood sampling is recommended as best practice. I therefore have concerns regarding the deteriorating CTG trace. My concerns are on three counts —

1. That the character of the variable decelerations was seen to gradually deteriorate up until the time that the CTG trace was discontinued at 1728.
2. That the tocograph portion of the CTG was discontinued at 1640, making it very difficult to time decelerations thereafter in respect to the uterine activity. Therefore if variable decelerations became consistently late decelerations one could possibly miss the association on clinical grounds alone. Late decelerations indicate a higher risk of fetal compromise/hypoxia but again there is still a high false positive rate from such recordings.
3. I am concerned that 52 minutes passes between the last cardio tocograph recording at 1728 and eventual delivery at 1820. I am particularly concerned that in [Dr B's] report of 16 July (labelled 'B' in supporting information) a statement is made that at 1730 the CTG was noted to be okay. In my opinion the CTG was then abnormal (actually last recorded 1728).

The decision to perform a ventouse delivery to conclude the second stage is reasonable providing the acoucher believes that the chance of success is high. Descent, rotation and delivery within four contractions would be considered to

be within normal limits and not indicate a particularly difficult instrumental delivery.

[Dr B] makes the comment that [Baby A] was born with a good heart rate and was very pink but not crying, yet paediatricians were crash bleeped. I find these comments a little inconsistent and this view is supported by the paediatric report compiled by [a specialist neonatal paediatrician at the public hospital]. The report clearly shows that cord blood gas revealed a pH of 6.8875, a base excess of –19.5 and lactate of 10.94, indicating significant acidosis at birth. The condition of [Baby A] at birth clearly indicated that at one minute of age she was apnoeic, unresponsive, pale and atonic, requiring active resuscitation which included intubation. She clearly was not a pink baby at birth. The CT head scan performed three days post partum revealed a small smear of blood adjacent to the falx and tentorium with the grey-white differentiation being normal. This would indicate that an anoxic event ante natally, before labour, resulting in cerebral palsy was unlikely as greater evidence of abnormality on CT would have been expected. The relative lack of CT abnormality would suggest that the hypoxic episode leading to the development of cerebral palsy occurred some time during the labour and delivery as it often takes several days before CT changes develop.

Summary Points of Note

1. [Mrs A] clearly had a dysfunctional labour due to occipto-posterior position creating relative cephalopelvic disproportion.
2. That the management of the first stage by [Dr B] can be considered appropriate providing the option for Caesarean section was repeatedly discussed and that [Mr and Mrs A] preferred the option of continuing with a trial of labour.
3. It is not possible from the notes to determine whether the labour plan made prior to 10.2.2001 in conjunction with [Dr C] to limit the first stage to ten hours was primarily based on the clinical wishes/recommendation of [Dr C] as opposed to the wishes of [Mr and Mrs A].
4. A clear CTG abnormality is present from 1600 hours, deteriorating in character up until the trace was discontinued at 1728 hours. I believe that this abnormality was overlooked.
5. Given the CTG abnormality it seems that there was an inappropriate delay to effect delivery until 1825 given that there was no reassuring fetal blood sample taken to contradict the CTG suggestion of developing fetal hypoxia.
6. The condition of [Baby A] at birth and the relatively normal CT scan suggests intrapartum hypoxia was the cause of cerebral palsy. Acute episodes of cerebral hypoxia are well tolerated by newborn babies, however prolonged hypoxia (which can often be determined by the cord blood sample) can cause cerebral damage.

OPINION

That CTG evidence suggesting fetal compromise was overlooked and as a result expedient delivery failed to occur. This constitutes at least a moderate departure from acceptable care.

FURTHER POINT TO CONSIDER

A further question to ask [the DHB] is why do women have to change rooms for instrumental delivery and why was a CTG machine not available to allow ongoing continuous monitoring? Usually one would expect the CTG machine to change rooms along with the woman labouring. The lack of CTG machine use therefore must also be held to question."

Responses to Provisional Opinion

Responses to the provisional opinion were received from Dr B and Mr and Mrs A. Further expert advice was also sought from Dr Michael East.

Dr B
Dr B expressed her deep sense of sadness about Baby A's birth and said:

> "I am profoundly dejected that there has been such a sad outcome in this situation. It is a source of the deepest regret and unhappiness to me that [Mr and Mrs A] have had such a poor outcome for their baby daughter. I can only apologise again and unreservedly."

Dr B reiterated her "ownership" of the entire birth process and the events attributable to her, noting that the birth has been discussed and reviewed many times by several experts and professional associates.

In relation to the progression of Mrs A's labour, Dr B advised that she uses Syntocinon with caution and slowly when augmenting a patient with a previous Caesarean "scar". Dr B stated that had she used more Syntocinon she would have been criticised for it because of the potential risk and the increased incidence of scar rupture in women who have had a previous Caesarean undergoing a trial of labour. She also notes that Mrs A's progress, although slow, was of the average range for an occipito-posterior labour, the liquor was normal and the CTG until 1600 was responding in the normal manner to the augmentation of the labour. She therefore saw the labour as fairly routine at the time. However, Dr B confirmed that that is no longer her view, knowing what she now knows.

Dr B explained that even a normal CTG may show transient deterioration. This will indicate that the CTG needs to be reviewed and monitored and the baby delivered as soon as possible.

Dr B explained that the CTG was discontinued at 1640 because the lack of facilities in the birthing room forced her to move to the Delivery Theatre, and the CTG machine could not be transferred with the bed. Dr B stated:

> "I will always deeply regret that a machine was unavailable easily to transfer with the bed correctly allowing ongoing monitoring. I will also always deeply regret that the room she was in originally was so tiny and ill equipped that we could not effect delivery there with ease/safety."

Dr B explained that she sent Ms D to locate another CTG while she rapidly set up the ventouse for delivery and listened to the fetal heart with the Doppler transducer in the meantime.

In response to Dr East's suggestion that fetal blood sampling was advisable when the CTG tracings showed abnormalities, Dr B noted that fetal blood sampling was hindered by:

- unsatisfactory lighting and equipment;
- a very old bed that did not lend itself to lithotomic-dorsal position quickly. The beds were changed in 2002–03 owing to several incidents involving this kind of situation;
- at the time the calibrating machine was located on the neonatal floor two flights of stairs above the delivery suite, and the sample would have had to be run up the stairs to read the results;
- the delay in calibrating the sample often produced poor results;
- in these circumstances fetal blood sampling would have taken more than an acceptable time to execute while the CTG possibly deteriorated and the baby remained undelivered.

Dr B explained that if she had used fetal blood sampling then attempted to perform an urgent Caesarean she would have had a further and unacceptable delay prior to the transfer to theatre and delivery of the baby. Dr B noted that the DHB has only one available theatre for acute Caesarean sections, and that Dr East's experience in Christchurch may be based on "a better organised delivery suite".

Dr B said that she does and "will always submit voluntarily and willingly to continuing medical education, review, audit and recertification" and enclosed a copy of the satisfactory RANZCOG practice audit she underwent voluntarily in October 2003. Dr B stated that if she ever takes up obstetrics again in New Zealand (which seems unlikely at this stage) she would accept my recommendation and undertake peer supervision and retraining in CTG tracings.

Mr and Mrs A
Mr and Mrs A clarified a number of matters in the information gathered section of my provisional report.

In relation to discussions about Mrs A's care, they reiterated that "[Dr B] made no comment to either of us ([Mr and Mrs A]) regarding the slow progress of the labour and the risks associated with continuing with the use (and increase in rates) of Syntocinon, at any stage prior to or during the labour".

Mr and Mrs A were provided with a copy of Dr East's report. They were concerned that Dr East did not discuss uterine hyperstimulation during labour. They also disagreed with his advice that the ventouse delivery had been appropriately managed.

Mr and Mrs A sought further advice from Dr Jenny Westgate, who confirmed her view that Mrs A experienced uterine hyperstimulation, resulting in fetal hypoxia,[6] as a result of the Syntocinon. Mr and Mrs A also referred to Dr Westgate's earlier advice that a ventouse delivery occurring over seven contractions (14–21 minutes) was too long and would cause hypoxia.

Further expert advice

Dr East reviewed the response to my provisional opinion from Mr and Mrs A and considered the further expert advice of Dr Jenny Westgate. Dr East advised:

> "I do not wish to alter the opinion already given in spite of the comments of [Mr and Mrs A] in their letter dated 1 August 2006.
>
> With particular reference to hyperstimulation of the uterus/overdose of Syntocinon. To determine whether hyperstimulation of the uterus had occurred one would either have to have a sustained contraction without relaxation or an excessive number of contractions per a unit time frame of 10 minutes with failure of a return to baseline between contractions. While one aims for 3–4 contractions out of 10 and the contraction rate at times were shown to be 6 out of 10, it would still depend upon the strength of the contractions as to whether hyperstimulation occurred. An intrauterine catheter would be required (very rarely used these days) to determine the actual uterine force of the contraction. Often in a dysfunctional labour frequent short-lived contractions occur but they are ineffective. I have tried to keep my comments as factual as possible rather than allow conjecture to interfere with my opinion.

[6] Lack of oxygen.

With regard to commenting on the normal length of time it takes to affect a Ventouse delivery, my report is possibly a little unclear. When I mention delivery within four contractions I am referring to the accoucher applying force during four separate contractions. There may be rest contractions in between so the total number of contractions from the moment a Ventouse is applied to the moment a baby delivers may be more than four but we are effectively talking about four sets of 'pull'. I do not think there is anything to suggest that the actual mechanical process of the Ventouse extraction was carried out in an inappropriate and unskilled way by [Dr B].

I think my opinion regarding the complaint file 05/16711 is both fair and considered and I do not wish to alter it simply to allow my report to 'match' Jenny Westgate's report. As an independent advisor, I wish my report to be just that, independent."

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.*

RIGHT 6
Right to be Fully Informed

1) *Every consumer has the right to the information that a reasonable consumer, in that consumer's circumstances, would expect to receive, including –*

   a) *an explanation of his or her condition;*

   b) *an explanation of the options available, including an assessment of the expected risks, side effects, benefits and costs of each option; …*

Opinion: Breach — Dr B

The right to be fully informed is a key component of the informed consent process. Right 6(1) provides that every consumer has the right to the information that a reasonable consumer, in that consumer's circumstances, would expect to receive, including an explanation of her condition and the options available. This information includes an assessment of the expected risks, side effects, benefits, and costs of each option. Without this information, a consumer cannot make an informed choice and give informed consent.

In my view, there were two occasions where Mrs A needed information to allow her to consent to the decisions being made about her care. The first was on 10 February 2001 when her membranes ruptured pre-labour. The second was when her labour failed to progress during the afternoon of 11 February 2001.

Pre-labour
When Dr B met Mrs A for the first time in the Delivery Suite on 10 February 2001, she was aware that Mrs A was anxious because she had experienced complications with the birth of her first daughter and had undergone an emergency Caesarean section. Mrs A had experienced a spontaneous rupture of membranes earlier that morning but was not yet experiencing contractions. The baby was in the occipito-posterior position creating relative cephalopelvic disproportion.[7]

Dr B offered Mrs A a choice — to induce the labour immediately or to leave Mrs A for 48 hours to see if labour developed naturally.

My expert advisor, Dr East, advised that these options were reasonable but a third option should also have been offered — Caesarean section. On 10 February 2001, the head was unengaged and the membranes had ruptured pre-labour. This is usually a bad prognostic sign with regard to orientation of the fetal head. Dr East did, however, qualify this advice by stating that the option of Caesarean section may not have been appropriate if the mother was focussed on pursuing a vaginal delivery.

In response to my provisional opinion, Dr B said that she also discussed the option of a Caesarean section on 10 February 2001 but acknowledged that this discussion was not specifically recorded in the notes, which only record "agrees to all counselling".

The conflicting accounts of what was discussed on 10 February 2001 are difficult to reconcile on the information that has been provided to me. However, given Mrs A's anxiety about the impending birth (which was noted by Dr B), I would expect Mrs A to recall being offered the option of a Caesarean section at that time. I also note that Dr B did not refer to any discussion about Caesarean section when she described

[7] The size of the baby's head is disproportionate to the maternal pelvis.

these events to ACC in 2001. I agree with Dr B that the clinical record does not adequately reflect any discussions about Caesarean section.

On balance, I am satisfied that Dr B did not discuss the option of continuing with a Caesarean at the pre-labour stage. Furthermore, while Mrs A may have indicated that she was happy to attempt a trial of labour, I consider it unlikely that she insisted on a vaginal delivery. In the circumstances, I accept Dr East's advice that Caesarean section should have been discussed as a viable alternative.

I consider that Mrs A was entitled to an explanation of her condition, including the clinical significance of membranes rupturing pre-labour and the position of the baby. This is information that a reasonable consumer, in Mrs A's circumstances, would expect to receive. It should have been followed by a discussion about the relative risks and benefits of all the options, including Caesarean section.

Progression of labour on 11 February 2001
It is clear from the clinical notes and the information provided by the parties that Mrs A's labour was slow and difficult. Mrs A was re-admitted to the delivery suite at 0150 but failed to progress, and Syntocinon was introduced at 0500. Even then, Mrs A was not described as being in "active" labour until 1115, and was not fully dilated until 1600.

My advisor confirmed that Mrs A's first stage of labour was dysfunctional owing to slow progress, and that even after Syntocinon was commenced at 0500 hours on 11 February 2001, progress still fell short of an accepted "normal" rate of progress. Dr East advised that in these circumstances, Mrs A should have been repeatedly advised of the risks of using Syntocinon, and been given the option of abandoning the attempt at a vaginal delivery and proceeding to a Caesarean section. If Mrs A considered these factors and remained focussed on a vaginal delivery, then it was reasonable for the induced labour to continue, as the CTG showed no abnormalities during this time.

It appears from the notes that Dr B reviewed Mrs A at 1440 and made the decision to persevere with Syntocinon infusion. In response to my provisional opinion, Mrs A confirmed that she was not involved in this discussion, and said:

> "[Dr B] made no comment to either of us ([Mr and Mrs A]) regarding the slow progress of the labour and the risks associated with continuing with the use (and increase in rates) of syntocinon, at any stage prior to or during the labour."

Dr East advised that it was reasonable for Dr B to continue with an induced labour if Mrs A remained focussed on a vaginal delivery, as there were no abnormalities on the CTG before 1600 hours. However, Mrs A is unlikely to have expressed this view, since she was (as Dr B noted) very anxious about proceeding with an induced labour.

I accept that childbirth is not an exact science and that each labouring mother presents with her own set of physical and emotional issues. That is precisely why the Code

requires providers to provide consumers with full information tailored to their individual circumstances. In circumstances where the baby is in a good position and the labour is progressing well, the labouring mother would expect to be reassured about that progress, and there would be little need to discuss any alternatives to a vaginal delivery. However, where any difficulties arise, the consumer should be kept appraised of their significance, and all options fully explored before decisions are made.

Given the baby's position, the lack of progress, and Mrs A's anxiety about her labour, a reasonable consumer in her situation would expect to be told of the risks, side effects and benefits of continuing with an induced labour, and the relative risks and benefits of any alternative, which in this case was to proceed to Caesarean section.

Dr B took the view that this was a fairly routine labour and advised me that maternal consent was obtained at every stage. In response to my provisional opinion, Dr B stated that she discussed the option of a Caesarean section throughout the first stage of labour. However, the notes do not record any discussions about options. Mrs A advised that she was not given any alternative to continuing with the induced labour, and that the option of Caesarean section was not discussed.

In my view, there were two occasions where Dr B did not provide Mrs A with sufficient information to allow her to consent to the decisions being made about her care. The first was on 10 February 2001 when Caesarean section was not offered as a reasonable option when Mrs A's membranes had ruptured and contractions had not commenced. The second was during the afternoon of 11 February 2001 when it became apparent that the labour was not progressing and Dr B decided to increase the Syntocinon infusion without discussing the risks and alternatives with Mrs A. This lack of consultation at two key points meant that Mrs A was not sufficiently informed to be able to make decisions about her care, and constitutes a breach of Right 6(1) of the Code.

Interpretation of the CTG tracings

Under Right 4(1) of the Code, every consumer has the right to have services provided with reasonable care and skill. In the context of providing obstetric services and managing a woman's labour, this includes the reasonable interpretation of clinical information such as CTG tracings and recognising when further action is required.

Mrs A's labour was monitored continuously throughout the first stage of labour and most of the second stage. When Mrs A was transferred to the delivery theatre, a CTG machine was temporarily unavailable.

Dr B has described the CTG tracings as not showing any abnormalities, persistent decelerations, or signs of fetal asphyxia. She noted on the clinical record at 1730 that the CTG was "OK". This, however, is inconsistent with Mrs A's discharge summary, which records that the CTG was abnormal.

As noted earlier, the CTG tracings were misplaced after Baby A's birth in 2001, and were only recovered in December 2005 as part of this investigation. The CTG tracings were not available to ACC and were not considered by ACC's expert advisors. My expert, Dr East, has had the benefit of reviewing them. They have also been reviewed by Dr Jenny Westgate in providing her advice to Mr and Mrs A.

Dr East noted that variable decelerations presented on the CTG from 1600 and gradually deteriorated in character up until the CTG tracings were discontinued at 1728. He advised that variable decelerations can be associated with fetal hypoxia, and fetal blood sampling is recommended if delivery is not imminent, as in Mrs A's case.

Dr East identified three concerns with the CTG tracings:

1. The character of the variable decelerations was seen to gradually deteriorate up until the time that the CTG trace was discontinued at 1728.

2. That the tocograph portion of the CTG was discontinued at 1640, making it very difficult to time decelerations thereafter in respect of the uterine activity. Therefore, if variable decelerations became consistently late decelerations, one could possibly miss the association on clinical grounds alone.

3. At 1730 the CTG was described by Dr B as being "OK" when it was in fact abnormal. 52 minutes passed between the last cardiotocograph recording at 1728 and eventual delivery at 1820.

Dr B explained that the CTG was discontinued at 1640 because the lack of facilities in the birthing room forced her to move to the Delivery Theatre, and the CTG machine could not be transferred with the bed.

I note that Dr B had a further opportunity to review the CTG tracings when they were located and sent to her as part of this investigation. Dr B confirmed her view that the CTG in the first stage was not out of the normal limits, and that the CTG for the second stage shows some early decelerations but that these recover quickly to the normal baseline.

I am guided by my expert advice that the CTG tracings showed clear abnormalities between 1600 and 1728 and that these were overlooked. The CTG tracings suggested developing fetal hypoxia and should have prompted further testing such as fetal blood sampling and consideration of an emergency Caesarean section. The failure to recognise these abnormalities resulted in an inappropriate delay to effect delivery.

In her response to my provisional opinion, Dr B described the difficulties she experienced in trying to locating a CTG machine once she transferred Mrs A to the Delivery Theatre. Dr B noted that fetal blood sampling was hindered by limited

facilities and that there is only one delivery theatre at the public hospital that is set up for acute Caesarean sections.

Dr B explained that if she had used fetal blood sampling then attempted to perform an urgent Caesarean, this would have caused a further and unacceptable delay prior to the transfer to theatre and delivery of the baby.

Although I accept that Dr B was operating in very challenging circumstances, in my view she did not interpret the CTG tracings between 1600 and 1728 with reasonable care and skill. Mrs A was being continuously monitored by CTG at that time, and the abnormal reading should have prompted further investigations and, if necessary, a more urgent delivery. In these circumstances, Dr B breached Right 4(1) of the Code.

Other comment

In response to my provisional opinion, Mr and Mrs A queried whether I would make any findings in relation to their concerns about uterine hyperstimulation and delayed ventouse delivery. These issues were raised by Dr Jenny Westgate when she reviewed Mrs A's labour and delivery during the ACC process. Dr Westgate advised Mr and Mrs A that, in her view, the continued use of Syntocinon had caused uterine hyperstimulation and gradual fetal hypoxia.

I asked Dr East for further advice on these issues. Dr East advised that, in his view, uterine hyperstimulation did not occur and that the ventouse delivery was appropriately managed by Dr B. Although in this respect Dr East's advice differs from Dr Westgate's, I am satisfied that his advice reflects a practice "accepted as proper by a responsible body" of professional opinion[8] and has a logical basis.[9] I therefore accept his advice and do not propose to take any further action on these issues.

I note also, for completeness, that the issues relating to the lack of equipment and the requirement for a room transfer on 11 February 2001 have now been addressed by the District Health Board.

[8] *Bolam v Friern Hospital Management Committee* [1957] 1 WLR 582.

[9] *Bolitho v City and Hackney Health Authority* [1997] 4 All ER 771.

Recommendations

I recommend that Dr B take the following action:

- Apologise to Mr and Mrs A in writing. This apology is to be sent to the Commissioner and will be forwarded to Mr and Mrs A.

- In the event that she returns to obstetric practice, undergo further training on the interpretation of CTG tracings.

Follow-up actions

- A copy of my final report will be sent to the Medical Council of New Zealand, the Royal Australian and New Zealand College of Obstetricians and Gynaecologists, and the Accident Compensation Corporation.

- A copy of my final report, with details identifying the parties removed, will be placed on the Health and Disability Commissioner website, www.hdc.org.nz, for educational purposes.