

**Independent Midwife, Ms C**

**A Report by the  
Health and Disability Commissioner**

**(Case 00HDC08628)**



Health and Disability Commissioner  
*Te Toihau Hauora, Hauātanga*



## Parties involved

|       |  |
|-------|--|
| Dr A  | Provider / Obstetrician at the public hospital |
| Mrs B | Consumer                                       |
| Mr B  | Husband of consumer                            |
| Ms C  | Provider / Independent midwife                 |
| Ms D  | Consumer's Lead Maternity Carer                |
| Ms E  | Maternity Manager at the public hospital       |
| Mrs G | Friend of consumer                             |
| Ms H  | Provider / Independent midwife                 |

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## Complaint

On 29 August 2000 the Commissioner received a complaint from Dr A, obstetrician, about the standard of care the consumer, Mrs B, received from Ms C, an independent midwife. Mrs B confirmed on 8 September 2000 that she supported Dr A's complaint against Ms C. The complaint was that Ms C:

- *Failed to provide services of an appropriate standard during Mrs B's labour and in particular:*
  - *did not respond appropriately to an anterior lip presentation;*
  - *did not respond appropriately to the slow descent of the head during labour;*
  - *did not respond appropriately to the lack of progress in second stage;*
  - *did not document appropriately throughout labour; and*
  - *did not transfer Mrs B to the public hospital (the hospital) in a timely manner.*
- *Failed to inform Mrs B of the following:*
  - *the deceleration of the foetal heartbeat;*
  - *the presence of caput;*
  - *the slow progress of second stage labour; and*
  - *the reason that Ms C did not have an access agreement with the hospital.*

An investigation was undertaken on 6 September 2000.

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## Information reviewed

- Mrs B's clinical records from the public hospital
  - Guidelines for Referral to Obstetric and Related Specialist Medical Services
  - New Zealand College of Midwives, Code of Ethics
  - Expert advice from Ms Terryll Muir, an independent midwife
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## **Information gathered during investigation**

### *Background*

In July 1999 Mrs B found she was pregnant with her first child and decided she would like a home birth with a midwife as her Lead Maternity Carer (LMC). (The term 'Lead Maternity Carer' refers to the general practitioner, midwife or obstetric specialist who has been selected by the woman to provide her comprehensive maternity care including the management of her labour and birth.) Mrs B contacted a friend's midwife, but found that she was fully booked. Mrs B's friend's midwife referred Mrs B to another midwife, Ms D. Ms D agreed to act as Mrs B's LMC.

Mrs B was well during her pregnancy but was uncertain of her delivery date. Working from the date when she first found she was pregnant, Mrs B thought her baby would be born on 28 April 2000. Ms D estimated the delivery date as 8 May 2000. The ultrasound examination performed on 8 December 1999 estimated that Mrs B was 16½ weeks pregnant and suggested a delivery date of 22 May 2000.

At an antenatal appointment in the first week of February 2000 Ms D informed Mrs B that she had decided not to continue as a midwife, and gave Mrs B a list of independent midwives she could approach.

Mrs B was 32 weeks pregnant and felt some urgency in choosing another LMC so that she could establish a rapport before her baby was born. She interviewed a number of midwives and discussed her reasons for wanting a home birth. Mrs B's past experiences with hospitals had not been happy. She told the midwives that she did not view childbirth as an illness but that she would wish to be transferred to hospital if anything went wrong. The uncertainty of Mrs B's delivery date was a complicating factor for the midwives in scheduling their workload, and the only midwife who would give a guarantee to deliver her at home was Ms C.

### *Ms C's work experience*

Ms C had worked in a variety of maternity situations before taking up full-time domiciliary midwifery in the area. An access agreement was granted to Ms C by the District Health Board. (An 'access agreement' for an independent midwife is an agreement with a public hospital to use its facilities to deliver a baby. An independent midwife makes an application and is usually granted an access agreement after the application has been vetted by a panel of Maternity Services managers.)

### *Ms C's access agreement with the District Health Board*

Ms E, Maternity Manager at the hospital, advised me that on 5 January 1998 Ms C was notified by the previous maternity manager, that due to concerns about her management of two maternity cases, the Maternity Review Committee was undertaking a review of Ms C's practice and her access agreement. On 17 March 1998 Ms C was required by the Maternity Review Committee to ensure that she practise only under the supervision of an independent midwife. The midwife who had agreed to undertake the supervision, withdrew as Ms C's mentor on 29 June 1998. Another midwife, who replaced this midwife, withdrew on 9 July 1998. Ms C's access agreement with the District Health Board was temporarily suspended

on 9 July 1998. Following a recommendation from the Maternity Review Committee, the Chief Executive Officer of the District Health Board, wrote to Ms C on 10 September 1998 informing her that her access agreement would be permanently suspended.

When Ms D withdrew as Mrs B's LMC and suggested Ms C as her replacement, she told Mrs B that Ms C did not have an access agreement with the public hospital. Mrs B recalled being told that this was because the hospital maternity staff disagreed with the way Ms C allowed women to go too far in their labour in the birthing pool, and that some of her clients gave birth in the pool. Mrs B said she did not have a problem with this, so did not consider the matter further.

Ms C advised me that she told Mrs B she did not have an access agreement. She said:

"I initially met [Mrs B] in late February 2000 to discuss the possibility of continuing her maternity care, as her previous midwife had withdrawn from practice. I explained to [Mrs B] that I only did home births as I didn't have an access agreement with the hospital. I explained that if we needed to transfer to hospital she would be cared for by the hospital staff. I went on to say that, if she and [Mr B] wanted, I would stay with them as a support person but that I could not provide midwifery care in the hospital. [Mrs B] asked me why this was and I replied that I had had a run in with one of the obstetricians. [Mrs B] went on to ask my opinion about various things in relation to the care I provided and philosophies."

Mrs B recalled that Ms C told her that she did not have an access agreement and that it was because she had a "run in" with one of the obstetricians. Mrs B informed me that Ms D had already told her this. She said that Ms C did not tell her that she had been before the Maternity Review Committee as part of an internal disciplinary procedure. Mrs B said that she assumed Ms C had withdrawn from her access agreement rather than having had her agreement withdrawn.

In response to my provisional opinion, Ms C stated:

"The reason that I had not been specific in detail [in relation to the withdrawal of the access agreement] was that I was unsure as to the exact nature of the action. I had the report but it did not signify that my clinical care was so bad that my access would be withdrawn without any prior written warning."

When Mrs B changed to Ms C's care on 13 March 2000, she was living a few minutes from the hospital. A week before she was due to deliver, Mrs B and her husband moved to the countryside, about 35 minutes from the hospital.

#### *Antenatal care provided by Ms C*

Ms C recorded in the prenatal chart that she saw Mrs B fortnightly from 13 March 2000, at 32 weeks' gestation, until she was 36 weeks' gestation, and then again the following week. Ms C recorded Mrs B's blood pressure, weight gain, the position of the baby and the status of the cervix. No urinalysis was recorded at these visits. Ms C noted that the pregnancy appeared to be progressing normally and recommended Mrs B take homeopathic remedies

to prepare for her labour. On 24 April 2000 Ms C recorded that Mrs B had experienced early contractions. She advised Mrs B to rest and to notify her if contractions became regular.

Ms C saw Mrs B the next day (25 April 2000), and noted that her contractions were settling. Ms C saw Mrs B weekly during May 2000. On 27 May 2000, Ms C recorded that she had discussed with Mrs B the possibility of referring her for assessment by an obstetrician for postmaturity. She noted that Mrs B did not want to be referred unless there was a “specific reason”. Ms C also noted: “Transfer discussed in labour if necessary in private car.”

#### *Events occurring during Mrs B’s labour*

At 2.45am on 31 May 2000 Mrs B awoke experiencing contractions. At 3.15am she had a blood show. She recalled feeling excited that her labour had started and woke her husband, Mr B, and asked him to set up the birthing pool. At 5.00am the contractions seemed to be regular, and she telephoned Ms C to inform her that labour had started. Mrs B also contacted Mrs G, whom she had asked to be her support person during the labour. Mrs G, who had given birth to two children at home, lived two hours away from Mrs B. While they were waiting for Ms C to arrive, Mr B prepared the room they planned to use for the birth. He took the clock from the wall and set it on the couch beside the birthing pool, so they could keep an accurate account of the time.

Ms C arrived at the couple’s home at 5.30am. She found that Mrs B was in established labour and was progressing well. On examination Ms C found that Mrs B’s uterine membranes were intact and the cervix was “soft and stretchy” and 6–7cm dilated. She recorded the foetal heart by sonicaid at 132 beats per minute. (A sonicaid is a portable device held against the mother’s abdomen to listen to the foetal heart. The normal foetal heart beats 120 to 140 times per minute.) Ms C also recorded the baby as being at station -1.

Station refers to the relationship of the presenting part of the foetus to the level of the ischial spines of the woman’s pelvis. When the presenting part is at the level of the ischial spines, it is at 0 station (synonymous with engagement). If the presenting part is above the spines the distance is stated as minus stations, and below as plus stations. The distance ranges from + or -1cm to + or -4cm. At +4 the presenting part is on the perineum (synonymous with crowning).

At about 6.00am Ms C commenced a partogram recording the foetal recordings and Mrs B’s pulse and blood pressure, contractions and cervical dilation. (A partogram is graphic record of the course of labour.)

Mrs B recalled that this stage of her labour was not too painful and she spent a comfortable time in the birthing pool.

At 7.30am Ms C recorded that Mrs B was “feeling slightly pushy”, and her cervix had an anterior ‘lip’ on the right-hand side. (A ‘lip’ is a section of the dilating and thinning cervix which has become caught between the mother’s pelvic bone and the baby’s head during

labour, causing this section to swell. It is usually an indicator that the baby is not fitting uniformly onto the cervix.) The foetal heart was recorded at 140 beats per minute. Ms C recorded on the partogram that the baby was at station 0, but did not record the dilation of the cervix. The uterine membranes were still intact.

Mrs G arrived at the couple's house at 8.00am and recalled that shortly after her arrival Mrs B started to push with her contractions.

Ms C had telephoned Ms H, the independent midwife who had agreed to be the secondary midwife during Mrs B's labour and delivery, at 8.15am and notified her that Mrs B was in labour. Ms H stated that she had offered herself as a secondary midwife to Ms C to gain experience in domiciliary midwifery. Ms H worked at another public hospital as a midwife before relocating to this area in 1998 and commencing as an independent midwife. She understood that the role of the secondary midwife was a supportive one. She advised me that the arrangement she had with Ms C was that when a woman was established in labour, Ms C would notify her as a courtesy so that she could plan her day. Ms C would contact her again when the woman was fully dilated and Ms H would then come to assist Ms C.

Mrs B's uterine membrane ruptured spontaneously at 8.45am producing clear liquor. Ms C performed a vaginal examination and recorded that the anterior lip of the cervix was smaller but still present. She gave Mrs B an oral dose of arnica 200c, to help reduce swelling. Ms C recorded that Mrs B was "feeling pushy".

In response to my provisional opinion, Ms C stated: "It was now that proactive strategies were employed because although [Mrs B] was coping extremely well this could not continue indefinitely." The strategies Ms C used to assist Mrs B to progress in labour were:

- ambulation, allowing the woman to move around to enable gravity to assist uterine efficiency
- positioning, to align the pelvic bones to alter the shape and capacity of the pelvis
- reassurance, as natural anxiety can decrease the blood flow which can affect contractions and increase the duration of the first stage of labour
- surveillance
- homeopathy.

Ms H arrived at the couple's house at 9.00am. Mrs B was in the pool and was being assisted by Mrs G. Ms C updated Ms H on the progress of Mrs B's labour. Ms H recalled that Mrs B was pushing with her contractions. Ms C performed a vaginal examination and informed Ms H that the cervix had an anterior rim, and that the baby's head was still high and not well applied to the cervix. Ms C advised Mrs B to stop pushing and to breathe through the contractions. She gave Mrs B an oral dose of caulophyllum 200c to assist her with the labour.

In response to my provisional opinion, Ms C stated:

"A manual reduction of the cervix was attempted [the time was not noted], however this was not successful as the head was not able to hold it back. I told [Mrs B] this and said

we would have to wait for the head to come down before it [the anterior lip] would go. The foetal heart was listened to with increasing frequency and remained normal.

Dilatation of the cervix and descent of the foetal head are fundamental events in the first stage of labour.

...

As the baby was in a posterior position, the fit of the foetal head in relation to the cervix was not ideal, but by encouraging rotation and creating a closer fit of the head on the cervix, greater descent and cervical progress would be achieved.

...

Measures to affect cervical dilation [such as] ambulating and maternal position also have a beneficial effect on rotation and descent.”

At 9.30am Ms C recorded on the partogram that the baby’s head had descended to station 0. She noted that there remained a small anterior lip but did not record the dilation of the cervix.

At 10.00am Ms C recorded in the narrative notes that the anterior lip had gone, but that the baby’s head was still high. The 10.00am entry on the partogram noted that Mrs B’s cervix was fully dilated and the baby at station 0. Mrs B was encouraged to push with her contractions. The baby’s heartbeat was recorded at 124 to 136 beats per minute. Mrs B’s pulse was recorded at 78bpm.

Mrs G recalled that at this time she joined Mr B in the kitchen and told him that she thought Mrs B should go to hospital.

At 10.30am Ms C recorded on the partogram that the baby had descended to station +1 and that there was a small caput present. (Caput is an oedematous swelling on the foetal skull caused by infiltration of serum and blood into the scalp tissue, due to pressure by a ‘girdle of contact’, usually the cervix.) Ms C recorded in the narrative, “FHH dip [foetal heart deceleration] but good recovery”. One of the indicators of foetal distress is a ‘dip’ or ‘deceleration’, which is a transient decrease in the foetal heart rate coinciding with uterine contraction in response to stimuli such as umbilical cord compression.

In response to my provisional opinion, Ms C stated:

“The deceleration heard in [Mrs B’s] labour, described by amplitude, was shallow, estimated to be 110bpm. The exact depth is unknown as my sonicaid does not have a digital display and by duration, the return to the baseline was described as good which meant that recovery was quick.”

Ms H said that Ms C was listening to the baby’s heartbeat about every 10 minutes, including when Mrs B was in the bath. Ms H described the deceleration as occurring for “a brief moment, which recovered very quickly”. Ms C recalled telling Mr and Mrs B in the



presence of Mrs G that the baby's heartbeat had slowed, and that "the baby may not be enjoying this [the labour] too much". Ms C stated, in response to my provisional opinion, that she told Mrs B that she would probably need a forceps delivery and advised closer monitoring of the baby's heartbeat in hospital.

Mrs B stated that she was not told about the baby's heart rate dipping. She said: "If they [the midwives] had discussed it with me I would have told them I wanted to go to hospital then. They did not discuss it with me. They did not discuss with me that I needed to go to hospital."

In response to my provisional opinion, Mrs B stated:

"[Ms C] never mentioned that I needed to go to hospital. The two midwives spoke with each other. I was in my own world, but I will stand by my recollection that all that was said was 'We need to reassess in 10 minutes'. Ten minutes passed and they would comment, 'We need to reassess in 15 minutes.' They assumed that I would realise that I needed to go to hospital. The word 'hospital' never came into the conversation."

Ms C and Ms H informed me that they continued to monitor the baby's heartbeat at regular intervals, and no further decelerations were heard. Ms H said she listened to the baby's heart, which was regular and strong.

Ms C first recorded the foetal heartbeat on the partogram at 6.00am. She noted the foetal heart again at 7.00am and again at 8.00am. The partogram shows that Ms C recorded the baby's heartbeat half hourly from 8.30am until 11.00am, and four times between 11.00am and 12 midday. However, her written record of Mrs B's labour does not reflect this, and records the foetal heart rate at 5.30am, 8.30am, 9.15am, 10.00am, 10.30am (when the dip was heard), 11.00am and 11.45am.

At 11.00am Ms C recorded: "Coping well and head now well engaged – small caput. Foetal heart no further dip, range 144–132 reg. Slow descent discussed and transfer to hospital suggested – reassess 12md."

In response to my provisional opinion, Ms C stated:

"Transfer to hospital was advised 3/4hr into the second stage of labour even though progress had been made.

...

I waited for [Mrs B] to consent to the transfer. There was no response. I said that the decision had to be made to transfer to hospital by 12-noon. I am aware that for some women it takes time to accept that there is a need to transfer to hospital. My goal throughout the labour was to gently guide her to the acceptance of hospital without fear or coercion.

...

I took [Mrs B's] lack of response as wanting to consider the information I had given her and needing time to accept that transfer was necessary. She knew that the progress of labour had been slow.

...

[Mrs B] while coping well, had limits to her endurance and I wanted her to go to hospital before she became distressed.”

Ms C was unable to recall if the caput noted at 11.00am had been mentioned to Mrs B. She said that the findings of that examination were diverted by conversation about catheterisation.

Mrs G recalled that the two midwives appeared concerned at 11.00am and were talking quietly to each other. She said she was waiting for them to say that Mrs B should go to hospital. Mrs B said: “At no point was a suggestion made or any discussion with either parent or support person made for the transfer to hospital ... I was extremely keen to have my baby at home, but understood the importance of transfer when ‘danger’ signs arose.”

Mrs B stated that at about this time Ms C introduced a urinary drainage catheter to empty her bladder, and recalled that Ms C explained that this was “to remove pressure and relieve the obstruction”. Ms C advised me that she catheterised Mrs B at approximately 11.20am after she had told Mrs B that there was no descent of the baby’s head when she pushed with a contraction, and that catheterisation might help by allowing enough room for the baby’s head to turn and come down. Ms C said that she did not normally perform catheterisation at home and did not have any catheters with her. Ms H provided a catheter from her equipment. Ms C did not record that she had catheterised Mrs B. (She stated that she completed Mrs B’s labour notes after Mrs B had been transferred to hospital, and omitted to include the catheterisation.)

Ms H recalled that she performed a vaginal examination of Mrs B at Ms C’s request for a second opinion, at about 11.30am. She found that there was caput present and that the baby’s head was a “tight fit at station 0”. Ms C’s notes record that Ms H performed a vaginal examination at 11.30am, but did not record Ms H’s observations. Mrs B said that she heard the midwives use the word “caput” but did not know what it meant. She said that she was not told about the baby’s head swelling.

At 11.50am Mrs B asked Mrs G to accompany her to the toilet. Mrs B said that she was athletic and fit, but knew that she “could not do it anymore. I knew if I had not been able to push the baby out by then, I was not going to be able to without intervention which is only available in hospital. I had tried so hard.” Mrs B recalled that at this time she was trying hard to push effectively with her contractions and that she tried various positions. She told Mrs G that she was exhausted and felt she could not do any more to deliver her baby, and said that it was time to go to the hospital.

At 12.00 midday Mrs B informed Ms C and Ms H that she would “like to go to the hospital”. She said that the midwives instantly agreed to the transfer. Ms C made a last

note, but did not record the time the note was made: “Transfer agreed to for no further progress. Hospital rung.”

Mrs G said it took 20 minutes for Mrs B and the midwives to get ready as it took some time to decide “who should go in what car”. Mrs G said that while she was waiting for everyone to organise themselves she became conscious that the situation was urgent and that time was being wasted gathering up items of clothing and the baby car seat. Mr B drove Mrs G’s car, and Mrs G sat in the back with Mrs B. Ms C followed in her vehicle. Ms H did not accompany them to the hospital.

In response to my provisional opinion, Ms C stated:

“I thought that the car seemed to be the most immediately available and fastest method of transport to hospital. The journey from [Mrs B’s] place to the doors of the maternity unit at [the hospital] is exactly 25kms.

...

As [Mrs B] had not packed her bag this needed to be done, but was done with speed and did not significantly alter the departure time from the house.

...

I have always felt that the conflicting time between the departure from [Mrs B’s] home and admission to hospital, was due to the fact that the clock we were using at [Mrs B’s] place was showing a different time from the hospital clocks.”

Mr B said that his wife was in a “bad way” when they got into the car. Ms C had told her not to push, and she was squatting on all fours on the back seat. Mr B said that although the journey from the house to the hospital normally took about 35 minutes, he was driving a lot slower than usual out of concern for his wife, and estimated that it took 45 minutes.

On arrival at the hospital at 12.50pm Mrs B was admitted and examined by a hospital midwife. The hospital midwife noted that Mrs B’s vulva was oedematous. Initially the CTG monitor recorded the baby’s heartbeat at 135 beats per minute, then showed late decelerations down to 60 beats per minute. The hospital midwife notified Dr A, an obstetrician, of Mrs B’s admission and he arrived in Delivery Suite at 1.00pm, just after Ms C.

Dr A said that when he first saw Mrs B he observed that she was markedly distressed: “She was tired and dehydrated and standing beside the bed clinging to it and from her appearance it was obvious that she was in obstructed labour.” (Obstructed labour is evident when there is no advance of the presenting part of the baby in spite of strong uterine contractions.)

Dr A later informed me: “It is my opinion that this baby should never have died. If [Mrs B] had been in our unit and under our care there would have been a request for an assessment when the second stage was not progressing. With the foetal heart monitoring that is

available these days it should have been relatively easy to pick up that the baby was distressed.”

Dr A positioned Mrs B on her left side and administered oxygen in an attempt to stabilise the baby’s condition. After examining Mrs B, Dr A advised Mr and Mrs B that due to the baby’s position in the pelvis he would not be able to deliver the baby by forceps, and obtained their verbal consent for Caesarean section.

Mrs B’s baby was delivered by Caesarean section at 1.34pm. The baby had an Apgar score of 1 at one minute and was resuscitated. (An Apgar score measures the condition of a baby by looking at colour, respiratory effort, heart rate, muscle tone and reflex response, with a possible maximum score of 10.)

Mr and Mrs B’s baby died after attempts to resuscitate her failed.

In response to my provisional opinion, Ms C stated:

“[Mrs B’s] labour began at [3.00am].

...

By the labour partogram she was found to be fully dilated at [10.00am].

...

I was aware of the slowing of progress but this was not yet prolonged. The condition of the mother was excellent and the baby responding well with a steady heart beat and no moulding of the head. The membranes had been ruptured for only one and a quarter hours with clear liquor draining. The mother’s birth plan was for low intervention and she was aware that the cervix was taking time to descend from the information I had given her and the reasons given for the interventions instituted.

...

I feel the response to the slow descent of the head in labour was appropriate.

...

The response to this situation was that relatively simple and sensible care measures designed to help maintain the progress of labour, while trying to correct the underlying problem which was in [Mrs B’s] case the position of the baby, were instituted in keeping with [Mrs B’s] stated preference for low intervention before major obstetrical interventions were required.

...

At [11.15am] I told [Mrs B] that I could do no more for her at home. This being put in context of the previous advice at [10.50am]. There was no reply from [Mrs B] and we discussed the only other option we could offer at home to assist descent was



31/5/00                    43<sup>2</sup> weeks by dates, 41<sup>4</sup> weeks by scan  
0300 hours                Onset of regular contractions  
0500 hours                [Mrs B] notified [Ms C] of labour  
0530 hours                [Ms C] arrives at [Mrs B's],  
                                  Contractions 1 x 3,  
                                  [Mrs B] was in no distress,  
                                  VE: Cervix soft, 6-7 cm dilated,  
    Position vertex LOP station – 1,  
    Membranes intact,  
                                  FHR 132,  
                                  No other observations recorded.

NZCOM handbook: Standard Three

The midwife collates and documents comprehensive assessments of the woman and/or baby's health and wellbeing.

**Comment**

'Arrival time satisfactory and prompt, however initial assessment should be more detailed, if the labour was progressing quickly and [Mrs B] was ready to deliver it would be appropriate to do a quick VE and FHR but otherwise this is not enough.'

Enkin: Monitoring progress of Labour

Adequate attention must be paid to her (the woman's) physical condition. In most circumstances this will include at least, assessment of her BP, pulse and temperature. Although such assessments have become traditional, there is little agreement to how frequently they should be performed .... In the presence of suspected abnormality such assessments should be made as frequently as necessary .... It is questionable whether any useful purpose is served by routinely repeated observations of these parameters in healthy women in apparently normal labour.

**Comment**

'As [Ms C] was expecting [Mrs B's] labour to be normal the frequency can be left to her discretion, however:

- 1) The blood pressure, pulse, temperature, and foetal heart rate should all be recorded initially,
- And,
- 2) Should be repeated as necessary but more frequently if any abnormality suspected.

The expected 'tradition' is:

Initially – Temperature, Pulse and BP, FHR

Then ½ hourly pulse and FHR, 4 hourly Temperature and BP in a normal labour.'

0730 hours                [Mrs B] in pool,  
                                  Feeling pushy,  
                                  FHR 140 – 2 hours since last recorded,

VE – anterior lip, cervix soft, on right side.

**Comment**

‘An anterior lip means the cervix is almost fully dilated except for a small rim to the front.’

0800 hours           FHR 124,  
Support person – [Mrs G] – arrives,  
[Mrs B] in pool.

0845 hours           SRM – clear liquor,  
Pushing involuntarily with contractions,  
VE – anterior lip still present – smaller,  
2<sup>nd</sup> midwife – [Ms H] – called.  
Anterior lip for 1¼ hours now.

0900 hours           [Ms H] arrived,  
[Mrs B] in pool.

0915 hours           FHR 132 – 1¼ hours since last recorded,  
Having occasional pushes.

**Comment**

‘Anterior lip is common in labour and can often take a while to subside. It is more common when the woman has been in a leaning forward position. It can take 1-2 hours to subside but regular assessment should take place to ensure that the anterior lip is reducing and descent of the presenting part can still occur. [Ms C] has continued to monitor the cervix vaginally, this is appropriate.’

1000 hours           VE: anterior lip gone, head still high, FHR 124-136,  
Pushing with contractions, slight blood loss vaginally.

**Comment**

‘It has taken 2½ hours for the anterior lip to subside which is just outside of the normal time limit – it is a concern that there has been no descent of the head. [Ms C] should have made [Mr and Mrs B] aware of this concern.’

NZCOM handbook: Labour

Continue regular assessment of the woman and baby and progress of labour.

**Comment**

‘[Ms C] has not taken regular assessment of [Mrs B] or the baby – or at least documented her regular assessments.’





**Comment**

'Head now well engaged and slow descent are contradictory terms – “the head was now well engaged” suggests the head has descended, and “slow descent” suggests that no descent has taken place.'

NZCOM handbook: Standard Two

The midwife shares all relevant information and is satisfied the woman understands all implications.

'Slow descent discussed and transfer to hospital suggested' indicates a discussion with [Mr and Mrs B] – they say this never occurred. [Ms C] has not recorded who she discussed this with.'

NZCOM handbook: Code of Ethics

...

- b) Midwives accept the right of each woman to control her pregnancy and birth experience.

“Plan to reassess at 1200 hours” suggests [Mrs B] did not want to transfer yet, [Mrs B] says she and [Mr B] were not involved in this decision.'

Pushing for 1 hour now with no progress.

**Comment**

'It is within normal guidelines to allow pushing for 1 hour in a primigravida with no progress, longer than this is outside of normal limits particularly in a home delivery where there is a transfer time before an opinion from a specialist can be sought. [Ms C's] explanation is plausible that it took ½ hour for [Mr and Mrs B] to agree to transfer and then ¼ hour to get ready, however, [Mrs B] and [Mrs G] say this conversation never took place.'

1145 hours            VE by [Ms H],  
                              FHR 140 regular,  
                              Transfer agreed.

Pushing now for 1¾ hours.

**Comment**

'The findings from [Ms H's] VE are not documented. Transfer would now be expected, this decision is appropriate. To transfer by car is acceptable.'

1250 hours            Arrived at delivery suite,  
                              Contracting 4:10 strong,  
                              Vulva oedematous,  
                              CTG – difficult to trace,

|            |   |
|------------|---|
|            | FHR 135 – late decelerations ↓ 60bpm.   |
| 1300 hours | [Dr A] present,<br>No improvements in FHR,<br>Plan – to theatre, ?Trial of forceps or Caesarean.  |
| 1335 hours | No foetal heart rate on arrival in theatre,<br>Emergency caesarean of a female infant,<br>Stillborn – unable to be resuscitated,<br>Weight 2675g. |

### **Comment**

In summary:

‘[Ms C] did not need an access agreement to care for [Mrs B] at a home confinement. It is debatable about whether [Ms C] should have told [Mrs B] why she did not have an access agreement, or whether [Mrs B] should have asked.

Observations of [Mrs B] and her baby were not taken and/or at the very least not recorded frequently enough.

Information was not shared with [Mr and Mrs B] adequately nor were they empowered to have control of the decision making during the pregnancy and labour.

The anterior lip, the slow descent of the head during labour and the lack of progress in 2<sup>nd</sup> stage were all taken to their widest possible limit and singularly this would be acceptable, but when the three are combined the result is potentially poor. When one problem occurs you can continue, when two or more exist – transfer/consultation should always be discussed – [Ms C] has not considered transfer soon enough nor did she make [Mr and Mrs B] aware of potential problems.’”

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### **Further independent advice – July 2001**

Ms Muir provided the following additional advice, in response to specific questions, in July 2001:

#### **“Replies to Questions:**

#### **1) Does the failure to perform urinalysis on antenatal visits fall below a standard of reasonable care?**

Proteinuria (protein in the urine) is a sign of pre-eclampsia; glucosuria (sugar in the urine) is a sign of gestational diabetes. In practice, screening for these signs is usually done with reagent strips at every antenatal assessment. Reagent strips may

give up to a 25% false-positive result but they are regarded as an efficient and simple initial diagnostic tool.

In any obstetric book including the NZCOM handbook, a urinalysis is regarded as an expected part of antenatal screening. To not perform this test would fall below a reasonable standard of care.

## **2) What are the risks associated with failure to perform urinalysis?**

If a urinalysis were only performed when other signs were present, e.g. high blood pressure, oedema, or a large baby, the mother and baby would be placed at an increased risk.

Enkin:

The appearance of proteinuria in a previously nonproteinuric woman with pregnancy induced or pre-existing hypertension is associated with a marked increase in maternal and foetal risk. For that reason, screening for proteinuria using a dipstick remains a valuable tool.

A diagnosis being delayed could cause unnecessary advancement in pre-eclampsia or gestational diabetes. A delay in diagnosis could also cause a poorer outcome for the mother and baby.

One complication of gestational diabetes is a larger baby resulting in a possible Caesarean section, shoulder dystocia, and increased trauma to mother and baby at the birth; another complication is a stillbirth.

Some complications of pre-eclampsia are, IUGR (intra uterine growth retardation of the fetus), placental abruption, eclampsia which can result in cardiovascular, renal, blood neurological, hepatic problems in the woman as well as foetal death.

## **3) Was [Ms C's] monitoring of [Mrs B's] labour adequate? Did it fall below the standard of reasonable care?**

The monitoring of [Mrs B's] labour falls below normal standards in that no initial assessments were performed at all other than to listen to the FHR. If labour is progressing normally in a healthy woman then it could be argued that there is no purpose in repeating observations but they should still be taken initially. If normal it would be at the midwife's discretion how often they are taken after that.

There is nothing recorded in this case. It is extremely useful later in labour to have baseline observations. The initial assessment was not adequate.

The FHR has been monitored regularly throughout labour. The monitoring of the baby could have been more frequent at times, even though [Mrs B] was in the pool, the FHR should still be listened to half-hourly during the active stage of labour.

Once the labour progress was outside of the normal range, with prolonged anterior lip and a high head, then the observations should have been repeated – they were not.

**4) You expressed concern that there had been no descent of the head by 10.00am.**

- i) What does this indicate?**
- ii) What would be the appropriate management in these circumstances?**
- iii) What are the risks associated with non-referral to secondary care in these circumstances?**

- i) Failure of the head to descend over 5½ hours may now suggest that the labour is not progressing normally – it is a warning sign for any midwife/obstetrician.

It may indicate poor contractions, poor positioning of the baby's head or the head being too big for the mother's pelvis which may result in an obstructed labour.

- ii) Appropriate management would be:
  - discussion with the woman and her partner,
  - consideration of transfer to hospital for continuous monitoring of baby's heart rate at minimum and possibly consultation with an obstetrician.
- iii) If failure to progress was due to poor contractions then the mother would become tired due to the long length of labour, possibly dehydrated, and this would lead to further inefficient contractions.  
If failure to progress was due to obstructed labour then you will get an exhausted mother from strong contractions which will increase risks such as haemorrhage, forceps and uterine rupture, as well as increases the chances of foetal distress in baby, meconium aspiration and stillbirth.

**5) Was the management of the anterior lip reasonable or not?**

The management of the anterior lip was reasonable, it is a common occurring condition and can take a while to subside, the cervix often gets caught between the mother's pelvis and the head of the baby making it difficult to reduce. It is common midwifery practice to push the cervix back over the baby's head and hold it there during a contraction, this enables the contraction to reduce it easily – it is very uncomfortable for the woman.

**6) When you referred on page 3 of your report to regular assessments not being documented, what assessments are referred to?**

Assessments are: Blood Pressure, Pulse, Temperature, Foetal Heart Rate, vaginal examinations – dilation of cervix, effacement of cervix, station of presenting part, position of presenting part and colour of liquor and monitoring of contractions – length, frequency and strength.

**7) What is the significance of the foetal heart rate dipping at 10.30am (in view of the head not being descended)?**

FHR decelerations are a sign of foetal distress, it is important to know whether the heart rate dropped before, during or after a contraction.

Myles:

Early decels – commonly associated with compression of the foetal head, for example as it engages, but may indicate early foetal hypoxia.

Late decels begin during or after contractions and usually indicate foetal hypoxia.

Decelerations can occur as one off occurrences and the reason would be unexplainable. However with any deceleration the midwife should:

- 1) listen to the FHR more frequently and throughout contractions
- 2) consider continuous monitoring
- 3) look at all the factors together  
i.e. type of deceleration  
colour of liquor – consider ARM to find out any other problems?

In this instance with the head being high, fully dilated, it may indicate:

- 1) cord compression,
- 2) head compression,

It would be unlikely as a one off occurrence to be foetal hypoxia.

**8) Would this sign indicate transfer into secondary care (either by itself or in combination with existing factors at the time)?**

On its own this sign would not indicate transfer into secondary care. It was the combination of the high head and the anterior lip, which had taken a long time to subside which would indicate transferring to base hospital. A one off occurrence of the foetal heart rate dropping would not influence this decision however it may make you consider monitoring the FHR more closely to be sure that this was only a one off occurrence.

**9) Is it appropriate/reasonable for independent midwives to practise without an access agreement? Do you know the incidence of this occurring?**

Yes it is appropriate, in fact it is arguably better as home birth midwives are very good at allowing birth to occur naturally with no interference, and are often not good at secondary care so it is better for them to hand over to midwives more experienced at secondary care. I am not sure of the exact incidence but I believe there are a handful of midwives who do not want access agreements with the base hospital for this reason.

**10) How is the death of [Mrs B's] baby linked (if at all) to [Ms C's] labour management?**

The death of the baby is a direct result of an obstructed labour. The obstruction was caused by the position of the baby's head in relation to [Mrs B's] pelvis. It is the responsibility of the midwife to monitor labour to ascertain if it is progressing normally and transfer/consult if it is not. Obstructed labours are common and are the cause of a lot of Caesarean sections. The baby's death is directly linked to the prolonged obstruction and likely to be a direct result of [Ms C] not acting soon enough on the assessments she made.

**11) At what point should transfer have reasonably been made in view of known distance to travel, time of day and traffic?**

Transfer should have been first considered at 8.45am when the anterior lip had been persistent for 1¼ hours. A plan for transfer should have been made at this time i.e. reassess in 1 hour – if no progress, transfer.

10.00am [Mrs B] fully dilated, head still high (some progress had been made).

With the head still being high a plan to reassess in 1 hour would have been appropriate with a decision to transfer if the head had not descended. Transfer should have been made at 11.00am.

**12) Is the foetal heart rate dipping recorded anywhere in the notes?**

Yes, FHR dip – good recovery, position changed, is recorded in the notes, the exact time is difficult to read but probably at 10.30am because of the chronological order of the other legible times recorded.

**13) [Mrs B] says that she believes that she was fully dilated by 8.00am and was pushing. Urges to push are noted in the labour notes at 7.30am. Does this indicate, amount to, the second stage of labour? When in your opinion did second stage begin?**

Second stage did not occur until full dilation, which was at 10.00am.

It is common for women to feel like pushing when the cervix is almost fully dilated, since the anterior lip was present from 7.30am, it was normal for [Mrs B] to want to push having only an anterior lip of the cervix left. This is not second stage.

**14) What does the 'cord pH clotted' mean? (See hospital resuscitation notes.) Is it significant?**

It means that the blood taken from the cord clotted, so it would be unable to be tested. The blood was probably taken to assess the pH level of the baby's blood,

which would give an indication as to whether the baby had been hypoxic (having a lack of oxygen) or not, and how long the baby had been hypoxic for.

I do not see any significance that it had clotted. It is something that happens regularly.

**15) Were [Ms H's] actions appropriate? What would have been expected of her in this situation?**

[Ms H] was contracted by [Ms C] to be her assistant at the birth. It would have been expected that she would not be responsible for anything other than her own actions during delivery. [Ms H] does have a responsibility to [Mrs B] if she feels [Ms C's] practice was outside of accepted standards.

NZCOM Handbook: Responsibilities to Colleagues and to the Profession.

g) Midwives take appropriate action if an act by colleagues infringes accepted standards of care.

This would entail [Ms H] first talking to [Ms C] and saying that she felt another form of action was needed. Then if [Ms C] took no action, [Ms H] should have discussed her feelings with [Mr and Mrs B], her responsibility ends there. If the instance had been immediately life threatening, e.g. haemorrhage or resuscitation, then she may intervene and provide appropriate care.

[Ms H] arrived at 9.00am, it would be a reasonable expectation that she read the notes to familiarise herself with the labour progress. [Ms H] should have been concerned that observations were not recorded and that progress was slow – with the anterior lip having been present for 2½ hours (7.30am – 9.00am).

If a discussion took place it would be reasonable to say let's wait 1 hour and then discuss transfer with [Mr and Mrs B]. 1 hour later progress had been made so it was reasonable to continue at home at this stage. Again, pushing for 1 hour to see if progress could be made.

At 11.00am with no progress, a discussion should have taken place between midwives and [Mr and Mrs B] to discuss transfer. It appears that a discussion did take place at 11.00am between midwives and [Ms C] decided to wait another 1 hour, at this stage transfer was discussed with [Mr and Mrs B].

[Ms H's] actions are within normal practice standards.”

## **Further independent advice – February 2002**

Ms Muir provided further independent advice, in response to specific questions, in February 2002:

### **“Replies to Questions:**

- 1) Is it usual to catheterise a woman to allow room for the baby’s head to descend?**

Myles:

Signs of obstructed labour

The midwife should exclude reasons such as full bladder, loaded rectum, or excessive liquor volume as factors contributing to the failure in descent.

Catheterisation is an accepted way to exclude a full bladder.

- 2) Who usually performs the procedure?**

It is most commonly the midwife who performs the catheterisation, but the obstetrician may also do the procedure.

- 3) Should it be performed during a home birth?**

Yes, it is appropriate for this procedure to be performed at home. Apart from secondary obstetric care, a woman should be able to receive the same care no matter where she chooses to give birth.

- 4) Was the procedure appropriate in these circumstances?**

Yes, it was an appropriate procedure in the circumstances; it was reasonable that [Ms C] tried to exclude a full bladder as a possible reason for the delay in the descent of the baby’s head.

- 5) Should the procedure have been performed sooner?**

It should have been considered earlier, if [Mrs B] had been going to the toilet regularly (ever 1-2 hours), and she had been able to pass urine, there was no reason to have performed a catheterisation earlier.

- 6) Should, as good practice, midwives delivering home births have temporary catheters as part of their kit?**

There are no legal requirements as to the equipment that must be carried.

I have enclosed some recommended guidelines for equipment needed for home births, you will see that they all recommend carrying a catheter.



It is common for women in labour to be unable to pass urine; therefore a catheterisation is sometimes necessary. Some reasons for this procedure are to prevent damage to a full bladder during labour and birth, to empty a bladder that may be preventing the foetal head from descending and to treat a postpartum haemorrhage. Therefore I would consider it good practice to carry a catheter.

I do not wish to alter any of my other opinions in light of the other explanations received.”

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### **Further independent advice – June 2002**

Ms C provided a substantive response to my provisional opinion. Her response includes quotes from journals and textbooks and has been attached as Appendix 1. Excerpts from Ms C’s response have been inserted into this report where appropriate.

Ms C’s full response was forwarded to my expert advisor to review. Ms Muir provided the following additional advice in June 2002:

“Enclosed is my report to the response by [Ms C]. Comments are made in the same chronological order as they were presented.

In [Ms C’s] response she mentioned the Partogram, until now I had not seen the Partogram so I have some information that I did not have when I wrote my other reports.

#### **a) Did not respond appropriately to the anterior lip of cervix**

[Ms C] is quite right with her research. She quotes on page 1:

‘Deviation from the normal rate of dilation is an indication for consideration rather than intervention, alerting to the potential or possible problem.’ (Keirse 1989)

[Ms C] recognised the prolonged anterior lip as a deviation from normal, her strategies listed were quite appropriate. However, I do not believe she acted in a manner showing that she was alerted to the potential or possible problem of obstructed labour. These actions would have included – discussing this deviation from normal with [Mrs B]; setting a time frame which allowed the deviation to be within acceptable limits but also intervention if it did not; and, looking for other signs which may indicate that this was in fact a problem and not normal.

I do not wish to alter my earlier advice.

**b) Did not respond appropriately to the slow descent of the head during labour**

If we use the research presented by [Ms C] that cervical dilation and descent of the head are intimately related – 0.25cm of station per cm of dilation; then surely [Ms C] would have been concerned with the poor descent in the first part of labour. [Mrs B] had laboured and dilated very quickly to almost 10cm with only 1cm descent of the head. Descent should be looked at over the entire labour, not just a small part.

The poor descent was caused by the posterior position, [Ms C] appropriately tried many strategies to turn the baby – to no avail.

I do not believe it is appropriate to wait at home until the mother is not coping, the baby's heartbeat is abnormal and there is moulding of the head. Whether at home or at hospital it is good practice to recognise deviations from normal, and in consultation with the parents to come to a plan of action and stick to it.

I do not feel I need to alter my earlier advice.

**c) Did not respond to the lack of progress in second stage of labour**

In her response [Ms C] has discussed the foetal deceleration, she has shown by her response that she recognised this as abnormal, she has listened to and recorded the foetal heart on the Partogram at 1030, 1100, 1115, 1130 and 1145. Her documentation of the subsequent foetal heart rates [was] inadequate for any interpretation to be made, she doesn't say whether she listened to the baby's heart beat before, during or after contractions, or for how long it was listened to.

I do not wish to alter my earlier opinion.

The initial assessment stated the station of the baby's head to be -1. At 0730 the station of the head is 0, the dilation was 9½ cm, [a]t 1000 [Mrs B] was fully dilated (10cm), the station was still 0. At 1030, the station was +1; this was when the deceleration of the baby's heartbeat was heard. At 1100 the station of the head was still at +1, transfer was suggested at this stage, a decision made to wait 1 hour and reassess, at 1145 no further progress had been made, [Mrs B] asked to transfer.

Consultation / transfer should occur when no progress has occurred in second stage over 1 hour in a woman having her first baby. In this case progress was slow but did occur, transfer was suggested within the 1 hour limit, as 1030 appears to be when progress stopped.

[Ms C] states that she discussed all her findings and concerns with the [couple]– they say she didn't. Nothing is documented. The decision to wait another hour at 11 o'clock and then transfer was outside of the acceptable time limit. One hour after 1030 is 1130 and it does not show that the slow dilation of the anterior lip, the persistent posterior position of the baby and the foetal deceleration were all considered when this decision was made.

I do not wish to alter my earlier opinion.

**d) Did not document appropriately throughout labour**

It is not necessary to repeat observations recorded on the Partogram in the notes, one advantage of the Partogram is that it allows for progress to be assessed very quickly. [Ms C] has recorded observations on the Partogram that were not recorded in the notes.

There is an initial set of maternal observations recorded. BP 112/60, pulse 68. The maternal pulse was also taken and recorded at 1100, pulse 76. Documentation is adequate.

The foetal heart rate has been taken 0530, 0600, 0700, 0800, 0830, 0900, 0930, 1000, 1030, 1100, 1115, 1130, and 1145.

Documentation is adequate; follow-up of the deceleration is not documented adequately.

|                       |            |   |
|-----------------------|------------|---|
| Vaginal examinations: | 0530 hours | consistency, dilation, station, membranes |
|                       | 0730 hours | dilation, consistency, station            |
|                       | 0845 hours | dilation only                             |
|                       | 0930 hours | dilation, station                         |
|                       | 1000 hours | dilation, station                         |
|                       | 1030 hours | station                                   |
|                       | 1145 hours | station                                   |

The frequency and documentation of the vaginal examinations is adequate.

|               |            |                      |
|---------------|------------|----------------------|
| Contractions: | 0530 hours | frequency            |
|               | 0600 hours | frequency + strength |
|               | 0700 hours | frequency + strength |
|               | 0800 hours | frequency + strength |
|               | 0900 hours | frequency + strength |
|               | 1000 hours | frequency + strength |
|               | 1100 hours | frequency + strength |

The frequency and strength of contractions are documented adequately.

**e) Did not transfer [Mrs B] in a timely manner**

I do not wish to alter my original answer to this question, except that there is quite a difference in [Ms C's] and [Mrs B's] recalling of discussions being made.

[Ms C] appears to have discussed transfer at appropriate times. [Mrs B] says she did not, neither of the two support people recall these discussions.

[Ms C] needs to reflect on the way she discussed this with the [couple], and make changes that prevents this miscommunication occurring.

**f) Did not inform [Mrs B] of the deceleration of the foetal heartbeat**

As mentioned previously [Ms C] needs to reflect on the way she discusses things with clients so she can be sure they have heard, understood, and are part of ensuing plans.

[Ms C] believes she informed [Mrs B], [Mrs B] does not remember. There is definitely a problem with the way [Ms C] communicated information.

**g) Failure to inform [Mrs B] of the presence of the caput**

Caputs occur frequently even in normal labours. I do not think it was necessary to discuss this with the [couple]. It is better to keep things simple. The position of the baby, the slow dilation of the anterior lip of cervix, the baby's lack of descent with pushes and the slowing of the baby's heart beat would have been enough for the decision to transfer to be decided on.

**h) Failure to inform [Mrs B] of the slow progress of the second stage of labour**

[Ms C's] reply suggests that she did inform [Mrs B] of the slow progress and that she did advise transfer to hospital on two occasions, at appropriate times.

It appears on both occasions that [Ms C] took [Mrs B's] silence as 'no I don't want to transfer'.

On two occasions [Ms C] set a time plan to reassess and transfer but on both occasions extended this plan because of the lack of response from [Mrs B].

'I advised closer monitoring of the baby's heartbeat in hospital ... I waited for a reply but there was none' (p24).

'I set a time limit by which the decision to transfer to hospital had to be made. ... I stated that there was nothing else I could offer her at home ... there was a pause in which there was no response from [Mrs B]' (p25).

[Ms C's] responsibility to inform the [couple] of the slow progress was also to make sure they understood what she was telling them and that they were involved in the decision to carry on.

I do not believe silence is an adequate no.

**i) Failure to inform [Mrs B] of the reason for you not having an access agreement with [the District Health Board]**

I do not feel I can address this issue appropriately as I believe it needs a legal interpretation. ...

**Referral Issues:****1) Referral for uncertain dates**

Discrepancies occur many times between the estimated date of delivery (EDD) from LMP and scan dates.

[Ms C] quotes Enkin. It is generally accepted that gestational age can be accurately estimated by ultrasound from early measurements of the foetal size in the first or early second, trimesters (Enkin).

A woman's period date can also give an accurate due date. But if the woman has long cycles, a history of missed periods, an irregular cycle, or the last period was scant, the calculation of her due date may not be very accurate (Enkin).

It is generally accepted that a scan prior to 20 weeks will give an accurate EDD, with a 12 day difference between [Mrs B's] LMP and scan dates it was appropriate for [Ms C] to use the scan date as the EDD.

It is important that a clear understanding and agreement between [Mrs B] and [Ms C] should occur as to which date is to be taken as the most accurate.

**2) Prolonged first stage of labour**

The length of labour is not the issue. Time is an inadequate value if it is to be looked at only from beginning to end of labour and no other factors are to be considered.

[Mrs B's] labour progressed very well which indicated good contractions. She dilated quickly from the beginning of labour to feeling like pushing in 4½ hours, which indicated she was labouring efficiently (0300–0730 hours).

A midwife's role is to facilitate a normal birth wherever possible but to recognise the abnormal.

[Mrs B's] labour was efficient, she dilated to 9½cm in 4½ hours and then laboured for another 2½ hours to go from 9½ to 10cm.

2½ hours is a long time for an anterior lip to subside and this does occur at times but it is still prolonged and should be recognised as a deviation from normal. What action takes place depends on all the factors present.

[Ms C] is quite right in that the length of the first stage of labour was not prolonged. However the length of time it took for the anterior lip to subside was a sign of a potential or possible problem.

I do not wish to alter my earlier advice.

**3) Persistent OP with no progress**

Progress is the ability of the baby to descend through the pelvis and the ability of the cervix to dilate to 10 cm, the baby's head had descended minimally throughout the entire first stage of labour, and minimally in the second stage.

The slow dilation of the anterior lip was directly related to the persistent OP position of the baby. The slow descent of the baby's head was also due to the OP position, [Ms C] knew the position of the baby was a problem as she had tried positioning, homeopathics and manipulation to turn it, to no avail.

It was unlikely that any further progress would be made without the baby turning.

I do not wish to alter my earlier advice.

**4) Obstructed labour**

[Mrs B] was almost fully dilated at 0730 hours and finally delivered a stillborn baby at 1330 hours – 6 hours later, by Caesarean section.

This labour was obstructed because of the OP position of the baby, the first sign was the length of time it took for the anterior lip to subside.

I do not wish to alter my previous statement.

**5) Failed to record urinalysis**

[Ms C] is quite correct that diabetes of pregnancy and pre-eclampsia can be picked up in other ways. However it would be likely for gestational diabetes to be first picked up by a urinalysis.

Most midwives do not weigh any more and many do not do routine polydose testing. Dipstick urine testing is a simple cost effective uninvassive test that has a very small false positive range when traces are excluded.

Most midwives perform urinalysis, the NZCOM handbook recommends it. Almost all obstetricians perform urinalysis, almost all textbooks recommend it.

In this case a urinalysis had no effect on the labour care or outcome, but to exclude it as an antenatal screening tool without gaining [Mrs B's] consent to do so falls outside expected antenatal care.

I do not wish to alter my earlier advice.

**6) Did not carry a urinary catheter**

I agree that catheterisation is not a normal procedure. I also agree that it would be rare to use one in a home birth setting.

However I have a lot of equipment that I take to a home birth that I rarely or have never used. This does not mean I would cease to take it. I have it there so I can deal with a sudden emergency if needed. Like [Ms C] I have found emergencies at a home birth to be rare.

Because of the rarity of its use, it is not inappropriate to not have a catheter in your home birth kit.”

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## **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.*  
...
- 5) *Every consumer has the right to co-operation among providers to ensure quality and continuity of services.*

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

## Professional Standards

The *Midwives Handbook for Practice* (New Zealand College of Midwives, 1993) describes 'The Scope of Practice of the Midwife' as:

"The Midwife must be able to give the necessary supervision, care and advice to women prior to, and during pregnancy, labour and the post-partum period, to conduct deliveries on her own responsibility and to care for the newborn and the infant.

This care involves preventative measures, detecting complications in mother and child, accessing medical assistance when necessary and carrying out emergency measures ..."

The *Handbook's* 'Code of Ethics' states:

### "Responsibilities to clients

...

k) Midwives have a professional responsibility to refer to others when they have reached the limit of their expertise."

**Transitional Health Authority Maternity Project (Formerly joint RHA Maternity Project), 'Guidelines for Referral to Obstetric and Related Specialist Medical Services' (July 1997)**

### "Timing of Referrals

Referral to a specialist should occur as soon as a problem is suspected or identified.

### The Referral Process

Referral for most of the criteria will be to an Obstetrician and, for those listed under Services Following Birth, to a Paediatrician. However, in some instances, particularly those criteria involving associated medical conditions, a referral to another Specialist such as a Physician, Anaesthetist, Surgeon, Paediatrician, Infectious Diseases Specialist or Psychiatrist, may also be appropriate or be more appropriate. For some situations a multidisciplinary team will be necessary. Many of the criteria under Labour and Birth Services will require both Obstetrician and Paediatrician.

It is recognised that referral to a woman's usual GP may be appropriate in some circumstances. However these guidelines refer specifically to medical Specialists as on the New Zealand Medical Specialist Register.

These Guidelines for Referral define three levels of referral and consequent action

1 = the Lead Maternity Carer **may recommend** to the woman (or parents in the case of a baby) **that a consultation with a specialist is warranted** given that her pregnancy, labour, birth or puerperium (or the baby) is or may be affected



by the condition. The specialist will not automatically assume responsibility for ongoing care. This will depend on the clinical situation and the wishes of the individual woman.

- 2 = the Lead Maternity Carer **must recommend** to the woman (or parents in the case of the baby) **that the responsibility for her care be transferred** to a specialist given that her pregnancy, labour, birth or puerperium (or the baby) is or may be affected by the condition. The specialist will not automatically assume responsibility for ongoing care. This will depend on the clinical situation and the wishes of the individual woman.
- 3 = the Lead Maternity Carer **must recommend** to the woman (or parents in the case of the baby) **that the responsibility for her care be transferred** to a specialist given that her pregnancy, labour, birth or puerperium (or the baby) is or may be affected by the condition. In most circumstances the specialist will assume ongoing responsibility and the role of the primary practitioner will be agreed between those involved. This should include discussion about timing of transfer back to the primary practitioner.”

The Guidelines list ‘Level of Action’ status (ranging from levels 1 to 3) for a variety of situations occurring in pregnancy and labour to guide the practitioner when deciding the level of referral and consequent action, for example:

| Code | Condition Heading                                       | Condition Subheading | Measure of Severity                                | Level of Action |
|------|---|----------------------|--|-----------------|
| 3052 | Uncertain Dates at best estimate at Term                |                      |  | 2               |
| 4032 | Obstructed labour                                       |                      |  | 3               |
| 4033 | Persistent OP [occipital presentation] with no progress |                      | 2 <sup>nd</sup> stage >2 hour primipara or >1 hour | 2               |
| 4035 | Prolonged 1 <sup>st</sup> stage of labour               | Primigravida         | Poor progress                                      | 2@              |

Criteria marked with a @ indicate that some Lead Maternity Carers may routinely use their discretion regarding referral when this is an area in which they have particular skill and experience and, if necessary, additional training.

## **Opinion: Breach – Ms C**

### **Right 4(1)**

Right 4(1) of the Code of Health and Disability Services Consumers' Rights states that every consumer has the right to have services provided with reasonable care and skill.

My midwifery advisor stated: "The death of [Mrs B's] baby was a direct result of an obstructed labour. The obstruction was caused by the position of the baby's head in relation to [Mrs B's] pelvis. It is the responsibility of the midwife to monitor labour to ascertain if it is progressing normally and transfer/consult if it is not. Obstructed labours are common and are the cause of a lot of Caesarean sections. The baby's death is directly linked to the prolonged obstruction and likely to be a direct result of [Ms C] not acting soon enough on the assessments she made."

For the following reasons, I accept this expert advice:

Mrs B was in established labour when Ms C arrived at her home at 5.30am on 31 May 2000. Ms C confirmed this when she examined Mrs B and found that her cervix was six to seven centimetres dilated.

At 7.30am Ms C examined Mrs B again and found that the cervix had an anterior lip on the right-hand side. I am advised that an anterior lip to the dilating cervix is a common condition, caused by the dilating and thinning cervix becoming caught between the mother's pelvic bone and the baby's head during labour. However, it is also a sign that the baby's head is not fitting uniformly onto the cervix.

When Mrs B's uterine membrane spontaneously ruptured at 8.45am Ms C conducted a vaginal examination and recorded that the anterior lip of the cervix was smaller but still present. She gave Mrs B an oral dose of 200c arnica to help reduce the swelling. At this time the anterior lip had been persistent for 1¼ hours.

At 10.00am Ms C recorded that the anterior lip had gone but the baby's head was still high. I note the comments of my advisor that it can take 1 to 2 hours for an anterior lip to subside and that in Mrs B's case, it took 2½ hours "which is just outside of the normal time limit". However, by this stage there had been a failure of the head to appreciably descend over 5½ hours. I am advised that this suggested that labour was not progressing normally, and was a warning sign. The appropriate management would have been to discuss the failure to progress with Mr and Mrs B and consider transfer to the hospital for consultation with an obstetrician and further monitoring of mother and baby. Ms C should have planned to reassess the situation in one hour and transfer Mrs B to hospital if there continued to be no further progress.

At 11.00am Ms C noted that the baby's head was "well engaged", but that there was "slow descent". I am advised that Ms C did not consider the significance of her observations, which were contradictory. Engagement suggests that the head has descended; slow descent indicates that little or no descent has occurred.

Ms C had a responsibility to monitor Mrs B's labour to ascertain if it was progressing normally and to transfer or consult with a specialist if it was not.

My advisor stated: "The anterior lip, the slow descent of the head during labour and the lack of progress in second stage were all taken to their widest possible limit and singularly this would be acceptable, but when the three are combined the result is potentially poor."

When more than one problem exists, transfer and/or consultation must be considered. Ms C failed to recognise that Mrs B's was an abnormal labour and that the baby's progress was obstructed.

In her response to my provisional opinion, Ms C stated: "I waited for [Mrs B] to consent to the transfer [to] hospital. ... My goal throughout the labour was to gently guide her to the acceptance of hospital without fear or coercion."

Mrs B stated in response to my provisional opinion: "They [Ms C and Ms H] assumed that I would realise that I needed to go to hospital. The word 'hospital' never came into the conversation."

Responding to Ms C's comments, my expert advised that Ms C was quite right when she noted that deviation from the normal rate of dilation is an indication for consideration rather than intervention. She said that Ms C recognised the prolonged anterior lip as a deviation from the normal and her listed strategies were quite appropriate, but her actions did not indicate that she was alerted to the potential or possible problem of obstructed labour. Ms C tried many strategies to turn the baby, to no avail. My advisor went on to comment:

"Progress [in labour] is the ability of the baby to descend through the pelvis and the ability of the cervix to dilate to 10cm. The baby's head had descended minimally throughout the entire first stage of labour and minimally in the second stage. The slow dilation of the anterior lip was directly related to the persistent OP position [occiput/posterior, the baby positioned facing the mother's spine] of the baby. The slow descent of the baby's head was also due to the OP position. [Ms C] knew the position of the baby was a problem as she tried positioning, homeopathics and manipulation to turn it to no avail. It is unlikely that any further progress would be made without the baby turning."

My expert also noted: "Cervical dilation and descent of the head are intimately related. ... Descent should be looked at over the entire labour, not just a small part."

I accept my expert's advice that Mrs B's baby's death was directly linked to the prolonged obstruction and was a direct result of Ms C's not acting soon enough on the assessments she made. Ms C did try a variety of measures to try to correct the position of the baby but she focussed on isolated events and did not view the labour in its entirety, assessing the various components in relation to each other to reach the conclusion that this labour was not progressing normally.

Accordingly, in my opinion, Ms C failed to provide Mrs B with midwifery services of the standard of care and skill reasonably expected of a midwife in such circumstances and therefore breached Right 4(1) of the Code.

#### **Right 4(2)**

Right 4(2) of the Code states that every consumer has the right to services provided that comply with legal, professional, ethical, and other relevant standards. In considering Ms C's actions, I have also taken into account the standards promulgated by the New Zealand College of Midwives *Handbook for Practice* which states: "The midwife must be able to give the necessary supervision, care and advice to women prior to, and during pregnancy, labour and the post-partum period, to conduct deliveries on her own responsibility and to care for the newborn and the infant. This care involves preventative measures, detecting complications in mother and child, accessing medical assistance when necessary and carrying out emergency measures ..."

Ms C did not comply with a number of professional standards in her management of Mrs B's labour. In particular, she did not fully assess the foetal heart dip and take the steps reasonably required of a midwife in such circumstances, as explained below:

#### *Failure to follow up and monitor foetal heart rate after it dipped at 10.30am*

Although Ms C recorded that there was a deceleration in the foetal heart rate at 10.30am, she did not record the details of the deceleration. My advisor stated that "there is no record here of what the foetal heart rate was, what it dipped to, how long it stayed down for, whether it was early or late deceleration". In addition, Ms C did not consider the consequence of the deceleration.

My advisor stated: "[Ms C] showed no interpretation of the deceleration, foetal heart rate decelerations can occur briefly and not be associated with foetal distress but are also a classic sign of foetal distress so when noted, thorough assessment should occur to ensure the safety of the baby."

Where the baby's head is high and the cervix fully dilated, a deceleration in foetal heart rate may indicate cord or head compression. My advisor stated that when a deceleration has been detected it is accepted practice to implement further checks to ensure the safety of the baby, as it is important to establish the significance of the dip, to know whether the baby's heart rate dropped before, during or after a contraction and how long the heart rate stayed down. My advisor stated that in these circumstances, the midwife should consider continuous monitoring, and look at all the presenting factors together, such as the colour of the liquor and the type of deceleration.

In response to my provisional opinion, Ms C stated that the deceleration that occurred in the baby's heartbeat was described by amplitude only, was shallow and fell to 110bpm. She said that the exact depth and duration of the deceleration was not able to be identified as her sonicaid did not have a digital display, but it did indicate that the baby's heartbeat recovered quickly and returned promptly to the baseline beat.

In response to Ms C's comments, my expert advised that Ms C acknowledged that the foetal deceleration was abnormal and as a result listened to and recorded the foetal heart at 10.30, 11.00, 11.30 and 11.45am. I am advised that Ms C's "documentation of the subsequent foetal heart rates [was] inadequate for any interpretation to be made. [Ms C did not] say whether she listened to the baby's heartbeat before, during or after the contractions, or for how long it was listened to."

There is evidence that Ms C met some of the accepted standards to ascertain the wellbeing of the baby, but she failed to further investigate the deceleration of the foetal heart. In my opinion Ms C failed to comply with the professional standards promulgated by the New Zealand College of Midwives and breached Right 4(2) of the Code.

#### **Right 4(5)**

Right 4(5) of the Code states that every consumer has the right to co-operation among providers to ensure quality and continuity of services.

The New Zealand College of Midwives *Handbook for Practice* states that midwives have a professional responsibility to refer to others when they have reached the limit of their expertise.

The 1997 *Guidelines for Referral to Obstetric and Related Specialist Medical Services* recommend that in the event of prolonged first stage or second stage labour, the LMC must recommend to the woman that consultation with a specialist is warranted. In the case of an obstructed labour, the LMC must recommend to the woman that the responsibility for her care be transferred to a specialist. I note that Dr A, who delivered Mrs B's baby by Caesarean section, stated that "it was obvious on [Mrs B's] admission to [the hospital] at 1.00pm, that she was in obstructed labour".

My midwife advisor stated: "It is within normal guidelines to allow pushing for 1 hour in a primigravida with no progress, longer than this is outside of normal limits particularly in a home delivery where there is a transfer time before an opinion from a specialist can be sought."

There is no evidence that Ms C had a clear plan of management for Mrs B's labour and delivery in the event of an unexpected complication.

At 8.45am Mrs B was showing an anterior lip to her cervix. This had persisted for 1¼ hours and, combined with the baby's high position in the pelvis, should have been an early warning for Ms C to reassess the situation in one hour, consider transfer to hospital and propose this to Mrs B.

I am advised that Ms C took the lack of progress in second stage to its widest limits. At 10.00am, when Mrs B was fully dilated and there had been no appreciable descent of the baby into the pelvis over 5½ hours, Ms C should have recognised that there was a risk to the outcome of the labour. In not recognising her limitations and promptly transferring Mrs B to secondary specialist services, Ms C did not ensure quality and continuity of care and, in my opinion, breached Right 4(5) of the Code.

### **Right 6(1)**

Right 6(1) of the Code states that every consumer has the right to information that a reasonable consumer, in that consumer's circumstances, would expect to receive, including an explanation of her condition and of the options available.

When Mrs B met with Ms C to contract with her for maternity services, they discussed the issue of Ms C not having an access agreement with the District Health Board. Ms C did not fully inform Mrs B of the reasons for her not having access to the hospital's facilities for delivery. She told Mrs B that the reason she did not have an access agreement was because she "had had a run in with one of the obstetricians". Ms C did not tell Mrs B that the hospital had withdrawn her access agreement.

When Ms C discussed details of the birth plan with Mrs B on 27 May 2000, she advised Mrs B that if there were problems with the labour she would need to consider the possibility of using a private car to get to the hospital. Ms C informed Mrs B that in this event her care would be taken over by the hospital staff and that she would be available in a support role only.

Mrs B went into labour at 3.15am on 31 May 2000. Ms C initially assessed her at 5.30am and found that labour was established. At 7.30am Ms C noted that Mrs B's cervix had an anterior lip which had the potential to impede the progress of labour. Ms C continued to observe and attempt to reduce the lip until 10.00am. Mrs B was aware that Ms C and Ms H, the secondary midwife, were attempting to reduce the lip, but was unaware of its significance.

At 10.30am when Mrs B had been in labour for over five hours, Ms C recorded a deceleration of the baby's heartbeat. This abnormality in the baby's heartbeat is one of the indicators of foetal distress. Ms C informed me that she told Mrs B that the baby's heartbeat had slowed and that the baby might not be enjoying the labour.

Mrs B disputed that she was told about the slowing of the baby's heartbeat. She said that if she had known she would have wanted to go to the hospital. She preferred to have her baby at home, but understood the importance of transfer to hospital when danger signals arose.

At 11.00am Ms C had concerns about the slow descent of the baby's head into the pelvis and the progress of labour generally. At 11.30am she asked Ms H, the secondary midwife, to check the position of the baby. Ms H confirmed that the baby was a "tight fit and station O" in the pelvis, and that the baby was presenting with 'caput'.

Mrs B heard Ms C and Ms H discussing the position of the baby's head and the word 'caput', but did not understand the significance of these factors. Mrs G supports Mrs B's comments that the two midwives appeared concerned and spoke quietly to each other but did not inform Mrs B of their concerns or that the baby's head was swelling.

I am advised that the presenting factors at this time strongly indicated that the outcome of Mrs B's labour was potentially poor. In this situation transfer and consultation should

always be discussed. My midwife advisor stated that Ms C did not adequately share information with Mr and Mrs B and did not empower them to have control of the decision-making during the labour.

In response to my provisional opinion, Ms C stated that shortly after the deceleration of the baby's heartbeat she told Mrs B that she would "probably need a forceps delivery and advised her that she needed closer monitoring in the hospital". This is new evidence. Ms H, the couple and Mrs G have not referred to Ms C raising the possibility of a forceps delivery. This is unusual as all parties present during the labour were aware that Mrs B was keen to have a low intervention delivery. Mrs B "understood the importance of transfer when 'danger' signs arose". It is unlikely that Mrs B would have interpreted the proposal of a forceps delivery as anything other than a danger sign, yet if Ms C's recollection of events is accurate Mrs B waited one and a half hours from the time of being told that she might require a forceps delivery until asking for a transfer to hospital.

Ms C stated that when Mrs B did not respond to her suggestions to transfer she took Mrs B's "lack of response as wanting to consider the information I had given her and needing time to accept that transfer was necessary".

Mrs B stated that she wanted to "stand by" her recollection that she was not advised by Ms C that she needed to go to hospital and that all that was said was "We need to reassess in 10 minutes" and "We need to reassess in 15 minutes."

Commenting on Ms C's response, my expert advised:

"There is quite a difference between [Ms C's] and [Mrs B's] recalling of discussions made. [Ms C] appears to have discussed transfer at appropriate times. [Mrs B] says she did not, neither of the two support people recall these discussions.

...

[Ms C] suggests that she did inform [Mrs B] of the slow progress. [Her] responsibility was to inform the [couple] of the slow progress and also to make sure they understood what she was telling them and that they were involved in the decision to carry on. ... It appears on both occasions [Ms C] took [Mrs B's] silence as 'no I do not want to transfer'."

My expert commented that silence does not necessarily indicate refusal. She advised that Ms C needs to reflect on the way she discussed all aspects of the labour with the [couple] and make changes to prevent such miscommunication.

Mrs B was entitled to be told, without asking, about the progress of her labour, the abnormalities that had been detected, the expected risks, and the options available (in particular, the option of immediate transfer to specialist care in hospital) and the reasons for Ms C not having an access agreement with the District Health Board, in a manner that enabled her to make her own decisions relating to the well-being of herself and her baby. These were all matters that a reasonable woman in Mrs B's circumstances would expect to be told about. I am satisfied from all the evidence available to me that Ms C did not provide

Mrs B with the information she needed. Ms C failed to adequately explain the status of her labour, the factors that she had observed that posed a risk to the labour, and the management options available. In these circumstances, Ms C breached Rights 6(1)(a) and (b) of the Code.

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## **Opinion: No breach – Ms C**

### **Right 4(2)**

The New Zealand Council of Midwives *Handbook for Practice*, Standard Three, requires that a midwife “collates and documents comprehensive assessments of the woman and/or baby’s health and wellbeing”.

#### *Maternal assessment*

Ms C expected Mrs B’s labour to be normal. When she first assessed Mrs B at 5.30am, she found that labour was established and progressing well. She assessed and recorded the status of Mrs B’s cervix. Ms C also commenced a partogram and recorded Mrs B’s pulse, temperature and blood pressure. I am advised that a midwife is expected to record the initial maternal temperature, pulse and blood pressure, as it is extremely useful later in labour to have baseline observations.

#### *Maternal recordings*

I am advised that the recordings to assess maternal well being should be taken routinely during the course of the labour and recorded. After the initial recordings taken at around 6.00am Ms C again noted Mrs B’s pulse on the partogram at 10.00am.

My expert commented that it is not necessary to repeat observations recorded on the partogram in the notes as the advantage of the partogram is that it allows for progress of labour to be assessed quickly. In response to my provisional opinion, my expert advised that the frequency and documentation of maternal assessments and the documentation of the maternal observations was adequate.

#### *Inadequate record keeping – progress of labour, vaginal examinations, catheterisation*

Ms C made half-hourly recordings of her observations of Mrs B’s labour from 5.30am to 8.30am. She recorded that the uterine membrane spontaneously ruptured at 8.45am, and that Ms H arrived at 9.15am. There were also brief notes about Mrs B’s progress at these times. At 10.00am Ms C noted that the anterior lip had gone. This indicated (although it was not recorded) that the cervix was fully dilated and that the second stage of labour had commenced.

The next entry Ms C made was at 11.00am, and recorded that she had discussed the slow descent and suggested transfer to hospital.

Mrs B was catheterised at about 11.20am, but there is no record of this in the notes.



Ms C's notes record that Ms H performed a vaginal examination at 11.30am, but there is no record of Ms H's observations. The final record, indicating the decision to transfer Mrs B to hospital, does not note the time.

Ms C admitted that she did not keep accurate recordings of the course of Mrs B's labour at the time and "finished the notes off in hospital after [Mrs B] had the lower uterine caesarean section". It was not until questioned that Ms C recalled that she had omitted to document the catheterisation.

My expert's initial advice was that Ms C's "observations of [Mrs B] and her baby were not taken and/or at the very least not recorded frequently enough".

In response to my provisional opinion, Ms C stated:

"There are several methods of recording the measures of progress in labour of which I use two. The partogram which is a structured graphical representation of the progress of labour ... [and] a time based dairy entry [to] record the mother's physiological and coping response to labour, which has disadvantages, as to complete may detract from a woman's care if it is written at length. These recordings are used not only to record the progress of labour but [as] the basis for clinical judgement.

...

The notes are dated and signed, I am the only writer. ... Corrections have been made in the appropriate manner. The fact that some of the notes were completed after the event was permissible and quite understandable as the priority was to get [Mrs B] to hospital, not to write notes. There are however some events missing."

In response to Ms C's comments, my expert advised that she had not viewed the partogram at the time of her initial advice. She said it is not necessary to repeat observations recorded on the partogram in the notes. Ms C recorded observations on the partogram that were not recorded in the notes. My expert also noted that Ms C recorded an initial set of maternal observations of blood pressure and pulse.

Although there were significant omissions from the records such as the catheterisation and the time the decision to transfer was made, I accept my expert's advice that overall Ms C's recording of Mrs B's labour was adequate. Accordingly, in my opinion, in relation to these matters Ms C did not breach Right 4(2) of the Code.

## Other comments

I am concerned about some of the other omissions in the general care provided to Mrs B, which have been identified by my expert advisor.

*Ms C failed to record that she had conducted a urinalysis for Mrs B at any of her antenatal visits*

Antenatal urinalysis is an important screening procedure to exclude abnormalities such as diabetes or eclampsia. In the diabetic condition (which causes a large baby), and eclampsia (high blood pressure and oedema), the mother and baby can be at increased risk of a poor outcome of the pregnancy and labour. I am advised that obstetric texts, including the New Zealand Council of Midwives *Handbook for Practice*, advise that a urinalysis is an expected part of antenatal screening.

In her response to my provisional opinion, Ms C stated that diabetes of pregnancy and pre-eclampsia can be picked up in other ways than urinalysis. My expert agreed, but stated that to exclude it as an antenatal screening tool without obtaining Mrs B's consent falls outside expected antenatal care guidelines.

*Ms C did not carry a urinary drainage catheter when she attended Mrs B's labour*

As discussed above, Ms C catheterised Mrs B during her labour. The issue of Mrs B's catheterisation is a matter that fell short of expected standards in all aspects. My expert advisor provided documentation to me in the form of four guidelines. All of the guidelines include a urinary catheter as part of the recommended equipment for midwives.

Although my expert stated that it is not mandatory for midwives to carry a catheter in the home birth kit because of the rarity of its use, I note that the New Zealand College of Midwives recommends that a urinary catheter is carried. In my opinion Ms C's practice also fell below accepted standards in relation to this matter.

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## Actions

I recommend that Ms C take the following actions:

- Apologise in writing to Mrs B. This apology should be sent to the Commissioner and will be forwarded to Mrs B.
- Review her practice in light of this report.

## **Other actions**

- A copy of this opinion will be forwarded to the New Zealand College of Midwives, with a recommendation that Ms C seek a review of the most recent year of her practice by a Midwifery Standards Review.
- This matter will be referred to the Director of Proceedings in accordance with section 45(f) of the Health and Disability Commissioner Act 1994 for the purpose of deciding whether any further action should be taken.
- A copy of this opinion, with identifying details removed, will be sent to New Zealand College of Midwives and the Maternity Services Consumer Council, and placed on the Health and Disability Commissioner website, [www.hdc.org.nz](http://www.hdc.org.nz), for educational purposes.

## Appendix – Response to Provisional Opinion

Ms C responded to my provisional opinion as follows:

“Failed to provide appropriate services during [Mrs B’s] labour and in particular:

(a) Did not respond appropriately to the anterior lip of cervix.

A partogram is a structured graphical representation of the progress of labour. Developed and refined over the years by Friedman, Philpott and Studd, it has become the standard method of recording the progress of labour. It allows progress to be graphically displayed so deviation can readily be recognised (Studd 1973) and the writing of lengthy descriptions avoided (Enkin 1989). The representations displayed are the heartbeat recordings, the cervicograph depicting the dilatation of the cervix, the descent and position of the presenting part. It also allows for the recording of the frequency and intensity of the contractions, maternal recordings, fluid intake, urinary output, and the state of the membranes. Interventions with any drugs can be recorded in the appropriate box.

The cervicograph, the most important indicator of the progress of the first stage of labour (Studd 1973) is expected to be of a rate of 1cm/hr in the active phase of labour which is assumed after 3cm dilation and is known as the alert line. Deviation from this arbitrary defined ‘normal’ rate of dilation is an indication for consideration rather than intervention, alerting to a potential or possible problem (Keirse 1989). While the alert line plots the cervical dilation the action line is a guide to when obstetrical intervention should be considered. The placement of the action line has been the subject of much debate. Studd 1973 argued that the action line should be set 2hrs to the right of the alert line while the WHO 1994 states: ‘A lag time of 4hrs between a slowing of labour and the need for intervention is unlikely to compromise the fetus or mother, and avoid unnecessary interventions.’

The most aggressive management protocol is known as active management of labour (O’Driscoll et al 1980). With this protocol intervention is instituted if cervical progress is under 1cm/hr at which time an oxytocin infusion is started to stimulate labour to the required rate of cervical dilatation. This protocol has been increasingly questioned in recent years (Impery & Baylan 1999).

The most commonly accepted intervention time is 2hrs to the right of the alert line. Figure 1 plots the 1cm/hr alert and action lines against [Mrs B’s] cervical progress while Figure 2 plots [Mrs B’s] individualised cervical dilatation against the action line. As can be seen by these graphs [Mrs B’s] rate of cervical dilation had slowed but was still progressive (Sehgal 1980).

What was the response to this situation?

The response to this situation was that relatively simple and sensible care measures designed to help maintain the progress of labour, while trying to correct the underlying

problem (Simkin & Ancheta 2000), which was in [Mrs B's] case the position of the baby, were instituted in keeping with [Mrs B's] stated preference for low intervention before major obstetrical interventions were required.

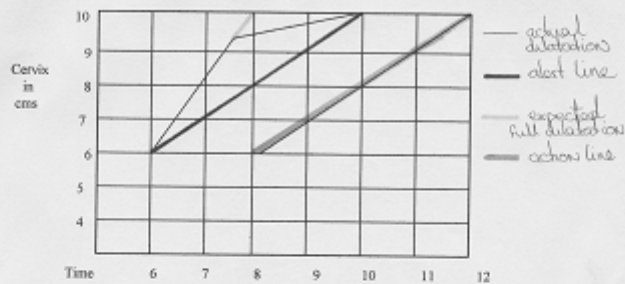


Figure 1: Cervicalgraph plotted against alert and a 2 hour action line

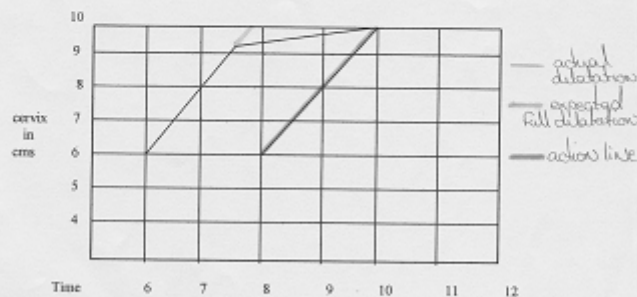


Figure 2: [Mrs B's] individualised cervicalgraph plotted against a 2 hour action line

At 7.30 am [Mrs B] stated that she had an urge to push at the height of her contractions so a vaginal examination (VE) was performed to establish full dilatation. However there was a lip of cervix still present on the right side, the membranes were intact but tense and the foetal heart was fine. As progress till this time had been very efficient I thought that there was no need to intervene as the membranes would soon rupture completing dilation.

Why I did not rupture the membranes?

- 1) I adjudged that the membranes were tense and would spontaneously rupture in the near future.
- 2) The position of the baby's head indicated that rotation might occur more easily before the head came too deep into the pelvis (Simkin & Ancheta 2000).

- 3) That with the membranes ruptured there was more likelihood for the lip of cervix to swell and become oedematous requiring epidural analgesia to correct (Barrett et al 1992).
- 4) There was more likelihood of pressure on the baby's head causing heart arrhythmias (Barrett et al. 1992).
- 5) The risk of infection was greater the longer the membranes were ruptured (Simkin & Ancheta 2000).

The plan at this stage was a 'wait and see' approach as progress up till now had been excellent. [Mrs B] got back in the pool, which she found soothing, and started using breathing patterns to help her control the urge to push (Simkin & Ancheta 2000 and Bennett et al 1993) which worked well.

At 8.45am the membranes spontaneously ruptured, the liquor clear with flecks of vernix in it. On VE, the lip of cervix although smaller was still present in the anterior position. It was now that proactive strategies were employed because although [Mrs B] was coping extremely well, this could not continue indefinitely as she would tire, having no energy for the second stage of labour or develop maternal distress.

The strategies included:-

- 1 – ambulation
- 2 – maternal positioning
- 3 – reassurance
- 4 – Homeopathy to speed the resolution and control any swelling of the anterior lip.
- 5 – increased monitoring.

The first strategy used was ambulation. [Mrs B] was asked to stay out of the pool as gravity would assist with the uterine efficiency to get rid of the anterior lip. Ambulation has proved effective to improve uterine action (Flynn et al 1978) thereby shortening labour, less need for analgesia and better condition of the baby. Read et al 1981 suggest that the increased 'tonis' or change in cervical pressure is responsible for the increased efficiency of labour in the vertical position. Mayes 1997 and Keirse 1989 both suggest that while there is a place for augmentation in slow labour, measures such as allowing the woman to be mobile, eat and drink should be other considered in the first instance.

Maternal positioning was used to enhance the rotation of the baby's head thus affecting descent. Leaning forward during contractions was adopted by [Mrs B], as it was the most comfortable position of those tried. According to Simkin & Ancheta 2000, maternal positioning may have beneficial effects because it improves the alignment of the pelvic bones altering the shape and capacity of the pelvis. The drive angle, which is the angle formed by the axis of the fetus spine and the axis of the birth canal is improved. It increases the frequency, length and efficiency of the contractions and there is optimal supply of oxygen to the fetus.

The third strategy used was reassurance. The effects of maternal anxiety are described by Simkin & Ancheta 2000, are 'decreased blood flow to the uterus, decrease contractions, increased duration of the first stage of labour, decreased blood flow to the

placenta and to the fetus. The production of foetal catecholamines is increased causing the baby to conserve oxygen but may cause heart rate decelerations. While these physiological responses occur, psychologically the mother becomes pessimistic and may panic.' It is therefore important to keep the mother informed of the progress of labour while offering support and suggestions as to comfort measures that can be used. It is important to be realistic with outcome possibilities and to continually updated so that acceptance of intervention is much quicker.

Homeopathy was [Mrs B's] preferred form of dealing with health problems. When the anterior lip persisted and after the rupture of the membranes I offered Arnica 200c as a way of preventing swelling of the anterior lip and vaginal bruising. Bradford and Chamberlain 1995 say, in regard to the claim that Arnica reduces bruising and bleeding, that 'in 1990 the department of Obstetrics & Gynaecology, University of Witwatersrand, Johannesburg ran a trial involving 159 women who had just had an episiotomy or perineal tear which seemed to confirm this'. This remedy is commonly used in the community and particularly in labour and the postnatal period (Smith 1998, Katz 1995). This was given because of [Mrs B's] premature pushing which was likely to cause more than usual trauma. It would also keep the anterior lip of cervix from becoming swollen necessitating more intervention. Moskowitz 1992 suggests that 'Arnica may be given after labour for obvious bruising of the labia or vagina, or even preventatively after much pushing and straining, a difficult forcep extraction, or simply a big baby and a snug fit when trauma to the soft tissues seem likely'.

The final strategy was to increase the surveillance of [Mrs B's] response to the labour and monitor the baby's heartbeat more closely. As [Mrs B] had been in advanced labour when I arrived I was not surprised, when at 7.30 she said that she felt an urge to push at the height of the contractions. Mentally calculating the expected progress of labour from my own standard of forecasting which is – the time taken from establishment of labour to 5cm plus half that time. So if she established labour at three in the morning and it was now six, that is three hours, this would make full dilatation expected around 0730. This being so [Mrs B] consented to a VE to confirm this. She was found not to be fully dilated, a rim of cervix remained on the right side and she was advised of this and started breathing patterns. The point of breathing patterns is to control the urge to push by preventing the diaphragm from fixing and increasing the abdominal pressure (Sweet 1997). At 0845 when the membranes ruptured another VE was done to confirm full dilation. The anterior lip was still present and proactive measures were instituted.

At 0930 another VE was done which found the anterior lip was smaller and the cervix was soft and reducible. A manual reduction of the cervix was attempted (Simkin & Ancheta 2000 and Davis 1987) however this was not successful as the head was not able to hold it back. I told [Mrs B] this and said we would have to wait for the head to come down before it would go. The foetal heart was listened to with increasing frequency and remained quite normal.

At 0930 I offered [Mrs B] Caulophyllum 200c to increase the effectiveness of the contractions to complete cervical dilation (Ventskovskiy 1990, Moskowitz 1990, and Eid et al 1993). [Mrs B] had at first refused this as she had thought it was Pulsatilla

which she did not want to take but after repeating my explanation of why I thought it would be of benefit to complete dilation, she accepted it.

[Mrs B] then adopted her preferred position which was walking and was allowed to bear down when she felt she had to, to conserve energy (Roberts et al 1985). Thus [Mrs B] progressed to full dilation which was confirmed at 1000 the time at which on her individualised cervicograph coincided with the alert line (see Figure 1).

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(b) Did not respond appropriately to the slow descent of the head during the labour.

Dilatation of the cervix and descent of the foetal head are fundamental events in the first stage of labour. However the relationship between the variables, uterine contractions, cephalo-pelvic relation (foetal head size and position in relation to pelvic size), the compliance of the cervix and the soft tissues are not well understood (Allman et al 1996).

Friedman and Sachtleben (1965) in their series of papers entitled 'Station of the presenting part' state in paper 1 'Patterns of descent' that 'descent of the presenting part during labour is intimately related to cervical dilatation and that both are probably affected by the same influences'. They continue that 'the influences influencing cervical dilation adversely or beneficially will influence descent in a like manner, both to direction and degree'.

They found that in the active phase of labour descent occurs in nulliparas (first time mums) at a rate of 0.25cm of station per centimetre of cervical dilatation. Applied to [Mrs B's] labour this would mean that the expected descent in the latter part of labour,

if the anterior lip were to be judged 1 centimetre of cervix, would be 0.25cms which over two and a half hours would equate to 0.1cm/hr, too small to be manually detected. This means that the labour had gone into slow motion.

By fact of this relationship improving the rate of the descent or cervical dilatation would improve the other. However as the baby was in a posterior position, the fit of the foetal head in relation to the cervix was not ideal, but by encouraging rotation and creating a closer fit of the head on the cervix, greater descent and cervical progress would be achieved (Allman et al 1996).

By nature of the interrelationship of these variables, strategies employed to encourage cervical dilatation were hoped to have a positive effect on descent, while awaiting the assistance of the secondary powers of labour, the abdominal muscles and the diaphragm in the second stage of labour (Mayes 1997).

Thus the measures described previously to affect cervical dilation, that is ambulating and maternal position, would also have a beneficial effect on rotation and descent (Simkin & Anteaeter 2000). Meanwhile monitoring of the foetal heart was increased, support for [Mrs B] increased by giving information on strategies to improve cervical dilation and a close watch was made for any tiredness or suggestion that she needed pain relief.

I feel the response to the slow descent of the head in labour was appropriate considering the mother was coping well, the baby's heartbeat was normal and there was no moulding of the foetal head.

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c) Did not respond appropriately to the lack of progress in second stage of labour.

Having reached full dilation [Mrs B] continued to assume an upright position walking between contractions and pushing as she felt inclined with contractions in a forward leaning position to encourage rotation. At 1030, half an hour into second stage a deceleration of the foetal heart was heard. A deceleration or dip of the foetal heart is described by Ziegel and Van Blarcom 1972 as 'a transient fall in the foetal heart rate in association with a contraction'. They say 'when dips are present, each uterine contraction produces only one dip. Dips may be described by amplitude, lag time and duration. Amplitude or depth, is the difference between the basal heart rate preceding the dip and the minimal rate at the lowest level of the dip. The lag time is the difference,

measured in seconds, between the peak of the contractions and the bottom of the corresponding dip. Duration is the interval of return to the basal rate.'

They describe three types of dips identified by their relationship to the contractions. 'Type I dips which slow briefly during a contraction, decreasing to somewhere 115–110 beats per minute (bpm). Recovery begins as soon as the height of the contraction passes, lag time is short and the recovery from the dip is rapid. Since recovery from this dip is rapid it is of very short duration. Type II or late decelerations are described as slow in onset and decrease to minimal rate, long in duration when compared to a type I dip, with its brief, rapid decrease and quick return to normal rate. The fall rate of Type II dips starts after the peak of the contractions and slowly continues downward. The lag time of these dips is 30–50 seconds and recovery is slow as was the decrease to the minimum rate of the dip. This slow decrease and recovery make the duration of a type II dip much longer than a type I dip giving it a 'U' shape as compared with the sharp narrow 'V' of a type I dip.'

The other type of deceleration described by Ziegel and Blarcom is a variable deceleration which is often associated with cord compression. They state: 'Compression of the umbilical cord may occur if the cord is tight around the neck or body of the fetus or if it lies between the fetus and the maternal pelvis. Such compression reduces or arrests blood flow during contractions and may result in brief or severe dips in the foetal heart rate. When severe dips occur, the foetal heart rate may drop well below 100 bpm. Dips from cord compression may occur at variable times in relation to the contractions and may be of variable amplitude.'

The deceleration heard in [Mrs B's] labour described by amplitude was shallow, estimated to be 110bpm. The exact depth is unknown as my sonicaid does not have digital display and by duration, the return to the baseline was described as good which meant that recovery was quick. The lower the heart rate goes the longer it takes to recover.

What was the response to the deceleration?

- 1 – assessment
- 2 – explanation
- 3 – advice
- 4 – increased surveillance of the foetal heart.

1 – Assessment of the deceleration meant that I listened with the sonicaid to the foetal heart over the next few contractions to ascertain the extent of the variation. No more decelerations were heard then or at any other time while at home. A VE revealed that [Mrs B] was fully dilated. This was commented on, as if the lip had slipped back then it could have been a reason for the deceleration. The head had progressed to station +1, the movement of the head descending could have ... caused the dip. The sutures of the presenting part were easily palpable and no moulding or swelling was noted at this time. The position of the head was unchanged and [Mrs B] was managing well. I felt that with the progress that had been made and by excluding factors mentioned above as a cause,

that this was a type 1 dip which Friedman considers an encouraging prognostic sign (Friedman and Sachtleben 1976).

2 – Explanation – Having used the sonicaid throughout labour to listen to the foetal heart, which everyone could hear, I then explained to all present what had been heard. [Ms H] commented later that she was glad I had done this. [Ms H] of course is a midwife and attuned to listening to the foetal heart. [Mrs B] was immersed in labour and may not have heard the deceleration but [Mr B] and [Mrs G] must have recognised that what was heard was different from before and my response to it by listening to the heartbeat through every contraction till I was satisfied to the extent of this deviation then reassessing [Mrs B] vaginally. To explain what we had heard I spoke to all present, [Mrs B], [Mr B], [Mrs G] and [Ms H] as to what had been heard and tried to put it in perspective with the rest of the labour. I waited until [Mrs B] had finished her contraction and then explained, stopping when she had a contraction and continuing again after.

I did not use the word ‘deceleration’ in my explanation as I try to keep it understandable for the person I am talking to, especially a woman in labour who is focused on coping with contractions.

I said that the slowing of the baby’s heartbeat may indicate that the baby was not ... enjoying this (the labour) much, but that it had recovered quickly and had not reoccurred. I continued that [Mrs B] was definitely fully dilated and though slow (referring to the latter part of the labour) the baby’s head had progressed. I later stated that [Mrs B] would probably need a forcep delivery and advised closer monitoring of the baby’s heartbeat in hospital. Exactly the reason that [Dr A] had stated in his statement. [Mrs B’s] response to this discussion was to ask how the baby’s heartbeat would be monitored in hospital to which I replied that they would use a CTG machine. [Mrs B] asked what that was and I replied it was a big machine which continuously recorded the heartbeat through sensors strapped to the abdomen. [Mrs B] nodded and verbally said: ‘Oh yes’ conveying comprehension. I waited for agreement to go but there was none.

At our initial meeting one of the things we discussed was the question of choice and decision-making in regard to [Mrs B’s] pregnancy and birth. I believed that the relationship being undertaken involved partnership (Guilliland & Pairman 1994) which I believed, involved having a mutual respect of one another’s positions. This view was reinforced by my promotional pamphlet that [Mrs B] had received from [Ms D] and brought with her to that meeting. I stated that I would give her information but that the final decision was hers. Throughout the pregnancy our relationship had developed and [Mrs B] had shown that she was willing to listen and take responsibility based on information that she had received from different sources, reading, antenatal classes, friends and of course me. Sometimes she had differing ideas and would decide to do things other than what I had suggested, this was accepted. An example of this was her refusal to have Pulsatilla earlier in the labour.

I took [Mrs B’s] lack of response as wanting to consider the information I had given her and needing time to accept that transfer was necessary. She knew that the progress of

labour had been slow by being asked to get out of the pool to maximise gravity, she knew that the anterior lip was slow to go and that even the pushing back of the cervix which had not worked due to the head having to come down. The acceptance of the caulophyllum to help dilate the last bit of cervix was queried by [Mrs B] as she thought that it was Pulsatilla and I had to reiterate what it was and why I was giving it. She was definitely told of the deceleration and the significance, taking into account that she was well into second stage, was not detailed but conveyed the essential element that baby might not have been enjoying the labour. Having said that, no further decelerations occurred.

3 – Advice – In my opinion this was an acceptance issue, so to speed up the process I imposed a time limit by which the decision had to be made, making it quite clear that I thought that transfer to hospital would happen. There was no choice or options, it was hospital now or later. The reasons for this advice were:

- The slowing of the latter part of the labour although within acceptable limits was slow.
- The position of the baby's head had not altered.
- [Mrs B], while coping well, had limits to her endurance and I wanted her to go to hospital before she became distressed.
- The distance to hospital was always a factor as it was going to take half an hour to get there.
- While you can monitor intensively with a sonicaid, more information can be obtained with the use of the CTG machine. The exact type of dip in relation to the contractions can be ascertained with ease and the depth of the dip and the frequency of the dips. From a practical point of view it does not have to be hand held.

4 – Increased surveillance – The frequency of the foetal heart recordings had slowly become closer and closer as the labour progressed. After the deceleration [Ms H] and I listened to the baby's heartbeat nearly all the time, except for when [Mrs B] was in the loo. If I was doing an examination then [Ms H] would listen with the sonicaid.

[Mrs B] continued to push at will. By 11am there were no external signs that the baby's head was progressing. That is, there was no vaginal gapping or anal pouting, I told [Mrs B] that I wanted to assess if, in fact there was any downward movement of the head while she pushed with contractions. I said, that although uncomfortable, this would be best done in a semi-reclining position for my ease and accuracy. This was done.

After I was satisfied that there was no descent of the head with contractions and had been unsuccessful in securing any rotation by digital manipulation of the baby's head, (Wright 1977 & Hamlin 1959) I stood and informed [Mrs B] that there had been no movement of the baby's head, however the heartbeat remained steady. I stated that there was nothing else that I could offer her at home. There was a pause in which there was no response from [Mrs B]. I continued that the only other thing I could think of was catheterisation which would be the first thing that would happen when they went to hospital, but that I did not have a catheter with me.

[Ms H] said that she had some in her bag if [Mrs B] wanted it done at home. [Mrs B] asked what would be achieved by this procedure and I replied, that with the bladder emptied it may provide enough room to allow the baby's head to turn and come down. I also stated that I did not normally catheterise at home as this was usually done when a problem had been identified.

There was no response from [Mrs B] until [Ms H] asked [Mrs B] directly if she wanted this done or not. [Mrs B] replied yes. Even though I believed that this was better done in hospital I felt that if it accelerated [Mrs B] consenting to go hospital then that's what had to happen. [Ms H] went to get the catheter which was in her car while I set up the appropriate equipment. A sterile pack was opened and after washing my hands donned sterile gloves. The catheterisation is an intimate procedure which entails passing the tube into the bladder via the urethra. It is something that cannot be done without the co-operation of the woman. This was done and [Mrs B] got up continuing to push at will.

[Mrs B] and [Mrs G] went to the bathroom and upon returning [Mrs B] said that she had decided she would like to transfer to hospital but first would like [Ms H] to examine her for a second opinion. I went to phone the hospital to inform them of the transfer and came back to hear [Ms H] telling [Mrs B] there was a large caput present. The baby's heartbeat was still normal and [Mrs B] was informed of this.

We organised a bag for [Mrs B] to take to hospital and left by car for [the hospital].

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d) Did not document appropriately throughout labour.

There are several methods of recording the measures of progress in labour of which I use two. The partogram which is a structured graphical representation of the progress of labour and is a stand alone record of the progress of labour.

This depicts cervical dilation, descent of the presenting part, foetal heart recordings, the frequency and intensity of contractions, maternal recordings, medication and other events (Studds 1973). The value of the partogram is that it is easy to fill out, can be

seen at a glance, is easily understood should a change of carer become involved (Enkin 1995). The disadvantage of partogram is that it does not allow for progress to be recorded in the second stage of labour or record the mother's psychological and coping response to the labour. To record this I like to use a time based diary entry which also has disadvantages, as to complete may detract from the woman's care if it is written at length.

These recordings are used not only to record the progress of labour but to detect incipient problems and are used in conjunction with the woman's response to labour to plan labour care. They are the basis for clinical judgement. The frequency of recordings, taking into account the history of any established risk factors, are based on the prevailing situation of the mother, baby and labour. This is the essence of individualised care (Sweet 1997). In [Mrs B's] labour the partogram was filled out on the hour and the written notes on the half hour. As the situation called for increasing monitoring of the foetal heart then the term range has been used to denote multiple instances.

Initial assessment:- When I arrived at [Mrs B's] place I listened to the foetal heart. Being assured that all was well with baby I proceeded to question [Mrs B] as to the history of the labour. When it had started, how did it feel. The nature of the show and had her membranes ruptured. The pool was already set up but not filled and [Mrs B] spoke of waking [Mr B] to organise it. While we were talking I was assessing [Mrs B's] response to the contractions and assessing the labour as it was at that point. Timing the contractions, gauging their intensity and [Mrs B's] response to them. Did she have to stop talking when she got one? Did she have to alter her position to cope? Did she need support from [Mr B] such as back rubbing? Was she anxious or panicked? These things are the essence of midwifery which make the difference between robotic care and thinking care.

The timing of the VE was accomplished when both [Mrs B] and I felt at ease with one another. Sweet (1997) states that 'it may be carried out (VE) to confirm the set of labour, the stage of dilation the station and position of the presenting part, if the labour is sufficiently advanced'. This was my assessment at this time. There was no hurry, as general observation told me that while in established labour [Mrs B] would be about halfway there (referring to cervical dilation) and the foetal heart was fine. Asking [Mrs B] if she wanted to know how far on she was, I performed a VE with her consent. This examination was done and recorded at 0530 and written in the notes. At 0600 I recorded the foetal heart and started the partogram after setting up my equipment and helping [Mr B] start to fill the pool so [Mrs B] could get in.

Timing of records –

From this time I wrote on the partogram in hour blocks and the written notes on the half hour till the situation called for altered notations. The foetal heart is recorded half hourly till 0830. From 0900 it is recorded quarter hourly and from 1000 and into second stage of labour it is notated in range as the frequency of recordings would not be accommodated on the partogram.

VE – these were done in response to the clinical situation and were more frequent than normal because of it. They allow the dilation of the cervix, descent and position of the head to be assessed. To have [Mrs B] pushing on an undilated cervix was not in her or the baby's best interest. The response to interventions, ambulation and monitoring had to be evaluated. Progress or lack of it had to be monitored. Thus [Mrs B] had a number of VEs before transfer. The condition of the cervix is noted, as is one of the factors involved when making decisions as to ongoing care or interventions. If the cervix had been hard or swollen, a completely different plan of care would have had to be devised.

Membranes – These were recorded as 'felt' at the initial assessment which to me meant that they were not tense. I failed to note that they were tense at 0730 but remember it well as it was one of the factors in deciding not to rupture the membranes. The rupture time is noted on the partogram and that the liquor was clear with vernix flecks. No meconium is noted at any time though the blood stained show is.

Contractions – These were recorded on the partogram as seen. They were moderate when I arrived but became more progressive as time went on. In second stage, because of the assistance of the secondary powers, contraction intensity becomes less significant but the regularity of them is important in relation to the length of second stage.

Interventions – these are recorded in the appropriate box on the partogram.

Maternal recordings – Baseline recordings were done. However as Enkin et al (1995) points out 'such assessments have become traditional, and that there is little agreement as to how frequently they should be performed. The value, if any, of frequent assessments of pulse and blood pressure in normal labour to screen for problems such as pre-eclampsia is unknown. It is likely to be small. It is questionable whether any useful purpose is served by routinely repeated observation of these parameters in healthy women in apparently normal labour.' The main reason claimed for doing them is to detect maternal distress which is defined by Sweet 1997 as being present when there is decreased pain tolerance and anxiety leading to exhaustion. All the things are easily observable, [Mrs B] did not once comment on the pain or backache which is one of the cardinal signs of posterior presentation. Neither was she unduly anxious, unable to question procedures or ask for explanations.

This is quite different from foetal distress for which the only way to detect it is to listen to the foetal heart.

The notes are dated and signed, I am the only writer. The writing is of questionable quality but recognisable. Corrections have been made in the appropriate manner, a line drawn through them. The fact that some of the notes were completed after the event was permissible and quite understandable as the priority was to get [Mrs B] to hospital not to write notes.

There are however some events missing.



The use of documentation is to record the progress of labour which I think it did. The information recorded was the basis for altering planned care. The early recognition of deviation from the norm was made allowing for timely interventions. Interventions were, firstly at home to assist [Mrs B] and secondly the advice to transfer to hospital for further assistance. They are like any document open to interpretation by others who are unfamiliar with the language of the writer and could have been more detailed.

References:-

Enkin M., Keirse M., Renfrew M & Neilson J. (1995) Monitoring progress of labour in *A Guide to effective care in Pregnancy and childbirth*. Oxford University Press; NY 31; 220-226

Studd J., (1973) Partograms and Nomograms of Cervical Dilatation in Management of Primigravida Labour. *BMJ*: 4, 451-5.

Sweet B.R. & Tiran D., (eds) 1997 Midwifery Care in the First Stage of Labour: *Mayers Midwifery – A Textbook for Midwives*. Bailliere; Glasgow 356-384.

e) Did not transfer [Mrs B] in a timely manner.

Transfer to hospital was advised 3/4hr into the second stage of labour even though progress had been made. [Mrs B] had been informed of the slow descent from the time of the anterior lip of cervix. After the VE in which I tried to push the anterior lip over the baby's head, I informed [Mrs B] that we would have to wait for the baby's head to descend for the lip to disappear. In stating the case for transfer to hospital at the time of the deceleration at 1030, I explained to [Mrs B] the nature of the deviation of the baby's heartbeat and once again referred to the descent of the presenting part which had progressed but was slow in the overall nature of the labour. After replying to [Mrs B's] inquiry as to how the baby's heartbeat would be monitored in hospital, I waited for [Mrs B] to consent to the transfer. There was no response. Thinking that I may not have been clear in my explanation or that she needed time to consider this I said that the decision had to be made to transfer to hospital by 12-noon.

From my experience of doing home births for 20 years I am aware that for some women it takes time to accept that there is need for transfer to hospital. It is not that they do not want to go but that they must acknowledge to themselves that help is needed. Until this happens there is resistance. [Mrs B's] acceptance of the situation came when she acknowledged in the bathroom that she could not do this. My goal throughout the labour, taking into consideration that antenatally [Mrs B] and I had discussed the nature of the position of the baby, how to encourage it to rotate by postural exercise, was to gently guide her to the acceptance of hospital without fear or coercion.

At the 11.15 I had ascertained that there had been no progress since the 1045 examination, of either descent or rotation and once again informed [Mrs B]. I stated that I could do no more for her at home. Discussion followed about catheterisation which, she chose to try. This having been done and there being no further progress, [Mrs B]

consented to go to hospital at 1145 after another VE done by [Ms H] which she requested as a second opinion. At this time [Mrs B] had been in the second stage of labour for one and  $\frac{3}{4}$  hours with one hour of no progress.

Transfer was achieved by private car as this was deemed the quickest way to get there. The alternatives were by ambulance which would have had to come from [a town] which was some 40 minutes away. This would have meant that there would have been a delay of 80 minutes to get to hospital, maybe more depending on the availability of a unit. The other alternative was by helicopter which is always available for emergency retrieval, but at the time with no further variation in heartbeat and the fact that it would take at least 10 minutes to get to us and return to the hospital, a total time of 20 minutes, I thought that the car seemed the most immediately available and fastest method of transport to hospital.

The journey from [Mrs B's] place to the doors of the maternity unit at [the hospital] is exactly 25kms. I was fairly familiar with this road, not only going to see [Mrs B] but visiting friends who live further up the same road. I had travelled it that morning from my home to attend [Mrs B] in labour and taking into account that I had to pack the car, it was dark and that I had to unpack once I got there to take the gear inside, it had taken me 30 minutes to attend [Mrs B] that morning. It is a road that is mainly rural with some bends near [Mrs B's] place for which I had to slow for but is otherwise a very comfortable trip at 100kms/hr. The route driven to get to the hospital bypasses a rural town and joins the rural divide to the nearest city, which also has an open road speed limit. This road was well known to [Mr B], who drove it twice a day to work and back. The time of day was noon and the weather was fine.

To have taken 45 minutes to reach hospital would have meant that the speed at which we were travelling would have had to average 33.3km/hr. This seems unlikely as even I, who was familiar with the road, had trouble keeping pace with [Mr and Mrs B]. [Ms H] also commented afterwards that she had to fall back from us as she was not comfortable with the speed. In your report you state that [Mrs G] and [Mr B] were concerned for [Mrs B] and that she found the trip uncomfortable. It therefore does not make sense that [Mr B] would prolong this for [Mrs B] by driving at 33.3km/hr.

I have always felt that the conflicting time between departure from [Mrs B's] home and admission to hospital, was due to the fact that the clock that we were using at [Mrs B's] place was showing a different time from the hospital clocks. I never questioned if the clock was correctly set as most of my clients set their own clocks, for timing the birth for things such as astrological readings for the child later on. Even though [Mrs G] felt that there was delay in departing from [Mrs B's] place, which was understandable as in a stressful situation time seems to stand still, this was not so. [Mrs B] herself, on my postnatal visit commented that she felt that the time from admission to hospital to getting to theatre was long but I felt that it couldn't have been faster as [Dr A] was very prompt in attendance and then procedures like intravenous cannulation and blood taking are essential before going to theatre.

At booking, my clients were given a booklet to record their antenatal care and this included information that would be generally useful for all clients. Antenatal class information and a list of requirements for home birth were included, so that separate pieces of paper would not have to be used. I had found that if separate sheets were used then there was a higher chance of losing them. In the list of requirements item 11 states – Bag for hospital (especially for first time mothers.) As [Mrs B] had not packed her bag this needed to be done, but it was done with speed and did not significantly alter the departure time from the house.

Thus once [Mrs B] consented to transfer, this was made by car with reasonable speed to [the hospital's] maternity unit.

References:-

[Ms C] (2000) Home Birth Maternity Record. page 8

f) Did not inform [Mrs B] of the deceleration of the foetal heartbeat.

Having reached full dilation [Mrs B] continued to assume an upright position walking between contractions and pushing as she felt inclined with contractions in a forward leaning position to encourage rotation. At 1030, half an hour into second stage a deceleration of the foetal heart was heard.

Assessment of the deceleration meant that I listened with the sonicaid to the foetal heart over the next few contractions to ascertain the extent of the variation. No more decelerations were heard then or at any other time while at home. A VE revealed that [Mrs B] was fully dilated. This was commented on, as if the lip had slipped back then it could have been a reason for the deceleration. The head had progressed to station +1, the movement of the head descending could have ... caused the dip. The sutures of the presenting part were easily palpable and no moulding or swelling was noted at this time. The position of the head was unchanged and [Mrs B] was managing well. I felt that with the progress that had been made and by excluding factors mentioned above as a cause, that this was a type 1 dip.

Having used the sonicaid throughout labour to listen to the foetal heart, which everyone could hear, I then explained to all present what had been heard. [Ms H] commented later that she was glad I had done this. [Ms H] of course is a midwife and attuned to listening to the foetal heart. [Mrs B] was immersed in labour and may not have heard the deceleration but [Mr B] and [Mrs G] must have recognised that what was heard was different from before and my response to it by listening to the heartbeat through every contraction till I was satisfied to the extent of this deviation then reassessing [Mrs B] vaginally. To explain what we had heard I spoke to all present, [Mrs B], [Mr B], [Mrs G] and [Ms H] as to what had been heard and tried to put it in perspective with the rest of the labour. I waited until [Mrs B] had finished her ... contraction and then explained, stopping when she had a contraction and continuing again after.

I said that the slowing of the baby's heartbeat may indicate that the baby may not be enjoying this (the labour) much, but that it had recovered quickly and had not reoccurred. I continued that [Mrs B] was definitely fully dilated and though slow (referring to the latter part of the labour) the baby's head had progressed. I later stated that [Mrs B] would probably need a forcep delivery and monitoring of the baby's heartbeat in hospital. Exactly the reason that [Dr A] had stated in his statement. [Mrs B's] response to this discussion was to ask how the baby's heartbeat would be monitored in hospital to which I replied that they would use a CTG machine. [Mrs B] asked what that was and I replied it was a big machine which continuously recorded the heartbeat through sensors strapped to the abdomen. [Mrs B] nodded and verbally said: 'Oh yes' conveying comprehension, I waited for a further statement but there was none. I therefore said that the decision would have to be made by 12 noon.

At our initial meeting one of the things we discussed was the question of choice and decision-making in regard to [Mrs B's] pregnancy and birth. I believed that the relationship being undertaken involved partnership (Guilliland & Pairman 1994) which I believed, involved having a mutual respect of one another's positions. This view was reinforced by my promotional pamphlet that [Mrs B] had received from [Ms D] and brought with her to that meeting. I stated that I would give her information and advice but that the final decision was hers. Throughout the pregnancy our relationship had developed and [Mrs B] had shown that she was willing to listen and take responsibility based on information that she had received from different sources, reading, antenatal classes, friends and, of course, me. Sometimes she had differing ideas and would decide to do things other than what I had suggested, this was accepted.

I took [Mrs B's] lack of response as wanting to consider the information I had given her and needing time to accept that transfer was necessary. She knew that the progress of labour had been slow, by being asked to get out of the pool to maximise gravity, she knew that the anterior lip was slow to go and that even the pushing back of the cervix which had not worked due to the head having to come down. The acceptance of the caulophyllum to help dilate the last bit of cervix was queried by [Mrs B] as she thought that it was Pulsatilla and I had to reiterate what it was and why I was giving it. When she came out of the bathroom later with [Mrs G] she assertively told us that she wanted to go to hospital. She was definitely told of the deceleration and the significance of it which, taking into account that she was well into second stage was not detailed but conveyed the essential element that baby might not have been enjoying the labour.

In my opinion this was an acceptance issue, so to speed up the process I imposed a time limit by which the decision had to be made, making it quite clear that I thought that transfer to hospital would happen. There was no choice or options, it was hospital now or later. The reasons for this advice were:

- The slowing of the latter part of the labour although within acceptable limits was concerning.
- The position of the baby's head had not altered.
- [Mrs B] while coping well, had limits to her endurance and I wanted to go to hospital before she became distressed.

- The distance to hospital was always a factor as it was going to take half an hour to get to.
- While you can monitor intensively with a sonicaid more information can be obtained with the use of the CTG machine. The exact type of dip in relation to the contractions can be ascertained with ease and the depth of the dip and the frequency of the dips. From a practical point of view it does not have to be hand held.

[Mrs B] continued to push at will until I re-examined her at 1100 to establish if there had been any further descent as there were no external signs of this.

(g) Failure to inform [Mrs B] of the presence of caput.

I cannot recall if the small caput noted at 11am had been mentioned to [Mrs B]. The findings of that examination had been diverted by the conversation about catheterisation.

I do recall that when [Ms H] did the examination before transfer that she said that there was a large caput present and I said that there was a small caput present at the previous examination before catheterisation.

(h) Failure to inform [Mrs B] of the slow progress of second stage of labour.

[Mrs B] was informed of the slow progress of the second stage of labour as an ongoing process.

The progress of [Mrs B's] labour had been good and at 0730 she stated that she was feeling slightly pushy with contractions. I thought that she must be approaching full dilation and suggested a vaginal examination to confirm this and arrange for [Ms H], the second midwife, to come for the delivery. I found that there was cervix still present on the right side. I informed [Mrs B] of this but was not too concerned as the membranes were still intact. [Mrs B] got back in the pool.

At 0845 [Mrs B's] waters broke and she stated that she definitely felt pushy. Thinking that [Mrs B] was now fully dilated I examined [Mrs B] vaginally. There was however, an anterior lip present but smaller than before. I tried to push this out of the way but this was not successful. I informed [Mrs B] of its presence and that we would have to wait for the head to come down so the rest of the cervix would dilate. [Mrs B] asked what an anterior lip was and I explained that usually the cervix opens (dilates) evenly but because the head was not snug on the cervix, it had dilated unevenly leaving a portion of the cervix at the front. I went on to say that the anterior lip could become swollen if it were pushed on, which would make it slower to dilate and suggested a forward leaning position to encourage rotation and to help [Mrs B] control the pushing urge she was feeling, to allow the cervix to dilate completely.

At 10am [Mrs B] was found to be fully dilated the anterior lip now gone. I informed [Mrs B] of this and said she could push as she wanted. [Mrs B] pushed at will in various positions until 1030 when a deceleration of the baby's heartbeat was heard.

I then listened to the foetal heartbeat through consecutive contractions until I was satisfied to the extent of the variation. I then examined [Mrs B] vaginally to assess progress. I then explained what had been heard by the sonicaid to those present in the room. I said the slowing of the baby's heartbeat may indicate that the baby was not enjoying this (the labour) much, but that it had recovered quickly and had not been heard since. I continued that [Mrs B] was definitely fully dilated and though slow the baby's head had come down a bit. I stated that [Mrs B] would probably need a forceps delivery. I advised closer monitoring of the baby's heartbeat in hospital.

[Mrs B] asked how the hospital would do this and I replied that they would use the CTG machine. [Mrs B] asked what that was. I replied that it was a big machine which continuously recorded the baby's heartbeat from sensors strapped to [Mrs B's] abdomen.

[Mrs B] nodded and verbally said: 'Oh yes' conveying comprehension.

I waited for a reply but there was none.

To make sure that [Mrs B] was aware that in my opinion we would have to transfer to hospital or delivery I set a time limit by which the decision for transfer to hospital had to be made.

By 11am there were no external signs that the baby's head was progressing. That is, there was no vaginal gaping or anal pouting. I told [Mrs B] that I wanted to assess if in fact there was any downward movement of the head while she pushed with contractions. I said, that although uncomfortable, this would be best done in a semi-reclining position for my ease and accuracy. This was done.

After I was satisfied that there was no descent of the head with contractions and had been unsuccessful in securing any rotation by digital manipulation of the baby's head, I stood and informed [Mrs B] that there had been no movement of the baby's head, however the heartbeat remained steady. I stated that there was nothing else that I could offer her at home. There was a pause in which there was no response from [Mrs B]. I continued that the only other thing I could think of was catheterisation which would be the first thing that would happen when they went to hospital, but that I did not have a catheter with me.

[Ms H] said that she had some in her bag if [Mrs B] wanted it done at home. [Mrs B] asked what would be achieved by this procedure and I replied, that with the bladder emptied it may provide more room to allow the baby's head to turn and come down. I also stated that I did not normally catheterise at home as this was usually done when a problem had been identified.

There was no response from [Mrs B] until [Ms H] asked [Mrs B] directly if she wanted this done or not. [Mrs B] replied yes. Even though I believed that this was better done in hospital I felt that if it accelerated [Mrs B] consenting to go to hospital then that's what

had to happen. The catheterisation was done and [Mrs B] got up continuing to push at will.

[Mrs B] and [Mrs G] went to the bathroom returning to say that [Mrs B] would like to transfer to hospital but first [Mrs B] would like [Ms H] to examine her for a second opinion. I went to phone the hospital to inform them of the transfer and came back to hear [Ms H] telling [Mrs B] there was a large caput present. The baby's heartbeat was still normal and [Mrs B] was informed of this.

We organised a bag for [Mrs B] to take to hospital and left by car for [the hospital].

(i) Failure to inform [Mrs B] of the reason for ... not having an access agreement with [the District Health Board].

I initially met [Mrs B] in late February 2000 to discuss the possibility of continuing her maternity care, as her previous midwife had withdrawn from practice. I explained to [Mrs B] that I only did home births as I didn't have an access agreement with the hospital. I explained that if we needed to transfer to hospital she would be cared for by the hospital staff. I went on to say that, if she and [Mr B] wanted, I would stay with them as a support person but that I could not provide midwifery care in the hospital. [Mrs B] asked me why this was and I replied that I had had a run in with one of the obstetricians. [Mrs B] went on to ask my opinion about various things in relation to the care I provided and philosophies, leaving to attend an appointment with another midwife.

The reason that I had not been specific in detail was that I was unsure as to the exact nature of the action. I had the report but it did not signify that my clinical care was so bad that my access would be withdrawn without any prior written warning. To obtain clarification I wrote to [...], the executive officer at that time. See letter dated 17/2/98.

The next meeting with [Mrs B] was on 13/3 when she registered with me as her LMC to provide her maternity care.

I do question the relevance of the comments in the provisional opinion regarding my access agreement, particularly in light of the expert midwives comments. The discussion seems to attempt to open up earlier difficulties which I had with [the hospital] in a way which unfairly colours consideration of this case.

Reference:-

[Ms C] (1998) letter to [the executive officer].

Referral issues:-

1) 3052 – Referral for uncertain dates:-

When [Mrs B] first presented for antenatal care she had a certain Last Menstrual Period (LMP) date of 2/8/1999. When estimating the expected date of delivery (EDD), the

LMP is used to calculate the EDD which is confirmed by serial fundal height inspection and quickening (Attico et al 1990). As [Mrs B's] fundal height on abdominal palpation in the early part of her pregnancy differed from expected she had an ultrasound scan at 16 weeks to establish the gestational age. Enkin & Keirse 1995 state that 'the great value of selective ultrasound use in pregnancy has been clearly established'. They say 'gestational age can be accurately established from early measurements of foetal size in the first or second trimester'. Mayers 1997 states: 'For accuracy the measurements for gestational age should be done between 16 and 20 weeks as prediction of gestational age by ultrasound cannot be accurately made after 24 weeks.'

'Between 13 and 18 weeks measurement of the biparietal diameter predicts the date of delivery to within two weeks in 89% of pregnancies.'

Discrepancy between certain dates and gestational age can sometimes occur when the mother's ovulation cycle is different from expected. The assumption is that all women ovulate mid cycle but some ovulate early or towards the end of the cycle which would make the EDD by LMP inaccurate. The timing in the cycle of conception can also cause LMP to be inaccurate.

[Mrs B] was insistent that her dates were correct despite being counselled as to the causes of discrepancy between LMP dating and the scan results. Clinically, taking into account the size of [Mrs B] and [Mr B] the baby's growth was good and was always more in keeping with scan dating. Taking this into account and the volume of liquor present (this usually decreases as term approaches), I was of the opinion that the scan was more correct.

Mongelli, Wilcox and Gardosi (1996) state that even with certain dates by LMP it is reported that ultrasound estimation of gestational age is more accurate and this is also supported by Geirsson & Busby (1991). Serial scanning for dates is felt by Taipale and Hilesmaa (2001) to be no more effective in establishing the accuracy of dating than one ultrasonic measurement.

The rationale for this referral code I believe is the woman who presents late in pregnancy for antenatal care and who has no idea of her LMP and it is too late to get an accurate dating scan ie after 24 weeks.

#### References:-

Bruton Attico N., Meyer D., Bodin H.J., Dickman D., (1990) Gestational age Assessment. Australian Family Practitioner

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Geirsson R., & Busby-Earle R., (1991) Certain dates may not be a reliable estimate of gestational age. *Br J of Obstet & Gynae* Jan: 98; 108-9



Mongelli M., Wilcox M., and Gardosi J. (1996) Estimating the date of confinement: Ultrasonographic biometry versus certain menstrual dates *Am J Obstet Gynecol*; 174:278-81

Sweer B.R. & Tiran D., (eds) 1997 *Antenatal Investigations of maternal and foetal wellbeing: Mayers Midwifery – A Textbook for Midwives*. Bailliere; Glasgow 21:216

Taipale P., & Hilesmaa V., (2001) Predicting Delivery Date by Ultrasound and Last Menstrual Period in Early Gestation. *97*:(2) 189-93.

2) 4035 – Prolonged 1<sup>st</sup> stage of labour:-

Sweet (1999) states that ‘labour used to be termed “prolonged” when it exceeded 24 hours. Nowadays, with active management the generally accepted limit is 12 hours’. [Mrs B’s] labour began at 0300 and transfer to hospital was effected at 12MD, a time of 9 hours. By the labour partogram she was found to be fully dilated at 1000, at which time the progress line met the alert line and was two hours from the action line (see figure 1). In this sense [Mrs B’s] labour was not prolonged either by being over 12 hours or being plotted on the partogram.

[Mrs B’s] individual graph, see figure 2 showed that the time that action needed to be taken was the very time that she became fully dilated.

I was aware of the slowing of progress but this was not yet prolonged. The condition of the mother was excellent and the baby was responding well with a steady heartbeat and no moulding of the head. The membranes had been ruptured for only one and a quarter hours with clear liquor draining.

The mother’s birth plan was for low intervention and she was aware that the cervix was taking time to descend from the information that I had given her and the reasons given for the interventions instituted.

The issue of whether there was reluctance on my part to transfer was not so. I was well aware that we needed to go to hospital and was working to achieve this.

Reference:-

Sweet B., 1997 *Mayers’ Midwifery – A Textbook for Midwives*. (12ed) Bailliere Tindall; Glasgow Capt 47, pg 604

3) 4033 – Persistent OP with no progress.

This referral guideline states that referral must be recommended in second stage at over 2 hours in a primipara. [Mrs B] had been informed of the deceleration of the foetal heart which had happened at 1030 half an hour into second stage and transfer to hospital was raised, referral had been recommended.

Again at 1115 I informed [Mrs B] that I could do no more for her at home which meant there was no option but to go to hospital. However a conversation ensued about catheterisation and [Mrs B] chose to have this done at home and this delayed transfer for a period. This procedure entails insertion of the catheter under sterile conditions into the bladder. Once [Ms H] had established that [Mrs B] wanted this done at home she had to go out to the car to get the catheter. There were certain preparations that had to be done before this procedure could be performed. This was still only one and a quarter hours into second stage. Referral had again been recommended, but we were first trying catheterisation to see if it helped the final descent of the baby's head.

[Mrs B] and I had discussed the decision-making and informed consent process early in the pregnancy, in fact on the first visit. She had on other occasions through the pregnancy and labour, demonstrated that she was willing and able to make decisions and was wanting full participation. She had been informed of the deceleration and was aware that progress had been slow. I knew this from the questions that she asked and her reaction to the answers given.

At 1145 [Mrs B] consented to transfer to hospital. This was one and three quarters hours into second stage and we were on the road by 12-noon, exactly the time that referral is advised to be recommended. By this time I had suggested twice to [Mrs B] that we needed go to hospital and the transfer was in progress.

4) 4032 – Obstructed labour.

There had been progress recorded at 1045 but at 1115 there was no progress and the caput was just a small swelling on the foetal head. At 1115 I told [Mrs B] that I could do no more for her at home. This being put in context of the previous advice at 1050. There was no reply from [Mrs B] and we discussed the only other option we could offer at home to assist descent was catheterisation which was done. At 1145 [Mrs B] requested a second opinion before transfer to hospital.

I had recommended referral to hospital at 1045 and 1115.

Failed to record that she had conducted a urinalysis for [Mrs B] at any antenatal visits.

Urine testing in pregnancy is done primarily to detect the presence of protein and glucose. In early pregnancy and in labour it is done to establish the presence of ketones and can also detect urobilinogen, blood and assess the PH of the urine. This is usually done outside the laboratory with a dipstix.

Enkin 1995 states that 'dipstix may give up to 25% false-positive results with trace reaction and 6% false-positive result with one + reaction on testing of random samples from women with normal 24 hour total protein excretions'.

When doing tests, the reason must be well thought out as to why the test is being done – screening, treating or prevention. If there is a positive result, can it be believed? And more to the point what is to be done about it? Is it the right test to get the information required? Clinical practice must be thinking and appropriate to the patient. When

interpreting test results one must always take into account influencing factors like contamination (Schlager 1995), appropriate test for information required (Kuo et al 1992) and reliability of the test (Brown & Buddle 1995).

In pregnancy many women report increased vaginal discharge and in [Mrs B's] case, she had a show discharge present following her uterine activity. A midstream urine sample (MSU) was sent to the laboratory at this time to exclude urinary tract infection (UTI), which is a risk factor for premature labour (Mayers 1997). This culture came back negative and was also negative for protein and glucose (see MedLab report no 1303436 dated 24 March 2000).

With [Mrs B], other signs had to be relied on to establish pre-eclampsia given that the dipstix would always be positive for protein because of contamination of the urine sample by vaginal discharge. Frye 1997 states in her book 'Understanding Diagnostic Tests in the Childbearing Year' that 'proteinurea shows up as toxemia becomes most severe, not in the early stages. Most proteinurea in pregnancy is related to contamination from yoni discharge, UTI or is benign. If proteinurea does appear in toxemia, the kidneys are severely stressed.' Clinical signs had to be relied on in this case such as blood pressure (B/P) which was stable, oedema which was not present and weight gain, as a cross check for oedema, was not excessive.

Testing for glucose in urine during pregnancy according to Frye 1997 is 'unreliable since a large number of healthy women will show glycosuria due to the higher filtration rate of the kidneys resulting from increasing blood volume'. She advises: 'If the diet is good and there are no classic diabetic symptoms, tests are not needed and best avoided.'

Misdraji and Nguyen 1996 state that 'urinary glucose testing is laden with caveats thus producing misleading results' and that 'screening with plasma glucose is preferred'. Screening for gestational diabetes is a contentious issue as Coustan's (1993) paper describes. [Mrs B] had in fact chosen to have a polycose test earlier in her pregnancy while under the care of [Ms D], the result of which was normal.

It was accepted that in [Mrs B's] case the urinalysis would be positive for proteinurea because of vaginal contamination. Clinically [Mrs B] showed no sign of pre-eclampsia or hypertension which can precede it as her B/P, weight, were normal and she had no oedema. Blood glucose testing had established that this was normal. To do a urinalysis would have added nothing to what was already known and accepted and would not have influenced the outcome of the pregnancy.

#### References:-

Frye A. (1997) *Diagnostic Tests in the Childbearing Year*. Labry's Press: Oregon

Kuo V.S., Koumantakis G., Gallery E.D. (1992) Proteinurea and its assessment in normal and hypertensive pregnancy. *Am J Obstet Gynecol.* 167(3):723-8

Schlager T.A, Smith D.E., Donowitz L.G., (1995) Perineal cleansing does not reduce contamination of urine samples from pregnant adolescents. *The Paediatric Infectious Disease Journal* 14(10):909-10

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Sweet B., 1997 *Mayers' Midwifery – A Textbook for Midwives*. (12ed) Bailliere Tindall; Glasgow Cpt 47, pg 604

Did not carry a urinary catheter.

A urinary catheter is a tube which is inserted, through the urethra, into the bladder for the purposes of drainage. It is used in obstetrics when operative procedures are performed and epidural anaesthesia is used. In the situation of posterior presentation a full bladder may retard the descent of the presenting part (Myles 1975) and therefore should be excluded. Catheterisation is an intervention that is done when there is recognition that things are not normal, usually in conjunction with other interventions.

In [Mrs B's] case the recognition that assistance was required had been acknowledged and discussed by me with [Mrs B]. At 1045 the deceleration of the baby's heartbeat had been heard and transfer advised. We were now half an hour later with no further descent and again I advised that transfer was necessary as I could do no more for her at home. The discussion in which [Mrs B] asks what catheterisation would achieve demonstrated her awareness of the procedure. Each of us responding to the other's questions. I said this was not normal and advised that it was not something I would usually do at home.

The reason for this was that the delay it can cause performing the procedure is time wasted getting to assistance. It was for this very reason that I do not carry catheters. Catheterisation is a procedure carried out in abnormal situations and in my view would not usually be carried out at home, as all you are doing is delaying transfer and assistance. Although there was a small chance it would work I felt the baby would still need assistance to be born.

It is the only catheterisation that I have performed at home.

Myles M.F (1975) Obstructed Labour in *Textbook for Midwives* Churchill Livingstone: London Cpt 22 pg 369-371.”

## **Addendum**

The Director of Proceedings laid before the Nursing Council of New Zealand a charge alleging professional misconduct. The charge in relation to not ensuring adequate communication was upheld by the Council on 23 December 2003 and it imposed a penalty of censure and ordered payment of 30% of the costs of the hearing. The Council also ordered continued name suppression of Ms C, as during the time elapsed since the events occurred she undertook further professional development and demonstrated a willingness to learn from her mistakes.

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