# Midwife, Ms C

# A Health Trust

# A District Health Board

## A Report by the

## Health and Disability Commissioner

## (Case 05HDC12098)

Health and Disability Commissioner
*Te Toihau Hauora, Hauātanga*

## Parties involved

| | |
|---|---|
| Ms A | Consumer |
| Mrs B | Complainant/Consumer's aunt |
| Ms C | Provider/ Midwife |
| Dr D | Obstetric registrar |
| Ms E | Midwife |
| Dr F | Obstetrician |
| Mr G | Chairman, the Maternity Unit Trust |
| A Maternity Unit | Provider/Maternity Unit |
| A District Health Board | Provider/Hospital |

## Complaint

On 22 August 2005 the Commissioner received a complaint from Mrs B about the services provided to her niece, Ms A, by Ms C. The following issues were identified for investigation:

- *The adequacy and appropriateness of the antenatal care Ms C provided to Ms A during her pregnancy in 2005.*

- *The adequacy and appropriateness of the care Ms C provided to Ms A during her labour on 3 July 2005.*

An investigation was commenced on 7 November 2005.

The investigation was extended on 17 May 2006 to include a District Health Board in relation to:

- *The adequacy and appropriateness of the care the District Health Board provided to Ms A during her labour on 3 July 2005.*

The investigation has taken over 12 months. The decision to extend the investigation to include the District Health Board necessitated additional responses and expert advice, delaying the process.

## Information reviewed

- Information provided by:
  - Mrs B
  - Ms A
  - Ms C
  - Dr F
  - Dr D
  - The Health Trust
  - The District Health Board

Independent expert advice was obtained from midwife Chris Stanbridge and obstetrician Dr Jenny Westgate.

The following responses to my provisional opinion were received:

- Mrs B, dated 13 September 2006
- Interim CEO, (the District Health Board), dated 26 September 2006
- New Zealand College of Midwives (on behalf of Ms C) dated 28 September 2006.

## Information gathered during investigation

### Overview

Ms A, aged 19 years, was admitted to a maternity unit at 2am on 3 July 2005. Midwives Ms C and Ms E monitored the progress of her labour throughout the night. At 8.30am Ms C had concerns about the progress of Ms A's labour as she found meconium when she examined Ms A vaginally. Ms C advised Ms A that she needed to transfer to a public hospital. Ms A was assessed at the public hospital by obstetric registrar Dr D and obstetric consultant Dr F. Dr F determined that Ms A needed a Caesarean section and arranged for a scheduled orthopaedic procedure to be postponed so that an operating theatre was available. Ms A was taken to theatre 53 minutes after her admission to the hospital. At 11.51am on 3 July, she was delivered of a stillborn baby boy who did not respond to resuscitation attempts. The placenta was disposed of in error. The post-mortem report did not reveal any cause for the death of the baby.

## Chronology

Ms A, who had miscarried her first baby in July 2004, was due to give birth to her second baby on 23 June 2005. Her Lead Maternity Carer[1] (LMC) was Ms C. Ms A planned to deliver at the maternity unit (the unit).

The unit is a primary facility dealing only with uncomplicated births and is administered by a health trust (the Trust). Pregnant women who are at risk, or thought to be likely to have a complicated pregnancy and/or delivery are transferred to the public hospital, which is about an hour and a half away from the unit.

*Antenatal records*
The antenatal record indicates that Ms C first saw Ms A on 26 November 2004. This is the date on the "first and second trimester care summary" completed by Ms C.

On 10 January 2005, when she was about 16 weeks into her pregnancy, Ms A saw Ms C again and signed the registration form to formalise her choice of Ms C as her LMC. Ms C entered a record of this visit on Ms A's "antenatal record" noting a normal blood pressure, that the pregnancy was progressing well, and that she had organised an ultrasound scan for 28 January.

On 26 January Ms C and Ms A completed a "care plan checklist" (as per the Trust's policy on Labour & Birth Standard Care Plan Procedure — see Appendix 1). This list is intended as a guide for the midwife and woman to develop an individualised care plan. They discussed, and signed off, a number of options including how and when to contact the midwife, her scope of practice, referrals/transfer to specialist care, and the general management of pregnancy and labour. In the section relating to "Healthy Pregnancy — Smoking cessation" they noted that Ms A did not intend to stop smoking. (Ms A did, however, agree to cut back to 10 or fewer cigarettes a day, which she managed to do.) In the "Childbirth preparation — Plans for the placenta" section, Ms A noted that she wanted to take the placenta home. No written record was made of Ms C's plan for the labour and delivery or of Ms A's expectation for her pain relief or delivery, except that the birthroom was to be "not too hot". Ms A apparently felt hot indoors, and claustrophobic.

[1] A Lead Maternity Carer refers to the general practitioner, midwife or obstetric specialist who has been selected by the woman to provider her complete maternity care, including the management of her labour and birth.

*Antenatal care*

The antenatal records indicate that Ms A was seen regularly by either Ms C or midwife Ms E at the unit's antenatal clinic.

Ms A stated that on one occasion when Ms C visited, she had dog hair "all over her". Ms A also said that Ms C did not always have urine testing equipment when she visited. Her aunt, Mrs B, confirmed that Ms C did not always have the necessary equipment, such as a tape-measure and the urine testing sticks, to perform the antenatal checks. Mrs B said that Ms C always appeared to be in a hurry.

The Trust chairman Mr G advised that all unit midwives have a carry-all in their car, with the equipment needed to conduct antenatal and postnatal checks. They also carry an emergency birth kit.

Ms C confirmed that on occasions she did have dog hair on her clothing when visiting her clients. This was because she always made a point of patting her clients' dogs. She said that on one occasion when she visited Ms A, she had just collected her own dog from the veterinary clinic. Ms C did not comment on the alleged lack of equipment.

Ms C stated that Ms A's pregnancy was "essentially uneventful". Her blood pressure was stable and the fetal heart rate was recorded as being within the normal range. (The normal fetal heart beats at around 120 to 140 times per minute.)

On 4 May 2005, when Ms A was in the 33rd week of her pregnancy, she telephoned Ms C to report that her baby had stopped moving. Ms C told Ms A to meet her at the unit so that she could conduct a cardiotocograph[2] (CTG) to check the baby's well-being. Ms C recorded Ms A's baby's heart rate as being between 130 to 160 beats per minute (bpm), which she considered to be normal. There was no sign of uterine contraction. The baby was lying in the OP (occipital/posterior) position.[3] Ms C believed this was the reason that Ms A was not able to feel the baby moving. Ms C told Ms A to start a fetal kick chart, to record the number of times she felt the baby kick during the day.

Ms A stated that the baby's movements slowed down in the last months of her pregnancy. She started a kick chart and recorded on the chart that he kicked well up to the last month.

[2] A cardiotocograph is the electronic monitoring of the fetal heart rate. A CTG can indicate any abnormalities in the fetal heart rhythm, which may indicate fetal distress. The Doppler unit converts fetal heart movements into audible beeping sounds and records this on graph paper.

[3] An occipital/posterior position is when the baby is lying in the pelvis, head down with its back proximal to the mother's spine and occurs in one-tenth of all labours. The presenting head does not fit the cervix as snugly as the anterior position and it is usual for the labour to be somewhat prolonged.

She described the baby's movements as "boots and kicks" and said the movements were most noticeable when she sat down.

Ms E conducted Ms A's antenatal checks throughout June 2005 and recorded that the pregnancy was progressing well.

Ms C said that she monitored the growth and estimated the size of Ms A's baby against the abdominal landmarks, such as the umbilicus, and she did not consider the baby to be excessively large.

On 27 June Ms E noted that Ms A was at term and should have a CTG in one week, if labour had not started, to check the well-being of the baby. Ms C recalled that Ms A wanted an induction at this time and was attempting to start her labour by taking cod liver oil and evening primrose. This was not recorded in the clinical records.

Ms A was concerned that Ms C allowed her to go past her due date. The Antenatal Record notes Ms A's estimated date of delivery as 23 June 2005. Ms C saw Ms A on 27 June and noted that she had experienced a show[4] three days earlier.

Ms C stated:

> "When a woman proceeds past her due date I double check the dates based on the last period date and the earliest scan date. I then arrange for a CTG at mutually convenient times and discuss induction of labour and that induction would have to be at [the public hospital]."

Ms C arranged to meet Ms A at the unit on 2 July in response to her concerns that her labour had started. Ms C recorded the visit, retrospectively, and that she performed a CTG, which showed a fetal heart rate of 140 to 160bpm. She could not detect any uterine activity. Ms C performed a vaginal examination and informed Ms A that although she was experiencing some intermittent contractions, her labour had not started.

Ms A recalls that the day before her labour started, 2 July, she contacted Ms C and told her that she had not felt the baby move that day. Ms C told her that that was because the placenta was in the front and the baby was kicking it. There is no record of this consultation in the clinical notes.

[4] A show is the blood-stained mucoid discharge seen a few hours before, or within a few hours after, the start of labour.

Ms A also claims that she sent a text message to Ms C the night of 2 July, requesting a transfer to the public hospital to deliver her baby. She said that her request was "brushed aside as a panic reaction".

*Labour — 3 July 2005*

Ms A's labour began around 12.30am on 3 July 2005. She rang Ms C and her aunt, Mrs B. Mrs B collected Ms A and her friend and they arrived at the unit at approximately 2am on 3 July.

Ms C examined Ms A and recorded that the cervix was 4cm dilated, the membranes bulging, but the baby's head was not well applied to the cervix. Ms C noted that the fetal heart rate was 160bpm. Ms C noted that Ms A "plans to walk about".

Mrs B was concerned that Ms C did not perform a CTG on Ms A. She thought all labouring mothers had a CTG. Ms C stated:

> "[The Trust] policy states that all women should have a CTG on admission. This is a discussion point as this recommendation has not been found, from the current research, to have any benefit. [Ms A] had had two CTGs just prior to her admission so a repeat CTG was not performed."

The Trust policy relating to monitoring during labour and birth (see Appendix 2) specifies that fetal and maternal baseline recordings are taken on admission, which includes the mother's vital recordings of temperature, pulse and blood pressure. The Trust's policy on fetal monitoring states that the midwife should assess the fetal heart rate by intermittent auscultation[5] "at least every fifteen minutes" in the first stage, and every five minutes, during and after a contraction, in the second stage.

Over the next three hours Ms A went outside the unit for a walk and to smoke cigarettes. She also had a bath. Ms C stated that Ms A's fetal heart rate was assessed regularly. (The records show that that Ms C recorded the fetal heart rate at 3.20am and Ms E assessed Ms A and recorded her observations at 5am and 5.20am.) Ms C acknowledged that the fetal heart rate was "not checked as frequently as it could have been". She said that was in part because Ms A, who was a heavy smoker, spent a lot of time outside the unit. When she was inside she was either in the bath or trying to sleep.

At 4am Ms C handed over the care of Ms A to Ms E so that she could rest. Ms A said that she thought it was unprofessional and unhygienic for Ms C to lie down to sleep on her bed. Ms C said:

[5] Auscultation is the process of listening to the fetal heartbeat through the mother's abdomen.

> "[The Trust] policy is that staff members do not sleep on duty. In this instance I had worked a day duty and a night shift at the maternity home as we had two women in residence. We had also had another woman present earlier in the evening who had been transferred to the base hospital. As I was tired and I had established that [Ms A] was 4cm dilated, I thought that it was an ideal opportunity to have a rest. [Ms E] (midwife) had arrived at the unit to help me. I discussed my tiredness with [Ms A] and she was happy for me to rest. I asked if [Ms A] minded if I rested on her bed as the other beds were occupied and the settee would have been in a noisy area. She was quite happy for me to use her bed. I placed a sheet over the bed and pillow and used a blanket to cover me."

At 5am Ms E recorded that Ms A requested a vaginal examination to assess the progress of her labour. The cervix was 1cm thick and the baby's head was still high in the pelvis. Ms A's contractions were regular and lasting 30 seconds. The fetal heart rate was 136 bpm.

Ms A was concerned that she had not felt the baby move and asked to go back into the bath.

Mrs B went home at about 5am.

At 6.20am Ms E noted that Ms A was experiencing backache and stronger contractions. Ms A got out of the bath to rest on her bed. The fetal heart rate was recorded at 128 bpm.

Ms C resumed responsibility for Ms A at 7am. At 7.40am Ms A requested a further vaginal examination to assess her progress. Ms C examined her and assessed that she was fully dilated, the membranes were bulging, but the head was still high. The fetal heart rate was 135 bpm. Ms A went out for a walk.

At 8am Ms C noted that Ms A was complaining that the unit was "too hot".

Mrs B arrived back at the unit at 8.25am to find Ms A sitting out on the front steps of the unit. She recalls that Ms A was "in a sheer panic and wanting to go to town". Ms A asked Ms C to check her progress. Ms C noted, "unable to hear FH [fetal heart] due to position". Ms C asked Ms A to go inside so she could hear the fetal heart properly.

When Ms A went inside into the birthing room, at 9am, Ms C recorded that she heard the fetal heart at 160 bpm. Ms A went to the toilet and noticed that there was a discoloured discharge on her pad. She showed Mrs B, who alerted Ms C.

At 9.15am Ms C recorded "? Meconium[6] on pad" and advised Ms A that she needed a vaginal examination. Ms C examined Ms A and recorded that the uterine membranes were bulging and the baby's head was high in the pelvis. Ms C noted that there was meconium on her glove, which she believed came from a hindwater[7] leak. Ms C advised Ms A that she needed to transfer to the public hospital. (The Trust policy on transfer is attached as Appendix 3.)

Ms C stated:

> "When [Mrs B] showed me [Ms A's] pad, I was unsure of what it contained. It did look like meconium but an immediate check revealed intact bulging membranes. There was no progress in the descent of the baby and the fetal heart was noted to be 160 bt/min.
>
> I decided to err on the side of caution and transfer to the base hospital. The journey in the ambulance can sometimes encourage the baby to rotate in the pelvis. As I was not sure if meconium was present, and knowing that the labour can progress rapidly after an ambulance trip, I decided to request a rapid transfer as I did not want to birth the baby in the ambulance if there was meconium present."

Ms C telephoned the public hospital and discussed Ms A with the obstetric registrar, Dr D. Dr D agreed to admit Ms A, and advise the ward and obstetric consultant, Dr F.

*The public hospital*

Dr D recalls that Ms C advised her that Ms A had been in labour for 12 hours, there was moderate meconium present from a hindwater leak, the baby's head was high and the heart rate was regular. Dr D advised the nursing staff and they prepared a birthing room.

Ms C assessed Ms A's blood pressure and the fetal heart rate at 10.10am, prior to Ms A boarding the ambulance. Mrs B followed the ambulance to the public hospital in her own car. Ms C accompanied Ms A in the ambulance and recorded that they arrived at the public hospital at 10.45am.

Immediately on Ms A's arrival at the public hospital, a CTG was commenced. The fetal heart rate was noted to range between 114 and 120 bpm. Dr D and Dr F assessed Ms A and decided to proceed to Caesarean section. Dr D recorded:

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[6] Meconium is the first faecal material evacuated from the fetus' or newborn's rectum, and appears green to very dark green. It is normal for meconium to be expelled within the first one to two days of birth. Meconium can be present in the amniotic fluid as a green staining. Although not always a sign of fetal distress, meconium in the amniotic fluid is highly correlated with its occurrence. Meconium in the amniotic fluid reveals that the fetus has had an episode of loss of sphincter control.

[7] When the baby's head is well flexed and fitting snugly into the cervix, fluid in front of the head is known as "forewaters". The remainder is known as the "hindwaters".

> "FH = 122/min but vague — not clearly a fetal ♥ — sounds distant and irregular — 86 – 125/min. S/B [Dr F] — stat CS [Caesarean section]
>
> Risks of operation — informed patient
> Consent form signed
> FBC [full blood count] Group and hold
> OT [operating theatre] informed."

Dr F said that there was no need to call in theatre staff for Ms A's Caesarean section because they were already on site preparing for an orthopaedic procedure. He stated:

> "A slight delay did ensue because the previously arranged acute orthopaedic case which had been previously scheduled for surgery required postponement. I undertook the discussion with the orthopaedic medical staff who were reasonable and co-operative.
>
> A recent review/audit of emergency Caesarean sections for failure to progress and/or non-reassuring fetal status in [the public hospital] was 65 minutes for decision–incision time. More than ten different tasks are required to be carried out before the operation can begin. In this case, the appropriate procedures were carried out expeditiously and within the average time for such cases.
>
> The fetal heart rate was recorded on the CTG at 11.04 at approximately 120/minute."

The CTG was discontinued at 11.07am, shortly after Ms A was given her pre-anaesthetic medication, as she wanted to go outside for a short period.

*Delivery*

Ms A was transferred to theatre at 11.25am. A preoperative check list was completed by an anaesthetic nurse who noted in the section for "Other comment", "Doesn't want placenta. Intends to breast feed."

The anaesthetist commenced the anaesthetic at 11.25am. Dr F stated that Ms A's baby's heart rate was recorded in theatre prior to the beginning of preparation for surgery and after the spinal anaesthetic was inserted at 11.35am. There is no CTG machine in theatre and it is difficult to perform a CTG when the patient is undergoing a spinal anaesthesia induction. Dr F examined Ms A when she was under the anaesthetic. When Dr F ruptured the membranes he discovered thick meconium. The fetal heart rate was taken again and heard.

Dr D stated:

> "[The specialist paediatrician was] called while the Caesarean section was being done. The Caesarean section was done quickly, baby was out and resuscitation done with the assistance of the anaesthetist.

> Baby was flat at birth. There was no delay in resuscitation as the anaesthetist was helping and resuscitation was started as soon as the baby came out. So even when [the specialist paediatrician], the anaesthetists were still resuscitating the baby and had done all they could and [what] would have been done by [the specialist paediatrician]."

Dr F noted that Ms A's baby, delivered at 11.51am, showed no sign of life at delivery, and despite vigorous resuscitation attempts, no response occurred and he was pronounced stillborn.

Mrs B recalled that Ms A was asked whether she wanted to keep the placenta. Ms A asked Mrs B what she should do. Mrs B said that at the time of this discussion they thought that the baby was alive and she replied, "What do you want the placenta for, you have your baby." Mrs B recalls that blood was taken from the placenta cord before it was packed into a plastic bag.

Dr F "strongly urged" Ms A to consent to a post-mortem examination of her baby to determine the cause of his death.

A post-mortem was performed. The baby was reported to weigh 4.0 kilos (8lb 13 oz). He was anatomically normal and there was no obvious cause of death. The pathologist noted that the placenta was not available for the post-mortem.

*Placenta*

Ms A was concerned that after the surgery the placenta went missing. On 11 August 2005, the District Health Board wrote to Mrs B regarding her and Ms A's concerns about the loss of the placenta. The District Health Board stated:

> "The maternity notes and birth plan of [Ms A] are not included in the hospital clinical notes as the midwife is an independent practitioner and retains the notes. The pre-operative check stated clearly that [Ms A] did not wish to keep the placenta.
>
> On discussion with the midwifery staff, it was understood that [Ms A] initially wished to keep the placenta and this was recorded in the birth plan. [Ms A] then apparently changed her mind and this was recorded on the preoperative record by the hospital midwifery staff.
>
> Generally, if the placenta was to be saved as a specimen, the consultant would have requested this. The staff were not informed that this was the case. The retention of placentas is noted on an individual basis according to each woman's expectation.
>
> We believe that the placenta was disposed of in the normal manner, as are all placentas, which are not requested by the consultant or the patient.

> Since this occurrence, we have discussed future protocols with the maternity department and have advised all staff that in future, in such cases as [Ms A's], the placenta will be treated as a laboratory specimen.
>
> We regret the placenta was disposed of, but believe that the theatre staff acted appropriately given the information available to them at the time."

**Follow-up actions**

*The Health Trust*
On 26 July 2005, Mr G, the Trust Chairman, wrote to Ms C requesting a "full written report" in relation to the circumstances of Ms A's labour and delivery.

On 2 August, Mr G wrote to Dr F. Mr G stated:

> "Further to the recent stillbirth of one of our clients at your maternity unit, we have received a letter of query from [Ms A's] support person. This letter is not one of complaint, but does require investigation. To enable us as a Trust to put together the events of this incident, we respectfully request a report regarding this incident from you on behalf of your unit. We have also requested the same from the midwives at our unit."

Ms C and Ms E provided written reports on their involvement in Ms A's care. On 8 August Mr G wrote to Mrs B to inform her that he and the Trust were working to address her concerns.

On 12 August, members of the Trust met with Mrs B to discuss her concerns. As a result of their discussions, Mr G telephoned the Midwifery Council to ask for advice. He was advised to forward the complaint to the Council.

On 22 August, Mr G wrote to the Midwifery Council enclosing Mrs B's letter of complaint, reports from Ms C and Ms E, Ms A's clinical records and other relevant documentation.

On 22 August, Mr G wrote to Ms C stressing the importance of complying with the Trust policies. He reminded her that, should a midwife need to sleep during their normal working shifts, they must use the medical centre flat or the postnatal bedroom.

On 30 August, Mr G wrote to Mrs B to confirm the 12 August meeting and advise her of progress on the Trust's investigation of her complaint. He stated:

> "Firstly, the clinical care that [Ms A] received, which we believe should be independently appraised by the Midwifery Council, and so have forwarded: a copy of your letter; the minutes of the initial Trust Sub-Committee Meeting held reading the concerns you have brought to our attention; the minutes of the meeting we held with you; and the copies of both the midwives' report — together with a covering letter explaining

the situation and the fact that we are seeking an independent appraisal of our midwives' performance.

Secondly, there are issues that require internal processes (compliance with company policy and surrounding the personal hygiene of our staff). We have held a meeting with [Ms C] and specifically covered issues regarding following and implementing Board policies (specifically the fetal monitoring and the Labour and Birth Standard Care Plan Procedure — with regard to maternal monitorings to be taken at admission); hygiene issues — with a directive from the Board that designated hospital beds are not available for staff to sleep on/in; clean, tidy and appropriate attire to be worn by staff at all times; carry-all bags are to be carried in the midwives' cares at all times with regular audits to be carried out on stock items carried.

Your letter has also prompted our own internal review of current policies with view to improving services and auditing processes to ensure that situations that give rise to concerns, such as yours, do not happen again."

*The District Health Board*

On 18 November 2005, the DHB commenced an investigation into the circumstances of the disposal of Ms A's placenta. Dr F advised:

"I do not clearly recall whether I specifically asked for the placenta to be delivered to the laboratory or not. However, in general, it is my regular personal practice and the policy of our unit, to recommend the placenta be examined histologically if the baby is stillborn. The placenta was disposed of. I understand that a thorough investigation regarding the loss of the placenta was undertaken by our nursing staff."

The DHB's Maternal and Child Manager advised:

"[A]t 1530hrs [3.15pm] it was noticed by the core midwife caring for [Ms A] on the afternoon shift that the placenta had not been returned. She phoned theatre at 1630hrs to request the placenta and explained that it was needed for histological purposes. The theatre nurse informed her that it had been discarded. The midwife asked for the theatre nurse to see if she could retrieve it from the rubbish. At 1640hrs the theatre nurse phoned back to say that the placenta had been found and that she would send it down to maternity with an orderly. The midwife … commented to the afternoon staff at 2245 [10.45pm] handover that it had not arrived. This was recorded in the notes by the night staff.

The same midwife was on duty the following afternoon and was disturbed to find that the placenta still had not arrived. She phoned the theatre who informed her that it was their understanding that it had been returned. The theatre nurse on duty on the Monday said that she was unable to talk to the nurse or the orderly on Sunday's shift as they were off duty, but she would endeavour to discuss it with them when they were available.

Further calls were made to the orderlies and the laboratory to see if they had received or located the placenta. Unfortunately the placenta was unable to be located and an apology was made to [Ms A] for any distress. A reportable events form was completed so an investigation could be undertaken and the need to keep placentas when a baby is stillborn or there is a neonatal death has been reiterated with the theatre staff."

*Midwifery Council*
The Midwifery Council of New Zealand asked Ms C to undertake a special peer review at the Council's request. Ms C completed the review on 2 May 2006. The Council is happy with the outcome and will not be taking any further action in relation to this matter.

## Independent advice to Commissioner

*Midwifery advice*
The following expert advice was obtained from Chris Stanbridge, an independent midwife:

"Thank you for asking me to provide advice on the midwifery care given by Ms C and [the unit] to [Ms A] in 2005 (05/12098/WS).

I have read the HDC Guidelines for Independent Advisors and agree to follow them.

I am a registered midwife with extensive experience in rural Lead Maternity Carer (LMC) midwifery care.

As discussed with [the HDC] Investigator … when she sought advice, I believe I have had [Ms C] as a participant in a workshop I led at the beginning of 2005. Apart from that I do not know her or her work, and doubt I would recognise her if I saw her again.

I have discussed aspects of this case with [my midwifery colleague] also an HDC advisor.

Advice on the midwifery care given by [Ms C and the Unit] to [Ms A] in 2005 (05/12098/WS).

Your referral instructions are:

**Purpose**
To provide independent expert advice about whether [Ms C] and/or[the unit] provided an appropriate standard of care to [Ms A].

**Background**

19-year-old [Ms A] was due to give birth to her second baby (first miscarried July 2004) on 23 June 2005. Her Lead Maternity Carer ('LMC') was [Ms C]. [Ms A] recorded in her notes that she wanted to retain the placenta.
[Ms A] had a show over several days in the last week of June. She attended [the unit] on 1 July for a CTG.

[Ms A's] labour began around midnight on 2 July 2005. She rang [Ms C] and her aunt, [Mrs B] who picked her up and they arrived at [the unit] at approximately 2am on 3 July. [Ms C] examined [Ms A] and recorded that contractions appeared to be established, she was 4cm dilated with bulging membranes, and recorded the fetal heart rate ('FH') was 160.

Over the next hour or so [Ms A] went for a walk and had a bath. At 3.20am the FH was 130. At 4am [Ms C] went to have a sleep for two hours and used the bed assigned to [Ms A].

[Ms E], midwife, examined [Ms A] at 5am. The FH was 136, contractions were 3:10:30 seconds, and she was dilated 5–6cm. The baby was at station -1. [Ms A] got back into the bath. [Ms A's] aunt, [Mrs B] arrived about this time.

At 6.20am the FH was 128, and contractions were getting stronger. At 7.40am [Ms A] was fully dilated and the FH was 135.

The FH was unable to be heard at 8.30am due to [Ms A's] position.

At 9.15am the FH was 160. [Ms B] showed [Ms C] the discharge on [Ms A's] pad, and [Ms C] recorded '? Meconium on pad'. [Ms C] decided to transfer [Ms A] to [the public hospital]. An ambulance was ordered, and hospital staff were notified.

At 10.10am the FH was 160 and [Ms A] vomited. Contractions were easing.

[Ms A] arrived at [the public hospital] at 10.45am. A CTG was commenced and the FH was 114–120. The baby's head was still high and [Ms A] was 8–9cm dilated. An emergency Caesarean section was performed. [Ms A's baby] was delivered at 11.51am but despite resuscitation efforts, never responded, and was pronounced stillborn.

A post-mortem was performed but no obvious cause for the baby's death was discovered. The pathologist noted that the placenta was not available for the post-mortem.

It appears that the placenta had been disposed of shortly after delivery contrary to [Ms A's] instructions. (The hospital records note that prior to the operation [Ms A] had

stated that she did not want the placenta retained. [Ms C] said that she had informed a nurse at the hospital that [Ms A] had wanted to keep the placenta.)

**Complaint**

- *The adequacy and appropriateness of the antenatal care [Ms C] provided to [Ms A] during her pregnancy in 2005.*

- *The adequacy and appropriateness of the care [Ms C] provided to [Ms A] during her labour on 3 July 2005.*

**Supporting Information**

1. Supporting Information Letter of complaint dated 19 August 2005 and enclosures received from [Mrs B], marked 'A' (numbered 1–46).
2. Letter dated 12 September 2005 and enclosures received from [Mr G], marked 'B' (numbered 47–111).
3. Letter dated 27 September 2005 and enclosures received from [the DHB], marked 'C' (numbered 112–249).
4. Facsimile dated 7 October 2005 from [the DHB] and enclosure, marked 'C1' (numbered 249A–249B).
5. Record of telephone conversation with [Mrs B] on 26 October 2005, marked 'D' (numbered 250–252).
6. Record of telephone conversation with [Ms A] on 26 October 2005, marked 'E' (numbered 253–254).
7. Notification letter to [Ms C] dated 7 November 2005, marked 'F' (numbered 255–257).
8. Letter dated 22 November 2005 and enclosures received from [Mr G], marked 'G' (numbered 258–264).
9. Letter dated 21 November 2005 and enclosures from [the New Zealand College of Midwives], marked 'H', (numbered 265–283).
10. Letter dated 30 November 2005 and enclosures received from [the DHB], marked 'I' (numbered 284–287).
11. Letter dated 23 January 2006 received from [Ms C's legal advisor], marked 'J' (numbered 288–290).

**Expert Advice Required**

1. In your professional opinion, was the service [Ms C] and/or [the unit] provided to [Ms A] appropriate? Please give reasons for your opinion, with reference to the individual staff members involved.

2. If the care provided was not appropriate, please explain why.

3. Please advise the appropriate standards that apply in this case. Were these standards satisfactorily applied by [Ms C]?

*If not covered above, please answer the following:*

4. Comment on whether [Ms C's] usual practice to assess a baby's size is appropriate.

5. Outline any additional steps which should be taken to assess the baby's size.

6. Advise the action that should be taken if the baby is considered to be large.

7. Explain what steps should be taken when a woman passes her due date, and advise whether [Ms C's] actions in this case were appropriate.

8. Advise whether [Ms C] should have performed a CTG on [Ms A's] arrival at [the unit] in the early hours of 3 July 2005.

9. Explain whether [Ms C] should have checked the fetal heart more regularly than was recorded in the medical records.

10. Advise whether [Ms C] appropriately handed over care to [Ms E] at any stage during [Ms A's] labour.

11. Comment on whether it was appropriate for [Ms C] to go to sleep during [Ms A's] labour, and if it was acceptable to sleep in [Ms A's] bed.

12. Given the hours [Ms C] had worked, please explain whether the break she took was appropriate, and if she should have returned to work.

13. Advise whether there were any indications that [Ms C] should have transferred [Ms A] to hospital sooner.

If, in answering any of the above questions, you believe that [Ms C] and/or [the unit] did not provide an appropriate standard of care, please indicate the severity of the departure from that standard.

To assist you on this last point, I note that some experts approach the question by considering whether the providers' peers would view the conduct with mild, moderate, or severe disapproval.

Are there any aspects of the care provided by [Ms C] and/or [the unit] that you consider warrant additional comment?

I have read all the supporting information … which relates to [Ms A's] hospital contacts as a child and don't appear to be relevant to the current situation.

Assessment of baby's size

Accurate assessment of a baby while growing in the uterus is difficult and normal practice is to examine the woman's abdomen at each antenatal visit in the second and third trimesters (thirds of pregnancy) looking for increase in the height of the fundus (top of the uterus). This provides a guide to ongoing growth and can be augmented by the woman's perception of increasing girth and height of her uterus. The LMC (Lead Maternity Carer) might consider measuring the same with a tape measure if s/he has concerns from the more subjective assessment of palpation. As well as the growth the LMC is taking into account the baby's movements (usually as observed by the mother) and heart rate, and other aspects of the mother's health, for example, general well being, tests, tightness of the uterus and whether there feels to be fluid around baby, baby's position, and in later pregnancy, descent of the baby's head into the pelvis.

Early ultrasound scans give a reasonably accurate assessment of the baby's weight but in later pregnancy these become increasingly inaccurate, especially for babies' weights at either end of the spectrum.

If the baby was thought to be large, there is not necessarily any specific action needing to be taken but certainly a heightened awareness and looking for progress and descent of the head in labour would be expected. It might be appropriate to consult if, by palpation, there were concerns about a large baby, there was no descent of the baby's head around term, and the woman was significantly past her anticipated date of delivery, or the LMC or mother had any concerns. In outlying areas it might be appropriate to discuss with the mother whether she preferred to plan to labour and birth at a base hospital, or continue with the plan for a primary unit birth, with perhaps an increased chance of needing to be transferred in labour.

Generally, even for a baby perceived to be 'large', there is the expectation that cephalopelvic disproportion (CPD, where the head is too large to fit through the pelvis) would not be diagnosed until the mother had had the opportunity to labour. A woman's position and movement, which, along with her hormones, can increase the maternal pelvic diameters; uterine activity (length, strength and frequency of contractions, length of labour); the position of the baby (which can change in labour); and the moulding (normal overlapping process of the baby's skull bones to allow it through the pelvis) all impact on whether a baby can be birthed normally, regardless of its size. Neither the mother's nor baby's size necessarily indicates a problem. Small women can birth large babies quite safely.

In [Ms A's] situation there is no indication [Ms C] perceived the baby to be 'large'. She has not recorded her assessment of fundal height on the antenatal record sheet, but has recorded the descent of the baby's head into the pelvis.

In her response [Ms C] states she 'did not consider that [Ms A's] baby was excessively large'. Assuming this was her assessment antenatally, continuing with the plan to birth at [the unit] was appropriate.

Passing due date:
[The Trust's] policy 'Standard Care Plan' outlines a full antenatal check and CTG profile at 41 weeks, with the plan to do a full biophysical check and consultation with an obstetrician at 40 weeks and 10 days ($41^1/_2$ weeks) with the possibility of an induction of labour being planned.

The policy also acknowledges that each plan of care needs to be individualised to the particular woman.

[Ms A's] notes record an LMP (first day of the last menstrual period, used to estimate the probable date of delivery by adding nine months and seven; first babies commonly going 41 or so weeks) of 17. 9. 04 with a regular menstrual cycle. It does not record whether she was sure or unsure of this date, but assuming she was, this gives the estimated date of delivery as 24 of June 2005 — her scan correlates with this date. It is normal for babies to birth within the fortnight either side of the estimated date of delivery.

[Ms A] was seen on the 27. 6. 05 for an antenatal check which appears to have been normal, and plans made for a CTG on the 1.7.05.

There is no explanation why this did not occur on that date but [Ms C] records retrospectively that she saw [Ms A] on the 2nd of July following a show. At this stage she appears to have assessed her — 'no uterine activity' noted (presumably either manually or on the CTG {cardiotocograph which records the baby's heart rate and uterine activity, and the correlation of the two, over the period of time it is attached}), and 'CTG satisfactory' implying baby's heart rate and reactivity were acceptable.

Internal examination showed the cervix was posterior and long (which would generally suggest labour was not imminent as the cervix commonly becomes softer, 'takes up' or shortens, and moves more anteriorly in the latter days of pregnancy. However this work can be done by early labour).

[Ms A] appears to have established in labour late on the second of July (8 days after EDD). This would be seen as in the normal time framework to birth.

Ms C's care was appropriate.

CTG on admission:
[The Trust's] policy on Fetal Monitoring offers three types of fetal monitoring of which [Ms C] employed the intermittent fetal auscultation option.

There is no research to support the routine use of CTG. [Ms A] did not appear to have any risk factors that would indicate the need to do a CTG.

She had had a CTG the day before presenting in labour.

It was reasonable for [Ms C] not to have performed a CTG on [Ms A's] admission to the unit in the early hours of 3.7.05.

Hand over of care; sleeping; bed use; hours of work:
It is quite appropriate for LMCs to share care of women when they are on time off, tired, or unavailable for any reason. Normally the situation is reviewed by both practitioners with the woman, and the woman is aware of who is providing on-going care. This should be documented in the woman's notes.

Unfortunately it is not clearly documented that this transfer of responsibility of care has taken place, nor exactly when. This leaves doubt about who was responsible for [Ms A's] care from 3.20am to 5am, and between 6.20am and 7am. The assumption is that [Ms E] was taking responsibility between 5am and 6.20am, the two times she made an entry in the notes.

[Ms C] explains in January 2006 that she had worked at the maternity home the previous day and night (may have provided 24 hour cover or worked eight or twelve hour shifts). I assume this was the day and night of the 1st of July. It is unclear whether she slept during the day (ie the 2nd of July) preceding [Ms A] establishing in labour.

It is ultimately the responsibility of the midwife to 'demonstrate awareness of her own health status and seek support to ensure optimum care for the woman is maintained' (one of the criteria of Standard Six of the New Zealand College of Midwives Midwifery Standards of Practice). This includes her assessment of her ability to remain fully alert, clearheaded and retain sound judgment when she has been working, or has not slept, for an extended period of time. There are no times set for this, as it varies from practitioner to practitioner.

Not knowing what sleep or break [Ms C] had had in the previous 24 hours makes it difficult to assess whether she had taken sufficient time off. Nor what alternatives were available for her to provide care for [Ms A].

It was appropriate for a back up midwife ([Ms E]) to provide care for [Ms A] for a period of time while [Ms C] took a break / slept.

In rural hospitals it is not uncommon for midwives to have the opportunity to sleep on site (given their home might be many miles away) while a core or back up midwife provides care for the woman. Being on site enables the LMC to be called if a second midwife is needed for any form of care, or if the birth is imminent.

It sounds as if [Ms A] had a bed in a birthing area ('resting on bed'), and the 'bed' referred to that was used by [Ms C], was one of the postnatal beds that had been assigned for [Ms A] to use after birth.

Where staff are needing to sleep on site (could be locum medical service, or midwife in this sort of situation) there is often a specific bed available. However, it is known that patient designated beds may be used, using the system [Ms C] refers to where the practitioner sleeps on the bed which is protected by a sheet.

Placenta:
[Ms A] has circled the 'Leave' option rather than the 'Take' option, suggesting that at that stage (date not included) she was not intending to keep the placenta. However it is noted 'Plans for placenta. Will take home'.

It is generally considered appropriate for a pathologist to examine the placenta of any baby that is stillborn (or dies soon after, and the placenta is still available), even if the baby is not for post mortem examination.

It is reasonable to expect [Ms C] to have passed on to [the public hospital's] staff what [Ms A's] birth plan included when she was handing over [Ms A's] care, but also reasonable that this was not of prime importance when there were concerns for [Ms A's baby] and [Ms A's baby] born with urgency was the priority. [Ms C] states in January 2006 that she passed on to a nurse in operating theatre that the placenta should be kept.

It seems [Ms C] was not directly involved in the loss of the placenta at [the public hospital].

Frequency of fetal heart recordings and earlier transfer of [Ms A] to [the public hospital]:

[The Trust's] policy on Fetal Monitoring recommends listening at least each fifteen minutes in the first stage of labour.

This would seem to be very frequent, especially in the early stages of an apparently normal labour. More commonly this would be half hourly, or even less if in early labour with mild, short and spaced contractions. Many women labour unattended and unmonitored in the early hours of labour.

Once contractions are regular, frequent (for instance 2 to 3 in ten minutes), and increasing strength then it is reasonable to expect half hourly monitoring of the woman and baby's well being.

It seems from [Ms C's and Ms E's] notes written at the time of [Ms A's] labour that they didn't perceive the need to transfer [Ms A] to [the public hospital] until there was some possibility of meconium liquor, and the acknowledgement of 'No progress High Head'.

It is difficult to assess the right time to consider transfer from the notes alone.

Factors to be considered for frequency of fetal (baby) monitoring and transfer of care are:

- The mother's ability to cope with her labour
- The length of labour
- The progress in labour assessed by the
  - frequency, length, strength and character of contractions;
  - position of the baby and descent of the presenting part (in this case the baby's head) assessed by abdominal palpation;
  - position of the baby and descent of the presenting part assessed by vaginal examination;
  - character, effacement, dilatation and application of the cervix assessed by vaginal examination
  - whether membranes intact or broken; liquor volume and colour
- The baby's ability to cope with the labour
- The geographical and time distance from assistance.

It would appear from the notes that [Ms A] was coping well with her labour, and using a variety of ways to manage — using hot water bottle, relaxing, walking about, bath, resting on bed, dozing, kneeling on steps. She was reported to be hot, tired, experiencing backache — all common in labour.

There are no baseline recordings of maternal temperature, pulse nor blood pressure until 10.10am — around the time of transfer. There is no recorded assessment of [Ms A's] ability to drink and retain fluids (except late in labour, when there is record of 'vomited' at 10.10am, possibly at […]), nor urinalysis — all of which may give some indications of [Ms A's] level of hydration.

The overall length of labour does not appear to be unusual — 'establishing' and four centimetres dilated when seen at 2am; fully dilated at 7.40am.

There is little documentation of the assessment of contractions —

- 2am 'seems to be establishing'; 2 in 10 minutes moderate on partogram
- 5am 'contractions 3:10:30 seconds'; 3 in 10 (partogram); '3:10:40-50 seconds'
- 6.20am 'has backache now' 'Contractions getting stronger'
- 10.10am 'Contractions easing off'

There was abdominal assessment recorded at [Ms A's] last antenatal visit with the head ('C' for cephalic) presenting and the descent at '$^{2}/_{5}$'. There doesn't appear to have been any abdominal assessment during labour.

Vaginal assessment was undertaken a number of times through the labour.

- 2am pp (presenting part) not identified,
  -2 (2cms above the maternal spines — a bony landmark in the woman's pelvis);
  cervix thick (expecting a progression from long / thick and hard / firm to thin and soft / stretchy); and not well
  applied (the presenting part is higher than the cervix)

- 5am 'pp — head in AP position' (the line where the two main plates of bone on the baby's scalp meet is running anterior to posterior of the mother's pelvis; the baby may be lying directly 'OA' or 'OP' — the former being the optimal position, the latter where it needs to rotate to come through the pelvis in a more favourable position, or stay OP, usually a more difficult position to birth);
  -1 (some descent);
  the cervix 1cm thick and soft;
  'not applied to pp'

- 7.40am position not assessed as the presenting part was not reached (ie it had risen out of the pelvis);
  the cervix was fully dilated;
  the membranes were bulging

- 9.15am the presenting part was OP (the back of the baby's head lying along the mother's spine)
  at -3 (lower than the previous examination, but still high)

Meconium stained liquor (fluid around baby) can be indicative of a baby that has or is experiencing some element of stress. It can also occur in a mature (later than 41 weeks) baby without necessarily indicating stress. Thin watery meconium liquor is seen as less of an indication of stress than thick meconium.

There was no suggestion of the waters having broken until 9am when there was '? Meconium on pad' (page 017) and some 'yellow staining on pad'. The forewaters (membranes) were noted to still be intact, so the possibility of it being meconium was low, although it is possible to have been from a minor leak somewhere behind baby. [Ms C] reports retrospectively that [Ms A] had used (presumably vaginal) 'evening primrose tablets to encourage labour' and it is reasonable to assume they may have caused some small vaginal discharge.

There is a note 'ht' at 5am on the liquor part of the partogram. I'm not sure what this is indicating.

[Ms C] explains in January 2006 that [Ms A] was 'quite a heavy smoker' and needed to walk to the end of a long drive to be in an area where she was permitted to smoke. She was also wanting to go outside to walk, and to cool down.

Smoking, especially during labour, influences the availability of oxygen to the baby in utero. If [Ms A] chose to continue smoking through labour this would be something that might warrant more frequent baby heart rate monitoring.

Reduced baby movements can indicate a baby that is stressed.

There is documentation of [Ms A] saying at 34 weeks 'she has not felt baby move for a while'. A CTG was reassuringly reactive.

In labour [Ms E] records [Ms A] 'saying she has felt no kicks'. Baby's heart was heard at an average rate.

[Ms C] states in retrospect she was reassured by the heart rate recordings that were done that were 'reactive and a good rate'. The CTG tracing from 2. 7. 05 isn't available to view but is reported to be satisfactory. There are no concerns expressed in the notes about the heart rate.

The recordings of the baby's heart rate noted in the notes were at 2am, 3.20am, 5am, 6.20am, 7.40am, 9.15am and 10.10am. The rates varied from 128, 130, 135 to 160. These rates are within those expected in labour. Those at the outer edges of normal (around 110 or 160) would suggest closer monitoring might be worthwhile if they're not in relation to contractions and / or fetal activity.

It appears [the public hospital] is about an hour and a quarter away from [the maternity unit], from the time of calling the ambulance to arrival at [the public hospital].

While care should always be guided by the needs and desires of each woman, more frequent and regular assessment of the actual character of the labour including assessment of how [Ms A] was coping, and the frequency and character of contractions

would have been appropriate. Abdominal palpation is a relevant tool to ascertain the lie, position and descent of the baby and is an essential aspect of assessment, especially when the head is high.

Not providing these would be a mild to moderate departure from a reasonable standard of care.

If [Ms C and Ms E] had in fact been observing and assessing [Ms A] continuously or frequently through her labour (but failed to document it) they may well have been appropriately happy with her progress.

Maternal recordings (temperature, pulse, blood pressure, urinalysis) are not essential but they do add to the picture of what is happening for the mother, particularly as [Ms A] was feeling hot, was in and out of the (presumably warm / hot) bath, and outside walking (in July in the night air).

This would be seen as a minor departure from a reasonable standard of care.

There don't appear to be any reasons to have less frequent than usually accepted as normal (ie approximately half hourly) monitoring of the baby's heart rate once [Ms A] was in established labour. It may have been necessary to have [Ms A] be willing to return to the room from outdoors, or briefly get out of the water to be able to listen to the heart rate. Of interest also is when in relation to the contractions the recordings were made, and for how long. Listening through the latter part of a contraction, and listening to the change in rate as it wears off, gives an indication of the baby's ability to cope with the contractions when there is expected to be a normal drop in the amount of blood flow and oxygen getting to baby. It is helpful to have the timing of listening documented a least once to suggest this is the normal pattern.

The recorded monitoring does not appear adequate. Given the need to temper the frequency of monitoring to the woman's willingness to be accessible to take the recording, I believe the departure from the standard would be considered mild to moderate.

The standard of documentation throughout seems to be minimal.

Antenatally there appear to have been visits by [Ms C] for which there are no records in the notes I received (eg 'I often called in on [Ms A] as she wasn't always at home and I would rather see someone and give them the opportunity to tell me if they have any problems even if a proper check is not completed'). [Ms A] reportedly had used oil of evening primrose but there is no documentation of this self medicated remedy. There does not seem to be any record of where visits were, any missed visits, little detail of issues discussed or decisions made.

In labour there are periods of time when there is little commentary on, or record of, what is happening for [Ms A] and her baby.

There appears to be a less than reasonable standard of documentation.

It is not understood why [Ms A's baby] died. [Ms A] was in [the public hospital] for just over an hour before he was born by Caesarian Section … and he may have succumbed regardless of possible earlier transfer.

However management of a high head at full dilatation should be a signal for discussion about transfer to a secondary unit, and close monitoring of mother and baby. It may have been more appropriate for [Ms A] to have mobilised close to the birthing area, if necessary using cooling cares of fan, cool sponging etc, and to reassess [Ms A] sooner than waiting an hour and a half with her cervix fully dilated and a high head.

This is a mild to moderate departure from a reasonable standard of care.

While aspects of [Ms C's] care have been appropriate, in my opinion there are a number of areas where she has not provided a reasonable standard of care.

On the whole [the unit] appears to have comprehensive policies and protocols around the issues raised in this situation. These are a good base to work from with the midwife being able to use clinical judgement and the woman's wishes being respected to deviate from them if appropriate."

*Obstetric advice*

Independent expert advice was obtained from obstetrician Dr Jenny Westgate. Dr Westgate stated:

"Thank you for asking me to provide advice on whether [the District Health Board] provided an appropriate standard of care to [Ms A]. I do not believe that I have any professional or personal conflicts in this case.

I have based my report on the information contained in the following documents which you supplied to me:

- Letter of complaint to the Commissioner from [Mrs B] with accompanying clinical records, dated 19 August 2005, marked with an 'A'. (Pages 1 to 53)
- Letter of response to the Commissioner from [the District Health Board], dated 30 November 2005, marked with a 'B'. (Pages 54 to 61)
- Notes taken during a telephone conversation with [Mrs B] on 12 May 2006, marked with a 'C'. (Pages 62 and 63)
- Letter of response to the Commissioner from [the District Health Board], dated 15 June 2006, marked with a 'D'. (Pages 64 to 71.)

My findings are detailed in the points below.

1. Staff at [the public hospital] did act appropriately when [Ms A] was admitted at 10.45am on 3 July 2005. [Ms A] was seen within minutes of arrival at [the public hospital] by [Dr D], the SHO, a CTG was commenced it was only a matter of minutes later that she was seen by [Dr F], the on call obstetrician who was already in the Delivery Suite (Timeline, page 0070). It was clear that she had failed to progress in labour over the preceding five hours, the fetal head was high, the cervix only 8 to 9 cm dilated and meconium liquor was present. In addition, the CTG, although of poor quality showed probable decelerations. This combination of factors was recognised immediately as being unsatisfactory and an emergency caesarean section was arranged.

2. [Ms A] was adequately monitored at [the public hospital], given the scenario that was presented to medical staff. [Dr D] reports that she was told that the fetal heart rate had been 'regular' prior to transfer (Page 069). A CTG was applied within minutes of [Ms A] arriving in the Delivery Suite. It was not good quality but showed a heart rate of around 110, with variability present but with episodes of loss of contact which appear to have been regarded as possible decelerations (page 71). In the context of the whole clinical scenario, I believe it was entirely correct to believe that this CTG was non-reassuring and for this information to contribute to the already clear indications that a caesarean section was required. The CTG needed to be removed in order to transfer [Ms A] to the operating theatre and thereafter access to auscultate the fetal heart was limited by anaesthetic procedures. The appearance of the CTG recording was not one which required a 'crash' or vitally urgent caesarean section. Ideally a CTG machine should be available in the theatre to continue recording fetal heart rate where possible but I would view the absence of CTG recording in theatre in this case as understandable and with mild disapproval only.

   In retrospect, I believe it is quite likely that the baby was already dead or virtually so by the time [Ms A] arrived at [the public hospital]. The heart rate recorded by the CTG machine was probably from [Ms A] herself. I say this because at delivery the baby was so dead that he could not be resuscitated. This indicates to me that he had been dead for at least one hour. If any record of his heart beat could have been made from 1047 onwards it would most likely have shown a terminal bradycardia (very low heart rate of less than 80 beats per minute) with no heart rate variability (straight line). The heart rate pattern record on the CTG has a stable baseline of 110 beats per minute and variability is present which is why I think it is most likely from [Ms A] herself. The ultrasound transducer simply records the rate of a pulsing object within its beam of sound. If there is no detectable fetal pulsation, it will record maternal pulsations in the large vessels in the mother's pelvis. This apparent

recording of a fetal heart rate from a maternal signal is a well described phenomenon. Given the clinical scenario as it unfolded, with no previous CTG to view and no history given of difficulty auscultating the fetal heart, I do not believe that the clinicians at the time could or should have considered the possibility that the baby might already be dead. This is very much a diagnosis made possible in retrospect.

3. The time taken (53 minutes) between her admission and delivery of the baby, was reasonable given the constraints of the service at [the public hospital]. These have been clearly described by [the DHB] and [Dr F]. I accept these comments reflect the reality of service provision in these circumstances. I also do not believe there was evidence that the operation needed to be a 'crash' caesarean.

4. The normal procedure regarding the placenta when a baby is delivered stillborn should be that the placenta, with the parent's knowledge and consent, is sent for histological examination.

5. [The public hospital's] management of [Ms A's] placenta was clearly inadequate in that the placenta was not saved and sent for histological examination. I note that a midwife did ring theatre after [Ms A] returned to the ward to request the placenta be sent to the obstetric ward as it was required for histology but unfortunately, despite its retrieval from the rubbish, and the intention to have an orderly return it, this did not occur. I am not sure if it can be determined whether an orderly was never called, not instructed properly or did not carry out the instructions. Given the fact that the midwife recognised the need to have the placenta, it seems that this is standard practice at [the public hospital] and that this case was an aberration, and one which is understandable given the tragic circumstances. It is unlikely that many babies would have been born dead in the operating theatre so theatre staff may not have been aware of this requirement. I believe that they are aware of this now. I view this with mild disapproval.

There are no other aspects of the care provided by [the District Health Board] that I wish to comment on. Please contact me if you require clarification of any of these points."

## Responses to provisional opinion

*Mrs B*

In response to the provisional opinion, Mrs B noted that the opinion states that she lodged complaints to the providers on behalf of Ms A. Mrs B stated that she did not complain, she "asked for clarification of procedures, … questioned actions and policies carried out and asked what were the correct protocols".

Mrs B stated that there was no written record of a plan for the labour and delivery, despite Ms A making repeated requests for this. Mrs B pointed out that the Standards for Midwifery Practice, Standard One specifies that the midwife works in partnership with the woman and recognises individual and shared responsibilities. Mrs B stated:

> "This client at no time was offered the opportunity to officially transfer to [the public hospital] for the birth and even at 'low risk' this could have been an option. I cannot understand why the client's wishes were not considered or listened to. The standards of practice are clear and the responsibilities to the client were not adhered to.
>
> I question to why it took the support person to request check up and draw attention to the experienced midwife, the major changes to the client's bodily secretions. This client was left in the care of two support persons, neither of them having any knowledge of labour and its stages, when she was assured of professional assistance throughout her labour however long it took. The binding contract to the client was never fulfilled by the professional."

Mrs B also observed that this report does not detail the hours Ms C worked prior to taking responsibility for Ms A's labour. Mrs B stated, "Even if tiredness was the excuse, Ms C violated the Trust policy."

Mrs B also commented that Ms C's surveillance of the labour and lack of documentation was "unbelievable".

## 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.*

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## Relevant standards

The Notice pursuant to section 88 of the New Zealand Public Health and Disability Act 2000, which sets out the terms and conditions for the provision of Maternity Services, states:

"PART C:

4.1 … The Lead Maternity Carer will …

(b) conduct a comprehensive pregnancy assessment of the woman including a physical examination, an assessment of her general health, family and obstetric history; …"

Standards of Practice, New Zealand College of Midwives Handbook for Practice, 2002:

"Standard Four:

The midwife maintains purposeful, on-going, updated records and makes them available to the woman and other relevant persons."

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## Opinion: Breach — Ms C

Right 4(2) of the Code of Health and Disability Services Consumers' Rights provides that consumers have the right to have services provided in accordance with relevant standards. In the context of services provided by a midwife, those standards include the Notice pursuant to section 88 of the New Zealand Public Health and Disability Act 2000 (the section 88 Notice) and Midwifery Standards of Practice.

Mrs B's complaint centres on the care Ms C provided to Ms A during her labour at the maternity unit on 3 July 2005 — in particular, Ms C's failure to regularly monitor Ms A's progress and to refer her to hospital earlier. However, Mrs B and Ms A also have concerns about the care provided by Ms C during the antenatal period.

*Monitoring and records*
The Midwifery Standards of Practice state that the clinical records should be "purposeful, on-going [and] updated".

Mrs B complained that there was no documentation of Ms A's progress and condition during her labour, from 3.20am to 5am. In particular, the fetal heart rate was not recorded during this time.

Ms C acknowledged that Ms A's baby's heart rate was not checked as frequently as it could have been during the night of 3 July 2005. She pointed out that Ms A was a heavy smoker, and frequently went outside the building to smoke cigarettes. When inside the building Ms A was either in the bath or trying to sleep.

Ms Stanbridge advised that the Trust's policy requiring the midwife to monitor the fetal heart rate every 15 minutes in the first stage of labour "would seem to be very frequent, especially in the early stages of an apparently normal labour". More commonly, women would be monitored half hourly or less in the first stage, and many women labour unattended and unmonitored in the early stages of labour. Once contractions are regular and frequent (occurring two to three times in ten minutes) and increasing in strength then it is reasonable to expect the midwife to monitor the woman and baby every half hour. The factors that determine the frequency of monitoring are, the mother and baby's ability to cope with the labour, the length and progress of the labour, and the distance the mother is from assistance. The maternity unit was an hour and a quarter away from the public hospital.

Ms Stanbridge stated that smoking during labour adversely affects the availability of oxygen to the baby. She advised that Ms C should have considered that this factor might warrant more frequent monitoring of the baby.

Ms A was hot and tired and experiencing backache — all common symptoms of labour — but was coping well. However, Ms C did not record Ms A's baseline recordings, urinalysis or her ability to take and retain fluid. Ms Stanbridge stated:

> "Maternal recordings (temperature, pulse, blood pressure, urinalysis) are not essential, but they do add to the picture of what is happening for the mother."

Ms Stanbridge advised that while the midwife must always be guided by the needs and wishes of her client, more frequent and regular assessments of the actual character of Ms A's labour, how she was coping, the frequency and character of her contractions, and the lie, position and descent of the baby would have been appropriate. She advised that the failure to note such recordings is a mild departure from a reasonable standard of care.

Ms Stanbridge also observed that Ms C's standard of documentation throughout seems to be minimal and of a less than reasonable standard and would be viewed with mild disapproval by her peers. In light of this advice, I consider that Ms C breached Right 4(2) of the Code.

## Opinion: No Breach — Ms C

*Antenatal checks*

Mrs B is concerned that it was Ms A's first pregnancy (apart from a miscarriage), she was very young, had limited family support, and was living in an isolated region.

Mrs B expressed concern that Ms A was not weighed throughout her pregnancy, and other measurements/investigations should also have been undertaken to assess the size of the baby. She also questioned whether Ms A should have been referred to a specialist as she thought the baby appeared to be large. Ms C said that she monitored the growth and estimated the size of Ms A's baby against the abdominal landmarks and did not consider Ms A's baby to be excessively large. The baby's weight at birth was 4000gm (8lb 13oz), which is not an overly large baby.

Ms Stanbridge advised me that even if the baby was thought to be large, action would only need to be taken if there were other concerns, such as no descent of the head around term, and the woman was significantly past her due date. It may also be appropriate to discuss whether the woman was happy to birth at a base hospital, or at the birth unit with an increased likelihood of transfer to hospital in labour.

Ms Stanbridge stated that a number of factors mean that the size of the mother and baby do not necessarily indicate there will be a problem during labour. These factors include the

maternal pelvic diameters increasing during labour, the strength and frequency of contractions, the length of the labour, the position of the baby, and the normal overlapping of the bones in the baby's skull to allow it to pass through the pelvis. It is not possible to diagnose whether the baby's head is too big to fit through the pelvis until a trial of labour has been attempted. Ms Stanbridge commented, "Small women can birth large babies quite safely."

*Past due date*

Ms A was concerned that Ms C allowed her to go past her due date. Ms A's estimated date of delivery was noted on the Antenatal Record as being 23 June 2005. Ms C saw Ms A on 27 June and noted that she had experienced a show three days earlier. Ms C planned to see Ms A again in a week for a CTG. Ms C stated that when one of her clients proceeds past her due date she double checks the dates, arranges for a CTG and discusses with the woman the possibility of an induction, which would be conducted at the public hospital.

Ms Stanbridge noted that Ms A's labour established on 2 July 2005, which was eight days after the estimated delivery date. This would be seen as within the normal time framework.

*CTG on admission*

Mrs B was concerned that Ms C did not perform a CTG on Ms A when she was admitted to the Unit. The Trust has a policy to guide staff on appropriate fetal heart monitoring. The policy recommends that a baseline fetal heart rate be taken as well as the mother's vital signs of blood pressure, pulse and temperature. High risk women should be offered electronic fetal heart monitoring, and any refusal to be monitored is to be documented. The policy also states that fetal well-being may be monitored by intermittent auscultation, ECG or by a combination of both.

Ms C said that the Trust policy regarding CTG on admission was a recommendation only. Ms A had had two CTGs just prior to her admission. Ms C believed that a further CTG was not necessary.

Ms Stanbridge advised that there is no research to support the routine use of CTG. Ms A had had a CTG the day before presenting in labour and did not appear to have any risk factors that would indicate the need for a further CTG. It was reasonable for Ms C not to have performed a CTG on Ms A on her admission in the early hours of 3 July 2005.

*Sleeping on duty*

Ms A complained that Ms C went to sleep on her hospital bed, which was not hygienic, and that she was left in the care of a junior midwife.

The Trust provides two rooms for the use of midwives, should they need to sleep during their shifts. The Trust does not condone staff sleeping on the hospital beds.

Ms C had been on duty for almost 24 hours when she handed over care to Ms E. In my view it is far preferable for a midwife to sleep than to try to stay awake and, because of extreme fatigue, place her clients at risk. Ms Stanbridge advised that it is not uncommon in rural hospitals for midwives to have the opportunity to sleep on site, as they may live some distance from the unit. Being on site enables the midwife to be called if the back-up midwife requires assistance. Ms Stanbridge commented that it is acceptable for the midwife to sleep on the patient's bed (with the patient's permission) when it is protected by a sheet. It was appropriate in these circumstances for Ms C to hand over care to Ms E.

*Transfer of care*

Ms B complained that Ms A should have been transferred to hospital earlier than 10am on 3 July 2005.

Ms E assessed Ms A's progress at 5am when she performed a vaginal examination and listened to the fetal heart rate. She checked her again at 6.20am when Ms A got out of the bath to rest on her bed. At 7am, Ms C resumed responsibility for monitoring Ms A. She performed a further vaginal examination and found that although the cervix was fully dilated and the uterine membranes bulging, the baby's head was still high in the pelvis. The fetal heart rate was satisfactory. An hour later, Ms C asked Ms A to come inside so that she could assess the fetal heart rate. The fetal heart rate at that time was rapid at 160 bpm and Ms C noted the presence of meconium in the draining amniotic liquor. Ms C advised Ms A that she needed to transfer to the public hospital. The necessary arrangements were made and Ms C checked Ms A and the well-being of the baby again at 10.10am before they boarded the ambulance to transfer to the public hospital.

Ms Stanbridge advised that the factors to be taken into account when considering transfer of care to secondary services are the length and progress of the labour, the character of the cervix, uterine membranes and liquor, position, descent and well-being of the baby, and the geographical and time distance from assistance. It is difficult to assess, from the clinical records alone, when was the right time to transfer Ms A. It appears from the notes that Ms A was coping well with her labour, and the overall length of the labour was not unusual. Meconium-stained liquor can be indicative of a baby who has been or is experiencing some stress. It can also occur in a mature (more than 41 weeks' gestation) baby without necessarily indicating stress. Thin watery meconium is less indicative of stress than thick meconium.

Ms C had no concerns about the fetal heart rate at the time of transfer, and the apparent recording of the fetal heart rate at the public hospital, although assessed as non-reassuring, indicated to staff that there was a live baby. It appears that the public hospital staff were optimistic about the outcome for Ms A's baby when she was transferred to theatre for the

Caesarean section. I am satisfied that Ms C acted appropriately as soon as she identified that Ms A's labour was not progressing as expected.

In my opinion, in relation to the issues described above, Ms C complied with professional standards and did not breach Right 4(2) of the Code.

## Opinion: No further action

Ms A raised concerns about Ms C's professionalism in relation to her standard of hygiene (she arrived at an appointment with dog hair on her clothing) and failure on occasions to have equipment such as urine sticks in the vehicle when she visited.

Ms C admitted that she had arrived at Ms A's home on one occasion after having uplifted her dog from the veterinary clinic.

Ms A and Mrs B stated that on more than one occasion when Ms C arrived at Ms A's home she appeared to be in a hurry and did not have all the necessary equipment. Mr G advised that all unit midwives have a carry-all in their car, with the required equipment to conduct antenatal and postnatal checks.

These issues have been addressed by the Trust chairman, who has reminded Ms C that Trust vehicles are not to be used to transport animals. Ms C has also been reminded that carry-all equipment bags are to be kept in the midwives' cars at all times, and that regular audits will be carried out to ensure that the appropriate stock items are available.

In these circumstances, I do not consider that any further action on my part is necessary.

## Opinion: No Breach — The District Health Board

*Standard of care*
Right 4(1) of the Code of Health and Disability Services Consumers' Rights provides that consumers have the right to have services provided with reasonable care and skill.

Ms C advised the public hospital obstetric registrar Dr D that she was transferring a young woman who had been in labour for 12 hours with her first delivery. The baby's head was high in the pelvis and although there was moderate meconium from a hindwater leak, the fetal heart rate was regular.

Ms A was seen by Dr D within minutes of her arrival at the public hospital. Dr D commenced a CTG and called obstetric consultant Dr F to review Ms A. Dr F determined that Ms A had failed to progress in labour. The baby's head was high, the cervix only 8 to 9cm dilated, meconium was present and there was concern about the well-being of the baby. An emergency Caesarean section was arranged. There was a slight delay in transferring Ms A to the theatre suite, because Dr F had to negotiate with the orthopaedic team to postpone previously arranged surgery to release a theatre. The CTG was removed in order to transfer Ms A to the operating theatre and further ausculatation of the fetal heart from that time was limited by the anaesthetic procedure. Dr F performed an examination under anaesthetic, including a vaginal examination to determine the position of the baby, following the insertion of the spinal anaesthetic and shortly before making his surgical incision.

My obstetric advisor, Dr Jenny Westgate, stated that the appearance of the CTG recording was not one that required a "crash" (vitally urgent) Caesarean section. It is likely, since Ms A's baby was not able to be resuscitated at delivery, that the CTG was unable to pick up a detectable fetal pulsation, and recorded the rate of the mother's pulse. This is a well described phenomenon.

Dr Westgate advised that the time taken between Ms A's admission and the delivery of her baby (53 minutes) was reasonable in the circumstances. In these circumstances, the public hospital staff provided Ms A with services with reasonable care and skill and the District Health Board did not breach Right 4(1) of the Code.

## Adverse comment

*Management of placenta*
Mrs B wanted to know why the baby's placenta was lost and was not delivered to the pathologist. She thought it would be important in determining why the baby had died.

Ms A was asked by the operating theatre staff during the preoperative checks if she wished to keep the placenta. The records show that Ms A declined to retain the placenta. The DHB Customer Services Manager advised that generally if the placenta is to be saved as a specimen, the consultant would request this. It appears that the theatre staff were not asked to retain the placenta and it was disposed of in the normal manner.

Once the error was discovered by the postnatal ward staff, attempts were made to locate it and return it to Ms A, but it appears that there were communication issues and the placenta

was destroyed. Ms A was informed and an apology was made to her for any distress this error might have caused.

Dr Westgate advised that the public hospital's management of Ms A's placenta was clearly inadequate in that the placenta was not saved and sent for histological examination. This was contrary to standard practice at the hospital but was understandable given the tragic circumstances. Dr Westgate commented that it is unlikely that many babies would have been born dead in the operating theatre, so theatre staff may not have been aware of this requirement. This failure would be viewed with mild disapproval.

These events have been discussed with the public hospital theatre and maternity staff and protocols have been put in place to ensure that similar events do not recur.

## Opinion: No Breach — The Health Trust

*Vicarious liability*

Under section 72(2) of the Health and Disability Commissioner Act 1994, employers are vicariously liable for ensuring that employees comply with the Code. Under section 72(5) it is a defence for an employing authority to prove that it took such steps as were reasonably practicable to prevent the employee from doing or omitting to do the things that breached the Code.

As previously mentioned, Ms C's minimal monitoring and record-keeping relating to Ms A's labour would be viewed with mild disapproval by her peers. There were issues relating to her professionalism, when she visited Ms A with dog hair on her clothing and settled to sleep on Ms A's hospital bed. These professional matters have been addressed with Ms C by the Health Trust Board Trust Chairman.

Ms C was employed by the Trust to undertake shift work at the maternity unit. As an employer, the Trust is potentially vicariously liable for Ms C's breach of the Code. However, Ms Stanbridge advised:

> "On the whole [the unit] appears to have comprehensive policies and protocols around the issues raised in this situation. These are a good base to work from with the midwife being able to use clinical judgment and the woman's wishes being respected to deviate from them as appropriate."

In my opinion, Ms C's failure to comprehensively monitor and document her observations of Ms A's labour relate to her individual clinical practice. I am satisfied that the Trust took such steps as were reasonably practicable to prevent Ms C's breaches of the Code. Accordingly, the Trust is not vicariously liable for Ms C's omissions.

## Actions taken

In response to my provisional opinion, Ms C confirmed that she will review her practice in light of this report, and provided a written apology to Ms A and her family for her breach of the Code.

## Follow-up actions

- A copy of this report will be sent to the Midwifery Council and the New Zealand College of Midwives.

- A copy of this report, with details identifying the parties removed, will be sent to the Maternity Services Consumer Council and placed on the Health and Disability Commissioner website, www.hdc.org.nz, for educational purposes.

# Appendix 1

Date Adopted: 12/05/04
Review Date: 12/05/05

Type: Procedure
Title: Labour & Birth Standard Care Plan Procedure

Page 1 of 1

**Procedure Statement:**

Standard care in labour reflects the accepted normal practices for the monitoring and support of normal labour. Deviations from the norm as describe in **Guidelines for Referral to Obstetric and Related Specialist Medical Services,** are referred and dealt with according to defined protocols to ensure optimal maternal and infant outcomes. Midwives have the primary responsibility for monitoring and assessment of labour. Deviations from the norm are discussed with a second midwife. Consultation or referral to an Obstetrician is made as is appropriate.

**Protocol On Admission:**

The midwife is notified prior to impending arrival - (pager, phone)

Midwife welcomes the woman and support people on arrival at the unit.

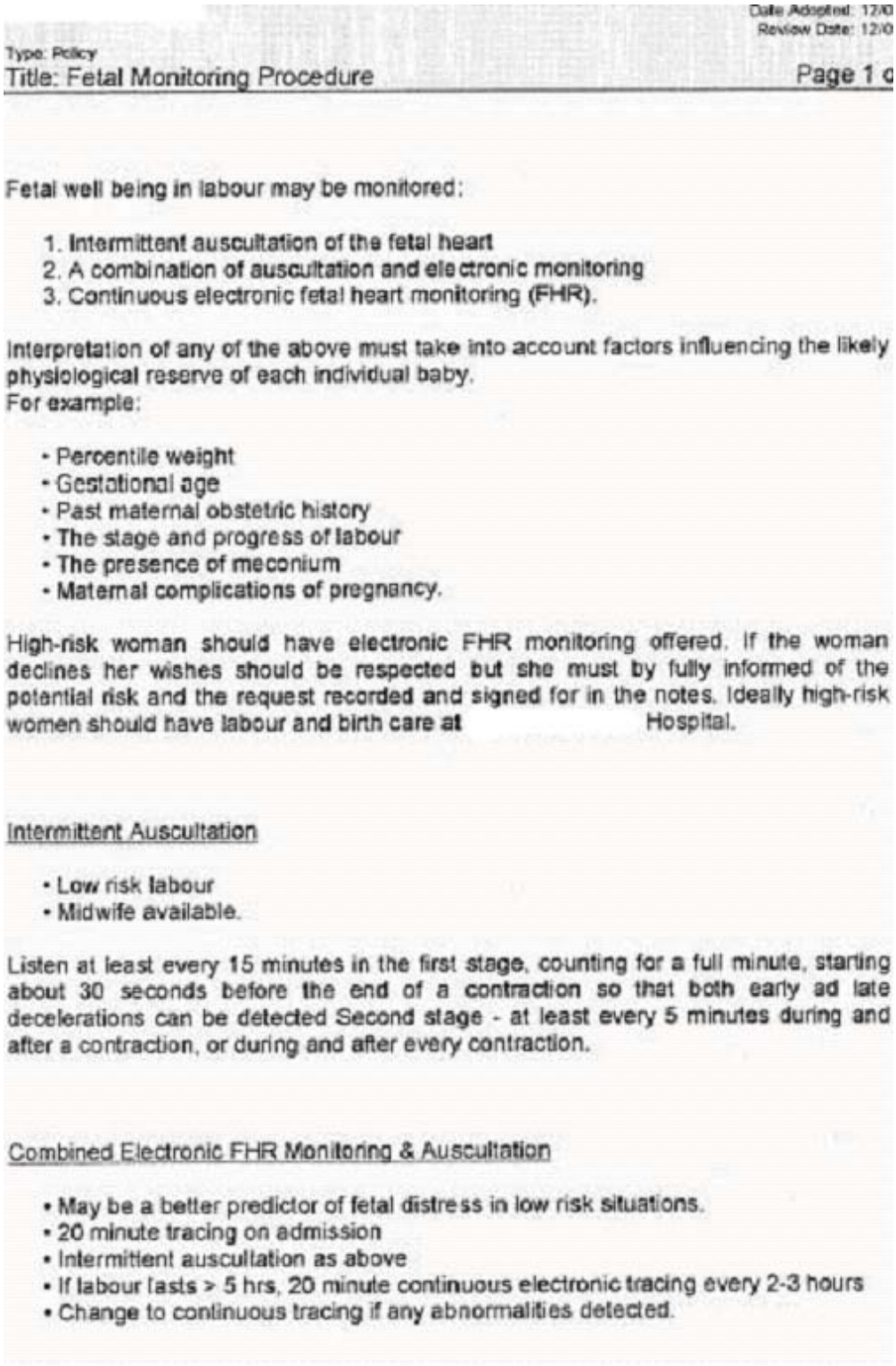
On Admission

1. Review Birth Plan
2. Baseline monitoring:
   - Recordings - Blood Pressure, Pulse, Temperature
   - Urinalysis:
   - Abdominal Palpation for lie, presentation, descent
   - Strength & frequency for contractions
   - Fetal heart rate
   - Liquor volume, assessment of liquor if SRM
3. Accurate diagnosis of labour. This is important, intervention in the latent phase of labour amounts to induction with its associated problems.
4. Discussion with 2nd midwife of findings and consultation with O&G if deviations from the norm are identified.
5. A Partogram is commenced when labour is established. The partogram records:
   - Progress of labour (dilation, descent, contractions)
   - Fetal condition (heart rate, presence of meconium)
   - Maternal condition (acidosis, pre-eclampsia)
   - Alert and action lines should be drawn (Friedman's Curve)
6. Vaginal examination 4 hourly in established labour and related to Friedman's Curve. Progress in active labour should be 1 cm per hour. O&G consult when deviations occur.



*Names have been removed to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.*

# Appendix 2



Date Adopted: 12/0
Review Date: 12/0

Type: Policy
Title: Fetal Monitoring Procedure Page 1 o

Fetal well being in labour may be monitored:

1. Intermittent auscultation of the fetal heart
2. A combination of auscultation and electronic monitoring
3. Continuous electronic fetal heart monitoring (FHR).

Interpretation of any of the above must take into account factors influencing the likely physiological reserve of each individual baby.
For example:

- Percentile weight
- Gestational age
- Past maternal obstetric history
- The stage and progress of labour
- The presence of meconium
- Maternal complications of pregnancy.

High-risk woman should have electronic FHR monitoring offered. If the woman declines her wishes should be respected but she must by fully informed of the potential risk and the request recorded and signed for in the notes. Ideally high-risk women should have labour and birth care at Hospital.

Intermittent Auscultation

- Low risk labour
- Midwife available.

Listen at least every 15 minutes in the first stage, counting for a full minute, starting about 30 seconds before the end of a contraction so that both early ad late decelerations can be detected Second stage - at least every 5 minutes during and after a contraction, or during and after every contraction.

Combined Electronic FHR Monitoring & Auscultation

- May be a better predictor of fetal distress in low risk situations.
- 20 minute tracing on admission
- Intermittent auscultation as above
- If labour lasts > 5 hrs, 20 minute continuous electronic tracing every 2-3 hours
- Change to continuous tracing if any abnormalities detected.



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Date Adopted: 12/
Review Date: 12/

Type: Policy
Title: Fetal Monitoring Procedure Page 1 c

**Cardiotochograph Indications:**

**A Reactive CTG**

This indicates the foetus is currently in good health. A **reactive trace has at least 2** accelerations of **> or equal to 15 beats per minute,** lasting for > or equal to 15 **seconds** in response to fetal movement. Once 2 accelerations have occurred the trace can usually be discontinued.

**B Non-Reactive CTG**

This may indicate fetal hypoxia or may reflect a quiet fetal behavioural stat e (which can last for up to 65 minutes). A non-reactive CTG has zero or one acceleration of 1 5 beats per minute lasting 15 seconds or acceleration of < or equal to 1 5 beats per minute. Where possible the trace should be continued for at least 65 minutes to exclude a quiet fetal behavioural state.

**C Decelerations**

Traces showing decelerations **(decrease in fetal heart of > 1 5 beats per minute lasting greater than 15 seconds)** require careful assessment. Variable decelerations may reflect low liquor volume in pregnancies complicated by UIGR, ruptured membranes or post term pregnancy. Late decelerations (often shallow) indicate fetal hypoxia and possible acidosis. Occasionally large deceleration s occu as the foetus changes behavioural states - these are not sinister.

**ALL CTG's ARE DOCUEMENTED AS REASSURING OR NON REASSURING TRACES**



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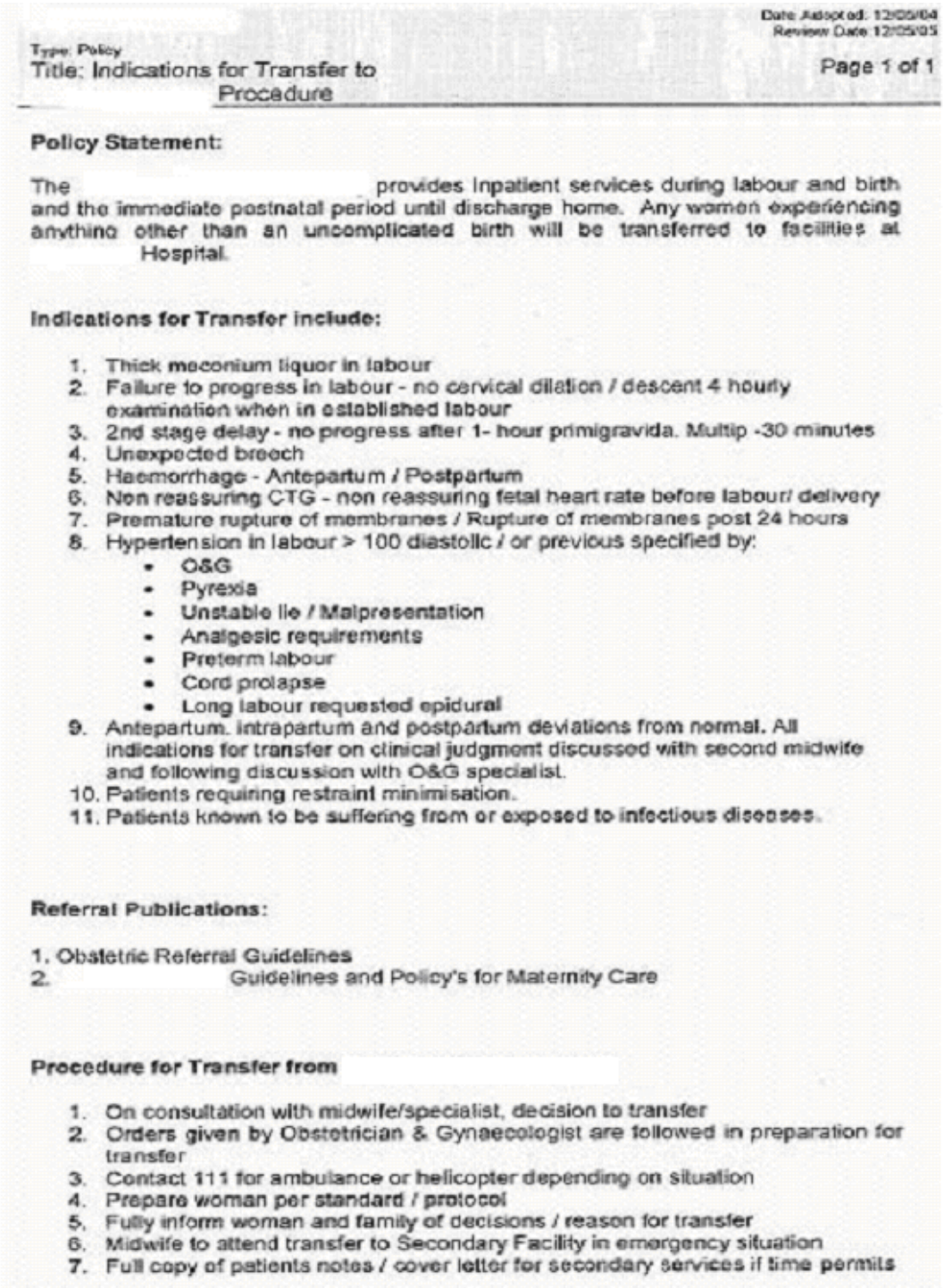
# Appendix 3



Date Adopted: 12/05/04
Review Date 12/05/05

Type: Policy
Title: Indications for Transfer to Procedure

Page 1 of 1

**Policy Statement:**

The provides Inpatient services during labour and birth and the immediate postnatal period until discharge home. Any women experiencing anything other than an uncomplicated birth will be transferred to facilities at Hospital.

**Indications for Transfer include:**

1. Thick meconium liquor in labour
2. Failure to progress in labour - no cervical dilation / descent 4 hourly examination when in established labour
3. 2nd stage delay - no progress after 1- hour primigravida. Multip -30 minutes
4. Unexpected breech
5. Haemorrhage - Antepartum / Postpartum
6. Non reassuring CTG - non reassuring fetal heart rate before labour/ delivery
7. Premature rupture of membranes / Rupture of membranes post 24 hours
8. Hypertension in labour > 100 diastolic / or previous specified by:
   - O&G
   - Pyrexia
   - Unstable lie / Malpresentation
   - Analgesic requirements
   - Preterm labour
   - Cord prolapse
   - Long labour requested epidural
9. Antepartum, intrapartum and postpartum deviations from normal. All indications for transfer on clinical judgment discussed with second midwife and following discussion with O&G specialist.
10. Patients requiring restraint minimisation.
11. Patients known to be suffering from or exposed to infectious diseases.

**Referral Publications:**

1. Obstetric Referral Guidelines
2. Guidelines and Policy's for Maternity Care

**Procedure for Transfer from**

1. On consultation with midwife/specialist, decision to transfer
2. Orders given by Obstetrician & Gynaecologist are followed in preparation for transfer
3. Contact 111 for ambulance or helicopter depending on situation
4. Prepare woman per standard / protocol
5. Fully inform woman and family of decisions / reason for transfer
6. Midwife to attend transfer to Secondary Facility in emergency situation
7. Full copy of patients notes / cover letter for secondary services if time permits



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