Obstetrician, Dr B

Public Hospital

A Report by the

Health and Disability Commissioner

(Case 04HDC00841)

Health and Disability Commissioner
Te Toihau Hauora, Hauātanga

Parties involved

Ms A	Consumer
Mr A	Consumer's partner
Baby A	Consumer's daughter
Dr B	Provider/Obstetrician
Ms C	Provider/Midwife
Ms D	Provider/Midwife
Public Hospital	Provider/Hospital

Complaint

On 23 October 2003 the Commissioner received a complaint from Ms A and Mr A about obstetric services provided to Ms A by Dr B during her pregnancy and delivery of her daughter in 2002. The following issues were identified for investigation:

- *The appropriateness and adequacy of Dr B's management of Ms A's antenatal care in view of her high platelet count and suggested Intrauterine Growth Restriction (IUGR)*
- *The appropriateness and adequacy of Dr B's management of Ms A's labour and delivery in view of her high platelet count and suggested IUGR.*

An investigation was commenced on 19 January 2004.

Information reviewed

- A copy of Ms A's medical misadventure claim file from the Accident Compensation Corporation (ACC)
- Clinical notes from midwives Ms C and Ms D
- Response to complaint by Dr B and the Public Hospital
- Clinical notes from the Public Hospital, Ms A and Baby A

Independent expert advice was obtained from independent obstetricians, Dr John Wakeman and Dr Jenny Westgate.

Information gathered during investigation

Previous complaints
Ms A's first complaint arising out of her antenatal care and delivery of Baby A was against midwife Ms C. This complaint was investigated by the Commissioner and resulted in a 'no breach' report (02HDC18527) on 29 October 2003.

Ms A also submitted a claim to ACC for medical misadventure. ACC accepted Ms A's claim on the basis of medical error on the part of Dr B by decision dated 30 September 2003.

Antenatal care
Ms A's Lead Maternity Carer (LMC) during the pregnancy was midwife Ms C. Ms A first saw Ms C on 25 July 2002 for an antenatal assessment. A scan estimated the delivery date as 9 November 2002.

In October 2002, Ms C was away on holiday and locum maternity care was provided by midwife Ms D. On 18 October, Ms D referred Ms A for an obstetric consultation at the Public Hospital because her platelet and white cell counts were high and Ms A had a family history of deep vein thrombosis (DVT).

Ms A first saw Dr B at an antenatal clinic on 24 October 2002 when she was 38 weeks pregnant. After his examination, Dr B concluded that the baby's size corresponded with a gestational age of 36 weeks. Dr B thought the baby's size was below average and possibly showed signs of IUGR. In his response to this investigation, Dr B stated:

> "The fact that the foetal weight was below average was discussed with [Ms A] and her Mum, and they asked me for the weight in pounds. I told them that the baby weighed about 6lbs. The possibility that smoking may have contributed to the lower weight was also mentioned. I reassured them that although the baby's weight was below average, it was still within the normal range (according to the growth charts – about the 20th percentile. IUGR is diagnosed if the weight is on or below the 10th percentile)."

Dr B advised Ms A to check foetal movements and wrote to Ms D, requesting twice-weekly CTG recordings. Dr B suggested that an induction of labour might need to be considered if the baby was not delivered by 40 weeks. In view of the raised platelet count and family history of DVT, Dr B asked Ms D to arrange further blood tests for iron studies, vitamin B12, folate, repeat complete blood count (CBC), and a thrombophilia screen. He scheduled another antenatal visit for 7 November 2002.

Dr B's letter to Ms D was dated 30 October 2002 but was not received by Ms C until 5 November 2002. Dr B explained that follow-up letters for the antenatal clinic were typed by an administrative assistant who provided clerical services for all of the outpatient clinics at the Public Hospital. Dr B's practice was to dictate a letter straight after a consultation. It would return from typing within a day or two and was then sent out. Dr B said that if urgent action was required, he would telephone the LMC directly.

In response to this investigation, The Public Hospital acknowledged that the delay in reporting to Ms D after the consultation on 24 October 2002 was due to a systems error. This matter was the subject of an internal review.

The results of the blood tests ordered on 24 October 2002 were reported on 25 and 27 October 2002. The thrombophilia screen consisted of three parts, one of which was available on 30 October 2002 and was abnormal. However, the test stated:

> "Shortened KCT suggests sample activation. Phospholipids released may have suppressed a lupus like anticoagulant. Repeat sampling could be considered."

The results from the other two tests for the thrombophilia screen were not available until 8 and 11 November 2002.

On 6 November 2002, Ms C wrote to Dr B asking for clarification about the matters highlighted in his reporting letter. Ms C performed a cardiotocograph (CTG) on Ms A on 6 November and the recording was normal. Ms C also received notification that Ms A's platelet count had decreased and was almost normal.

Ms A went into labour at approximately 6am on 7 November 2002. Ms A had an appointment scheduled with Dr B at the antenatal clinic for later that morning and was advised by Ms C to keep that appointment.

During this consultation, Dr B concluded that Ms A's uterus was the right size for a term gestation and the foetal heart rate was normal. He examined the available blood tests, which showed low iron stores, only a mildly elevated platelet count and an abnormal lupus anticoagulant screen result with a laboratory recommendation to repeat the sample. The results of the remaining blood tests were not available.

Dr B advised me that he did not call the laboratory to follow up on the missing test results. At his second consultation with Ms A, he realised that he had previously miscalculated the due date for her pregnancy and he was satisfied that Ms A's baby was a good size for term. Dr B considered that the test results were almost within normal range, except for the lupus anticoagulant screen, which noted the possibility of a laboratory error. As there was not enough time to re-test, the baby was a good size, the platelet problem was resolving and Ms A was already in early labour, Dr B returned her to the care of her LMC to manage the labour.

Dr B wrote to Ms C and advised her that "the slight increase in platelets may be related to iron deficiency. The mild thrombocytosis is unlikely to affect her pregnancy. In view of the fact that she is now in labour, the issue of induction of labour is no longer relevant. She has been returned to your care."
In response to this investigation, Dr B described his findings from the consultation on 7 November 2002:

> "Results of investigations showed a mildly elevated platelet count of 434b/l (normal 150-400) and a Hb of 99g/l. The ferritin level was 7ug/l, serum iron was 6umol/l, iron

> binding capacity was 83umol/l and the iron saturation was 7. All these results were abnormal and suggested iron deficiency anaemia. After reading the literature, I concluded that the mildly elevated platelet count was due to the iron deficiency anaemia.
>
> It should be noted that platelet counts above 600b/l are abnormal and this condition is called thrombocytosis, which may either be primary or secondary. In patients with secondary thrombocytosis, the platelet count will gradually fall over time, especially if there is treatment of the underlying problem. [Ms A's] platelet count was falling from 527 on 1/10/02 to 482 on 18/10/02 to 434 on 25/10/02. In view of this falling trend toward normal, further investigation was deemed unnecessary. It should also be noted that most patients with secondary thrombocytosis (ie platelet counts above 600b/l will **not** have clotting or bleeding problems and do not require treatment."

The Head of the Obstetrics and Gynaecology Department at the Public Hospital advised me that "[t]hrombocytosis is often seen [during pregnancy] without any apparent cause. It bears no relationship to IUGR in the foetus."

Dr B advised me that Ms A was transferred back to Ms C as a low-risk patient but that this did not imply that there was no risk. Ms C was aware that he was the on-call obstetrician and was available for consultation if required.

Labour and delivery

The midwifery management of Ms A's early labour is detailed in report 02HDC18527 and is not relevant to this report.

Labour was established by late afternoon on 7 November and Ms A returned to the Public Hospital at 1620 hours. A vaginal examination at 1705 hours showed Ms A was 6 to 7cm dilated with membranes still intact. The foetal heart was listened to intermittently. Ms C performed a vaginal examination at 1915 hours and found the cervix to be 8cm dilated. Following discussion with a hospital midwife, Ms C ruptured the membranes at 1920 hours, finding meconium-stained liquor. Ms C telephoned the on-call paediatric senior house officer (SHO) to advise her of the presence of meconium and Dr B's earlier suspicion of IUGR, so that the on-call paediatric SHO would be aware of the situation when she was called to attend the delivery.

Ms A became fully dilated at 2115 hours and began pushing shortly thereafter. A CTG recording of the foetal heart was commenced at 2150 hours (although the CTG machine clock showed the time as one hour earlier as it had not been adjusted for daylight saving). At 2148 hours the assisting midwife, Ms D, noted that the baby's heart rate was variable and that Ms A was becoming too tired to push effectively, so Dr B was called.

There is a discrepancy in Ms C's and Dr B's recollection of when Ms C called Dr B. Ms C believes that she called him soon after 2150 hours and had to page him again as he had not responded, but he eventually arrived at 2205 hours. Dr B believes that he was paged at 2215 while he was in the operating theatre and arrived at 2220 hours.

Dr B found that Ms A was fully dilated and the baby's head had entered the pelvis. Ms C reported that Ms A had been in the second stage of labour for about one hour and the CTG recording showed heart rate deceleration and tachycardia (fast heart rate). It was apparent that Ms A required assistance to deliver her baby and Dr B decided to perform a ventouse extraction.

Dr B was able to deliver Baby A's head after about 20 minutes and the on-call paediatric SHO was able to suction her throat and nasal passages. Dr B found that the cord was around the baby's neck and corrected it. However, the baby's upper shoulder was impacted (shoulder dystocia), obstructing her birth. It took Dr B about 28 minutes to deliver Baby A. Baby A was born suffering hypoxic ischaemic encephalopathy.

In his response to this investigation, Dr B advised me that he discussed Baby A's condition with Ms A shortly after her birth. He also asked Ms C why he was not consulted when meconium-stained liquor was discovered during labour. Ms C explained that she had consulted the hospital midwives at the time and the consensus was that intermittent auscultation (listening to the foetal heartbeat) was adequate in the presence of old meconium. Dr B stated:

> "The umbilical cord pH after delivery showed foetal acidaemia with a pH of 6.81 and a base excess of -28. According to the [text], 'foetal acidaemia is a slowly developing event from the onset of changes in the foetal heart rate. The foetus suffers from brain damage only when exposed to prolonged and profound hypoxia. In a gradually developing hypoxia, abnormal foetal heart rate patterns may be present for 120-140 minutes before foetal acidaemia increases significantly.'
>
> According to this evidence, foetal heart rate abnormalities would have been present from about 8.30pm."

Sometime after the events, the Head of the Obstetrics and Gynaecology Department at the Public Hospital advised me:

> "A CTG was commenced at 9.48pm and was obviously abnormal. [Dr B] was present in the Delivery Suite from 10.15pm where he initiated a ventouse delivery. Any form of instrumental delivery can be deleterious to an already compromised baby. A ventouse extraction takes longer than a forceps delivery and 28 minutes as recorded by [Dr B] would, in my opinion, be regarded as a prolonged period of time for delivering a compromised baby."

ACC findings in relation to antenatal care

ACC found medical error in relation to the antenatal care provided by Dr B. The care provided by Dr B during labour and delivery was deemed appropriate. In making these findings, ACC relied upon independent expert advice from two obstetricians. Copies of the advice from the two advisors are attached to this report as Appendix A.

In relation to Dr B's antenatal consultation with Ms A on 24 October, ACC's specialist advisor noted that Dr B's report to Ms D was delayed and, as a consequence, there was inadequate time to carry out the monitoring Dr B had suggested before Ms A went into labour.

The results of the blood tests ordered on 24 October, which were not available to Dr B until 25 and 27 October, showed that Ms A was iron deficient and that her platelet count remained elevated. The thrombophilia screen consisted of three parts, one of which was available on 30 October and was abnormal, while the other two were not available until 8 and 11 November, after Ms A had delivered. ACC's specialist advisor advised ACC that Dr B should have consulted the laboratory about the results of the other tests or consulted a haematologist when he discovered that some of Ms A's test results were abnormal.

When Dr B saw Ms A on 7 November he noted that she was in labour and he concluded that her abnormal blood picture was unlikely to affect her pregnancy. ACC's specialist advisor advised ACC that, based on inadequate information, Dr B incorrectly formed the view that Ms A was low risk, a "mind set" that he passed on to Ms C.

In relation to Dr B's obstetric care during labour and delivery, ACC's independent advisor advised ACC that Dr B made the correct decision when he arrived in the delivery room at about 10.10pm and found foetal and maternal distress. It was necessary to delivery the baby quickly and, given the clinical finding that her head was well down in the pelvis, it was reasonable that Dr B chose ventouse extraction, particularly if he was more familiar with this than forceps. He concluded that there was no medical error in relation to this issue.

Independent advice to Commissioner

The following expert advice was obtained from Dr John Wakeman, obstetrician:

> "I confirm I am a practising Obstetrician and Gynaecologist, a Fellow of the Royal College of Obstetricians and Gynaecologists and a Fellow of the Royal Australian and New Zealand College of Obstetricians and Gynaecologists.
>
> My understanding of the case is as follows:-
>
> In the first instance a complaint was made to the Health and Disability Commissioner by [Mr A] and [Ms A] after the birth of their daughter [Baby A] who suffered hypoxic ischaemic encephalopathy following her delivery. The complaint was made against their Lead Maternity Caregiver, [Ms C]. The Commissioner found in favour of [Ms C] that there was no breach of the Code.
>
> A case was also laid before the Accident Compensation Commission on the grounds of medical misadventure, a panel consisting of a barrister, a lay member and two midwives, found a case of medical error against the specialist involved, [Dr B], contrary to the advice they received both from two specialist obstetricians and gynaecologists, […].

Following this report and a request from [Mr A] and [Ms A], the Commissioner is now investigating the aspects of [Dr B's] care.

I find this case particularly difficult and vexing mainly because the care of the patient has ceased to be a team event and following an adverse outcome, sides have been taken between midwife and obstetrician.

I have in front of me reports from two specialist obstetricians – […] an independent advisor to the ACC, and […] a specialist advisor to the ACC. Although in their reports, there are some distractions which have no bearing on the final outcome, they are both unhappy about the lack of continuous electronic foetal heart monitoring and are guarded in the correctness of their expressing an opinion of medical error on the part of the midwife. They do not find a case of medical error against the specialist concerned, in fact ACC's independent advisor emphatically states 'I do not believe there is an issue of medical error on the part of [Dr B]'. [ACC's midwifery advisor] takes a contrary view.

An ACC panel consisting of a barrister, a lay-member and two midwives, one of whom has also supplied the specialist midwifery report, have then found to me the extraordinary finding of medical error against the specialist concerned, despite the recommendations of two independent specialists.

This all occurs against a background where maternity has been legislatively separated from conventional healthcare matters. As medical knowledge increased, people have developed special interests. Initially these special interests were based on the amount of study and expertise in a particular field. More recently they have been by special training and examination to enter the various Royal Colleges. Commensurate with this has been an acceptance that once an expert opinion is sought, that opinion should be followed wherever reasonable. In maternity in New Zealand in the early '90s the then Minister of Health, Helen Clark, gave equal standing to midwives as of medical obstetricians. The subsequent Health Acts in Section 51 and Section 88, have now created the Lead Maternity Care status where the Lead Maternity Caregiver as appointed by the patient has virtually autonomous rights. They may seek advice but they do not have to heed it. They may practise within public hospitals in maternity units, they do not have to follow the guidelines set out by those units.

In this document there was reference to patients being sent to and handed back to both the specialist and midwife. This is actually incorrect. Section 88 makes it quite clear that the responsibility lies with the Lead Maternity Caregiver. There is no automatic transfer of the patient, even if transfer to a secondary care is recommended under the Section 88 guidelines, as it was not in this case, transfer of patient may be resisted and be very difficult. Transfer only takes place when there is full agreement between patient, LMC and specialist.

In this case, [Ms A] was referred on the 24th October at 38 weeks gestation by [Ms D], the acting Lead Maternity Caregiver, to the Women Child and Family Service of [the Public Hospital] because of a raised platelet count. I cannot find a referral letter in the

documentation I have been given although on Page 64, I think by [Dr B], 'the raised platelets are recorded and a family history of DVT has been found' although I note that this family history is not recorded in the patient's maternity notes on Page 28. [ACC's specialist advisor] in his report comments that 'these blood tests taken on the 1st October were at 34 and a half weeks, when the recommendation is that they should be done at 28 weeks', he further comments that it took another three weeks until the patient was referred for a specialist opinion. If there had been a problem, which in my opinion there was not, there was little time to sort it out. As a clinician, [Dr B] examined the patient at 38 weeks, he estimated the foetal size at 36 weeks, not a particularly accurate examination, but enough to leave him uncomfortable enough to do an ultrasound which showed the baby to be at the 20th percentile with a normal liquor volume. In his letter, he states that 'this is suggestive of intrauterine growth restriction'. I would not agree with this diagnosis. Nonetheless, it is expressing concern and in his last paragraph he asks for further monitoring and suggests possible induction at 40 weeks. He is not unduly concerned about the platelets although asked for further Laboratory investigation.

There is an unacceptable delay [in] conveying this information from [Dr B] to [Ms D]. I suggest it is reasonable to issue a formal letter. This should be properly typed and faxed to the person concerned to be later signed and then forwarded by mail. I believe this fault lies not with [Dr B] but with [the Public Hospital] and believe that it has been addressed, Page 46, of this document. I think it is unlikely it has any bearing on the final outcome.

[Dr B] arranged to see [Ms A] again two weeks later. I presume, as did [ACC's specialist advisor], this to discuss the Laboratory findings. He may or may not have had at that stage the letter written by [Ms C] on the 6th November. [Dr B] found that [Ms A] was already in labour, was having contractions 4 minutes apart and had been having the same since 6 a.m. that morning. Foetal movements he notes had been normal. He expresses no undue concern with regard to the thrombocytosis and notes that the fact that she is already in labour, makes the issue of induction no longer relevant. I believe [Ms A] went from the antenatal clinic to delivery suite and was continuing to be managed under the care of her Lead Maternity Caregiver. I note that his letter was dictated that day. I am unsure when it reached [Ms C]. [ACC's specialist advisor] surmises that [Dr B] might have been able to get more information had he rung the Laboratory .We do not actually know whether [Dr B] actually either tried to ring the Laboratory or look on the computer to see whether the results were available. If we believe what is printed on the Laboratory reports, [ACC's specialist advisor] is certainly wrong, because that states the information did not become available until some the next day and some several days later.

Again, although important information, it is difficult to believe that any of it would have had any relevance to the final outcome. Any relevance of the blood tests would be in the prevention of [Ms A] developing a deep venous thrombosis which in fact she did not

anyway, and would have been very unlikely and in fact did not have any effect upon the baby.

Having proceeded from antenatal clinic to delivery suite, [Ms A] was seen and subsequently discharged by her Lead Maternity Caregiver to subsequently return six hours later in established labour.

The contention is now whether or not [Ms A] should have had continuous foetal heart tracing during her labour. The ACC panel implies that by handing back [Ms A's] management to her LMC, [Dr B] implied there was no problem. I believe this is incorrect.

1. Under Section 88 [Dr B] had never taken over the care of [Ms A].

2. The implications of IUGR were not dismissed by [Dr B]. The question of induction was no longer considered to be relevant since she was already in labour.

Under the guidelines of Section 88, drawn up on the advice of the College of Midwives and College of Obstetricians and Gynaecologists, under Code 40111, IUGR with a normal liquor pool is under Section 2 and therefore considered by the two Colleges to be appropriately managed by a midwife. … Further I believe that [Dr B] under these circumstances had every right to assume since the opinion of the two Colleges is that the midwife can manage such cases, that they would be managed under accepted circumstances along the guidelines as has been laid out in various units and as nationally published.

There is a difference of opinion expressed by the expert witnesses as to whether continuous foetal heart monitoring is required or whether intermittent auscultation is satisfactory. The two obstetric specialists in their reports both strongly support continuous foetal heart monitoring and are backed by the reports of individual expert panels from both the Royal College of Obstetricians and the Royal Australian and New Zealand College of Obstetricians. The midwife quotes the Impey paper, from Dublin and eventuating in Oxford, which actually is only discussion on more normal obstetrics. From both Royal College papers the recommendation is that with IUGR, which [Ms C] still believed to be the existing diagnosis as shown by her comments at 7-30 that evening when discussing the case with [the on-call paediatric SHO] and separately when meconium liquor was found, foetal heart monitoring should have been used. I believe that [Dr B] had every right to assume that would be the case when [Ms A] left clinic. I have already commented that I do not believe that [Dr B] had the evidence to support a diagnosis of IUGR, however I would agree with his comment in his report that had an artificial rupture of membranes (ARM) been performed earlier in labour, the presence of meconium liquor is highly likely to have been evident then and for there to be yet another reason under the Royal College protocols to commence on intermittent foetal heart tracing. His further surmised that had continuous foetal heart monitoring been adopted it probably would have shown abnormalities earlier on and an earlier delivery been achieved is equally in my opinion likely to be correct but cannot be totally

substantiated. It is these surmises upon the correctness or otherwise not to have had continuous foetal heart monitoring that have led the two specialist obstetricians reporting to the ACC to raise the question of medical error.

Once baby's distressed condition was recognised, [Dr B's] response was extremely quick under the circumstances. His decision to deliver the baby as soon as possible was correct. I share [ACC's independent advisor's] thoughts with regard to the method of delivery that [ACC's independent advisor] has entered on Page 146 but echo [ACC's independent advisor's] thoughts that this is a matter of personal choice and experience. I would certainly believe that delivery by caesarean section could not have been achieved within that time limit and the decision to go for vaginal delivery was the correct one. Unfortunately the final outcome was much less than the parents, or anyone connected with the case, had desired. I do not feel it within my expertise to comment on any of the paediatric management but have no thoughts that there was anything less than desirable care.

To answer the specific questions asked.

Question 1 What particular standards apply in this case?

The standards that apply to this case as to any medical case, should ideally be of the best possible practice. However, much in medicine is open to discussion as to what is the best possible practice and in obstetrics in particular, there is a recognised division between what is considered best possible practice by obstetricians and what is considered over-medicalisation by some midwives. I would suggest however that when guidelines are drawn down by medical colleges based on strong double blind clinical trial evidence, that those guidelines should only be ignored where other exceptional circumstances exist. Under New Zealand practice as set down in the Act, Lead Maternity Caregivers accept the full responsibility for being exactly that. They are guided towards taking advice, however there is within the Act not the compulsion for them to take that advice or to be guided by the guidelines that are laid up for management of cases within the individual units in which they practice. I would suggest the same standard applies that they should only go outside those guidelines when there are exceptional and extraordinary cases.

Question 2 Did [Dr B's] actions on reviewing [Ms A] on 24 October 2002 meet those standards?

I believe that [Dr B's] actions on the 24th October did meet those standards in that he was asked specialist advice only. He was not asked to manage the case. He supplied that advice, he arranged for further investigations, he detailed a plan for the patient's management in the meantime and he arranged to review the patient a fortnight later.

Question 3 Was [Dr B's] advice, in light of [Ms A's] blood count, family history and IUGR, to the LMC about labour management appropriate?

At the 24th October, [Dr B] did not have the full blood counts he desired available to him. Tests were still being done. He did advise the Lead Maternity Caregiver of a suggested regime for the continuation of the pregnancy. At that stage the diagnosis was certainly not clinched and as we said before, was in doubt and the management of labour was not the vital matter at that stage.

Question 4 What other issues, if any, [Dr B] should have brought to the LMC's attention?

We do not have a full documentation of what [Ms A] was told. There was obviously verbal consultation and discussion at the time. The written remarks to the Lead Maternity Caregiver would seem to be appropriate although the communication from the hospital clerical department was far more prolonged in coming than is desirable.

Question 5 Was [Ms A's] pregnancy considered 'low risk'?

I believe a question of low and high depends on whether there is a medium range in between. If we are to follow the guidelines as outlined in the recommendations from Section 88, we would have to place [Ms A's] pregnancy in Category 2 on a 1 to 3 basis i.e. satisfactory to be managed by a midwife as Lead Maternity Caregiver with advice from a specialist.

Question 6 Was [Ms A's] labour considered 'low risk'?

With regard to low risk would be similar to Question 5.

Question 7 Comment on [Ms A's] blood test as seen on the 24th October antenatal check.

At that stage, the blood test showed a mild thrombocytosis, although slightly outside the limits quoted by the Laboratory, this is not a gross check. Expediency would say that it is worthwhile doing a further test to see where they lie, but there would be no immediate clinical changes.

Question 8 Did they present a foreseeable risk with the pregnancy?

Since they are inconclusive in themselves, they cannot be deemed to be suggestive of foreseeable risk within the pregnancy, they need further evaluation. [ACC's specialist advisor's] point that by this stage [Ms A] was at 38 weeks when being seen in clinic and it is desirable that these tests are carried out at 28 weeks and abnormalities actioned promptly, is taken in view of the fact that should subsequent blood tests suggest that there is a high risk of deep venous thrombosis then appropriate treatment could be initiated. By the time the results of those tests became available such appropriate treatment was no longer applicable.

Question 9 Did they present a foreseeable risk in labour?

The risk[s] in labour … were no different really from the foreseeable risks in the total pregnancy.

Question 10 What if any would be the impact of these results on the labour and on the fetus?

As far as the labour is concerned, there would be no foreseeable risk except that secondarily associated should [Ms A] have previously developed a deep venous thrombosis. In this particular case there was no effect.

Except for the secondary effects, had she developed it, this has little effect on the fetus and in [Ms A's] case it is reasonable to say it had no effect on the fetus.

Question 11 Dr B saw Ms A again the morning that labour commenced.

What, if any, preparation and/or advice should [Dr B] have given [Ms A] about labour and delivery?

Under Section 88 it is the duty of the LMC to give advice preparation about labour. In an ideal situation, perhaps both the patient and the LMC would attend when a specialist was involved. This is not always possible or practical however and did not occur in this case. Further at the time concerned, [Ms A] was already in labour probably in some discomfort and certainly as a primigravid probably apprehensive. This is far from the ideal time to give both preparation and advice. I would believe under the situation the advice for the patient to go straight to delivery suite and for the LMC to be contacted, was fairly reasonable.

Question 12 What if any preparation and/or advice should [Dr B] have given the LMC about labour and delivery?

I believe that the LMC had already been given the advice that [Dr B] believed the baby could have IUGR. The patient was already in labour and therefore the question of induction because of the IUGR was no longer relevant. He did advise that the mild thrombocytosis was unlikely to affect the pregnancy. Although he gave no further advice on how the midwife should manage the labour, he did not dismiss his diagnosis of IUGR and therefore I believe had a right to accept that the LMC would conduct labour along normally accepted guidelines for that condition.

Question 13 Should [Dr B] have contacted the laboratory when the complete results of the tests taken on 24 October were not available?

We do not know whether or not [Dr B] did contact the Laboratory. Had he done so, whether any of the tests would have been available or not is doubtful. It is absolutely

certain that not all of the tests would have been available. Had they been available in full at 40 weeks with a patient in labour, they would have had little or no bearing on the management of the labour and certainly they had no bearing on the final outcome in [Ms A's] case.

1. Other matters reporting:

I believe there are some system errors illustrated by this case that might be taken into consideration for general recommendation. For an antenatal consultation clinic, which is a very dynamic clinic in that things move rapidly, it is totally unacceptable to have long delays in typing written reports. There are huge advantages in having a written typed report in the notes. Hospital clinics should make every endeavour to see that typed reports are typed immediately and are promptly electronically transferred to the referring LMC and documented in the notes.

2. Guidelines:

Units should be encouraged to have guidelines for the general management of pregnancy – including both labour and delivery. There should also be an obligation of LMCs who have access to those units to follow those guidelines unless there is a specific reason which should then be appropriately documented. Guidelines should be carefully documented to follow best practice advice as accepted on a national level with appropriate modifications to suit the particular case of a unit. I do not know what guidelines, if any, are available that would be applicable to this case in [this city] but further make the point that while there is no compulsion for LMCs to even look at the guidelines let alone follow them, the arduous job of formulating the guidelines is not always adhered to.

3. Facilities:

A further administrative matter that could have influenced this final outcome would be that units should make available immediate caesarean section facilities. Operative deliveries should always take place in a situation where the trial of forceps can be abandoned and an immediate caesarean section performed. This comment is not intended to be a criticism of [Dr B's] management of the delivery of [Ms A]. The delivery however was certainly more difficult than anticipated which did not help the baby's case although I believe it was the best practice in the circumstances had the unit had the ability to give [Dr B] immediate facilities for doing the alternative caesarean section, this could well have been helpful.

Finally, my advice to the Commissioner would be that Ms A did receive the appropriate standard of care from consultant obstetrician, [Dr B]. …

I believe there were errors in the hospital's systems. …"

Further independent advice to Commissioner

Having reviewed the expert advice provided to ACC and the advice from Dr Wakeman, I sought further independent advice from Dr Jenny Westgate, obstetrician. Dr Westgate is a very experienced obstetrician and has been on the HDC panel of expert advisors since January 2001. She is aware of the High Court Rules relating to expert advisors and has confirmed her compliance on several previous occasions.

Dr Westgate was sent copies of the relevant documentation and provided advice in a telephone conversation with one of my legal advisors on 2 November 2004. Dr Westgate's advice is summarised below.

In relation to the consultation on 24 October 2002, Dr Westgate advised that a management plan formulated at 38 weeks should have been communicated to the LMC the same day so that it could be put into action immediately. Dr Westgate acknowledged that there is a lot of documentation in maternity care, but considered that Dr B should have telephoned Ms D and noted the management plan in the hospital notes. He could also have noted it in the patient maternity booklet.

When his reporting letter did not return from typing until 30 October 2002, Dr B should have telephoned Ms D as it was apparent that there had already been a delay of six days in reporting.

In relation to the thrombophilia blood screen results, Dr Westgate confirmed that the test result on 30 October 2002 was not conclusive and that a re-test was necessary. Dr Westgate acknowledged that thrombophilia screen tests take a long time to come through. However, in terms of best practice, Dr B should have ordered a re-test on 30 October 2002. As that did not occur, Dr B should have reviewed the two remaining results on 7 November 2002. Dr Westgate noted that, as a matter of common sense, there is no benefit in ordering tests if the results are not reviewed. Dr Westgate also advised that the abnormal test results and the two missing results should have been documented in the hospital notes.

Dr Westgate was asked to give an indication of the seriousness of the errors of failing to report to the midwife in a timely manner and failing to follow up on the test results. Dr Westgate commented that while these errors had no bearing on the outcome of the case, they represented a low level departure from professional standards.

This summary of Dr Westgate's advice was verified by her as being an accurate reflection of her comments on 13 December 2004.

Responses to Provisional Opinion

Ms A

In response to the "facts gathered" section of my provisional opinion, Ms A stated that she should have been told by Dr B that she needed twice-weekly CTG recordings on 24 October 2002 and that it was not enough for Dr B to put this in the reporting letter to the LMC. She has noted his failure to follow up on blood tests but otherwise states that she still holds him in high regard.

Ms A noted that The Public Hospital has undertaken an internal review as a result of the delay in formal reporting from Dr B to her LMC but advised me that she has not been advised of the outcome of that internal review.

Public Hospital

The Public Hospital did not respond to my provisional opinion.

Dr B

Dr B forwarded a response to my provisional opinion through his lawyer. Dr B's lawyer made the following submissions:

- Dr B's delay in formal reporting to the LMC was due to inadequate resources, as recognised by Dr Wakeman;
- The test results that Dr B was expected to follow up were not available when Ms A went into labour;
- Dr Westgate's advice on the follow-up of test results was based on best practice and not a reasonable standard of care;
- ACC's specialist advisor's advice to ACC on the follow-up of test results was qualified by the fact that he needed to ask Dr B more questions and it is inappropriate for the Commissioner to rely on this advice when ACC's specialist advisor has not been given an opportunity to review his opinion with more information;
- The clinical facts in this case are such that the Commissioner cannot make a finding based on his own knowledge of obstetric practice.

Code of Health and Disability Services Consumers' Rights

The following Right in the Code of Health and Disability Services Consumers' Rights is 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.

…

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

Opinion: Breach – Dr B

Follow-up on test results
Ms A was entitled to have services provided with reasonable care and skill and in compliance with professional standards, pursuant to Right 4(1) of the Code.

Dr B saw Ms A for the first time on 24 October when she was 38 weeks pregnant. Ms A had been referred to Dr B because she had a high platelet and white cell count and a family history of DVT. Dr B examined Ms A and, on the basis of a possible diagnosis of IUGR, formulated a care management plan that included further blood tests, regular monitoring and consideration of induction at term.

In view of the raised platelet count and family history of deep vein thrombosis, Dr B asked Ms D to arrange further blood tests for iron studies, vitamin B12, folate, repeat CBC, and a thrombophilia screen. He scheduled another antenatal visit for 7 November 2002.

The care management plan was dictated in a letter to Ms D after the consultation on 24 October 2002. Dr B's letter did not return from typing until 30 October 2002, 12 days after Ms A's consultation with Dr B. Ms A has advised me that she would have complied with the requirement for regular CTG monitoring if Dr B had shared this information with her on 24 October 2002.

The results of the blood tests were reported on 25 and 27 October 2002 and showed that the platelet issue was resolving. The thrombophilia screen consisted of three parts, one of which was available on 30 October 2002 and was abnormal. However, the test stated:

> "Shortened KCT suggests sample activation. Phospholipids released may have suppressed a lupus like anticoagulant. Repeat sampling could be considered."

The results from the other two tests for the thrombophilia screen were not available until 8 and 11 November 2002. Dr B advised me that he did not telephone the laboratory to follow up on the two remaining thrombophilia tests when he saw Ms A on 7 November 2002 because she was already in labour.

My expert advisor, Dr Wakeman, noted that the thrombophilia screen result from 30 October 2002 was inconclusive and that the other two test results were not available until after Ms A delivered. Dr Wakeman considered that the test results were important but were relevant to whether Ms A would develop a DVT, and did not pose any risk to the baby. In his view, the test results had no relevance to the final outcome.

Dr Westgate agreed that the thrombophilia test results were not relevant to the final outcome but advised that, in terms of best practice, the inconclusive test result on 30 October 2002 should have been re-tested. As that did not occur, Dr Westgate advised me that the two missing results should have been followed up on 7 November 2002 and details of the tests and missing results should have been recorded in the clinical notes.

In response to my provisional opinion, Dr B's counsel submitted that I should prefer the advice of Dr Wakeman on this issue on the basis that he gave me full and independent advice.

I asked Dr Westgate to comment on two isolated aspects of Dr B's care because Dr Wakeman's advice on this issue differed to the expert advice provided to ACC and was based on consideration of the outcome at Baby A's birth. Unlike ACC, I am not required to establish a causal link between the health services that are provided and the outcome of a case. Dr Westgate had the benefit of more information when she provided her advice, as Dr B had by then advised me that he did not telephone the laboratory to follow up the missing thrombophilia results.

I consider that Dr B had a responsibility to monitor the safety of both mother and baby in providing antenatal services. The thrombophilia screen results were relevant to Ms A's potential to develop a DVT and I agree with my expert advisors that this was important information.

The first of the three test results on 30 October 2002 was inconclusive. I agree with Dr Westgate that best practice would have been for Dr B to urgently follow up on the remaining two results at that stage, so that he could consider whether a re-test was necessary. As this did not occur, I consider that Dr B should at least have telephoned the laboratory to follow up on the two remaining test results when he saw Ms A on 7 November 2002 to meet a reasonable standard of care.

Although I acknowledge that the delay in reporting to Ms D was due to the administrative systems in place at the Public Hospital, I am mindful of the fact that Ms A was 38 weeks pregnant at the time of the consultation on 24 October 2002 and that Dr B was outlining tests and monitoring that required immediate action.

Dr B has advised me that he does telephone other providers in urgent cases. In my view he should have done so in this case.

There is no record of the abnormal thrombophilia screen result in the clinical notes from Ms A's consultation on 7 November 2002. Dr B's letter to Ms C reports that Ms A's "mild thrombocytosis is unlikely to affect her pregnancy", but does not indicate that further results were awaited. I consider that the unresolved thrombocytosis issue was inadequately documented in the clinical notes and the reporting letter to Ms C on 7 November 2002. In this respect also, Dr B exhibited a lack of due care.

Accordingly, Dr B breached Right 4(1) of the Code because he did not follow up Ms A's thrombophilia test results when he saw her on 7 November 2002 and he did not record the status of the test results in Ms A's clinical record.

Opinion: No breach – Dr B

Labour and delivery
After the antenatal consultation with Dr B on 7 November 2002, responsibility for management of labour was handed back to Ms C.

Dr Wakeman advised that it was appropriate for Dr B to allow Ms C to manage Ms A's labour as induction was no longer necessary and responsibility for her care had not been transferred to Dr B. The Maternity Services notice issued by the Ministry of Health pursuant to section 88 of the New Zealand Public Health and Disability Act 2000 does not mandate transfer of care to an obstetrician when there is suspected IUGR with a normal liquor volume, as in Ms A's case.

It is clear that Dr B was not consulted when Ms C discovered meconium-stained liquor at 1930 and he therefore did not have any involvement in the decisions about how Ms A's labour should be monitored.

Dr B was called in to assist with Ms A's labour at approximately 2200 on 7 November 2002. At 2148 the assisting midwife, Ms D, noted that the baby's heart rate was variable and that Ms A was becoming too tired to push effectively so Dr B was called.

Dr B found that Ms A was fully dilated and the baby's head had entered the pelvis. The CTG recording showed heart rate deceleration and tachycardia, and it was apparent that Ms A required assistance.

Dr B was able to deliver Baby A's head by ventouse extraction after about 20 minutes and the on-call paediatric SHO was able to suction her throat and nasal passages. Dr B found that the cord was around the baby's neck and corrected it. However, the baby's upper shoulder was impacted (shoulder dystocia), obstructing her birth. It took Dr B about 28 minutes to deliver Baby A.

According to Dr Wakeman, once Dr B recognised that the baby was in distress he acted quickly to deliver her and the ventouse extraction was not the cause of Baby A's poor condition at birth. Dr Wakeman acknowledged that forceps may have been quicker but commented that it is a matter of personal skill and experience. Dr Westgate shared this view. In the circumstances, Dr B delivered Baby A within an acceptable timeframe and could not have predicted the cord around her neck or the shoulder dystocia.

On the basis of my expert advice, I am satisfied that Dr B provided obstetric services with reasonable care and skill during Ms A's labour and delivery on 7 November 2002 and did not breach the Code.

Opinion: Breach – Public Hospital

Formal reporting by specialist in DHB to LMC
As a health consumer, Ms A was entitled to co-operation among providers to ensure quality and continuity of services, pursuant to Right 4(5) of the Code.

Ms A's secondary midwife, Ms D, referred her to Dr B on 18 October 2002 because she had a high platelet and white cell count, and a family history of DVT.

When Dr B saw Ms A on 24 October 2002, he noted that the baby was small for dates and Ms A was anaemic. On the basis of a possible diagnosis of IUGR, Dr B formulated a care management plan that included further blood tests, regular monitoring and consideration of induction at term.

The care management plan was dictated in a letter to Ms D after the consultation on 24 October 2002. Dr B advised me that this was the standard practice for generating reporting letters and that usually the letter would be typed and sent within one or two days. Dr B explained that he would call other providers directly in urgent cases.

Dr B's letter did not return from typing until 30 October 2002. It was not received by Ms C until 5 November 2002, 12 days after Ms A's consultation with Dr B.

Dr Wakeman advised me that the Public Hospital must take some responsibility for ensuring that there are systems in place to ensure that information of this nature is conveyed to the referrer in a timely fashion. The Public Hospital has acknowledged that this was a "systems error" and has undertaken an internal review. In response to my provisional opinion, however, Ms A has noted that she has not been advised of the outcome of that review.

It is clear that the administration systems at the Public Hospital failed Dr B and Ms A on this occasion. I therefore consider that the Public Hospital breached Right 4(5) of the Code.

Other comments

Equipment
During the course of the investigation, it was difficult to reconcile the times documented on the equipment reports with the times in the clinical notes and witness accounts. There appears to have been a problem with the clocks in the delivery suite and the internal clocks in the CTG monitor, which had not been adjusted for daylight saving time.

Although this issue was not specifically under investigation, it is essential that delivery suite equipment is functioning properly and that clinical information is recorded accurately. I take this opportunity to remind the Public Hospital of its obligations in this regard.

Actions taken

Dr B has provided an apology to Ms A and Mr A for his breach of the Code.

Recommendations

I recommend that the Public Hospital take the following actions:

- Send a written apology to Ms A and Mr A.
- Report to Ms A and Mr A on the outcome of the internal review of the timing of letters being sent from ANC that was carried out in January 2003.
- Review the administration and support services for the antenatal clinic at the Public Hospital and report to me on the outcome of the review.

Follow-up actions

- A copy of this report will be sent to the Medical Council of New Zealand and the Royal Australian and New Zealand College of Obstetricians and Gynaecologists.

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

APPENDIX A

09 September 2003

[…]
Medical Misadventure Unit
Accident Compensation Corporation
PO Box 1426
Wellington

Dear […],

RE: [Baby A], Claim No: […]

Issue: Birth asphyxia following alleged mismanagement of labour and birth.

I have reviewed the facts and opinions in the file dated 21 August 2003. The file contains two volumes; Volume 2 (194 pages) relates to events before and during [Baby A's] birth, and, as an obstetrician, I am qualified to comment on the issues raised in this file; Volume 1 relates to the paediatric care that [Baby A] received, which is outside my expertise, but I understand ACC is also seeking a paediatric opinion.

It has been very difficult to decide whether this case satisfies the criteria for medical misadventure. There are numerous examples of poor communication, unwise decisions, and poor documentation throughout [Ms A's] pregnancy, labour, and delivery. I have addressed all these issues in detail under V Medical Error. However, the most difficult issue in this case was deciding whether the miscommunications and unwise decisions caused [Baby A's] injury. This was made particularly difficult by the lack of detail in some of the medical notes.

There is no doubt that [Baby A] would have fared better if she had been born earlier, and poor communication and unwise decisions probably delayed her delivery .Therefore, I have concluded that this is a case of medical misadventure on the basis of medical error.

Physical Injury

[Baby A] had apgars of l, 3, 4 and 6, the first venous blood gas revealed a pH of 6.81 with a BE of -28, she had an early onset of seizures, and she has had feeding difficulties. [The] paediatrician says this indicates that [Baby A] suffered profound antenatal hypoxia. The evidence suggests there has been "serious brain injury with a guarded long-term neurological prognosis". Only time will allow a more accurate assessment of the injury that [Baby A] has suffered.

Although the evidence shows that [Baby A] suffered profound antenatal hypoxia, it is important for this inquiry to pin-point the timing of hypoxia to intrapartum rather than just

antenatal. A normal CTG the day before [Ms A] came into labour showed that baby was well at that stage. This does not rule out a pre-existing condition, but it makes it less likely. Therefore, hypoxia was probably caused by an intrapartum event such as placental dysfunction.

We will probably never know what caused the hypoxia, but we need to know whether it could have been prevented. Should signs of trouble have been picked up earlier and should baby have been delivered earlier? As I explain under Medical Error, Ms A was inappropriately treated as a low-risk patient. As a result, baby was not monitored adequately. I believe that signs of foetal compromise would have been detected earlier if CTG monitoring had been started when artificial rupture of membranes (ARM) revealed meconium-stained liquor. This would have led to an earlier delivery.

In summary, I believe there was an unnecessary delay in identifying foetal compromise and that this contributed to [Baby A's] condition at birth.

Consistency

There are some inconsistencies in the details of the claim made on [Baby A's] behalf. However, the claim of mismanagement of [Ms A's] labour and delivery is consistent with the evidence in the file.

Causal Link

As explained under Physical Injury, I believe there is a causal link between [Baby A's] injury and medical treatment.

Medical Error

There are eleven issues that need to be considered under Medical Error. Some of them are probably irrelevant to the final outcome, but poor communication between the obstetrician and midwives, and poor documentation, make it impossible to be sure what issues are relevant. Perhaps [Ms C], [Ms D], and [Dr B] could comment further after they have read this report, and hopefully they can clear up some of these issues.

The issues that concern me are: -

1. [Ms A] did not have her 28-week gestation blood tests
2. There was a significant delay in referring [Ms A] to an obstetrician when she had raised platelets
3. The raised platelet levels were never fully investigated or explained
4. The abnormal thrombophilia screen was not repeated, investigated, or treated
5. There was an unacceptable delay between the time [Dr B] saw [Ms A] (24 October 2002) and the time that his letter reached [Ms D] (4 November 2002).

6. The term IUGR was misused repeatedly
7. No admission CTG was done
8. An obstetrician was not notified when meconium was detected in the liquor
9. CTG monitoring was not started when meconium was detected in the liquor
10. A very poor quality, and possibly accidental, CTG tracing was not commented on by [Ms C] or included in the notes she sent to ACC
11. The ventouse delivery and the management of shoulder dystocia were inadequately documented

I have addressed these issues in more detail below.

Platelets and thrombophilia screen

[Ms A] had blood tests on 1 October 2002, when she was at 34½-weeks' gestation. These were 'subsequent blood tests', which are normally done at 28-week's gestation. Why were they done so late in the pregnancy? This might not seem a major issue, but as I explain below, this delay was the start of a series of delays that resulted in [Ms A's] going into labour without full investigation of potential risk factors.

The report from these blood tests, dated 10 October 2002, records a platelet level of 527 and an elevated WBC. [Ms C] was away on holiday when this test was done, and [Ms D] was caring for [Ms A]. [Ms C], in her letter to ACC, says that during her absence [Ms D] referred [Ms A] to the secondary care obstetric clinic because of the raised platelets. However, it seems there was a significant delay in referring [Ms A].

The referral form that [Ms D] filled in is undated. However, the form mentions, "subsequent bloods ***redone*** – results sent to clinic" It is clear from the midwifery notes that these repeat 'subsequent bloods' were done on 18 October 2002. Therefore, it seems [Ms A] was not referred on 10 October 2002 when the raised platelets were first reported. Nor was she referred when [Ms D] saw her again on 18 October 2002 because on that day [Ms D] wrote in the notes, "plan to refer you to see obstetrician next week, just as a precaution" Therefore, [Ms A] eventually saw [Dr B] more than three weeks after her abnormal blood test on 1 October 2002. This delay was due in part to the extraordinarily long time before the results were available, but it was also due to [Ms D's] tardiness in referring [Ms A]. It must be remembered that this delay is on top of a six-week delay in having the initial 'subsequent blood test'.

[Ms D] might have been reassured by speaking to the laboratory, and she appropriately took swabs, organised mid-stream urine, and repeated the blood tests on 18 October 2002. However, this problem should have been referred more promptly especially when [Ms A] had a family history of DVT.

The blood tests done on 18 October 2002 were reported 21 October 2002 and again they showed elevated platelet levels (482). When [Ms A] saw [Dr B] on 24 October 2002 he repeated the blood tests, ordered iron deficiency investigations, and arranged for a thrombophilia screen.

The results of the iron deficiency investigation came back promptly (25 and 27 October 2002) and were sent to [Ms C], [Ms A's GP], and I presume to [Dr B]. [Ms A] was iron deficient, and [Ms A's GP] was vigilant in checking that the midwife was giving [Ms A] iron. I note that the tests on 1 October 2002 also showed abnormal Ferritin. This was not commented on in [Ms D's] notes and I am unsure whether [Ms A] had received iron at this earlier stage. The platelet results also came back promptly on 25 October 2002, and again the platelet level was raised.

The thrombophilia screen consisted of three parts: a lupus anticoagulant screen, thrombotic investigations, and cardiolipin antibodies. The lupus anticoagulant screen results were available on 30 October 2002, and they were abnormal. At this stage I would have expected the midwife and [Dr B] to be in contact. The abnormal result should have triggered someone to contact the laboratory to get the results of the other tests urgently. Repeat blood tests should have been done, and it would have been wise to consult with a haematologist.

The other results eventually came through on 8 November 2002 (thrombotic investigation) and 11 November 2002 (cardiolipin antibodies), and the thrombotic investigations were abnormal. The recommendation was for the tests to be repeated, but [Ms A] had delivered by this stage. The series of delays in having the platelet problem investigated meant that it was never properly investigated.

[Dr B] concluded on 7 November 2002, when he saw [Ms A] in early labour, that the "slight increase in platelets ***may*** be related to iron deficiency" and that it was unlikely to affect the pregnancy. However, this conclusion had not been fully investigated because of the series of delays. Therefore, [Ms A] was starting in labour with a family history of DVT, an unexplained raised platelet level, an abnormal lupus anticoagulant screen, and a suggestion of IUGR (see later), and she was a smoker. Although some of these risk factors might have been eliminated with further investigation, it was inappropriate to assume [Ms A] was low-risk.

[Ms C] did assume that [Ms A] was low-risk. However, she might have been lulled into a false sense of security by [Dr B's] summary of the situation on 7 November 2002. [Ms A's] appointment with [Dr B] that day was no doubt arranged so that he could review his original diagnoses and review the results of subsequent investigations. He did not have all the results of the haematology investigations. Therefore, I would have expected him to contact the laboratory to get these results, especially as he already had an abnormal lupus anticoagulant result. I am sure that the results of the thrombotic investigation, which became available 8 November

2002, would have been available on 7 November 2002 if he had asked for them. This was also abnormal. With this information he should have advised [Ms C] that it would be prudent to do electronic foetal heart monitoring. His diagnosis of IUGR was an even stronger reason to request an admission CTG and at least intermittent CTG monitoring throughout labour. It seems that [Dr B] did not change his mind about his diagnosis of IUGR because he still maintained after the delivery that there had been an antenatal diagnosis of IUGR. These risk factors did not become irrelevant just because [Ms A] was in labour.

Communication delay

There was poor communication between [Dr B] and [Ms D] (or [Ms C]) following [Ms A's] referral to [Dr B]. [Ms D] referred [Ms A] for an obstetric opinion some time after 18 October 2002 because of raised platelet levels, and [Dr B] saw her on 24 October 2002. His letter back to [Ms D] was typed on 30 October 2002, and it seems that she did not receive the letter until 4 November 2002. This is an unacceptable delay in communication especially when [Ms A] was almost due and [Dr B] was recommending increased monitoring of foetal movements and twice-weekly CTGs. I am not surprised that [Ms C] was concerned when she read the letter, and it was very wise of her to seek clarification.

The delay in communication could be partly due to a system fault that needs correcting, and I have no doubt that it caused confusion for [Ms A], [Ms D], and [Ms C]. It is difficult to decide what effect this confusion had on subsequent events. I would expect the uncertainty to trigger more caution, but it seems it did not. Despite her concern about possible IUGR, [Ms C] surprisingly did not do an admission CTG and she did not inform an obstetrician and start CTG monitoring when she discovered meconium stained liquor. I deal with these issues in more detail below.

IUGR

When [Ms A] saw [Dr B] on 24 October 2002 she had an ultrasound scan, and [Dr B] wrote, "U/S -2.778 Kg ± 400 g – IUGR". In his letter to [Ms D] he said that baby's weight suggested IUGR. However, baby's weight was between the mean and the 20% line on the IUGR prediction graph, and it did not indicate IUGR. When [Dr B] saw [Ms A] early in labour, 7 November 2002, he decided that the uterus corresponded to a term gestation. His concerns about IUGR appeared to be related mainly to making sure that [Ms A] did not go beyond term. As [Ms A] was in labour the issue of induction was no longer relevant, and [Dr B] passed her care back to [Ms C]. However, after [Baby A] was born [Dr B] was still convinced that his diagnosis of IUGR was correct. He wrote in the hospital notes, "Concerns: (1) No CTG during labour despite ANC finding of IUGR".

In his letter to ACC, 1 April 2003, [Dr B] admits that the term IUGR was erroneously used. Therefore, in retrospect, this diagnosis has become a red-herring.

However, at the time, it created confusion. Despite the confusion, there is evidence that [Ms C] knew IUGR was a possible risk factor during [Ms A's] labour; she told [Ms A] that she should 'birth on land … because of old meconium?/??IUGR'. If she was concerned about possible IUGR why did she choose not to do an admission CTG and not to start CTG monitoring and inform an obstetrician when she detected meconium in the liquor.

Admission CTG

[Ms A] had a CTG on 6 November 2002 before she came into labour. This was essentially normal. However, she did not have an admission CTG on 7 November 2002. I am unsure what protocol [the Public Hospital] has regarding admission CTGs, but most hospitals recommend them to identify pregnancies that might benefit from continuous electronic foetal heart monitoring in labour.

Some studies have suggested that neonatal outcome is not improved by doing an admission CTG (Impey et al 2003). However, one needs to look at the criteria Impey et al used to select patients for the trial. Amongst the criteria is "clear amniotic fluid". Therefore, no woman admitted with intact membranes was included in the trial. The criteria were stringent and meant that only very low-risk patients were involved. [Ms A] did not satisfy these criteria. She had intact membranes on admission, she was a smoker, she had mild throbocystosis with an abnormal thrombophilia screen, and there was a suggestion, albeit confused, that baby had IUGR. Thrombophilia increases the risk of placental dysfunction. Under these circumstances I would certainly expect an admission CTG to be done.

Meconium-stained liquor

[Ms C] performed artificial rupture of membranes (ARM) at 1920 hours and meconium-stained liquor drained. I would expect a midwife to contact an obstetrician and start CTG monitoring if meconium was found on ARM, even if the woman had previously been considered low-risk. However, [Ms C] did not do this. As I explain below, I believe ignoring the ***intrapartum*** significance of the meconium was inappropriate.

Maternity Services Notice, Section 88, states that when moderate or thick meconium is present the LMC "must recommend to the woman that a consultation with a specialist is warranted". Moreover, the protocol at many hospitals is that an obstetrician should be contacted whenever ***any*** meconium is found in the liquor. I am unsure what the protocol is at [this Public Hospital].

[Ms C] described the meconium as "old meconium" in the hospital notes, and, in her letter to ACC, she described it as "a very pale green". However, it is often very difficult to judge what type of meconium is present. Moreover, [Ms C] did not record in the hospital notes whether the meconium was thin, thick, or moderate.

This feature is more important than the colour. [Ms C] did not tick the "thick/frank" box or the "slight/thin" box on the labour and birth summary. This suggests that the meconium was moderate.

[Ms C] was obviously concerned about the meconium because she told Ms A that she should "birth on land ... because of old meconium?I??IUGR". [Ms C] says in her letter to ACC that she also discussed the meconium with other midwives, i.e., [Ms D], […], and […]. It seems that these midwives did not urge [Ms C] to inform an obstetrician about the meconium. Moreover, [Ms C] says, "all agreed that intermittent Doppler use before, during and after contractions would be adequate".

[Ms C] took further precautions because of the meconium, i.e., she called the paediatric SHO […] and asked her to attend when baby was born. However, I am surprised that she called a paediatrician but did not inform an obstetrician. It seems that she was aware of the dangers of meconium at the moment of birth but she did not consider the intrapartum significance of meconium.

[Ms C] says that she started the CTG at 2150 hours, and it seems this was in response to a late deceleration that [Ms C] heard at 2144 hours. The notes record "FH 135 ↓ 112 ↑ 148 bpm". [Ms C] repeated the auscultation at 2148 hours and recorded "FH 130 bpm – variable – no cervix felt – CTG". The CTG tracing recorded abnormalities as soon as it was started.

The Clinical Guidelines on Intrapartum Fetal Surveillance from the Royal Australian and New Zealand College of Obstetricians and Gynaecologists provide an algorithm outlining when electronic foetal heart monitoring (EFM) should be done. I have enclosed a copy of the algorithm. This states that meconium stained liquor is an intrapartum risk factor that should lead to continuous EFM.

The value of CTG monitoring is that it monitors the foetal heartbeat over time, and it picks up foetal heart rate changes over fractions of a second. The effect of contractions can be seen much more clearly by CTG than by auscultation. Therefore, it is likely that abnormalities would have been detected earlier by CTG. If an abnormality in the heart rate had been picked up earlier then delivery could have been sped up by doing either a Caesarean section or an earlier instrumental delivery.

Poor quality CTG

[Ms C] has explained, in her letter to ACC, that the time on the CTG tracings is out by one hour because of daylight saving. However, it is not acceptable to have the machine recording the wrong time. If [Ms C] was unable to correct the time on the machine then she should have at least commented on the problem in the notes so that the hospital notes and the CTG tracing were consistent.

The CTG tracings from 2148 hours until delivery are of reasonable quality and show abnormalities from the start. However, there is an earlier CTG tracing that was

possibly accidentally done between 2100 hours and 2148 hours. This CTG shows bits of tracing at the 80 bpm level on two occasions – once at 2120 hours and again at 2138 hours; Although it is impossible to interpret the CTG tracing I am surprised that it did not trigger [Ms C] to get the CTG monitor working properly. I am also surprised that [Ms C] did not comment on this tracing either in the hospital notes or in her letter to ACC. This extra CTG tracing is included in the hospital notes, but it was not included in the copies of CTGs that [Ms C] sent to ACC.

Delivery and its documentation

[Ms C] says she called [Dr B] soon after 2150 hours because the CTG showed a late deceleration to 70 bpm. Although he did not respond to the first page and required a second page, [Ms C] says he arrived in the [birthing unit] at 2205 hours. [Dr B's] memory of the timing is slightly different; he claims he was paged at about 2215 hours and that he saw [Ms A] at about 2220 hours. Despite this discrepancy, I believe the response time was reasonable. However, the discrepancy is important when trying to establish the time taken for each stage of the delivery.

[Dr B] examined [Ms A] and explained to her that there was a problem with the foetal heart. He then explained the ventouse procedure and got her consent. [Dr B] says that the head was below the spines. Therefore, a ventouse was an appropriate method of delivery. The alternative was to do a Caesarean section. However, I doubt that this would have delivered baby any faster. A Caesarean section would have avoided the problem of shoulder dystocia, but this was an unpredictable complication.

[Dr B] claims, in his letter to ACC, that he attached the ventouse at 2225 hours and that baby's head delivered after about twenty minutes of traction. This is an acceptable time to apply traction if progress is being made. Baby was fully delivered at 2248 hours, which means that the shoulder dystocia added three minutes to delivery time. This would be acceptable if we can be sure these times are correct. However, the medical notes either do not record times or are inconsistent with the times [Dr B] uses in his letter to ACC. In the notes, he recorded 28 minutes to deliver the head, compared with 20 minutes in his letter to ACC.

It seems that both [Ms C] and [Dr B] are relying on memory, and I can find no way to reconcile their different versions of events. This means that I cannot be sure when the ventouse was attached, how long it took for the head to be delivered, or how long it took for the shoulders to be delivered. The time taken to deliver the head was probably reasonable because one would not abort a ventouse delivery after twenty minutes if delivery was imminent. However, it is more important to know how long it took to deliver the shoulders. This was already a compromised baby and four or five minutes delivering the shoulders might have been vital.

I am not suggesting that there was medical error while doing the delivery. I am concerned only that the delivery was not more carefully documented. Without a

detailed record it is impossible to comment on whether there was medical error while doing the delivery.

In summary, there were many instances where [Ms A's] care was far from ideal. It is difficult to conclude that any one of those instances amounts to medical error. However, because of the compounding effect of delays and poor communication, I believe that [Ms A's] *overall care* fell below the standard to be reasonably expected.

Conclusion

As I have explained, it was difficult to reach a conclusion in this case. I cannot be ***certain*** whether a pre-existing condition or medical error caused or contributed to [Baby A's] problems. However, certainty is not required by ACC. The level of proof is "on the balance of probabilities".

Although a pre-existing condition cannot be ruled out, I think it is very likely that some event, such as placental dysfunction, occurred during labour. The result was birth asphyxia. In many such situations I would conclude that intermittent CTG monitoring throughout labour ***might*** have picked up the problem in time to move to a Caesarean section or a more prompt instrumental delivery. However, in this case, I think that CTG monitoring would ***probably*** have picked up a problem earlier and triggered a more rapid response. I say "probably" because the CTG paper, which was obviously passing through the machine between 2115 hours and 2148 hours, shows unusual tracings that might represent foetal compromise. They are not strong evidence of dips, but they are strong evidence that further investigation via accurate CTG was needed. This was not done. Furthermore, when CTG monitoring with full tocograph recording was started at about 2149 hours the tracing immediately showed a late deceleration. This supports my view that baby had been in trouble prior to this. Therefore, I recommend that this case be accepted as medical misadventure on the basis of medical error.

Sincerely,

[ACC's specialist advisor]

[ACC advisor]

Independent Advice 24 June 2003

To: […]
Medical Misadventure Unit
National Claims Unit
PO Box 1426
Wellington

Dear […]
Re: Baby A
Claim No: […]

Thank you for asking me to provide Independent advice on this child's medical misadventure claim. The claim relates to birth asphyxia following alleged mismanagement of labour. It would appear from the claim that [Baby A's] mother, [Ms A], has directed her concerns at the care she received from her midwife, [Ms C], rather than to any care provided by obstetrician [Dr B].

Physical Injury
[Ms A] had what appears to be a normal pregnancy and she was due on 7/11/02. She was referred by her midwife, [Ms C], to [Dr B's] antenatal clinic on 24/10/02 at which time she was 38 weeks pregnant. The reason for the referral was because of a raised platelet count (482) and there was a family history of deep vein thrombosis. At that consultation [Dr B] felt that the baby was smaller than expected for 38 weeks. He performed an ultrasound scan and fetal weight was estimated at 2.778kg. He advised [Ms A] to check on fetal movements and recommended in a letter to the midwife that she perform twice weekly cardiotocographs. He also recommended that if the baby had not been delivered by 40 weeks gestation an induction of labour should be considered. In view of the thrombocytosis and the family history of deep venous thrombosis a full blood count and a thrombophilia screen were requested.

[Ms A] went into spontaneous labour on her due date with labour pains starting at 0600 hours. It had been arranged for her to have a further consultation with [Dr B] that day so she saw him at clinic and after this visit she was assessed in a hospital birthing room by her midwife. Her midwife subsequently went round to see [Dr B] and asked for clarification of matters in his letter but according to the midwife [Dr B] stated that he had no concerns about [Ms A]. The midwife's assessment at 1040 showed [Ms A's] cervix to be 50% effaced and admitted one finger with the head at Station -2 and the membranes were intact. It was felt that she was just in early labour and she was allowed to go home to await established labour.

[Ms A] was visited again by her midwife at home at 1410 hours and assessment showed that her cervix was 3-4 cm dilated and almost fully effaced. Membranes were intact and the fetal

heart was said to be 130 beats per minute. [Ms A] arrived at the birthing unit at 1620 hours and was visited by her midwife shortly after 1630 hours. A further vaginal examination at 1705 hours showed the cervix to be 6-7 cm dilated and the fetal heart was normal to auscultation.

A further vaginal examination was performed at 1915 hours at which time her cervix was 8 cm and the head was at -1. An ARM was performed and old meconium stained liquor was noted. The midwife discussed this finding with […], the Duty Paediatric House Surgeon requesting that [she] be present at the time of delivery. She also discussed the findings with two core hospital midwives and it was agreed that intermittent Doppler auscultation would be adequate.

[Ms A] was fully dilated at 2115 hours and the fetal heart is said to have been normal. She commenced pushing but some 35 minutes later a fetal heart deceleration down to 112 was noted and the midwife asked [Ms A] to move on to the bed so that CTG monitoring could be commenced. Continuous monitoring started at 2150 and a fetal heart deceleration of 70 beats per minute was noted. [Ms C] left [Ms A] in the care of another midwife [Ms D] while she went to the office to contact [Dr B]. [Dr B] arrived on the labour ward at 2205 hours as he had been in theatre up until that time. He was briefed on the clinical details and assessed [Ms A] at 2220. He felt that the CTG showed tachycardia with late decelerations. The baby's head was in an occipito-anterior position and below the ischial spine. In view of the non-reassuring cardiotograph he recommended an assisted delivery with a Ventouse. The Ventouse was applied at 2225 hours. An episiotomy was subsequently made. It is not clear how many contractions occurred subsequently but with maternal efforts the baby's head was delivered after 20 minutes. The baby's mouth and nostrils were suctioned by [the on-call paediatric SHO]. The cord was noted to be around the fetal neck. Following delivery of the head there was shoulder dystocia, which was managed with McRoberts manoeuvre, and suprapubic pressure. The baby was delivered at 2248 hours. She weighed 3000gms and was in poor condition at birth with Apgar scores of 1, 3, 4 and 6 at l, 5, 10 and 15 minutes. [The on-call paediatric SHO] carried out correct neonatal resuscitation including suctioning, airway bagging with oxygen, cardiac compressions and then intubation at four minutes of age. A first venous blood gas revealed the pH to be 6.81 with a base excess of -28, suggesting very significant intrapartum hypoxia. Thick meconium is reported at the time of delivery and thick meconium was suctioned by [the on-call paediatric SHO]. The baby was transferred urgently to the Special Care Baby Unit and was subsequently transferred by helicopter to [a second Public Hospital] […] Neonatal Unit. Her progress is outlined in letters from [a] Paediatrician and from [a] Neonatal Paediatrician at [the second Public Hospital].

Baby A showed evidence of pulmonary hypertension and ongoing seizure activity requiring anticonvulsant treatment. She was discharged back to [the Public Hospital] on 27/11/02 at which time there was still ongoing concern regarding her seizure activity and her poor feeding. [Baby A] and [Ms A] were finally discharged from [the Public Hospital] on 18.12.02.

Consistency

There is no doubt that this baby was born with evidence of significant intrapartum hypoxia. I am not aware of her current neurological status. A letter from [Ms A's GP] […] dated 3/3/03 states that [Baby A] had attended the surgery only once for her routine three month immunisations and "appears to be doing well". However [the Public Hospital's paediatrician's] letter states "the low Apgars, the profound metabolic acidosis and the early onset of seizures all suggest serious brain injury with a guarded long term neurological prognosis. She has ongoing hypotonia, which is also of concern. As time unfolds within the next year or two, or longer, the precise neurological detail of any potential affects of the described hypoxia may become apparent".

Medical Error

The roles of two people need to be considered in this case. The first is the role of midwife [Ms C]. There are a number of claims put forward by [Ms A] regarding her concerns about antenatal and intrapartum care. If these claims can be substantiated then they may well reflect [Ms C's] philosophical desire to keep all labours free of medical intervention but the claims are clearly rebutted in the letter from [Ms C]. I believe these claims and counterclaims are best addressed in an investigation by the Health and Disability Commissioner. The real issue is whether or not the outcome of this labour and delivery could have been prevented by closer intrapartum monitoring particularly when meconium stained liquor was detected. The clinical notes show that from the time of admission to hospital at 1620 hours up until the commencement of a CTG 1 at 2150 hours, the fetal heart is recorded on 25 occasions and all of these occasions was within the normal range. On one occasion at 1938 hours a small deceleration was noted during a contraction and a larger deceleration was noted at 2144 hours. It was shortly after this deceleration that the CTG was commenced. Much of the tracing is uninterpretable and highlights why a scalp electrode would have been better in this situation as there is often a lot of artefactual recording from an abdominal transducer. However parts of the tracing clearly show late decelerations and one cannot help but wonder just when these late decelerations started.

Although [Ms C] did not receive [Dr B's] letter until either 4 or 5 November, she was aware of his concerns about possible intrauterine growth retardation prior to [Ms A] going into labour. She may have been reassured by the normal CTG on 6/11/02 and by the fact that [Dr B] was happy for [Ms C] to remain the lead maternity carer of [Ms A's] labour. Although the meconium observed following ARM was described as "old" it is recognised that meconium stained labour is a significant risk factor for neonatal encephalopathy and it is my view that following the finding of meconium, along with the knowledge of possible IUGR, this baby should have had continuous electronic fetal heart monitoring. Both the Royal College of Obstetricians and the Australasian College of Obstetricians have produced guidelines which strongly recommend when continuous electronic fetal monitoring should be used and meconium staining of the amniotic fluid is in both guidelines. I believe that failure to have more accurately monitored this baby is an issue of error. I realise that a finding of error could well be challenged from a midwifery perspective, as there are no

definite studies evaluating the effectiveness of electronic monitoring compared to intermittent auscultation in relation to specific high risk factors. However I believe most maternity practitioners, both obstetricians and midwives would feel that failure to follow the guidelines for monitoring high risk labours would fall below a reasonable standard of care.

It may well be relevant that the midwife was concerned enough about the meconium to inform [the on-call paediatric SHO] at 1930 hours i.e. some 2 hours before delivery, yet she was not concerned enough to apply continuous monitoring.

The second role, which needs to be considered, is that of [Dr B]. I would be very critical of the fact that although [Dr B] was suspicious of intrauterine growth retardation, to the point that he recommended twice weekly CTGs and consideration of induction at term, he did not dictate a letter to [Ms C] for six days following the clinic visit. A phone call directly to the midwife concerned would have overcome that shortcoming. However, as the baby was ultimately seen not to be growth retarded, this omission does not meet the criteria for medical error and really had no bearing on the outcome of the case other than, as mentioned earlier the possibility that growth retardation was another cofactor indicating the desirability for closer intrapartum monitoring of this baby. The second issue concerning [Dr B] is his decision to perform a Ventouse delivery. He clearly made the correct decision to expedite delivery and given the clinical findings of a baby in an occipito-anterior position below the ischial spines, it would be very reasonable to opt for a Ventouse delivery especially if [Dr B] is more familiar with the Ventouse than with forceps. He could not predict in advance of delivery that the cord would be tightly round the baby's neck nor could he predict that it would take 23 minutes from the time of application of the cup until delivery of the baby. I personally believe delivery with forceps might have been quicker but the time to deliver this baby was not excessively beyond the recommendations in the reference [Dr B] has supplied relating to use of the vacuum extractor. Although there was a degree of shoulder dystosia, that appears to have been dealt with efficiently and from the information supplied to me I do not believe that a caesarean section could have delivered this baby any sooner after [Dr B] had assessed the patient and there is no evidence that a caesarean section would have significantly altered the outcome. To that end I do not believe there is an issue of medical error on the part of [Dr B].

Medical Mishap

Although the long term outcome for this baby is unclear it would seem that there is a high likelihood of ongoing neurological damage. The events of this labour would meet both the rarity and severity criteria and should a claim be dismissed and challenged on the basis of medical error then I believe that it would be pertinent for ACC to cover this claim on the basis of medical mishap.

Sincerely

[…]

[ACC] Independent Advisor