# Obstetrician, Dr D

# A District Health Board

## A Report by the

## Health and Disability Commissioner

## (Case 11HDC00515)

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## Executive summary

### Background

1. In 2008, at 40 weeks and six days gestation, Ms B was reviewed by an obstetrician and diagnosed with oligohydramnios.[1] Ms B delivered her baby by emergency Caesarean section following a failed induction. During the delivery, the fetal heart showed at least three episodes of bradycardia.[2] However, the baby was born healthy and was not identified as being growth restricted.

2. In late 2009, Ms B became pregnant with her second baby and arranged for a midwife at a larger hospital (the Hospital) Ms C to be her Lead Maternity Carer (LMC). Ms B's estimated date of delivery was mid 2010. Her Body Mass Index (BMI) was 36, which indicated maternal obesity.

3. At 28 weeks/4 days gestation, Ms C referred Ms B to an obstetrician because of her previous delivery by Caesarean section. At 31 weeks/2 days, Ms B was seen by obstetrician Dr D, who noted the complications Ms B had experienced during her first pregnancy. The agreed plan was for Ms B to attempt a vaginal delivery if labour commenced spontaneously, or to have a further obstetric review at 40 weeks.

4. At 40 weeks/1 day, Ms B reported to Ms C that she had felt decreased fetal movements. The following day, Ms B repeated her concerns to Dr D. Dr D conducted a bedside ultrasound scan and cardiotocograph[3] (CTG) monitoring, which she considered to be reassuring. At the time of that consultation, Ms B had respiratory symptoms, and therefore Dr D decided to delay Ms B's elective Caesarean section until her symptoms had cleared.

5. At 41 weeks/1 day, Ms B was admitted to the Hospital for a pre-admission check. Ultrasound scans confirmed intrauterine fetal death.

6. At 41 weeks/2 days, Ms B delivered her stillborn baby by induction. Ms C intended to be in attendance at the delivery, but poor communication between Ms C and the midwives at the Hospital contributed to Ms C not being present to support Ms B.

7. The District Health Board's post-mortem report states that the baby was small for gestation, as was Ms B's first child.

### Decision summary

*Dr D — Breach*

8. Dr D should have taken a more cautious approach to the management of Ms B's second pregnancy. When Ms B presented at 31 weeks/2 days, Dr D should have considered whether serial ultrasound growth assessments were warranted. When Ms B reported decreased fetal movements two days post term, Dr D should have carefully considered Ms B's risk factors and either assessed her or delivered the baby on or

[1] Low amniotic fluid volume.
[2] Slowing of the fetal heart rate, which is a possible sign of fetal distress.
[3] A CTG records the fetal heartbeat and uterine activity onto graph paper for analysis of fetal well-being and uterine activity.



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before 40 weeks/6 days. To delay the Caesarean section without earlier assessment, was suboptimal. Accordingly, Dr D breached Right 4(1) of the Code of Health and Disability Services Consumers' Rights (the Code).[4]

*The DHB — Adverse comment*

9. DHB staff should have recognised that this delivery would be distressing for Ms B and ensured that she had appropriate support. It was also particularly important for Ms B to have the support of a midwife with whom she was familiar when she delivered her stillborn baby. The DHB should review its communication and documentation policies to avoid similar events occurring in the future.

*Ms C — Adverse comment*

10. Although Ms C subsequently acknowledged that she retained clinical responsibility for Ms B's care between 40 weeks/2 days and 41 weeks/1 day, I am concerned that Ms C was initially unclear about the nature and extent of her responsibilities. It is important that LMCs are clear about their clinical responsibility, and ensure that the woman has a clear understanding. If there is any ambiguity, a discussion between the woman and her LMC should take place, so that the woman knows who to contact if she has any concerns. As Ms B's LMC, Ms C had a duty to make clear her roles and responsibilities.

## Complaint and investigation

11. The Commissioner received a complaint from Ms B and her partner, Mr A, about the services provided to Ms B. The following issues were identified for investigation:

- *Whether obstetrician Dr D provided Ms B with an appropriate standard of care in 2010.*
- *Whether the DHB provided Ms B with an appropriate standard of care in 2010.*

12. An investigation was commenced on 4 October 2011.

13. The parties directly involved in the investigation were:

| | |
|---|---|
| Mr A | Complainant |
| Ms B | Consumer/Complainant |
| Ms C | Midwife/Lead maternity carer |
| Dr D | Obstetrician |
| Dr E | Obstetric registrar |
| Ms F | Midwife |
| Ms G | Clinical midwifery manager |
| A District Health Board | Provider |

Also mentioned in this report:

[4] Right 4(1) provides: "Every consumer has the right to have services provided with reasonable care and skill."



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| | |
|---|---|
| Ms H | Hospital midwife |
| Dr I | Clinical head, obstetrics and gynaecology |
| Dr J | Chief medical officer |
| Dr K | Former chief medical adviser |
| Baby 1 | |
| Baby 2 | |

14. Independent expert advice was obtained from obstetrician and gynaecologist Dr Jennifer Westgate (**Appendix A**) and midwife Thelma Thompson (**Appendix B**).

## Information gathered during investigation

### First pregnancy — 2008

*Antenatal period*

15. In 2007, Ms B became pregnant for the first time. At 40 weeks/6 days, Ms B had not yet delivered her baby, so was reviewed by an obstetrician at the local hospital. An ultrasound scan showed that the liquor surrounding the baby was reduced to "slivers", and a diagnosis of oligohydramnios was made.[5]

*Delivery of baby*

16. Ms B was admitted to the Hospital for an induction of labour[6] as she was post term with oligohydramnios. Ms B had non-reassuring CTG trace readings pre-labour and, during the induction, the fetal heart rate showed at least three episodes of bradycardia,[7] prompting delivery by emergency Caesarean section.[8] Baby 1 was born weighing 3140g.[9]

### Second pregnancy — 2010

17. In late 2009, Ms B became pregnant with her second baby and arranged for a hospital midwife, Ms C, to be her Lead Maternity Carer (LMC). Ms B's Estimated Delivery Date (EDD) was mid 2010, and her Body Mass Index (BMI) at the time was 36, which indicated maternal obesity.[10]

18. At 22 weeks, an ultrasound scan showed normal liquor volume[11] and normal fetal anatomy, with measurements correlating with the current gestational age and EDD.

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[5] Oligohydramnios is a common condition in pregnancy characterised by a deficiency of amniotic fluid. Complications of oligohydramnios may include intrauterine growth restriction. The risk of the condition recurring in a subsequent pregnancy depends on its cause during the previous pregnancy.

[6] A method of artificially or prematurely stimulating childbirth.

[7] Fetal bradycardia is a slowing of the fetal heart rate, which is a possible sign of fetal distress.

[8] Operation note (dated 30 May 2008).

[9] Greater than the 10th centile on population-based charts, which indicated satisfactory fetal growth.

[10] There is no record of Ms B's BMI in the clinical notes relating to her first pregnancy. The BMI is a measure of body fat based on height and weight. BMI of 30 or greater indicates obesity. BMI of 40 or greater indicates morbid obesity.

[11] Amniotic fluid.



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The report stated that view of the fetal heart was "suboptimal" and recommended a follow-up ultrasound assessment at approximately 24 weeks.

19. A further ultrasound scan was conducted at 26 weeks. The report records: "Fluid volume is normal. The fetal heart detail remains suboptimal, as best seen, the fetal heart appears normal in size, symmetry and orientation."

20. During Ms B's antenatal assessments of 27 weeks/4 days and 28 weeks/ 3 days, Ms C noted the presence of fetal movements and measured the fundal height.[12]

*Referral to obstetrician*

21. At 28 weeks/4 days, Ms C referred Ms B to an obstetrician. The referral letter stated "TOS [trial of scar]"[13] as the provisional diagnosis and noted:

> "She had a c/s [Caesarean section] in 2008 for failed induction.
>
> Please advise plan for this woman."

No other clinical history was documented in the referral letter. The referral was triaged as routine and Ms B was to be seen within one month.

22. At 31 weeks/2 days, Ms B was assessed by obstetrician Dr D at the Hospital. Dr D recorded that Ms B's blood pressure was normal and her fundal height was 31cm. Dr D noted the complications Ms B experienced during her first pregnancy, including her diagnosis of oligohydramnios, failed induction for post-dates, two episodes of fetal bradycardia,[14] and delivery by Caesarean section. Dr D said:

> "[Ms B's] previous pregnancy history was for induction of labour for oligohydramnios at 40+6 weeks. This is not uncommon at this gestational age and is not necessarily a red flag for IUGR [intrauterine growth restriction]."

23. Dr D recommended a trial of scar if labour commenced spontaneously, otherwise a further obstetrician appointment at term of 40 weeks to discuss the options for delivery, including an elective Caesarean at 41 weeks. The notes record that Ms B did not want an induction of labour.

*Further antenatal assessments*

24. At 34 weeks/1 day, Ms B was admitted to the Hospital and assessed by a senior house officer. The notes record that for the previous two and a half weeks, Ms B had had a chest infection and asthma, and had been taking antibiotics and prednisone.[15] The

[12] The fundal height is a measure of the size of the uterus from the top of the pubic bone to the top of the uterus, used to assess fetal growth. It should match the fetus's gestational age in weeks within 1–3cm.

[13] Attempting a normal vaginal delivery following a previous Caesarean section. Also known as a "trial of labour".

[14] I note that the Operation Note (dated 30 May 2008) records at least three episodes of fetal bradycardia.

[15] An anti-inflammatory steroid.



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notes further record that there were good fetal movements, a reassuring CTG trace, and no sign of spontaneous rupture of membranes.[16]

25. At 35 weeks/5 days, Ms C noted that Ms B was still unwell with respiratory symptoms but there were good fetal movements and the fetal heart rate was sound.

26. Between 36 weeks/5 days and 39 weeks/2 days Ms B was assessed several times by Ms C and other clinicians at the Hospital. The notes record that during that period, Ms B consistently reported fetal movements but continued to have respiratory symptoms. Ms B subsequently visited her GP and was prescribed prednisone and Augmentin.[17]

27. The day after her due date, Ms B reported decreased fetal movement to Ms C. Ms C reviewed Ms B and retrospectively recorded the following:

> "I listened with sonic aid FHR [fetal heart rate] heard. Advising ctg monitor but she said it sounded ok and as she was seeing consultant next day declined."

*Obstetric review*

28. At 40 weeks/2 days, Ms B was seen by Ms C and Dr D at the Hospital. Dr D documented in the clinical notes that Ms B had previously had a Caesarean section for failed induction, but on this occasion did not document the presence of oligohydramnios and fetal bradycardia during Ms B's first pregnancy. Dr D recorded Ms B's fundal height at 41cm and noted that she declined an induction of labour. Dr D also recorded that Ms B had reported decreased fetal movements. In a letter to Ms C, dated that day, Dr D stated: "[Ms B] has been complaining that her fetal movements have not been as noticeable although she has been getting fetal movements daily."

29. Due to Ms B's concerns about reduced fetal movements, Dr D conducted CTG monitoring of Ms B and a bedside ultrasound scan. Dr D recorded the following in the clinical notes:

> "CTG — Reassuring
>
> BL 140–150/avg variability/Ø decels/ + accels / Ø […][18]
>
> USS [ultrasound scan] @ bedside — AFI 6 —
>
> Deepest pocket 3cm @ fundus
>
> A/P Reassuring fetal growth @ 40+2 wks
>
> Plan c/s [Caesarean section] [41 weeks/2 days]."

30. Dr D advised HDC that as Ms B's assessment for decreased fetal movement was normal, there was no reason to move the Caesarean section forward. Dr D stated that

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[16] Rupture of the amniotic sac. A premature rupture of membranes occurs prior to labour.

[17] An antibiotic.

[18] A fetus will have decreased variability of its heart rate and reduced or no fetal movements when it is sleeping. A fetus can be asleep for up to 90 minutes at a time.



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she advised Ms B to notify Ms C or to return to hospital if there were further episodes of decreased fetal movements. This instruction was not recorded in the clinical notes.

31. Dr D advised HDC that her decision to book the procedure for 41 weeks/2 days was because of the limited availability of operating theatres at the DHB for elective Caesareans, as well as Ms B having had respiratory symptoms at the time. She stated:

> "We looked at the date [when she would be 40+3 weeks], however she had been feeling unwell and was on antibiotics so we scheduled the next available date for elective caesarean section. We are only able to perform elective caesarean section at [the Hospital] on dates when we have elective operative lists: Tuesday, Wednesdays and every other Friday. In this case there was no Friday list so the surgery was scheduled for the following Tuesday."

32. The DHB acknowledged that the "logistics of service provision" had an impact on Dr D's decision. It advised:

> "Most maternity units do not undertake elective induction of labour or elective Caesarean sections at weekends or on public holidays. [The DHB] requires elective Caesarean sections to be performed on the elective gynaecology lists (Tuesdays, Wednesdays and alternative Fridays), which limit the days available — previously they had been performed each day on the acute theatre list from Monday to Friday. The first available list after 41 weeks was on [Tuesday], and so that is the date that was planned. Had the DHB system not been changed then the caesarean section would probably have been booked for the [Monday morning], which might have altered the outcome.
>
> …
>
> At present the DHB has not accepted the need to change the system for elective caesarean sections back to the old system (of being able to perform them each working day), despite continuing pressure from the obstetricians for this to happen."

33. The DHB's current Chief Medical Officer, Dr J, stated in response to the provisional opinion that the decision to remove elective Caesarean sections from the acute theatre schedule was made by the Theatre Management Committee. Dr J confirmed that the Obstetrics and Gynaecology Teams were opposed to having their access to acute theatres for elective Caesarean sections altered.

34. Dr J stated that currently, if an elective Caesarean section is regarded by the clinicians as having a higher priority than a scheduled elective patient, the higher priority case will take precedence. If an emergency Caesarean section is required, that will take priority in the acute theatre.

35. Dr J further stated in response to the provisional opinion:

> "If at any time [Ms B's] obstetrician had decided that the caesarean section required to be performed sooner than would be allowed by booking on the elective list, the procedure could have been performed on an emergency list. There have



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never been, and will never be, any barriers which delay a caesarean section which the obstetric team considers should be performed urgently."

*40 weeks/2 days to 41 weeks*

36. Ms B advised HDC that between 40 weeks/2 days and 41 weeks/1 day, neither Dr D nor Ms C contacted her despite both knowing that she had concerns about decreased fetal movements.

37. Ms C initially advised HDC: "I was not LMC or privy to [Ms B's] care from Friday [40 weeks/2 days]. I resumed as LMC postnatally [the day following the birth]…"

38. When HDC subsequently asked Ms C about her understanding of whether she retained clinical responsibility for Ms B's care, Ms C advised:

> "I was the LMC for [Ms B] and had consulted with [Dr D]. I was following her plan. The only time I would have expected to see [Ms B] between that visit and the planned caesarean was if she was concerned about fetal movements."

39. Ms C further stated that there was no formal handover of Ms B's care to Dr D and that formal handover usually occurs when a woman is admitted for a Caesarean section.

40. Dr D advised HDC that:

> "[Ms C] did not formally transfer care to secondary care. I provided consult service only. I expected follow-up between the visit for scheduling the caesarean section with the assessment for [decreased fetal movements] on [40 weeks/2 days] and the scheduled caesarean section on [41 weeks/2 days] would be with [Ms C]."

41. The DHB advised that it did not believe there had been any formal handover of care by Ms C, as the Section 88 Referral Guidelines applicable at the time state that the LMC retains clinical responsibility until it is agreed that the responsibility should be transferred to an obstetrician.[19]

*Hospital admission*

42. At 3pm at 41 weeks/1 day, Ms B was admitted to the Hospital for her pre-admission check, which was conducted by obstetric registrar Dr E. Dr E asked Ms B about fetal movements. Ms B said that she had not felt any fetal movements that day and was unsure when she had last felt her baby move. Dr E attempted to detect a fetal heartbeat with a hand-held ultrasound before asking midwifery staff to perform a CTG. Dr E then performed an ultrasound scan but could not visualise the fetal heart. Dr E requested an urgent formal ultrasound by a sonographer, which showed oligohydramnios and confirmed intrauterine fetal death (IUFD). Dr E stated to HDC that she then informed Ms B of the IUFD, and expressed her condolences.

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[19] The *Guidelines for Consultation with Obstetric and Related Specialist Medical Services (Referral Guidelines)* were previously appended to the Section 88 Maternity Services Notice 2002, and are to be used in conjunction with the Primary Maternity Services Notice 2007. The Referral Guidelines are to be used to facilitate consultation and integration of care, giving confidence to healthcare providers, women and their families.



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43. Ms B told HDC that during the scan she sensed something was wrong and kept asking Dr E what was wrong, but Dr E continued to perform the scan without saying anything in reply.

44. Dr E does not recall Ms B questioning what was happening, but accepted that this may have occurred. Dr E told HDC that she did not want to alarm Ms B until she was sure of the diagnosis, and therefore obtained clarification as quickly as possible. Dr E advised:

> "Due to the significance that an intrauterine fetal demise has for a woman and her family I would always confirm the diagnosis with a formal ultrasound performed by a trained sonographer to allow the diagnosis to be communicated in an unequivocal manner. I did not raise my concerns with [Ms B] explicitly as they arose as at that time I felt it would be unprofessional to set alarm bells ringing without being sure of the diagnosis."

45. At 6.30pm, medical staff explained to Ms B and her partner, Mr A, that a vaginal delivery of the stillborn baby had a lower incidence of complications than a Caesarean section, and that Ms B was at no risk secondary to the IUFD. Ms B elected to go home overnight and return in the morning.

46. The DHB's Midwifery Manager, Ms G, advised HDC that she informed Ms C's midwifery partner about the IUFD, and the midwifery partner stated that she would pass on the information to Ms C.

*Communication between midwives regarding labour and delivery*

47. At 8.20am at 41 weeks/2 days, Ms B was admitted to the delivery suite, and induction medications were commenced an hour later.

48. Ms C visited Ms B that day and asked whether she wanted her to be present for the labour and delivery, to which Ms B replied "yes". Ms C also recalled telling the core midwifery staff that she would attend the labour and birth, but this was not documented in the clinical notes. Ms C advised HDC that she did not document her intention to attend the labour because it is "standard normal practice in our hospital for the LMC midwife to provide labour care once labour is established".

49. Ms G advised HDC that she would usually expect there to be a written plan recording the intentions of the LMC to be present when labour is started by an induction. Dr J also confirmed that that was the expectation.

50. Ms C advised HDC that at 9pm she telephoned the delivery suite and spoke to hospital midwife Ms H. Ms C recalled Ms H saying that Ms B was not in established labour and did not know who was assigned to Ms B at that point. Ms H does not recall Ms C's telephone call but, as far as she can remember, Ms B was not in labour when Ms H began her shift. There is no record in the contemporaneous notes of the conversation.

51. At 9pm, Ms B started to feel contractions. Hospital midwife Ms F was called to help in the delivery suite as it was busy. Ms F said that she was aware that Ms C wanted to be present for Ms B's labour and delivery.



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52. At 9.40pm, Ms F assessed Ms B as not being in established labour. Ms F said: “I offered to ring [Ms B’s] LMC and told [Ms B] to ask me when [she was ready] to ring her.” Ms F said she repeated this offer again between 11.30pm and midnight, when Ms B appeared to be in labour.

53. Ms F said she planned to conduct a vaginal examination at around 1.45am; however, at 1am Ms B felt the urge to push. Ms F stated that at that point, she realised how far Ms B was in labour and considered that it was too late to telephone Ms C. Seven minutes later Ms B gave birth to Baby 2, who was stillborn. Baby 2 weighed 3030g, which indicated severe intrauterine fetal growth restriction (IUGR).[20]

54. The DHB stated the following in response to the provisional opinion:

> “[The DHB’s] Associate Director of Midwifery has advised that it is a reasonable decision not to disturb an LMC midwife in the early evening, with non-urgent information, if there is an expectation she will be attending the woman in labour later in the evening. This is done to enable the midwife to rest before she provides continuous care to the woman during labour and birth. With the benefit of hindsight [Ms F] could have been more pro-active by contacting [Ms C] when labour became established. However, [Ms F] was not to know that the events would proceed rapidly leaving no opportunity for later contact. [Ms F] twice spoke with [Ms B] about calling [Ms C] and was awaiting further instruction from her before telephoning [Ms C]. In the circumstances it was not an unreasonable approach to adopt. [Ms F] was acting appropriately by respecting [Ms B’s] wish not to call [Ms C] until asked to do so. While it would have been optimal for [Ms C] to be present to support [Ms B], [Ms B] did not receive a lesser standard of care as a result of [Ms C’s] absence.”

*Postnatal care*

55. Ms B told HDC that Ms F “left the room quickly” following the stillbirth, and therefore she felt unsupported.

56. Ms F stated:

> “I left [Ms B] and family to have ‘family’ time with [their baby], a time to reflect. This time I was checking the placenta and informing the [Senior House Officer] of [Ms B’s] delivery so we can do swabs, bloods etc. I believe I had left [Ms B] with good intensions [sic] to have family time together and this would have only been 30 minutes at most.”

57. Ms C documented that she visited Ms B in hospital that morning and at home the following day. Ms C called and visited over the next few days and attended the funeral.

58. During a home visit a week later, Ms C asked Ms B whether she was happy for her to continue to provide postnatal care. A decision was made to transfer Ms B’s care to another midwife.

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[20] Fetal growth below the average expected for the gestational age.



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*The DHB's post-mortem report*

59. The DHB's post-mortem report records an anatomically normal male infant but noted that the baby was small for gestational date, as was Ms B's first baby. The report states:

> "The most striking feature in the placenta was the placental weight that was only 181.5 grams (trimmed placental disc).[21] The umbilical cord was poorly coiled. Microscopy of the placenta showed no particular features other than a reduced population of tertiary villi. The low placental weight was very likely to have been associated with the lower than expected fetal weight.
>
> This infant was small for gestation and would have been small a week prior to delivery. It is now recognised that a high proportion of [intrauterine deaths] are small for gestational age but identification of this vulnerable group can be difficult for a variety of reasons. Her first baby was also small and was delivered by Caesarean section that, from the notes provided, appeared to have followed induction of labour at 40+6 weeks. This raises the question — was that baby already compromised in utero prior to [induction of labour] and became hypoxic[22] in the stressful environment that labour creates?
>
> The small size of the placenta was likely to have reflected poor implantation."

**Subsequent events**

60. Following the baby's stillbirth, Ms C met with Dr D. Dr D advised HDC that it was important to review stillbirth cases and learn from them. Dr D reviewed the post-mortem report and the clinical records of Ms B's previous pregnancy to see whether there was a suggestion of IUGR with Ms B's first pregnancy. Dr D created a customised growth chart,[23] which identified that Baby 1 would have been classed as having IUGR had customised growth charts been in use at the DHB in 2008, or in 2010 during Ms B's second pregnancy. Dr D advised HDC that at the time of Baby 1's birth, customised growth charts were not available at the DHB, and the relevant software was installed only in mid 2010. Dr D further stated that as midwifery guidelines in 2010 suggested specialist referral for fetal weight of less than the 5th centile on population-based charts from a previous pregnancy, she did not identify Baby 1's birthweight of 3140g, which was greater than the 10th centile, as a risk factor in Ms B's second pregnancy.

61. Dr D met with Ms B and Mr A to discuss their case and to express her condolences. Dr D told HDC that she subsequently attended Perinatal Society of Australia and New Zealand meetings and lectures regarding growth restriction and its detection. Dr D advised HDC that she now uses customised growth charts for all women.

[21] A normal placenta weighs approximately 500g at term.

[22] Inadequate oxygen supply.

[23] Customised growth charts are used to calculate and monitor fetal growth. The chart is adjusted for the physiological variables of maternal height, weight in early pregnancy, parity (number of times the mother has given birth) and ethnic group.



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62. Ms G undertook an internal investigation of Ms B's case, which identified that there had been a breakdown in communication between midwives Ms F and Ms C, and arranged a meeting between the two of them to discuss the matter.

63. Later in the year, Ms B and Mr A met with the DHB's Maternity Services Manager. Ms B and Mr A received an apology but they advised HDC that they still did not feel that their concerns had been resolved. Ms C said that she wanted to be present for the meeting, but was away on leave when it took place. The DHB has been unable to provide any documentation relating to Ms B's and Mr A's meeting with the Maternity Services Manager, who has since left the organisation.

64. The DHB's "Complaints Policy and Procedure" states: "If a facilitated meeting is to be held, notes of that meeting are taken, recording all outcomes, follow up actions, and whether they are completed by the set date." The DHB said that the Maternity Services Manager did not follow the policy, which is being reviewed to ensure that, in future, its Quality Resource Unit is informed of such meetings so it can attend and provide support. The DHB advised that the Associate Director of Midwifery will also attend any future conciliation meetings.

**The DHB's views on Dr D's management**

65. HDC asked the DHB and Dr D to comment on the standard of care provided to Ms B. Their responses are as follows.

66. The DHB's former Chief Medical Adviser, Dr K, submitted that Baby 1 would not have been identified as IUGR in 2008 or 2010 as his birthweight was greater than the $10^{th}$ centile for population-based charts. She further stated that while the DHB did not have customised growth charts in 2008, there was no requirement to use customised growth charts given that the Section 88 Referral Guidelines, applicable in 2008 and 2010, did not refer to customised growth charts but to population-based charts. She therefore concluded that there was no significant departure from accepted standards by Dr D. As stated above, this view was also shared by Dr D.

67. Dr D advised that in 2010, there was no guideline for referral of women with a BMI between 35 and 40, and there is no evidence in the obstetric literature for serial ultrasounds to monitor fetal growth in obese women.

68. Dr K advised that, in her view, maternal obesity is a reason to have one growth scan at 36 weeks (as opposed to serial scans) and, to date, there is insufficient evidence for relevant obstetrics and gynaecology colleges to include serial scans in their guidelines when managing maternal obesity. She stated:

> "I expect some obstetricians would view failure to use every means at our disposal to assess fetal well-being as sub-standard care, but unfortunately maternity care has suffered greatly from overuse of interventions in the hope of improved outcomes. We are now encouraged to be far more selective in our use of interventions, and (ideally) to await the results of well-conducted studies before changing practice. In light of that I do not feel [Dr D's] care could be viewed as anything more than a minor departure from accepted standards."



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69. Dr K contended that Dr D's management of Ms B at 40 weeks/2 days followed normal practice, as Dr D appropriately assessed Ms B, advised her to return to hospital if reduced movements persisted and, as the pregnancy was perceived as normal at the time, Dr D's decision for Ms B to deliver at 41 weeks' gestation was consistent with international evidence of good practice.

70. Dr K stated that the DHB does not have a protocol for the management of decreased fetal movements as there is no clear guideline on the matter. She advised:

> "Monitoring fetal movements by the women is seen as a basic part of midwifery antenatal care, beginning at LMC [Lead Maternity Carer] booking when women are told the reasons to call their LMC right away — one of those being a reduction in fetal movements, to less than 10/day. This is also documented within the women's hand held pregnancy diary which is given to the woman on booking, filled in by the Midwife at each antenatal appointment. This also contains a kick chart. At each antenatal appointment the woman is asked about her fetal movements as a part of standard practice.
>
> We do not hold a protocol specific to decreased fetal movements, but the usual practice is that if a woman called an LMC about decreased fetal movements, she would be brought in to a facility where electronic monitoring (CTG) of the fetal heart rate could be done for a 20 minute period. If there were any concerns from this, the CTG would be continued and an obstetrician assessment would be done. To our knowledge kick charts are not evidence based, but are a tool that some midwives use to encourage women to monitor movements."

71. Dr K accordingly advised HDC that she would also have managed Ms B in the same way as Dr D, and therefore any criticism of her practice would also apply to Dr K.

72. Dr D, in response to the provisional opinion, provided HDC with a letter from the DHB's Clinical Head, Obstetrics and Gynaecology, Dr I.[24] Dr I supports Dr D's management of Ms B's second pregnancy for the same reasons given by the former Chief Medical Adviser, as outlined above.

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## Response to provisional opinion

73. Ms C's, Ms B's and Mr A's responses to my provisional opinion are summarised below. Dr D's and the DHB's responses are incorporated into the report where relevant.

[24] Dr I was Ms B's obstetrician during her first pregnancy. He was not present during the labour and delivery of Baby 1. Dr I is also Dr D's Medical Council Supervisor. Dr D was under supervision as an International Medical Graduate at the time.



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**Ms C**

74. Ms C responded that she has reflected on her roles and responsibilities as an LMC and is now "fully aware of documentation between primary and secondary care and how that needs to be documented in the clinical notes". Ms C also advised: "I now fully discuss with the women who to contact and how, should I be away from my practice, or if any changes occur making the care change from primary to secondary."

**Ms B and Mr A**

75. Ms B and Mr A advised HDC that they strongly disagree with Dr K's view that Baby 1 would not have been identified as IUGR in 2008 or 2010. They stated that they had seen an earlier report recording that Baby 1's birthweight was in the "1st centile and that Baby 2 was in fact in the 2nd…" They stated that they were "dismayed" that the Caesarean section was delayed despite all the "warning signs" present at the time of Ms B's second pregnancy, including decreased fetal movement.

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## Final opinion: Breach — Dr D

**Introduction**

76. At 28 weeks/4 days, Ms C referred Ms B to Dr D. At 31 weeks/2 days, Dr D reviewed Ms B for the first time and noted her maternity history. The day following her due date, Ms B reported decreased fetal movements to Dr D. Dr D conducted a bedside ultrasound scan and a CTG, which she considered did not indicate anything of concern. She booked Ms B's Caesarean section and advised her to either report to Ms C or return to the hospital if she had further concerns. Ms B arrived at the Hospital for her pre-admission check. Sadly, ultrasound scans confirmed that Baby 2 had died.

77. I am mindful that Dr D's standard of care must be measured against the applicable standards in 2010 and in light of the relevant circumstances.

78. One key issue in this investigation is what is reasonably expected of an obstetrician when managing the second pregnancy of a woman who presents with the following risk factors:

- *First pregnancy*: failed induction at 41 weeks, oligohydramnios, fetal bradycardia and delivery by emergency Caesarean section; and
- *Second pregnancy*: a BMI of 36 and reported decreased fetal movement.

79. The view of my expert obstetrician and gynaecologist, Dr Jennifer Westgate, is that the combined significance of the above factors meant that Ms B was at risk, particularly of having a growth restricted baby in her second pregnancy.[25] She

[25] I acknowledge that, in assessing the cumulative risk factors in Ms B's second pregnancy, Dr Westgate takes into account IUGR in Ms B's first pregnancy (in addition to the factors set out above), on the basis of retrospective use of a customised growth chart. I accept that IUGR in Ms B's first pregnancy was not known at the time of Ms B's second pregnancy, on the basis of use of a customised growth chart, and I do not consider that not using a customised growth chart was unreasonable at that



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therefore advised that serial antenatal ultrasound scans (to closely assess fetal growth) were warranted, as was follow up after Ms B's reports of reduced fetal movements at 40 weeks/2 days. Dr Westgate stated that:

> "…I believe [Ms B's] past obstetric history plus Ms B's presentation at 40+2 [weeks] of gestation with reduced fetal movements strongly suggested that this baby should be delivered before 41 weeks, or if not should have a repeat fetal assessment with liquor volume and CTG before 41 weeks."

80. Dr Westgate advised that Dr D's management of Ms B's presentation represented a moderate departure from accepted standards.

81. In response Dr D stated that the relevant applicable guidelines in 2010 meant that the above factors were not risk factors and, in any event, there was no clarity regarding the expected practice when managing a patient with Ms B's obstetric history. Accordingly, Dr D and Dr K submitted to HDC that Dr D's standard of care was reasonable and, at the most, a mild departure from accepted standards. This view was supported by Dr I.

**What is reasonably expected of an obstetrician in the circumstances?**

*Significance of IUGR in first pregnancy (based on customised growth chart)*

82. Dr Westgate advised that Ms B was at risk of having a growth restricted baby, given that her first baby's customised birthweight centile would be at the 5th centile (if Ms B's BMI during her first pregnancy had been similar to her BMI during her second pregnancy). Dr D submitted that Baby 1 would not have been identified as a growth restricted baby in either 2008 or 2010, as he was greater than the 10th centile on the population-based charts and, at that time, there was no requirement to use customised charts.

83. Fetal growth restriction can be detected by plotting ultrasound measurements of the estimated fetal weight over time on a standard population-based growth chart or a customised growth chart. The customised growth chart is adjusted for physiological variables such as maternal weight, height, ethnicity, parity and fetal gender, which are considered to be significant determinants of birthweight.

84. The use of customised growth charts is increasing in the United Kingdom (UK), Canada and New Zealand (NZ). Dr Westgate advised that online calculators for customised growth charts based on NZ population have been available since 2004,[26] and I note that UK guidelines in 2008 and 2010 recommended the use of customised growth charts.[27] However, in NZ, there was no requirement in 2010 to use customised

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time. I have therefore excluded this factor from my analysis; the issue is discussed in further detail below.

[26] The online calculator recommended for use is developed by the Perinatal Institute and available from www.gestation.net.

[27] National Institute for Health and Clinical Excellence "Antenatal Care" issued March 2008 and last modified June 2010. Available www.nice.org.nz; <accessed 7 February 2013>; Royal College of



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growth charts rather than population-based charts. The *Guidelines for Consultation with Obstetric and Related Specialist Medical Services (Referral Guidelines*) 2007 refer to population-based charts when determining whether to make a specialist referral for previous IUGR.[28]

85. While I agree with Dr Westgate that this case illustrates the usefulness of customised growth charts, Dr D's omission to use customised growth charts at the time of Ms B's second pregnancy (in respect of either pregnancy) was not a deviation from a reasonable standard of care at that time. I therefore do not consider that this was a basis on which Dr D should have detected that Ms B's second baby was growth restricted.

*Obstetric history –known risk factors*

86. Regardless of whether Baby 1 would have been considered IUGR on the basis of a customised growth chart, other known factors present in Ms B's obstetric history indicated that her second pregnancy was high risk and regular fetal growth monitoring was appropriate. In Ms B's first pregnancy there had been a failed induction at 41 weeks, oligohydramnios, fetal bradycardia and delivery by emergency Caesarean section.

87. Dr I, in support of Dr D, stated in response to the provisional opinion that reduced liquor is a "notoriously subjective ultrasound assessment" and inherently unreliable. Dr I stated that the CTG recordings during Ms B's first pregnancy and labour were reassuring in many ways and did not reflect fetal compromise per se. Dr I stated that, therefore, "the events surrounding the previous labour and delivery were not as significant as Dr Westgate would believe".

88. However, I remain of the view that those factors should have prompted Dr D, at the consultation at 31 weeks/2 days, to consider whether regular fetal growth monitoring was required. This is also supported by Dr Westgate's expert advice – in respect of Ms B's first pregnancy she stated that:

> "The scenario of reduced liquor on scan at 40 weeks plus 6 days of gestation followed by clear reports of FHR decelerations during the induction process is entirely consistent with a baby whose customised birth weight centile was in the lowest few centiles. I remain of the opinion that these events should have raised concerns about placental function and fetal wellbeing in [Ms B's] pregnancy in 2010…"

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Obstetricians and Gynaecologists, "The investigation and management of the small-for-gestational-age fetus" (November 2002). Available from www.rcog.org.uk; <accessed 7 February 2013>.

[28] Ministry of Health *Guidelines for Consultation with Obstetric and Related Specialist Medical Services (Referral Guidelines*, 2007, Wellington, Ministry of Health. Available from www.health.govt.nz; <accessed on 5 February 2013>. The 2007 Guidelines have been superseded by the Ministry of Health *Guidelines for Consultation with Obstetric and Related Medical Services (Referral Guidelines)* published in 2012.



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*Maternal obesity*

89. The risk factors arising from Ms B's first pregnancy (summarised above) were even more important when viewed in light of Ms B's obesity during her second pregnancy.

90. Dr Westgate advised me that maternal obesity increases the risk of IUGR and makes fetal growth monitoring more difficult. She considered that this risk factor, together with Ms B's obstetric history, was an indication for serial ultrasound scans. While Dr Westgate acknowledged that the 2007 *Referral Guidelines* state that the LMC must make a specialist referral of a woman with a BMI of over 40 (ie morbid obesity), Dr Westgate advised that the reference in the *Referral Guidelines* suggests that the maternal BMI should be calculated and appropriate clinical action taken. Dr Westgate advised:

> "The obstetric risks of raised BMI have also been recognised for some years… Again there is no randomised trial to provide evidence as to how best to assess fetal growth during pregnancy in women with raised BMI. But in my view this does not mean that we should do nothing…"

91. I consider that Ms B's BMI of 36 alone did not indicate that a specialist referral and serial growth scans were required under the 2007 *Referral Guidelines*. However, when viewed together with her obstetric history (ie the known risk factors), her BMI was an additional risk factor that should have been considered when Ms B presented at 31 weeks/2 days, and again at 40 weeks/2 days.

*Reduced fetal movements*

92. At 40 weeks/2 days, Ms B reported reduced fetal movement. Dr D conducted a bedside ultrasound scan and CTG monitoring. She stated to HDC that she advised Ms B to return to hospital or inform Ms C if there were any further episodes of reduced fetal movement. This advice is not recorded in the notes. Dr D booked Ms B's elective Caesarean section for nine days post term.

93. Decreased fetal movements are associated with increased risk of adverse pregnancy outcome, including stillbirth. A 2009 study found that while obstetricians practising in Australia, NZ and the UK agree that maternal perception of decreased fetal movement is a marker for increased risk, there is variation in antenatal practice around decreased fetal movement owing to the lack of definitive guidance as to what constitutes appropriate assessment.[29]

94. The Australian and New Zealand Stillbirth Alliance's *Clinical Practice Guideline for the Management of Women Who Report Decreased Fetal Movements* (July 2010) recommends ultrasound scan assessment for fetal biometry (growth scan) and amniotic fluid volume for women presenting with decreased fetal movements where "maternal perception persists despite a normal CTG or in the circumstance of suspected fetal growth restriction". The guideline states:

[29] Flenday V, MacPhail J, Gardener G, Chadha Y, Mahomed K, Heazell A, Fretts R, Froen F, "Detection and management of decreased fetal movements in Australia and New Zealand: A survey of obstetric practice" in *Australian and New Zealand Journal of Obstetrics and Gynaecology* 2009, Vol 49, pp 358–363.



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> "Although evidence is currently lacking to recommend ultrasound assessment for all cases of women presenting with DFM [decreased fetal movement], ultrasonography may be used for the detection of conditions that contribute to DFM [decreased fetal movement]."

95. The UK NICE guidelines, while not supporting formal fetal movement counting, recommend that all women reporting decreased fetal movement be assessed for fetal well-being.[30]

96. Dr I stated in response to the provisional opinion that Dr D appropriately managed Ms B's concerns of reduced fetal movements. Dr I stated that Dr D followed normal practice by assessing Ms B, and gave appropriate advice to return to hospital if reduced fetal movements persisted.

97. Dr I further submitted that in light of the relevant standards applicable in 2010, Ms B did not present as a patient who required an emergency Caesarean section. Therefore it was acceptable for Dr D to recommend an elective Caesarean for 41 weeks/2 days.

98. By contrast, Dr Westgate is of the view that the CTG and bedside ultrasound scan were reassuring only to the extent that they showed that there were no signs of acute fetal distress and an emergency delivery was not indicated at that time. Dr Westgate further stated that, although Dr D's advice to Ms B was acceptable for a woman with normal risk factors, it was not acceptable in Ms B's case, given her obstetric history.

99. Dr Westgate also criticised Dr D's decision to book Ms B's Caesarean section nine days post term without any intervening assessment. Dr Westgate viewed this decision as a moderate departure from accepted standards, stating:

> "I remain of the opinion that [Dr D] did not appreciate the combined clinical significance of the events of [Ms B's] previous pregnancy and her reports of reduced fetal movements in planning and follow up after the consultation of [40 weeks/2 days]. ***In my view [Ms B] should have been delivered or reassessed with a CTG and liquor volume within 3 to 4 days of that date and certainly on or before 40+6, the gestation at which she delivered in her last pregnancy*** [my emphasis]."

100. I agree with Dr Westgate's view. Although each risk factor individually may not have raised concerns that Ms B's second pregnancy was high risk, when assessed collectively, those factors should have led Dr D to take a more cautious approach, including planning more frequent fetal growth assessments or ensuring that Ms B delivered on or before 40 weeks/6 days.

101. I acknowledge that, at the time Dr D booked Ms B for her Caesarean section, Ms B had respiratory symptoms and there was limited availability of operating theatres for elective Caesareans. Dr Westgate advised that it was reasonable for Dr D to delay the procedure for a few days given Ms B's respiratory symptoms. However, the delay

[30] National Institute of Clinical Excellence, *Antenatal Care: Routine Care for the Healthy Pregnant Woman*, London, UK, RCOG Press, 2003.



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meant that no operating theatre would be available electively until 41 weeks/2 days. I note the DHB's comment that there was a theatre available if an obstetrician considered that an emergency Caesarean section was required. I am of the view that Dr D should have taken into account all of the above risk factors, and that it was not clinically appropriate to delay the Caesarean section without having reassessed Ms B in the interim.

**Conclusion**

102. In my opinion, Dr D should have taken a more cautious approach to the management of Ms B's second pregnancy. When Ms B presented at 31 weeks/2 days, Dr D should have considered whether serial ultrasound growth assessments were warranted. In my view the matter turns on risk assessment, and in particular, as previously stated, the risk assessment made at 40 weeks/2 days. Enough was known to suggest that this may not be straightforward, and additional assessment was indicated. When Ms B reported decreased fetal movements two days post term, Dr D should have carefully considered Ms B's risk factors and either assessed her or delivered the baby on or before 40 weeks/6 days. To delay the Caesarean section without earlier assessment was suboptimal.

103. I find that Dr D did not provide Ms B with maternity services with reasonable care and skill and, accordingly, Dr D breached Right 4(1) of the Code.

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## Comment: The District Health Board

**Operating theatre availability**

104. The DHB has a duty to appropriately manage the availability of theatre time for surgical procedures, including elective Caesarean section procedures. The DHB reduced the availability of theatre time from every week day to two or three days per week.

105. Dr D explained that when she saw Ms B at 40 weeks/2 days and looked at the next available dates for elective Caesarean sections, her options were either 40 weeks/3 days or 41 weeks/1day. Given Ms B's respiratory illness at the time, Dr D decided not to book the Caesarean the following day. Unfortunately, the next available day was a week later.

106. I accept that DHBs are required to operate within resource restraints, and it is the DHB's decision as to how resources are allocated and best managed. I also accept that the ultimate responsibility for the decision to book Ms B's Caesarean at 41 weeks/2 days lay with Dr D. As stated above, Dr J has confirmed to HDC that an operating theatre would always be available if an emergency Caesarean section needed to be performed.

107. The DHB's former Chief Medical Adviser, Dr K, advised HDC during the course of my investigation that she does "not accept the need to change the system for elective



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caesarean sections back to the old system (of being able to perform them each working day), ***despite continuing pressure from the obstetricians for this to happen***" (my emphasis). I note that the DHB is currently participating in the Productive Operating Theatre project and reviewing the current theatre allocations, incorporating and streamlining the use of theatres in the Hospital.

**Adverse comment — Communication and documentation**

108. Ms C intended to attend Ms B's labour and delivery and recalls telling the delivery suite hospital staff of this plan. Ms C explained that she did not document the plan in the notes because it was normal practice for the LMC to provide labour care once labour is established. Nevertheless, I consider that this was a significant discussion that should have been appropriately documented in the notes to ensure continuity of care. I note that this was also the expectation of the DHB's Clinical Midwifery Manager and the current Chief Medical Officer, Dr J.

109. Ms C said she called the delivery suite around 9pm and spoke to Ms H. Ms C recalls asking who was caring for Ms B, and said that Ms H responded that she did not know. Ms H does not recall this conversation and there is no documentation of it.

110. Ms F said she was aware that Ms C was prepared to come in for the birth and asked Ms B to tell her when she wanted Ms C to be called. I consider that it would have been better for Ms F to have called Ms C directly at that point, so that appropriate arrangements could be made for Ms C to be present for the labour and delivery. I note that the DHB accepted that with the benefit of hindsight, Ms F could have been more pro-active by contacting Ms C when labour became established.

111. I accept that once Ms B felt the urge to push, there was insufficient time to call Ms C. However, poor communication between the midwives, coupled with the lack of documentation, contributed to Ms C not being present to support Ms B. The DHB accepted, in response to the provisional opinion, that documentation of conversations between midwives is an area for improvement.

112. My midwifery expert, Ms Thelma Thompson, identified that the midwives' documentation, although not a breach of professional standards, was an area for improvement, including recording the time that entries were made in the progress notes, and also recording the telephone calls between the midwives.

113. I accept that Ms B's quality of care was not affected by the absence of Ms C. However, in my view, the DHB staff should have recognised that this delivery would be distressing for Ms B and ensured that she had appropriate support. It was also particularly important for Ms B, when she delivered her stillborn baby, to have the presence a midwife with whom she was familiar. The DHB should review its communication and documentation policies to avoid similar events occurring in the future.



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## Adverse Comment: Ms C

114. In Ms C's initial response to HDC she stated: "I was not LMC or privy to [Ms B's] care from [40 weeks/2 days]. I resumed as LMC postnatally [after the birth]…" Ms C subsequently stated that she was in fact Ms B's LMC and that formal handover of care usually occurs when a woman is admitted for a Caesarean section.

115. My midwifery expert, Thelma Thompson, stated that under the 2007 *Referral Guidelines*, Ms C remained Ms B's LMC until a change of responsibility occurred. In Ms B's case, the change of responsibility would have been on the date of her elective Caesarean section.

116. While Ms C subsequently acknowledged that she retained clinical responsibility for Ms B's care between 40 weeks/2 days and 41 weeks/1 day, I am concerned that Ms C was initially unclear about the nature and extent of her responsibilities. It is important that LMCs are clear about their clinical responsibility to the woman and, if there is any ambiguity, a discussion between the woman and her LMC should take place so that the woman knows who to contact if she has any concerns.

117. Although Ms Thompson commented that it was acceptable practice for Ms C not to have contacted Ms B between that period (unless Ms B contacted Ms C), I remain of the view that Ms C, as Ms B's LMC, should have been clear on her role and responsibilities.

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## Recommendations

### Dr D

118. I recommend that Dr D:

1. apologise in writing to Ms B. The apology is to be sent to this Office by **29 July 2013** for forwarding to Ms B; and
2. review current obstetric literature on the clinical management of women who are at risk of having a growth restricted baby, and the management of women with raised BMI. Dr D is to provide HDC a written account of her learnings from the literature review together with any changes to her practice by **26 August 2013**.

### The DHB

119. In my provisional opinion, I recommended that the DHB:

1. develop a policy on the use of growth scans for women at risk of having an IUGR baby;
2. review its theatre booking system and availability of operating theatres for elective Caesarean sections;
3. ensure that there are appropriate processes for effective communication between midwifery staff; and



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4. provide staff training on record-keeping.

120. The DHB advised HDC that it has already implemented the use of customised growth charts as per recommendation (1).

121. The DHB advised HDC in relation to recommendation (2) that it is participating in the Productive Operating Theatre project, which includes reviewing the current theatre allocations, incorporating and streamlining the use of theatres in the Hospital. The DHB advised that this may result in increased elective theatre time for the Obstetrics and Gynaecology Team.

122. The DHB advised in relation to recommendations (3) and (4) that it has provided education and support to its staff to improve documentation in clinical records. It stated that regular audits of records are conducted by the maternity quality facilitator, and that Transfer of Care forms are currently being trialled, which the DHB considers will enhance handover of care between maternity professionals. The DHB also advised that an Associate Director of Midwifery role has been newly created to provide additional clinical governance and support for hospital midwives.

**Ms C**

123. I recommend that Ms C reflect on her role and responsibilities as an LMC, in particular her clinical responsibilities to the woman after a specialist referral has been made, and provide a written report to HDC by **19 August 2013**.

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## Follow-up actions

124. 
- A copy of this report with details identifying the parties removed, except the experts who advised on this case, will be sent to the Medical Council of New Zealand and the Royal Australian and New Zealand College of Obstetricians and Gynaecologists, and they will be advised of Dr D's name.
- A copy of this report with details identifying the parties removed, except the experts who advised on this case, will be sent to the New Zealand College of Midwives, the Midwifery Council of New Zealand, and the Maternity Services Consumer Council, and placed on the Health and Disability Commissioner website, www.hdc.org.nz, for educational purposes.



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## Appendix A — Independent obstetric advice to the Commissioner

**4 August 2011**

The following preliminary expert advice, dated 4 August 2011, was obtained from obstetrician and gynaecologist Dr Jennifer Westgate:

"Thank you for asking me to provide expert advice on this complaint. I have read the files you sent me. I will not repeat the history of the events as you have already summarised these. I will respond to your specific questions.

1. **Should the caesarean section (CS) have been done [at 40 weeks/2 days] given the history and the reduced fetal movements?**
   No, I do not believe that a CS was necessary [at 40 weeks/2 days] as the CTG was normal. However in view of [Ms B's] past history and her presentation with reduced fetal movements I believe delivery should have been scheduled within the next few days.

   The key to the sad loss of [Baby 2] appears to me to be due to lack of recognition that there were indications that [Ms B] should have had serial ultrasound scans (USS) to monitor her baby's growth during the pregnancy. There were two reasons that serial scans were required, in my view. The first is [Ms B's] history of an induction for low liquor volume at 41 weeks followed by two episodes of fetal bradycardia during the induction process which resulted in delivery by CS. These events suggest to me the possibility that as a post term [Baby 1] did not have the reserves to cope with pre-labour contractions. This would raise concern about placental function and in my view warranted regular assessment of fetal growth in a subsequent pregnancy. The second factor was [Ms B] had a BMI in this pregnancy of 36, which places her in the obese category. Clinical assessment of fetal growth in large women is even more difficult than usual and for this reason ultrasound assessment of fetal growth is recommended. Furthermore, obese women are at higher risk of intrauterine fetal death, another indication for closer monitoring of fetal growth. Had this been done, [Baby 2's] fetal growth restriction (which was severe by the time of delivery) would have been identified and delivery by CS offered by term, if not before.

   Over the last 6 or more years the use of customised antenatal growth charts and calculation of customised birth weight centiles to more accurately predict babies at risk of fetal death has been widely publicised both internationally and within NZ, specifically by Professor Lesley McCowan. Similarly, the risks of maternal obesity have been a topic of major interest in the last 3 to 4 years. For example the Royal Australian and NZ College of O&G (RANZCOG) magazine dedicated an entire issue to obesity in the summer of 2008. Baby 2's customised birth weight centile was the 2nd centile, indicating severe fetal growth restriction (FGR). The post-mortem confirmed evidence of FGR and noted that the placenta was very small. If [Ms B] was of a similar pre-pregnancy weight in her first pregnancy with [Baby 1] then his customised birth weight centile would be the 5th centile, again indicating a significant



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FGR. I obtained these centile figures from a GROW chart in [Ms B's] notes — obviously the data was entered and the results printed after [Baby 2] was delivered and his birth weight was known. This illustrates that these computerised programs are available at [the DHB], as they are in all the obstetric Hospitals I have worked in NZ.

I view the absence of serial antenatal growth scans to monitor fetal growth in [Ms B's] pregnancy as a severe departure from an appropriate standard of obstetric practice. However, I am also aware that not all clinicians (LMCs and obstetricians) use customised growth or centile charts (nor are they required to) and the risks of maternal obesity may not yet be fully respected. Thus I am unsure as to whether the majority of my colleagues would view this with the same severity as I do.

2. **Was the ultrasound (USS) done [at 40 weeks/2 days] sufficiently reassuring?**
The combination of the CTG and bedside USS for liquor volume only was reassuring that [Baby 2] had no acute signs of fetal distress and an emergency delivery was not indicated. The normal range of amniotic fluid volume as measured by the Amniotic Fluid Index (AFI) varies from study to study, some using <5cm, others less than 8cm. Both the AFI (6cm) and maximum pool depth (3cm) measured on the 24th are within the normal range but are at the lower end of the normal range at term. By comparison, the figures we usually use for 41 week gestation pregnancies are AFI>5cm and maximum pool depth >2cm.

3. **Was the follow-up arranged [at 40 weeks/2 days] acceptable?**
[Ms B] was asked to report further instances of reduced fetal movements. This is standard advice which is acceptable for a standard pregnant woman. However, for reasons I have already outlined, I do not believe this was adequate in [Ms B's] case. Given her history and her gestation (2 days past term) it is my view that if conservative management was to be continued (not my preference) she should have been assessed again with a CTG and bedside USS for liquor volume by 41 weeks. Even if [Ms B] had not had a previous baby with growth restriction, I would not be entirely comfortable with no planned review before delivery at 41+2 days. Fetal monitoring for post-dates usually commences at 41 weeks of gestation and usually consists of a clinical review, a CTG and a liquor volume assessment. The National Women's protocol for the management of postdates pregnancy is available on-line.

**[PDF]**INDUCTION OF LABOUR – **POST DATES PREGNANCY**

www.nationalwomenshealth.adhb.govt.nz/.../...

This document states the post-term review should occur around 41 weeks (40+5 to 41+2). This allows for arranging access to clinics which can be challenging at times. These guidelines also suggest that a formal growth scan be done at around 41 weeks, not just a liquor volume assessment. [Ms B's] admission for delivery preparations was 41+1 so this falls within the range



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given in the National Women's document. Therefore it is possible that some practitioners would not view these arrangements with any concern in a woman with no past history of fetal distress at 41 weeks but I believe that in [Ms B's] case most would view this as a moderate departure from a safe standard of practice.

4. **Should a kick chart have been given?**
Most guidelines do not suggest the use of kick charts routinely in pregnancy. There is no evidence that formally completing a kick chart when there has been maternal perception of reduced movements definitely results in better fetal outcome. Practitioners vary in their attitude to kick charts in high risk pregnancies or following reports of reduced fetal movements (as summarised in this report;

**[PDF]Fetal Movement** Monitoring: Practice in Australia and New Zealand

www.stillbirthalliance.org/.../**fetal**%20**movement**%20monitoring_Flenady et al).

Therefore lack of advice to use a kick chart cannot be criticized.

5. **Should the obstetric specialist have contacted the LMC to arrange follow-up with the LMC later in the week?**
My preference for management would have been delivery within the next 2–3 days but if conservative management was chosen then in my view the follow-up required was a repeat CTG and liquor volume assessment and fetal growth scan before 41 weeks. An appointment could have been given to [Ms B] before she left the clinic. A consultation with the LMC in the community would not have been adequate but might have given [Ms B] an opportunity to reflect on her perception of fetal movements. It is my practice to contact LMCs by phone when some action is required but I actually do not know what percentage of obstetric specialists do this. Some hospitals fax copies of the antenatal consultation to the LMC following the Clinic and in others, the Hospital Midwife at the Clinic telephones each LMC with an outcome summary. Some form of communication with the LMC should be made.

6. **Should a formal clinic visit have been offered before the delivery date?**
Yes, for reasons explained already.

7. **Should the Hospital have a protocol for follow-up of women with reduced fetal movements?**
I read the email response from [the DHB] on the question of management of reduced fetal movements. It is difficult to write an evidence based protocol as there is no clear evidence. In most cases advice to women to continue paying attention to fetal movements and report further concerns is what is advised. I suggest use of a kick chart in these circumstances (and there is usually a kick chart in most patient held maternity booklets). As I mentioned above not all practitioners use kick charts which given the absence of evidence should not be criticised.



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> It would appear to me that [Ms B's] antenatal management was focused on one of her obstetric risk factors; that of having had a previous CS and was aimed at wanting to maximise the opportunities for a vaginal delivery. Her other two risk factors — the past history of fetal oligohydramnios, pre-labour fetal 'distress' warranting CS and FGR in her first pregnancy coupled with her raised BMI in the current pregnancy do not appear to have precipitated any heightened concern for fetal wellbeing. Had these two factors been absent then management of her presentation at 40+2 with reduced fetal movements could be viewed as within the range of standard practice. However, in my view, these additional risk factors warranted serial USS assessment of fetal growth in the pregnancy and should have prompted a different response to the presentation with reduced movements at term (had she remained undelivered by then).

I trust this information is helpful. Please contact me if there are any issues which require clarification. I will not be sending a hard copy of this letter or my invoice.

Kind regards.

Yours sincerely

Jenny Westgate DM FRANZCOG.
Obstetrician and Gynaecologist"

**Clarification of preliminary advice**

*5 August 2011*

Dr Westgate was asked when the serial ultrasound scans should have been performed and whether the severe departure applies only to [Dr D] or whether [Ms C] should also have recognised the need for serial ultrasound scans. Dr Westgate stated:

> "Serial scans in situations like this are usually performed at around 28 weeks, 32, and 36 weeks with scans at 38+ if there is a need.
>
> I think the obstetrician bears the primary responsibility as this is a secondary care issue. However, if the Midwife fails to recognise these risks are present she will not refer the woman for a secondary review! In this case [Ms B] was only referred for secondary review on account of a previous [Caesarean section] so she was only seen at 32 weeks or so by [Dr D]. That still gave time for a couple of growth scans."

*16 August 2011*

Dr Westgate was then asked whether all women with a BMI >35, assuming this is their sole obstetric risk factor, should be referred for specialist assessment prior to 26 weeks; whether an acceptable alternative practice would be for the LMC to order serial growth scans in this situation; and whether she thought the need for formal fetal growth monitoring in this situation is common knowledge amongst LMCs, and therefore whether the failure to organise such monitoring (either by specialist referral



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or other means) would be a departure from expected standards. On 16 August 2011 Dr Westgate responded that:

> "there are no written guidelines for the antenatal monitoring of fetal growth in obese women — despite their higher risk of stillbirth. Both Dr McCowan and I suggest at least one single scan at around 36 weeks' gestation if Obesity is the only risk factor. In this case I have suggested serial growth scans because of the previous growth restricted baby."

The Ministry of Health LMC Referral Guidelines state that all patients with morbid obesity (generally regarded as BMI >40) must have transfer to specialist care recommended. However, there is no level of recommendation for obese patients (BMI 35–40). Dr Westgate was asked to comment on this, as LMCs will often refer to these guidelines when justifying their management of a patient. She responded:

> "Prof McCowan tells me that new Referral Guidelines about to come out will recommend specialist care at BMI >40 and specialist consult >35. I accept that these guidelines were not in place at the time of the case in question."

Dr Westgate was also asked to comment on whether assessment of maternal BMI at an antenatal booking visit is an evidence-based and expected practice in this country. Dr Westgate stated that:

> "the importance of measuring height and early pregnancy weight has been advertised widely in NZ for some time — and the fact that referral guidelines currently state high BMI as a referral indication does suggest that BMI should be calculated. There is a lot of evidence based literature around the value of customised birth weight centiles as more accurately identifying a group of babies who have increased neonatal morbidity.
>
> I indicated in my report that I felt the failure to identify and manage the risk factors of previous growth restricted baby and maternal obesity in combination with reduced fetal movements at term was a severe departure from safe practice but I also stated that I was not sure whether all of my colleagues would view this with the same severity. However, the increased risk of obesity in pregnancy has been publicized for some time and both Professor McCowan and I believe that all midwives (and specialists) should have more education in the management of obesity in pregnancy.
>
> The bottom line in this case is that in a previous pregnancy when this woman went to 41 weeks she had reduced liquor volume and then developed fetal distress during an induction and delivered what was for her a growth restricted baby. Yet in the next pregnancy despite presenting with reduced movements at term, she was allocated a date for a CS at 41 +2 days without any intervening review or concerns about fetal wellbeing. Even if the presence of obesity is ignored (which it should not be in my view) and if the fetal growth restriction was not identified by the use of customised birth weight centiles (despite the large amount of local education and the availability of the programs to calculate these) then this management fell below an acceptable standard in my view.



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I think this case illustrates the value of customised birth weight centiles — if they had been used they would have clearly alerted both the Midwife and specialist that there was a growth problem in the previous pregnancy which could recur therefore indicating the need for serial scans in the pregnancy."

**Further expert advice**

*20 March 2012*

The following further expert advice was obtained from Dr Westgate dated 20 March 2012 following receipt of further information and responses from the parties involved:

"Thank you for asking me to provide further expert advice on this complaint. I have previously provided preliminary advice. I have read all of the documents listed on page 5 of your letter of instruction to me. I will not repeat the history of the events of this case as they have been well documented.

My concerns regarding the treatment given to [Ms B] related to failure to identify that she was at risk of a growth restricted fetus in her pregnancy in 2010. As a result fetal growth and wellbeing were not assessed with serial growth scans during the pregnancy. Similarly lack of recognition of this risk contributed to a lack of assessment of fetal condition between [Ms B's] visit at [40+2 weeks of gestation] and her admission at 41+1 weeks of gestation for an elective caesarean section (CS) the following day despite her history of reduced fetal movements at term.

I indicated that there were three factors which I felt should have indicated that she was at risk of having a growth restricted fetus.

**1. Previous birth of a growth restricted baby.** [Ms B's] previous baby was growth restricted as calculated by his customised birth weight centile of only 5%. I was surprised that this value was not calculated during [Ms B's] care in her pregnancy of 2010. The usefulness of customised centiles to more accurately identify babies born with growth restriction has been well documented from the late 1990s and an on-line calculator for customised centiles based on a NZ population has been available since 2004. However, the DHB has indicated that the on-line calculator was not available through their hospital computer system until July 2010. [Dr D] points out in her report that [Ms B's] first baby's birth weight was above the 10$^{th}$ centile on population based charts and therefore, on this basis, was not identified as growth restricted. The current NZ Section 88 Maternity Guidelines suggest referral for a previous baby with a birth weight <10$^{th}$ centile on population charts. Use of customised birth weight centiles is not a referral guideline.

The question arises then as to whether access to the on-line calculator for customised birth weight centiles should have been available prior to 2010.

I believe that calculation of customised BW centiles has been demonstrated to be clinically useful and therefore would be regarded as best practice, even prior to 2010. There is no randomised clinical trial which clearly shows that identification of a low customised birth weight centile from a previous pregnancy significantly



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improves outcome in a subsequent pregnancy. However we do know that women who have had one growth restricted baby are likely to have another. Despite the lack of randomised trial evidence most obstetricians suggest serial scans of fetal growth and would generally advise against going beyond term in a subsequent pregnancy. Thus there are good reasons for calculating a customised BW centile using it to inform care in the next pregnancy. This is especially so when the baby's weight seems smaller than expected or there has been a delivery for fetal distress, as in [Ms B's] case.

Adoption of change into clinical practice proceeds at varying pace in different centres and also between individuals in the same centre. Where there is no landmark randomised trial changes in practice usually occur by diffusion over time. Hearing a presentation at a meeting, reading a paper, reviewing a case, discussions with colleagues are some of the ways this occurs. Use of these BW centiles is by no means widespread through NZ, nor is their use mandated. Thus it is not possible to say that the DHB was offering substandard care by not offering access to on-line calculation of birth weight centiles prior to 2010.

**2. Raised maternal BMI**. The second clinical factor which indicated that [Ms B] was at higher risk of a growth restricted baby in 2010 was the fact that her BMI was 36. The obstetric risks of raised BMI have also been recognised for some years, as I indicated in my previous report. Again there is no randomised trial to provide evidence as to how best to assess fetal growth during pregnancy in women with raised BMI. But in my view this does not mean that we should do nothing as perhaps [Dr K] and [Dr D] suggest in their comments.

As I indicated in my report Section 88 Referral Guidelines only listed BMI>35 as an indication for referral after 2010 so failure to consider monitoring fetal growth with raised maternal BMI was not mandated by the Guidelines during [Ms B's] pregnancy in 2010. Again I believe it is a matter of best practice based on available evidence and expert advice slowly being accepted into clinical practice at different rates in different places. As I have already indicated failure to arrange serial growth scans on the basis of a raised maternal BMI could not be considered substandard practice in 2010 as the guidelines were not in place at this time.

**3. Clinical Risk assessment**. The third clinical factor which I believe indicated that fetal growth restriction, or more specifically poor post-term placental function was a possibility in this 2010 pregnancy was [Ms B's] past obstetric history. In her first pregnancy [Ms B] had an assessment of fetal wellbeing at 40+6 weeks of gestation, as is recommended for post-dates pregnancies. A marked reduction in liquor volume was found and as a result labour was induced. During the induction process two episodes of fetal bradycardia occurred and as a result the baby was delivered by CS. In my view it is very likely that this baby would have been stillborn had he not been identified as being at risk by the postdates liquor scan and had labour induced.

[The Perinatal Pathologist] who performed the post-mortem commented that the events of [Ms B's] first pregnancy and raised the question of poor placental function in that pregnancy on page 2 of her report.



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> 'This infant was small for gestation and would have been small a week prior to delivery. It is now recognised that a high proportion of term IUDs are small for gestational age but identification of this vulnerable group can be difficult for a variety of reasons. Her first baby was also small and was delivered by Caesarean section that, from the notes provided, appeared to have followed induction of labour at 40+6 weeks. This raises the question — was that baby already compromised in utero prior to [induction of labour] and became hypoxic in the stressful environment that labour creates?'

As I indicated in my preliminary report, I believe this past obstetric history plus [Ms B's] presentation at 40+2 [weeks] of gestation with reduced fetal movements strongly suggested that this baby should be delivered before 41 weeks, or if not should have a repeat fetal assessment with liquor volume and CTG before 41 weeks.

Risk assessment is a key part of antenatal care. I trained in the 1980s in Auckland when we had very limited access to ultrasound, birth weight centiles and postdates assessments had not been thought of, induction rates were very low and we did not know raised BMI was a risk factor for fetal growth restriction and stillbirth. We did however encounter many cases of postdates stillbirth. As a result we did then and still do, deliver women with stillbirth at or beyond term one to two weeks earlier than their previous demise. We also recognised that fetal distress during post term labour was possibly an indication of poor placental function and so ensured that these women did not go beyond term in subsequent pregnancies. However, it is true that post-dates fetal distress in a previous pregnancy does not feature as a risk factor for fetal growth restriction in the current obstetric textbooks that I have been able to review in preparing this report. (But delivery of a previous growth restricted baby does.)

[Dr D] states that she had not been involved in a case of stillbirth for some years. The average O&G registrar and specialist in public practice in NZ would encounter cases of stillbirth with unfortunate regularity, if not in women attending their clinics, then through discussion of cases at regular Perinatal Mortality and Morbidity meetings. At these meetings it is usual for any evidence for fetal growth restriction or other cause of stillbirth to be sought and recommendations are made for care in the next pregnancy. It may well be that [Dr D's] obstetric practice has been in a population where stillbirth is uncommon compared to NZ and/or the medicolegal climate where she worked precluded the learning opportunities that we are fortunate to have in our Perinatal Mortality Meetings. To her credit, [Dr D] has followed up on the issues from this case, has attended NZ Perinatal Society meetings and educational sessions given by Professor McCowan and now uses customised birth weight centiles and antenatal growth charts in her clinical practice. As clinicians we never stop learning and accumulate experience with each patient we treat, manage or review with colleagues. I can think of scenarios in which my management has altered considerably based on experience.

There is another mitigating factor in this case. [Ms B] had a respiratory tract infection and was on antibiotics and steroids. It is generally better not to schedule



HDC

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elective or semi-elective surgery in the presence of acute respiratory infections so it was reasonable for [Dr D] to want to delay delivery for a few days. Unfortunately, waiting a few more days for the infection to settle meant that the next available date for an elective CS was at 41+2 [weeks] of gestation. To [Dr D's] credit she did listen to [Ms B's] concerns about liquor volume and performed an ultrasound to assess this as well as a CTG when investigating [Ms B's] report of reduced fetal movements. This seems to have reassured her that it was safe to wait a further week before delivering the baby.

**What obstetric Standards apply in this case?**
The standards are those detailed in the Section 88 Referral Guidelines. As I have already indicated the guidelines related to low birth weight babies and referral for raised BMI in 2010 were adhered to in this case.

There are no standards for the follow up of a woman who reports reduced fetal movements. As I indicated previously, failure to advise use of a kick chart can not be criticised. The advice given to [Ms B] to report further instances of reduced movements is standard. Whether or when to schedule a repeat fetal assessment in cases of reduced movements is again not clear. But generally, in the absence of other risk factors, obstetricians would rely on a repeat presentation initiated by the mother. If risk factors or adverse features were present then follow-up with a formal growth scan and/or liquor assessment might be arranged, depending on the gestation.

**Comment on [the DHB] Conciliation meeting [later in the year].**
The DHB have advised that the manager who facilitated this meeting did not make a record of the discussions nor did they send a letter to [Ms B] and [Mr A] regarding the outcome of the meeting. [Ms B] was unhappy with these events and initiated her complaint to the HDC. We all know that communication is a key element in dealing with and resolving complaints. In my experience the role of senior management in facilitating these meetings is vital to both the complainants and the staff being complained about. From the very little information provided about this meeting it appears that it was completely unsuccessful from [Ms B's] view but the manager involved seems to have been oblivious to this fact. Does [the DHB] have a policy regarding these meetings? What steps have they taken to ensure that appropriately experienced and skilled staff facilitate the meetings and provide the best opportunity to answer questions, resolve concerns, apologise where necessary and follow-up any outstanding issues?

**In conclusion** I remain of the opinion that [Dr D] did not appreciate the combined clinical significance of the events of [Ms B's] previous pregnancy and her reports of reduced fetal movements in planning the follow-up after the consultation of [at 40 weeks/2 days]. In my view [Ms B] should have been delivered or reassessed with a CTG and liquor volume within 3 to 4 days of that date and certainly on or before 40+6, the gestation at which she delivered in her last pregnancy. I have discussed a number of mitigating factors which I believe influenced [Dr D's] decision making process. I find it difficult to comment on the severity with which this should be viewed. I am aware that clinicians trained in a different era and in a



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different environment are exposed to different clinical problems and management options. I am also aware that although we try as best as we can we do not always get everything right. In my experience bereaved parents in similar circumstances want to know that clinicians have learnt from the events and it seems to me that [Dr D] has. It is a great pity that this has not been conveyed to [Ms B] and [Mr A] either during the meeting [later in the year] or subsequently.

Kind regards.

Yours sincerely

Jenny Westgate DM, FRANZCOG

Obstetrician and Gynaecologist"

**Clarification of further advice**

*23 May 2012*

Dr Westgate was asked to clarify why she found it difficult to comment on the severity with which she viewed [Dr D's] decision-making process. On 23 May 2012 Dr Westgate stated:

"I am trying to be fair and reasonable in my comments and I tried to identify contributing and mitigating factors. Since my last report I have had the opportunity to discuss aspects of this case anonymously with other senior colleagues. As a result, and in response to your request for some idea of severity of departure from a standard of practice, I suggest the following.

Failure to identify previous growth restricted baby and failure to identify risks associated with obesity — minor end of the scale. This information has been around for some years and I think failure to understand these by 2010 signifies rather late trickle down into clinical practice in [the region]. I am aware that growth centiles and BMI guidelines were not in the section 88 referral guidelines in 2010 but I do not believe that clinicians should use legislation as a guide to best clinical practice.

Management of the presentation with reduced fetal movements a few days past term — moderate departure. The events surrounding induction and delivery of the previous pregnancy were significant and needed to be taken into consideration when making the decision to allow this woman to go post term and beyond the gestation at which problems occurred in her last pregnancy."

**Further advice on first pregnancy**

*30 July 2012*

The clinical records of [Ms B's] first pregnancy were obtained and sent to Dr Westgate for review. On 30 July 2012 Dr Westgate commented:

"Thank you for asking me to provide further expert advice on this complaint. I have previously provided advice on [Ms B's] pregnancy in 2010 which sadly



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ended in a post term stillbirth of a growth restricted baby. You have now asked me to comment on [Ms B's] first pregnancy in 2008. I have read the hospital notes you emailed to me.

**Summary of [Ms B's] pregnancy in 2007–2008.**
[Ms B] became pregnant for the first time in 2007. Her due date was [date]. Her antenatal course was complicated only by recurrent urinary tract infections for which she was treated with prophylactic antibiotics. [Ms B] had not delivered by 40 weeks and 6 days of gestation and was reviewed by [Dr I] at an Antenatal Clinic in [the town]. He arranged for her to have an ultrasound assessment of liquor volume that day. The ultrasound report stated that the liquor was reduced to slivers around the baby, the only liquor pool which did not contain umbilical cord measured 1.5cm and the uterine artery Doppler's were at the upper limit of normal. As I have already advised, assessment of liquor volume by ultrasound at around 41 weeks of gestation is recommended practice as part of an assessment of fetal condition. If the deepest measurable pool of liquor is less than 2cm then induction of labour is advised. Accordingly [Dr I] arranged for [Ms B] to be admitted that evening to the hospital for induction of labour.

[Ms B] was admitted to [the Hospital] at 1900 hours. A CTG was performed and is reported as being normal. Her cervix was very unfavourable and she was given 1 mg of Prostin gel to commence the induction. The post prostin CTG was described as normal. The following day she received two doses of 2mg of Gel, one in the morning and one at 1415 hours. The fetal heart rate (FHR) was checked appropriately on CTG and auscultated regularly with no abnormalities reported. By the evening [Ms B] was not experiencing contractions and was preparing to settle down for the night. At 2150 hours the FHR was auscultated and a deceleration heard. As a result a CTG was recorded. The notes record that the Midwives who reviewed the CTG were concerned at the presence of FHR decelerations and requested the on call consultant obstetrician come in to review [Ms B] and the CTG. [A doctor] attended and recorded that the CTG showed a baseline of 150 beats per minute with moderate variability. She noted two to three episodes of FHR deceleration down to 80 to 100 beats per minute which were variable and late. The CTG in-between was normal. [The doctor] examined [Ms B] and discovered that her cervix was still closed. She discussed with [Ms B] and her husband that the baby may not tolerate labour and in view of the fact that she was 'remote' from labour and delivery a caesarean section (CS) was recommended and agreed to by [Ms B]. The CS was performed under spinal anaesthetic and [Baby 1] was delivered at 0027 hours. The CS was uneventful. [Baby 1] cried at birth and did not require resuscitation. His Apgars were 9 and 10 at one and five minutes. [Baby 1] weighed 3140 grams. He had mild jaundice the following day and was complement fed as he was not latching onto the breast well. [Ms B] and [Baby 1] were transferred back to [the local hospital] to complete recovery after the CS and their progress there appears to have been uneventful.

Unfortunately, the CTGs have either faded or the quality of the photocopy is poor so I am unable to make any comments about the FHR patterns recorded. The notes



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however do contain thorough descriptions of the CTGs recorded using a standardised template.

**Comment**
The scenario of reduced liquor on scan at 40 weeks plus 6 days of gestation followed by clear reports of FHR decelerations during the induction process is entirely consistent with a baby whose customised birth weight centile was in the lowest few centiles. I remain of the opinion that these events should have raised concerns about placental function and fetal wellbeing in [Ms B's] pregnancy in 2010, especially when she went beyond term again with reports of reduced fetal movements.

I hope this information is helpful to your assessment of this case. Please contact me by email if you have any further questions.

Kind regards

Jenny Westgate FRANZCOG DM.

Honorary Associate Professor in Obstetrics and Gynaecology"



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## Appendix B — Independent midwifery advice to the Commissioner

The following preliminary expert advice, dated 4 October 2011, was received from midwife Ms Thelma Thompson.

"I have been asked to provide the Health and Disability Commissioner with preliminary advice on case number 11/00515 and I confirm that I have read and agree to follow the Commissioner's Guidelines for Independent Advisors.

I graduated with a Diploma of Nursing in 1984, a Diploma of Midwifery in 1989 and a Bachelor of Health Science in 1996. I have held my current position as Director of Midwifery Practice at Counties Manukau District Health Board since November 2002. Prior to that time I held a variety of clinical roles in both primary and secondary practice. I am the current Chair of the National DHB Midwifery Leaders Forum and was a member of the Midwifery Council of New Zealand from January 2004 to February 2010.

As Director of Midwifery Practice I am responsible for the professional oversight of the midwives at Counties Manukau DHB. Part of my role involves:

- providing professional direction and midwifery leadership within CMDHB;
- facilitating the provision of the highest quality midwifery care in accordance with designated standards of practice locally, nationally and internationally.

The Commissioner requested advice on

- if there are concerns about the care provided by [Ms C] and [the] District Health Board which require formal investigation.

The following sources of supporting information that were sent have been reviewed prior to the advice being given:

- A. [Mr A] and [Ms B's] complaint
- B. [Ms C's] response to the complaint dated 22 June 2011
- C. [The DHB's] response to the complaint dated 16 June 2011
- D. [Ms B's] clinical notes from [the DHB]
  - NB page 79 is a scan report dated […] 2008 from [Ms B's] first pregnancy.
- E. Letter from [the DHB] dated 26 July 2011

**Background and Summary**

[Ms B] was pregnant with her second child. Her first pregnancy had resulted in induction at 40+6 weeks gestation proceeding to emergency Caesarean section due to failed induction and fetal bradycardia.

[Ms B] was seen [at 17 weeks/3 days] for an antenatal booking appointment with Midwife (MW) [Ms C], with an expected due date of [40 weeks]. Antenatal care continued.

*[28 weeks/4 days]*
MW [Ms C] referred [Ms B] for an Obstetric review due to history of previous Caesarean section.

*[31 weeks/2 days]*
[Ms B] was seen by [Dr D] for an Obstetric Consultant review. [Ms B] was 31+2 weeks gestation, had no concerns. Blood pressure was 110/76, fundal height equivalent to dates, showing a normally grown baby. The plan was made for trial of scar if [Ms B] went into labour normally. If she reached her due date without going into labour spontaneously, the plan was for another Consultant appointment to discuss options for delivery.

*[40 weeks/1 day]*
[Ms B] called [Ms C] and informed her that she had decreased fetal movements. [Ms B] was seen and the fetal heart rate was within normal range. A cardiotocograph (CTG) was offered and declined as [Ms B] had an appointment with the consultant the following day.

*[40 weeks/2 days]*
Seen by [Dr D] at 40+2 weeks gestation as arranged. [Ms B] noted that the fetal movements had not been as noticeable. Blood pressure was 110/80, fundal height equivalent to 41cm. The plan was for a trial of scar if [Ms B] went into labour prior to 41 weeks and if not, a Caesarean section was booked for [41 weeks/2 days].

[Ms B] went to Delivery Suite for a CTG due to the decrease in fetal movements. This was reviewed by [Dr D]. The CTG was assessed as reassuring and fetal movements were noticed while the monitoring was occurring. [Dr D] performed an ultrasound assessing the liquor volume with a pocket of 3cm. [Ms B] was sent home following discussion of importance of monitoring fetal movements.

*[41 weeks/1 day]*
[Ms B] was admitted to [the Hospital] for a booked Caesarean section planned for [41 weeks/2 days]. Upon admission [Ms B] complained of no fetal movements on this day and a formal ultrasound confirmed an intrauterine death of [Baby 2].

**My response to the advice required is as follows:**

There are no concerns about the care provided by [Ms C] and [the] District Health Board which require formal investigation.

**Antenatal visits**
Antenatal visits historically have followed a traditional pattern which have been four weekly up till 28 weeks, two weekly till 36 weeks and then weekly till delivery. There is no evidence based research for this pattern. (pg 434, Pairman et al, 2010). The British National Institute of Clinical Excellence (NICE) guidelines (2008) suggest that for a woman who is having her second or more pregnancy which is uncomplicated, a schedule of seven appointments should be adequate. The expected pattern at term for antenatal visits is at 40 and 41 weeks gestation.

MW [Ms C] provided care within this suggested guideline. Referral was made for a previous Caesarean section to an Obstetric Consultant as per Appendix 1; Maternity Services Section 88 of the New Zealand Public Health and Disability Act 2000. The antenatal visit at 40 weeks occurred with [Dr D]. At 41+2 weeks the plan was for admission and an assessment would have been done then.

**Management of decreased fetal movements**
The Royal College of Obstetricians and Gynaecologists guideline for reduced fetal movements recommends:

- an assessment of risk factors, including an assessment for small for dates;
- listening to the fetal heart;
- if a history of decreased fetal movements is confirmed then to perform CTG monitoring;
- if perception of reduced fetal movements resolved and no risk of small for dates assessed then the plan is to give advice that if further episodes of reduced fetal movement occur then to contact for another review.

During the Obstetric Consultant visit on [40 weeks/2 days], [Dr D] palpated [Ms B] abdominally and assessed the fetal height to be equivalent to 41cm. This is considered an acceptable size for a term pregnancy. [Ms B] went to Delivery Suite for a CTG. [Dr D] assessed the CTG as reassuring and fetal movements were noticed during the monitoring. [Dr D] performed an ultrasound assessing the liquor volume with a pocket of 3cm. [Ms B] was sent home following discussion relating to importance of continuing to monitor fetal movements.

MW [Ms C] was present at the beginning of this consultation visit but not present when [Dr D] reviewed the CTG. MW [Ms C] followed up on the assessment outcome later that day.

No contact by MW [Ms C] from [40 weeks/2 days] until [Ms B's] admission.

The expected schedule of antenatal visits at this time is weekly. This can be adjusted if there is a planned change agreed between the health professional and the woman or the woman contacts the health professional. There is no evidence that planned further contact by MW [Ms C] was discussed. No further contact was made by [Ms B] raising concerns.

MW [Ms C] comments in her letter about not being the Lead Maternity Carer (LMC) during this time period. According to Maternity Services Section 88 of the New Zealand Public Health and Disability Act 2000 the LMC remains the same unless an agreed change over occurs with the woman. Clinical Responsibility changes over as required for secondary consultation or care. This would occur when [Ms B] came in for a planned Caesarean. During the week MW [Ms C] would still have been [Ms B's] LMC unless the [The DHB] has a specific arrangement for employed case-loading staff.

**Management of post dates**
In relation to the planned delivery at 41 weeks gestation, there is no evidence for delivery to occur earlier unless risk factors are present. Compared with serial

antenatal monitoring, induction of labour at 41+2 weeks of gestation results in comparable maternal and fetal outcomes. (NICE 2008)

Pairman et al (pg 842, 2010) states that one of the maternal indications for induction of labour is prolonged pregnancy past 41 weeks.

The plan was for [Ms B] to be admitted at 41+1 weeks gestation for an elective Caesarean the following day if labour had not commenced spontaneously.

**MW [Ms C] did not attend labour**

MW [Ms C] visited [Ms B] on [the day of the induction of labour] and confirmed that she would provide midwifery care during labour with [Ms B]. This plan of intention was not documented in the clinical notes. MW [Ms C] called the delivery suite at 2100 hours to inquire after [Ms B's] progress and was informed that [Ms B] was not in labour. This phone call was not documented in the clinical notes.

At 2100 [on day of induction] documentation 'Midwife called in to take over care' (page 54) however it does not stipulate which midwife. There is reference to a communication breakdown as to which midwife was going to provide care during labour in [the DHB's] investigation report. (page 9, 10)

[The DHB] midwife left the room following the birth of [the baby] and [Ms B] and [Mr A] felt unsupported.

There is insufficient evidence to comment on this.

Thelma Thompson [RM; RN]

**References**

Maternity Services; Notice of pursuant to Section 88 of the New Zealand Public Health and Disability Act 2000. MoH (2002)

New Zealand College of Midwives (NZCOM) 2008a Handbook for Practice. NZCOM Christchurch

National Institute for Health and Clinical Excellence (UK) CG 70 — induction of labour: Clinical Guideline. July 2008

Pairman et al 2010 midwifery preparation for practice 2e ELSEVIER Sydney Australia

Royal College of Obstetricians and Gynaecologists (UK) Reduced Fetal Movements Green-top Guideline 57. Feb 2011"

### Further expert advice

The following further expert advice, dated 14 March 2012, was obtained from Ms Thompson, following receipt of further information and responses from the parties involved:

"I have been asked to provide the Health and Disability Commissioner with additional advice on case number 11/00515 and I confirm that I have read and agree to follow the Commissioner's Guidelines for Independent Advisors.

I graduated with a Diploma of Nursing in 1984, a Diploma of Midwifery in 1989 and a Bachelor of Health Science in 1996. I have held my current position as Director of Midwifery Practice at Counties Manukau District Health Board since November 2002. Prior to that time I held a variety of clinical roles in both primary and secondary practice. I am the current Chair of the National DHB Midwifery Leaders Forum and was a member of the Midwifery Council of New Zealand from January 2004 to February 2010.

As Director of Midwifery Practice I am responsible for the professional oversight of the midwives at Counties Manukau DHB.

Part of my role as involves:

- providing professional direction and midwifery leadership within CMDHB;
- facilitating the provision of the highest quality midwifery care in accordance with designated standards of practice locally, nationally and internationally.

…

The Commissioner requested advice on

- Were the midwifery services provided to [Ms B] appropriate?
- What standards apply in this case?
- Were those standards complied with?
- Whether [Ms C] identified [Ms B's] condition(s) that warranted consultation with or referral to a specialist
- Whether it was appropriate for [Ms C] to not contact [Ms B] between her appointment at [the Hospital] [at 40 weeks/2 days] and her admission [at 41 weeks/1 day]
- Whether it was appropriate for midwife [Ms F] to attend the delivery rather than call in [Ms C]?
- Whether it was appropriate for midwife [Ms F] to leave the room shortly following the stillbirth?

The following sources of supporting information that were sent have been reviewed prior to the advice being given:

- A. [Mr A] and [Ms B] complaint
- B. [Ms C's] response to the complaint dated 22 June 2011
- C. [The DHB's] response to the complaint dated 16 June 2011
- D. [Ms B's] clinical notes from [The DHB]
  - NB page 79 is a scan report dated […] 2008 from [Ms B's] first pregnancy.
- E. Letter from [the DHB] dated 26 July 2011
- F. Letter from [Dr D] dated 22 October 2011
- G. Letter from [the DHB] dated 28 October 2011
- H. HDC's letter to [the DHB] dated December 2011

- I. Letter from [the DHB] dated 12 January 2012
- J. Letter from [Ms C] dated 19 November 2011
- K. HDC's letter to [Ms C] dated 9 December 2011
- L. Letter from [Ms C] dated 16 January 2012

**My response to the advice required is as follows:**

Were the midwifery services provided to [Ms B] appropriate?

The midwifery services provided were appropriate. In some areas midwifery practice could have been improved. These aspects are mentioned in the body of the report.

What standards apply in this case?

The following are the Midwifery Standards (NZCOM 2008) which apply to this case.

1. The midwife works in partnership with the woman
2. The midwife upholds each woman's right to free and informed choice and consent throughout the childbirth experience
3. The midwife collates and documents comprehensive assessments of the woman and/or baby's health and wellbeing
4. The midwife maintains purposeful, on-going, updated record and makes them available to the woman and other relevant persons.
5. Midwifery care is planned with the woman.
6. Midwifery actions are prioritised and implemented appropriately with no midwifery action or omission placing the woman at risk.
9. The midwife negotiates the completion of the midwifery partnership with the woman.

Were those standards complied with?

The above standards were complied with.

The areas of improvement were for Standard 3. Evidence of this is on page 25 of [Ms B's] clinical notes from [The DHB]. There was no time recorded for the first entry, no date or time for the second entry. On page 54 of [Ms B's] clinical notes from [The DHB], no documented evidence of communication relating to midwifery care in labour.

Whether [Ms C] identified [Ms B's] condition(s) that warranted consultation with or referral to a specialist?

[Ms C] identified the requirement for a specialist consultation during this pregnancy due to [Ms B's] previous LSCS (page 23). The specialist appointment occurred with a plan of 'trial of scar (TOS) if normal labour, follow up in clinic approximately [due date] (EDD) if no labour, patient does not want IOL. Plan C/S @ 41 weeks if no labour' (page 45).

During the antenatal visits [Ms C] assessed the fundal height in comparison to the gestation (page 35). These were equivalent. At both specialist visits these were also assessed and found equivalent (pages 45, 46). These assessments reflect no evidence of intrauterine growth restriction.

Whether it was appropriate for [Ms C] to not contact [Ms B] between her appointment at [the Hospital] [at 40 weeks/2 days] and her admission [at 41 weeks/1 day]?

It would be considered acceptable practice not to contact [Ms B] between her appointment at $40^{+2}$ gestation and admission at $41^{+1}$ gestation. At this gestation weekly assessments are considered usual practice. The expectation of the midwife in a partnership would be for the woman to contact her if she had any concerns.

It appears in hindsight that there was an expectation from [Ms B] for [Ms C] to assess her pregnancy during this week. The advice from [Dr D] at the appointment [at 40 weeks/2 days] was 'should she continue to be concerned about fetal movements to come back in … otherwise to come in for her scheduled Caesarean at 41/40' (page 8).

Whether it was appropriate for midwife [Ms F] to attend the delivery rather than call in [Ms C]?

The ideal and intention was for [Ms C] to attend the birth. A number of factors contributed to this not occurring.

- There was no documentation in the clinical notes of [Ms C's] plan to attend the birth. (page 52;53;54) The attendance at labour and birth is noted as expected practice within this District Health Board.
- There are different perceptions of the communication between [Ms B] (page 63) and [Ms F] (page 91) in regards to asking [Ms C] to attend the birth.
- The labour progressed rapidly to birth and at 0100hours [Ms F] 'did not realise how far in established labour [Ms B] was' (page 91).

Taking these factors into consideration it was appropriate for [Ms F] to attend the birth.

Whether it was appropriate for midwife [Ms F] to leave the room shortly following the stillbirth?

It is acceptable practice for a midwife to leave the room 20 minutes following a vaginal birth taking into consideration the wellness of mother and baby. The appropriateness of [Ms F] leaving the room approximately 20 minutes following the birth of [Baby 2] is reliant on [Ms F's] assessment of the whole situation including emotional and family support. [Ms B's] physical condition was stable and [Ms F's] assessment led her to leave them for 'family time' (page 91). It was not due to [Baby 2] being stillborn.

There is no evidence of communication between [Ms F] and [Ms B] as to why she was leaving the room and when she would be return. If this had occurred this may have alleviated [Ms B's] feeling of being unsupported.

Thelma Thompson [RM; RN]

**References**

New Zealand College of Midwives (NZCOM) 2008a Handbook for Practice. NZCOM Christchurch"

**Clarification of further advice**

Ms Thompson was asked whether the following, aside from [Ms B's] previous Caesarean section, also required specialist consultation or referral:

1. Oligohydramnios in the first pregnancy.
2. Two episodes of bradycardia during labour in the first pregnancy.
3. [Ms B's] BMI of 36 at the start of her second pregnancy.

*4 December 2012*

On 4 December 2012 Ms Thompson advised that none of the above were reasons for referral. Ms Thompson stated:

"The [Ministry of Health] (2002) Referral Guidelines would have been the current guide at the time of this event. Morbid Obesity defined as a Body Mass Index (BMI) of >40 was a criterion for a recommendation for the woman's care to be transferred to a specialist. The Referral guidelines have since been updated (2012), these guidelines include a referral criterion of Obesity (BMI >35) for consultation with a specialist."

*18 December 2012*

Ms Thompson was also asked whether [Ms C] should have requested one or more (serial) growth scans for [Ms B] given her BMI of 36, or whether it was reasonable to rely on fundal height measurements. On 18 December 2012 Ms Thompson stated:

"It was reasonable to rely on fundal height measurements with no known previous history of IUGR."