HEALTH & DISABILITY COMMISSIONER
TE TOIHAU HAUORA, HAUĀTANGA

Poor coordination of care provided to woman with placental abruption

1. On 21 June 2021 the Health and Disability Commissioner (HDC) received a complaint from Mr A about the care provided to his wife, Mrs A, at Wellington Hospital (Health New Zealand | Te Whatu Ora (Health NZ) Capital, Coast and Hutt Valley). The complaint concerns the maternity care provided to Mrs A when it was discovered that she had a possible placental abruption[1] at 36 weeks' gestation.

Summary of events

2. On Friday Day1 April 2021, on the advice of her midwife, Mrs A underwent an ultrasound scan (USS) at a radiology provider to check her baby's growth. She was 27 weeks' gestation at the time. The scan found less than normal amniotic fluid around the baby, extra fluid around the placenta, and 'sonographic appearances concerning for placental abruption'. The radiologist advised Mrs A to go to Wellington Hospital immediately. Health NZ told HDC that the radiologist contacted Mrs A's midwife to advise of the concerning findings and organised for the USS report and images to be made available on the Health NZ computer system as soon as possible. The midwife told HDC that the radiologist said that he had picked up concerning findings on the scan, including abnormal fluid around the placenta, and that he 'thought the finding was serious and recommended Mrs A come in for urgent obstetric assessment'.

3. Health NZ said that the radiologist did not discuss the findings directly with the obstetric senior medical officer (SMO), and the formal USS report was not made available on the computer system. However, the radiology provider told HDC that Mrs A was provided with a printed copy of the USS report to take with her to the hospital.[2] In addition, the radiology provider told HDC that the report was available electronically on the Health NZ computer system before Mrs A arrived at the hospital, with records showing that the final verified report was distributed at 3.35pm; that the report was faxed to the delivery suite and confirmed received at 3.36pm; and that the report was sent electronically to Health NZ, queued at 3.35pm, and dispatched at 3.44pm.

4. Health NZ told HDC that prior to Mrs A's arrival in the delivery suite, the scan images were reviewed by the on-call SMO and another SMO who is trained in advanced obstetric USS. The two SMOs have different recollections of their discussion about the significance of the scan's findings. The first SMO recalls discussing the fact that there was fluid behind the placenta but does not recall the other SMO making a clear decision as to whether the scan showed a placental abruption (only that there were potential signs of one). Conversely, the

[1] Placental abruption is a serious pregnancy complication where the placenta prematurely separates from the uterine wall before the baby is born.
[2] Mrs A has not advised HDC whether she recalls receiving a copy of the report to take with her to hospital.

second SMO recalls commenting that there was fluid behind the placenta that could represent fresh bleeding, but that there was no obvious blood clot visible.[3] The second SMO also recalls saying that the fact that the radiologist was concerned enough to send Mrs A to hospital urgently should be taken into account.

5. Health NZ told HDC that no definitive diagnosis was made following the review of the scan by the SMOs, and it accepts that there was no formal documentation of the image review. The two SMOs planned to correlate the scan findings with clinical findings, and a registrar was asked to perform a clinical assessment, including blood tests and a cardiotocograph[4] (CTG) as soon as Mrs A arrived in the delivery suite.

6. On arrival in the delivery suite, Mrs A was assessed by a registrar. Her vital signs and the CTG were noted to be normal and reassuring. Blood samples were taken for a Kleihauer-Betke test to determine whether there were fetal blood cells in the maternal blood sample. The registrar cannot recall who asked the midwife to take a blood sample for the Kleihauer-Betke test but told HDC that the clinicians were aware that certain blood tests[5] (including a full blood count) are required when assessing a patient for a placental abruption. The registrar said that they did not ask the midwife directly for these tests to be done at the time of Mrs A's arrival, as they assumed that they would be requested automatically with the Kleihauer-Betke test. The registrar stated: 'Essentially everyone who comes to [the] Delivery Suite for assessment has a full blood count and group and hold performed by midwifery staff, so I did not explicitly ask for these tests to be done.' However, a full blood count was not taken at this point.

7. The registrar noted that the baby had a normal estimated weight and that Mrs A reported that she had felt good fetal movements, had had no bleeding or pain, and had had Braxton-Hicks contractions[6] on the previous Tuesday evening ([…]). Mrs A's womb was noted to be soft and not tender to touch. The clinical notes state that the registrar discussed these findings with the on-call SMO and planned to discharge Mrs A for formal USS and review in the Women's Health Assessment Service (WHAS) on Monday Day4 April if the results of the Kleihauer-Betke test were negative. However, the SMO does not recall speaking with the registrar about the findings and noted that no formal management plan had been agreed upon at this stage.

8. On the evening of Day1 April, there was a handover between the first on-call SMO, the registrar, and the overnight on-call SMO. Mrs A was then reviewed by the overnight on-call SMO. Health NZ told HDC that the overnight on-call SMO felt that the examination findings were not consistent with placental abruption; however, given the concerning USS findings, Mrs A should be admitted for observation overnight and the results of the Kleihauer-Betke test reviewed (the Kleihauer-Betke test eventually showed a negative result). The SMO

[3] Placental abruption can involve blood clots and other blood-clotting issues.
[4] A technique to monitor the fetal heartbeat.
[5] These include a full blood count, coagulation studies (ability to clot), and a group and hold (performed before blood transfusions to determine blood compatibility and ensure patient safety).
[6] Irregular, painless and mild uterine contractions that can occur during pregnancy.

recommended that if there were no concerning signs or symptoms overnight, Mrs A could be discharged home with the WHAS review planned for Monday Day4 April.

9. Overnight, a midwife took a full blood count. However, Health NZ said that the medical team were not aware that this had been undertaken and so they did not check the results or take this into account in their decision-making. The results of the full blood count showed a decrease in haemoglobin from 132 on Wednesday […] April to 115 on Saturday Day2 April. In response to the provisional opinion, Health NZ said that the results of the blood test were checked during the course of the admission and, while there was a drop in the haemoglobin level, it is unlikely that the result would have changed Mrs A's management due to the other reassuring clinical findings at the time. Health NZ told HDC: 'The drop in haemoglobin is consistent with possible abruption, but after careful consideration we feel the overall clinical decision making was consistent with usual practice.'

10. From 1.30am to 3.30am on Day2 April, CTG monitoring was normal. Uterine activity was visible on the CTG but was not able to be felt by the midwife on examination. The registrar was informed of the uterine activity and recommended ongoing close monitoring. At 2.30am, Mrs A reported constant left-sided abdominal pain and was assessed by the registrar, who was reassured by the normal CTG, lack of vaginal bleeding, and the examination findings of a soft and non-tender uterus. CTG monitoring was continued while the pain was present, and at 2.40am the midwife noted that Mrs A's pain had stopped completely. At 3.35am the CTG was removed as Mrs A's pain had settled, and monitoring of the baby's heart was normal and reassuring.

11. At approximately 7.15am on Day2 April, the overnight midwife completed a handover with the incoming midwife. The overnight midwife asked the incoming midwife to highlight to medical staff that a full blood count had been taken overnight and had shown a drop in haemoglobin. The incoming midwife told HDC that the overnight midwife considered that this could be 'significant'. At 7.50am, the overnight on-call SMO conducted a ward round and reviewed Mrs A. The SMO noted the normal vital signs overnight, normal CTG monitoring, normal findings on examination, and absence of vaginal bleeding.

12. The incoming midwife recalls advising the SMO of the decrease in haemoglobin. She said: 'I remember that he thought about it, but he said he did not think this was anything to be concerned about.' However, this discussion is not documented, and the SMO does not recall the conversation. In response to the provisional opinion, Health NZ told HDC that in clinical practice, 'not all that is said during a ward round is necessarily captured in the notes and we do not feel the decision to not take action … would always be documented'.

13. The SMO discharged Mrs A, and she was advised to return to hospital on Monday Day4 April to have another USS and undergo further CTG monitoring.

14. Health NZ told HDC that there was difficulty confirming a diagnosis as the clinical presentation did not match the USS findings. Health NZ said that the team considered multiple factors, including the normal vital signs, normal CTG monitoring, examination findings, the negative Kleihauer-Betke test, and the absence of vaginal bleeding and/or

abdominal pain — all of which led them to consider that the findings of the USS were incidental.[7] Health NZ told HDC:

> 'There is little evidence to guide decision making regarding an incidental finding of abruption on ultrasound as this has only been reported rarely in the literature and therefore it is not known how reliably ultrasound detects abruption in this setting.'

15. Mrs A re-presented to Wellington Hospital on Sunday Day3 April as she was experiencing some mild pain and had not felt her baby move for two hours. Sadly, on examination it was discovered that her baby had died. I extend my sympathies to Mrs A and her family for their loss.

System Analysis Review

16. Health NZ conducted a System Analysis Review (SAR) as a result of these events. The review found the following:

Lack of certainty regarding significance of USS findings

17. Mrs A did not have symptoms of a placental abruption, so the USS findings were difficult to interpret. In addition, no guidelines on the management of suspected placental abruptions were in place at the time of the events.

Communication

18. The reporting radiologist relayed the radiology findings to the midwife, but the on-call obstetric SMO was not contacted, and the formal USS report was not made available to the obstetric SMO electronically when Mrs A arrived at Wellington Hospital. After the informal review of the USS images by two SMOs, there were differences in recollection as to what was discussed in relation to the findings, and no definitive diagnosis was made about the USS images and whether they showed an abruption or just potential signs of one, and this may have affected what was handed over to the next SMO.

Incomplete initial work-up of Mrs A

19. The work-up on admission did not include a full blood count, blood group typing, and coagulation studies. A full blood count was performed by the overnight midwife, but the medical team were unaware that this had occurred, so the results were not reviewed.

Inadequate interpretation of blood test results

20. A Kleihauer-Betke test was performed, but it is known to be a poorly sensitive and specific test in the setting of placental abruption, and the fact that the result was normal should not have been considered a reassuring finding in this case.

High acuity of delivery suite (staffing and bed shortages)

21. A Code Red had been implemented, and it may have affected the level of detail in the discussions and information given to Mrs A prior to her discharge.

[7] An unexpected discovery during a medical test or examination that is not related to the primary reason for the test.

No evidence of advice/information given to family at discharge

22. There is no documentation of advice being given to Mrs A and her family regarding what signs or symptoms to look out for after discharge from hospital.

Responses to provisional opinion

23. Mrs and Mr A were given the opportunity to respond to the provisional opinion, and they advised that they agree with the provisional findings.

24. Health NZ was given the opportunity to respond to the provisional opinion. It accepted the recommendations made in the provisional opinion. Health NZ stated:

> 'This was an unusual/atypical presentation of placental abruption, and the clinical findings did not tally with the ultrasound findings. In this situation it is difficult to proceed to emergency delivery, when there is no evidence of fetal compromise. Emergency delivery is probably the only intervention that would have altered the outcome; even extended admission and regular fetal monitoring may not have identified the optimal time to deliver, and the outcome may have tragically been the same.'

25. Further, Health NZ told HDC:

> 'I would like to apologise on behalf of Health New Zealand Te Whatu Ora, Capital, Coast and Hutt Valley (Health NZ CCHV) for the loss of Mr and Mrs A's baby daughter and acknowledge the huge ongoing emotional distress this tragic event continues to have on them both and their extended family.'

Opinion

26. Right 4(5) of the Code of Health and Disability Services Consumers' Rights (the Code) provides that every consumer has the right to cooperation among providers to ensure quality and continuity of services.

27. Health NZ identified several shortcomings in the care provided to Mrs A, as outlined above. I acknowledge that at the time of Mrs A's presentation, there was high acuity in the delivery suite, and a Code Red had been implemented. The radiology provider has confirmed that the radiology report was made available to Health NZ electronically prior to Mrs A's arrival in the delivery suite. In any event, the report was not viewed by clinicians in the delivery suite nor by the two SMOs who conducted the image review, which made the interpretation of the USS findings difficult. This was compounded by Mrs A's atypical presentation of placental abruption.

28. The radiology images were reviewed by two SMOs prior to Mrs A's arrival, but the clinicians have different recollections of the discussion as to the significance of the findings of the scan. This resulted in neither SMO making a clear finding on whether there was evidence of a placental abruption. There was also no documentation of their review of the images or of any potential findings. Health NZ acknowledged in its SAR that the lack of clarity may have affected the nature of the handovers to other clinical staff. I agree. In my view, the two SMOs who reviewed the images should have communicated clearly and documented their discussions to ensure appropriate communication between clinicians. It is clear that the

radiologist considered the results of the scan to be significant, and it is unclear whether this was taken into account adequately by clinicians at Wellington Hospital.

29. There was also confusion about the requirement for a full blood count when the Kleihauer-Betke test was ordered. Instead, the full blood count was ordered by a midwife overnight without the knowledge of the medical team. This meant that the medical team did not check the results, which showed a drop in haemoglobin. It is unclear whether this was taken into account in the clinical decision-making, including Mrs A's discharge, as there is no documentation of any discussion regarding the drop in haemoglobin or potential significance of this. I note that this omission was also identified in the SAR.

30. Several staff were involved in Mrs A's care, and from the information available to me there were several instances of poor communication and suboptimal documentation, which resulted in substandard coordination of Mrs A's care after her admission to Wellington Hospital. I also note, as identified in the SAR, that there were no guidelines in place at the time of the events for the management of placental abruption, which, paired with Mrs A's unusual clinical presentation, led to staff lacking clarity on how to interpret the USS report. Seemingly there was also a lack of safety-netting at the time of discharge, with no advice given to Mrs A and her family regarding the concerning signs or symptoms to look out for. In my view, all these considerations led to a fragmented delivery of care and suggest a systemic failing on the part of Health NZ. I acknowledge Health NZ's comments that Mrs A's presentation of placental abruption was atypical, and that it considers that any further intervention would have been unlikely to change the outcome. However, it is my role to assess the appropriateness of the care provided at the time, irrespective of the outcome or any other possible outcomes. Accordingly, I find that Health NZ breached Right 4(5) of the Code.

Changes made

31. Health NZ made several changes as a result of these events and the SAR, including the following:

- The key learnings from the event were discussed at several multi-disciplinary meetings, and the significance of USS findings continues to be highlighted to clinicians.
- Handover is now a more formalised process and uses a structured format. The handover meetings now take place in a separate room where there are fewer distractions.
- The obstetrics clinical leader has had various conversations with the radiology provider to clarify the process of communicating the findings of scans.
- Currently, formal guidelines for investigation and management of suspected placental abruption are being developed.
- Active recruitment of midwifery staff is ongoing.
- A 'Baby Movements Patient information leaflet' is being developed. Information is also recorded on the discharge summary that is now provided to all women. General information is provided in the Community Midwife Team booklet, which was updated recently and is now provided to all women, and the expectations around discharge summaries are set out in the registrar orientation booklet.

Recommendations

32. I recommend that Health NZ Capital, Coast and Hutt Valley:

a) Provide a written apology to Mrs A for the failings identified in this report. The apology is to be sent to HDC within three weeks of the date of this report, for forwarding to Mrs A.

b) Provide HDC with a copy of its formal guidelines for investigation and management of suspected placental abruption. A copy of the guidelines is to be provided to HDC within three months of the date of this report.

c) Work with the radiology provider to create documented guidance on how to communicate urgent USS findings to Health NZ clinicians where the patient is told to present to hospital urgently. Health NZ is to provide HDC with a copy of this guidance within six months of the date of this report.

Follow-up action

33. A copy of the final report with details identifying the parties removed, except Health NZ Capital, Coast and Hutt Valley and Wellington Hospital, will be placed on the Health and Disability Commissioner website, www.hdc.org.nz, for educational purposes.

Rose Wall
Deputy Health and Disability Commissioner