

## Failings in care provided to woman in relation to ectopic pregnancy

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1. On 10 August 2021, the Health and Disability Commissioner (HDC) received a complaint from Ms A about the care provided to her at Auckland Hospital (Health New Zealand | Te Whatu Ora Te Toka Tumai Auckland [Health NZ]). Ms A raised concerns that she was not offered an ultrasound scan earlier to confirm an ectopic pregnancy<sup>1</sup> and that the delay in diagnosis and treatment resulted in her having a fallopian tube removed.

### Information gathered

2. Ms A was five weeks pregnant when she presented to her general practitioner (GP) on 24 March 2021 with cramps, pain and vaginal spotting.<sup>2</sup> She was referred to Auckland Hospital on Thursday 25 March for assessment and an urgent scan to exclude an ectopic pregnancy.
3. Ms A was assessed by a house officer, and the clinical notes state that she had mild lower abdominal tenderness with a small amount of vaginal spotting but that there was no cervical motion tenderness<sup>3</sup> or adnexal tenderness.<sup>4</sup> Health NZ, in its response, told HDC that the house officer, in consultation with the senior medical officer (SMO), did not offer an ultrasound scan as Ms A's human chorionic gonadotropin (HCG)<sup>5</sup> levels were 'likely too low (550iU) for the scan to detect an embryo'. The SMO told HDC that the scan becomes accurate only when HCG is above 1,500–2,000iU and so he considered that a scan would not assist with Ms A's management at that time. Health NZ told HDC that, while – in hindsight – an earlier scan may have provided additional diagnostic information, this was not evident, and the Health NZ guidelines in place at the time for management of an ectopic pregnancy did not stipulate a timeframe for when the ultrasound scan should be completed.
4. Ms A told HDC that she was in severe pain; however, clinical notes document that she had a pain level of 1–3 out of 10. The Senior House Officer (SHO) told HDC that Ms A was in a stable condition when she assessed her and she appeared comfortable during examination. The SHO said that Ms A did not appear to be in severe pain and that, had her pain been recognised as severe, then the initial assessment would have included a scan. In response to the provisional report, Ms A said that when she was assessed by a nurse her pain was a 3; however, during 'the long period of waiting for [the] SMO, I reported the pain increasing significantly to 8'.
5. Ms A was discharged with a referral to the early pregnancy assessment unit (EPAU) for follow-up and a further HCG blood test on Monday 29 March. On Friday 26 March, Ms A had a phone call with an EPAU nurse and reported that she had slight abdominal pain. She said

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<sup>1</sup> A pregnancy that develops outside the uterus, most commonly in a fallopian tube.

<sup>2</sup> Any vaginal bleeding unrelated to normal menstruation.

<sup>3</sup> A sign found during a pelvic exam where moving the cervix causes pain, indicating potential pelvic inflammation or irritation.

<sup>4</sup> A pain or soreness in the lower abdomen.

<sup>5</sup> HCG is a hormone primarily associated with pregnancy.

that she was unable to do the blood test on Monday 29 March as planned and so she would do it on Saturday 27 March instead. In its response to HDC, Health NZ clarified that, according to the EPAU progress notes following the phone call on 26 March, the EPAU nurse understood that a repeat beta HCG would be done on Saturday 27 March as per protocol. However, the blood test did not occur until 29 March. The blood test results showed an HCG level lower than expected, which raised the likelihood that Ms A was experiencing an ectopic pregnancy. A scan was organised for 30 March, which showed a 'large amount of fluid in [the] right fallopian tube and uterus'. Ms A was sent by ambulance to Auckland City Hospital, arriving at around 1pm, and she underwent tubal removal surgery<sup>6</sup> for treatment of the ectopic pregnancy at 7pm that evening.

6. Health NZ told HDC that Ms A was given an acuity score of 2 (to be seen within 20 and 60 minutes) as she was haemodynamically stable<sup>7</sup> and her pain level was 'not severe'. Health NZ said that the plan was for Ms A to be transferred directly to the operating rooms for surgery; however, several more acute patients required surgery first. Health NZ told HDC that there was little opportunity to have facilitated surgery earlier with the resources available. Health NZ said that Women's Health only has one acute operating theatre, and this has been a risk on its risk register for several years with risk mitigations in place and a business case under consideration. In response to the provisional report, Ms A told HDC that during her time in hospital, she informed staff that her pain was increasing significantly, and she requested additional pain medication. However, this did not result in her being seen any earlier.
7. The SMO acknowledged that, on reflection, an earlier HCG blood test would have resulted in an earlier diagnosis of ectopic pregnancy.
8. Health NZ told HDC that the gynaecology rapid multidisciplinary panel (GRAMP) noted that this was an avoidable event and identified that the knowledge and skills of staff were lacking, that the SHO was not aware of the protocol, and there was a lack of access to operating rooms.

#### **Responses to provisional opinion**

9. Ms A was given the opportunity to respond to the 'information gathered' section of the provisional report. Where relevant, her comments have been incorporated into the final report. In addition, Ms A told HDC: 'It is disappointing on both occasions that the increase of pain was not noted ... and acted upon. This information is vital in assessing patients and may have resulted in improved patient care, ultimately meaning I would have endured less pain and emotional distress'.
10. Health NZ was given the opportunity to comment on the provisional report, and it accepted the findings.

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<sup>6</sup> A surgical procedure to remove one or both fallopian tubes, often to prevent pregnancy or treat medical conditions such as ectopic pregnancy.

<sup>7</sup> When vital signs are within a normal range and stable, indicating adequate blood flow to the body's organs.

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### Opinion: Health NZ – breach

11. As part of my assessment of this complaint, I obtained external clinical advice from Dr Per Kempe, obstetrician and gynaecologist.
12. Dr Kempe advised that the findings on 25 March suggested a pregnancy of unknown location and, in accordance with the Health NZ guideline on ectopic pregnancy (2020), a transvaginal ultrasound scan and HCG measurements should have been used to confirm or exclude an intrauterine pregnancy.<sup>8</sup> Dr Kempe also referenced the NICE<sup>9</sup> Clinical Guideline 154 (2012) referred to by the Royal New Zealand College of Obstetricians and Gynaecologists (RANZCOG), which states: ‘Offer women to attend an early pregnancy assessment service ... a transvaginal ultrasound scan to identify the location of the pregnancy’. Dr Kempe noted that, while neither of the guidelines define a timeframe for when the first ultrasound scan should take place, they all state that ultrasound is one of the most important tools to diagnose an ectopic pregnancy, either on its own or in combination with HCG measurements.
13. Dr Kempe considered that an ultrasound scan should have been performed or requested within 24 hours of Ms A arriving at Auckland Hospital and advised that the delay in this respect was important as it impacted on the treatment options available. Dr Kempe advised that the failure to perform a scan on 25 or 26 March constitutes a moderate departure from accepted standards. Dr Kempe also identified a further moderate departure, being the failure by Health NZ staff to follow the Health NZ guideline on ectopic pregnancy (2020).
14. Health NZ said that, while in hindsight an earlier scan may have provided additional diagnostic information, this was not evident, and the internal guidelines did not stipulate a timeframe for when the scan should be completed. Dr Kempe advised that an updated version of the guidelines could include a specific timeframe for when the first ultrasound scan should be completed to provide clarity to clinical staff.
15. While I accept that the internal guidelines did not include a timeframe for when an ultrasound scan should be completed, I agree with Dr Kempe’s advice that the scan should have been performed or requested within 24 hours of Ms A arriving at Auckland Hospital, as it was clinically indicated. In my view, the failure by Health NZ to have a timeframe written into its guidelines contributed to the delay in Ms A receiving an ultrasound scan.
16. Dr Kempe also considered that the delay of four days in repeating blood tests was a moderate departure from accepted standards. I note that it is unclear why the tests were not undertaken on 27 March as indicated by Ms A during her phone call with EPAU on 26 March; however, I consider this irrelevant as the blood tests were initially ordered to be undertaken on 29 March by Health NZ clinicians. I also note that Health NZ agreed that the timeframe for further HCG monitoring should be adhered to regardless of whether this falls in a weekend or not. Accordingly, I accept Dr Kempe’s advice in this respect and am critical of Health NZ.

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<sup>8</sup> A healthy, normal pregnancy where a fertilised egg implants and develops inside the uterus (womb).

<sup>9</sup> UK National Institute for Health and Care Excellence.

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17. Dr Kempe advised that the six-hour wait between Ms A arriving at hospital and her undergoing surgery constitutes a moderate departure from accepted standards given that it was known at that time that Ms A had an ectopic pregnancy. Health NZ said that Ms A was stable while waiting for surgery and her pain level was not severe. Health NZ said that the plan was for Ms A to be transferred directly to the operating rooms for surgery, but several more acute patients required surgery first. Health NZ told HDC that there was little opportunity to have facilitated surgery earlier due to resource constraints. I acknowledge the resource constraints faced by Health NZ and note that this has been documented on its risk register for some time, with risk mitigations in place and a business case under review. Accordingly, I am not overly critical of Health NZ in this respect.
18. I am thoughtful of Ms A's feedback in response to the 'information gathered' section of the provisional report where she refers to Health NZ staff not acting upon her concerns. She states: 'It is disappointing on both occasions that the increase of pain was not noted ... and acted upon'. Ms A's remarks are a salient reminder of the need for clinicians to be responsive to a patient's evolving symptoms in scenarios such as this.
19. Health NZ had a responsibility to provide care of an appropriate standard to Ms A. Guided by clinical advice, I have identified several shortcomings in the care provided by Health NZ, including the delay in Ms A receiving an ultrasound scan, the lack of clarity in the internal guidelines around timeframes for completion of the relevant diagnostic tests, and the delay in Ms A receiving further HCG monitoring. I consider that these shortcomings are the responsibility of Health NZ rather than individual clinicians because several Health NZ staff were involved in the decision not to perform an ultrasound scan sooner. Ultimately, the Health NZ guideline on ectopic pregnancy (2020) lacked sufficient clarity. Cumulatively, I consider that these failings represent a failure by Health NZ to provide services with reasonable care and skill to Ms A. Accordingly, I find Health NZ in breach of Right 4(1)<sup>10</sup> of the Code of Health and Disability Services Consumers' Rights (the Code).

### **Changes made**

20. Health NZ told HDC that, following the events, pending formal review of policy, it provided interim advice to staff that patients accepted from primary care with pain and bleeding should have an initial ultrasound scan within 24 hours of arrival at hospital, regardless of HCG level and severity of pain.
21. Health NZ said that it is currently reviewing documented risks in relation to the timing of acute and emergency procedures and associated acute capacity across all its operating room and procedural suites. It said that this matter has been considered by its Senior Leadership Team as part of peri-operative reporting, and a working group has been formed that includes Women's Health.

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<sup>10</sup> Right 4(1) of the Code states: 'Every consumer has the right to have services provided with reasonable care and skill'.

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**Recommendations and follow-up actions**

22. I recommend that Health NZ provide a written apology to Ms A for the failings identified in this report. The apology is to be sent to HDC for forwarding within three weeks of the date of this report.
23. I also recommend that Health NZ provide HDC with an update on its review of the internal policies related to management of ectopic pregnancies, including advice on whether it has included formal guidance on timeframes for completing ultrasound scans and HCG blood tests in suspected ectopic pregnancies. This information is to be provided to HDC within three months of the date of this report.
24. A copy of this report with details identifying the parties removed, except Health New Zealand | Te Whatu Ora Te Toka Tumai Auckland, Auckland Hospital, and the expert who advised on this case, will be placed on the Health and Disability Commissioner website, [www.hdc.org.nz](http://www.hdc.org.nz), for educational purposes.

Rose Wall

**Deputy Health and Disability Commissioner**

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## Appendix A: Independent clinical advice to the Commissioner

The following independent advice was obtained from Dr Per Kempe, obstetrician and gynaecologist:

'Dear Ms [...],

Re: Complaint Ms [A] / Te Whatu Ora – Te Toka Tumai Auckland, ref C21HDC01837

I have been asked to provide advice in this case (C21HDC01837). I have read and agree to follow the Commissioner's guidelines for independent advisors. I can confirm there is no conflict of interest. My qualifications are MD, PhD, FRANZCOG. I am a specialist Obstetrician and Gynaecologist, vocationally registered in Sweden since 2007 and in New Zealand since 2019. I have worked as a senior medical officer at Palmerston North Hospital since 2017.

I have been asked by the Commissioner to review the enclosed documentation and advise whether I consider the care provided to Ms [A] by Te Whatu Ora – Te Toka Tumai Auckland was reasonable in the circumstances, and why. In particular, I have been asked to comment on:

- The appropriateness of Ms [A]'s overall management. Please comment on the timeliness of the investigations undertaken, diagnosis, and treatment.
- The appropriateness of the Senior Medical Officer's decision not to review Ms [A] in person on 25 March 2021.
- The appropriateness of the decision to discharge Ms [A] on 25 March 2021.
- The adequacy of the safety netting advice provided to Ms [A].
- The appropriateness of Te Whatu Ora – Te Toka Tumai Auckland's policies on the management of ectopic pregnancy and threatened miscarriage, and whether they were followed adequately in this case.
- The appropriateness and quality of Ms [A]'s clinical documentation.
- Any other matters relating to Ms [A]'s care that you consider warrant comment.

I have been provided with relevant documents, including the consumer complaint, hospital records and responses from Te Whatu Ora – Te Toka Tumai Auckland and the clinicians involved.

### Background

[Ms A] was pregnant with a last menstrual period (LMP) on 17 February 2021. On 24 March 2021, at five weeks gestational age, [Ms A] began to experience cramps, pain, and vaginal spotting and she contacted her General Practitioner (GP). The next day, 25 March 2021, the GP referred her to the Women's Assessment Unit (WAU) at Auckland Hospital for an ultrasound scan to exclude an ectopic pregnancy since she could not get an ultrasound in the community. [Ms A] was seen in WAU the same day. She had a blood

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pressure of 111/64, a heart rate of 64, a respiratory rate of 16 and an oxygen saturation of 98%. Her pain score was 1–3 according to the clinical notes. Blood tests were taken showing a haemoglobin (Hb) of 129 g/L and a  $\beta$ -hCG of 550 IU/L.

She was advised that her  $\beta$ -hCG levels were likely too low for an ultrasound scan to detect an embryo, so the scan was not completed. She was discharged with a script for analgesia, a referral to the early pregnancy assessment unit (EPAU) to be seen the following week and a plan to have another blood test for  $\beta$ -hCG on Monday 29 March. She was advised to seek medical attention if she experienced worsened pain, heavy bleeding, or fever. EPAU had phone contact with [Ms A] the next day, 26 March, and plans were made for [Ms A] to do a repeat  $\beta$ -hCG on 27 March with follow-up by phone on 29 March. A repeat blood test was completed on 29 March 2021, and the  $\beta$ -hCG was 1500, which led EPAU to arrange an ultrasound scan for the following morning. The ultrasound scan on 30 March 2021 suggested a diagnosis of ectopic pregnancy and the presence of blood in the abdomen, and [Ms A] was seen in the WAU following the ultrasound. She had a BP of 96/70 and a HR of 72. A decision was made to send her to Auckland Hospital by ambulance. A laparoscopy was performed in the evening of 30 March 2021. On this day and before the surgery, the Hb was 132 and the  $\beta$ -hCG was 1150. The laparoscopy confirmed an ectopic pregnancy in the right fallopian tube and 100–200 ml of blood in the abdominal cavity. The right fallopian tube was removed to treat the ectopic pregnancy.

## Comments

### **Regarding the appropriateness of [Ms A]’s overall management. Please comment on the timeliness of the investigations undertaken, diagnosis, and treatment.**

When [Ms A] was referred to the WAU on 25 March, she was assessed by the House Officer. According to the clinical notes, the assessment showed mild lower abdominal tenderness, cervical motion tenderness, and adnexal tenderness on examination; that she had a small amount of brown vaginal bleeding; and that her observations were stable. The  $\beta$ -hCG was 550. With these findings and without [Ms A] having had an ultrasound, it was correct to say that the condition could be either an early live intrauterine pregnancy, a miscarriage, or an ectopic pregnancy. This is what is called a Pregnancy of Unknown Location (PUL). The Auckland DHB Clinical Guideline on Ectopic Pregnancy (2020) states that the combination of  $\beta$ -hCG and trans-vaginal ultrasound should be used to confirm or exclude an intrauterine pregnancy and that ‘in women with serum  $\beta$ -hCG levels less than the discriminatory zone for trans-vaginal ultrasound and negative ultrasound findings a diagnosis of trophoblast of unknown site is made’. RANZCOG refers to the NICE Clinical Guideline 154 (2012) for guidance on ectopic pregnancy and this states ‘Offer women who attend an early pregnancy assessment service (or out-of-hours gynaecology service if the early pregnancy assessment service is not available) a transvaginal ultrasound scan to identify the location of the pregnancy and whether there is a fetal pole and heartbeat.’ The RCOG Green-top Guideline No. 21 on the Diagnosis and Management of Ectopic Pregnancy (2016) states that ‘Transvaginal ultrasound is the diagnostic tool of choice for tubal ectopic pregnancy’.

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None of these guidelines define a timeframe for when the first ultrasound should be performed, but they all state that ultrasound is one of the most important tools to diagnose an ectopic pregnancy, on its own or in combination with a  $\beta$ -hCG measurement. The ADHB Guideline further states that 'On occasions, it is not possible to reach a firm diagnosis at initial presentation. The presence of trophoblast of unknown site will have been confirmed by serum  $\beta$ -hCG measurement and negative ultrasound findings, but further serum  $\beta$ -hCG measurement and ultrasound evaluation will be needed. This should be done no more than 48-72 hours later'. When [Ms A] was discharged from WAU on 25 March, the plan included a referral to the EPAU, a repeat serum  $\beta$ -hCG 4 days later and advice on symptoms that would require her to return earlier. No request for an ultrasound was made.

In my view, and supported by all three guidelines, an ultrasound should have been performed at the WAU or a request for an ultrasound within 24 hours should have been made. The management of aPUL with repeat serum  $\beta$ -hCG and ultrasound evaluation within no more than 48–72 hours described in the ADHB guideline requires that PUL **will have been confirmed by serum  $\beta$ -hCG and negative ultrasound findings**. Abnormal pregnancies are associated with impaired  $\beta$ -hCG production. This means that in the presence of an ectopic pregnancy may be detected by ultrasound even at low  $\beta$ -hCG levels. It is possible that an ultrasound on 25 or 26 March would have identified the ectopic pregnancy, although this is not certain.

I also have concerns around the plan for when the next  $\beta$ -hCG measurement was going to be done. In a normal intrauterine live pregnancy, the  $\beta$ -hCG level is expected to at least double every 48 hours. The ADHB guideline recommends a repeat  $\beta$ -hCG test no more than 48–72 hours after the first test. The plan made at discharge from WAU was to repeat the test 4 days later, on 29 March. If a test had been done on 27 March, this could potentially have helped the clinicians to diagnose the ectopic pregnancy two to three days earlier. In the clinical documentation of the phone call between EPAU and [Ms A] on 26 March, there are contradictions around when the next  $\beta$ -hCG test was planned to be done. The note says, 'unable to do blood test Monday will do  $\beta$ -hCG 27/3, f/u 29/3'. In hindsight, this is confusing since the test was not done on 27 March, it was done on 29 March, which was the Monday. It is unclear why [Ms A] did not have the test on 27 March if this was the plan communicated by the EPAU. If the repeat  $\beta$ -hCG had been done 48 hours after the first one, this could have led to an earlier ultrasound.

The delays in performing the ultrasound and doing the repeat  $\beta$ -hCG are important because of their implications on how the ectopic pregnancy could have been treated differently if they had been performed earlier. When the ultrasound was performed on 30 March, there were signs of blood in the pelvis (haemoperitoneum). It is possible that this wouldn't have been present if an ultrasound had been performed earlier, especially if an ultrasound had been done on 25 or 26 March. Without blood in the pelvis, [Ms A] would have been fulfilling the criteria for medical treatment with methotrexate and could potentially not have needed surgery and removal of her right fallopian tube.

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In my opinion, the decision to not perform an ultrasound on 25 or 26 March and to not request an ultrasound but to wait for another  $\beta$ -hCG before requesting one is a moderate departure from accepted practice based on guidelines including the ADHB guideline. The plan to do the repeat  $\beta$ -hCG 4 days after the first one instead of after 48–72 hours as recommended by the guidelines is also a moderate departure from accepted practice. I believe the decisions to not do an ultrasound within 24 hours and to do the repeat  $\beta$ -hCG after 4 days would be viewed as outside normal practice by my peers.

[Ms A] was admitted to Auckland Hospital around 1 pm on 30 March following the ultrasound, which was performed at 11am, but she did not have surgery until 7pm. In my opinion, this is a long time to keep a woman with a known ectopic pregnancy and haemoperitoneum waiting for surgery knowing that she might have ongoing intraperitoneal blood loss, and I believe my peers would agree with this opinion. This is a moderate departure from accepted practice. I have no concerns around the choice of treatment with a laparoscopic right salpingectomy once the diagnosis of an ectopic pregnancy with haemoperitoneum was established. This is within accepted practice.

**Regarding the appropriateness of the Senior Medical Officer’s decision not to review [Ms A] in person on 25 March 2021.**

Senior Medical Officers often oversee several junior doctors, including House Officers and Registrars. It is impossible for an SMO to review every patient in person. In my view, it was within accepted HDC practice for the SMO to rely on information they got from the House Officer and to not review [Ms A] in person when making their decision.

**Regarding the appropriateness of the decision to discharge [Ms A] on 25 March 2021.**

According to the clinical notes, the House Officer’s impression when [Ms A] visited WAU on 25 March 2021 was that she had mild lower abdominal tenderness, cervical motion tenderness, and adnexal tenderness on examination; that she had a small amount of brown vaginal bleeding; and that her observations were stable. The  $\beta$ -hCG was 550. With these findings and without [Ms A] having had an ultrasound, it was correct to say that the condition could be either an early live intrauterine pregnancy, a miscarriage, or an ectopic pregnancy. This is what is called a Pregnancy of Unknown Location (PUL). Patients with a PUL in a stable condition are usually managed as outpatients. As I have outlined above, I have concerns regarding the follow-up plan made at discharge, but it is my view that the decision to manage [Ms A] as an outpatient was correct and in line with accepted practice.

**Regarding the adequacy of the safety netting advice provided to [Ms A].**

According to the clinical notes, the advice given to [Ms A] when she was discharged from the WAU on 25 March was to not hesitate to seek medical attention should she develop worsened pain not controlled by analgesia, heavy bleeding, or fevers or should she have any other concerns. In my opinion, this advice was adequate and in line with accepted practice.

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**Regarding the appropriateness of Te Whatu Ora – Te Toka Tumai Auckland’s policies on the management of ectopic pregnancy and threatened miscarriage, and whether they were followed adequately in this case.**

I have described the relevant parts of the ADHB guideline on the management of ectopic pregnancy (2020) above. The ADHB guideline on the management of miscarriage (2021) states that ‘If the site of the pregnancy is unknown, it should be managed as a suspected ectopic pregnancy (refer Ectopic Pregnancy guideline)’. Up until the ultrasound on 30 March, the location of [Ms A]’s pregnancy was unknown, which means the guideline on the management of ectopic pregnancy should have been used. The guideline does not specifically say when the first ultrasound should be performed, but regarding a pregnancy of unknown location it states that ‘The presence of trophoblast of unknown site will have been confirmed by serum  $\beta$ -hCG measurement and negative ultrasound findings, but further serum  $\beta$ -hCG measurement and ultrasound evaluation will be needed. This should be done no more than 48–72 hours later’. As I read this, the guideline tells the clinician to do a  $\beta$ -hCG test and an ultrasound at first presentation and then repeat both after 48–72 hours. It is my view that the existing guideline was not followed adequately, and this is a moderate departure from accepted practice. In an updated guideline, Te Whatu Ora – Te Toka Tumai Auckland may consider defining a timeframe within which the first ultrasound should be performed.

**Regarding the appropriateness and quality of [Ms A]’s clinical documentation.**

Overall, I have no concerns with the appropriateness or quality of [Ms A]’s clinical documentation. As mentioned above, there is confusion in the EPAU note from 26 March around the plans for when to do the repeat  $\beta$ -hCG.

**Regarding any other matters relating to [Ms A]’s care that I consider warrant comment.**

There is a discrepancy between [Ms A]’s description of the level of pain she experienced and the pain levels staff have documented in the notes. This indicates that the communication between [Ms A] and various staff was not as good as it could have been. Te Whatu Ora – Te Toka Tumai Auckland could discuss this with their staff to improve communication around experienced pain with patients.

**Conclusion**

In summary, it is my opinion that the decision to not perform an ultrasound on 25 March or within 24 hours from the initial presentation on 25 March, and the decision to repeat the  $\beta$ -hCG test after 4 days instead of the recommended 48–72 hours, both are moderate departures from accepted practice. These two decisions delayed the diagnosis of the ectopic pregnancy. If the ultrasound had been done earlier, [Ms A] could potentially have had medical treatment of her ectopic pregnancy instead of surgery and could potentially not have needed removal of her right fallopian tube. It is also my opinion that there was moderate departure from accepted practice by not

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following the ADHB guideline on the management of ectopic pregnancy and that an updated version of the guideline could include a specific timeframe for when the first ultrasound should be performed to clarify the expected management. I have no concerns regarding the SMO not reviewing [Ms A] in person on 25 March, and I have no concerns with the decision to discharge [Ms A] from WAU on 25 March and manage her as an outpatient. It is my opinion that the time from admission to Auckland Hospital on 30 March to the start of the surgery for a woman with a known ectopic pregnancy and intraperitoneal bleeding was longer than accepted practice. I have no concerns regarding the choice of treatment of the ectopic pregnancy once it was diagnosed and haemoperitoneum was present.

Yours sincerely,

Per Kempe

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