General Practitioner, Dr C

Medical Centre

General Practitioner, Dr D

A Report by the

Deputy Health and Disability Commissioner

(Case 19HDC00711)

HDC

Health and Disability Commissioner

Te Toihau Hauora, Hauātanga

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Executive summary

1. This report concerns the care provided to a woman primarily by two general practitioners at a medical centre between 2017 and 2018, in particular, the management of her iron deficiency (anaemia) and whether there was a delayed diagnosis of colorectal cancer.

2. Ms A had been seen by several GPs at the medical centre, and by several doctors at Accident and Emergency (A&E) at the public hospital between 2016 and 2018, for symptoms including persistent anaemia, abdominal and pelvic pain, and diarrhoea.

3. The report highlights the importance of clear communication between providers in instances of "shared care", where a patient is seen by multiple different providers. It also emphasises the importance of using critical thinking to reassess possible diagnoses when patients continue to present with persistent and significant symptoms that fail to respond to treatment as expected.

Findings

4. The Deputy Commissioner found a GP in breach of Right 4(1) of the Code. The Deputy Commissioner was critical that the GP did not investigate the cause of the woman's persistent and unexplained iron deficiency anaemia more thoroughly, and considered that opportunities were missed to diagnose and respond to her cancer several months earlier.

5. The Deputy Commissioner was critical that another GP did not ensure that the results of a blood test in 2018 were brought to the attention of the first GP.

6. The Deputy Commissioner highlighted the importance of the medical centre having in place clear policies and processes to support a shared-care model, and of ensuring that clinical responsibilities are understood clearly by all care providers.

Recommendations

7. The Deputy Commissioner recommended that both GPs review the HealthPathways guidance on iron deficiency anaemia and undertake an audit of patients given oral or parenteral iron therapy in the last 12 months, and provide a written apology to the woman's whānau.

8. The Deputy Commissioner recommended that the medical centre consider whether any improvements can be made to its policies and processes to ensure clarity as to which GP has the primary responsibility for an individual patient's care, and to better support its shared-care model through the timely and effective facilitation of communication and cooperation between each doctor in instances of shared care.

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Complaint and investigation

9. The Health and Disability Commissioner (HDC) received a referral from the Nationwide Health and Disability Advocacy Service regarding concerns raised by Ms B about the care provided to her late sister, Ms A, at a medical centre. The following issues were identified for investigation:

- *Whether Dr C provided Ms A with an appropriate standard of care in 2017 and 2018.*
- *Whether the medical centre provided Ms A with an appropriate standard of care in 2017 and 2018.*
- *Whether Dr D provided Ms A with an appropriate standard of care in 2017 and 2018.*

10. This report is the opinion of Deputy Health and Disability Commissioner Deborah James, and is made in accordance with the power delegated to her by the Commissioner.

11. The parties directly involved in the investigation were:

Ms B	Complainant/consumer's sister
Dr C	General practitioner (GP)/provider
Medical centre	GP practice/provider
Dr D	GP/provider

12. Further information was received from DHB1 and DHB2.

13. In-house clinical advice was obtained from GP Dr David Maplesden (Appendix A).

Information gathered during investigation

14. This report concerns the management of Ms A's iron deficiency (anaemia) and whether there was a delayed diagnosis of her colorectal cancer over 2017 to 2018. Ms A had been seen by Dr C,[1] Dr D,[2] and other GPs at the medical centre, and by several doctors at the Accident and Emergency (A&E) between 2016 and 2018, for symptoms including persistent anaemia, abdominal and pelvic pain, and diarrhoea.

15. While overseas, Ms A was diagnosed with stage four terminal cancer, and, sadly, passed away a few weeks later.

[1] Dr C obtained a Bachelor of Medicine and Bachelor of Surgery and was granted a general scope of practice in medicine. She is a fellow of the Royal New Zealand College of General Practitioners.
[2] Dr D obtained a Bachelor of Medicine and Bachelor of Surgery and was granted a general scope of practice in medicine. She is a fellow of the Royal New Zealand College of General Practitioners.

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Background

2016–2017

16. Ms A was in her twenties at this time. She first presented to the medical centre in 2016 for a routine pre-conception check-up, and was seen by a clinic nurse. Blood test results showed low iron, and the nurse noted that Ms A had been anaemic for some time. Oral iron supplements were provided.

17. Ms A presented to the clinic nurse a further three times and was encouraged to persist with oral iron supplements and to repeat her blood tests in three months' time. The blood tests were not repeated after the last visit.

18. In Month1[3], Ms A presented to the medical centre and was seen by Dr D in relation to a left ear infection and a lump in her left breast. Imaging showed a fibroadenoma,[4] and in Month2 Ms A was referred to a breast clinic for excision of the lump, which took place on 8 Month11.

19. At a preoperative appointment in Month7, the anaesthetist noted that Ms A had low iron, and requested that supplements be given prior to her surgery.

20. Dr C prescribed further iron tablets on 10 Month8. On 12 Month9, prior to her breast surgery, Ms A presented to the medical centre with swollen glands on the left side of her neck. Dr C told HDC that Ms A's blood test results at the time showed normal thyroid functioning, but persistently low haemoglobin,[5] and she asked the nurse to commence Ms A on iron injections, as the iron tablets did not appear to be working.

21. There is no reference in the clinical notes from this consultation (or around the time the latest blood test result was received) to the intended management plan for Ms A's anaemia, such as how many injections would be administered, and when to assess her response. The next entry is on 17 Month10, when a nurse recorded that an iron injection had been administered.

2018

22. In 2018, Ms A was seen a total of 22 times by several doctors and nurses at the medical centre. Ms A also presented to A&E on three occasions.

Month11– Month12

23. On 13 Month11, Ms A was seen by Dr D for follow-up after the excision of her non-cancerous tumour (which was undertaken on 8 Month11). Ms A's iron deficiency was discussed at this appointment, and Dr D recommended iron injections every fourth day to address Ms A's persistent anaemia. A repeat blood test was arranged for three weeks' time. A further iron injection was given by the nurse on 15 Month11, and again on 27 Month12, at which time Ms A was also given a further blood test form.

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[3] Relevant months are referred to as Months 1-22 to protect privacy.

[4] A non-cancerous breast tumour.

[5] Iron is a component of haemoglobin. Ms A recorded a haemoglobin (Hb) level of 77. Hb levels of less than 80g/L are considered to be "severe anaemia" and a potential red flag.

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Month14– Month15

24. Ms A presented to the medical centre four times in Month14, including for treatment of an apparent urinary tract infection (UTI) on 3 Month14, and for a further iron injection on 7 Month14. At the 3 Month14 appointment, Dr C documented in the clinical records that Ms A did not have any abdominal pain and appeared systemically well.

25. At the 7 Month14 appointment, the clinic nurse also provided Ms A with another blood test form, as she had lost the previous form given to her in Month12. The provider listed on the form is Dr D. Ms A had this blood test on 8 Month14. A screenshot of the results indicates that Dr D viewed and filed the test results. However, Dr D told HDC that she never received a copy of the blood test results from 8 Month14, and was never consulted about the results.

26. On 15 Month14, Ms A was seen by Dr C in relation to respiratory symptoms. There is no reference in the clinical records to any discussion or follow-up about the blood test form Ms A had been given by the clinic nurse on 7 Month14, or the test results of 8 Month14.

27. On 23 Month14, Dr D recommended that Ms A continue with weekly iron injections and have a repeat blood test in 4–6 weeks' time.

28. On 29 Month15, Ms A presented to A&E complaining of back and abdominal pain. The clinical records note that the treating physician did not consider Ms A's symptoms to be sinister, and prescribed a combination of paracetamol, Voltaren, and tramadol (all pain relief medications), with instructions to increase her intake of clear fluids, and to return to A&E or see her GP for worsening symptoms.

Month16–Month17

29. Ms A next presented to the medical centre on 13 Month16 and was seen by Dr C regarding her persistently low iron. Dr C documented in the clinical records that Ms A did not have any "red flag symptoms" such as heavy menstrual bleeding or weight loss. Dr C referred Ms A for an iron infusion at the public hospital, which took place on 20 Month16.

30. On 8 Month17, Ms A presented to Dr D with new onset back pain and loose stools. A smear test was taken and came back normal, and Ms A was advised that the pain was likely musculoskeletal back pain, but to return in two weeks' time if her symptoms worsened. Dr D told HDC that this was the last time she saw Ms A.

Month18– Month19

31. Ms A presented to A&E on 10 Month18 via ambulance with abdominal pain, vomiting, and diarrhoea. The ambulance summary records Ms A having reported blood in her stools (rectal bleeding) and being in significant pain.

32. The A&E discharge summary indicates that the treating physician's impression was that Ms A was suffering from gastroenteritis and dehydration. Ms A was treated with IV rehydration and medication to treat her stomach cramps and nausea,[6] and discharged the same day with

[6] Buscopan, metoclopramide.

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advice to follow up with her GP or return to ED if required. Further blood tests were performed.

33. On 15 Month19, Ms A presented to Dr C with constipation and pain while passing urine and bowel motions. Dr C recorded her examination as normal and recommended that Ms A try laxatives. Dr C noted that aside from Ms A's persistent anaemia, her blood test results at the time were normal and she denied any abdominal pain, rectal bleeding, or weight loss. Dr C told HDC that she did not receive a copy of the blood test results performed at the hospital on 10 Month18.

34. On 22 Month19, Ms A presented to A&E again, with a "flu-like illness" and haemorrhoids.[7] The hospital discharge summary outlined that Ms A had abdominal pain and constipation as well as her menstrual period, and described her pain at the time as being "severe". Ms A was given a course of antibiotics. She was discharged the same day and advised to return to her GP for review in a few days' time.

35. Ms A was seen at the medical centre by a GP on 24 Month19 for a planned review following her A&E discharge. The notes indicate that Ms A had an ongoing cough, fever, mild abdominal pain, and diarrhoea. Ms A was advised to continue with the antibiotics and a fluid/electrolyte solution.

Month20

36. Ms A was seen by Dr C twice more in 2018, on 9 and 27 Month20. On 9 Month20, Ms A presented with lower back, abdominal, and pelvic pain, with her pain worsening on movement. Dr C told HDC that Ms A's abdomen was soft and not tender to touch, with no masses, and she asked Ms A to have a blood test to investigate the cause of the pelvic/groin pain, and to return if her symptoms worsened. However, Ms A did not complete the blood test, and did not return with worsening symptoms.

37. Ms A next presented to Dr C on 27 Month20 for a further consultation regarding the pain in her right groin area. Dr C told HDC that she examined Ms A and noted that she appeared well, and no mass was detected in her abdomen.

38. Dr C told HDC that she recalls that Ms A appeared to have lost weight (approximately 5kg) when she last saw her at this appointment. However, Dr C but did not weigh Ms A or document this observation in the clinical records. Dr C stated that she was not worried about the weight loss at the time, but in hindsight, should have been.

39. Dr C told HDC that she did not feel that Ms A warranted admission or a more urgent assessment at either this appointment or on 9 Month20, as she looked well and the pain was not severe. Dr C treated Ms A for a UTI with oral antibiotics and referred her for a non-urgent priority two ultrasound[8] to investigate her chronic abdominal pain.

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[7] Swollen veins in the rectum and anus that cause discomfort and bleeding.

[8] Usually completed within four weeks.

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40. The ultrasound was booked for 23 Month22, slightly outside of the four-week timeframe requested. Dr C said that 27 Month20 was the last time she saw Ms A.

Subsequent events

41. Ms A was travelling overseas when she was admitted to hospital on 1 Month22, with sudden onset abdominal pain.

42. A CT scan showed a large pelvic mass, and a colonoscopy showed multiple polyps and a malignant mass in Ms A's colon, indicative of colorectal cancer.

43. Ms A was discharged on 11 Month22 to return to New Zealand, with an arranged admission to DHB2. Due to the inoperable and advanced nature of Ms A's cancer, she was considered not to be a suitable candidate for chemotherapy, and was discharged into hospice care on 22 Month22. Sadly, Ms A passed away a few weeks later.

Primary responsibility of Ms A's care

44. As referenced above, Ms A was seen by several doctors at the medical centre over 2016 to 2018.

45. Dr C told HDC that Dr D was Ms A's primary GP, and from Month11 Dr D had taken responsibility for the management of Ms A's iron deficiency.

46. In contrast, Dr D told HDC that as a locum, she was always under the impression that Ms A's regular GP was Dr C. Dr D noted that at that time, all patients at the practice were registered under Dr C.

47. In a further response dated 15 December 2021, Dr D told HDC that had she had a discussion with Dr C around who was the primary caregiver of Ms A, she would have indicated this in her clinical records. Dr D reiterated that she was not Ms A's primary GP, and that she had no further interaction with Ms A after Month17.

Further information — Dr C

48. Regarding the specific concerns raised by Ms B in her complaint, Dr C made the following comments.

Constipation and abdominal pain

49. Dr C noted that Ms A had presented to her with abdominal pain and constipation on two occasions in 2018. Dr C stated that she believes she managed these presenting symptoms to the best of her ability, but with the benefit of hindsight, it may have been helpful if the blood tests ordered on 9 Month20 had been completed.

Management of Ms A's iron deficiency anaemia

50. Dr C told HDC that her involvement with Ms A regarding her iron deficiency anaemia was "negligible", and that Ms A had been seen multiple times by Dr D regarding her iron deficiency, with a plan in place to manage the anaemia that seemed to be working.

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Cancer diagnosis/ultrasound referral

51. Dr C stated that she had not excluded cancer as the reason for Ms A's symptoms, but rather, that she thought there were far more likely causes, and she was investigating these as a diagnosis. Dr C said that she felt that the semi-urgent priority two referral grading for the ultrasound ordered was appropriate, and as fast as it could be done as an outpatient.

Follow-up of blood test results

52. Regarding the blood test results of 8 Month14, Dr C told HDC that the primary responsibility for following up test results rests with the clinician who ordered the tests, and provided a copy of the medical centre's Test Result Policy, which confirms this. Dr C noted that the audit tab indicates that the results received on 8 Month14 had been ordered by Dr D on 7 Month14, and had been received and filed by Dr D.

53. Dr C stated that she would like to convey to Ms A's whānau how sorry she is for not diagnosing Ms A's cancer sooner.

Further information — Dr D

Management of Ms A's iron deficiency anaemia

54. Dr D told HDC that with hindsight, the nature of Ms A's anaemia is now clear. Dr D stated:

> "Unfortunately, due to the involvement of multiple care givers, (both Doctors and nurses), together with her presentations related to other organ systems (breast lumps and upper back pain), and her noncompliance with medication, the refractory nature[9] of her iron deficiency anaemia was not appropriately identified and addressed earlier. If this was identified, she would have been referred to a hospital specialist for upper and lower Gastrointestinal (GI) endoscopy to ascertain whether her iron deficiency anaemia was secondary to occult[10] GI bleeding."

Follow-up of test results

55. Dr D told HDC that she now asks colleagues to refer any test results back to her that have been signed off in her absence, as this will ensure that she is aware of, and attends to, any abnormal test results that have been received for patients she has seen as part of her shared care at the medical centre. Dr D noted the importance of well-documented care plans in instances of "shared care" of patients.

Responses to provisional opinion

Ms B

56. Ms B was given the opportunity to respond to the "information gathered" section of the provisional opinion. She commented that she was lost for words to read how many times her sister had presented with the same problem and was not examined further.

[9] Iron deficiency anaemia that is unresponsive to treatment.

[10] Bleeding that is not visible to the naked eye.

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57. Ms B acknowledged that her sister had not completed all of the blood tests requested by the medical staff involved in her care, but noted that she had been tired and was continually sent home with the same medication, so this was not surprising.

Dr C

58. Dr C was given the opportunity to respond to the provisional opinion. She did not make any comments on the proposed recommendations and follow-up actions, but commented that Dr D was a permanent GP at the medical centre at the time of the events, and continues to work there on a part-time basis.

Dr D

59. Dr D was given the opportunity to respond to the provisional opinion. She accepted the proposed recommendations and follow-up actions.

Medical centre

60. The medical centre was given an opportunity to respond to the provisional opinion. The medical centre noted that ownership has changed in the time since the events, but acknowledged that no whānau should suffer the grief and loss experienced by Ms A's whānau.

Opinion: Introduction

61. This report highlights the importance of clear communication between providers in instances of "shared care", where a patient is seen by multiple providers. It also emphasises the importance of using critical thinking to reassess possible diagnoses when patients continue to present with persistent and significant iron deficiency anaemia that fails to respond to treatment as expected, and where there is no obvious cause for anaemia of such severity. With medical practices focussing less on consistent, individual doctor consultations, and more frequently using a "shared care" model, attention must be paid to issues that can arise when no single clinician takes overall responsibility for a patient, and the need to ensure continuity of care in such instances.

62. I note that Ms A did not present with constant or progressive bowel symptoms until near the end of 2018. Diagnosis of such a cancer in Ms A's age group is very rare, with more benign, common causes (such as menstruation) more likely to cause persistent anaemia in women of Ms A's age.

63. My in-house clinical advisor, Dr David Maplesden, noted that Ms A had presented with varied and intermittent abdominal symptoms and no obvious abdominal mass. Dr Maplesden advised that this, coupled with the absence of any constant or worsening bowel symptoms until the end of 2018, appeared suggestive of a possible gut cause for the anaemia (rather than colon cancer). Furthermore, the classically vague and non-specific nature of symptoms related to ovarian pathology, the "red flag" of Ms A's unexplained

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weight loss being missed, and the delay in scheduling an ultrasound scan, are all factors that likely contributed to the delay in diagnosis.

64. I note that multiple secondary-care providers were involved with various aspects of Ms A's medical conditions. I have not identified any concerns with the care provided by the secondary-care providers.

65. I also acknowledge that the complexity and chronicity of Ms A's medical conditions was a difficult background upon which to provide care and diagnosis, and I have taken this into consideration throughout the report.

Opinion: Dr C — breach

Background

66. Ms A first presented to the medical centre with low iron in 2016; however, her clinical records indicate that low iron had been an issue since 2013, with heavy periods referenced by her previous GP in 2015. Ms A was seen by Dr C on several occasions over 2017 and 2018 in relation to her iron deficiency anaemia, which continued to persist despite treatment with oral and parenteral[11] iron.

Management of Ms A's iron deficiency anaemia — 2017

67. Ms A's initial presentations to the medical centre were with another doctor and clinic nurses in 2017.

68. I sought advice from my in-house clinical advisor, Dr David Maplesden, regarding the care provided to Ms A by Dr C. Dr Maplesden noted that Ms A had a picture of chronic iron deficiency anaemia with reference to heavy periods in her clinical records, and that at the time of her initial presentations it was reasonable to assume that her iron deficiency was due to menstruation with inadequate oral intake of iron, particularly given a lack of any persistent gastrointestinal complaints. Dr Maplesden advised that it was reasonable that no further investigations were undertaken by her previous doctors at that point (ie, around Month1), but noted that the anaemia was significant, and stated:

> "If it persisted despite adequate replacement, and was assumed to be related to heavy periods, it would be accepted practice to try and address the presumed underlying cause (dysfunctional uterine bleeding)."

69. Ms A was seen by Dr C for the first time on 4 Month6. Dr C next saw Ms A on 10 Month8. At this time, Dr C documented that Ms A had low iron levels and prescribed iron tablets.

70. Dr C ordered blood tests on 12 Month9, when Ms A presented regarding a swollen neck gland. The clinical records do not refer to Ms A's low iron levels at the time of her Month20

[11] Intramuscular injections.

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appointment, but Dr C told HDC that she asked the clinic nurse to commence iron injections, because the tablets were not working.

71. Regarding this presentation, Dr Maplesden stated that he would expect there to have been a plan in place to address the bleeding and ongoing anaemia. He noted that the plan referred to by Dr C above (to commence iron injections) is not documented in the clinical records. Dr Maplesden advised that if such a discussion occurred, he is mildly to moderately critical that it was not documented, and mildly critical that there was no plan to address the underlying issue of dysfunctional uterine bleeding.

72. Dr Maplesden advised that he believes the degree of anaemia warranted further assessment together with parenteral iron therapy, and he is mildly to moderately critical that this was not considered.

73. I accept Dr Maplesden's advice. I am satisfied that the discussion about commencing iron injections occurred, but I am critical of Dr C's failure to document such a discussion in the clinical records.

74. I also agree that further assessment should have been undertaken in conjunction with parenteral iron therapy, and I am critical that this did not occur.

2018

Management of Ms A's iron deficiency anaemia — Month14 to Month16

75. Over the course of 2018, Ms A was seen by Dr C on six occasions for treatment of her persistent iron deficiency anaemia, UTI symptoms, and lower abdominal pain.

76. On 13 Month16, Ms A saw Dr C regarding her iron levels. At this time, Dr C referred Ms A to the public hospital for an iron infusion, and documented that Ms A's anaemia had persisted despite iron injections and tablets. While it appears that recent blood test results from 8 Month14 may not have been brought to Dr C's attention prior to being filed, Dr Maplesden commented that Dr C would have had access to the results when she reviewed Ms A on 13 Month16.

77. Dr C told HDC that her involvement with Ms A regarding her iron deficiency anaemia was negligible, with Dr D being primarily responsible for overseeing management of Ms A's treatment. Dr Maplesden noted that this is in contrast to Dr D's response, which states that Dr C was Ms A's regular GP, and therefore responsible for overseeing management of her iron deficiency.

78. Dr Maplesden advised that he is of the view that Dr C was primarily responsible for determining that it was appropriate to initiate iron injections for Ms A (which she did), and that while such therapy as it occurred was appropriate, the cause of Ms A's severe iron deficiency anaemia was not investigated adequately.

79. Dr Maplesden advised:

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"[A]ppropriate management [in Month14– Month16], as per the cited guidance, was to carefully review [Ms A's] symptom history to establish whether it remained reasonable to attribute her anaemia to heavy periods (there having been no presentation with this complaint since [Ms A] had enrolled at the medical centre), and to further investigate as indicated. Alternatively, advice might have been sought from a haematologist. This was undertaken to some degree by [Dr C] on 13 [Month16] and essentially established menorrhagia[12] or dietary insufficiency were less likely to be relevant issues. Hence, the cause of her iron deficiency, and particularly the reasons for the severe and refractory nature of her iron deficiency, were unexplained. Under the circumstances, I am moderately critical at the failure by [Dr C] to further investigate [Ms A's] iron deficiency anaemia, or seek haematologist advice, at this point."

80. I agree with Dr Maplesden's comments and accept his advice that inadequate consideration was given to the severity and refractory nature of Ms A's anaemia.

81. While a number of factors contributed to the delay in Ms A's cancer diagnosis, the severity of the anaemia, the lack of an obvious cause for it, and the lack of response to treatment, were all indications that it needed to be investigated more thoroughly. In the absence of a confirmed history of ongoing menorrhagia, specialist advice should have been sought. I accept Dr Maplesden's advice that Dr C's failure to do this was a moderate departure from accepted practice.

15 Month19

82. Ms A was reviewed by Dr C on 15 Month19 with bowel symptoms that included constipation. Dr C told HDC that Ms A was not exhibiting any "red flag" symptoms at this time, such as weight loss or night pain, and Ms A did not mention rectal bleeding at this appointment, despite her recent ED presentation where this symptom was recorded. Dr C advised that she completed an abdominal examination at this appointment, but likely did not document it because the results were normal.

83. In relation to this appointment, Dr Maplesden advised:

"Best practice would be to document relevant negative findings which in this case includes the results of an abdominal examination. I remain mildly critical there was no consideration given to further investigation of [Ms A's] anaemia at this point given her recent ED attendances with abdominal pain and the lack of expected response to parenteral iron therapy."

84. I accept Dr Maplesden's advice and agree that it would have been appropriate at this time for Dr C to consider further investigation, given Ms A's recent ED attendances and her persistent and treatment-resistant anaemia.

[12] Heavy menstrual bleeding lasting more than seven days.

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Month20

85. Dr C saw Ms A on 9 Month20, and for the last time on 27 Month20. An ultrasound referral was made at this time, given Ms A's complaints of chronic abdominal pain. Dr C told HDC that this presentation was almost three weeks after Ms A had first presented with abdominal pain, and that she "was again advised to come back for reassessment if she developed further symptoms or if her pain got worse".

86. I note and accept Dr Maplesden's advice that the care provided by Dr C in Month20 was consistent with expected practice. Dr Maplesden noted the varying nature of Ms A's intermittent abdominal symptoms, and advised that the abdominal ultrasound was "ordered with appropriate priority when Ms A's presentations with abdominal pain were increasing in frequency but with no obvious cause evident".

Conclusion

87. While I acknowledge that several factors contributed to the delay in diagnosing Ms A's cancer, I am critical of Dr C's inadequate investigation into the cause of Ms A's anaemia in 2017 and 2018, in particular:

- The failure to consider further assessment of Ms A's ongoing bleeding and anaemia in Month9, and the failure to document any discussion around this.
- The failure to investigate Ms A's persistent anaemia further in Month16, or seek advice from a haematologist, given the severity of the anaemia, the lack of an obvious cause, and the lack of response to treatment.
- The failure to consider further investigation into the cause of Ms A's anaemia when she presented in Month19 following her recent hospital presentations with abdominal pain and rectal bleeding, and a continued lack of response to parenteral iron therapy.

88. I consider that the above failures by Dr C meant that opportunities were missed to potentially diagnose and respond to Ms A's cancer several months earlier than occurred. I note Dr Maplesden's comments that in hindsight, an earlier referral for a colonoscopy in Month16 or an ultrasound in the latter part of 2018 is unlikely to have resulted in an improved prognosis for Ms A, given the aggressive nature of the tumour. However, an earlier diagnosis may have given Ms A and her whānau the opportunity to plan for her future, and may have avoided the trauma of a diagnosis occurring overseas.

89. In my opinion, Dr C's failure to investigate the cause of Ms A's anaemia more thoroughly over 2017 and 2018 departed from the accepted standard of care. Accordingly, I find that Dr C breached Right 4(1) of the Code of Health and Disability Services Consumers' Rights (the Code).[13]

90. I acknowledge that since these events, Dr C has made a number of changes to her practice around treatment of iron deficiency anaemia, and these changes appear appropriate and should reduce the risk of a similar case in the future.

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

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Opinion: Medical centre — other comment

91. Dr C was a GP and part-owner of the medical centre at the time of the events. As stated above, I have found Dr C to be in breach of the Code for failing to provide an adequate standard of care to Ms A.

92. As a healthcare provider, the medical centre is responsible for providing services in accordance with the Code. In this case, I consider that the deficiencies in Dr C's care were individual failures. The medical centre had a "Test Result" Policy in place at the time, which outlines the process for management of patient tests, investigations, results, and referrals. I accept Dr Maplesden's comment that the medical centre test policy is consistent with accepted practice, and I am satisfied that the policy was appropriate.

93. I do, however, note the comments made by Dr Maplesden about the "lack of ownership" of primary responsibility for the investigation and management of Ms A's anaemia by both GPs. While I am not critical of the "Test Result" policy, I am concerned that the medical centre did not appear to have appropriate policies or processes to support its shared-care model. I am also critical of the lack of clarity as to which GP had the primary responsibility for Ms A's care. I consider it appropriate for the medical centre management and all parties to reflect on the issue of clinical responsibility when care of a patient is shared, and how best to confirm expected responsibilities in such a situation, and what policies and processes are needed to support this.

Opinion: Dr D — adverse comment

94. Dr D saw Ms A on several occasions in 2017 and 2018 while working as a locum GP at the medical centre. Dr D told HDC that as a locum, she was always under the impression that Dr C was primarily responsible for the care of patients at the medical centre, including Ms A. In contrast, Dr C told HDC that Dr D was responsible for overseeing management of Ms A's iron deficiency anaemia from Month11.

95. I sought advice from my in-house clinical advisor, Dr David Maplesden, regarding the care provided to Ms A by Dr D from 2017 to 2018. Dr Maplesden advised that the majority of the care provided by Dr D was reasonable.

96. Dr D had limited contact with Ms A in Month14. Dr D's name was, however, on the 7 Month14 blood test request form, and the results of the 8 Month14 test were viewed and filed by Dr D. Regarding Dr D's care in Month14, Dr Maplesden advised:

> "Taking into account the apparent lack of clarity over who was taking overall responsibility for management of [Ms A's] severe anaemia … but noting [Dr D] did review and file the haemoglobin result of 8 [Month14] without apparently discussing this with [Dr C], I am mildly to moderately critical of [Dr D's] failure to ensure the haemoglobin result was brought to the attention of [Dr C] if [Dr D] had no intention of

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further investigating the reason why the response to parenteral iron therapy was not as expected."

97. I agree with Dr Maplesden's comments and I am mildly critical that Dr D did not ensure that the Month14 haemoglobin results were discussed with Dr C. I acknowledge the advice provided by Dr Maplesden that despite this failure, Dr C would have had access to the result of 8 Month14 when she next reviewed Ms A on 13 Month14 in relation to her anaemia.

98. Notwithstanding the above criticism, I accept Dr Maplesden's advice that the majority of the care provided by Dr D was appropriate. I acknowledge that Dr D has taken remedial measures since the events in question, including undertaking further education on management of iron deficiency anaemia and ensuring improved lines of communication between providers when there is a "shared care" situation.

Changes made

99. Dr C advised that she has made the following changes:

- When prescribing oral iron tablets she no longer prescribes these without first completing a full examination and history of the patient.
- In pre-menopausal women with iron deficiency, she ensures that she checks for causes of iron deficiency anaemia, including menorrhagia, coeliac disease (or other malabsorption conditions), and gastrointestinal blood loss.
- In post-menopausal women and all men with unexplained iron deficiency, she ensures that she refers them for gastroscopy/colonoscopy or CT colonography, even when there is an absence of gastrointestinal symptoms.
- Where no cause for iron deficiency is found, she refers all patients, regardless of age, for further investigation.
- One month after starting iron replacement therapy, she ensures that either she or a clinic nurse orders a further blood test for a full blood count and to re-check ferritin levels.
- She documents a thorough management plan for all patients with iron deficiency anaemia, and ensures that there is clarity around the management of a patient should it persist, and that all nursing staff are aware of the expected improvement in iron levels.
- Patients who present repeatedly at the practice or at A&E are discussed at monthly clinic meetings to determine whether management can be improved.

100. Dr D has undertaken the following:

- Asked all colleagues to refer the results of any tests signed off in her absence back to her to ensure that she is aware of, and attends to, all abnormal test results generated for patients she has seen as part of her shared care at the medical centre.

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- Reviewed a recent British Society of Gastroenterology study on management of iron deficiency anaemia in adults, and intends to share the information with her GP colleagues and the medical centre nurses at their monthly peer review meeting.
- Reflected on the issue of "shared care" of patients, and the need for well-documented care plans to be available in clinical records to ensure continuity of care.

Recommendations

101. Bearing in mind the above changes already made by Dr C, I recommend that Dr C:

a) Provide a written apology to Ms B and her whānau for the failings identified in this report. The apology should be sent to HDC within three weeks of the date of this opinion, for forwarding to Ms B.

b) Review the HealthPathways guidance on iron deficiency anaemia[14] and undertake an audit of patients given oral or parenteral iron therapy in the last 12 months to ensure that the underlying cause of the iron deficiency anaemia has been investigated appropriately, and share the results of the audit with HDC within three months.

102. Bearing in mind the above changes already made by Dr D, I recommend that Dr D:

a) Provide a written apology to Ms B for the adverse comments made in this report. The apology is to be sent to HDC, for forwarding to Ms B, within three weeks of the date of this report.

b) Review the HealthPathways guidance on iron deficiency anaemia and undertake an audit of patients given oral or parenteral iron therapy in the last 12 months to ensure that the underlying cause of the iron deficiency anaemia has been investigated appropriately, and share the results of the audit with HDC within three months.

103. I recommend that the medical centre consider whether any improvements can be made to its policies and processes to ensure clarity as to which GP has the primary responsibility for an individual patient's care, and to better support its shared-care model through the timely and effective facilitation of communication and cooperation between each doctor in instances of shared care.

[14] Community HealthPathways section "Iron Deficiency Anaemia"

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Follow-up actions

104. A copy of this report with details identifying the parties removed, except the expert who advised on this case, will be sent to the Medical Council of New Zealand, and it will be advised of Dr C's and Dr D's names in covering correspondence.

105. A copy of this report with details identifying the parties removed, except the expert who advised on this case, will be sent to the Royal New Zealand College of General Practitioners and the Health Quality & Safety Commission, and placed on the Health and Disability Commissioner website, www.hdc.org.nz, for educational purposes.

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Appendix A: In-house clinical advice to Commissioner

The following expert advice was obtained from Dr David Maplesden, General Practitioner:

"Thank you for the request that I provide clinical advice in relation to the complaint from [Ms B] (per NHDAS), sister of [Ms A] on behalf of [Ms A's] whānau, about the care provided to [Ms A] by [Dr C] of [the medical centre]. In preparing the advice on this case to the best of my knowledge I have no personal or professional conflict of interest. I agree to follow the Commissioner's Guidelines for Independent Advisors. I have reviewed the following information:

- Complaint from [Ms B]
- responses from [Dr D] and [Dr C] of [the medical centre]
- GP notes [the medical centre]
- clinical notes [DHB2]
- clinical notes [DHB1]
- A further response was received from [Dr C] on 30 March 2021 and comments in relation to the response have been incorporated into this report identified as addenda dated 7 April 2021
- Further responses were received from [Dr D] (10 September 2021), [Dr C] and [the medical centre] (14 September 2021). These have been incorporated as addenda dated 25 October 2021

2. The complaint relates to delays in the diagnosis of [Ms A's] cancer. [Ms A] had apparently presented with symptoms including *constipation, ongoing pain, irregular period and low iron levels* for at least a year prior to her diagnosis. Whānau believe the symptoms were not adequately investigated. [Ms A] travelled [overseas] in [Month22] and was admitted to hospital there after a further episode of abdominal pain. Investigations revealed widespread cancer and she was flown back to New Zealand for further management. [Ms A] was admitted to [DHB2] on 12 [Month22] and underwent exploratory surgery which found her cancer was too advanced for other than palliative management. She was discharged on 22 [Month22] for hospice care and […] sadly, [Ms A] passed away [a few weeks later].

3. There appears to be a lack of clarity over the nature of [Ms A's] cancer. While initial CT imaging [overseas] suggested an ovarian primary with spread to the bowel and peritoneal cavity, subsequently colonoscopy on 2 [Month22] showed multiple colorectal polyps and a fungating malignant looking mass in the sigmoid colon. Histology of a biopsy from this mass showed signet ring adenocarcinoma (signet ring cell carcinoma (SRCC))) suggestive of colorectal origin. The [DHB2] notes initially refer to a diagnosis of metastatic colorectal cancer but following surgery, where involvement of the right ovary was noted, there is reference to likely ovarian primary. Later in the notes there is reference to *likely sigmoid colon primary with metastatic spread to the right ovary* but the [DHB2] discharge summary dated 22 [Month22] refers to likely ovarian primary. A majority of SRCC tumours originate in the stomach, and they account for around 1% of cases of colorectal cancer (CRC). A literature review includes the

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comment: *SRCC is more common as a CRC variant among young adults than older adults and leads to more aggressive outcomes primarily because of its late detection*[1]. Metastatic involvement of the ovary with SRCC is recognised as a Krukenberg tumour. Gastric and colorectal cancers collectively account for almost 90% of the primary site for this tumour[2]. On the other hand, primary SRCC of the ovary is extremely rare with only a few case studies reported in the literature[3]. On the balance of probability, and taking into account the clinical features of [Ms A's] presentation including her long history of iron deficiency, it seems most likely she had a primary CRC of very uncommon subtype (SRCC), that subtype being more common in young patients with CRC than older patients, and being a particularly aggressive cancer with late detection not uncommon. There were 88 cases of CRC diagnosed in females in [Ms A's] age group (25–44 years) in the most recent (2017) cancer data available, and 19 cases of ovarian cancer[4]. This illustrates how uncommon these cancers are in [Ms A's] age group.

4. GP responses note [Ms A] enrolled at [the medical centre] [in] 2016. On review of notes prior to this time there is reference to *?low iron…?iron tabs* [in] 2013, and heavy periods [in] 2015. [In] 2016 [Ms A] presented to [the public hospital] ED with epigastric pain and was noted to be anaemic (see results summary Appendix 1) consistent with previous results (not on file) with diagnosis *anaemia, suspect secondary to menstrual loss.* Iron tablets were prescribed. The epigastric pain was managed as suspected reflux with advice *please consider USS if continued pain.* [Ms A] initially consulted with nurses at [the medical centre] [in] 2016 (cervical smear, possible sub-fertility, *has been anaemic in the past (pt stated) …* Weight 88.7kg. Blood tests showed persistent iron deficiency anaemia (Hb 86) and oral iron was prescribed [in] 2016 (script not collected). There were [three] further nurse consultations in […] at which [Ms A] was encouraged to take her oral iron (she complained of diarrhoea as a side effect). The first GP contact was with [Dr D] on 4 [Month1] (ear issue, left breast lump) and [Ms A] was referred for breast imaging.

Comment: [Ms A] had a picture of chronic iron deficiency anaemia with reference to heavy periods in her notes. She did not adhere to the recommended iron replacement therapy. It is unclear how long she had been iron deficient or to what degree the deficiency had been previously investigated including dietary assessment. There was no complaint of persistent GI symptoms. Given [Ms A's] age and the overall clinical picture at this point, I think it was reasonable to assume her iron deficiency was due to menstruation with inadequate oral intake of iron and that no specific further investigations were required at this point. However, the anaemia was certainly significant (local guidance[5] lists haemoglobin <80 g/L as 'severe anaemia' and a

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[1] Farraj F et al. Signet Ring Cell Carcinoma of the Colon in Young Adults: A Case Report and Literature Review. Case Reports in Oncological Medicine. 2019. https://doi.org/10.1155/2019/3092674 Accessed 24 September 2020

[2] Aziz M et Kasi A. Cancer, Krukenberg Tumor. StatPearls[Internet]. Last updated 29 June 2020. https://www.ncbi.nlm.nih.gov/books/NBK482284/ Accessed 24 September 2020

[3] Kim J et al. Primary ovarian signet ring cell carcinoma: A rare case report. Mol Clin Oncol. 2018;9(2):211–214

[4] https://www.health.govt.nz/publication/new-cancer-registrations-2017 Accessed 24 September 2020

[5] Community HealthPathways section 'Iron Deficiency Anaemia'

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potential red flag) and I believe if it persisted despite adequate replacement, and was assumed to be related to heavy periods, it would be accepted practice to try and address the presumed underlying cause (dysfunctional uterine bleeding).

5. [Ms A] had a breast ultrasound on 4 [Month2] and biopsy 15 [Month2] confirming likely fibroadenoma. She preferred to have the lump removed and was referred to a surgeon with consultation taking place on 26 [Month4] and [Ms A] being placed on the waiting list for local excision. She was seen for pre-anaesthetic assessment on 31 [Month7] and bloods done at that time showed persistent but relatively stable iron deficiency anaemia (Hb 80). Weight was recorded as 88.9kg and BMI 33.5. A fax was sent to [the medical centre] by the anaesthetic department on 6 [Month8] requesting [Ms A] have her iron deficiency treated prior to surgery and [Dr C] provided a prescription for oral iron on 10 [Month8]. The pre-anaesthetic clinic report dated 7 [Month8] noted the blood results and included the comment: *D/W [Dr […] — referred to GP for Hb, iron & platelet investigation.* A second fax was sent to [the medical centre] from the anaesthetics department on 6 [Month9] requesting repeat blood tests prior to [Ms A's] forthcoming surgery. [Dr C] saw [Ms A] for the first time on 12 [Month9] for a swollen neck gland. She was systemically well. Blood tests were ordered (unclear if this was to investigate the swelling or per the recent fax). Results showed further drop in haemoglobin to 77g/L (now severe anaemia) and [Dr C] states she then organised for [Ms A] to have parenteral iron (IM injections) *as the oral iron tablets she was taking did not appear to be working.*

Comment: There is no reference in the clinical notes around the time the latest blood test result was received to the intended management plan such as the intended replacement regime (how many injections, when to assess response etc (the next entry is 17 [Month10] when a nurse has recorded administering an iron injection). This is a mild departure from accepted standard of clinical documentation. I believe the observation that [Ms A] now had a picture consistent with severe iron deficiency anaemia required at least a review of her notes to determine the extent to which the condition had been previously investigated, confirmation of the nature of [Ms A's] periods (if it was to be assumed this was the cause of the anaemia) or any symptom that might suggest an alternative cause of blood loss, confirmation as to whether or not she had taken the course of oral iron (if she had, consideration might be given to investigate causes affecting iron absorption such as coeliac disease) — all these considerations being consistent with the cited guidance. While it was still most likely the cause of the iron deficiency was a combination of blood loss via menstruation with inadequate oral replacement, I believe the degree of anaemia warranted further assessment together with the parenteral therapy and I am mildly to moderately critical this was not considered.

Addendum 7 April 2021: [Dr C] states in her later response she was aware [Ms A] had a long history of irregular, heavy periods and dysmenorrhoea documented by the previous GP and she had been reviewed by the local gynaecology service in [2015] for

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stress incontinence with normal speculum examination and cervical smear noted at that time. [Dr C] states [Ms A] *had no red flags (PR bleeding, abdominal pain, weight loss) at this time to suggest otherwise … I attributed her iron deficiency to menorrhagia and her lack of response to non-adherence with iron replacement therapy.* The clinical notes dated 12 [Month9] do not reflect any of these considerations but may not accurately reflect the discussions undertaken. If [Ms A] admitted to ongoing heavy periods and denied any other symptoms of note, it was reasonable to proceed with parenteral iron replacement and closely monitor the response to therapy. However, noting [Ms A] was now severely anaemic with the presumption being this was due to her dysfunctional uterine bleeding, I would expect there to have been a plan in place to address the bleeding in addition to dealing with the symptom of iron deficiency. If a discussion was undertaken as documented in the response, I am mildly critical there was no plan to address the underlying issue of dysfunctional uterine bleeding and I am mildly to moderately critical this important discussion was not documented. If there was no such discussion, my original criticisms remain.

6. [Ms A] was reviewed by [Dr D] on 13 [Month11] in relation to her recent breast surgery. At the consultation, a nurse asked [Dr D] about [Ms A's] parenteral iron replacement plan (which had not been documented by [Dr C]) and [Dr D] made contact with a DHB pharmacist and together they worked out and documented a suitable replacement regime and plan for follow-up blood tests.

Addendum 25 October 2021: *A review of Task Manager shows a task from [a] (practice nurse) dated 13 [Month11]: Hi I spoke to [Dr C] to confirm dosage, see notes. Given 1st inj and set recall for 1/12. needs fe dose checked and f/u Fe till target reached* (This may relate to the original injection provided on 12 [Month10]). The task continues: *[Dr D] - see my notes lets talk about this next clinical meeting or when we are both free! […] I have documented what this girl needs, you may just want to run this past a GP- i have written it in the notes thanks […].* There is a detailed IM iron replacement regime documented under [Dr D's] name and this refers to consultation with the hospital pharmacist. It is apparent [Dr D] and the practice nurse were responsible for confirming an iron replacement regime for [Ms A] because [Dr C], who had initiated the treatment in response to [Ms A's] iron deficiency, had left inadequate instructions.

Comment: [Dr D] notes in her response she attended [the medical centre] intermittently as a locum GP. In the situation described, I believe her action in confirming a suitable iron replacement plan (replacement already having been commenced) for [Ms A] was appropriate given it had not been documented previously. I believe it was reasonable for [Dr D] to assume that [Ms A's] registered GP ([Dr C]), who had initiated the parenteral iron replacement, had undertaken whatever assessments she felt were necessary in regard to [Ms A's] severe iron deficiency, and [Dr D's] role was to ensure, at the request of the practice nurse, that an appropriate treatment regime was in place.

Addendum 7 April 2021: [Dr C] maintains [Dr D] was [Ms A's] primary GP and from [Month10] onwards [Dr D] took responsibility for the management of [Ms A's] iron deficiency which had failed to respond to oral and IM replacement therapy throughout

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2016–2017. This is in direct contrast to [Dr D's] response dated 8 September 2020 which states: *Her* [Ms A's] *regular GP was [Dr C]. I was not [Ms A's] regular GP Provider …* My original advice has been provided with the assumption [Dr C] was [Ms A's] primary provider but this is now uncertain and requires clarification and agreement from both GPs. My impression from the clinical notes remains that up to [Month11] [Dr C] was primarily responsible for managing [Ms A's] anaemia and on 13 [Month11] [Dr D] was facilitating the management plan initiated by [Dr C] (parenteral iron replacement) at the request of nursing staff because [Dr C] had not detailed the management plan sufficiently to enable nursing staff to commence administration of IM iron.

Addendum 25 October 2021: [Dr D] states in her later response that she *was always under the impression that [Dr C] was the primary care giver and I as a locum was providing and co-ordinating the care of her patients when I was working as a locum in her practice … In hindsight, if the patient was regularly reviewed by me I am sure that I would have referred her on for a specialist opinion, to investigate her refractory iron deficiency anaemia.* [Dr D] notes that during the period in question, all patients were registered under [Dr C] (who owned the practice at the time). […] I remain of the view that [Dr C] was, to this point, primarily responsible for determining it was appropriate to initiate parenteral iron replacement therapy for [Ms A] and, while such therapy was appropriate, the cause of [Ms A's] severe iron deficiency anaemia had been inadequately investigated and remained so.

7. IM iron injections were administered in [Month11] and [Month12] with blood test form provided on 27 [Month12] for follow-up testing. [Ms A] did not complete the test (lost form). On 3 [Month14] [Dr C] saw [Ms A] for symptoms of urinary tract infection and on 7 [Month14] [Ms A] received a further iron injection and was provided with another blood test form. The provider listed on the form was [Dr D]. Results showed only a very modest increase in haemoglobin (81) and stable ferritin level. [Dr C] saw [Ms A] on 15 [Month14] for respiratory symptoms. There is no reference to discussion regarding blood results. On 23 [Month14] there is an entry under [Dr D's] name: *the plan that I am aware of is that she needs 5 FE injections in total 4 weeks apart. She has had 4 injections so far and her final injection which will be her fifth one is next month. Is this correct? […] please follow plan for IM injections as grossly low parameters and once complete we will repeat the test 4–6 weeks after completion. If needing help with doses etc please check with GP/ [Dr D].* On 13 [Month16] [Ms A] consulted with [Dr C] specifically to discuss her recent blood test results. Notes include: *Persistently low ferritin despite using iron inj and iron tabs. Needs ref for iron infusion for persistently low iron. Denies menorrhagia. Eats healthy diet. No weight loss, no red flags.* [Dr C] states there was no mention from [Ms A] of a recent attendance at ED with flank pain (see below) but I presume [Dr C] had viewed a copy of the discharge summary. A referral was made for iron infusions with infusions taking place on 20 and 27 [Month16]. The referral letter listed reason for referral as *Daystay — iron infusion* and contained the information referred to above in addition to recent blood test results and note of lack of response to oral and IM iron.

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Comment: [Dr D] states she did not receive a copy of the blood test result from 8 [Month14] and was never consulted about the result. [Dr C] states: *The bloods showed persistent iron def anaemia, her Hb had increased slightly to 81 and [Dr D] recommended to continue the IM iron injections.* The entry under [Dr D's] name appears to represent a query from a nurse regarding [Ms A's] current management plan but does not confirm the most recent blood result was discussed although I presume it was received in [Dr D's] in-box (but may have been filed by [Dr C] if [Dr D] was working as a locum). I believe the results suggested [Ms A's] iron deficiency was refractory to parenteral replacement, which in turn suggested ongoing significant blood loss or some atypical cause for the iron deficiency. I believe appropriate management at this time, as per the cited guidance, was to carefully review [Ms A's] symptom history to establish whether it remained reasonable to attribute her anaemia to heavy periods (there having been no presentation with this complaint since [Ms A] had enrolled at [the medical centre]) and to further investigate as indicated. Alternatively, advice might have been sought from a haematologist. This was undertaken to some degree by [Dr C] on 13 [Month16] and essentially established menorrhagia or dietary insufficiency were less likely to be relevant issues. Hence the cause of her iron deficiency, and particularly the reasons for the severe and refractory nature of her iron deficiency, were unexplained. However, I acknowledge [Ms A] had not presented any symptoms at this point that might have raised suspicion for persistent occult blood loss (renal or GI cause) with recent urinalysis negative for blood (see below) and recent flank pain apparently having settled. Under the circumstances, I am moderately critical at the failure by [Dr C] to further investigate [Ms A's] iron deficiency anaemia, or seek haematologist advice, at this point. I note referral was made for iron infusions but this was for treatment of the symptom rather than investigation of the underlying cause. I cannot state that referral for investigation of possible occult GI blood loss (endoscopies) would necessarily have been accepted in the absence of other red flags for malignancy in a patient of [Ms A's] age, although *Unexplained iron deficiency anaemia* is a current criterion for direct access to outpatient colonoscopy[6] with the rider: *Menstruation is the commonest cause of iron deficiency anaemia in women — for women aged less than 55 years a menstrual history should be obtained prior to referral. Coeliac disease and urinary loss should also be excluded.*

Addendum 7 April 2021: [Dr C] states that the blood results of 8 [Month14] were ordered by [Dr D] and were viewed and filed by [Dr D] (confirmed on review of results audit screenshots). This is in direct contrast to [Dr D's] response which states: *I was not privy to this result at the time and nor was I consulted about them. I did not at any time check on her history of iron deficiency as she was already on treatment nor did I check if [Ms A] had any investigations for it.* However, [Dr C] did review [Ms A] on 13 [Month16] specifically in relation to her refractory anaemia and iron deficiency. Noting [Dr D] did view the results of 8 [Month14], the moderate criticism discussed above in relation to the failure to further investigate [Ms A's] refractory anaemia (noting particularly [Ms A] denied any menorrhagia symptom) remains but should probably

[6] https://www.health.govt.nz/system/files/documents/publications/referral-criteria-direct-access-outpatient-colonoscopy-computed-tomography-colonography-feb19-v2.pdf Accessed 24 September 2020

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apply to management offered by both [Dr D] and [Dr C] [see comment below in addendum]. I note in [Dr C's] response there is reference to [Ms A's] anaemia having been discussed between them at a clinical meeting prior to the consultation of 13 [Month16] with the conclusion being that an iron infusion was now required. I remain of the view that there was not adequate consideration given to the severity and refractory nature of [Ms A's] anaemia in the absence (by this stage) of a confirmed history of ongoing menorrhagia, and that specialist advice should have been sought. It is somewhat concerning to see there being no apparent 'ownership' of primary responsibility for investigation and management of [Ms A's] anaemia being accepted by either of the GPs concerned.

Addendum 25 October 2021: Taking into account the apparent lack of clarity over who was taking overall responsibility for management of [Ms A's] severe anaemia, but noting [Dr D] did review and file the haemoglobin result of 8 [Month14] without apparently discussing this with [Dr C], I remain moderately critical of [Dr C's] management of [Ms A] to this point for the reason previously discussed and am mildly to moderately critical of [Dr D's] failure to ensure the haemoglobin result was brought to the attention of [Dr C] if [Dr D] had no intention of further investigating the reason why the response to parenteral iron therapy was not as expected. However [Dr C] had access to the result of 8 [Month14] when she reviewed [Ms A] on 13 [Month16] in relation to her refractory anaemia. [Dr D] states in her later response: *The refractory nature of her iron deficiency anaemia is now clear. Unfortunately, due to the involvement of multiple care givers, (both doctors and nurse practitioners), together with her presentations related to other organ systems (Breast lumps and upper Back pain), and her noncompliance with medication, the refractory nature of her iron deficiency anaemia was not appropriately identified and addressed earlier. If this was identified, she would have been referred to a hospital specialist for upper and lower Gastro intestinal endoscopy ASAP to ascertain whether her iron deficiency anaemia was secondary to occult GI Bleeding.* I tend to agree with this comment.

8. On 29 [Month15] [Ms A] had presented to the public hospital ED with a 24 hour history of left flank pain. ED discharge summary notes record unremarkable examination findings and dipstick urinalysis with assessment recorded as: *A [woman in her twenties] previously healthy female, query kidney stone but she is sleeping through the pain, not acting colicky, bowel issue but opening bowels easily, ovarian pain ?possible I suppose, seriously doubt sinister like AAA or pancreatitis.* [Ms A] was prescribed analgesia and advised to increase fluids with safety netting advice given and recommendation *to follow up with GP for niggling issue.* The discharge summary refers to [Ms A] being *here on Friday arvo in ED* but I am unsure if this refers to a previous presentation (no record of this) or the current one (20 [Month15] being a Friday).

Comment: There was no clinical indication for immediate hospital admission or further emergency investigations on the basis of [Ms A's] recorded presentation and it was appropriate to refer her back to her GP for further review as required.

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9. [Ms A] next presented to [the medical centre] on 8 [Month17] ([Dr D]) with complaint of recent onset back pain, possibly associated with weaving. Notes include: *bowels open TID loose. No blood in urine or poos … **no menorrhagia*** [my emphasis] … *no gross neurological deficit or pain radiation.* There is reference to the recent iron infusions and assessment as: *back pain ?cause ?msk ?related to Fe def.* [Ms A] was recommended a back exercise programme, advised to have a recheck of blood count following her iron infusions, urine testing (negative) and cervical smear, and *f/u if persisting after 2 weeks.* A smear was performed by the practice nurse on 8 [Month17] (no abnormality other than mild discharge, weight recorded as 83.9kg but no reference to complaint of weight loss — 5kg decrease in past 10 months). [Dr D] states she had no further contact with [Ms A].

Comment: I believe [Dr D's] management of [Ms A] was adequate with a likely musculoskeletal cause considered for the back pain (which would be common in this age group) but advice to follow up in two weeks if symptoms persisted. The bowel looseness may have been a new symptom but this is difficult to ascertain from the notes. Weight loss was apparently not presented as a symptom but is evident on review of historical measurements although I note [Ms A] previously had an elevated BMI. I note absence of menorrhagia symptom was again recorded.

10. [Ms A] attended [the public hospital] ED for a second time on 10 [Month18], transported by ambulance. The ambulance patient report form (PRF) includes: *Pt has a hx of abdominal and back pain, with recurring trips to hospital … today pain is 8/10, paracetamol no longer controlling the pain, with increased vomiting … urination is painful, dark in colour, increased smell. Last period 2/52 heavier, longer and more painful than normal. Period pattern is regular. Stools on Saturday had frank blood, now diarrhoea …* The [public hospital's] discharge summary dated 10 [Month18] does not refer to any rectal blood loss but notes: *c/o abdominal pain, vomiting (4 times), diarrhoea (frequently) x yesterday, no fever, no other symptoms …* Examination was unremarkable and blood tests showed haemoglobin improved to 101 g/L. Assessment documented as: *gastroenteritis, dehydration* and [Ms A] was treated with IV rehydration, anti-emetics and anti-spasmodics with safety netting advice to return to ED or GP as needed.

Comment: It is unclear if the ED MO read the ambulance PRF given the differences in history recorded. The PRF suggests this is the latest episode of a chronic or recurring issue with recent frank PR blood loss while the ED summary presents a new acute situation and does not refer to rectal blood loss. Blood tests were somewhat reassuring when compared with previous results although the history of chronic iron deficiency and recent iron infusion is not recorded. The presentation, as presented in the discharge summary, was consistent with a diagnosis of acute gastroenteritis (and an episode of rectal blood loss associated with the diarrhoea would not necessarily alter this diagnosis) but there may have been some deficiency in history taking by the ED MO noting the information presented in the PRF. However, there was no obvious clinical indication for hospital admission or further urgent investigations at this point. The

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haemoglobin result was referred to in the discharge summary but it is not clear if [Dr C] received a formal copy of the results.

11. [Ms A] was reviewed by [Dr C] on 15 [Month19] in relation to bowel symptoms: *Issues with constipation … no red flags (night pain, weight loss, PR bleeding, worsening pain, systemic symptoms) OE Looks well, alert and orientated, chest completely clear … Imp: ?cause constipation Plan: trial lactulose, check bloods.* Safety netting advice provided (return if symptoms persist or worsen). Blood test showed a drop in haemoglobin to 94 g/L but [Dr C] states in her response: *Blood tests done at the time showed persistent anaemia but had improved with the iron transfusion to Hb 94* … Cholesterol results were elevated. A practice nurse relayed the results and lifestyle advice to [Ms A] on 16 [Month19] with the offer of further iron transfusions. This was declined by [Ms A] who stated a preference for oral iron (prescription provided).

Comment: The history obtained by [Dr C] was appropriate and reassuring although it is unclear why [Ms A] did not recall the rectal bleeding symptom she had previously presented to the paramedics (see above). I would expect an abdominal examination to be performed in a patient with new onset constipation and would be mildly critical if this was not done (not documented) although abdominal examination in ED a month previously was normal. I would not expect [Dr C] to have recalled the reference to haemoglobin of 101 g/L in the ED discharge summary but if she had received a formal copy of the results from that attendance (which does not appear to be the case) I would be critical of the failure to note a drop in haemoglobin over the previous month, most suggestive (particularly in the face of a sub-optimal response to quite intensive parenteral iron replacement over several months) of ongoing haemoglobin loss (and ferritin plus red cell parameters remained consistent with a picture of iron deficiency). [Dr C] did observe there had been some response to the iron infusions (based on records available to her, an apparent increase in haemoglobin from 81 g/L on 8 [Month14] to 94 g/L on 15 [Month19]) but ferritin had actually dropped over this period and the response to the iron infusions was less than would be expected. I believe the issue of why [Ms A] was still iron deficient remained unresolved at this stage and required further consideration, but given the observed (albeit mediocre) response in haemoglobin and negative screening (in history) for potential 'red flags' for malignancy, that being a very uncommon cause of iron deficiency in [Ms A's] age group, I am mildly critical there was no consideration of referral for further investigation at this point. Had [Dr C] been aware of [Ms A's] rectal bleeding, weight loss or drop in haemoglobin over the previous month I would be somewhat more critical of the failure to refer.

Addendum 7 April 2021: [Dr C] confirms in her response she did not receive a copy of blood test results related to the ED presentation on 10 [Month18]. She states she did perform an abdominal examination on 15 [Month19] and it is likely she did not document the examination because the result was normal. Best practice would be to document relevant negative findings which in this case includes the results of an abdominal examination. I note the triage nurse notes dated 15 [Month19] include reference to possible haematuria symptom which is relevant in the context of [Ms A's] recurrent abdominal pain and anaemia, but this does not appear to have been

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acknowledged during the consultation with [Dr C]. I remain mildly critical there was no consideration given to further investigation of [Ms A's] anaemia at this point given her recent ED attendances with abdominal pain and lack of expected response to parenteral iron therapy.

12. [Ms A] attended [the public hospital's] ED for the third time on 22 [Month19] with a history of flu-like symptoms, abdominal pain, constipation and painful swollen haemorrhoids. Abdominal examination recorded as: *soft, mild tenderness suprapubic PR: swollen haemorrhoids noted, no active bleeding, partially reduced, stopped due to pt discomfort, empty rectum …* There were crepitations evident on respiratory examination and chest X-ray showed patchy right peri-hilar changes. Blood tests showed haemoglobin 98g/L. Impression was: *LRTI. Haemorrhoids. Irregular menses.* IV then oral antibiotics were provided with analgesia and laxatives and advice for GP follow-up in two days.

Comment: On the basis of the recorded history and assessment findings, [Ms A's] management seems reasonable. There was no acute condition requiring hospital admission or further emergency investigations and it was reasonable to pass further management on to the GP. The symptom pattern on this presentation appeared somewhat different to that presented at the previous ED attendance.

13. [Ms A] was reviewed at [the medical centre] by [a GP] on 24 [Month19] in relation to the ED attendance. She was still symptomatic of her LRTI and had not persisted with her oral antibiotics for several days because of nausea. She had mild abdominal pain and diarrhoea with abdominal examination recorded as: *Abd soft, very mild epigastric tenderness, bs NAD.* Comprehensive general assessment is documented with impression that [Ms A] had a persistent LRTI and dehydration. Antibiotic was changed to a liquid preparation plus oral rehydration solution and safety netting advice.

Comment: [Ms A's] symptoms appeared primarily related to her LRTI and adverse effects from her medication (recent use of laxatives and antibiotic can both cause diarrhoea with nausea a common antibiotic related side effect). Management was consistent with accepted practice.

14. [Dr C] reviewed [Ms A] on 9 Month20. Notes read: *Sore lower abdo and groin this morning, no trauma no radiation of pain, no fever, no exac or relieving factors, unsure of cause, pt is otherwise well, no complaints, no RIF pain, no period changes, bowels normal, no urinary symptoms. OE looks well, alert and orientated, chest completely clear, HR 60reg Abdo SNT, no rebound tenderness, no guarding R groin tender ++ full ROM R hip Imp: ?cause groin pain Plan: check bids, Advised to come back if no improvement in symptoms or if gets worse.* [Dr C] states she was unsure of the cause of [Ms A's] pain with there being no obvious pointers in the history or assessment, but ordered blood tests to try and clarify a cause. [Ms A] did not get the test done and did not return for review until 27 [Month20]. On this occasion [Dr C] noted: *Lower abdo pain and assoc UTI symptoms, dysuria and frequency, no fever, no abdo pain. Systemically well. Periods irregular. Chronic lower abdo pain and can feel lump in lower*

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suprapubic region and RIF. Systemically well no fever, no other concerns. OE looks well, alert and orientated, chest completely clear, HR 60reg Abdo soft but obese, tender suprapubic and RIF region, no rebound tenderness, no guarding Imp: Chronic abdo pain + UTI Plan: urine sent for MCS, ref USS for chronic abdo pain, Advised to come back if no improvement in symptoms or if gets worse. In her response, [Dr C] recalls observing that [Ms A] was looking well having apparently lost some weight (previous elevated BMI) although weight was not measured and [Ms A] did not volunteer a history of weight loss. This issue was not explored further. [Dr C] made a semi-urgent referral for abdominal and pelvic ultrasound with her expectation this would be completed within a month and, in her experience, often more promptly than this. The DHB response notes an appointment was booked for the procedure to be undertaken on 23 [Month22] *(slightly outside the usual timeframe because of [public holiday])* and a telephone message was left when she did not attend the appointment (she had just been discharged from [DHB2] to Hospice at this time). It appears [Ms A] did not seek further medical assistance in New Zealand prior to travelling [overseas] in [Month21]. She was admitted to hospital [overseas] on 1 [Month22] with abdominal pain which was revealed to be secondary to a malignant bowel obstruction. She was transferred back to New Zealand ([DHB2]) on 11 [Month22] (see sections 1, 2).

Comment: I believe [Dr C's] management of [Ms A] in [Month20] was consistent with accepted practice. [Ms A] by now had a several month history of intermittent abdominal symptoms, the nature of which appeared to vary. In hindsight she had a red flag of unexplained weight loss (degree not determined) but this was apparently not regarded by [Ms A] as problematic and was not noted as an issue by any of the multiple clinicians she saw over the period in question. Her bowel pattern was variable with rectal blood loss apparently noted transiently in [Month18] in association with an acute gastroenteritis, but not subsequently reported to clinicians. Abdominal ultrasound was ordered with appropriate priority when [Ms A's] presentations with abdominal pain were increasing in frequency but with no obvious cause evident. In summary, the factors I believe contributed to the delay in [Ms A's] diagnosis of cancer included:

- rarity of such a malignancy in [Ms A's] age group as against much more common benign causes for her symptoms in this age group
- most common cause of iron deficiency anaemia in females in [Ms A's] age group is menstruation
- absence of any constant or progressive bowel symptoms suggesting a possible gut cause for the anaemia until the last quarter of 2018
- absence of any obvious abdominal mass on repeated abdominal palpations by various clinicians through 2018
- symptoms related to ovarian pathology are classically vague and non-specific as they were in this case
- the 'red flag' symptom of weight loss was missed as this was not raised as an issue by the patient and was assumed by [Dr C] to be deliberate
- delay in scheduling ultrasound scan due to [holiday period]

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However, I remain of the view that there were indications to more thoroughly investigate the cause of [Ms A's] iron deficiency, particularly in [Month16], and the failure to do this represents a departure from accepted practice as previously discussed. These indications included the severity of the anaemia, the failure of the anaemia to respond as expected to parenteral iron therapy, and there being no obvious cause for anaemia of this severity (menstrual pattern not suggestive of persistent heavy loss and oral intake adequate when [Ms A] was eventually questioned about these issues). It is apparent, in hindsight, that even had a referral been made for colonoscopy and been accepted in [Month16] or ultrasound performed in the latter part of 2018, it is unlikely to have resulted in an improved prognosis for [Ms A] given the aggressive nature of her rare tumour, but it may have given herself and her whānau more time to plan for [Ms A's] future and might have avoided the trauma of the diagnosis being made in another country.

15. Recommendations: I recommend [Dr C] review the cited HealthPathways guidance on iron deficiency anaemia and undertake an audit of patients given oral or parenteral iron therapy in the last 12 months to ensure the underlying cause of the iron deficiency anaemia has been appropriately investigated.

Addendum 7 April 2021: [Dr C] has outlined in her response various changes in practice she has made since [Ms A's] case was brought to her attention and these changes appear appropriate and should reduce the risk of a similar case in the future. [Dr D] might be asked to consider her practice with respect to investigation and management of iron deficiency anaemia including review of the cited HealthPathways guidance. I believe both GPs should reflect on the issue of clinical responsibility when care for a patient is shared and how to best confirm expected responsibilities in such a situation.

Addendum 25 October 2021: [Dr D] has noted remedial measures taken since the events in question including further education on iron deficiency anaemia and ensuring improved lines of communication between providers when there is a 'shared care' situation. I have reviewed [the medical centre's] 'Test Result Policy' which appears consistent with accepted practice."

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Appendix 1: Summary of Ms A's blood results

Date	Hb (115–155g/L)	MCV (80–99fL)	MCH (27–33 pg)	Ferritin (21–170µg/mL)	Iron (10–30 µmol/L)	Transferrin (2.0–3.6 g/L)	Iron satn (20–50%)	Referrer	Comment
2016	87	61	18					DHB	
2016	86	61	18	<8	2	3.28	3	Dr C	
31 Month7	80	58	17	<8	2	3.66	2	DHB	Part of assessment for GA. Fax request to Dr C 6 Month8] to treat IDA
12 Month9	77	58	17	12	43	3.34	56	Dr C	Response to fax from DHB 6 Month9 requesting rpt blood before surgery
8 Month14	81	57	17	13				Dr D	
									Ferric carboxymaltose infusions 20/7 (1000mg)and 27/7 (900mg)
10 Month18	101	70	21					DHB	CRP 12
15 Month19	94	68	21	10	3	3.2	4	Dr C	
22 Month19	98	67	21					DHB	CRP 14 Chest XR — clear

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