General Practitioner, Dr A

A Report by the

Health and Disability Commissioner

(Case 10HDC00253)

Health and Disability Commissioner
Te Toihau Hauora, Hauātanga

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Executive Summary

Background

1. This report is about the failure of a general practitioner, Dr A, to diagnose colorectal cancer in his patient, Ms B (who at the time was 66 years old).

2. Ms B consulted Dr A on a number of occasions between November 2007 and November 2008 with various complaints, including tiredness, low energy levels, mild lower back pain, aching upper abdomen, shortness of breath, tightness in her lower chest, and a feeling of passing out.

3. Dr A diagnosed Ms B with iron deficiency anaemia in November 2007 and prescribed iron supplements. Ms B's iron levels initially improved but dropped again between April and July 2008. Dr A prescribed more iron supplements for Ms B but her health did not improve. There is no evidence that Dr A carried out an abdominal or rectal examination on Ms B, or ordered tests to investigate the cause of Ms B's anaemia.

4. Dr A also diagnosed Ms B with gastritis[1] on two occasions in 2008 without carrying out an abdominal examination on either occasion.

5. In November 2008 Ms B sought a second opinion from another GP, who immediately identified a swollen liver and arranged for Ms B to be investigated further with blood tests and a computerised tomography (CT) scan. The CT scan revealed a primary tumour in Ms B's caecum,[2] and secondary cancer in her liver. She was immediately referred to the oncology team at a public hospital, where fortnightly chemotherapy treatment was commenced. Ms B is currently receiving hospice palliative care at home.

Decision summary

6. Dr A treated Ms B's symptoms of iron deficiency anaemia but did not undertake appropriate investigations to elucidate the cause of the anaemia. Dr A should have carried out an abdominal and rectal examination on Ms B, and requested laboratory tests (mid-stream urine sample to exclude renal blood loss, and faecal occult bloods to exclude blood loss from the bowel). Dr A should also have referred Ms B for a gastroscopy when she presented with upper gastrointestinal tract symptoms and anaemia.

7. Dr A breached Rights 4(1)[3] and 4(4)[4] of the Code of Health and Disability Services Consumers' Rights (the Code) for failing to appropriately investigate and manage Ms B's iron deficiency anaemia. He also breached Rights 4(1) and 4(4) of the Code for failing to examine Ms B's abdomen prior to diagnosing gastritis.

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[1] Inflammation of the stomach lining. The most common symptom is abdominal upset or pain. Other symptoms are indigestion, abdominal bloating, nausea, and vomiting.
[2] The first portion of the large bowel, situated in the lower right quadrant of the abdomen.
[3] Right 4(1) of the Code states: "Every consumer has the right to have services provided with reasonable care and skill."
[4] Right 4(4) of the Code states: "Every consumer has the right to have services provided in a manner that minimises the potential harm to, and optimises the quality of life of, that consumer."

8. Dr A breached Right 4(2)[5] of the Code for failing to meet professional standards in terms of his documentation.

9. The Health and Disability Commissioner (HDC) recommended that the Medical Council consider whether a review of Dr A's competence was warranted. HDC also referred Dr A to the Director of Proceedings to consider whether any proceedings should be taken.

Investigation process

10. On 14 September 2009 HDC received a complaint from Ms B about the services provided to her by Dr A.

11. An investigation was commenced on 19 March 2010. The following issues were identified for investigation:

- *The appropriateness of the care provided by Dr A to Ms B between January 2007 and November 2008, including the adequacy of the documentation.*
- *The adequacy of the information provided by Dr A to Ms B between January 2007 and November 2008.*

12. Information was received from the following parties who were directly involved in the investigation:

Ms B	Consumer/complainant
Dr A	General practitioner/provider
Dr C	General practitioner

13. Clinical advice was obtained from my clinical advisor, general practitioner Dr David Maplesden, and is attached as **Appendix A**.

Information gathered during investigation

Iron deficiency

14. The management of Ms B's low iron levels by Dr A is central to this investigation. Outlined below is some general background information on this topic.

15. Anaemia is a condition in which the body does not have enough healthy red blood cells. Red blood cells transport oxygen to body tissues. There are many types of

[5] Right 4(2) of the Code states: "Every consumer has the right to have services provided that comply with legal, professional, ethical, and other relevant standards."

anaemia. The most common type is "iron deficiency anaemia". This is a decrease in the number and size of red cells in the blood caused by too little iron.

16. The major causes of iron deficiency anaemia are blood loss, poor absorption of iron, or inadequate intake of iron. In men and postmenopausal women with normal dietary intake of iron, iron deficiency anaemia is most commonly caused by gastrointestinal blood loss from certain types of cancer (oesophagus, stomach, colon), long-term use of aspirin or non-steroidal anti-inflammatory medications, peptic ulcer disease, or ulcers.

17. Iron deficiency anaemia may also be caused by poor absorption of iron in the diet due to coeliac disease, Crohn's disease, gastric bypass surgery, or taking antacids.[6]

Clinical history

18. On 3 July 2007 Ms B had routine blood tests taken. These showed normal results for haemoglobin[7] (127g/L) and haematocrit[8] (0.38).

19. On 9 October 2007 Ms B had blood drawn again for routine tests. These showed borderline low results for haemoglobin (113g/L), haematocrit (0.34), iron[9] (9µmol/L), iron saturation[10] (0.14), and ferritin[11](12ng/mL).

20. Dr A advised HDC that as "the decrease [in haemoglobin, iron and iron saturation] was minimal and without any physical complaints reported by Ms B, no further investigation was warranted or queried".

21. The next time Ms B consulted Dr A was on 15 November 2007. She advised him that she had "not been feeling great for a month, on and off". She also complained of shortness of breath on exertion, and aching in her upper left chest. Dr A documented an unremarkable cardiovascular examination. He did not perform an abdominal examination. Dr A's differential diagnoses were "? Developing CHF [congestive heart failure], ?? Ischaemic heart disease, anaemia as per tests last time". He discussed these conditions with Ms B and advised her that she required an urgent ECG.[12] He also requested blood tests and prescribed frusemide (a diuretic to reduce Ms B's lung congestion).

22. The blood test results showed that Ms B's haemoglobin had fallen to 94g/L, haematocrit had fallen to 0.29, iron had fallen to 3µmol/L, iron saturation had fallen to 0.04, and ferritin had fallen to 8ng/mL. The pathologist had commented: "Note decreased haemoglobin ? recent blood loss — monitor."

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[6] http://www.nlm.nih.gov/medlineplus/ency/article/000584.htm

[7] A protein in the red blood cells responsible for carrying oxygen. Normal range is 115–160g/L. Low haemoglobin levels are generally indicative of anaemia.

[8] The proportion of the blood that consists of packed red blood cells. Normal range is 0.35–0.47. Decreased haematocrit indicates anaemia.

[9] Normal range 10–30µmol/L.

[10] Transported iron. Normal range is 0.15–0.50.

[11] Stored iron. Normal range is 20–380ng/mL.

[12] "ECG" is written in Ms B's notes from this consultation, but no ECG results are detailed, and there is no evidence that the ECG was performed.

23. Dr A saw Ms B on 19 November 2007 to explain the test results. The notes from that consultation state:

> "No melena,[13] other bleeding. Test results explained, foods, feeds and care as advised, medicine/s as prescribed and explained, clarifications made as requested, rev[iew] prn[14] to one month. Impression: Anaemia: Iron def[icient] anaemia?? Advised: Iron supplement. Stop frusemide, rest as before."

24. Dr A advised HDC that he explained to Ms B that the results indicated that she did not have congestive heart failure and she had not had a heart attack. He told Ms B that she had an iron deficiency requiring iron supplements. Dr A advised HDC that he asked Ms B about any bleeding per rectum, or other bleeding, both of which she denied.

25. Dr A prescribed iron supplements and advised HDC that "a proper diet was advised with a view to monitor [Ms B's] haemoglobin levels in the future by repeat blood tests … and [I] asked her to return for a follow up consultation in one month's time".

26. The phrase "Test results explained, foods, feeds and care as advised, medicine/s as prescribed and explained, clarifications made as requested, revu prn to one month", which was recorded by Dr A at this consultation, also appears on eight other occasions in Ms B's clinical record, identical in format and spelling. While Ms B recalls Dr A told her she needed to lose weight, she does not recall him ever offering specific dietary advice.

27. Ms B next consulted Dr A on 7 January 2008. Dr A advised HDC that this was for a repeat prescription. His notes state that Ms B "[h]as been feeling much better after iron supplementation". Her blood pressure and pulse are recorded[15] and a comprehensive cardiovascular examination is noted as follows:

> "Chest NAD,[16] no added sounds; Heart NAD, no added sounds; JVP[17] not raised; No carotid bruit;[18] No pitting edema legs;[19] Sensation and circulation to feet normal."

28. Ms B received her usual medications, including ongoing iron supplements, and she was advised to come back in three months' time.

29. Dr A advised HDC:

> "No other issues or symptoms in regard to the iron or haemoglobin deficiency were raised or discussed. This was because [Ms B's] major health related issue was to do with her high blood pressure (which was normal at this time) and as

[13] Black, tarry stools. Melena occurs when blood is in the colon long enough for the bacteria in the colon to break it down into chemicals (hematin) that are black.
[14] As needed.
[15] Blood pressure 125/73mmHg (110–140/70–80mmHg is considered normal), pulse 66 beats per minute (bpm) (normal pulse rates range from 60–100bpm).
[16] No abnormality detected.
[17] Jugular venous pressure.
[18] An abnormal sound in the carotid artery (the main artery in the neck).
[19] A build-up of excess fluid in the body tissues.

> she was already taking iron supplementation I was of the view that there was no need for repeat bloods at this time. The general recommendation for blood tests in such cases is three to six monthly. I understand that iron supplementation orally takes at least four months to be effective. It was therefore my opinion at the time that blood tests were not indicated."

30. The cardiovascular examination noted by Dr A at the consultation ("Chest NAD, no added sounds; Heart NAD, no added sounds; JVP not raised; No carotid bruit; No pitting edema legs; Sensation and circulation to feet normal") appears on nine occasions in Ms B's clinical record, identical in format and spelling. Ms B advised HDC that she has no recollection of Dr A carrying out a cardiovascular examination on her or examining her feet or legs (although she does recall having an ECG). She also advised HDC that Dr A never examined her abdomen or "pressed around, or felt the areas" that she said were sore.

31. Ms B next consulted Dr A on 8 April 2008 for a routine appointment. She complained of broken sleep, tiredness at times, and cravings for salt. Dr A advised HDC that he believed Ms B's symptoms could be due to her improved blood pressure management (having previously been higher) or the effects of some medications (Lipex[20] and a diuretic). He advised HDC that he gave Ms B advice on a proper diet, weight management, and to stop taking Lipex for three months. Blood tests were ordered to check her iron and haemoglobin levels, and also to check for side effects of Lipex.

32. The clinical notes record a comprehensive cardiovascular examination (worded identically to the previous one on 7 January 2008), and repeat medications were prescribed.

33. The blood test results showed that Ms B's haemoglobin had increased from 94 to 100g/L, haematocrit had increased from 0.29 to 0.31, iron had increased from 3 to 28µmol/L, iron saturation had increased from 0.04 to 0.44, and ferritin had increased from 8 to 15ng/mL.

34. On 10 April 2008 Dr A called Ms B to explain the test results. He advised HDC:

> "I explained to [Ms B] that as a result from the iron supplementation she was taking the [haematocrit] and haemoglobin levels were increasing and that the iron markers had returned to normal except the iron stores that had improved from 8 to 15. I advised [Ms B] to increase her iron pills to two tabs twice daily and to see me if need be, or in a month's time whichever was earlier. I was [of] the view that there was no need at this time to do anything else by way of further investigation."

35. On 14 July 2008 Ms B consulted Dr A. She complained of breathing difficulties, tiredness, lack of energy and burning in the chest. Her pulse, weight, and blood pressure were recorded, and she was found to have an elevated blood pressure (191/98mmHg). Dr A also noted "ECG" (although no results are recorded) and ordered blood tests. He diagnosed Ms B with non-infective gastritis and prescribed

[20] A cholesterol-lowering medication.

omeprazole.[21] Dr A advised Ms B to come back for a review the next day, which she did.

36. At the consultation the following day (15 July 2008), Ms B reported that she was feeling better. Blood tests showed that her haemoglobin had decreased from 100 to 89g/L, iron had decreased from 28 to 2µmol/L, iron saturation had decreased from 0.44 to 0.03, and ferritin had increased from 15 to 31ng/mL. The blood film showed "[m]oderate anaemia … low iron stores".

37. Dr A advised HDC that "it was noted that [Ms B] was not taking iron supplement as advised, therefore was advised again to start taking iron pills two twice a day.[22] No further test[s] were carried out as she was doing well, had no complaints or concerns including an absence of bleeding."[23]

38. Ms B was advised to return for review as needed or in one month's time. On 21 July 2008 the consultation notes state:

> "Informed doing well, no complaints and has run out of some meds, will come for revu later, repeat script requested, given as confirmed by the doctor, revu as discussed. Detailed checkup next visit as requested."

39. Routine observations were recorded and a script for iron tablets was given.

40. On 7 October 2008 Ms B was reviewed by Dr A. She complained of feeling "sick and exhausted, energy level is just collapsed … not getting better, getting worse … happening over a week. Also mid-lower back pain both sides."

41. Dr A recorded a comprehensive cardiovascular examination, worded identically to the previous two (except "Heart dual sounds" was recorded instead of "Heart NAD"). He also recorded Ms B's blood pressure (125/71mmHg) and pulse (77bpm).

42. Dr A believed Ms B's symptoms were the result of a change in Ms B's thyroxine[24] formulation. She was advised to change the brand of thyroxine, and further blood tests were done. These showed an increase in TSH,[25] and accordingly Dr A advised her to increase her dose of thyroxine to 1.5 tablets and to have blood tests for thyroid function in a week's time.

43. The notes from this visit state:

> "Test results explained, foods, feeds and care as advised, medicine/s as prescribed and explained, clarifications made as requested, revu prn to one month. To increase thyroxine tab to one and half and get bloods in a week again."

[21] Inhibits the production of stomach acid.
[22] The clinical notes state: "[I]ncrease iron tabs to 2 [twice a day] now rather than one on and off."
[23] Ms B advised HDC that she was taking her medication, and Dr A's statement that she was not taking her iron supplement as advised is incorrect.
[24] Medication used to treat an underactive thyroid gland.
[25] Thyroid-stimulating hormone. An increase in TSH means the thyroid gland is underactive. (Source: http://www.labtestsonline.org/understanding/analytes/tsh/test.html.)

44. On review on 21 October 2008 Ms B complained of tiredness and breathlessness after exertion. Dr A ordered repeat blood tests, and a repeat prescription for iron pills was given. He advised Ms B to reduce her dose of thyroxine to one tablet until the results were received.

45. On 22 October 2008 there are two entries in Ms B's notes, both of which are recorded as being entered by Dr A. The first entry states:

> "Patient called and requested her blood results be given. Patient is coming in today at 1.40pm to see the doctor. Also wants to discuss about thyroxine. Wants her prescription to be repeated."

46. The second entry describes the consultation that Dr A had with Ms B later that day, where Dr A advised Ms B that her blood tests showed she had normal thyroxine levels, and that she should increase her thyroxine dose back to 1.5 tablets as this was the correct dosage, and return for review "prn to one month".

47. On 3 November 2008 Ms B consulted Dr A as she felt like she was passing out, and "as if someone had punched her in the chest". She had taken Gaviscon for this. She also complained about a very tight lower chest. Dr A's notes record Ms B's blood pressure (184/74mmHg), pulse (76bpm), and a comprehensive cardiovascular examination (again, worded identically to the previous cardiovascular examination on 7 October).

48. Dr A performed an ECG and requested blood tests to exclude cardiac ischaemia. The ECG report stated: "normal sinus rhythm, Low QRS voltages,[26] Abnormal repolarisation, possible coronary ischaemia".

49. The blood tests showed that Ms B's CRP[27] was high (63.7mg/L — normal range is 0–8mg/L), Troponin T[28] was normal (0.02µg/L — normal range is 0.0–0.04µg/L), and AST[29] was high (66U/L — normal range is 0–35U/L).

50. Dr A explained the test results to Ms B the following day (4 November), advised her to return for review "prn to one month", and prescribed a new variety of thyroxine tablets. There is no evidence that Dr A took any steps to investigate Ms B's abnormal CRP results.

51. On 14 November 2008 Ms B returned to Dr A complaining of upper abdominal discomfort. The notes record that Ms B felt as though she had had her gallbladder out. She also complained of weakness in the chest and lack of energy. She advised that Gaviscon gave her some relief for a short time.

[26] The QRS complex corresponds to the depolarisation of the right and left ventricles.
[27] C-reactive protein. Levels of C-reactive protein rise in response to inflammation. (Source: http://www.nlm.nih.gov/medlineplus/ency/article/003356.htm.)
[28] A test to determine whether a patient has had a heart attack or suffered damage to the heart.
[29] Aspartate aminotransferase. AST is a liver enzyme and is an indicator of liver cell damage.

52. Dr A took Ms B's blood pressure,[30] and pulse (70bpm). He ordered repeat blood tests and performed an ECG. The ECG results were normal except for low QRS voltages. Dr A diagnosed Ms B with non-infective gastritis and prescribed Losec. He did not examine Ms B's abdomen.

53. Ms B's blood tests showed her CRP had increased to 195.6mg/L.[31] Later that day a telephone call to Ms B is recorded:

> "Test results explained, foods, feeds and care as advised, medicine/s as prescribed and explained, clarifications made as requested, revu prn to one month. To go to ED as necessary as discussed."

54. Again, there is no evidence that Dr A took any steps to investigate Ms B's abnormal CRP results.

55. On 20 November 2008 Ms B consulted GP Dr C for a second opinion.[32] Dr C obtained Ms B's old blood records and requested further blood tests. The new blood test results showed Ms B's haemoglobin had fallen to 80g/L (from 89g/L in July) and an abdominal examination revealed an epigastric[33] mass. Dr C discussed Ms B with a consultant gastroenterologist at the DHB. The gastroenterologist recommended an urgent CT scan. The CT scan was carried out on 26 November 2008, and revealed a primary tumour in Ms B's caecum, and secondary cancer in her liver.

56. Ms B was referred to the Oncology Department at the public hospital and was diagnosed with stage IV colorectal carcinoma (the most advanced cancer stage). Ms B received palliative chemotherapy treatment, to which she responded well initially. However, she has ceased receiving chemotherapy and is now receiving palliative hospice care at home. With regard to Ms B's iron deficiency and abnormal haemoglobin results, Dr A advised HDC:

> "The steps that I [took] to find a cause for [Ms B's] iron deficiency were blood tests and taking a history, including personal, family and past history of medical conditions. This included identifying whether she was a smoker, her alcohol consumption, any bleeding per vagina and/or rectum, any weight loss, ethnicity, lifestyle, family history of cancer, whether she had undergone surgery. The above are relevant factors, and significantly she did not have any alarm symptoms which indicated a sinister cause for her iron deficiency.
>
> …
>
> By way of follow [up] taken as a result of the abnormal haemoglobin results I prescribed iron supplementation, and advice to improve her diet. I also monitored changes in signs/symptoms and test results, and acted within the best practice guidelines, which are keeping the option of review open, looking for new symptoms and signs, and if no improvement or deterioration without

[30] This was recorded as 11/64mmHg. Dr A advised that "this is clearly a typo".
[31] This is more than 24 times greater than the normal range limit.
[32] On this day Ms B also de-registered with Dr A's practice and transferred her care to Dr C's practice.
[33] Upper central region of the abdomen.

> any attributable reason to seek further help (specialist referral). Each of these steps at each visit was taken as necessary and always done in the best interest of [Ms B]."

57. Dr A also explained to HDC his thought process when investigating Ms B's symptoms of aching in her upper left chest, tightness in her lower chest, and breathlessness:

> "[Ms B] has never mentioned to me that she was suffering from 'extreme right upper quadrant discomfort and constant aching' throughout November 2008.
>
> From my professional opinion, both mentions of pain above are typical of cardiac origin unless proven otherwise. Second diagnosis was of gastritis which was simultaneously treated.
>
> Usually, one would first investigate down ones first diagnosis — in this case it's the cardiac track. If the patient does not improve, and the cardiac results also turn out to be not the likely cause at that time, then it is prudent to further investigate or make a referral as the case may be. As you can see since an abnormal ECG resulted the first time, and similar symptoms happened again it was necessary to go the path that I had at that time.
>
> And unfortunately again (I say unfortunately not due to the complaint but because of what [Ms B] is going through at the moment with her illness), had [Ms B] come back to me with increasing specific symptoms, I most likely would have come to the same conclusion as the other GP/specialist has. Keeping in mind the timeframe of two visits and phone call in November with the above symptoms of pain declared to me."

58. Ms B objects to Dr A's statement that she never mentioned she was suffering from extreme right upper quadrant discomfort and constant aching. She recalls that she did mention these symptoms to him.

Recorded provider

59. Dr A is recorded as the provider for every entry in Ms B's clinical notes. HDC sought confirmation from Dr A that he provided services to Ms B on all occasions recorded in her clinical notes. Dr A responded: "I confirm I provided all the services as mentioned in the notes."

Opinion: Breach — Dr A

Investigations and management of iron deficiency anaemia

60. Ms B was entitled to receive services of an appropriate standard from Dr A. This included not only receiving treatment for her symptoms, but also having her symptoms investigated appropriately to find the underlying cause. In my view, Dr A

did not give sufficient consideration to the possible causes of Ms B's symptoms, resulting in a delayed diagnosis of colorectal cancer.

61. Looking at the overall clinical picture, Ms B was complaining of persistent tiredness and exercise intolerance at a number of her consultations with Dr A. There were no symptoms of weight loss, overt bleeding, change in bowel pattern, or difficulty swallowing (which may have indicated a gastrointestinal problem). However, Ms B was in her mid-60s (advancing age is the main risk factor for bowel cancer), her mother had bowel cancer (putting her at increased risk), and she had unexplained iron-deficiency anaemia.

62. Dr Maplesden, my in-house clinical advisor, advised that it was reasonable for Dr A to monitor Ms B following her "borderline" iron deficiency result in October 2007, given the absence of any accompanying suspicious symptoms.

63. However, Dr Maplesden added that "a significant proportion" of his colleagues would have commenced further investigations at this point, as there was no obvious cause for the iron deficiency, and in light of Ms B's family history of bowel cancer. While Dr Maplesden acknowledged that the results were only "borderline" at this stage, they were a significant change from the normal results in July 2007.

64. A month later, in November 2007, there was a clear picture of iron deficiency, with the pathologist querying blood loss as a cause. Dr A asked Ms B whether she had experienced melena or suffered any bleeding, both of which she denied. Dr A diagnosed Ms B with iron deficiency anaemia, prescribed iron supplements, and advised her to come back for review "prn to one month".

65. I note the following extract, referred to in Dr Maplesden's advice, which outlines the appropriate management of patients with iron deficiency anaemia:[34]

> "Iron deficiency anaemia in men and postmenopausal women is most commonly caused by gastrointestinal blood loss or malabsorption. Examination of both the upper and lower gastrointestinal tract is therefore an important part of the investigation of patients with such anaemia. In the absence of overt blood loss or any obvious cause, all patients should have upper gastrointestinal endoscopy, including small bowel biopsy, and colonoscopy or barium enema to exclude gastrointestinal malignancy."

66. Accordingly, following the blood test results in November 2007, which clearly showed Ms B had an iron deficiency, Dr Maplesden advised that Dr A should have carried out an abdominal and rectal examination on Ms B, and requested laboratory tests (mid-stream urine sample to exclude renal blood loss and faecal occult bloods to exclude blood loss from the bowel). Given Ms B's age, and her family history, she was at an increased risk for bowel cancer. In these circumstances, Dr Maplesden believes it may have been appropriate for Dr A to refer her directly for colonoscopy.

[34] Goddard AF et al, "Guidelines for the management of iron deficiency anaemia." *Gut* 2000; 46 (Suppl IV): iv1–iv5. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1766761/pdf/v046p00ivl.pdf.

67. I agree with Dr Maplesden's advice that, while it was appropriate to commence Ms B on iron supplements at this point, Dr A should also have carried out standard investigations into the cause of the iron deficiency. Iron deficiency anaemia is not a disease but a symptom of an underlying condition (whether it be poor intake of iron, malabsorption, or blood loss), and the underlying cause needs to be identified and, if possible, treated.[35]

68. Dr A failed to carry out any investigations as to the cause of Ms B's iron deficiency anaemia in November 2007 (or at any later date).

69. In July 2008, despite taking iron supplements, Ms B's haemoglobin and iron levels had decreased since last tested in April 2008. The pathologist's comment in relation to the July results was "[m]oderate anaemia … low iron stores". As Dr Maplesden has noted, this indicated ongoing blood loss in the face of replacement of iron.

70. At this time (14 July 2008) Ms B was also complaining of burning in the chest. She was diagnosed with non-infective gastritis and told to increase her iron supplements.

71. Dr Maplesden considers that Ms B's presentation in July 2008 was "a picture requiring urgent exclusion of upper [gastrointestinal] malignancy", and notes that patients presenting with upper gastrointestinal tract symptoms and anaemia should be referred for a gastroscopy. He "finds it difficult to understand why [Dr A] did not initiate further investigations, or even perform an abdominal examination, at this late stage".

72. In fact, following the consultation on 14 July 2008 Dr A continued to prescribe iron supplements to Ms B, but at no stage did he check Ms B's haemoglobin or iron levels, or carry out any investigation into the cause of Ms B's iron deficiency anaemia.[36]

73. Even in November 2008, when Ms B's blood test results showed a very abnormal CRP, Dr A failed to order any further tests or carry out any investigations to elucidate a cause for the infection or inflammation. Dr Maplesden has commented that while the interpretation of CRP results is difficult (as it is so non-specific), "if a CRP test is ordered, the person who ordered it should be prepared to act on the result".

74. Dr Maplesden has noted that Ms B's CRP result from November 2008 was "unequivocally abnormal" and, accordingly, there was a need to exclude significant pathology involving inflammation or infection. Given her clinical presentation (tiredness and iron deficiency anaemia), Dr Maplesden has advised that Ms B's

[35] Schrier S, "Treatment of anemia due to iron deficiency". Uptodate. Last updated February 2010. www.uptodate.com.

[36] At consultations in October 2008 Dr A carried out investigations into whether Ms B's symptoms were the result of a reaction to her thyroid medication or hypothyroidism. At the last consultation on 14 November 2008, Dr A diagnosed Ms B with non-infective gastritis (again without carrying out an abdominal examination). At a number of the consultations throughout the year Dr A had considered cardiac ischaemia as the primary cause of Ms B's presenting symptoms. In Dr Maplesden's view this was investigated appropriately and "appeared to be largely excluded as the primary cause of the symptoms".

elevated CRP result "is yet another indicator that, in this context, malignancy needed to be excluded with abdominal and rectal examination, endoscopy, CT scan etc".

75. As Dr Maplesden has summarised:

> "[Dr A] treated [Ms B's] symptoms of iron deficiency without elucidating its cause and appropriate investigations were not undertaken. He continued to monitor her and, in spite of a demonstrated inadequate response to iron treatment and a picture highly suspicious of ongoing occult blood loss, together with the development of vague upper gastrointestinal symptoms, he failed to either examine [Ms B's] abdomen or initiate appropriate further investigations."

76. In Dr Maplesden's view, these aspects of Dr A's management of Ms B would be met with "severe disapproval by his peers" and, had Ms B been managed in accordance with accepted practice, her bowel cancer (which had declared itself through unexplained iron deficiency anaemia secondary to occult gastrointestinal blood loss) should have been diagnosed towards the end of 2007 following a colonoscopy or CT scan.

77. Dr Maplesden found Dr A's response to the complaint (see paragraphs 56 and 57) "somewhat disturbing", as they indicate that Dr A "has not understood the basic management errors he has made, nor do they illustrate an understanding of the pathophysiology[37] of iron deficiency anaemia or the recommended management of such a condition". These are "significant gaps" in what Dr Maplesden would regard as basic GP knowledge. When viewed in the context of failing to perform an abdominal examination prior to diagnosing and treating "gastritis", and the uncertainties raised over the veracity of Dr A's clinical documentation (discussed below), there appears to be an issue regarding Dr A's competency.

78. I agree with Dr Maplesden's advice. This is yet another case where patient safety was compromised through failing to get the basics right. Appropriate investigation and management of iron deficiency anaemia is within the scope of a competent general practitioner. Dr A treated Ms B's anaemia, but failed to carry out investigations into the underlying cause of this symptom. This was despite Ms B's age and family history placing her at increased risk of bowel cancer, and (latterly) in the face of symptoms suggestive of gastrointestinal malignancy. I accept Dr Maplesden's advice that if appropriate investigations into the cause of Ms B's iron deficiency had been carried out by Dr A, her cancer could have been diagnosed earlier.

79. Dr A's failure to examine Ms B's abdomen prior to diagnosing gastritis in July and November 2008 may have further delayed the correct diagnosis.

80. In my view, Dr A's failure to appropriately investigate and manage Ms B's iron deficiency anaemia breached Ms B's rights under the Code, in particular her right to have services provided with reasonable care and skill (Right 4(1)), and her right to

[37] The study of the changes of normal mechanical, physical, and biochemical functions, either caused by a disease, or resulting from an abnormal syndrome.

have services provided in a manner that minimised the potential harm to her, and optimised her quality of life (Right 4(4)).

81. I am also of the view that Dr A breached Rights 4(1) and 4(4) of the Code by failing to examine Ms B's abdomen prior to diagnosing gastritis in July and November 2008.

Documentation

82. In his review of Ms B's clinical notes, Dr Maplesden commented on Dr A's use of a "hot key" function when recording his notes. This is a function available in most practice management systems that enables a word, phrase, or list to be inserted quickly, usually with the activation of one or two keys. Dr Maplesden has noted three lists or phrases, identical in spelling and format, that recur in Ms B's clinical record. These are:

- "Chest NAD, no added sounds. Heart NAD, no added sounds. JVP not raised. No carotid bruit. No pitting oedema legs. Sensation and circulation to feet normal." (This was recorded on nine occasions from December 2006 to November 2008.)

- "Test results explained, foods, feeds and care as advised, medicine/s as prescribed and explained, clarifications made as requested, revu prn to one month." (This was recorded on eight occasions from December 2006 to November 2008.)

- "Detailed explanation of diet and exercise, its value, how and why it works, how to pick and choose between two available choices at a particular time, how to get maxm out of the mind, brain and body, how to make them happy & work in harmony." (This was recorded twice, once on 3 July 2007 and again on 8 April 2008.)

83. While "hot keys" are not uncommon in general practice, Dr Maplesden has rightly pointed out that the content of the clinical notes must accurately reflect the activity that took place during a consultation. Ms B does not recall Dr A carrying out a cardiovascular examination on her (recorded as occurring on nine occasions) nor receiving advice on "foods, feeds and care" (recorded as occurring on eight occasions) or diet and exercise (recorded as occurring on two occasions).

84. By failing to accurately record the activity that took place during some of Ms B's consultations, Dr A is in contravention of professional standards for documentation. These standards are contained in *Aiming for Excellence — An Assessment Tool for New Zealand General Practice*, 2nd edition, 2002[38] and *Aiming for Excellence — An Assessment Tool for New Zealand General Practice*, 3rd edition, 2008[39] (attached as Appendix B). Of relevance is Indicator D.7.1 of the 2002 edition, which states:

[38] The Royal New Zealand College of General Practitioners, *Aiming for Excellence — An Assessment Tool for New Zealand General Practice*, 2nd edition. Wellington, RNZCGP, 2002.
[39] The Royal New Zealand College of General Practitioners, *Aiming for Excellence — An Assessment Tool for New Zealand General Practice*, 3rd edition. RNZCGP, Wellington, 2008.

"Records are sufficient to meet legal requirements to describe and support the management of health care provided". Included in the criteria for this indicator is the requirement that recent consultations record the reason for the encounter, examination findings, and assessments/investigations. Also of relevance is Indicator D.9.1-5 of the 2008 edition, which states: "Consultation records relevant content of each patient contact with practice clinical staff, including consultations, home visits and telephone advice."

85. Dr Maplesden has also commented on Dr A's failure to record the results from Ms B's ECG tests that were apparently carried out on 15 November 2007 and 14 July 2008 (although there is no evidence that they were, other than "ECG" being recorded in her notes). Dr Maplesden has advised that if an ECG had been carried out, he would have expected it to have been reviewed by Dr A immediately, and some comment made in the notes (even if just "normal"). This omission contravenes Indicator D.7.1 (of the 2002 edition) and Indictor D.9.1-6 (of the 2008 edition), which state that consultation records should include examination findings.

86. The failure to accurately record the activity that took place during some consultations, and examination findings, is in contravention of GP professional standards and, consequently, Dr A breached Right 4(2) of the Code.

87. I am of the view that Dr A's breaches of Rights 4(1), 4(2), and 4(4) of the Code are of a seriousness that warrant the referral of Dr A to the Director of Proceedings.

Other comment

88. Dr Maplesden has commented that while Dr A is listed as, and has provided written confirmation that he was, the provider for every entry in the clinical notes, the narrative from at least two entries (21 July 2008 and 22 October 2008) suggests that he was not the provider on those occasions.

89. Dr Maplesden has advised that:

> "While it is quite reasonable for a practice nurse to offer the services that were provided on these occasions the provider identification should accurately represent the person that actually provided the service."

90. While I am not making a finding about whether Dr A was or was not the provider for every entry in Ms B's clinical record, I agree with Dr Maplesden's advice, and note that a failure to accurately identify the person providing the service is in contravention of professional standards for documentation, in particular Indicator D.7.1 (of the 2002 edition) and Indicator D.9.1 (of the 2008 edition), which require the person making the entry to be identifiable.

Action taken

91. In a letter dated 8 September 2010, Dr A offered his "sincere apology" to Ms B for "failing to fully investigate [her] iron deficiency anaemia, and as a consequence, depriving [her] of the opportunity [for] an earlier diagnosis".

92. Dr A further advised that he "deeply regret[s] the outcome and for the delay that occurred in making the diagnosis of cancer …" While accepting that it may be of little comfort to Ms B, he noted that at all times he was trying to do his best for Ms B.

Recommendations

93. I recommend that Dr A:

- Undergo additional training on clinical documentation and familiarise himself with the contents of "Guidelines for the management of iron deficiency anaemia" (reference 31 in the report) and report back to HDC on completion of this by **10 December 2010**.

- Ensure that patient records accurately reflect the care provided at each consultation, record examination findings, and correctly identify the provider of services, and report back to HDC on the steps taken to achieve this by **10 December 2010**.

Follow-up actions

- Dr A will be referred to the Director of Proceedings in accordance with section 45(2)(f) of the Health and Disability Commissioner Act 1994 for the purpose of deciding whether any proceedings should be taken.
- A copy of this report will be sent to the Medical Council of New Zealand with a recommendation that it consider whether a review of Dr A's competence is warranted.
- An anonymised copy of this report with details identifying the parties removed, except the expert who advised on this case and Dr A, will be sent to the DHB, the Royal New Zealand College of General Practitioners, and the Health Quality and Safety Commission.
- An anonymised copy of this report with details of the parties removed, except the expert who advised on this case, will be placed on the Health and Disability Commissioner website, www.hdc.org.nz, for educational purposes.

Addendum

Ms B has since died. The Director of Proceedings decided to issue proceedings, which are pending.

Appendix A — Independent advice to Commissioner

The following expert advice was obtained from my in-house clinical advisor, general practitioner Dr David Maplesden:

> "Thank you for the request that I provide clinical advice in relation to the complaint from [Ms B] about the care provided to her by [Dr A]. To my knowledge I have no personal or professional conflicts of interest although I have had professional contact with [Dr A].
>
> **1. Documents reviewed**
> 1.1 Complaint from [Ms B] received 14 September 2009
> 1.2 Responses from [Dr A] received 21 December 2009 and 26 April 2010
> 1.3 Response from [([Ms B's] current GP)] received 1 April 2010
> 1.4 GP notes from [Dr A] covering the period December 2006–November 2008
> 1.5 GP notes from [Dr C] including copies of specialist reports
>
> **2. Complaint**
> 2.1 [Ms B] claims that [Dr A] failed to diagnose her cancer. She presented to [Dr A] in April 2008. He ordered blood tests but, according to [Ms B], [Dr A] did not follow-up the results showing abnormal liver function. By November 2008, [Ms B] was suffering from extreme fatigue, right upper quadrant discomfort, and constant aching. She recalls that [Dr A] prescribed Losec tablets over the phone but did not conduct a physical examination.
>
> 2.2 On 20 November 2008, [Ms B] consulted general practitioner [Dr C] for a second opinion. [Dr C] immediately identified a swollen liver which was painful to the touch. He ordered blood tests and the results on 21 November 2008 were concerning. A CT scan on 26 November 2008 revealed a tumour in [Ms B's] caecum and secondary cancer (extensive metastases in her liver). [Dr C] also ordered a colonoscopy which confirmed the diagnosis. At the date of her complaint, [Ms B] had been receiving fortnightly chemotherapy treatment at [the public hospital] since January 2009.
>
> 2.3 According to [Ms B], [Dr C] was 'shocked' that [Dr A] had not conducted a physical examination earlier or followed-up [Ms B's] concerning blood test results of April 2008. [Ms B] has complained about [Dr A's] failure to follow-up these abnormal test results and carry out the appropriate investigations to detect the cancer at an earlier stage.
>
> 2.4 [Ms B] stated, in a telephone conversation with HDC staff on 28 April 2010, that she does not recall [Dr A] carrying out any examination of her abdomen in 2007 and 2008, nor does she recall him ever listening to her heart or lungs, or examining her neck, legs or feet over the same period. She does recall [Dr A] performing ECGs on her. She does not recall ever being given specific dietary advice although recalls being told on one occasion to lose weight.

3. Provider(s) response

3.1 In his response of 21 December 2009, [Dr A] offers [Ms B] his sincere sympathy at her predicament. He lists the liver function test results of April 2008 which are essentially normal. He notes that he had two face-to-face consultations with [Ms B] in November 2008, and one telephone call regarding blood test results and script renewal. Clinical records for those consultations are presented in the response letter (see section 4). [Dr A] states that the records support his recollection that [Ms B] 'never mentioned to me that she was suffering from "extreme right upper quadrant discomfort and constant aching" throughout November 2008'. He feels that the pain [Ms B] described was 'typical of cardiac origin unless proven otherwise'. He therefore sought to investigate and exclude this as the primary diagnosis, with investigation of other possible diagnoses to be undertaken if the cardiac investigations were negative. He feels that an abnormality in the ECG on the first visit, together with a repeat episode of pain suspicious of cardiac origin, vindicated his decision to pursue this diagnosis initially. He feels that, had [Ms B] presented later with the symptoms she described to [Dr C], he would likely have followed the path that [Dr C] did.

3.2 [Dr A] disputes the comments attributed by [Ms B] to [Dr C] that a single liver function test 'back then' and appropriate further investigations could have led to the early detection of the cancer and more timely treatment. He supplies extracts from a bpac publication on interpretation of liver function tests to support this assertion.

3.3 There is a more detailed response received on 26 April 2010 which consists largely of a synopsis of the clinical notes. He notes that she had suffered from dysfunctional uterine bleeding in the past and had undergone uterine polypectomy and hysteroscopy but a date for this is not given. Some relevant extracts from the synopsis provided include:

(i) *On 9 October 2007, blood samples were taken for routine tests…the haemoglobin result was found to be slightly low at 113…the decrease was minimal and without any physical complaints reported by [Ms B], no further investigation was warranted or queried…*

(ii) Further blood tests were taken on 15 November 2007 after [Ms B] presented with non-specific unwellness including shortness of breath on exertion and upper left chest discomfort. An ECG was performed and blood tests taken. *The blood tests I subsequently received showed…her haemoglobin level has reduced to 94…her iron saturation was low…these results indicated that [Ms B] was anaemic…I explained to her that she had an iron deficiency and as a result a haemoglobin deficiency requiring iron supplementation. I asked her particularly about any signs/symptoms of bleeding per rectum or having dark bowel motion, which she denied, and keeping in mind her abnormal vaginal bleeding in the past was asked about any other bleeding, which she also denied…she was commenced on iron supplementation and a proper diet was*

advised with a view to monitor her haemoglobin levels in the future by repeat blood tests…

(iii) On 7 January 2008 [Ms B] was feeling improved after her iron treatment. She received her usual medications including ongoing iron therapy. *No other issues of symptoms in regard to the iron or haemoglobin deficiency were raised or discussed…the general recommendation for blood tests is such cases is three to six monthly. I understand that iron supplementation orally takes at least four months to be effective. It was therefore my opinion at the time that blood tests were not indicated…*

(iv) On 8 April 2008 [Ms B] attended for a routine appointment complaining of tiredness at times and craving for salt. The symptoms were felt to be due to her blood pressure management and blood tests were repeated. *The blood tests showed an increase in haemoglobin (100g/L)…Her iron saturation was now within the normal range at 0.44…I explained…that as a result from the iron supplementation she was taking the haematocrit and haemoglobin levels were increasing and that iron markers had returned to normal except the iron stores that had improved from 8 to 15. I advised [Ms B] to increase her iron pills to two tabs twice daily and to see me if need be, or in a month's time…I was of the view that there was no need at this time to do anything else by way of further investigation…*

(v) On 14 July 2008 [Ms B] was seen with complaints of difficulty breathing, tiredness, lack of energy and burning in the chest. Her blood pressure was elevated and ECG and blood tests were performed. *I diagnosed and treated her for gastritis/reflux…*she underwent a planned review the following day and felt much better. Blood tests had shown a drop in haemoglobin to 89 and iron stores to 2 *and the peripheral film showed low iron stores/iron deficiency. It was noted she was not taking iron supplement as advised, therefore was advised to take iron pills two twice a day. No further tests were carried out as she was doing well, had no complaints or concerns including an absence of bleeding.*

(vi) [Ms B] was reviewed on 7 October 2008 and was *feeling sick and exhausted, energy level is just collapsed…not getting better, getting worse…also mid lower back pain both sides…*[Dr A] felt these symptoms may have been due to a change in [Ms B's] thyroxine formulation as there had been publication of similar side effects amongst other patients taking the new formulation. She was advised to change the brand of thyroxine and further blood tests were done. These showed an increase in TSH and her thyroxine dose was increased. On review on 21 October 2008 [Ms B] was still short of breath on exertion and feeling very tired. Further adjustments were made to her thyroxine regime which changed again after blood test results from tests taken on 21 October 2008.

(vii) There was a further review on 3 November 2008 when [Ms B] was complaining of 'passing out' and a feeling of being punched in the chest. She had taken Gaviscon for this. ECG and blood tests were taken to exclude cardiac

ischaemia. Results were explained the following day. There was a further and final consultation on 14 November 2008 for symptoms of upper abdominal discomfort 'feels as if had gallbladder out'. ECG was taken and further blood tests done. She was prescribed Losec.

3.4 Regarding iron deficiency, [Dr A] notes: *The steps that I took to find a cause for [Ms B's] iron deficiency were blood tests and taking a history, including personal, family and past history of medical conditions. This included identifying whether she was a smoker, her alcohol consumption, any bleeding per vagina and/or rectum, any weight loss, ethnicity, lifestyle, family history of cancer, whether she had undergone surgery. The above are relevant factors, and significantly she did not have any alarm symptoms which indicated a sinister cause for her iron deficiency.*

3.5 Regarding [Ms B's] abnormal haemoglobin results [Dr A] notes: *...I prescribed iron supplementation, and advice to improve her diet. I also monitored changes in signs/symptoms and test results, and acted within the best practice guidelines, which are keeping the option of review open, looking for new symptoms and signs, and if no improvement or deterioration without any attributable reason to seek further help (specialist referral). Each of these steps at each visit was taken as necessary and always done in the best interests of [Ms B]*.

3.6 [Dr C] notes that he first saw [Ms B] as a casual patient when he was on duty at an after-hours centre. After ascertaining there was no indication for immediate hospitalisation, he advised her to see a GP during normal hours as review of her recent blood tests results would be required. She elected to see [Dr C] on 20 November 2008 and he obtained her old results and ordered new blood tests. *She had a marked iron deficiency anaemia and an epigastric mass*. He discussed her case with a gastroenterologist and urgent CT scan was recommended. This was performed a short time later and showed a carcinoma of the caecum with extensive liver metastases. She was seen in surgical clinic, given a blood transfusion and referred for palliative chemotherapy.

4. Review of clinical records

4.1 There are clinical records available from 21 December 2006. There is a 'front page' included which contains [Ms B's] regular medications, history and medical warnings. Included in the history, and noted on 17 November 2005, is a family history of *G/m had DM, M/o had bowel Ca.* I interpret this as a family history of diabetes in her grandmother and bowel cancer in her mother. The consultation records appear to be generally comprehensive and well constructed.

4.2 There are consultations on 21 November 2006 (cough) and 21 and 27 December 2006 (blood pressure checks). In 2007 there are consultations on 22 March (general review and episode of faint), 2 April (general review, routine blood tests performed) and 3 July (general review and repeat prescriptions — *detailed explanation of diet and exercise, its value, how and why it works, how to pick and choose between two available choices at a particular time, how to*

get maxm out of the mind, brain and body, how to make them happy & work in harmony. Reinvestigate…). On 6 July 2007 a cervical smear is taken and the result (normal) conveyed face-to-face on 25 July 2007. On 8 October 2007 repeat prescriptions are dispensed with check-up to be undertaken at a later date, and further blood tests taken.

4.3 On 15 November 2007 — *Has not been feeling great for a month, off and on…feels out of breath…walking distance makes her breathless…sort of aching left anterosuperior ant axillary area…*Recorded cardiovascular examination is unremarkable. There is no abdominal examination recorded. Impression is *?Developing CHF, ??IHD, anaemia as per tests last time.* ECG is evidently performed although there is no commentary in the notes. Blood tests are taken. On 19 November 2007 there is a note *No melena, other bleeding. Test results explained, foods, feeds and care as advised, medicine/s as prescribed and explained, clarifications made as requested, revu prn to one month Impression: Anemia: Iron def anemia?? Advised: Iron supplement.* Iron is prescribed as Healtheries iron with Vitamin C one tablet twice daily, three months prescribed.

4.4 On 7 January 2008 the consultation notes record that [Ms B] *has been feeling much better after iron supplementation*. A comprehensive and appropriate cardiovascular examination is recorded (see 5.2) and repeat medications supplied including a further three months of iron at one tablet twice daily. There is no abdominal examination recorded.

4.5 A three monthly cardiovascular review, again apparently comprehensive, and repeat medication prescription is recorded on 8 April 2008. [Ms B] is *generally well, tired at times, drags along*…. Blood tests are taken. Lipex is stopped for three months and [Dr A] wonders if [Ms B's] now improved blood pressure control, from having been higher previously, is contributing to her tiredness. Dietary advice is given (see 5.2). A telephone call on 10 April is recorded. Results are explained and [Dr A] advises *increase iron to 2 bd* and review *prn to 3 months*. On 17 June 2008 there is a telephone consultation for *acute bronchitis and rhinitis* and antibiotics are prescribed.

4.6 On 14 July 2008 there is a consultation for *feeling burning in the chest, difficult breathing, tired, lack of energy*. Basic recordings (weight, blood pressure and pulse) are recorded and *ECG* although no other physical findings or the ECG result are noted. Blood tests are ordered, omeprazole prescribed and a diagnosis of *Non-infective gastritis NOS* recorded. [Ms B] is seen again the next day (may be a telephone consultation but not recorded as such) —*Better today. Test results explained, foods, feeds and care as advised, medicine/s as prescribed and explained, clarifications made as requested, revu prn to one month*. No physical examination is recorded. Routine repeat medications are given. On 21 July 2008 there is a consultation that begins *Informed doing well, no complaints and has run out of some meds, will come for revu later, repeat script requested, given as confirmed by the doctor, revu as discussed. Detailed checkup next visit as requested*. Routine observations are recorded and a script for iron tablets, two twice a day, given.

4.7 The next recorded visit is 7 October 2008. *Feeling sick and exhausted, energy level is just collapsed…not getting better, getting worse…happening over a week*. Bilateral mid to lower back pain is noted. Routine cardiovascular examination is recorded. There are no back or abdominal findings recorded. The possibility of a reaction to a change in thyroid preparation is noted[40] and replacement of this prescription made. [Dr A] records a call to [Ms B] on 9 October 2008 explaining that liver function tests were done instead of the intended thyroid function tests but the appropriate results will be forthcoming. Test results are explained in a call on 10 October 2008 with advice to increase the thyroxine dose and repeat bloods in a week. On 21 October 2008 [Ms B] is recorded as requesting a change in her thyroxine *coz it is making me lethargic*. She is complaining of *tiredness and breathlessness. Difficulty in breathing after short walk*.... She has not increased the thyroxine dose. Basic recording are taken, further blood tests done and a repeat prescription for iron given. The following day (22 October 2008) [Ms B] calls in for her test results and repeat prescription and these are provided. Blood pressure and pulse are again recorded and a comment *Patient is coming today at 1.40pm to see the doctor*.

4.8 The next recorded consultation is 3 November 2008. *Felt passing out as if someone punched me in the chest…other day had gaviscon. Feeling tightness lower chest very much…Better now…decided to go home rather than hospital till trop T result*. A comprehensive cardiovascular examination is recorded. An ECG is taken and this is reported as *Abnormal repolarisation, possible coronary ischaemia*. It is unclear whether this is a computer report or [Dr A's] interpretation. Blood tests to exclude current or recent cardiac ischaemia (Trop T and cardiac enzymes) are ordered. There is no change in medications. Results are conveyed per telephone on 4 November 2008 and the ECG result filed on 6 November 2008.

4.9 On 14 November 2008 [Ms B] is seen again with her brother. *Not feeling too good…'don't know…feeling aching hypochondrium both sides and lower sternal area…feels as if had her gall bladder out. Food goes there and sits there and feels so weak in the chest…its not funny and no energy at all.' Gaviscon gives relief for a short time*. [Dr A] feels that the presentation *could mean heart.* Blood pressure and pulse, but no other physical findings, are recorded. ECG is taken and this time is reported as normal apart from low QRS voltages. Further cardiac bloods are taken. A diagnosis of *Non-infective gastritis NOS* is recorded and Losec prescribed. A telephone call to [Ms B] later that day records explanation of blood results and *To go to ED as necessary as discussed*. Transfer of medical records out of the practice is noted on 21 November 2008.

[40] There was a change in the brand of funded preparation of Thyroxine about this time and a significant number of patients were reacting to this change in a variety of ways

4.10 Results:
(i) Weight: Patient weight has been recorded on five occasions between November 2007 and October 2008 and is constant.
(ii) General blood tests: Through 2008, Troponin and creatine kinase tests were all normal. Thyroid function was essentially normal. Liver function tests were performed on 2 April 2007 (normal), 3 July 2007 (normal), 9 October 2007 (normal), 15 November 2007 (normal), 8 April 2008 (normal), 8 October 2008 (minimal elevation of GGT at 51 (normal range 0–50), AST 39 (0–35) and albumin 30 (33–48). On 3 November 2008 the AST alone was repeated as part of a cardiac enzyme test and had increased to 66. C-reactive protein, a non-specific inflammatory marker, was normal on 8 April 2008 at 4.7 (0–5), 15.1 on 14 July 2008, 63.7 on 3 November 2008 and 195.6 on 14 November 2008. There are no results in the file from late November 2008 when [Ms B] saw [Dr C], and when liver function tests were evidently deranged but this does not alter my comments in section 5.

(iii) Haemoglobin (Hb), Haematocrit (Hct) iron and related results are as follows (normal range in brackets):

Date	Hb (115–160)	Hct (0.35–0.47)	Ferritin (20–380)	Pl. iron (10–30)	Iron sat. (0.15–0.50)	Comments
3.7.07	127	0.38	-	-	-	Normal
9.10.07	113	0.34	12	9	0.14	Borderline low
15.11.07	94	0.29	8	3	0.04	Pathologist comment †
8.4.08	100	0.31	15	28	0.44	See comment ‡
15.7.08	89	0.28	-	-	-	Pathologist comment □

† *note decreased haemoglobin ? recent blood loss — monitor* (Iron therapy commenced at this point)
‡ shows some response to iron supplements and iron dose increased at this point
□ *Moderate anaemia. Reduced MCV and/or MCH. ? low iron stores…*This is indicative of ongoing iron (blood) loss in the face of replacement.

(iv) Helicobacter pylori serology has been performed on 9 October 2007. The result is REACTIVE. This implies that [Ms B] has either current or past H. pylori infection. The test is usually ordered for patients with upper gastrointestinal symptoms suggestive of peptic ulcer as there is an association between peptic ulcer disease and H pylori infection. In patients who had not previously received H. pylori eradication therapy, a reactive result would generally indicate the need for such therapy. There is no indication from the notes why the test was ordered (ie no record of gastrointestinal symptoms) or that the result and its significance was discussed with the patient, and no indication that eradication therapy was prescribed.

(v) CT scan/colonoscopy: CT of the abdomen performed on 26 November 2008 shows caecal carcinoma with regional and central lymphadenopathy and widespread metastatic liver disease with metastases occupying over half the liver. Biopsy at colonoscopy shows a moderately differentiated adenocarcinoma.

4.11 [Dr C]: referral letter from [Dr C] to gastroenterology dated 21 November 2008 states *...gives a history of increasing tiredness and sob over last 8 months. She has also has complaints of some recent bloating and epigastric discomfort for which she consulted her GP in July. He prescribed iron and Losec. O/E she has a mass in her epigastrium ? lobe of liver...*

4.12 Oncology letter dated 17 December 2008 includes the comments *she initially presented with RUQ discomfort and was found to have iron deficiency anaemia...O/E...liver edge palpable and tender 4cm below the right costal margin...* [Ms B] commences palliative chemotherapy shortly thereafter.

5. Comments

5.1 Provider: [Dr A] is listed as the provider for every entry on the clinical notes. The narrative from at least two entries (21 July 2008 (4.4) and 21 October 2008 (4.5)) suggests that he was not the provider on those occasions, and possibly not on others including telephone calls. While it is quite reasonable for a practice nurse to offer the services that were provided on these occasions the provider identification should accurately represent the person that actually provided the service. Failure to do so is a mild departure from expected standards.

5.2 Hot key: It is evident from the notes that [Dr A] uses a 'hot key' function when recording his notes. This is a function available in most practice management systems that enables a word, phrase, list etc to be inserted quickly, usually with the activation of one or two keys. There are three obvious list/phrases that recur, in identical format and spelling, in the notes. The following list is reproduced at nine of the consultations from December 2006 to November 2008:

Chest NAD, no added sounds
Heart NAD, no added sounds
JVP not raised
No carotid bruit
No pitting oedema legs
Sensation and circulation to feet normal

The following phrase is recorded on eight occasions, mostly telephone calls, during the same period:

Test results explained, foods, feeds and care as advised, medicine/s as prescribed and explained, clarifications made as requested, revu prn to one month

The following phrase is recorded, in identical format, on two occasions during the same period:

detailed explanation of diet and exercise, its value, how and why it works, how to pick and choose between two available choices at a particular time, how to get maxm out of the mind, brain and body, how to make them happy & work in harmony.

The use of hot keys is not uncommon in general practice. However, the content of the clinical notes must accurately reflect the activity that took place during a consultation. [Dr A's] clinical notes give the impression that a very comprehensive cardiovascular examination took place at most visits. This is to be commended if it can be verified by the patient that [Dr A] examined her neck for a JVP assessment, listened over her carotid arteries for bruits, removed her footwear and examined her feet for oedema, pulses and sensation on each of the occasions he recorded these results. It is likely that she would also recall if she was given advice on 'foods, feeds and care' on each of the eight occasions this is recorded. Unfortunately she has no such recollection (see 2.4) which must cast some doubt on the veracity of these records.

5.3 Assessments: Comments regarding an apparent excellent attention by [Dr A] to [Ms B's] cardiovascular system on most of the occasions she was seen are noted above. For the most part, the recorded examinations were appropriate and thorough (but see 5.2) although I would regard the consultations of 14 July 2008 (4.4) and 14 November (4.7) as exceptions. On both of these occasions, a diagnosis of gastritis was made, and treatment for this instituted, without an abdominal examination. On 14 July 2008 there is no recording of heart or lung auscultation in a patient complaining of difficulty breathing. In the November consultation, there were patient references to hypochondrial aching and the gallbladder yet this area was not examined. At this consultation, the ECG was essentially normal (as had been the Trop T from the previous consultation) although cardiac ischaemia as a cause of the symptoms could still not be excluded. However, it is evident that [Dr A] did feel a gastrointestinal problem was a likely cause of [Ms B's] symptoms on 14 November 2008 (in view of recorded diagnosis and treatment given) yet he did not perform an abdominal examination. In general, [Dr A's] recorded treatments and management strategies in the consultations examined were of a reasonable standard (although see 5.2). However, the deficiencies in recorded examinations described above, particularly those related to the failure to undertake an abdominal examination when a diagnosis of gastritis is made, are probably a mild to moderate departure from expected practice. Given the detailed and conscientious way in which [Dr A] has documented his cardiovascular examinations, it would be most unusual for him to have performed an abdominal examination and not documented it in a similar fashion. My comments regarding the H. pylori result (see 4.8(iv)) may also be relevant here. [Dr A] prescribed antibiotics for [Ms B's] bronchitis following a telephone consultation on 17 June 2008 (4.3) — this practice would be met with mild disapproval from a significant proportion of my peers but

there would be others that might sanction antibiotic prescribing without an examination under certain circumstances.

5.4 Liver function (see 4.8): [Dr A] is correct in noting that the liver function tests of April 2008, and probably those for October 2008, gave no particular cause for concern. The elevations in the latter result were minimal, although need to be examined in the context of the patient's presenting symptoms. In fact, it is not uncommon to get a mild elevation of some liver enzymes in patients taking statins (as [Ms B] was intermittently) in an otherwise well patient. The further elevation of AST noted incidentally in the cardiac enzyme result[41] of 3 November 2008 might have prompted a repeat of the full liver function profile although it would have been reasonable to wait until [Ms B's] condition perhaps declared itself further (cardiac or gut) before pursuing this.

5.5 Iron deficiency: Appropriate investigation and management of iron deficiency anaemia is expected to be within the scope of a competent general practitioner.

(i) Background: The following are extracts from reputable sources that, in my opinion, are relevant to this case and represent the knowledge expected of a general practitioner in New Zealand:

Iron deficiency anaemia in men and postmenopausal women is most commonly caused by gastrointestinal blood loss or malabsorption. Examination of both the upper and lower gastrointestinal tract is therefore an important part of the investigation of patients with such anaemia. In the absence of overt blood loss or any obvious cause, all patients should have upper gastrointestinal endoscopy, including small bowel biopsy, and colonoscopy or barium enema to exclude gastrointestinal malignancy[42].

From a recent literature review[43]: *The usual presenting symptoms* (of iron deficiency anaemia) *in adults, as seen in current practice, are primarily due to anemia and include weakness, headache, irritability and varying degrees of fatigue and exercise intolerance. However, many patients are asymptomatic and may recognize that they had fatigue, weakness, exercise intolerance, and/or pica only after successful treatment with iron…Diagnostic issues — Successful overall management of the patient with iron deficiency anemia must include attempts to identify and treat, if possible, the underlying cause(s) of the iron deficiency (eg, blood loss from a tumor or varicosity, iron malabsorption)... The hemoglobin concentration will rise slowly, usually beginning after about one to two weeks of treatment, and will rise approximately 2 g/dL* (locally used units =

[41] AST may be increased by both liver damage and heart muscle damage

[42] Goddard AF et al. *Guidelines for the management of iron deficiency anaemia. Gut* 2000; 46(Suppl IV):iv1–iv5 Available to download at: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1766761/pdf/v046p00iv1.pdf

[43] Schrier S. *Treatment of anemia due to iron deficiency.* Uptodate. Last updated February 2010. www.uptodate.com

20 g/L) *over the ensuing three weeks. The hemoglobin deficit should be halved by about one month and should return to normal by 6 to 8 weeks... Duration of treatment — There is disagreement as to how long to continue iron therapy: Some physicians stop treatment with iron when the hemoglobin level becomes normal, so that further blood loss will cause anemia and alert the patient and physician to the return of the problem which caused the iron deficiency in the first place; Others believe that it is wise to treat for at least six months after the hemoglobin has normalized, in order to replenish iron stores. Our practice is to individualize the duration of iron replacement. As an example, it makes sense to fully replenish iron stores in a patient who became iron deficient as a consequence of multiple pregnancies. On the other hand, we stop therapy once the hemoglobin concentration is normalized in a patient who has occult gastrointestinal bleeding. In this latter setting, the return of iron deficiency is an important clue that bleeding has recurred.*

(ii) Clinical picture: [Ms B] was complaining of persistent tiredness and exercise intolerance at many of her consultations and she did not really give the impression of a well woman. Cardiac ischaemia was suspected on some occasions, and investigated appropriately, and appeared to be largely excluded as the primary cause of the symptoms. Reactions to thyroid medication and hypothyroidism were also considered. Vague upper abdominal symptoms were noted in July and November 2008 and may have been present somewhat earlier (see 4.8(iv)). There were no recorded symptoms of weight loss, overt bleeding, change in bowel pattern or difficulty swallowing that might have been suspicious for gastrointestinal malignancy. However, [Ms B] was in her mid-60s (advancing age being the main risk factor for bowel cancer), possibly had a first degree relative with bowel cancer which places her at increased risk (and [Dr A] claims to have confirmed this with her (3.4)), and most importantly she had the red flag of unexplained anaemia. In my opinion, the most significant laboratory finding in the context of ongoing symptoms of tiredness, and apparent response to iron supplementations, was the iron deficiency anaemia which was borderline in October 2007 but obvious by November 2007. The blood picture was classic for iron deficiency and [Dr A] recognised this and prescribed appropriately. The picture initially improved but not to the extent that would be expected following supplementation unless there was ongoing iron loss. The picture worsened between April and July 2008 in spite of large doses of oral iron. This would indicate ongoing significant iron loss, most likely through ongoing blood loss. While [Dr A] recognised the iron deficiency anaemia, he failed to recognise the significance of the overall clinical picture. The marked elevation in [Ms B's] CRP over the latter part of 2008 is not specific for a diagnosis of cancer but does suggest the presence of some significant inflammatory process.

(iii) Investigation and management: Iron deficiency anaemia is not a disease but a symptom of an underlying condition (be it poor intake of iron, malabsorption or increased iron losses (usually through blood loss)). In my opinion, it was probably reasonable for [Dr A] to have monitored [Ms B] following her borderline result of October 2007, given the absence of any accompanying

suspicious symptoms. However a significant proportion of my colleagues might have commenced further investigations at this point if there was no obvious cause for the iron deficiency picture (albeit borderline but a significant change from results three months previously that were entirely normal), particularly if they were aware that [Ms B] had a positive family history of bowel cancer. [Dr A] rechecked the bloods a month later and the picture was clearly one of iron deficiency with the pathologist querying blood loss as a cause. At this point it is my opinion that standard investigations (in addition to abdominal and rectal examinations) should have been commenced and included MSU to exclude renal blood loss, and faecal occult bloods to exclude loss from the bowel. The latter test is not necessary if the patient is at high risk for bowel cancer or has symptoms suggestive of bowel cancer, when direct referral for colonoscopy would be appropriate. Referral for gastroscopy would be appropriate in a patient with upper GI symptoms and anaemia. Had the MSU and faecal occult bloods been negative in the absence of any suspicious symptoms or family history of bowel cancer, referral for endoscopies would still have been indicated, given the cause of the anaemia remained unexplained and occult gastrointestinal blood loss would be the most common cause of such a picture in this age group. [Dr A] did not follow this recommended path. He treated [Ms B's] symptom of iron deficiency without elucidating its cause and appropriate investigations were not undertaken. He continued to monitor her and, in spite of a demonstrated inadequate response to iron treatment and a picture highly suspicious for ongoing occult blood loss, together with the development of vague upper gastrointestinal symptoms, he failed to either examine [Ms B's] abdomen or initiate appropriate further investigations. In my opinion, these aspects of [Dr A's] management of [Ms B] would be met with severe disapproval by his peers.

5.6 Cancer diagnosis: It is my opinion that, had [Ms B] been managed in accordance with accepted practice, her bowel cancer should have been diagnosed towards the end of 2007 when investigations for her significant iron deficiency anaemia would most likely have included colonoscopy or CT scan. It is unclear, whether detection a year earlier would have altered the clinical outcome given the advanced stage of the cancer twelve months later. However, [Ms B] was denied the chance of an earlier diagnosis of her cancer, which had declared itself through the red flag of unexplained iron deficiency anaemia secondary to occult gastrointestinal blood loss rather than through other red flags of unexplained weight loss, abdominal pain, overt rectal blood loss or change in bowel pattern. While it might have been reasonable for [Dr A] not to have a high index of suspicion for bowel cancer being the cause of [Ms B's] anaemia in late 2007 and through 2008 (although if a positive family history of bowel cancer is confirmed this should have increased such suspicion), this does not excuse him from appropriately investigating the anaemia. When [Ms B] presented with upper gastrointestinal symptoms requiring treatment, and ongoing iron deficiency anaemia, in July 2008, (a picture requiring urgent exclusion of upper GI malignancy) it is difficult to understand why [Dr A] did not initiate further investigations, or even perform an abdominal examination, at this late stage.

5.7 General: It is somewhat disturbing to read [Dr A's] comments in 3.4 and 3.5 — to me they show that he has not understood the basic management errors he has made, nor do they illustrate an understanding of the pathophysiology of iron deficiency anaemia or the recommended management of such a condition. These represent significant gaps in what I would regard as basic GP knowledge and therefore must raise an issue of competency. When this issue is combined with those of failure to perform an abdominal examination prior to diagnosing and treating 'gastritis', and the uncertainties raised over the veracity of [Dr A's] clinical documentation, I feel an assessment of [Dr A's] clinical competence is warranted.

My recommendations are:

(i) [Dr A] is referred to the Medical Council.

(ii) [Dr A] formally apologise to [Ms B] for failing to investigate her iron deficiency anaemia in a manner consistent with expected practice and thereby denying her the opportunity of an earlier diagnosis of her bowel cancer.

(iii) [Dr A] familiarise himself with the contents of reference 3 (*Guidelines for the management of iron deficiency anaemia*) which gives an excellent summary of the pathophysiology and recommended management of iron deficiency anaemia.

6. Opinion

6.1 On the basis of the records available to me, and referring to comments in section 5, I am of the opinion that the management of [Ms B] by [Dr A] departed from expected standards to a severe degree with respect to investigation and management of her iron deficiency anaemia. Other issues, which may be lesser departures from expected practice, are discussed above.

Dr David Maplesden
Clinical Advisor
Health and Disability Commissioner
Auckland"

On 20 July 2010 HDC sought Dr Maplesden's comment on (1) [Ms B's] elevated CRP result from 14 November 2008; and (2) [Dr A's] failure to arrange the ECG (or record the results in [Ms B's] notes) from the consultations on 15 November 2007 and 14 July 2008. Dr Maplesden provided the following further advice on 21 July 2010:

(1) "Interpretation of this test is difficult as it is so non-specific. However, if a test is ordered, the person who ordered it should be prepared to act on the result. In this case the test was unequivocally abnormal (even though not indicative of any specific pathology) and should have signalled the need to exclude significant pathology involving inflammation or infection. Further testing needs to be directed towards the presenting complaints and overall clinical picture (including other blood test results) of the patient eg if she was

presenting with joint pain, one would investigate causes of arthritis. In this case she was presenting with tiredness and iron deficiency anaemia, and the elevated CRP is yet another indicator that, in this context, malignancy needed to be excluded with abdominal and rectal examination, endoscopy, CT scan etc."

(2) "Yes — it is apparent [Dr A] had an ECG machine in his rooms — which is fairly standard these days — so no formal referral would be required other than to the practice nurse or whoever was operating the machine. However, I would expect if an ECG was carried out it would be reviewed by [Dr A] immediately and some comment made in the notes, even if just 'normal'."

Appendix B — Professional standards 2002 & 2008

The Royal New Zealand College of General Practitioners, *Aiming for Excellence — An Assessment Tool for New Zealand General Practice*, 2nd edition. Wellington, RNZCGP, 2002:

Indicator D.7.1: Records are sufficient to meet legal requirements to describe and support the management of health care provided.

…

Criteria

Demographic data

- Name of patient
- NHI number
- Gender
- Address
- Date of birth
- Ethnicity
- Registration status
- Registered/casual
- Principal caregiver/next of kin
- Significant relationships
- Contact phone number
- Community Services Card
- Occupation

Consultation records:

- The entry is dated
- Person making the entry is identifiable
- The entry is legible

Recent consultations recorded:

- Reason for encounter
- Examination findings
- Investigations ordered —office and laboratory
- Assessments/investigations
- Diagnosis
- Management plan including medication change, additions, follow up arrangements
- Medications are clearly identifiable: drug names/dose/frequency/time

Medical records show:

- Clinically important drug reactions and other allergies are easily identified
- Awareness alert for specific disability etc.
- Problem lists are easily identifiable
- Preventative care
- Current medication list
- Risk factors are identified and markers used
    - Family history
    - Smoking
    - Alcohol, drugs
    - Blood pressure
    - Weight/height/BMI
- Immunisations
    - ADT recorded
    - Childhood immunisations
- Referrals and responses are easily accessible in clinical records:
    - Laboratory
    - Xray
    - Other tests
    - Other health information
- Screening
    - Cervical smears
    - Mammograms

The Royal New Zealand College of General Practitioners, *Aiming for Excellence — An Assessment Tool for New Zealand General Practice*, 3rd edition. RNZCGP, Wellington, 2008:

Indicator D.9.1: Patient records meet requirements to describe and support the management of health care provided.

Criteria:

D.9.1-1: GPs and practice nurses have completed an audit of 15 patient records each

D.9.1-2: Demographic data:

- Name of patient
- NHI number
- Gender
- Address
- Date of birth
- Contact phone no.
- Ethnicity
- Registration status
- PHO enrolment status
- Name of primary GP and/or clinical team

- Next of kin

D.9.1-3: Other demographic data:

- Current occupation
- Principal caregiver/contact person
- Significant relationships
- Hapu/iwi
- Aliases, maiden name

D.9.1-4: Medical records show:

- Clinically important drug reactions and other allergies (or the absence thereof)
- Directives by patients
- Problem lists (using a recognised system for disease coding)
- Past medical history
- Current smoking status and history of all patients over age 15
- Disabilities of the patient
- Current medications
- Clinical management decisions made outside consultations, e.g telephone calls

D.9.1-5: Consultation records:

- Relevant content of each patient contact with practice clinical staff, including consultations, home visits and telephone advice
- Each entry is dated
- The person making the entry is identifiable
- The entry is legible and could be understood by someone not regularly working at the practice, e.g. a locum

D.9.1-6: Consultation records should also include:

- Patient reason for encounter
- Examination findings
- Investigations ordered
- Diagnosis and assessment
- Management plans
- Information given to patients, including notification of recalls, test results, referrals and other contacts (and ideally patient understanding, agreement for consent will be checked and recorded when necessary)
- Medications (name, frequency) by indication. Review appropriateness of long-term medications
- Intermediate clinical outcomes
- Screening and preventative care initiatives recommended

D.9.1-7: Risk factors are identified and appropriately acted upon:

- Alerts
- Family history
- Smoking and, where appropriate, offer of support for smoking cessation
- Alcohol/drug use

- Blood pressure
- Weight/height/BMI
- Immunisations

D.9.1-8: Referral letters contain:
- Reason for referral
- Background information and history
- Current treatment
- Key examination findings
- Problem
- Referral letter should contain long-term medications and allergies

D.9.1-9: Referrals and responses are easily accessible in clinical records:
- Laboratory results
- X-ray
- Other tests and health information

D.9.1-10: Screening:
- Cervical smears
- Mammograms

D.9.1.11: Clinical records chosen for assessment show evidence of random selection

D.9.1.12: The last entry in the records is less than 12 months old

D.9.1.13: Records, referral letters and investigation reports are filed, or are available electronically, in the patient's medical record

D.9.1.14: Clinical management decisions are recorded

D.9.1.15: The practice team uses the results of the medical record audit to identify quality improvement opportunities