General Practitioner, Dr B

Medical Centre

A Report by the

Health and Disability Commissioner

(Case 14HDC00919)

Health and Disability Commissioner
Te Toihau Hauora, Hauātanga

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Executive summary

1. Mr A (38 years old at the time of these events) was a patient of general practitioner (GP) Dr B. Although relatively fit, he was overweight, a smoker, and had been diagnosed with diabetes in 2013. From about Month1[1], a few months after his diagnosis, Mr A experienced coughing fits, particularly at night. He saw Dr B about these fits in Month1 and Month3. Dr B thought Mr A might have an infection in his chest, and prescribed antibiotics.

2. On 28 Month5, Mr A returned to Dr B because of further coughing fits, bleeding from the nose, and episodes of shortness of breath. Dr B documented that a specialist assessment was required. On 2 Month6, Dr B sent a semi-urgent referral to the district health board's (DHB) respiratory service. The referral gave no indication of the duration and severity of Mr A's symptoms or the duration of his smoking history, and no physical findings were included other than blood pressure.

3. On the night of Friday 7 Month6, Mr A experienced continual coughing for about eight hours. He returned to Dr B on 10 Month6 and told him what had happened. Dr B ordered a full set of blood tests and documented that Mr A needed an urgent respiratory appointment. Dr B told HDC that at this point he sent off a referral to the DHB for urgent specialist assistance, but there is no evidence of that referral in the medical notes, and the DHB did not receive it.

4. On 14 Month6, Mr A returned to Dr B. Following the appointment, Dr B sent a new referral to the DHB, this time for specialist gastroenterology review.

5. On 17 Month6, the DHB informed Dr B that an appointment had been booked for Mr A for 1 Month9 at "the medical clinic". Dr B assumed this appointment was for the specialist respiratory appointment. In fact, it was for the gastroenterology review.

6. On 25 Month6 Mr A visited Dr B. Dr B told HDC that, as he was already fully booked with other patients, he did not review Mr A formally or examine him physically. However, he did see Mr A and prescribed an antibiotic.

7. Sadly, on 26 Month6 Mr A died. His post mortem recorded his cause of death as "respiratory failure due to severe pulmonary oedema[2] and pleural effusions".[3] He was found to have had severe coronary artery disease, signs of an old myocardial infarction (a heart attack), and an enlarged liver.

Findings

8. Dr B failed to advocate appropriately for Mr A by failing to follow up the respiratory referral or informing the DHB when Mr A's condition deteriorated, and failed to carry out the appropriate physical assessments of Mr A before prescribing an antibiotic on

[1] Relevant months are referred to as Months 1-9 to protect privacy.
[2] Fluid leaking into the lung, often caused by congestive heart failure. When the heart is not able to pump efficiently, blood can back up into the veins that take blood through the lungs. As the pressure in these blood vessels increases, fluid is pushed into the air spaces in the lungs.
[3] Fluid blocking the lungs.

25 Month6. Accordingly, Dr B failed to provide Mr A services with reasonable care and skill and breached Right 4(1)[4] of the Code of Health and Disability Services Consumers' Rights (the Code).

9. There is also a pattern of inadequate documentation in Dr B's referral letter and clinical notes. Accordingly, Dr B breached Right 4(2)[5] of the Code.

10. Adverse comment is made about the DHB regarding its communication with Dr B.

Complaint and investigation

11. The Commissioner received a complaint about the services provided by Dr B to Mr A. The following issues were identified for investigation:

- *Whether Dr B provided Mr A with an appropriate standard of care between Month1 and Month6.*
- *Whether the medical centre provided Mr A with an appropriate standard of care between Month1 and Month6.*

12. An investigation was commenced on 12 January 2015.

13. The parties directly involved in the investigation were:

Ms A	Complainant
Dr B	General practitioner/provider
Medical centre	Provider

14. Information was also reviewed from:

The Coroner	
The DHB	
PN C	Practice nurse

Also mentioned in this report:

Dr D	General practitioner

15. In-house clinical advice was obtained from general practitioner (GP) Dr David Maplesden (**Appendix A**).

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

Information gathered during investigation

Background

16. Mr A (38 years old at the time of these events) had been a patient of vocationally registered GP Dr B since 2000. Dr B[6] has been practising for over 30 years.

17. Mr A was overweight[7] and a smoker, although he was relatively fit and had not had any serious health issues before being diagnosed with diabetes in 2013. He had a strong family history of diabetes and cardiovascular disease.

Month1, 2013

18. From about Month1, Mr A experienced coughing fits, particularly at night, which were sometimes so severe that he could not lie down. On 12 Month1, Mr A went to see Dr B about this problem. It is documented in Mr A's medical notes that he had a persistent cough overnight and he possibly had traces of blood in his sputum.[8] On examination, Mr A was "febrile"[9] (temperature not recorded) and had "developing [right lower lobe[10]] moist sounds". Dr B told HDC that he thought Mr A may have had "some level of infection in his chest area". Antibiotics were prescribed, and Mr A was advised to return in a week if he did not improve. Mr A's partner, Ms A, told HDC that the treatment seemed effective, and Mr A's symptoms disappeared until Month3.

Month3

19. According to Ms A, in the early hours of 5 Month3 Mr A experienced a coughing fit that lasted for three hours. Ms A said that Mr A was coughing up blood (haemoptysis) and felt very unwell. Later that day, Mr A presented to Dr B, who documented that Mr A had experienced bouts of epistaxis (bleeding from the nose) with shortness of breath (SOB). His blood pressure was taken and documented as being 130/80mmHg.[11] Dr B ordered an urgent chest X-ray. His primary reason for requesting an X-ray was noted in the clinical records as being due to the haemoptysis. Dr B recorded that Mr A "may require specialist work up".

20. Dr B told HDC that Mr A's symptoms, along with his "heavy smoking habit, weight, diabetes and young age" led him to conclude that there were "respiratory issues to explore".

21. On 7 Month3, the X-ray was performed at the public hospital.

22. On 14 Month3, the X-ray results were reported. The report stated that Mr A's lungs were clear with no fluid around them, and that his "cardiac silhouette [was] within normal limits". Dr B told HDC that the results confirmed that Mr A's heart and lungs

[6] Dr B is the sole director and the sole doctor at the practice.
[7] Mr A's partner and Dr B refer to Mr A as being overweight; however, his weight was not documented by Dr B in his medical notes during the period of the events under investigation.
[8] A mixture of saliva and mucus coughed up from the respiratory tract, typically as a result of infection or other disease.
[9] Having or showing the symptoms of a fever.
[10] One of three subunits (called lobes) in the right lung.
[11] Ideally blood pressure should be less than 130/80mmHg, normal being around 120/80mmHg.

were clear. Later that day, Dr B saw Mr A and noted that he was "still coughing and smoking". Dr B told HDC that the X-ray "confirmed that [Mr A's] heart was clear. I was therefore directed back to considering treatment for lung/respiratory issues". Dr B prescribed further antibiotics (E-mycin[12]) to "address any infection" and Champix[13] in an effort to overcome Mr A's tobacco smoking addiction. Dr B advised that he intended "to monitor whether cessation [of smoking] alleviated [Mr A's] coughing complaints".

23. In a statement to the Police, Ms A said that Mr A completed his course of antibiotics but he continued to experience coughing and shortness of breath, although not severely enough to seek medical attention. Ms A said that Mr A seemed to be back to normal, but in Month5 his coughing fits started again, and he was coughing up brown mucus. Ms A further stated that Mr A's health fluctuated. She said that his symptoms seemed to occur only at night, and that sometimes he would need to take time off work owing to having been up all night coughing, and being too exhausted to work.

Month5

24. On 28 Month5, Mr A returned to Dr B because of further coughing fits, more haemoptysis and episodes of shortness of breath. Dr B provided him with a Duolin Hfa inhaler[14] to help with his breathing. Dr B told HDC: "[Mr A's] presentation and history suggested to me at that time that further respiratory investigation by a specialist was required." Dr B said that he told Mr A to go to the Emergency Department (ED) if he deteriorated. Dr B documented that a specialist assessment was required, but there is no documentation of any advice given or any examination of Mr A being carried out at this visit. However, Dr B told HDC: "I am confident that I would have carried out the basic physical examination requirements at each visit given [Mr A's] symptoms and given my usual every day practice."

25. Ms A was present at most of Mr A's appointments with Dr B. She said she recalls Dr B's consultations with Mr A being relatively brief, but said he would sometimes listen to Mr A's chest.

Month6

26. On 2 Month6, Dr B sent a semi-urgent referral to the DHB's respiratory service for an "urgent Chest X-ray", and stated that Mr A "may require specialist work up". The referral gave no indication of the duration and severity of Mr A's symptoms or the duration of his smoking history, and no physical findings were included other than his blood pressure. The DHB acknowledged the referral on 3 Month6 and noted on 4 Month6 that a chest X-ray and spirometry test[15] were required "now".

[12] Erythromycin — an antibiotic used to treat a variety of mild to moderate infections.
[13] Champix is a medication designed to reduce the cravings and withdrawal symptoms that occur when a person gives up smoking. It also blocks the effect of nicotine.
[14] A Duolin HFA inhaler is used to treat patients suffering from chronic obstructive pulmonary disease, and may also be used to treat asthma.
[15] A common test used to assess how well someone's lungs are working by measuring how much air can be inhaled and exhaled and how quickly one exhales. Spirometry is used to diagnose asthma, chronic obstructive pulmonary disease (COPD) and other conditions that affect breathing.

27. At 3.53am on 5 Month6, Mr A presented at the public hospital's ED with shortness of breath and complaining of coughing fits. Mr A was seen by an ED Medical Officer who noted Mr A's recent medical history (recent cough, usually at night) and that his GP had referred him to a respiratory physician. The ED Medical Officer documented that Mr A was coughing and could not breathe well. She examined his chest and documented that it was clear but he had "decreased air entry mid-lower zones". She further documented that he looked well. He was placed on a nebuliser[16] for a short time "with good effect". He was sent home with a primary diagnosis of acute asthma. His notes state: "[L]ikely early chronic obstructive pulmonary disease due to smoking." He was advised to follow up with his GP and the specialist, as arranged, or re-present to ED in the event of deterioration.

28. In a statement to the Coroner, Ms A said that on Friday 7 Month6, Mr A was feeling better and his coughing was more manageable. He and Ms A went away for the weekend. That night he experienced continual coughing for about eight hours. Ms A said that he could not lie down, so he sat up in a chair during the night using his inhaler.

29. At about 6pm on Saturday 8 Month6, Mr A visited GP Dr D at a 24-hour weekend service because of his coughing fit the night before. Dr D documented that Mr A reported to her that his cough was mostly dry, although sometimes he produced small amounts of white sputum with occasional flecks of blood. On examination he was tachycardic[17] with a pulse of 120 beats per minute (bpm) — normal being around 100bpm — and had a fever of 38.4°C — normal being around 37°C. His chest was clear on examination with no signs of acute asthma (no wheeze) and no infection or crepitation (crackling or rattling).

30. In a statement to the Coroner, Dr D said that Mr A's tachycardia and raised temperature were consistent with a viral upper respiratory tract infection. She gave him steroids for his lungs, and more inhalers and codeine to help suppress the cough to assist him to sleep. She instructed Mr A to return to his usual GP (Dr B) on Monday (10 Month6).

31. On Monday 10 Month6, Mr A returned to Dr B, telling him what had happened over the weekend. In a statement to the Coroner, Ms A said that she and Mr A "described [Mr A's] inability to lie down due to coughing, his breathing difficulties and his general feelings of exhaustion and un-wellness". The following was documented in Mr A's medical notes:

> "Awaiting respiratory assessment // when coughing definitely SOB // now on Prednisone orally and changed to Ventolin // minimal improvement // needs urgent appointment and [respiratory function] studies plus blood work up."

[16] A nebuliser is a drug delivery device used to administer medication in the form of a mist inhaled into the lungs. Nebulisers are commonly used for the treatment of asthma, COPD and other respiratory diseases.
[17] Tachycardia is a heart rate exceeding the normal resting rate.

32. There is no documentation of any examination of Mr A having been carried out at this visit. Dr B ordered a full set of blood tests. He told HDC that he also sent off another referral to the DHB for urgent specialist assistance, and that this was owing to Mr A's reported deterioration in symptoms and minimal improvement following the recent course of medication. However, there is no evidence in the medical notes of that referral. The DHB told HDC that it did not have any record of communication from Dr B regarding Mr A's appointment.

33. On 11 Month6, Dr B received the blood test results. Dr B told HDC that they were all within normal ranges "but for his CRP[18] which was raised indicating inflammation (which I believed at the time confirmed infection in his chest)". The results also showed mildly elevated liver enzymes and elevated levels of carcinoembryonic antigen (CEA), a tumour marker that may be elevated in the presence of various cancers but can also be elevated by other factors such as smoking.

34. Ms A told the Coroner that Mr A's symptoms continued to get worse and became more regular and severe. On 14 Month6, he returned to Dr B. Mr A's medical notes for this visit document that his blood sugar levels were high and that he was experiencing weight loss and a "recent change in bowel habit" (which, according to Ms A, Dr B said was due to "an enzyme [that] was higher than normal"). Dr B documented that Mr A had lost 5kg, but did not document Mr A's previous or current weight. There is no documentation regarding any examination of Mr A being carried out at this visit. Dr B said that at this visit he started to consider that there might also be gastric concerns developing.

35. Ms A told HDC that she recalls this appointment. She said that by this stage Mr A needed to evacuate his bowels frequently and had lost a lot of weight, yet she does not recall Dr B carrying out any examinations at this appointment.

36. Following the appointment, Dr B sent another request to the DHB, this time for a specialist gastroenterology review. That same day, Dr B received acknowledgement from the DHB that his gastroenterology referral had been received and would be forwarded on to the appropriate service.

37. Ms A said that on 15 Month6, Mr A was "seriously ill", had no appetite and was exhausted. She added that a few days later he started vomiting. Mr A did not seek medical attention at that time.

38. Ms A said that around this time, Mr A called Dr B to see "if he had heard anything from the specialist yet", and that Dr B said he had not.

39. On 17 Month6, the DHB informed Dr B that an appointment had been booked for Mr A for 1 Month9 at "the medical clinic". Dr B told HDC that he assumed this appointment was for the specialist respiratory appointment. However, the DHB told HDC that it was for the gastroenterology review.

[18] C-reactive protein — a substance in the liver that rises in the presence of inflammation.

40. On 19 Month6, Mr A received a letter from the DHB stating that his first appointment with the gastroenterology service at the public hospital had been booked for 1 Month9, and his spirometry had been booked at the public hospital's diagnostic service for 11 Month7. Dr B was not sent a copy of that letter or alerted to the spirometry appointment. Ms A told HDC that Mr A rang the hospital to see if he could get any earlier appointments, and was told that none were available.

41. On 24 Month6, the DHB sent Mr A a letter informing him that he had been given an appointment for a chest X-ray on 11 Month7, to follow the spirometry. Dr B was not sent a copy of that letter. the DHB told HDC:

> "There was not at that point an appointment made for [Mr A] for his respiratory referral as the service was awaiting the results from his respiratory tests and x-ray. The results of these tests would have been reviewed, the prioritisation upgraded to urgent if it was felt necessary, and an appointment made."

42. Ms A stated that Mr A was "so bad" at this stage that she contacted a private hospital to see if Mr A could be seen privately, but was told that only the public hospital did the spirometry tests. She then tried, unsuccessfully, to bring forward his specialist appointment at the public hospital, telling them that "his quality of life was terrible" because of the "constant coughing, exhaustion, lack of appetite and that … his symptoms were getting steadily worse". The DHB told HDC:

> "All appointments are made according to the prioritisation of the referral and normal process is for the referrer to contact the department if they have any concern at the appointment timeframe. We do not have any record of any communication from the referrer regarding the appointment timeframe."

43. During the night of 24 Month6, Mr A's symptoms deteriorated. Ms A told the Coroner that this was "the worst episode he had with coughing and no sleep". She stated that he was unable to maintain a warm body temperature and was coughing constantly.

44. According to Ms A, on 25 Month6 Mr A was generally well. That day, Mr A visited Dr B. Dr B told HDC that Mr A did not have an appointment but rather visited the practice regarding an insurance claim. Dr B said that as he was already fully booked with other patients he did not review Mr A formally or examine him physically, but he did see Mr A about the insurance claim and signed some insurance documentation. In response to my provisional opinion, however, Ms A stated that Mr A did have a scheduled appointment with Dr B for 25 Month6.

45. Dr B documented in Mr A's medical notes for 25 Month6 that Mr A told him that he had experienced another "bout of coughing with sputum".

46. Dr B prescribed ciprofloxacin (a stronger antibiotic than the one Mr A had been prescribed previously). Dr B said that he told Mr A that if he did not improve once he had taken the further antibiotics, then he was to make an appointment to see him, and that if anything else arose of immediate concern in the meantime, to "continue to utilise the A & E department at the hospital". However, this advice is not documented.

47. While visiting the practice on 25 Month6, Mr A also saw Dr B's practice nurse (PN) PN C for a check-up of his diabetes, including blood and glucose level checks. The clinical notes from PN C's check-up are recorded after the notes from Dr B's interaction with Mr A, but the times of the consultations have not been logged.

48. PN C informed HDC that Dr B asked her to "take [Mr A's] blood sugar". She said that Mr A advised her that he had been unwell for some time, with recurring chest infections and shortness of breath. She documented his shortness of breath. PN C told HDC that Mr A "looked unwell", and that she advised him to go to the ED if he felt short of breath again. She further said: "As far as I can remember I don't think I discussed [Mr A] with [Dr B] after this visit."

49. In contrast, Dr B told HDC: "Neither my nurse nor I thought he looked particularly unwell at that time and he was in good spirits when I spoke with him." Dr B also stated that he recalls PN C seeing Mr A first and then speaking to him about the possibility of Mr A having another chest infection.

50. Dr B stated:

> "I was confident that usual practices would have been followed by my PN with her recording [Mr A's] vitals and she would have alerted me if there was any cause of concern. …
>
> I would have reacted differently if my own observations of [Mr A] caused me any concerns or alarm at the time, but they did not. By differently, I mean by urging him to go down to the A&E department immediately if I could not see him straight away, or making a full consultation time later in the session or day.
>
> At this point in time I was still working to a diagnosis of [chronic obstructive pulmonary disease] or related and was awaiting specialist input for [Mr A]. There is nothing to my recollection that indicated cause for concern, other than recurrent symptoms."

51. Later that day Ms A called a larger public hospital and asked if Mr A could be referred there so that he could be seen more quickly than his appointment at his public hospital. The staff said that he could be seen, and told Ms A to get a referral from Mr A's doctor. Ms A said that she rang Dr B's office, and the practice manager told her that she would send the referral. There is nothing documented in Mr A's medical notes regarding the referral. Dr B told HDC: "Regrettably, Mr A die[d] the next day before the referral could be resent to seek an earlier appointment."

52. Ms A said that, generally, Mr A was well during the evening of 25 Month6. However, Ms A said that she woke up at around 4am on 26 Month6 to the sound of Mr A struggling to breathe and talk. He told her to call an ambulance. He was coughing "like he did when he was having one of his fits". She said that there was a pool of blood and mucus on the floor, and that he continued to cough up blood and mucus, "gasp for air then cough again". She called an ambulance and when the paramedics arrived they gave him an oxygen mask, but he kept pulling it off to vomit. He managed to get onto a stretcher but then collapsed, and the paramedics started

cardiopulmonary resuscitation (CPR). The CPR was unsuccessful and, sadly, Mr A died.

53. Mr A's post mortem recorded his cause of death as "respiratory failure due to severe pulmonary oedema[19] and pleural effusions".[20] He was found to have had severe coronary artery disease, signs of an old myocardial infarction (a heart attack), and an enlarged liver.

54. Dr B told HDC:

> "At no time following receipt of the clear chest Xray in [Month3], combined with his young age and presentation with consistent respiratory like symptoms between late [Month5] and late [Month6], did I conclude that [Mr A's] issues were heart related."

55. Dr B also said that whilst he treated Mr A's respiratory symptoms as "serious and warranting specialist intervention", he never considered Mr A's presentations as alarming or severe to the point where he might have admitted him to hospital, or found them to be life threatening.

56. Furthermore, Dr B stated that if he had had the ability to influence the referral process further to achieve an earlier appointment for Mr A, he would have done so.

Further information

Dr D

57. Dr D stated to HDC (regarding her examination of Mr A): "The absence of crepitations is significant given the provisional cause of death. Pulmonary oedema commonly causes crepitations throughout the lung fields and none was heard at that time."

Dr B

58. Dr B stated:

> "I believe this case is an example of where expedient access to specialist input at an earlier stage, would have obviously helped [Mr A] in obtaining a clear diagnosis to enable appropriate and prompt treatment. It is clear that [Ms A] had contacted [the DHB] concerned at the delay in an appointment time for [Mr A] for the respiratory specialist and lung function testing … Systems need to exist where patients can be seen in a prioritised way when their symptoms continue or deteriorate post referral, to ensure they can access appropriate interventions when more urgency is required. … There is little doubt that seeing the specialist would have assisted in [Mr A's] diagnosis and consequent treatment."

59. Dr B acknowledged that his documentation was inadequate, and said that he has since allocated more time to his note taking, and that he is trying to implement 15-minute

[19] Fluid leaking into the lung, often caused by congestive heart failure. When the heart is not able to pump efficiently, blood can back up into the veins that take blood through the lungs. As the pressure in these blood vessels increases, fluid is pushed into the air spaces in the lungs.
[20] Fluid blocking the lungs.

consultations, although this has not been easy to achieve owing to patient demand from his 2,500 patients. He also said that he is "in active talks to join a group practice, and [he is] confident that will address many of the issues that have arisen in this case".

60. Dr B also said that he believes his specialist referral request to the DHB contained sufficient information to trigger the appropriate response from the DHB. He added, however, that as part of improving his clinical documentation he will review his referral content to ensure that the action he wants taken is clearly stated in the referral. Furthermore, Dr B said that he has implemented Electronic Referral Management System (ERMS) software, which simplifies completing referrals and ensures that more thorough information is sent within the referrals.

61. Dr B told HDC:

> "I am confident that I would have carried out the basic physical examination requirements at each visit given [Mr A's] symptoms and given my usual every day practice. That examination, given his symptoms, would have included [blood pressure] and chest examination, and weight at times given his size at consultations prior to the 25th [Month6]."

Responses to provisional opinion

62. Mr A's family, Dr B (both personally and on behalf of the medical centre) and the DHB responded to relevant sections of my provisional opinion.

Ms A

63. Ms A wrote that she really hopes that "no other family has to go through what we have experienced, and that [Mr A's] death will change practices in place currently so this never happens again to anyone else's family."

Dr B

64. Dr B accepted the findings of my provisional opinion and advised that his practice has changed immeasurably since he saw Mr A in Month6.

65. Dr B said he accepts that on 25 Month6 he should not have seen Mr A "on the hop". He advised that he underwent a performance assessment and that he has since had supervision, which has been "positive and complimentary".

66. In addition, Dr B advised that he has moved from working as a sole practitioner to working in a group practice, [under supervision]. The practice […] has a clinical director, a practice manager and a clinical pharmacist. Dr B stated that as well as peer review he attends regular evening staff meetings, in-house training and seminars. In addition he said that he is participating in his new practice's accreditation process, which includes being matched with a peer to carry out individual systematic audits of his practice on a regular basis.

67. In response to a recommendation made in my provisional opinion (that he report back to HDC on the effectiveness of the changes he has made to his practice following these events), Dr B stated that the above changes have provided him with insight into what went wrong while he was in individual practice and with collegial support that was not available to him previously. He advised that there has been significant improvement in his record-keeping and that he now uses a system of setting reminders for tasks related to consultations. He added:

> "Overall, I am confident that I am now practicing to a much higher standard and I have remedied the issues that resulted in my work pressure leading up to [Month6] … I remain motivated to continue the improvements in my practice."

The DHB

68. The DHB accepted the criticism in my provisional opinion.

69. In response to my recommendation that it review its practice around communication with providers referring patients (with the aim of ensuring that those providers receive all relevant information regarding the referral, including any appointment times allocated to the patient and information about the nature of those appointments), the DHB advised that it was introducing a practice that will allow GPs and other healthcare providers to see appointments (and other information) in the hospital system and for the hospital to see information about care provided in the community.

70. The DHB said that the only way to achieve this level of information exchange before undertaking the changes would be to provide all referrers with copies of letters sent to patients detailing their appointment dates and times (including appointments for diagnostic tests and imaging) and any further correspondence regarding appointments.

Opinion: Dr B — Breach

Care from Month1–Month6

Respiratory issues

71. From about Month1, Mr A started having episodes of coughing, mostly at night. On 12 Month1, he saw his GP, Dr B, about his symptoms. Dr B thought that Mr A had a chest infection and prescribed antibiotics. The antibiotics seemed effective, and Mr A's symptoms disappeared for about six weeks.

72. On 5 Month3, Mr A returned to Dr B after experiencing another coughing fit. He was coughing up blood and felt very unwell. He also reported bleeding from his nose and shortness of breath. Dr B ordered an urgent chest X-ray and documented that Mr A "may require specialist work up". Dr B thought that Mr A's symptoms, along with his "heavy smoking habit, weight, diabetes and young age" meant that there were "respiratory issues to explore".

73. On 7 Month3, the X-ray was performed at the public hospital. The formal report stated that Mr A's lungs were clear with no fluid around them, and that his "cardiac

silhouette [was] within normal limits". Accordingly, no specialist assessment was arranged. On 14 Month3, Dr B saw Mr A and noted in his medical notes that Mr A was "still coughing and smoking". Dr B prescribed further antibiotics and an anti-smoking medication to see whether cessation of smoking alleviated Mr A's coughing fits.

74. On 28 Month5, Mr A returned to Dr B as he was experiencing episodes of shortness of breath and further coughing fits, during which he would sometimes cough up blood. Dr B provided Mr A with an inhaler to help with his breathing, and noted again that a specialist assessment was required.

75. On 2 Month6, Dr B sent a semi-urgent referral to the DHB's respiratory service for a chest X-ray. The referral documented that Mr A "may require specialist work up". The DHB noted that a chest X-ray and spirometry were required "now".

76. I obtained advice from my in-house clinical advisor, GP Dr David Maplesden, who advised me that between Month1 and early Month6, Mr A's symptoms and assessment findings were primarily respiratory in nature and were mostly consistent with a lower respiratory tract infection with possible underlying smoking-related chronic obstructive pulmonary disease (COPD). Dr Maplesden noted that there was a positive response to antibiotic treatment both times it was prescribed (12 Month1 and 14 Month3). He considered that Dr B was conscientious in ordering a chest X-ray, and noted that the X-ray did not detect any signs of significant lung pathology or a cardiac cause for Mr A's symptoms and history.

77. Overall, Dr Maplesden considered that during the period discussed above, "it was very reasonable that a respiratory cause for [Mr A's] symptoms … was at the forefront of diagnosis being considered by [Dr B]". In addition, Dr Maplesden considered that Dr B's referral for semi-urgent specialist assessment was appropriate.

78. I accept Dr Maplesden's advice. Mr A was a smoker, which placed him at risk of developing smoking-related diseases, including COPD. Mr A's predominant symptoms of a cough and shortness of breath, together with the initial positive results from antibiotics and the normal chest X-ray at this time, support Dr B's assumption that Mr A's issues were respiratory based. Accordingly, I find that it was appropriate for Dr B to diagnose Mr A's issues as being respiratory related between Month1 and early Month6. I am satisfied that Dr B's care was reasonable in this respect.

Follow-up of referral

79. On 2 Month6, Dr B sent a semi-urgent referral to the DHB's the public hospital respiratory service for an "urgent Chest X-ray", and stated that Mr A "may require specialist work up". The DHB acknowledged the referral on 3 Month6 and noted on 4 Month6 that a chest X-ray and spirometry test were required "now".

80. On Friday 7 Month6, Mr A coughed all night and had to sit up using his inhaler. Early the following evening he visited GP Dr D at the 24-hour weekend service. Dr D documented that Mr A's chest was clear on examination with no signs of acute asthma (no wheeze, no infection or crackling/rattling). After carrying out a physical assessment she instructed Mr A to return to Dr B on Monday (10 Month6).

81. As instructed, on 10 Month6 Mr A returned to Dr B and told him the events that had occurred over the weekend. Dr B documented that Mr A needed an "urgent [respiratory] appointment". He said that this was because of Mr A's reported deterioration in symptoms and minimal improvement following the recent course of medication. There is no record that a physical examination was carried out at this visit, but Dr B ordered a full set of blood tests.

82. Dr B said that he sent off another referral for urgent specialist assistance, but there is no record of his having done so. The DHB told HDC:

> "All appointments are made according to the prioritisation of the referral and normal process is for the referrer to contact the department if they have any concern at the appointment timeframe. We do not have any record of any communication from the referrer regarding the appointment timeframe."

83. As there is no documentary evidence regarding another referral being sent on 10 Month6, I find it more likely than not that no further referral was sent.

84. Dr Maplesden advised that on 10 Month6, when Dr B noted that Mr A needed an urgent appointment, he should have arranged for the referral centre to be contacted to confirm the date of Mr A's respiratory appointments (chest X-ray, spirometry and specialist review). Furthermore, Dr Maplesden advised that at this point Dr B should have attempted to expedite the appointments by providing the DHB with further relevant information (either by telephone or re-referral). I agree with this advice.

85. On 14 Month6, Mr A returned to Dr B with bowel issues, which Dr B felt were due to elevated liver enzymes and weight loss. He told HDC that at this stage he began to consider that there might also be gastric concerns developing. There is again no evidence that any physical assessment was carried out. However, Dr B sent off another referral to the DHB, this time for specialist gastroenterology review (received and acknowledged by the DHB on the same day).

86. On 17 Month6, the DHB informed Dr B that an appointment had been booked for Mr A for 1 Month9 at "the medical clinic". The appointment letter did not state whether it was for the respiratory or gastroenterology review. Dr B told HDC that he assumed that it was for the specialist respiratory appointment. However, the appointment was actually for the gastroenterology review.

87. On 19 Month6, Mr A received a letter advising him that an appointment had been booked for his spirometry at the public hospital's diagnostic service for 11 Month7, and that his first appointment with the gastroenterology service had been booked for 1 Month9 at the public hospital. Dr B did not receive a copy of that letter.

88. Dr Maplesden advised that given the timing of the appointment receipt in relation to the referral being sent, the non-specific description of the clinic as "medical" in the letter, and the fact that Dr B was not notified of the chest X-ray and spirometry appointment times scheduled for Mr A, it was reasonable for Dr B to assume that the appointment scheduled for 1 Month9 was related to the respiratory referral. However, Dr Maplesden also stated that, given Dr B's mistaken interpretation of the 17 Month6

letter, he should have attempted to expedite the respiratory appointment after receiving notification of the 1 Month9 appointment date. I agree with this advice.

89. Dr B told HDC that Mr A needed the appropriate interventions to occur more urgently, and that if he had had the ability to influence the referral process further to achieve an earlier appointment for Mr A, he would have done so. However, Dr B made no attempt to expedite Mr A's specialist respiratory appointment.

90. I am critical not only of Dr B's failure to follow up on the specialist respiratory referral that he made for Mr A, but also of his apparent lack of awareness that, as Mr A's GP, he was best placed to attempt to bring forward the specialist appointments.

Physical assessments

91. Ms A, who accompanied Mr A at most of his appointments with Dr B, told HDC that at some appointments Dr B would listen to Mr A's chest, but other than this she does not recall him carrying out any examinations. Ms A told HDC she recalls the appointment where the gastroenterology referral was made, on 14 Month6. She said that by this stage Mr A needed to evacuate his bowels frequently and had lost a lot of weight, yet she does not recall Dr B carrying out any examinations at the appointment.

92. Dr B said that he is confident he would have carried out adequate physical assessments at all appointments, including "BP and chest examination, and weight at times". However, no physical assessments have been documented for any of the consultations from 28 Month5.

93. Dr Maplesden expressed concern at the lack of physical assessment findings documented for the consultations between 28 Month5 and 14 Month6. He also stated:

> "A minimum requirement for the consultation for 14 [Month6], if [gastrointestinal] malignancy was suspected would have been palpation of the abdomen to exclude a palpable mass, the presence of which would impact on referral prioritisation."

94. On the available evidence, I am unable to make a finding as to what examinations, if any, were carried out at the appointments from 28 Month5 to 14 Month6. However, if Dr B did carry out the appropriate examinations at these appointments, I am critical that he did not record his findings in Mr A's clinical notes.

95. Dr B has acknowledged that he did not perform an examination during the visit on 25 Month6. Dr B told HDC that Mr A did not have an appointment for this visit, but arrived at the practice to discuss an insurance claim. In response to my provisional opinion, Ms A stated that Mr A did have an appointment for the visit.

96. During the visit, Mr A saw both Dr B and PN C, although there is some ambiguity regarding the order in which those consultations occurred. Dr B stated that he recalls PN C seeing Mr A first and speaking to him about the possibility of Mr A having another chest infection. Dr B told HDC: "I was confident that usual practices would have been followed by my PN with her recording [Mr A's] vitals and she would have

alerted me if there was any cause of concern." Conversely, the clinical notes appear to indicate that Dr B saw Mr A first, although the time of each consultation is not recorded.

97. Dr Maplesden advised that he was concerned that Dr B made no physical assessment of Mr A at the appointment on 25 Month6, especially as Dr B was sufficiently suspicious of a significant respiratory tract infection to prescribe an antibiotic usually reserved for more severe or persistent infections. Dr Maplesden further advised that, considering the deterioration in Mr A's symptoms the day before, he was "concerned at the absence of recording of vital signs or lung auscultation findings".

98. I am unable to make findings as to whether Mr A had an appointment with Dr B on 25 Month6 or who saw Mr A first on that date. Regardless, I am critical that Dr B prescribed a strong antibiotic (indeed, even stronger than he had prescribed previously) without examining Mr A.

99. In my view, Dr B failed to perform the appropriate physical examinations, particularly assessing Mr A's vital signs and auscultating his lungs, before prescribing a strong antibiotic on 25 Month6.

Conclusion

100. Dr B displayed a pattern of suboptimal care. He failed to advocate appropriately for Mr A by failing to follow up Mr A's respiratory referral when his condition deteriorated, despite having documented that he would do so. Dr B also failed to update the DHB when Mr A's condition deteriorated.

101. Furthermore, I find that Dr B failed to carry out adequate physical assessments of Mr A on 25 Month6. Dr B decided that Mr A was sufficiently unwell as to require a strong antibiotic, yet failed to carry out any examinations of Mr A before prescribing the new medication.

102. Overall, I find that Dr B failed to provide Mr A services with reasonable care and skill and breached Right 4(1) of the Code.

Documentation and referral letter

103. The applicable standards in relation to documentation and referral of patients are set out by the Medical Council of New Zealand (MCNZ) in the document *Good Medical Practice*.[21] The standard relating to documentation provides that practitioners must:

> "keep clear and accurate patient records that report:
>
> - relevant clinical information
> - options discussed
> - decisions made and the reasons for them
> - information given to patients
> - the proposed management plan
> - any drugs or other treatment prescribed."

[21] Medical Council of New Zealand, *Good Medical Practice* (July 2008).

104. The standard regarding referral states that good clinical care in relation to referring patients includes "provid[ing] all relevant information about the patient's history and present condition".

105. I am critical of the standard of documentation in Dr B's clinical notes in relation to Mr A's visits to him, in particular from 28 Month5 and for all of the visits in Month6. There is very little documented regarding what occurred during Mr A's appointments with Dr B, including what was discussed.

106. In particular I note that: on 12 Month1 Dr B documented that Mr A was febrile yet did not record his temperature; Dr B said that on 28 Month5 he advised Mr A to go to the ED if his symptoms did not improve, but that advice is not documented; and Dr B said that on 14 Month6 he began to consider gastric concerns and cited weight loss as a factor, but he failed to document Mr A's previous or current weight.

107. I also note, as stated above, that if Dr B did carry out appropriate examinations of Mr A at his appointments between 28 Month5 and 14 Month6, I am critical that he did not record those examinations in Mr A's clinical notes.

108. I am also concerned about the content of the specialist referral letter sent by Dr B to the DHB on 2 Month6. Dr Maplesden advised me that there was enough information in the letter to triage the referral as at least semi-urgent (taking into account the recent normal chest X-ray), but he was nevertheless critical of the standard of the letter. It gave no indication of the duration and severity of Mr A's symptoms or the duration of his smoking history, and no physical findings were included other than his blood pressure.

109. I find that the referral letter that Dr B sent was not in line with the MCNZ standard because it did not provide the DHB with all of the relevant information about Mr A's clinical history. In addition, I find that Dr B failed to follow the MCNZ standard in relation to record-keeping. Overall there is a pattern of inadequate documentation in Dr B's referral letter and clinical notes and, accordingly, I find that Dr B breached Right 4(2) of the Code.

Opinion: Medical centre — No breach

110. At the time of these events, Dr B was the sole director of the medical centre and the sole doctor at the practice. The medical centre is a healthcare provider and an employing authority for the purposes of the Health and Disability Commissioner Act 1994. As such, it may be held directly liable for the care provided to Mr A, and it may be held vicariously liable for any actions or omissions of its employees and/or agents who are found to be in breach of the Code.

111. In my view, Dr B's failure to advocate for Mr A, failure to carry out adequate physical assessments, and poor documentation were the result of individual

decision-making and cannot be attributed to the system in which he was working. Accordingly, I conclude that the medical centre did not breach the Code.

Opinion: DHB — Adverse comment

112. On 2 Month6, Dr B sent a semi-urgent referral to the DHB's respiratory service for an "urgent Chest X-ray" and stated that Mr A "may require specialist work up". The DHB acknowledged the referral on 4 Month6 and noted that the chest X-ray and spirometry test were required "now".

113. On 14 Month6, Dr B sent another request to the DHB, this time for specialist gastroenterology review. That same day, Dr B received an acknowledgement from the DHB that his gastroenterology referral had been received and would be forwarded to the appropriate service.

114. On 17 Month6, the DHB informed Dr B that an appointment had been booked for Mr A for 1 Month9 at "the medical clinic". The appointment letter did not state whether it was for the respiratory or gastroenterology review. As Dr B's first referral had been for the respiratory review, Dr B assumed that the appointment was for the specialist respiratory appointment. In fact, it was for the gastroenterology review.

115. On 19 Month6, Mr A received a letter allocating him an appointment for spirometry at the public hospital's diagnostic service (scheduled for 11 Month7) and an appointment with the gastroenterology service (booked for 1 Month9). The DHB did not send Dr B a copy of the letter or alert him to the spirometry appointment.

116. On 24 Month6, the DHB sent Mr A a letter informing him that he had been given an appointment for a chest X-ray on 11 Month7, to follow the spirometry. Again, Dr B was not sent a copy of that letter.

117. Providers must maintain clear lines of communication so that misunderstandings and incorrect assumptions are minimised. Co-operation and communication between providers involved in delivering co-ordinated health services are vital to ensure quality care.

118. I am critical that the DHB did not include the appointment clinic in its letter to Dr B regarding Mr A's gastroenterology referral. In addition, I am critical that the DHB did not alert Dr B to the spirometry or chest X-ray appointments.

Recommendations

119. I recommend that Dr B:

a) Provide a written apology to Mr A's family for his breaches of the Code. The apology should be sent to HDC within three weeks of the date of this report, for forwarding to Mr A's family.
b) Undertake further education and training on clinical documentation, and provide HDC with evidence of having completed the training within six months of this report.

120. In response to a recommendation made in my provisional opinion, Dr B has reported back to HDC on the effectiveness of the changes he has made to his practice following these events.

121. In my provisional opinion, I recommended that the Medical Council of New Zealand consider whether a review of Dr B's competence is warranted. The Council has advised that it is currently undertaking such a review.

122. In response to a recommendation made in my provisional opinion (regarding the DHB's communication with providers referring patients), the DHB advised that it was introducing a practice that will allow GPs and other healthcare providers to see appointments (and other information) in the hospital system and for the hospital to see information about care provided in the community. I recommend that the DHB report back to HDC on the progress and effectiveness of the changes within six months of this report.

123. Also in response to that recommendation, the DHB also offered to share its learnings and the actions it has taken in relation to this case through the National DHB CMO Group. I consider that would be appropriate. Confirmation of this action should be provided to this Office within three months of the date of this report.

Follow-up actions

124. A copy of this report will be sent to the Coroner.

125. 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 B's name.

126. 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 it will be advised of Dr B's name.

127. A copy of this report with details identifying 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.

Appendix A: Independent clinical advice to the Commissioner

The following expert advice was obtained from Dr David Maplesden:

"1. Thank you for providing this file for advice. To the best of my knowledge I have no conflict of interest in providing this advice. I have reviewed the available information: statements from [Ms A], the partner of [Mr A] (dec); response from [Dr B]; response from [the DHB]; statement from [Dr D]; [ambulance service] documentation; GP notes ([Dr B] and [the 24-hour weekend service]); [public hospital] notes; various Coronial documentation including autopsy report on [Mr A]. [Mr A] was a 38 year old who had experienced several months of intermittent respiratory symptoms before his sudden death on 26 [Month6]. He had seen [Dr B] and several clinicians over this period — [Dr B] on several occasions, ED staff at [the public hospital] on at least one occasion, and [Dr D] on one occasion. At the time of his death [Mr A] was awaiting an appointment with the respiratory service at [the public hospital] having been referred there by [Dr B]. Cause of death was attributed to respiratory failure due to severe pulmonary oedema and pleural effusions. [Mr A] also had evidence of severe coronary arteriosclerosis and evidence of an old myocardial infarction (heart attack). [Ms A] is concerned that the true nature and severity of her partner's condition went apparently undetected and untreated and this may have contributed to his death.

2. The following clinical synopsis has been obtained from the various sources of information noted above. [Mr A] was a physically active 38-year-old man with no apparent ongoing health problems until 2013. However, he had a significant smoking history (20 years) and was obese with a BMI of 34.9[1] kg/m^2. [Mr A] was diagnosed with type 2 diabetes [in 2013] and commenced treatment for this [the following month] (metformin). [GP notes] also refer to *strong family hx of diabetes and CVD* [cardiovascular disease] *in [close family]*. A form to check [Mr A's] lipid profile was provided at this consultation but it does not appear [Mr A] ever had the test done.

Comment: At the time [Mr A's] diabetes was diagnosed and treatment commenced, an estimate of his 5-year cardiovascular risk based on available parameters (positive family history, smoking history, diabetes diagnosis, BP 140/90) would have been at least moderate (10–15%) and possibly higher depending on his lipid profile[2]. GP notes suggest appropriate lifestyle advice was given and hypoglycaemic therapy commenced and there was a documented intention to check the lipid profile. Subsequent blood pressure recordings were satisfactory without treatment. Optimum management might have been to have ensured [Mr A] had his lipid profile and formal cardiovascular risk determined with discussion on options of management of all modifiable cardiovascular risk factors.

[1] World Health Organization give a healthy BMI range as 18.5–24.9 while BMI 30–35 is moderately obese.
[2] Ministry of Health. Cardiovascular Disease Risk Assessment. Updated 2013.

3. [Mr A] had no overt cardiorespiratory symptoms until around [Month1]. GP notes 12 [Month1] state: *Episode overnight of persistent cough with traces of ?blood in sputum/febrile O/E developing RLL moist sounds, for course of Augmentin then reassess in 1/52 if no better.* [Ms A] states the treatment seemed effective and [Mr A] was asymptomatic and undertaking his normal activities for about six weeks before similar symptoms recurred. On 5 [Month3] [Dr B] recorded *further bouts of epistaxis with SOB, smoker, needs urgent CXR … may require specialist workup.* A chest X-ray was undertaken on 7 [Month3] and was essentially normal — in particular there was no evidence of cardiomegaly which might have raised concern regarding cardiac function. [Dr B] reviewed [Mr A] on 14 [Month3]: *See CXR result = NAD but still coughing and smoking, further course of Emycin and trial Champix for smoking cessation.* Further antibiotics were provided and smoking cessation strongly advised. [Ms A] states [Mr A] continued to have intermittent symptoms, primarily night-time cough, although symptoms appeared to ease through [Month4] and [Month5] and [Mr A] was [physically active] without problems. He did not attend a doctor again in relation to his respiratory symptoms until 28 [Month5] although he had attended [the public hospital] ED on 10 [Month5] and [Dr B] on 13 [Month5] in relation to an injury […]. There was no mention of respiratory symptoms at either of these consultations.

Comment: [Mr A's] symptoms and assessment findings were primarily respiratory in nature and were most consistent with a lower respiratory tract infection (LRTI) with possible underlying smoking-related chronic obstructive pulmonary disease (COPD). There was apparent response to antibiotic therapy on both occasions these were provided. [Dr B] was conscientious in ordering a chest X-ray in light of [Mr A's] smoking history and haemoptysis[3] and this did not detect any signs of significant lung pathology (malignancy being the major concern) — COPD being a diagnosis made on the basis of history and spirometry rather than being a radiological diagnosis. Importantly, there were no radiological findings to suggest a cardiac cause for [Mr A's] symptoms and the history, without the benefit of hindsight, did not raise suspicion of a cardiac cause given [Mr A's] young age, absence of any overt symptoms suggestive of ischaemic heart disease (such as consistently impaired exercise tolerance or effort related chest pain), and absence of physical findings possibly suggestive of heart failure such as peripheral oedema, basal lung crepitations or arrhythmia. I feel it was very reasonable that a respiratory cause for [Mr A's] symptoms, most likely on the basis of his significant smoking history, was at the forefront of diagnosis being considered by [Dr B] and that this diagnosis was pursued when [Mr A's] symptoms persisted and worsened from the end of [Month5].

4. [Ms A] states that [Mr A] began coughing at night again towards the end of [Month5] and was unable to attend work from 28 [Month5]. She states he attended [the public hospital's] ED overnight 27/28 [Month5] . *A&E checked his SAT levels, they were 92%, staff then put him on a nebulizer for a short time and sent*

[3] And this action was consistent with local guidelines: New Zealand Guidelines Group. Suspected cancer in primary care: guidelines for investigation, referral and reducing ethnic disparities. Wellington. New Zealand Guidelines Group; 2009.

him home with the comment 'Oh well, whatever is wrong is obviously reversible because you are feeling better'. Later that morning [Mr A] attended [Dr B] who recorded *Further bout of coughing fits with more haemoptysis and episodes of SOB, needs specialist assessment and trial of Duolin.* A prescription was provided for Duolin inhaler. A referral was made by [Dr B] to [the public hospital's] respiratory service on 2 [Month6] marked 'Semi-Urgent'. Reason for referral is *Recurrent cough and haemoptysis* with clinical details of *Further bout of coughing with more haemoptysis and episodes of SOB, needs specialist assessment and trial of Duolin, thank you. See CXR result=NAD but still coughing and smoking, further course of Emycin and trial Champix for smoking cessation. Further bouts epistaxis with SOB, smoker, needs urgent CXR — 130/80 — may require specialist work-up.* The referral was acknowledged by the DHB on 4 [Month6] and annotated that chest X-ray and spirometry were required immediately. The respiratory specialist appointment was scheduled for 1 [Month9] (three month wait) with chest X-ray and spirometry scheduled for 11 [Month7].

Comment: The DHB have no record of [Mr A] attending [the public hospital] ED on 28 [Month5]. However he did attend ED on 5 [Month6] when he was seen with management similar to that described by [Ms A] in her statement, and there is no reference in [Dr B's] contemporaneous record dated 28 [Month5] that [Mr A] had been to ED. There is no ED discharge summary in the GP notes relating to a visit on 27/28 [Month5]. It seems most likely the ED visit referred to by [Ms A] is the visit of 5 [Month6] (see below). If there was an ED attendance on 28 [Month5] it would be a severe departure from expected standards if no record of that visit had been kept. [Dr B's] management of [Mr A] on 28 [Month5] was reasonable in that a diagnosis of possible asthma or COPD was considered and treated, and this was a reasonable diagnosis in the context of [Mr A's] history as discussed in section 3. A referral for semi-urgent specialist assessment was also made which was appropriate. However, I am mildly to moderately critical that there is no record of any physical assessment having been performed on 28 [Month5], and I am mildly critical at the standard of the documentation in the specialist referral letter with there being no indication of the duration and severity of [Mr A's] symptoms, duration of smoking history not recorded and no physical findings documented other than blood pressure. However, I feel there was enough information in the referral letter to triage the referral as at least semi-urgent (taking into account the recent normal chest X-ray) although 'significant haemoptysis' is listed on the DHB prioritization form as an indication for urgent assessment. The primary care guidelines cited in section 3[4] state *A person should be referred urgently to a specialist if they have persistent haemoptysis and are smokers or ex-smokers aged 40 years or older … A person should be referred urgently to a specialist if they have a normal chest X-ray, but there is a high suspicion of lung cancer.* Given [Mr A's] age and consideration quite reasonably given to a diagnosis of asthma/COPD over malignancy, he probably did not fit these criteria for urgent (as opposed to semi-urgent) referral. I am not qualified to say whether a twelve

[4] New Zealand Guidelines Group. Suspected cancer in primary care: guidelines for investigation, referral and reducing ethnic disparities. Wellington. New Zealand Guidelines Group; 2009.

week wait for a semi-urgent referral is within acceptable DHB timeframes. Of course, with the benefit of hindsight, [Mr A's] symptoms were not representative of primary lung pathology. I cannot say whether, had the chest repeat X-ray and spirometry been performed on 1 [Month7] as scheduled or even earlier, this would have resulted in the true underlying diagnosis being revealed given [Mr A's] intermittent symptoms which were generally worse at night (see later discussion on heart failure).

5. [Mr A] presented to [the public hospital's] ED in the early hours of 5 [Month6]. The MO has recorded *pt has developed a cough over recent weeks, usually at night, non-productive, feels short of breath also …* current treatment and specialist referral noted … *having paroxysms of coughing and unable to relieve them … looks well, talking in full sentences, pr 116, O2 sats 92% on room air, HS dual, no murmurs, warm and well perfused, chest clear but decreased air entry mid-lower zones, given salbutamol/ipratropium nebulizer with good effect, pt feeling much better post-nebuliser … chest clear, good air entry bilaterally, nil added. Imp: likely early copd due to smoking …* Plan was to continue to use Duolin as required but with a spacer and to follow up with GP and the specialist as arranged, or re-present to ED in the event of deterioration.

Comment: Management was consistent with expected standards. The clinical picture was consistent with acute exacerbation of asthma/COPD with the diagnosis due to be clarified further with scheduled spirometry. The apparent response to the nebulized medication supported the diagnosis. There was no particular reason to suspect an underlying cardiac cause for [Mr A's] symptoms for reasons discussed previously.

6. [Ms A] states *On the 30th [Month5] [Mr A] was still coughing frequently … he was also having stomach trouble including diarrhoea. On 7th [Month6]. [Mr A] and I went to [another region for a holiday]. [Mr A] was feeling better and his coughing was manageable.* However, overnight 7/8 [Month6] [Mr A's] cough recurred such that he was unable to lie flat and he spent the night sitting up using his inhaler. He attended [Dr D] at [the 24-hour weekend service] on 8 [Month6]. [Dr D] documented history including: *recently diagnosed ?asthma, normal CXR, awaiting specialist review, seen last Tuesday in ED treated with nebulizer, no Prednisone and sent home … last night coughing fits worse … mostly dry cough but occasionally white sputum with flecks of blood particularly when lying down, feels tight in chest when coughs, good exercise tolerance however, […], no exertional chest tightness, cough or SOB, no history reflux, does not feel systemically unwell …* smoking and diabetes history was obtained. On examination [speaking] *full sentences, coughing fits, flushed, T 38.4, P120, sats 96% RA, BP 110/70. Chest AE R=L vesicular, no wheeze or creps … ?nocturnal asthma … ?reflux related cough …* Salbutamol was give via a spacer and prescriptions provided for prednisone and codeine. *Home tomorrow review overnight if needed. To see own GP ?worth testing for pertussis.*

Comment: This consultation was well conducted and very well documented. [Dr D] has explored the possibility of a cardiac cause for [Mr A's] symptoms with questions relating to symptoms suggestive of underlying ischaemic heart disease,

and [Mr A] denied any suspicious symptoms. The clinical picture, noting the normal chest X-ray and recent ED assessment outcome, was consistent with a viral exacerbation of asthma (presence of fever) manifesting primarily as cough rather than wheeze and management was appropriate for this diagnosis. Appropriate 'safety-netting' instructions were provided. There were no findings in the physical examination strongly pointing towards a diagnosis of heart failure — no basal crepitations or signs of effusion, no peripheral oedema. The tachycardia and fever were consistent with a viral cause for [Mr A's] more acute symptoms, with tachycardia also a side effect of salbutamol use. Oxygen saturations were within acceptable limits for an individual with a significant smoking history.

7. On 10 [Month6] [Mr A] attended [Dr B] for review. [Dr B] recorded *Awaiting respiratory assessment, when coughing definitely SOB, now on Prednisone orally and changed to Ventolin, minimal improvement, needs urgent appointment and resp fn studies plus blood work-up.* Blood tests were ordered and results (11 [Month6]) showed elevated CRP, mildly elevated liver enzymes (ALT and GGT) and elevated CEA[5]. [Dr B] was concerned by the blood results (particularly the CEA elevation) and reviewed [Mr A] on 14 [Month6] noting history of *recent change in bowel habit, no blood, appetite poor, weight loss of 5kg, no pain, needs referral for scoping.* A gastroenterology referral was sent and acknowledged that day (no copy on file). [Ms A] reports that [Mr A] remained in poor health with poor appetite, exhaustion and occasional vomiting. She tried to expedite appointments for his various investigations by ringing [a private hospita] and [the public hospital] but was unable to bring forward his appointments. On the night of 14 [Month6] *[Mr A's] symptoms became worse … he was unable to maintain a warm body temperature and was coughing constantly. This was the worst episode he had with coughing and no sleep.* [Dr B] states [Mr A] attended a practice nurse on 25 [Month6] for routine diabetes review (notes recorded to this effect). He was also seen by [Dr B] who recorded *Further bout of coughing with sputum +++, for course of Ciproxin …* with prescription of this antibiotic recorded.

Comment: It is concerning that no physical assessment findings have been documented for any of the consultations discussed in this section. A minimum requirement for the consultation of 14 [Month6], if GI malignancy was suspected as stated by [Dr B], would have been palpation of the abdomen to exclude a palpable mass, the presence of which would impact on referral prioritization. Noting the deterioration in [Mr A's] symptoms on 24 [Month6] as reported by [Ms A], and the decision that 'strong antibiotics' were required (ie that there may have been significant infection present) I am concerned at the absence of recording of vital signs or lung auscultation findings in the consultation of 25 [Month6]. In the absence of such recordings it is not possible to say whether consideration should have been given to admitting [Mr A] to hospital on 25 [Month6], or to suspect a diagnosis other than an infective cause for [Mr A's] current symptoms. The failure to document relevant physical findings, diagnosis

[5] CEA is a tumour marker which may be elevated in the presence of various cancers but may also be elevated by non-malignant conditions such us ulcerative colitis or smoking. Its use in primary care as a screening test for malignancy (as it was apparently used in this case) is not recommended [BPAC. Appropriate use of tumour markers. Best Tests. July 2010].

and follow-up plans represents a mild to moderate departure from expected standards of clinical documentation. The failure to conduct an adequate physical assessment on the dates discussed, including assessment of vital signs and auscultation of the heart and lungs and abdominal examination on 14 [Month6], (if such assessments were not performed) would be a moderate to severe departure from expected standards noting the degree of [Mr A's] unwellness as reported by [Ms A].

8. [In the early hours of] 26 [Month6] [Mr A] awoke [Ms A]. He was in a distressed state, struggling to breathe and unable to talk or lie down, and he had coughed up a large amount of mucous and blood. The ambulance was called […]. [Mr A] was conscious and alert when first assessed although he was anxious, dyspnoeic and coughing persistently. Recordings were resps 26, pulse 149, BP 121/96, oxygen saturation 80%. [Mr A] could not stop coughing to allow auscultation of the lungs. He was administered high flow oxygen but on walking three steps to the ambulance stretcher he desaturated to 68% and [shortly thereafter] suffered a VT cardiac arrest. Despite active resuscitation efforts over almost half an hour (including several defibrillations and administration of adrenaline) [Mr A] remained asystolic and resuscitation was stopped.

9. At post mortem [Mr A] was found to have severe coronary artery disease and signs of an old myocardial infarction affecting an area of 4–5cm at the apex of his left ventricle. Additional findings included severe pulmonary oedema with bilateral pleural effusions and enlarged liver. There was no ascites. There was nothing in [Mr A's] medical history to suggest he suffered from classic symptoms suggestive of severe underlying ischaemic heart disease, or any event suggestive of a myocardial infarction. While it has been noted [Mr A] was at increased risk of suffering a cardiovascular event (see section 2) there is no evidence-based process for screening for occult coronary artery disease in asymptomatic men in [Mr A's] age group despite his risk factors. A review article on silent myocardial ischaemia[6] notes that although angina pectoris is considered the cardinal symptom of myocardial ischemia and coronary heart disease (CHD), studies have established that silent myocardial ischemia (defined as objective evidence of ischemia without associated chest pain) is the most common manifestation in patients with CHD. It has been estimated that between 2 and 4 percent of apparently healthy asymptomatic middle aged men have significant coronary disease. The prevalence may approach 10 percent in asymptomatic men with two or more major coronary risk factors (eg, smoking, obesity, family history of heart disease, age over 45 years, diabetes, hypertension, and hypercholesterolemia). The risk of silent ischemia is increased substantially in patients with diabetes, particularly if they have other risk factors. Another review article on silent myocardial infarction[7] notes that epidemiological studies have determined that 25–30% of myocardial infarctions may be 'silent' (ie no symptoms) in males with perhaps a higher proportion of silent infarcts occurring in patients with diabetes compared with

[6] Deedwania P. Silent myocardial ischemia: Epidemiology and pathogenesis. Uptodate. Last updated October 2013. www.uptodate.com.
[7] Wilson P et Douglas P. Epidemiology of coronary heart disease. Uptodate. Last updated June 2013. www.uptodate.com.

those without diabetes. However, the incidence of silent myocardial infarction is strongly age dependent with the incidence before age 40 years being almost zero. Taking these factors into account, while acknowledging [Mr A] was at increased risk of ischaemic heart disease (and silent ischaemia) due to the various factors discussed previously, I do not think the extent of the disease found at post-mortem was foreseeable by his clinicians particularly given [Mr A's] age and active lifestyle and the absence of symptoms suspicious for ischaemic heart disease. The absence of suspicion of underlying ischaemic heart disease in turn influenced the differential diagnosis of [Mr A's] (apparent) respiratory symptoms.

10. It seems most likely [Mr A's] death was due to respiratory failure secondary to acute decompensated heart failure, the heart failure being a result of [Mr A's] occult ischaemic heart disease causing systolic left ventricular dysfunction. Put simply, impairment of the function of the 'pump' (the left ventricle) means fluid can 'back-up' in the lungs causing dyspnoea (shortness of breath) particularly with exercise and also when the patient is lying flat (orthopnoea) because redistribution of the circulation in that position means a further increase in fluid 'pressure' in the lungs. In [Mr A's] case, it is apparent cough rather than dyspnoea was his primary presenting symptom, although dyspnoea became more apparent as his disease progressed. Eventually he developed symptoms which, in hindsight, likely represented paroxysmal nocturnal dyspnoea — severe shortness of breath and coughing that generally occur at night, waking the patient from sleep. From a recent review article[8]: *Symptoms of heart failure (HF) include those due to excess fluid accumulation (dyspnea, orthopnea, edema, pain from hepatic congestion, and abdominal distention from ascites) and those due to a reduction in cardiac output (fatigue, weakness) that is most pronounced with exertion ... Important information concerning the acuity of HF is suggested by the presenting symptoms: Acute and subacute presentations (days to weeks) are characterized primarily by shortness of breath, at rest and/or with exertion. Also common are orthopnea, paroxysmal nocturnal dyspnea, and, with right HF, right upper quadrant discomfort due to acute hepatic congestion, which can be confused with acute cholecystitis ... Chronic presentations (months) differ in that fatigue, anorexia, abdominal distension, and peripheral edema may be more pronounced than dyspnea ... Over time, pulmonary venous capacitance accommodates to the chronic state of volume overload, leading to less or no fluid accumulation in the alveoli, despite the increase in total lung water. These patients present with excessive fatigue and low-output symptoms ...* It appears [Mr A's] symptoms were initially relatively mild and intermittent indicating he had 'compensated' heart failure with occasional symptomatic episodes of decompensation primarily related to the lying position. It is somewhat atypical that effort related dyspnoea was not more prominent over this period ([Month3] to [Month5]). However, the absence of obvious clinical signs such as abnormal lung auscultation findings or abnormal chest X-ray findings is consistent with compensated heart failure over this period. A primary care article on heart failure[9] notes *Physical examination has serious*

[8] Colucci W. Evaluation of the patient with suspected heart failure. Uptodate. Last updated June 2014. www.uptodate.com.

[9] Watson R, Gibbs C, Lip G. ABC of heart failure: clinical features and complications. BMJ. 2000;320:236–239.

limitations as many patients, particularly those with less severe heart failure, have few abnormal signs. In addition, some physical signs are difficult to interpret and, if present, may occasionally be related to causes other than heart failure. What in hindsight were episodes of decompensation (manifest as paroxysmal nocturnal cough with haemoptysis and dyspnoea) became more frequent from the end of [Month5] associated with increasing prominence of the non-specific symptoms of chronic heart failure (fatigue and anorexia) although the absence of suspicious clinical signs such as basal lung crepitations, elevated JVP (not commented on by any provider), peripheral oedema, abnormal heart sounds or rhythm was noted by clinicians until at least 7 [Month6] and this would still have been consistent with a picture of (mostly) compensated heart failure. In order to confirm a diagnosis of heart failure, [Mr A] required an echocardiogram although a blood test (BNP) may have increased suspicion of heart failure had it been significantly elevated. However, these investigations were not requested because the diagnosis of heart failure was not suspected. It appears that in the early hours of 26 [Month6] [Mr A] suffered acute decompensated heart failure manifest as PND and progressing rapidly to frank pulmonary oedema and respiratory failure. I do not think it is possible to state unequivocally that [Mr A] would have had assessment findings suspicious for heart failure at the consultations of 10 and 14 [Month6]. I am less certain as to whether or not some signs might have been evident at the consultation of 25 [Month6] noting [Mr A] died less than 24 hours after this consultation.

11. Was it reasonable that heart failure was not considered as a diagnosis as [Mr A's] symptoms evolved? As noted previously, it is important to acknowledge there was no particular reason to suspect that someone in [Mr A's] age group and who had no symptom history suggestive of cardiac ischaemia, should have severe ischaemic heart disease including a previous myocardial infarction. I can see no other factors in [Mr A's] previous medical history that would lead his clinicians to suspect he was prone to heart failure (eg excessive alcohol intake, uncontrolled hypertension, valvular heart disease) and there was no cardiac enlargement to suggest underlying cardiomyopathy on the X-ray of [Month3]. He had a significant smoking history that placed him at risk of developing smoking related diseases including COPD and malignancy. His predominant symptom of cough and then dyspnoea was consistent with a diagnosis of COPD or perhaps adult onset asthma (less likely malignancy given his age), and the response to inhaled bronchodilators (at least initially) was consistent with this diagnosis, as was the normal chest X-ray. However, by mid-[Month6] the relatively rapid progression of [Mr A's] symptoms and increasing prominence of systemic symptoms of weight loss, anorexia and fatigue were perhaps less typical for early stages of COPD in a relatively young person and further investigation was certainly required and had been organised with priority based on the information supplied by [Dr B] in early [Month6]. What was required at this point was a careful and thorough reassessment by [Dr B] (including physical examination) and I cannot be confident, on the basis of the documentation supplied, that such an assessment took place. Certainly an alternative or additional diagnosis of gastric malignancy was considered following results of blood tests, but it does not appear there was an adequate reassessment of [Mr A's] cardiorespiratory status (or at least there is no

documentation to support this) in light of the deterioration in his respiratory symptoms. I cannot say that such an assessment would necessarily have led to recognition of [Mr A's] heart failure or need for immediate medical intervention (and therefore have altered his outcome), or that immediate medical intervention on 25 [Month5] would necessarily have altered the outcome. In summary, I do not think the failure by [Mr A's] providers to recognise his underlying condition as heart failure, or to consider this in the differential diagnosis of his condition, was a departure from expected standards. His presentation had many atypical features for heart failure — not least his young age in the absence of an overt condition predisposing him to heart failure, while there were sound reasons to suspect a primary respiratory cause for his symptoms. However, I feel there may have been some deficiency in [Dr B's] assessments of [Mr A], or at least in his documentation of those assessments, in the latter part of [Month6]."

Dr Maplesden provided the following supplementary advice:

"1. I have reviewed the response from [Dr B] to my original advice on this case. [Dr B] states he is certain he would have carried out the requisite physical examinations on 28 [Month5] and 14 [Month6] but omitted to document the results of the examinations. It is quite possible the assessments on these occasions did not result in any significantly abnormal findings although documentation of relevant negative findings would still be expected in the clinical context presented. [Dr B] states that on 25 [Month6] [Mr A] had presented for a diabetes nurse review and did not have an appointment booked with the GP. [Mr A] mentioned to the nurse that his recurrent cough symptom was flaring but he did not appear overtly unwell (although I note *shortness of breath* was recorded as diagnosis). [Dr B] sighted [Mr A] but did not examine him. He provided a prescription for antibiotics on the basis of the recent history of presumed recurrent chest infections with instructions to re-present if he failed to improve with antibiotics or to attend ED if his condition worsened in the interim.

2. I remain of the view that the standard of [Dr B's] clinical documentation on 28 [Month5] and 14 [Month6], and the content of his specialist referral letter dated 2 [Month6], represent mild to moderate departures from expected standards of clinical documentation.

3. I remain concerned that no physical assessment was undertaken on [Mr A] by [Dr B] and/or the attending practice nurse on 25 [Month6] prior to provision of the antibiotic ciprofloxacin for a presumed respiratory infection. The nurse has recorded a symptom of *shortness of breath* and [Dr B] has been sufficiently suspicious of a significant respiratory tract infection to provide [Mr A] with an antibiotic usually reserved for more severe or persistent infections. However, there are no vital signs recorded (which the practice nurse might have undertaken) and [Dr B] acknowledges he sighted but did not examine [Mr A]. While acknowledging the prime purpose of [Mr A's] visit on 25 [Month6] was for diabetes review rather than to have his respiratory symptoms addressed, he did draw to the attention of the nurse a current exacerbation of his symptoms and therefore deserved adequate physical assessment, particularly if treatment was to

be provided. I think under the circumstances, and irrespective of the fact [Mr A] died several hours after attending the surgery, the failure to adequately assess him on 25 [Month6] would be met with moderate disapproval by my peers."

Dr Maplesden provided the following further supplementary clinical advice:

"This advice should be read in conjunction with my original advice and my supplementary advice previously provided. I have reviewed additional information provided in the form of a statement from practice nurse (PN) [PN C] dated 17 February 2015 and further information provided by [Dr B] dated 4 March 2015.

1. [PN C] states she saw [Mr A] on 25 [Month6] following a request from [Dr B] to perform a fingerprick glucose test on him (result 13.8 mmol). General principles of diabetes management were then discussed and a form provided for further blood tests including HbA1c. [PN C] states: *We also discussed how he had been unwell for some time, with recurring chest infections and shortness of breath. He said that the Dr had given him some antibiotics that day. He looked unwell. I advised him to go to ED if he again felt short of breath.*

2. In relation to the consultation of 25 [Month6], following review of the PMS [Dr B] has a different recollection of events to that recorded in his initial response. He states [Mr A] presented without an appointment with a request for an insurance form to be signed. [Dr B] apparently signed the form between seeing his booked patients although he does not recall doing so. He recalls [Mr A] being seen by the PN and the PN *speaking to me about his possibly having another chest infection, hence I prescribed antibiotics and advised [Mr A] to ensure he went to A&E if he deteriorated in any way.* [Dr B] states his impression, on general observation, was that [Mr A] had a recurrence of his 'usual' problem (working diagnosis was COPD) and that he was not sufficiently concerned by [Mr A's] general appearance to consider an immediate full consultation was warranted. He notes the PN did not express any particular concerns to him regarding [Mr A's] condition. If he had felt particularly concerned about [Mr A], or the PN had expressed concerns to him, he states he would have organised a full consultation or arranged for [Mr A] to be seen in ED.

Comment: The additional information provided does not alter my view recorded in the supplementary advice, that [Mr A's] management by [Dr B] on 25 [Month6] would be met with moderate disapproval by my peers if the sequence of events was as per the recollection of [PN C] (ie [Dr B] had seen [Mr A] and prescribed ciprofloxacin, and not undertaken any sort of physical examination, prior to her review of his blood glucose). If [PN C] had reviewed [Mr A] first and determined he had symptoms suggestive of a chest infection (and noting 'shortness of breath' was recorded as a symptom in the clinical notes) I would expect recording of vital signs (temperature, pulse, respiratory rate, blood pressure) to have been undertaken prior to discussion of [Mr A's] further management with [Dr B] (and I note nursing advice is being sought separately in this regard). Had these results been 'reassuring' I might be somewhat less critical of [Dr B's] management (including failure to auscultate [Mr A's] chest) even though prescribing of ciprofloxacin would not necessarily have represented best

clinical practice in this situation. However, [Dr B] diagnosed [Mr A] with an exacerbation of COPD without any physical examination by himself or the PN and I feel this management would be met with moderate disapproval by my peers.

3. [Dr B] accepts aspects of his clinical documentation were inadequate and outlines remedial measures he has undertaken since this complaint. The remedial measures appear appropriate and I have no further comment in this regard.

4. [Dr B] states it was his usual practice to record [Mr A's] weight and blood pressure, and to auscultate his lung fields, when [Mr A] presented with respiratory symptoms in [Month5] and [Month6]. Such findings should have been consistently documented. If such assessments were undertaken as stated, the issue is the standard of clinical documentation as previously discussed. If there was no assessment of the respiratory system or vital signs on the occasions mentioned, I remain of the view this would be regarded as a moderate to severe departure from expected standards of care as discussed in section 7 of my original advice dated 19 August 2014.

5. With respect to [Mr A's] specialist referrals, [Dr B] states he made a referral to the DHB respiratory service on 2 [Month6] (marked as semi-urgent) and the referral was acknowledged as received on 3 [Month6]. On 17 [Month6] an appointment date for 'medical' was received for 1 [Month9] which I believed was part of the respiratory referral. In the interim a referral had been made to the DHB gastroenterology service on 14 [Month6] and receipt of the referral acknowledged the same day. Around 25 [Month6] [Ms A] asked if [Mr A's] 1 Month9 appointment could be expedited and [Dr B] asked the practice manager to locate the referral so [Dr B] could re-send it (presumably requesting a more urgent appointment and the reason for this). Sadly [Mr A] died before this action could be undertaken. It has since been reported by the DHB that the appointment given to [Mr A] for 1 [Month9] was actually for gastroenterology review although this was not stated explicitly in the letter sent to [Dr B]. The appointment date for [Mr A's] repeat chest X-ray and spirometry was 11 [Month7] although [Dr B] was not notified of these appointments.

Comment: Following [Dr B's] review of [Mr A] on 10 [Month6], he recorded needs urgent appt in response to [Mr A's] reported deterioration in his symptoms and lack of response to a recent course of oral steroids and bronchodilator (some response being expected if the diagnosis was COPD). This was an appropriate initial reaction to the clinical situation. However, I feel at this point [Dr B] should have arranged for the referral centre to be contacted to confirm the date of [Mr A's] respiratory appointments (chest X-ray, spirometry and specialist review) and he should then have attempted to expedite the appointments (noting the original specialist referral had been semi-urgent) by providing the DHB with further relevant information (either by phone or re-referral). Having appropriately decided [Mr A] needed urgent respiratory outpatient review I think it was poor practice to wait until he was prompted by [Ms A] on 25 [Month6] to try and expedite the referral. This failure to adequately advocate for his patient I think represents a mild to moderate departure from expected practice given the clinical picture

described. There was some confusion over the nature of the appointment scheduled for 1 [Month9] and I think it was reasonable for [Dr B] to have assumed this was related to the respiratory referral given the timing of the appointment receipt in relation to the referral being sent, the non-specific description of the clinic as 'medical' in the letter he received, and the fact he was not notified of the chest X-ray and spirometry appointment times scheduled for [Mr A]. However, this fact that [Dr B] did not attempt to expedite the respiratory appointment when he received notification of the 1 [Month9] appointment date, even if his interpretation of the service attached to this date was in error, remains an aggravating factor.

6. I have no additional comments or recommendations."