Te Whatu Ora Waikato
(formerly Waikato District Health Board)

A Report by the
Deputy Health and Disability Commissioner

(Case 20HDC01130)

Health and Disability Commissioner
Te Toihau Hauora, Hauātanga

Contents

Executive summary

1. This report relates to the care provided to a woman, aged in her seventies at the time of the events, in relation to the delays in Te Whatu Ora Waikato actioning the multiple GP referrals for a semi-urgent echocardiogram and notifying the echocardiogram results to the GP and patient.

2. The woman initially presented to her general practitioner (GP) advising that she was suffering mild light-headedness and felt 'a little odd'. Blood tests were completed, and an electrocardiogram (ECG) taken for the woman showed a change in the contraction of her heart. The GP sent a semi-urgent referral for an echocardiogram to Thames Hospital (Te Whatu Ora Waikato), which was triaged four days later by the Cardiology Department at Thames Hospital and accepted as 'Priority 1'. However, the woman did not receive an appointment for an echocardiogram.

3. The woman presented to the GP again with episodes of palpitations associated with discomfort in her chest, and the GP sent a second referral to the Cardiology Service at Thames Hospital. The second referral was accepted over three weeks later for an 'Event Monitor' with a 'Priority 2' rating.

4. The woman presented to the GP for a third time, following which a third referral was sent to the Cardiology Service and was triaged as 'Priority 1' and waitlisted correctly. Three weeks later, the woman underwent an echocardiogram at Thames Hospital. Cardiologist Dr B reviewed the echocardiogram and diagnosed the woman with severe heart valve disease alongside other heart issues. This report did not contain any management recommendations to the woman's GP.

5. The echocardiogram report indicated that it was copied to the medical centre. However, the GP told HDC that neither he nor the medical centre received the echocardiogram report. The woman contacted the medical centre requesting her echocardiogram result, and initially staff were unable to locate the report, but it was located later that day, and the need for cardiology referral was discussed.

6. The woman was telephoned by cardiologist Dr D and they discussed her echocardiogram results, including the need for an aortic valve replacement and further assessments. Dr D offered to arrange for the investigations to be undertaken at Te Whatu Ora Waikato. The woman told Dr D that because of the delays and seriousness of her results, she had arranged an appointment with a cardiology clinic, and she wanted her cardiac issues to be investigated privately.

7. On 27 May 2020, a consultant cardiologist undertook heart valve replacement surgery on the woman.

Findings

8. Te Whatu Ora Waikato was found to have breached Right 4(1) of the Code because of the delays in triaging the first referral and performing the echocardiogram, the delay in

communicating the echocardiogram results to both the GP and the woman, and the lack of action taken after the errors were identified.

9. Te Whatu Ora Waikato was criticised for not having actioned the event monitor further after the second referral.

10. Dr B was criticised for not having made the appropriate recommendation on the woman's echocardiogram report.

11. The medical centre was reminded of the importance of escalating any concerns raised to the appropriate provider, to ensure quality and co-ordination of care.

Recommendations

12. It was recommended that Te Whatu Ora Waikato provide a written apology to the woman, conduct an audit of echocardiogram referrals to ensure that they have been actioned appropriately, and provide HDC with copies of the policies and guidelines that have since been implemented to address the issues arising from these events.

Complaint and investigation

13. The Health and Disability Commissioner (HDC) received a complaint from Ms A about the services provided by Te Whatu Ora Waikato.[1] The following issue was identified for investigation:

- *Whether Waikato District Health Board provided Ms A with an appropriate standard of care during August 2019 to May 2020.*

14. This report is the opinion of Deputy Commissioner Carolyn Cooper and is made in accordance with the power delegated to her by the Commissioner.

15. The parties directly involved in the investigation were:

Ms A	Complainant/consumer
Te Whatu Ora Waikato	Group provider

16. Further information was received from:

Dr B	Consultant cardiologist
Dr C	General practitioner (GP)
Medical centre	General practice clinic
Cardiology clinic	Specialist cardiology group provider

[1] On 1 July 2022, the Pae Ora (Healthy Futures) Act 2022 came into force, which disestablished all district health boards. Their functions and liabilities were merged into Te Whatu Ora|Health New Zealand. All references in this report to Waikato District Health Board (WDHB) now refer to Te Whatu Ora Waikato.

17. Cardiologist Dr D is also mentioned in this report.

18. In-house clinical advice was obtained from GP Dr David Maplesden (Appendix A). Independent systems advice was obtained from a general physician and systems advisor, Dr Margaret Wilsher (Appendix B). Independent cardiology advice was obtained from Dr Ian Crozier (Appendix C).

Information gathered during investigation

Background

19. This investigation concerns the delays in Te Whatu Ora Waikato actioning the multiple GP referrals for a semi-urgent echocardiogram[2] and notifying the echocardiogram results to the GP and patient.

20. On 30 July 2019, Ms A (aged in her seventies) presented to her family doctor, Dr C. Dr C recorded that Ms A had experienced pain in her jaw and across her back in early 2019. During this presentation Ms A did not report feeling any chest pain, palpitation, nausea, or vomiting, but she told Dr C that she was feeling mild light-headedness and 'a little odd'.

21. An electrocardiogram (ECG)[3] taken for Ms A on the same day showed a change in the contraction of the heart. The results were considered to be abnormal.[4]

22. Ms A was referred for blood tests and sent home to monitor her blood pressure further.

August 2019 — first cardiology referral (Priority 1)

23. On 8 August 2019, Dr C saw Ms A and reviewed her blood test results taken on 30 July 2019, which were unremarkable. Dr C recorded that Ms A had intermittent chest pain and light-headedness, and that a heart murmur[5] had been detected.

24. Given the concern for Ms A's heart condition, Dr C sent a semi-urgent referral for an echocardiogram[6] to Thames Hospital (Te Whatu Ora Waikato) on the same day and attached both the ECG and blood test results.

25. The first referral was queued for Cardiology Department triage on 12 August 2019, but it was not triaged until 4 September 2019 (almost four weeks later), when it was accepted as

[2] An echocardiogram (also called an echo) is a test used to assess heart conditions.
[3] An electrocardiogram is a test to check the heart's rhythm and electrical activity.
[4] The ECG notes recorded: '[C]heck ECG; sinus rhythm, marked L axis deviation [a condition wherein the mean electrical axis of the ventricular contraction of the heart is not correct], PR mildly prolonged [a delay in the time it takes for the signal to reach the top of the heart], QRS N [the main spike seen in the ECG representing the depolarisation of ventricles], no ST/T wave changes.'
[5] A heart murmur is a sound made by the blood flowing abnormally through the heart's valves.
[6] An echocardiogram uses sound waves to create pictures of the heart and can show blood flow through the heart and heart valves.

a 'Priority 1'.[7] Te Whatu Ora Waikato confirmed in writing to Dr C that the referral had been received by the Referral Coordination Centre (RCC)[8] and had been accepted as a Priority 1.

26. Te Whatu Ora Waikato told HDC that the standard expectation for timeframes from receipt of referral to triage is 10 working days. However, it stated that the volume of referrals received by the Cardiology Department meant that the wait times for triaging were often more than 10 working days.

27. Despite the acceptance of the first referral, the booking of the echocardiogram appointment did not occur. Te Whatu Ora Waikato told HDC that an investigation undertaken following Ms A's complaint found that human error caused the delay, as 'there was no record of [the referral] having been sent' to the Cardiology Department from the RCC.

28. Te Whatu Ora Waikato explained that in its usual process, the RCC forwards the referral to the booking clerk responsible for clinical appointments, who then adds the patient to the waiting list (based on triaged acuity and service capacity). However, in this instance, the administrator at the RCC forgot to waitlist and forward the referral for the echocardiogram for Ms A. Consequently, the booking clerk at Thames Hospital was not notified about the referral, and Ms A was not actually waitlisted for her echocardiogram appointment.

September 2019 — second cardiology referral (Priority 2)

29. On 3 September 2019, Ms A presented to Dr C again with episodes of palpitations associated with discomfort in her chest.[9]

30. That day, Dr C sent a second referral to Te Whatu Ora Waikato's Cardiology service noting Ms A's latest symptoms and a change in her medication,[10] and that she was still waiting for a date for her echocardiogram from the first referral. The second referral included the comment: 'Previous referral dated 08/08/19 accepted by [Te Whatu Ora Waikato doctor] 04/09/19 and notification sent to Echo.'

31. Te Whatu Ora Waikato told HDC that the second referral was triaged at Thames Hospital on 30 September 2019 for an 'Event Monitor' (sometimes also known as a Holter monitor[11]) with a 'Priority 2' rating. Notification of receipt of the referral was sent to Dr C on 30 September 2019. Ms A told HDC that she understood that the event monitor had been requested by Dr C at this point because of the heart murmur detected, and they were still waiting for the echocardiogram, but Te Whatu Ora Waikato did not follow up with her on this.

[7] Priority 1 is considered urgent.
[8] Te Whatu Ora Waikato states on its website that referrals must be sent through the Referral Coordination Centre.
[9] The consultation notes recorded this as episodes of heart racing in her chest and minor retrosternal discomfort lasting 10 minutes and then resolving.
[10] Ms A was started on metoprolol (a medication used to treat high blood pressure and chest pains).
[11] A portable heart monitor used to record the electrical activity of the heart and detect irregular heartbeats.

32. By 30 September 2019, Ms A had waited for more than seven weeks and still had not received her echocardiogram from Te Whatu Ora Waikato following the first referral sent on 8 August 2019.

33. Following the second referral, Ms A presented to Dr C on 25 October 2019 for hand joint symptoms. The clinical notes document that Ms A had had no further episodes of heart racing caused by the new medication prescribed to her in September 2019. Dr C noted that Ms A was still 'awaiting echo' appointment, but no referral was sent on this occasion.

January 2020 — third cardiology referral (Priority 1)

34. On 10 January 2020, Ms A presented to Dr C with facial pain. The clinical notes document that Ms A had 'not heard back re: echo yet (ref initially done in Aug)' and that a 'chase up [of] echo' was required.

35. Consequently, Dr C sent Te Whatu Ora Waikato a third cardiology referral on this day. The referral noted that Ms A was still waiting for her echocardiogram from the first referral made in August 2019. This referral was triaged on 23 January 2020 as a Priority 1 and was waitlisted correctly. Ms A received a letter on the same day advising her that the referral wait time was 1–6 weeks.

36. The medical centre, on behalf of Dr C, told HDC that it did not track referrals once they had been sent. It stated that the expected timeframes for referrals are usually discussed with patients at the time the referral is made, and patients are told to contact the practice if they have not heard back within the timeframe discussed.

37. Dr C told HDC that 'patients were usually informed of the considerable delays in the hospital system' and were 'encouraged to contact [the GP] if they were worried about excessive delays with appointments or results'. Dr C said that any further follow-up was guided by specialist advice, which was 'usually being directly informed by the hospital clinician at their appointment'. Ms A told HDC that she was not advised about this directly.

Delay in communicating echocardiogram results to referrer and lack of follow-up

February 2020 — echocardiogram performed at Thames Hospital

38. On 14 February 2020, Ms A underwent an echocardiogram at Thames Hospital — more than six months since the first referral was made in August 2019.

39. Te Whatu Ora Waikato said that its Cardiology Department aims to perform echocardiograms graded as Priority 1 within a six-week time frame from receipt of referral, which is achieved in over 90% of patients at Te Whatu Ora Waikato. Te Whatu Ora Waikato acknowledged that the delay experienced by Ms A was not 'consistent with [Te Whatu Ora Waikato's] expectations for referrals triaged to occur on a P1'.

Echocardiogram report

40. Cardiologist Dr B reviewed the echocardiogram and diagnosed Ms A with severe heart valve disease (aortic stenosis)[12] alongside other heart issues.[13] The echocardiogram report was finalised by Dr B on 19 February 2020. The report did not contain any management recommendations to Ms A's GP, such as whether an urgent cardiology referral was required.

41. Te Whatu Ora Waikato told HDC that it was usual practice for the reporting cardiologist to make a recommendation to the GP or referring physician regarding any changes to management or follow-up as required (which includes directly notifying the RCC if the results warrant prompt action). However, because Ms A's echocardiogram report contained no recommendation by Dr B, the RCC was not notified that a follow-up appointment was needed for Ms A.

42. Dr B told HDC that usually he would make a recommendation if there was an abnormal result, to alert the referring doctor 'as to at least the preliminary next steps to undertake'. Dr B acknowledged that he did not make a recommendation in Ms A's case, and this was omitted in error.

Notification of echocardiogram result to GP

43. The echocardiogram report stated 'GP Referral' and indicated that it was copied to the medical centre.[14] However, Dr C told HDC that neither he nor the medical centre received the echocardiogram report.

44. Te Whatu Ora Waikato told HDC that although echocardiogram reports are available to the GP to access electronically on the Clinical Work Station (CWS),[15] there is no electronic notification process to inform GPs or other referring doctors that an echocardiogram has been performed. Te Whatu Ora Waikato said that reports are not actively sent to referring GPs unless they telephone and ask for the report. Te Whatu Ora Waikato acknowledged these issues and informed HDC that it is in the process of making further changes (discussed below at paragraph 136).

[12] Severe narrowing of the aortic valve, which restricts the blood flow from the heart to the rest of the body.

[13] The other heart issues were summarised as mild aortic regurgitation (the aortic valve does not close tightly, which may cause blood to leak backward into the heart) with dilated ascending aorta and moderate left ventricular hypertrophy (thickening of the wall of the left ventricle, which is the main pumping chamber of the heart).

[14] The 'CC' header of the report included the medical centre.

[15] Te Whatu Ora Waikato also stated that a preliminary report of the echocardiogram is created by the sonographer who performs the echocardiogram, and this is available in the CWS under 'Imaging Enquiry'. The CWS is an online real-time patient information interface for clinicians to access. The echocardiogram report is reviewed by a cardiologist, who finalises the report with his/her comments, including recommendations to the referring doctor as necessary. The report is published onto the CWS under 'documents' and is accessible by GPs and clinicians in the hospital. If the patient is clinically symptomatic (ie, is breathless at rest or has significant signs of heart failure), the on-call cardiology registrar or cardiologist is notified.

45. Dr C told HDC that although the report was available on CWS, this was not the usual system for information to transfer to general practice, and he was expecting any information to be available on Healthlink.[16] Dr C stated:

> 'CWS is not a means of transferring information to general practice, but allows us access to hospital records, with patient permission, to track a specific missing result (this can only be done by clinical staff). We would be expecting any information to come via Healthlink directly to the doctor's inbox when receiving any outpatient or imaging reports. This system is usually extremely reliable.'

46. In relation to why the echocardiogram reports were not placed on Healthlink, Te Whatu Ora Waikato told HDC that it does not 'currently have the capability to send echocardiogram reports via Healthlink to GP's or other referring physicians'.[17]

47. Dr C said that when he sends a patient referral, he uses a task reminder, which will always alert him if the results are received. However, in this case, this may not have occurred because of the 'lengthy wait list for hospital appointments, [which] is set many months in advance'.

48. Dr B stated that at the time of events, he understood that Ms A's GP would arrange the follow-up appointment, as the report was copied to the GP. However, after reviewing Te Whatu Ora Waikato's response, he became aware that this was not the case and that there was no system to notify the GP that the echocardiogram had taken place and to flag any abnormal findings.

49. Dr B stated:

> 'I was not aware (at the time) of the system in place to arrange follow-up for such patients — I do not recall this system having been explained to me when I commenced my employment.'

Follow-up of echocardiogram results

50. Ms A told HDC that she was not specifically told by Dr C or Te Whatu Ora Waikato to follow up her results or about the event monitor requested.

51. Te Whatu Ora Waikato told HDC that usually patients were given verbal instructions to follow up results of their tests with their GP or referring clinician. However, Te Whatu Ora Waikato did not confirm whether Ms A was given these instructions.

52. Te Whatu Ora Waikato also said that at the time of events it did not have policies or guidelines in place pertaining to the management of echocardiogram referrals and results.

[16] Healthlink is a secured health-system integrator that enables the electronic delivery of pathology and radiology results, referrals, clinical documents, and discharge summaries.
[17] Te Whatu Ora Waikato told HDC that all possible referrers and GPs would need to be encoded properly within the relevant fields within its system to allow reports to be transmitted via Healthlink.

53. Dr B told HDC that normally he would discuss significantly abnormal findings of any relevant investigations with the patient or the referring physician. However, in this case, Ms A's echocardiogram was taken at a different hospital, which meant that he did not have an opportunity to speak with Ms A or anyone else involved.

54. Dr B told HDC that at the time of events it was 'exceptionally busy' with a lot of changes because of the COVID-19 pandemic. Dr B believes that an improved orientation for new staff with an emphasis on electronic communication would prevent such omissions from occurring in the future.

May 2020 — Ms A's request for echocardiogram results

55. Ms A told HDC that she called the medical centre several times requesting her echocardiogram results.[18] She said that she asked several nurses to track the results as the echocardiogram had been deemed 'semi-urgent'. However, she assumed that she was not advised about the results because the results might have been 'low risk', hence she thought there was no news. Ms A told HDC:

> 'I was continually told that the report "just wasn't there" and not one person; from the receptionist to the nurses to the doctor … appeared to have been able to communicate, either with each other — or more importantly; with me.'

56. However, the medical centre told HDC that its records show that Ms A contacted them only on 4 May 2020 to request her test results.

57. According to Ms A, after several calls she waited for one more week and, on the morning of 4 May 2020, she telephoned the medical centre again requesting the results of her echocardiogram from February. Initially, the nursing staff at the medical centre were unable to find the echocardiogram report, but they managed to access the CWS and locate a copy of the report.

58. Later that afternoon, the on-call GP reviewed Ms A's echocardiogram results and discussed the need for cardiology referral with Ms A (as Dr C was away). The consultation note documented that Ms A's valve was not working well and likely needed to be replaced. It was also documented that Ms A would '[follow up] with hospital as to why her GP had not been notified of result earlier'.

59. Ms A told HDC that she was shocked when she discovered that her results were serious and immediately tried to get in contact with Dr B. Unfortunately, Dr B was unavailable at the time.

60. On 5 May 2020, Ms A requested an urgent private referral for a heart valve repair with a private cardiology clinic. The referral was completed on the same day and an appointment made for Ms A to see a cardiology consultant at the cardiology clinic on 13 May 2020.

[18] Ms A told HDC that she kept requesting her results because she liked to have a record of her results.

Subsequent events

61. On 8 May 2020, Ms A was contacted via telephone call (due to COVID-19 restrictions) by Te Whatu Ora Waikato's cardiologist, Dr D. Dr D discussed the echocardiogram results with Ms A, including the need for an aortic valve replacement and further assessments,[19] and he offered to arrange for the investigations to be undertaken at Te Whatu Ora Waikato.

62. Ms A told Dr D that because of the delays and seriousness of her results, she had arranged an appointment with the cardiology clinic for the following week, and she wanted her cardiac issues to be investigated privately. Accordingly, Dr D made no changes to her management.

63. Following Dr D's conversation with Ms A, a copy of the telephone consultation notes was sent to Dr C on the same day. The telephone note documented:

> 'Phone conversation was initiated after a call to Waikato as results of echocardiogram had never been sent to GP. There was no discussion about [work] up. Echo requested August — not done [until] February. No result [until] May when it was demanded [by Ms A].'

64. On 27 May 2020 (over three months since her abnormal echocardiogram results), a consultant cardiologist from the cardiology clinic undertook heart valve replacement surgery on Ms A.

Further information

Ms A

65. Ms A told HDC that as a retired health professional, she had 'lost faith in the public health system'. She said that the medical centre repeatedly told her that the report 'just wasn't there', and no one advised her whether her condition was 'becoming more acute and was now severe and urgent'.

66. Ms A said that the private cardiologist told her that she would have had a life expectancy of only two further years had she not followed up and actioned her cardiology results. Ms A stated:

> 'The lack of care and urgency that I experienced in the system and the lengths I had to go in order to gain access to my own health records leaves me with serious concerns for the health of others who are in a less privileged position.'

Medical centre

67. The medical centre told HDC that its practice is not updated regarding patient appointment details with Te Whatu Ora or the public health system, and that public health providers communicate directly with patients. The medical centre said that it did not consider making any changes as a result of these events.

[19] A coronary angiogram (X-rays of the heart's blood vessels), a non-contrast CT chest scan, and a dental assessment.

Dr C

68. Dr C told HDC that the clinical staff at the medical centre were not made aware of Ms A's echocardiogram until she called the practice in May 2020. At this time, he was away on leave.

Te Whatu Ora Waikato

69. Te Whatu Ora Waikato told HDC that it 'acknowledges that the systems and procedures that were in place at that time were inadequate for ensuring that this referral was managed in a timely and appropriate way'. Te Whatu Ora Waikato also said that following Ms A's complaint it undertook a comprehensive review of its echocardiogram services, and it has been making numerous changes/significant improvements to its systems. These are discussed below at paragraph 136.

70. Te Whatu Ora Waikato also said that there were mitigating factors for the time that elapsed between Ms A's echocardiogram appointment, the delay in notifying her results, and the lack of follow-up, including the following:

- The volume of referrals at the time exceeded Te Whatu Ora Waikato's ability to process the referrals.
- A COVID-19 Level 4 lockdown was in place from 25 March 2020 to 27 April 2020, followed by a further two-week Level 3 lockdown until 13 May 2020. During the COVID-19 Level 4 and Level 3 lockdowns, face-to-face clinic appointments were cancelled by Te Whatu Ora Waikato. Virtual clinics for telephone consultation were implemented only during the latter phase of the lockdown.

71. Te Whatu Ora Waikato told HDC that no serious adverse event or incident report was undertaken for Ms A's complaint. However, the event was raised in Te Whatu Ora Waikato's departmental meetings, and further changes were made.[20]

Dr B

72. Dr B told HDC that he would like to extend his sincerest apologies to Ms A for the distress caused to her by his care.

73. Dr B said that he was grateful for the opportunity to reflect on his clinical practice, and that Ms A's complaint has allowed him to 'look into the technical aspects of hospital communication systems, its complexities and the impact that it can have on patient care'.

Responses to provisional opinion

Ms A

74. Ms A was given an opportunity to comment on the 'information gathered during investigation' section of the provisional opinion. Her comments have been incorporated into the report where relevant.

[20] The meeting identified the absence of robust results notification and acknowledgement processes for echocardiogram as a risk, and this saw the formation of a working group.

Te Whatu Ora Waikato

75. Te Whatu Ora Waikato had no further comments to make and agreed with my proposed recommendations.

Dr B

76. Dr B was given an opportunity to comment on the provisional opinion as it related to him, and he had no further comments to make.

Medical centre

77. The medical centre was provided with the relevant sections of the provisional opinion and given an opportunity to comment. The medical centre's comments have been incorporated within this report. Further, its clinical nursing team advised:

> '[R]equests for results may not always be recorded in the patient notes. If the results are unavailable at the time, a task is recorded on the patient file and left active for the nursing team to follow up until the result has been received. I reviewed [Ms A's] historical task list (including inactivated tasks) to check if any active tasks were outstanding during that time. The only task we have in the archive was from the 4th of May 2020, as recorded in the patient notes. At that time, patient calls were managed by an external call centre. All calls received for results were passed on to the nursing team via a patient task. I cannot explain or understand how multiple calls were missed and completely undocumented on the patient records.'

Dr C

78. Dr C was given an opportunity to comment on the provisional opinion as it related to him, and he had no further comments to make.

Opinion: Te Whatu Ora Waikato — breach

Introduction

79. This case highlights deficiencies in Te Whatu Ora Waikato's processes for actioning a semi-urgent echocardiogram referral and notifying the patient of the results, and for actioning subsequent referrals for cardiac advice.

80. Ms A's complaint concerns multiple systems failures that were not identified by Te Whatu Ora Waikato. These deficiencies are discussed below.

Delays in triaging first referral and performing echocardiogram

Triage delay

81. On 8 August 2019, the first referral was sent to Te Whatu Ora Waikato from Ms A's GP to request an echocardiogram appointment to investigate Ms A's intermittent heart issues. The first referral was triaged on 4 September 2019 (nearly four weeks later) as a Priority 1

and accepted for the hospital waitlist. However, an administrator at the RCC forgot to forward the referral, and Ms A was not actually waitlisted for the echocardiogram.

82. Te Whatu Ora Waikato said that its standard expectation of the timeframe from receipt of referral to triage is 10 working days, but often this is exceeded because of the volume of referrals. My independent systems advisor, Dr Margaret Wilsher, agreed that the recommended timeframe for triage of GP referrals is 10 working days and said that her peers would expect a semi-urgent referral to be triaged within this timeframe. The first referral exceeded the timeframe, and Dr Wilsher considered the delay to be a moderate departure from the standard of care.[21]

83. I accept Dr Wilsher's advice. The referral should have been triaged within 10 working days, and I am critical of Te Whatu Ora Waikato for not meeting the appropriate timeframe.

Delays in performing Ms A's echocardiogram

84. On 3 September 2019, Ms A presented to Dr C with another episode of chest discomfort. A second referral was sent to Te Whatu Ora Waikato to notify it that Ms A was still waiting for a confirmation date for the echocardiogram (triaged on 30 September 2019 for an event monitor, Priority 2). When Ms A presented to Dr C again on 10 January 2020, she still had not received an echocardiogram appointment, and Dr C sent a third referral (which was triaged on 23 January as a Priority 1).

85. Ms A's echocardiogram was finally performed on 14 February 2020 — over 27 weeks (> six months) from the time the first referral was sent to Te Whatu Ora Waikato until Ms A received her echocardiogram.

86. Te Whatu Ora Waikato's Cardiology Department told HDC that its standard timeframe to perform Priority 1 echocardiograms is within six weeks from receipt of referral. Dr Wilsher agreed that ideally a Priority 1 triage would result in an echocardiogram being performed within six weeks and was critical that it took six months for Ms A to receive an echocardiogram.

87. Dr Wilsher advised:

> 'The DHB attributes this delay to human error but in reality it is human factors that have come into play. Humans do not work perfectly — they are subject to distraction, competing demands, interruption and fatigue all of which can interrupt workflow and lead to tasks not being performed as imagined. Thus systems need to be robust because humans will make mistakes. A referral management system should have sufficient safety redundancy in processes and procedures that a single human slip does not result in patient harm.'

[21] Dr Wilsher did not identify any issues with the triage times for the second and third referrals to Te Whatu Ora Waikato.

88. Dr Wilsher considered that the delay in Ms A's echocardiogram being performed represented a severe departure from the accepted standard of care.

89. My independent cardiology advisor, Dr Ian Crozier, also considered that the delay in performing the echocardiogram for Ms A was a severe departure from the standard of care.

90. I accept my advisors' advice. The referral should have been triaged by Te Whatu Ora Waikato within 10 working days, and Ms A should have received her echocardiogram within six weeks.

Delay in communicating echocardiogram results to GP and Ms A

Delay in sending echocardiogram report to GP

91. After the echocardiogram was performed on 14 February 2020, the report was finalised on 19 February by Dr B, who diagnosed Ms A with severe heart valve disease and other heart issues. Despite Ms A's echocardiogram showing abnormal results, these were not sent to her GP or communicated to Ms A in a timely manner.

92. Te Whatu Ora Waikato's notification system did not inform referring doctors when echocardiograms had been carried out. Instead, reports were made available on CWS for GPs to access. Although Ms A's echocardiogram report was published on CWS, Dr C was not expressly notified of this. It was only when Ms A followed up with the GP practice in May 2020 that nursing staff located the report on CWS, which prompted immediate GP review. Ms A was informed of her echocardiogram results on 4 May 2020.

93. Te Whatu Ora Waikato told HDC that at the time of events there was no written policy on the communication of abnormal results to the referrer or to the GP.[22]

94. Dr C told HDC that neither he nor the medical centre received notification that the echocardiogram had been performed for Ms A and that the results were available. Dr C told HDC that when receiving any outpatient or imaging reports, the usual system was for the information to come directly via Healthlink to the doctor's inbox. However, in this case this was not done.

95. I make a finding of fact that although the echocardiogram report showed that it was 'copied' to Ms A's medical centre, this did not occur. This finding is supported by Te Whatu Ora Waikato's statement to HDC that at the time of the events the Cardiology Department was unable to send echocardiogram reports to GPs or other referring physicians via Healthlink.

96. Dr Wilsher told HDC that the standard of care for informing of abnormal results would be for Te Whatu Ora Waikato to report the echocardiogram results in a timely fashion. Dr Wilsher stated that once the echocardiogram report had been completed, the results should have been sent to the referrer rather than published on the CWS.

[22] WDHB told HDC that it made further changes to its system to prevent a similar event from occurring.

97. Dr Wilsher advised:

> 'This is a moderately severe departure from the standard of care in most DHBs, acknowledging that primary care practices do not have systems that allow them to track referrals management within DHB systems.'

98. Dr Wilsher told HDC that where a critical echocardiogram abnormality is identified by the reporting cardiologist (ie, Dr B in this case), there should be a prompt to notify the referrer.

99. Both my in-house GP advisor, Dr Maplesden, and Dr Crozier also made similar comments about the echocardiogram report not being sent to the GP. Dr Maplesden advised:

> '[Ms A's] echocardiogram result was significantly abnormal. It is standard and accepted practice for copies of investigation results to be forwarded to the clinician ordering the test. Despite the result being significantly abnormal with possibly time critical intervention required, there was no apparent attempt to signal this to the GP … I believe this complaint has uncovered significant deficiencies in the current process for communicating abnormal echocardiography results.'

100. Dr Crozier also expressed concern that the referring GP was not notified that the echocardiogram had been performed and that the report was available. Dr Crozier considered this to be a 'severe departure from the standard of care that would be viewed with concern by [his] peers'.

101. I accept the advice above, which highlights considerable deficiencies in Te Whatu Ora Waikato's system of communicating significantly abnormal results in a timely manner. Te Whatu Ora Waikato's systems failed to ensure that Ms A's GP was informed that the echocardiogram had been performed, and that her GP received a copy of the results in a timely manner.

102. As a result of these systems failures, it took nearly three months for Ms A to be notified of the results of her echocardiogram, and, more importantly, her significant heart condition. Dr Wilsher advised HDC that the expectation is that Ms A would have been advised of the findings within two to four weeks of the test being performed.

103. Dr Wilsher considered the significant delay to be a 'severe departure from the standard of care in light of the abnormality reported'. I accept Dr Wilsher's advice and am concerned that Te Whatu Ora Waikato's deficient systems meant that Ms A was not informed of the significantly abnormal results in the appropriate timeframe. As a result, Ms A was denied the opportunity for earlier intervention and treatment of her cardiac issues.

System failure in not identifying human error

104. Dr Wilsher advised HDC that there were unclear standards for the administrative staff in processing referrals from receipt to booking, with process and systems not supporting them. With respect to the first referral, Dr Wilsher noted that the staff member who 'forgot a key step in the referrals management process' made a 'very human mistake'. In a robust system,

the triaged referral should have been routed to a booking slot and prompted an alert to staff to take additional action.

105. Dr Wilsher noted that 'primary care practices do not have systems that allow them to track referrals management within DHB systems'. She commented that '[t]here appears to have been no procedure in regards to results management'.

106. Dr Wilsher explained what a reasonable referral management system should look like:

> 'A tertiary DHB would be expected to have a robust referral management pathway and ideally an electronic referral pathway that would result in timely triage, booking, reporting and dissemination of results to referrer (and patient). An electronic referral management system would allow all referrals to be captured, the pathway mapped and variance reporting to the service enabled. Staff could take assurance that a safety net was in place should they omit a step, or fail to execute a step in a timely way.'

107. I accept Dr Wilsher's advice. I am critical that Te Whatu Ora Waikato did not have a robust referral management pathway at the time of events with the appropriate safety net in place to ensure that patients did not fall through the cracks if a human error occurred.

Lack of action by Te Whatu Ora Waikato after errors identified

108. Dr Wilsher noted that the omissions identified above appear not to have triggered an incident report that could have led to a systematic investigation by Te Whatu Ora Waikato. No reference was made to any investigation having been undertaken prior to Ms A's complaint to this Office. Dr Wilsher queried the 'rigour of the [Te Whatu Ora Waikato] clinical risk and incident reporting system' and whether it was being used by staff to report concerns.

109. Dr Wilsher advised:

> '[Ms A] appears to have struggled to make her voice heard. Ultimately she has done so via formal complaint but [Te Whatu Ora Waikato] could consider how it might hear the patient voice before it is channelled via an external agency.'

110. I agree with Dr Wilsher's observation. I am concerned that there appears to have been no urgency shown by Te Whatu Ora Waikato for the lack of action taken on the echocardiogram identified in January. There was also no escalation for any investigation once Te Whatu Ora Waikato was aware that Ms A's significantly abnormal results had not been actioned.

Conclusion

111. As this Office has stated previously,[23] it is the responsibility of healthcare organisations to ensure that there are robust systems in place to minimise the risk of errors, such as those experienced by Ms A. Dr Wilsher stated:

[23] See Opinion 19HDC02393 (30 June 2021) and Opinion 20HDC00116 (30 March 2022).

> 'Although one might argue that no significant harm occurred to [Ms A] as a result of the omissions of care, this could be considered, at best, a near miss. However, it was undeniably stressful for [Ms A] who worried about her test result and then considered it necessary to take her health needs to the private system, such was her loss of trust in the provision of care by her local tertiary provider. I consider there are broader lessons to be learned here.'

112. I agree with Dr Wilsher's comments. Without Ms A's active participation in following up her echocardiogram appointment and then result, it is possible that Te Whatu Ora Waikato would not have identified the omissions, which could have caused significant harm to Ms A.

113. I acknowledge that during this period there were significant systemic pressures across the health system, which could have affected the communication of results between different providers. However, I do not consider that the COVID-19 lockdown directly caused the human error in triaging of the first echocardiogram referral for Ms A (as this occurred on 8 August 2019). In my view, the COVID-19 lockdown was not a mitigating factor for the existing system issues that caused a delay in communicating the echocardiogram results to Ms A's GP.

114. As set out above, whilst acknowledging the challenging circumstances presented by the COVID-19 pandemic at the time, I find that Te Whatu Ora Waikato had overall responsibility for the following failings in Ms A's care:

- The first referral for the Priority 1 echocardiogram exceeded the recommended timeframe for triage by 10 working days;
- It took around six months for the echocardiogram to be performed, when ideally it would have been performed within six weeks;
- The result of the echocardiogram was not sent directly to the referrer, Ms A's GP. This resulted in a further delay in Ms A receiving the results;
- Te Whatu Ora Waikato lacked a robust system to identify delays in actioning referrals and abnormal results; and
- No further systematic investigation was undertaken by Te Whatu Ora Waikato for the errors and delays caused to Ms A.

115. Te Whatu Ora Waikato has acknowledged that at the time of events it did not have an electronic process to notify referring clinicians and GPs that the test and report had been completed. It also lacked a robust system to identify delays in actioning referrals. This case has demonstrated that Te Whatu Ora Waikato's deficient systems resulted in significant delays at several stages in Ms A's patient journey. I consider that Te Whatu Ora Waikato did not provide services to Ms A with appropriate care and skill. Accordingly, I find that Te Whatu Ora Waikato breached Right 4(1) of the Code of the Health and Disability Services Consumers' Rights (the Code).[24]

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

Event monitor not actioned further after second referral — adverse comment

116. As noted above, Dr C sent a second referral to Te Whatu Ora Waikato's Cardiology service for Ms A on 3 September 2019. This referral was triaged on 30 September 2019 for an event monitor, Priority 2. However, Ms A told HDC that she did not hear anything further from Te Whatu Ora Waikato about this.

117. It is not clear from the evidence why Ms A did not receive the event monitor. Whilst there may be a good reason for this (for example, because subsequently the echocardiogram was booked and rendered the event monitor unnecessary), I am critical that this decision was not communicated by Te Whatu Ora Waikato to Ms A or her GP. My concern is that this inaction indicated another procedure that Te Whatu Ora Waikato's system failed to recognise had not been done for Ms A.

Opinion: Dr B — adverse comment

118. Dr B was the cardiologist who reviewed the report of Ms A's echocardiogram performed on 14 February 2020. Dr B's report, finalised on 19 February 2020, stated that Ms A had severe heart valve disease (severe aortic stenosis) and other heart problems. Dr B did not document any management recommendations for Ms A's GP despite this abnormal result.

119. Dr B told HDC that at the time of events his understanding was that Ms A's GP would arrange the follow-up appointment, as the report was to be copied to her GP. However, he was not aware that there was no electronic system to notify the GP that the echocardiogram had taken place and to flag the abnormal findings. Dr B said that the follow-up system was not explained to him by Te Whatu Ora Waikato.

120. Dr B accepted that he did not make recommendations for Ms A following her abnormal results, which was an error. He said that normally he would discuss any abnormal findings with the patient or the referring physician, but in this case, Ms A's echocardiogram was taken at a different hospital, which meant that he did not have an opportunity to speak with Ms A or anyone else involved.

121. My independent cardiology advisor, Dr Crozier, considered that Dr B interpreted and reported the echocardiogram correctly. However, Dr Crozier was mildly critical that Dr B made no recommendation for further referral or assessment on the echocardiogram report. Dr Crozier advised:

> 'Ideally there would have been a recommendation for further assessment of this important finding. However, there is variation in New Zealand with regard to providing a recommendation for further assessment or treatment on medical reports. For this reason, I would regard this at most as a mild departure from the standard of care. [Dr B] has acknowledged that a recommendation should have been provided in his report.'

122. Dr B agreed with Dr Crozier's findings and has reflected on the 'technical aspects of hospital communication systems, its complexities and the impact it can have on patient care'.

123. I accept Dr Crozier's advice. I am critical that Dr B did not include a recommendation in the echocardiogram report for further assessment or treatment. However, I acknowledge that the report indicated that it was to be copied to Ms A's referring GP. I also acknowledge Dr B's explanation that the echocardiogram was taken at Thames Hospital, while he reported it retrospectively at the main centre hospital, which meant that he did not have the opportunity to follow up with the patient personally, which normally he would do. Another mitigating factor was that COVID-19 affected the period of care at this point, and I accept that it would have been busy for all parties concerned.

124. Consequently, I do not find Dr B in breach of the Code, but I am critical that he failed to make the appropriate recommendation on Ms A's echocardiogram report.

Opinion: Medical centre — educational comment

125. Dr C was the primary GP for Ms A at the medical centre and made the three referrals to WDHB after having seen Ms A in August 2019, September 2019, and January 2020 for cardiac symptoms. I have carefully considered the care provided by the medical centre and Dr C and will comment on each aspect separately.

Medical centre

126. Following the echocardiogram performed on 14 February 2020, Ms A's results were not sent directly to the medical centre or Dr C.

127. Ms A told HDC that she made 'several [phone] calls' to the medical centre (see paragraph 55) requesting her echocardiogram result. However, the medical centre's records show only one call from Ms A on 4 May 2020.

128. As stated in paragraph 77, the medical centre's clinical nursing team explained that requests for patient results may not always be recorded in the patient notes and unfortunately it was unable to explain or understand how 'multiple calls' were missed and not documented in the patient records.

129. It was following this call that nursing staff accessed a copy of Ms A's echocardiogram results on CWS. Ms A was then informed of her results by another GP who was on call while Dr C was on leave.

130. I am unable to reconcile Ms A's recollection of making multiple telephone calls to the medical centre when its records show only one call. However, if Ms A had made these multiple calls before 4 May 2020 and was told by the nurses that there were no results, I would be critical that these calls were neither recorded by the nursing staff nor followed up appropriately (for example, by referring Ms A's concerns to Dr C). It is important that any

concerns raised are escalated to the appropriate provider to ensure quality and co-ordination of care.

131. In response to the provisional opinion, the medical centre told HDC that it has implemented a 'Critical Care' recall process since these events. This requires any clinicians who are concerned or would like attention drawn to a referral or follow-up to create a 'Critical Care (CC)' recall for the patient with a due date set for when they would expect a response. These recalls are checked by the wider clinical team on a weekly basis to ensure that tasks are completed and to ensure that the practice can follow up with patients without having to wait for them to make the initial call.

Dr C

132. Dr C was provided with an opportunity to review Dr Maplesden's advice to HDC. The medical centre responded on behalf of Dr C, noting that the practice does not track patient referrals once sent, but patients are advised to keep in touch if the results are not received within the timeframes discussed during their consultation.

133. Ms A told HDC that she was not specifically told about the timeframe of results by Dr C or by any other clinician. However, as a retired health professional, she liked to have a copy of her medical record and wanted to be informed of the results of the echocardiogram.

134. Dr Maplesden advised HDC that the overall management of Ms A by Dr C was consistent with accepted practice and clinically appropriate. Although Dr Maplesden was mildly critical that there was no tracking of the third referral by Dr C from 23 January 2020, this was mitigated by a number of factors, which included Ms A's clinical stability at the time, the reasonable expectation that a copy of the echocardiogram result would be forwarded to Dr C (in particular if it was significantly abnormal), and that Ms A, who has a clinical background, might have enquired soon after the echocardiogram had been performed.

135. I accept Dr Maplesden's advice and have no further comment regarding Dr C.

Changes made by Te Whatu Ora Waikato

136. Te Whatu Ora Waikato told HDC that following Ms A's complaint it made, or was in the process of making, the following changes:[25]

- The RCC made administrative changes in its process whereby a report was developed and is run weekly to ensure that human error is picked up early and any omissions are addressed. This includes the RCC adding patients to the echocardiogram waitlist directly once the referral has been vetted and triaged on the BPAC system.[26]

[25] The changes made or proposed were last updated to HDC on 22 March 2022.
[26] BPAC Clinical Solutions provides clinical tools to primary health sector organisations and links eHealth systems together to secure electronic medical data within New Zealand.

- Te Whatu Ora Waikato's Information Services Department is in the process of implementing the 'Acknowledgement and Notification' process to GPs and other referring clinicians, which requires the results to be acknowledged by the referring clinician. The results will also be added to an 'Unacknowledged results' tab viewable when the referring clinician logs into the CWS. For referrals from a GP, the results will be transmitted electronically to the referring GP, like hospital discharge summaries. If the result requires prompt action, by default a follow-up will be arranged by the Cardiology Department without the GP needing to re-refer the patient.
- Te Whatu Ora Waikato is implementing an electronic echocardiogram form, which will be made available on the intranet and linked to the CWS and hospital patient administration system (IPM). This will also replace the current paper/fax request and streamline all referrals into an electronic system.
- Te Whatu Ora Waikato has implemented 'focused' echocardiogram protocols where time slots have been reduced to 45 minutes (from one hour) to improve efficiency and the volume of echocardiograms being performed. Echocardiogram request forms have also been revised to identify and facilitate patients suitable for the focused echocardiogram.
- Te Whatu Ora Waikato advised that policies have been written for the management of echocardiology referrals and vetting, along with a written policy for the management of abnormal results, including the process for informing GPs of results.
- An echocardiogram project manager has been appointed and a working group formed. The group meets every one to two weeks to create and implement strategies to improve the efficiency of services and departmental processes, and to update various services.
- Te Whatu Ora Waikato advised HDC that the Ministry of Health asked Te Whatu Ora Waikato to trial the use of the PREP tool as a pilot project, with a view to national adoption by the cardiac network after 12 months. The PREP tool is a regional referral management system designed for patients who are referred for cardiac surgery and structural heart disease intervention.

Dr Wilsher's review of changes made

137. Dr Wilsher reviewed the above changes and considered them to be appropriate.

138. Dr Wilsher acknowledged that the combined challenges of a cyber-attack and the COVID-19 pandemic have delayed the implementation timeline for Te Whatu Ora Waikato. She concluded:

> 'I consider that once the relevant mitigations are in place the risk of an untimely triage of GP echocardiography referral or echo result not sent to referrer will be greatly reduced. Once the definitive electronic solution is in place such interim mitigations will no longer be necessary. I acknowledge that [Te Whatu Ora Waikato] has taken the complaint seriously and is working to implement solutions that will ensure a resilient and safe system of referrals management.'

Recommendations

139. Considering the comprehensive changes made or in the process of being implemented by Te Whatu Ora Waikato, I recommend that Te Whatu Ora Waikato:

a) Provide a written apology to Ms A for the failings identified in this report, including the changes it has made in light of Ms A's complaint. The apology is to be sent to HDC, for forwarding, within three weeks of the date of this report.

b) Provide HDC with a written report and confirmation of the changes (as set out in paragraph 136) that have been implemented. An explanation should be provided regarding the changes that have yet to be implemented, and the expected timeframe for the implementation.

c) Provide HDC with copies of the recently implemented policies and guidelines for the management of echocardiology referrals and vetting, management of abnormal results, and the process for informing GPs of results.

d) Undertake an audit of a random sample of echocardiogram referrals received over the three-month period immediately preceding the date of this report, to ensure that referrals have been triaged and actioned appropriately. Te Whatu Ora Waikato is to provide to HDC a summary of the findings from this audit and, if the audit does not show satisfactory compliance with Te Whatu Ora Waikato's updated guidelines, a report on the further changes that will be made to address this.

140. Te Whatu Ora Waikato is to report back to HDC on the completion of recommendations b) to d) within six months of the date of this report.

Follow-up actions

141. A copy of this report with details identifying the parties removed, except Te Whatu Ora Waikato, Thames Hospital, and the advisors on this case, will be placed on the Health and Disability Commissioner website, www.hdc.org.nz, for educational purposes.

142. I will request information and confirmation from Te Whatu Ora|Health New Zealand regarding the activities and expected national implementation of the trial PREP tool that was used for patients referred for cardiac surgery and structural heart disease intervention.

Appendix A: In-house clinical advice to Commissioner

The following in-house advice was obtained from GP Dr David Maplesden:

> 'Thank you for the request that I provide clinical advice in relation to the complaint from [Ms A] about the care provided to her by Waikato DHB (WDHB) and [the medical centre]. In preparing the advice on this case to the best of my knowledge I have no personal or professional conflict of interest although I practise in the WDHB catchment area and have previously (2015–17) visited [the medical centre] in my role as a PHO GP Liaison. I agree to follow the Commissioner's Guidelines for Independent Advisors. I have reviewed the following information:
>
> - Complaint from [Ms A]
> - Response from [the medical centre]
> - GP notes [medical centre]
> - Response WDHB
> - WDHB clinical notes
>
> 2. [Ms A] complains about delays in performing of her echocardiogram and delays in her being notified of the result. The sequence of events as determined from the responses and available clinical notes is summarised below.
>
> 3. 30 July 2019 — [Ms A] attends [Dr C] at [the medical centre]. Notes include: *Earlier this year, experienced pain in her jaw and across her back …. Has been well since, but over the w/e felt a little odd, nil specific, almost like anxiety, mild light headedness. No chest pain, no palpitations, nausea or sweating. Checked Bp: elevated. Bp has remained up since then (135–164/80–97) …* A new ejection systolic murmur was noted on auscultation but examination was otherwise unremarkable. ECG was performed showing marked left axis deviation but no acute ischaemic changes. [Ms A] was referred for blood tests and several days of home blood pressure monitoring (unremarkable blood test results including normal troponin) and was reviewed by [Dr C] on 8 August 2019. Mildly elevated blood pressure record was noted and: *Also aware of vague intermittent discomfort retrosternally — comes and goes, no obvious ppt/relieving factors. Tends to last a few minutes only. Can occur at rest. Associated with mild light headedness.* The murmur was again detected but was felt to be louder than previously observed. An e-referral for echocardiogram was sent the same day. This included the consultation notes discussed above, and a copy of the ECG and blood test results. The referral was marked semi-urgent with reason for referral documented as: *New onset ESM with retrosternal discomfort, light headedness — ? for echo.*
>
> Comment: [Ms A's] management by [Dr C] was consistent with accepted practice. There was an adequate assessment undertaken on the dates noted with a diagnosis of possible valve disease and referral for echocardiogram being an appropriate management strategy. It is not possible for the GP to predict the likely wait for such a procedure although historically there has been difficulty accessing non-acute echocardiograms through WDHB. However, given [Ms A] was symptomatic and had an

abnormal ECG, and the referral had quite appropriately been marked semi-urgent, a delay of months would not be expected. Nevertheless, I believe it would have been appropriate to offer [Ms A] the option of private referral for the echocardiogram and it is not clear if this was done (mild criticism if it was not).

4. The referral was queued to cardiology triage on 12 August 2019 but was not triaged until 4 September 2019 when it was accepted as priority 1 for echocardiogram only at Thames Hospital. The DHB response indicates that due to some human error (not otherwise defined) *the note saying the notification was sent to echo could not be validated because there was no record of it having be[en] sent.*

Comment: I am not sure how the three week delay between receipt of the referral and actual triage compares with other DHBs or accepted practice but it does seem lengthy for a semi-urgent referral. I am unable to comment further on the "human error" that resulted in the failure to schedule the echocardiogram as intended or what steps have been taken to reduce the risk of such an error in the future.

5. On 3 September 2019 [Ms A] attended [the medical centre] and was seen by a trainee intern and [Dr C]. She reported further episodes of palpitations associated with minor retrosternal discomfort. Blood pressure was elevated and systolic murmur persisted. She was commenced on metoprolol and an "Advice Only" referral was sent to the DHB cardiology service noting [Ms A's] latest symptoms, change in medication and the fact she was still awaiting confirmation of a date for her echocardiogram. Notification of receipt of the referral was received by [the medical centre] on 5 September 2019. The referral was queued for triage on 5 September 2020 and was triaged on 30 September 2020. It appears [Ms A] was assigned priority 2 for an event monitor procedure at Thames Hospital with there being an assumption she had been assigned a time for her echocardiogram. On 30 September 2019 [the medical centre] was notified the referral had been accepted under cardiology as priority 2.

Comment: GP management on 3 September 2019 was clinically appropriate. As noted previously, it is difficult for the GP to predict the likely wait for an echocardiogram but appropriate attempts were made to expedite the referral, and the current delay of a month was not extraordinary. There was no indication for acute cardiology referral but best practice might have been to have again discussed the option of private referral. I have assumed [Ms A] was advised to attend for review should her symptoms persist or worsen despite introduction of metoprolol and best practice would be to document such advice. Given [Ms A's] ongoing symptoms, I believe it would also have been best practice to track the referral at this point, or at least to give [Ms A] a rough time frame in which to respond if she had not been notified of an approximate date for her procedure (perhaps within a month of the second referral being sent). However, it is quite possible the letter dated 30 September 2020 was perceived as being confirmation of the echocardiogram priority as there was no detail in the letter (apart from acceptance by the cardiology service) regarding the intended procedure, and [Dr C] had not referred [Ms A] for rhythm monitoring.

6. On 25 October 2019 [Ms A] attended [Dr C] in relation to some hand joint symptoms. Notes also refer to *no further episodes of heart racing since on Metoprolol. Has been feeling well, quite active.* Cardiorespiratory examination was normal apart from the persistent murmur for which [Dr C] noted echocardiogram was still awaited. [Ms A] was referred for blood tests and hand X-ray (diagnosis osteoarthritis).

Comment: [Ms A's] condition appeared improved with medication and there was no indication for acute or urgent cardiology referral. As noted above, it is quite possible there was an impression [Ms A] had been accepted for her echocardiogram as a priority 2 patient with a wait of several weeks likely for the procedure. There may also have been a degree of acceptance of delays in accessing echocardiography as being "normal" and given [Ms A's] improvement and stability on medication there did not appear (without the benefit of hindsight) to be great urgency with having the procedure performed. Had [Ms A] been experiencing persistent or worsening symptoms, I would be somewhat more critical that further effort was not made at this point to expedite the procedure.

7. [Ms A] next attended [the medical centre] on 10 January 2020 for assessment of facial pain symptom. There is no record of her contacting the practice since her last appointment regarding her echocardiogram. However, on 10 January 2020 note is made that she had still not heard back regarding scheduling of her echocardiogram. Cardiorespiratory assessment was normal apart from the persisting murmur. [Dr C] sent another "Advice Only" referral to the DHB cardiology service the same day noting [Ms A] was still awaiting her echocardiogram following referral in August 2019. The referral was queued for triage on 15 January 2020 and triaged on 23 January 2020 as priority 1 for echocardiogram only at Thames Hospital. On this occasion [the medical centre] received notification on 23 January 2020 the referral had been accepted, and on 30 January 2020 there was notification the referral was triaged priority 1 (1–6 week wait).

Comment: GP management on this occasion was consistent with accepted practice. As noted previously, [Ms A's] condition was stable and there was a reasonable impression she was awaiting her echocardiogram with P2 priority. However, when it was established on 10 January 2020 (over three months since the "P2" letter was received) that [Ms A] had still not received an appointment for the echocardiogram, it was certainly appropriate to try and expedite the procedure.

8. [Ms A] eventually underwent her echocardiogram on 14 February 2020. The DHB response states: *The echocardiogram was performed on 14 February 2020 at 13:07. Preliminary reports prepared by the sonographer are loaded onto Clinical Work Station (CWS) under "imaging". Once the report is finalised by a consultant, the finalised report is filed in "documents". The report is then available to GPs on the DHB system. No report is actively sent to GPs unless they phone and ask for it. The report for this echo study was finalised on 19 February 2020 at 12:54.* The echocardiogram (reviewed by [Dr B]) was abnormal. The report is technical and detailed but the relevant summary reads: *Severe AS* [aortic stenosis] *and mild AR* [aortic regurgitation] *with dilated ascending aorta, moderate LVH, preserved LV systolic function.* There is no management

recommendation noted (eg required urgent cardiology referral etc.). There is a reference to *CC — [the medical centre]* but as per the DHB response it does not appear a copy of the result was forwarded. [Ms A] did not receive any information regarding the result and it appears for several weeks she assumed "no news is good news". On 9 April 2020 she requested a repeat prescription of her usual medications which were sent electronically to the pharmacy as recommended due to Covid precautions at the time. It was not until 4 May 2020 that there is reference in the clinical notes to [Ms A] querying her result (see below). In the interim, [the medical centre] had been taken over by [another medical centre].

Comment: [Ms A's] echocardiogram result was significantly abnormal. It is standard and accepted practice for copies of investigation results to be forwarded to the clinician ordering the test. I am not aware of any formal correspondence from WDHB stating that echocardiogram results would be an exception to this accepted practice but the DHB might clarify this (provide a copy of the date and nature of any communication provided in this regard). [The medical centre] was listed as a "CC" recipient but was not sent a copy of the result. There was no indication to the GP that the procedure had been informed. [Ms A] does not refer to any standard instruction to report to her GP for follow-up after the procedure. Despite the result being significantly abnormal with possibly time critical intervention required, there was no apparent attempt to signal this to the GP or to provide subsequent management recommendations (although the GP would generally recognise that urgent cardiology referral was required), or to provide an immediate intra-departmental (cardiology) referral (although see below). I believe this complaint has uncovered significant deficiencies in the current process for communicating abnormal echocardiography results and I believe comment from a clinician familiar with such systems is required to quantify any departure from accepted practice (including in relation to the initial delay in [Ms A's] procedure). I am mildly critical there was no tracking of the referral by the GP once a time frame had been established for the procedure (1–6 weeks from 30 January 2020). Mitigating factors are [Ms A's] clinical stability and the reasonable expectation that a copy of the echocardiogram result would be forwarded to [Dr C] as the clinician making the referral for the investigation (particularly if it was significantly abnormal), and that [Ms A] (who has a clinical background) might have enquired soon after the procedure was performed regarding the result.

9. On 4 May 2020 [Ms A] contacted [the medical centre] querying the results of her echocardiogram. Nursing staff were initially unable to find the result but evidently accessed the CWS when [Ms A] expressed concern. Nursing staff then noted the result on CWS and a copy of the result was faxed to [the medical centre]. The result was reviewed by the on-call GP and the need for cardiology referral discussed with [Ms A]. [Ms A] requested urgent private referral and documentation to expedite this was provided on 5 May 2020. [Ms A] also contacted [the main centre hospital] and expressed her concern at the failure by the DHB to convey the result to her GP. On 8 May 2020 [Ms A] was contacted by DHB cardiologist [Dr D] for a virtual consultation in relation to her abnormal echocardiograph result but as she had already arranged a private cardiology review any further intervention by the DHB was declined. It is unclear

if the cardiology review had been pre-scheduled following the echocardiogram, was related to the "P2" referral for rhythm monitoring (see section 5), or was organized in response to [Ms A's] phone call. The DHB might clarify this. [Ms A] was seen by [a cardiologist] on 13 May 2020 and underwent further investigations (coronary angiography) and was referred to a cardiothoracic surgeon to determine whether she required a procedure on her dilated aortic root in addition to urgent valve replacement. A valve replacement has since been performed but I am unsure if [Ms A] required open surgery.

Comment: I believe [Ms A's] management by her GP was appropriate once it was apparent a copy of the echocardiogram report had not been received at the practice. However, [Ms A] is rightfully aggrieved at both the delays in her having the procedure performed and delays in the result being conveyed to the GP. This case illustrates deficiencies in DHB processes and also the importance of tracking referrals in primary care when faced with such deficiencies.'

Appendix B: Independent clinical advice to Commissioner

The following independent advice was obtained from Te Whatu Ora Te Toka Tumai Auckland Chief Medical Officer Associate Professor Dr Margaret Wilsher:

> 'I have been asked to provide an opinion to the Commissioner on case number 20HDC0113 and I have read and followed the Commissioner's Guidelines for Independent Advisors.
>
> 2). My qualifications are as follows: MB ChB, University of Otago; MD, University of Otago; Fellow, Royal Australasian College of Physicians; Distinguished Fellow, Royal Australasian College of Medical Administrators; Fellow Thoracic Society of Australia and New Zealand. I am currently the Chief Medical Officer for Auckland District Health Board and Honorary Professor of Medicine, Faculty of Medical and Health Sciences, University of Auckland. I am accountable for the clinical practice and professional standards of over 1500 doctors employed by ADHB and have been involved in medical leadership and health management for over 15 years. I am a practising physician in public and private sectors, a clinical researcher and teacher. I also hold chartered membership of the New Zealand Institute of Directors and sit on a number of external health related governance and advisory committees and boards.
>
> 3). My referral instructions from the Commissioner are to provide an opinion on the care provided by Waikato DHB to [Ms A] between August 2019 until May 2020.
>
> 4). I have been provided with the following information: Letter of complaint dated 29 June 2020. Waikato DHB's responses dated 13 October 2020, 16 April 2021 and 29 November 2021. [The medical centre's] response to HDC dated 10 October 2020. [Ms A's] explanation of the doctor's response to her complaint received on 27 January 2021. Clinical records from Waikato DHB covering the relevant period. Clinical records from [the medical centre] covering the period 8 August 2019 to 14 May 2020. [The medical centre's] response to HDC dated 10 December 2021.
>
> 5). Background
>
> In August 2019, [Ms A] ([in her seventies] at the time) presented to her family doctor, [Dr C] at [the medical centre], for chest pain and light headedness. A semi-urgent referral for an echocardiogram was sent to Thames Hospital (Waikato DHB) on the same day. Despite multiple referrals being sent to Waikato DHB to have the echo performed during this time, the echo was performed on 14 February 2020 (approximately 6 months later) which identified a narrowed blood vessel (severe aortic stenosis). Waikato DHB has since acknowledged that human and systemic errors caused the prolonged delay.
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> In early May 2020, [Ms A] raised further concern to her family doctor that she had not received the results of follow-up from Waikato DHB about the echo performed in February. On 8 May 2020, a cardiology consultant rang (due to Covid-19 lockdown) [Ms A] to discuss the report but she had since decided to seek private specialist care. No

further contact was made with Waikato DHB and [Ms A] has since received an aortic valve replacement.

6). The timeliness of Waikato DHB actioning [Ms A's] echocardiogram referrals.

On 8 August 2019, [Ms A] visited her GP, [Dr C], complaining of retrosternal chest discomfort associated with mild light headedness. An ejection systolic murmur was heard. [Dr C] sent a semi-urgent referral to Waikato DHB Cardiology requesting an echocardiogram. On 3 September 2019 [Ms A] presented again with another episode of retrosternal chest discomfort this time associated with episodes of her heart racing in her chest. [Dr C] sent a further referral to Waikato DHB Cardiology. When seen again on 10 January 2020, [Ms A] had still not had her echo so [Dr C] sent a third referral to Waikato DHB Cardiology.

The initial referral, sent 8 August 2019, was eTriaged on 4 September nearly four weeks later. Sufficient information is provided in the referral including the history, clinical examination and ECG appearances. The referral was to be accepted onto the Thames Hospital echo wait list as a priority 1 booking but that step was not processed by the referral coordination centre due to "human error" as stated by Waikato DHB. The second GP referral resulted in a booking for Holter monitor with P2 priority but no details are provided as to whether that was processed or not. The final GP referral was again triaged as echocardiogram with P1 priority and the test was performed on 14 February 2020.

The recommended timeframe for triage of GP referrals is 10 working days. In respect of the initial GP referral, that was exceeded by 10 working days. This is a moderate departure from the standard of care as referrals comprise a mixture of urgent to routine requests and peers would consider a semi-urgent referral would be triaged within the 10 working day timeframe. Waikato DHB indicates that the volume of referrals at the time exceeded the ability of the DHB to process in a timely manner.

A P1 priority would ideally result in an echocardiogram being performed within 6 weeks. The delay of 6 months represents a severe departure of care. The DHB attributes this delay to human error but in reality it is human factors that have come into play. Humans do not work perfectly — they are subject to distraction, competing demands, interruption and fatigue all of which can interrupt workflow and lead to tasks not being performed as imagined. Thus systems need to be robust because humans will make mistakes. A referral management system should have sufficient safety redundancy in processes and procedures that a single human slip does not result in patient harm.

7). The systems that would be reasonably expected for a DHB to have in place to identify delays in actioning referrals and abnormal results.

Waikato DHB admits that at the time of [Ms A's] echocardiogram it did not have written policies, procedures or guidelines pertaining to the management of echocardiogram referrals. Thus, the standard was not clear to those staff processing referrals from receipt to booking and processes and systems did not exist to support them. There

appears to have been no procedure in regards to results management and although the echo was reported by a cardiologist in timely fashion, the report was not pushed to the referrer or sent to the patient. No direct action was taken in respect of the important information contained in the report.

A tertiary DHB would be expected to have a robust referral management pathway and ideally an electronic referral pathway that would result in timely triage, booking, reporting and dissemination of results to referrer (and patient). An electronic referral management system would allow all referrals to be captured, the pathway mapped and variance reporting to the service enabled. Staff could take assurance that a safety net was in place should they omit a step, or fail to execute a step in a timely way. Consumers and referrers are entitled to know timeframes for being seen after referral, and are entitled to know results of investigations in a timely manner. Whilst the DHB states that it is routine that patients are told to contact their GP for results, [Ms A] disputes that this happened in her case. Written information regarding the process of informing the GP of results (regardless of whether they are abnormal or not) and what the patient should do if the result is not forthcoming within a certain timeframe could be considered. Consideration could also be given to copying the patient the actual result of the test.

As previously stated, humans are fallible and systems and processes should be robust enough to ensure patient safety when humans slip. Staff should be able to refer to published policies, procedures and guidelines and they should be engaged in reviewing and improving service performance. In this instance the staff member simply forgot a key step in the referrals management process. That is a very human mistake. In a robust system the triaged referral should route to a booking slot, and if not a prompt should alert staff to take additional action.

Once reported the echo should have been sent directly to the referrer, not published on a DHB system that the referrer must then pull the report from. This is a moderately severe departure from the standard of care in most DHBs, acknowledging that primary care practices do not have systems that allow them to track referrals management within DHB systems. Waikato has done a lot of work to improve this and whilst electronic systems are still in development, the sending of paper copies mitigates the risk.

8). The reasonableness and adequacy of the preliminary echocardiogram report being made electronically available on the clinical workstation.

The issue of the preliminary echocardiogram report not being published on the clinical workstation is not relevant when the final report was made available 5 days after the test was performed. The issue is that the report was not pushed to the referrer who instead had to recall that a referral had been made some weeks/months earlier and then pull the report from the DHB system. That, as stated above, represents a moderately severe departure from the standard of care.

There will be occasions when a sonographer identifies a critical abnormality and the process for managing that should be described in the DHB procedures and guidelines for management of echocardiogram findings.

Where a critical echocardiogram abnormality is identified by the reporting cardiologist, a prompt to the referrer on next steps would be a useful clinical management step. Consideration could be given to having a section in the report on management advice.

9). The timeliness of Waikato DHB to consult [Ms A] with her abnormal echocardiogram results.

[Ms A] waited nearly three months before she was informed of the abnormal findings on her echocardiogram. This is a severe departure from the standard of care particularly in light of the abnormality reported. The standard of care would be that the DHB would report the echo in a timely fashion, that it would send the report directly to the referrer who would then view and action on receipt. Thus, I would expect [Ms A] to have been advised of the findings of her echo within two to four weeks (pending whether face to face discussion necessary) of the test being performed. Once the GP had been advised of the report action was taken the same day but it did require [Ms A], who is health literate, to take action herself to secure a copy of the report and to ensure that the DHB sent a copy to the referrer.

Waikato DHB has now implemented an appropriate mitigation that enables referrers to receive results directly and in a timely fashion. The final improvement solution is a fully managed electronic referrals pathway with policies and procedures to support such, including results management.

10). The adequacy of the various remedial steps proposed and being implemented by Waikato DHB to address the issues and clinical risks identified in this case.

The remedial steps proposed and already implemented by Waikato DHB are described in their responses of 16 April 2021 and 22 November 2021. These are appropriate.

The improvements relate primarily to the management of the referral and the result. I consider that the improvements could extend to consumer engagement and consideration of written materials for patients that describe the process of referral management including results management, and possibly a protocol for copying results to patients. The consumer voice is very important in this context and copying the report adds a layer of redundancy should a result not be actioned.

11). Any other relevant matters in this case that you consider warrant comment, including proposed recommendations that Waikato DHB should adopt.

Although one might argue that no significant harm occurred to [Ms A] as a result of the omissions of care, this could be considered, at best, a near miss. However, it was undeniably stressful for [Ms A] who worried about her test result and then considered it necessary to take her health needs to the private system, such was her loss of trust in the provision of care by her local tertiary provider. I consider there are broader lessons

to be learned here. The delay in referral management and further delay in sending the result to the referrer appears not to have triggered an incident report that could have led to a systematic investigation by the DHB. No reference to an investigation is made by the DHB in its initial response 8 October 2020 and it appears that an investigation only occurred after the HDC initiated its enquiries. Thus, I wonder about the rigour of the DHB clinical risk and incident reporting system and whether staff use this to report concerns.

Once an incident has been identified, whether of harm or omission, early acknowledgement of such, apology and investigation does result in fewer formal complaints. Moreover, consumer feedback on system performance can be illuminating. [Ms A] appears to have struggled to make her voice heard. Ultimately she has done so via formal complaint but Waikato DHB could consider how it might hear the patient voice before it is channelled via an external agency.

I extend my acknowledgement to [Ms A] of her experience.

Yours sincerely

Margaret Wilsher MD, FRACP, FRACMA
Chief Medical Officer'

The following further advice was obtained from Dr Wilsher on 12 April 2022:

'I have been asked to provide further advice to the Commissioner on case number 20HDC0113 and I have read and followed the Commissioner's Guidelines for Independent Advisors.

2). My qualifications are as follows: MB ChB, University of Otago; MD, University of Otago; Fellow, Royal Australasian College of Physicians; Distinguished Fellow, Royal Australasian College of Medical Administrators; Fellow Thoracic Society of Australia and New Zealand. I am currently the Chief Medical Officer for Auckland District Health Board and Honorary Professor of Medicine, Faculty of Medical and Health Sciences, University of Auckland. I am accountable for the clinical practice and professional standards of over 1500 doctors employed by ADHB and have been involved in medical leadership and health management for over 15 years. I am a practising physician in public and private sectors, a clinical researcher and teacher. I also hold chartered membership of the New Zealand Institute of Directors and sit on a number of external health related governance and advisory committees and boards.

3). My referral instructions from the Commissioner are to review the response to my provisional advice report by Waikato DHB and advise if it causes me to add to or amend my original report. I am to consider whether any previously identified departures from

accepted practice have changed and to comment on the temporary solutions identified in the report and whether these are appropriate remedial measures.

4). I have been provided with the following information:

Waikato DHB's response to my provisional advice report dated 24 March 2022.

5). Background

On August 2019, [Ms A] ([in her seventies] at the time) presented to her family doctor, [Dr C] at [the medical centre] for chest pain and light headedness. A semi-urgent referral for an echocardiogram was sent to Thames Hospital (Waikato DHB) on the same day. Despite multiple referrals being sent to Waikato DHB to have the echo performed during this time, the echo was performed on 14 February 2020 (approximately 6 months later) which identified a narrowed blood vessel (severe AS). Waikato DHB has since acknowledged that human and systemic errors caused the prolonged delay.

In early May 2020, [Ms A] raised further concern to her family doctor that she had not received the results of follow-up from Waikato DHB about the echo taken in February. On 8 May 2020, a cardiology consultant rang (due to Covid-19 lockdown) [Ms A] to discuss the report but she had since decided to seek private specialist care. No further contact was made with Waikato DHB and [Ms A] has since received a valve replacement.

6). Changes to provisional advice

I make no changes to my comments on departures from the standard of care provided to [Ms A].

10). The adequacy of the various remedial steps proposed and being implemented by Waikato DHB to address the issues and clinical risks identified in this case.

Waikato DHB provides further detail about the definitive electronic referrals management system and the improvements anticipated once this solution is fully in place. It is accepted that the combined challenges of a cyber-attack and then pandemic have impacted the implementation timeline. The interim solution of manually emailing or posting all echo reports is still in the process of implementation so the risk of a report not being acted upon remains until this mitigation is in place. The business case being developed to increase echocardiology staffing will, if approved, assist in the timely triaging of GP referrals. Policies describing the standard of care in respect of results management have been published and shared with clinicians in the Cardiology Department.

I consider that once the relevant mitigations are in place the risk of an untimely triage of GP echocardiography referral or echo result not sent to referrer will be greatly reduced. Once the definitive electronic solution is in place such interim mitigations will no longer be necessary.

I acknowledge that Waikato DHB has taken the complaint seriously and is working to implement solutions that will ensure a resilient and safe system of referrals management.

11). Any other relevant matters in this case that you consider warrant comment, including proposed recommendations that Waikato DHB should adopt.

Yours sincerely

Margaret Wilsher MD, FRACP, FRACMA
Chief Medical Officer'

Appendix C: Independent cardiology advice to Commissioner

The following independent advice was obtained from cardiologist Dr Ian Crozier:

'My name is Ian George Crozier;

I am a registered medical practitioner (10770) and cardiologist.

I have been requested to provide an opinion regarding the care provided by [Dr B] to [Ms A] during his read of her echocardiogram on 14 February 2020.

I am professionally acquainted with [Dr B].

Documents provided:

- Health and Disability Commissioner's summary of case and request for advice.
- Letter of complaint from [Ms A] to HDC 12 June 2020
- [Dr B's] response to HDC dated 12 December 2022
- Clinical records from Te Whatu Ora Waikato covering the period 1 August 2019 to 15 September 2020
- Echocardiogram report dated 14 February 2020 for [Ms A]
- Te Whatu Ora Waikato's responses dated 16 April 2021 and 26 November 2021.

Case summary: Extracted from HDC summary augmented with my own observations. Quotations from correspondence are shown in italics.

8 August 2019:
Referral for echocardiography by [Dr C] for [Ms A] forwarded to Waikato DHB.
Indications; *New onset ESM with retrosternal discomfort, light headedness — ? for echo*

3 September 2019:
Further referral [Dr C]
Palpitations — awaiting appointment from previous referral 8 Aug

4 September 2019
Echocardiogram referral triaged by Dr … for echocardiogram at Thames Hospital, category P1 priority. Patient not waitlisted at this time due to administrative error.

30 September 2019:
Palpitation referral triaged by Dr … for event monitor,
Priority 2.

10 January 2020:
Echocardiogram re-referral by [Dr C]
[Ms A] was referred in August and was put on the waiting list for an echo. She has heard nothing from the hospital and is wondering when it is likely to be done.

23 January 2020:
Echocardiogram re-triaged P1 priority

14 February 2020:
Echocardiogram performed.

19 February 2020:
Echocardiogram reported by [Dr B].
Severe Valvular Aortic Stenosis
NB: The report also states
GP referral
CC: [the medical centre]
However, in the responses from Waikato DHB 16 April and 22 November 2021, it was acknowledged that no report was sent to the general practice, and they were not notified that the echocardiogram had been performed.

4 May 2020:
The patient reports several inquiries by the patient to the general practice regarding the result, but no report was traced. On the 4th of May following a further request by the patient the report was found.

8th May:
Telephone consult with Dr D.
Recommends she should be worked up for aortic valve replacement however letter states
I understand that [Ms A] has made an appointment to be seen privately in the cardiology clinic next week. She has private insurance and is intending to be investigated privately. Hence at present, I have not made any plans to investigate her at Waikato DHB but would be happy to arrange this if she changes her plans.

13th May 2020:
Private cardiology consultation Dr …
Diagnosis; severe aortic stenosis due to bicuspid aortic valve.
Aortic valve replacement recommended.

27 May 2020:
Aortic Valve Replacement

Comment:

Specific advice required:

1. The adequacy of the care [Dr B] provided to [Ms A] in relation to the reading and follow up of the 14 February 2020 echocardiogram.

   Response: [Dr B] interpreted and reported the echocardiogram correctly.

I note that there was no recommendation for further referral or assessment on the echocardiogram report. Ideally there would have been a recommendation for further assessment of this important finding. However, there is variation in New Zealand with regard to providing a recommendation for further assessment or treatment on medical reports. For this reason, I would regard this at most as a mild departure from the standard of care. [Dr B] has acknowledged that a recommendation should have been provided in his report.

2. The adequacy of relevant systems, policies and procedures implemented by Waikato District at the time, in particular in relation to the follow up of abnormal test results.

   Response: There were significant inadequacies in Waikato DHB's management of this referral.

   Firstly, the referral was not booked due to an administrative error resulting in delay in the echocardiogram being performed. I regard this as a severe departure from the standard of care that would be viewed with concern by my peers. I note that Waikato have accepted that this was unsatisfactory and have implemented strategies to reduce the risk of this event occurring in the future.

   Secondly, the report was not sent to the referring general practitioner, nor was he notified the procedure had been performed and a report was available. I regard this as a severe departure from the standard of care that would be viewed with concern by my peers. I note that Waikato have accepted that this is unsatisfactory and planning to ensure all reports are sent to the referring doctor.

3. Any other relevant matters in this case that warrant further comment.

   Response: My major concerns are the administrative error in the patient not being booked, and the failure to provide the referrer with a report. These resulted in a delay to diagnosis and treatment of a serious heart condition.

   Whilst ideally the report would also have provided a recommendation for further assessment and treatment of the aortic stenosis, which [Dr B] has acknowledged, this did not delay her treatment as she was promptly assessed and treated following the general practitioner becoming aware of the result of the echocardiogram.

Ian Crozier
Cardiologist'