Health New Zealand|Te Whatu Ora Te Tai Tokerau (previously Northland District Health Board)

Primary Health Organisation, PHO 1

Primary Health Organisation, PHO 2

A Report by the

Deputy Health and Disability Commissioner

(Case 20HDC01184)

Health and Disability Commissioner
Te Toihau Hauora, Hauātanga

Contents

Executive summary

1. This report relates to the provision of podiatry services in the Northland region from 2017 until 2020 (inclusive) and examines whether the care provided to the late Ms B in 2017, including the management of her podiatry care by multiple providers, was adequate.

Findings

2. The Deputy Commissioner considered that during Ms B's two-week admission to Kaitaia Hospital, the clinicians involved failed to assess and consider the cause of her ulcers adequately, and despite being seen on multiple occasions, Ms B was not referred to the vascular service or the diabetes clinic. The Deputy Commissioner considered that Health New Zealand|Te Whatu Ora (Health NZ) held responsibility for ensuring that Ms B received timely intervention and found Health NZ Te Tai Tokerau in breach of Right 4(1) of the Code.

3. The Deputy Commissioner was critical of an error in RN G's classification of Ms B's foot disease following review, and her oversight of instructions on the rejected referral from community podiatry services. In addition, the Deputy Commissioner was concerned that podiatrist Ms H did not respond clearly in her explanation for the referral rejection.

4. The Deputy Commissioner also held PHO 1 responsible for the provision of community podiatry services to people with diabetes in Northland between 2017 and 2020 (inclusive) and was critical that PHO 1 did not provide an adequate community podiatry referral system and processes over this time, which affected multiple consumers, including Ms B.

5. The Deputy Commissioner did not find PHO 2 in breach of the Code and noted that it was not the responsible entity when care was provided to Ms B.

Recommendations

6. The Deputy Commissioner recommended that Health NZ Te Tai Tokerau provide a written apology to Ms B's whānau for the failings identified in this report; provide a summary of the findings of an audit of referrals of people with diabetes to community podiatrists to identify any delays in treatment; provide evidence of education sessions for practice nurses and community podiatrists on the management of diabetic feet; and report back to HDC on the findings of a review of documentation, to ensure that consistent terminology is now used, and a review of the processes and clinical guidelines for the diabetic foot for community podiatrists and general practices.

7. In addition, the Deputy Commissioner recommended that Health NZ Te Tai Tokerau provide HDC with updates on the adequacy of staffing numbers for the podiatry service, the requirements of training for podiatrists on the referral process, and progress with the development of patient 'journey maps'.

Complaint and investigation

8. Complaints were made to HDC about podiatry services in Northland from 2017 to 2020. The complaints related to reported service performance issues, including the quality of communication, the coordination of care, the standard of service, and the management of referrals and complaints.

9. Deputy Health and Disability Commissioner Rose Wall commenced an investigation on her own initiative pursuant to section 40(3) of the Health and Disability Commissioner Act 1994. The following issues were identified for investigation:

- *Whether Northland District Health Board[1] provided an appropriate standard of care to Ms B between Month2[2] and Month6 2017 (inclusive).*
- *Whether Northland District Health Board provided an appropriate standard of care to multiple consumers from July 2017 to June 2020 (inclusive) in respect of podiatry services provided, including but not limited to:*
  a) *Whether Northland District Health Board had adequate systems in place in order to provide continuity of care to its patients.*
  b) *Whether Northland District Health Board took the appropriate steps to address and facilitate the resolution of concerns raised.*
- *Whether PHO 1 provided an appropriate standard of care to Ms B between Month2 and Month6 (inclusive).*
- *Whether PHO 1 provided an appropriate standard of care to multiple consumers from July 2017 to June 2020 (inclusive) in respect of podiatry services provided, including but not limited to:*
  a) *Whether PHO 1 had adequate systems in place in order to provide continuity of care to its patients.*
  b) *Whether PHO 1 took the appropriate steps to address and facilitate the resolution of concerns raised.*
- *Whether PHO 2 provided an appropriate standard of care to multiple consumers from July 2019 to June 2020 (inclusive), in respect of podiatry services provided, including but not limited to whether PHO 2 had adequate systems in place in order to provide continuity of care to its patients.*

10. This report is the opinion of Deputy Commissioner Rose Wall and is made in accordance with the power delegated to her by the Commissioner.

[1] On 1 July 2022, the Pae Ora (Healthy Futures) Act 2022 came into force, resulting in all district health boards being disestablished and Health New Zealand|Te Whatu Ora (previously called Te Whatu Ora|Health New Zealand) being established in their place. All references in this report to Northland District Health Board (DHB) now refer to Health NZ Te Tai Tokerau.
[2] Relevant months are referred to as Months 1–6 to protect privacy.

11. The parties directly involved in the investigation were:

Mrs A	Complainant
Mr C	Complainant
Health NZ Te Tai Tokerau	Provider
PHO 1	Provider/primary health organisation
PHO 2	Provider/primary health organisation

12. Further information was received from:

ACC	
Medical centre	Provider

13. Also mentioned in the report:

Dr D	Internal medicine consultant
Dr E	General practitioner
Dr F	General practitioner
RN G	Registered nurse
Ms H	Community podiatrist
PHO 3	Primary health entity

14. Independent advice was obtained from a rural hospital medicine specialist, Dr Jennifer Keys (Appendix A), and a systems advisor physiotherapist, Ms Janice Mueller (Appendix B), and in-house medical advice was obtained from general practitioner (GP) Dr David Maplesden (Appendix C).

Information gathered about community podiatry services in Northland

Introduction

15. This opinion considers the system in the Northland region for the provision of podiatry services from 2017 until 2020 (inclusive). In particular, the report examines whether Health NZ Te Tai Tokerau, PHO 1,[3] and PHO 2 had adequate systems and processes in place for the management and provision of community podiatry services.

16. The report also specifically examines the care provided to the late Ms B, in particular whether the care provided to her in 2017, including the management of her podiatry care, was adequate. Ms B's mother complained about the treatment her daughter received from Health NZ Te Tai Tokerau at Kaitaia Hospital and from the podiatry clinic.[4] Ms B required an amputation of her toe, then a below-knee amputation, and, sadly, she died.

[3] PHO 1 was removed from the Companies Register and it no longer has legal status.
[4] Northland DHB contracted PHO 1 to provide these services at the time of Ms B's treatment.

17. Diabetes podiatrist Mr C worked in the diabetes clinic operated by Health NZ Te Tai Tokerau.[5] He also complained about Ms B's treatment. In addition, he told HDC that he had raised concerns with several parties[6] over four years regarding patient safety, complaints, and performance issues relating to the podiatry clinic. He referred to the performance of the podiatry clinic, including issues relating to contract management; clinical governance; financial irregularities; clinician performance; and coordination of the referral processes. He had made patient safety complaints that specifically related to the coordination of the referral process for the podiatry clinic.

Importance of podiatry to people with diabetes[7]

18. Generally speaking, a regular systematic review of a diabetic person allows for assessment of glycaemic control and early detection and intervention of diabetes-related complications. It also creates an opportunity to review and assess individual treatment plans regularly and provide support if required. A regular check is more significant for a diabetic person who is less compliant with their diet and treatment plan (including medication) and has challenges with other aspects of their lifestyle that place them at risk of developing more profound complications more rapidly.

19. Foot problems are a recognised serious complication of diabetes. A combination of poor circulation, susceptibility to infection, and nerve damage from high blood-sugar levels can cause diabetic ulcers.

20. Medical literature suggests that the five-year mortality rate for a person with diabetes and a foot ulcer is 2.5 times higher than for diabetes alone, and the mortality rate is greater than 70% for those people who undergo a related lower-limb amputation. For those requiring a lower-limb amputation and receiving renal replacement therapy (treatment for kidney failure), the mortality rate is 74% at two years.[8]

21. According to statistics, the prevalence of diabetes in Māori and Pacific populations is around three times higher than among other New Zealanders. For people with diabetes, 19–34% will experience foot ulcers in their lifetime. In New Zealand, the risk of diabetes-related lower limb amputation is more prevalent amongst Māori, with much poorer outcomes.[9]

Requirements for care of a person with diabetes at time of events

22. The Ministry of Health|Manatū Hauora Quality Standards for Diabetes Care 2014, [10] Standard 11 recommends that access to foot-care services is the basic expected care for people with diabetes. It is expected that all people with diabetes receive an annual foot

[5] Mr C is no longer an employee of Health NZ.
[6] Including internally within the DHB, the Ministry of Health, and HDC.
[7] Northland DHB Review of Community Podiatry Services (October 2018).
[8] See footnote 6.
[9] See footnote 6.
[10] This was the version current at the time of events. The standards were updated, and the current version in place is the Quality Standards for Diabetes Care 2020 (released September 2020).

check, and that this foot check is the basis for an integrated foot-care service across primary and secondary services.

23. In 2014 the New Zealand Society for the Study of Diabetes (NZSSD) developed the 'National Diabetes Foot Screening and Risk Stratification Tool' (NDFSRS tool), which offers comprehensive advice on foot screening and assessing risk status.

24. The NDFSRS tool outlines the risk stratification of low risk of foot disease, moderate risk of foot disease, high risk of foot disease, and active foot disease (see Appendix D).

25. The NDFSRS tool defines a 'high risk foot' as previous amputation or ulceration or two or more risk factors present. It includes being Māori as a risk factor under 'high risk', effectively moving Māori people who have been identified with moderate risk into the high-risk foot category. The actions to be taken for a high-risk foot included an agreed and customised management and treatment plan, and referral for specialist intervention if or when required.

26. The NDFSRS tool defines 'active foot disease' as the presence of active ulceration, an unexplained hot, red, swollen foot with or without the presence of pain, severe or spreading infection, or critical limb ischaemia. The actions to be taken included urgent referral to a multi-disciplinary or hospital foot clinic, and urgent hospital admission for severe infection or critical limb ischaemia.

27. The NZSSD guidelines were updated in April 2017, but the language used to describe risk stratification in the service specifications remained unchanged.

Background — podiatry services in New Zealand and Northland

28. Historically, nationwide service specifications were jointly agreed between the Ministry of Health and the DHBs and were reviewed and updated as needed.

29. In 2012, (then) Northland DHB contracted PHO 1 to provide community podiatry services in Northland. PHO 1 held contracts with community podiatrists and community podiatry services, to provide care to Northland people with diabetes.

30. In late 2013, the Ministry of Health announced additional funding to support the Diabetes Care Improvement Package (DCIP) for the provision of podiatry services. The diabetes working group consulted on a variety of options, and by consensus agreed (and agreed with the Ministry of Health) that the funding would be used for the podiatry service, to improve access to community podiatry for all Northland patients who were identified at risk of foot complications.

31. PHO 1 community podiatry services and the new DCIP-funded community podiatry services were to align to ensure that there was full service coverage across the Northland district, with the delivery of podiatry services based on identified risk/high risk need.

32. The effectiveness and impact of the Community Podiatry Programme was evaluated in June 2016 by PHO 1. Health NZ told HDC that after this evaluation in 2016, PHO 1 implemented

changes to the triaging of referrals. The evaluation noted that the lack of training needed to be addressed in order to reduce variability in practice amongst community podiatrists, and clinical governance needed development.

2017

33. Northland DHB and PHO 1 entered into a Health and Disability Services Agreement in 2012 (the Agreement) and agreed to subsequent variations to alter the terms and extend the duration of the service.

34. Prior to 2017, there had been variations for PHO 1 to introduce foot-care screening and risk stratification for people with diabetes, and to establish clear referral pathways for patients to access podiatry services in primary care.[11]

35. In the 2017–2019 period, the Agreement required that under the guidance and recommendations of the advisory diabetes working group, PHO 1 would deliver seven service objectives, which included to:

- Develop, oversee, and implement culturally safe and appropriate models of care for patients and whānau with diabetes.
- Reduce inequities in the burden of diabetes disease on high-risk patient groups — in particular for Māori.

36. Under the Agreement, PHO 1 was also to provide the diabetes working group with the secretariat, leadership, and support required to deliver the service specification.

37. The community podiatry services and podiatrists were to provide services to people with diabetes who had 'moderate' and 'high risk' feet. Patients who required input and management of 'active foot' problems would be referred to the secondary service, the diabetes clinic.

38. The Community Podiatry Service Specifications current in 2017 stated:

> 'The contractor will provide best practice, quality podiatry services based on established professional standards and codes of practice to patients referred for assessment and treatment … *and* … The contractor will treat patients in a timely manner as per the 2014 NZSSD Diabetes Foot Screening and Risk Stratification Tool … and Te Tai Tokerau Primary Health Organisation's (PHO 1) podiatry treatment guidelines …'

39. The service specification Exit Criteria stated:

> 'Patients requiring input from the secondary health care team for the management of active foot problems will be referred to the Secondary service, the diabetes clinic by the contractor, through their referral processes. The contractor will ensure the General Practice is notified that the patient's care has been transferred.'

[11] Variation to Agreement signed December 2013.

Terminology used in guidance for referrals — July 2017

40. At the time of events, GP practices across the Northland district referred patients directly to community podiatrists. PHO 1 had in place a guidance document, 'How to use the Diabetes Foot Risk Assessment Form & Refer to Podiatry' dated 2014/2015, to help GP practices with the referral process to podiatry services.

41. The guidance document referred to actions to be taken for 'at risk' and 'high risk' feet, rather than 'moderate risk' and 'high risk' feet as outlined in the NDFSRS tool.

42. The guidance document also noted that the referral pathway for 'acute foot' (which was not one of the categories listed in the NDFSRS tool) must be sent via the usual DHB diabetes e-referral pathway with a telephone call to the DHB Podiatry clinic (that is, a separate referral process to the management of 'at risk' and 'high risk' feet).

43. No clinical policy or guidelines on the management of the diabetic foot were available to general practices. Nor were process documents or clinical guidelines for the management of the diabetic foot available to community podiatrists.

44. The NDFSRS tool used in Northland DHB in 2017 was based on the 2014 guidelines.

2017 reviews

'Northland PHO Community Podiatry Review' June 2017

45. In June 2017 podiatrist Mr C BHSC (POD), PGDIPHSC (the complainant) conducted a review of the podiatry service. His review report stated that 'the community podiatry programme had been mismanaged from the outset' and that there had been three years of continuous and unresolved problems.

46. The review report stated that the lack of coordination and management of the programme had enabled the referral process to be abused by referrers and providers, and this had resulted in the misuse of allocated funding. It said that a considerable number of inappropriate referrals had been accepted by providers, due to the lack of clinical oversight and triaging of referrals.

47. The review report also stated:

> 'This systemic failure has also seen high risk patients wait for exceptionally long periods from date of referral. High risk patients have also been inappropriately discharged to either not be seen again or were informed to request alternative funding to receive ongoing podiatry cares. These delays and discharging practice has contributed towards some patients developing diabetic complications resulting in hospital level care and/or amputation. Other discharged patients have otherwise been managed by the [diabetes clinic] which is effectively subsidising the programme by managing these patients who should otherwise be managed by the community programme. In the past two years a noticeable increase in diabetic foot ulcerations has been received by the diabetes clinic despite full access to community podiatry services not previously available three years ago. These referrals are mostly for patients who were being managed by the community

podiatry services or not at all. These failures have consequently exposed significant gaps in the expected delivery of the community podiatry services.'

48. The review recommended that new funding for community podiatry in Northland be re-allocated to the diabetes clinic to manage the 'high risk' patients as it was better placed and skilled to manage these patients, while the community podiatrists would continue to manage the 'at risk' patients.

PHO 1 investigation — December 2017

49. In 2017 a complaint was lodged with HDC regarding the treatment a community podiatrist had provided to two patients. HDC referred the complaint to Northland DHB under section 59(4) of the Health and Disability Commissioner Act 1994. Northland DHB requested that the contract holder, PHO 1, conduct an investigation.

50. The review report dated 7 December 2017 found the following:

- The workload and activity being carried out by the community podiatrist was not apparent to those within the PHO, as patients were visible to the PHO only when they were returned or closed.
- Due to the setup of the current electronic referral system, it was unclear exactly when the podiatrist received the referral, as acceptance did not take place until contact had been made between the podiatrist and patient and the initial appointment had been booked. Large periods of time could then pass during which it was unclear what activity was taking place between the patient and the podiatrist, which was unrecorded and not apparent to the PHO.
- There were no timelines in place for how long the patient could reside in this period following receipt of referral but contact not made and no appointment fixed.
- The analysis identified a general systemic failure that had allowed these unfortunate events to occur, often unbeknownst to the PHO. Therefore, the energies and priorities were channelled into addressing these as a whole-of-system solution in order to halt the ongoing effects and manage the risk. Unfortunately, this did not address earlier failures within the system or the lack of direct oversight into the services provided or the actions of the providers.

51. Health NZ Te Tai Tokerau told HDC that it agrees that there was a significant increase in diabetes-related lower extremity amputations for Northland patients between the financial years 2016/17 and 2017/18. Health NZ said that the cause was not known at that time.

52. PHO 1 initiated immediate remedial actions, including the following:

- A redirection of referrals — general practices would thereafter send all referrals to the PHO, and they would be assigned to a podiatrist from there.
- Formulation of a strict timeframe guide for referrals whereby the period of time between 'assigned and received' and 'received and accepted' was a documented

measure and depicted all activity that occurred. This information was visible to the PHO for audit purposes.

- Reformation of the previous overarching group the diabetes working group into the Northland Diabetes Strategic Advisory Group (NDSAG), which adopted a collaborative approach across all spectrums and specialties of diabetes care providers from primary, secondary, and community/allied services.
- The appointment of a programme coordinator to provide day-to-day coordination of the podiatry service, assess and allocate referrals made into the PHO, and oversee the programme with regard to ensuring that patients enter and exit the service in an appropriate locality and in a timely way, and in accordance with the proposed treatment timeframe and guidelines.

Update to policies and training following reviews — 2018

53. PHO 1's guideline for general practices, 'How to Guide for Diabetes Podiatry Services', was updated in January and then June 2018, largely reflecting the change in referral processes — that referrals were to be sent to the PHO by the general practice, and then assigned to a podiatrist from there.

54. Of note, the updated version did not align with the 2017 NDFSRS tool that was in use in 2018. There remained inconsistent use of terminology, ie, the documentation referred to 'At Risk/Moderate Risk foot', rather than using the categories in the 2017 NDFSRS tool, which are low risk, moderate risk, high risk, and active foot disease.

55. The 'Community based Diabetes Podiatry Services in Northland process map' (undated) was also developed, outlining the process and timeframes for a GP practice to make a referral to the PHO and for it to be assigned and actioned by a podiatrist.

56. Health NZ Te Tai Tokerau told HDC that no formal training was provided by PHO 1 to community podiatrists regarding the change in the referral system and processes.

2018 review

57. Health NZ told HDC that several podiatry service reviews and evaluations took place in Northland but concerns still remained about whether there was sufficient clinical oversight of the management and coordination of the podiatry service, and variance of practice. Health NZ said that the concerns suggested that there might be unacceptable risk to patient safety, so Northland DHB, as funder, requested another review in October 2018.

58. The review was conducted by two health professionals.

59. The review concluded that the current model of care did not appear to support seamless care with clear clinical oversight and responsibility for the foot health of people with diabetes in Northland.

60. The review noted that the issues could partly be due to contracts being administered by separate directorates within Northland DHB. It outlined that hospital and community

podiatry services were managed and delivered by different services and disparate practitioners. It stated that connected care was also hindered by the community podiatrists using different patient management systems, and the lack of integration between secondary services and primary care IT tools.

61. The review report states:

> 'The current funding package and contracting model for community podiatry is not sufficient to provide the appropriate evidenced based level of podiatry care to all high risk and moderate risk foot patients in Northland.'

62. The review report states that there was insufficient hospital-based podiatry staff to meet the demands on the hospital podiatry service, and there was concern about patients deemed to be AFIR (Active Foot in Remission) following their discharge from the diabetes clinic, and whether they were receiving the essential and regular podiatry follow-up and input required to reduce the risk of re-ulceration post discharge. The reviewers said that AFIR patients should continue to be cared for by the hospital-based podiatry team, to ensure that they were monitored and treated carefully, and not lost to follow-up.

63. The review also stated that community podiatrists were working in isolation and there did not seem to be any active podiatry group that might be able to provide a forum for peer interaction and discussion.

64. The report stated that more robust clinical governance for the podiatry programme and the development of service standards and a credentialling framework were required.

65. The report made six recommendations:

- That additional hospital specialist podiatry FTE (full-time equivalent) capacity be created in order for the hospital podiatry service to meet its current and future demands.
- That the hospital podiatry service provide continuing care to all patients with Active Foot, AFIR and end-stage renal failure.
- That the community podiatry service be reoriented and sufficiently resourced to ensure that the high-risk foot cohort could access free or subsidised podiatry services on a monthly basis if required, as per evidence-based guidelines.
- That new opportunistic foot risk screening programmes be developed to improve the annual foot risk screening coverage, especially for patients who are, or are likely to be, in the high-risk foot group.
- That effective clinical leadership and clinical governance of the community podiatry services needed to be developed, including service standards and a credentialling framework.
- If resources allowed, the continuation of a free or subsidised community podiatry service for the moderate risk group of patients, at a frequency of one or two sessions per year.

66. Health NZ told HDC that it accepted the findings and recommendations within this review, including the comments made by the reviewers that they were 'not confident that there was sufficient clinical monitoring and quality assurance in place at Te Tai Tokerau to ensure all contracted podiatrists were working to the expected Boards' Codes of Practice'.

Actions taken following 2018 review

67. Health NZ told HDC that the recommendations from the 2018 review were signed off by the Northland DHB Executive Leadership Team in December 2018.

68. Health NZ said that discussions with the community podiatrists began on 27 March 2019, including discussion of a clinical governance group for community podiatrists. A working group, including members from PHO 1 and Northland DHB clinicians and managers, met with community podiatrists on 11 April 2019 to discuss the way forward with the recommendations.

69. PHO 3 told HDC that it was aware that significant training occurred in 2018 under PHO 1's direction to embed the referral processes and educate clinicians on foot screening and assessment.

PHO 3

70. In 2019 PHO 2 established PHO 3 as the primary health entity (PHE) for Te Tai Tokerau Northland. PHO 3 told HDC that it commenced delivery of services on 1 July 2019 as the PHE delivering and contracting primary healthcare services within the rohe of Te Tai Tokerau.

71. Health NZ told HDC that PHO 3 entered into a contract with Northland DHB for the community podiatry service, which was coordinated by a team made up of a diabetes nurse specialist, a nurse director, and a clinical director (GP). General practices conducted the patients' diabetic annual reviews and then sent podiatry referrals to PHO 3. The team reviewed the referrals against criteria to determine whether the patient could be managed appropriately by a podiatrist in the community or needed to be referred to the diabetes clinic.

72. Health NZ told HDC that wait times were monitored and, if the patient referred was not seen within the agreed timeframe, then the patient was electronically referred back to the PHO 3 care coordination team to follow up.

73. PHO 3 also entered into contracts with community podiatrists to provide podiatry services for people with diabetes who had been assessed with moderate and high-risk feet. The contracts required the providers to treat patients in a timely manner as per the NDFSRS tool, PHO 3's podiatry treatment guidelines, and the community-based Diabetes Podiatry Service flow chart. Enrolled service users in Northland were entitled to access the service if they had been diagnosed with diabetes and identified as having at-risk foot disease.

74. Under the contracts, the community podiatrists were required to refer patients with active foot disease to the diabetes clinic and notify the patient's general practice that the patient's care had been transferred.

75. PHO 3 provided HDC with a spreadsheet of the podiatry referrals that had been received between mid-2017 and 30 June 2019 and had a wait time of over 28 days (around 1,016 patients). PHO 3 said that it had found the following main reasons for delays of over 100 days:

- Patients previously under the diabetes clinic were referred for community podiatry with a view to being seen again in 8–12 weeks' time.
- Repeat contacts were attempted before a successful contact was made and an appointment was scheduled.
- Podiatrist illness required appointment rescheduling.
- Patient preference for a particular community venue resulted in the need for a podiatry service reallocation and a delay in appointment availability.
- Patients did not attend booked appointments for a variety of reasons.
- Delays occurred in patient assignment to a podiatrist +/- delays in communications by podiatrists.

76. PHO 3 told HDC:

> 'Based on our analysis of this data and the more current 2019/2020 data we are confident that there have been system and process improvements that support timely referrals, referral activation and patient engagement. We continue to monitor to ensure these systems remain in place and are being followed.'

77. In relation to the 2018 community podiatry review, PHO 3 told HDC that a working group (see paragraph 68) was formed to progress recommendations made for the improvement of the podiatry service. PHO 3 stated that the previous clinical coordinator tried repeatedly to progress the podiatry work with the DHB podiatry working party with limited success.

78. PHO 3 said that all four recommendations related to community podiatry have been actioned and continue to evolve, but it is constrained by funding and has been unable to fully implement the recommendation for monthly podiatry for the high-risk foot cohort. However, it has been able to offer the high-risk foot cohort group five podiatry visits annually based on clinical need.

79. PHO 3 told HDC that it is aware that podiatry clinical leadership needs to be strengthened, and it continues to work in this space to promote collegial collaboration between secondary and community podiatry services. The diabetes community podiatrists meet regularly for peer review and support.

80. PHO 3 advised that it has put in place improvement measures and has taken the following actions (systems related) to address concerns relating to the community podiatry service:

- It reinforced the active foot referral pathway across Northland and recirculated the risk algorithms to general practices and other providers.

- It refined the e-referral system and rolled this out.
- It actioned a change request to one of its e-documents to ensure clear messaging.

Concerns raised in 2019

81. In December 2019 Mr C sent two emails to the Northland DHB Chief Operating Officer (COO) highlighting concerns that community podiatrists continued to send patients to general practices to be referred to the diabetes clinic, rather than referring them directly to the diabetes clinic as required by their contracts. He noted that in his view, this was not patient centred and caused delays in treatment, creating needless patient costs and consuming unnecessary resources and time of other services.

82. In the emails, Mr C said that recently he had seen a patient in the diabetes clinic who had reported that the application of a dressing/bandage on the right second toe by a community podiatrist in July 2019 had led to the development of an ulcer. The patient had required four courses of antibiotics in the following two months. In October 2019 the patient was seen again by the community podiatrist, who advised the patient's GP to refer the patient to the diabetes clinic. At the time of review in the diabetes clinic, the patient's joint and bone of the toe was exposed, and X-rays showed cortical destruction or signs of bone infection. Mr C referred the patient to the orthopaedic service to review for amputation.

83. Mr C also forwarded his emails sent to the COO in previous years highlighting similar issues, including in December 2018 when he outlined individual cases that he considered were affected by incorrect referrals or lack of referrals, including for amputations.

84. Health NZ said that the issues raised by Mr C were a concern to the DHB. It immediately reported the matter to PHO 3 as the contract holder for community podiatry services, and PHO 3 confirmed to Health NZ that it issued reminder communications to all general practice and community podiatrists on the required referral process. PHO 3 also advised that the podiatrist concerned was no longer providing any community podiatry services.

Guidance documents updated — 2019

85. Minor amendments were made to the 'Community based Diabetes Podiatry Services in Northland' (2019) process map and the 'How to Guide: How to Refer to Podiatry' reflecting the change from PHO 1 to PHO 3, and the use of the e-referral management system.

86. The 2019 process map still did not use the NDFSRS Tool (2017) categories. It used 'At Risk' and 'High Risk' foot, rather than 'Moderate Risk' and 'High Risk' foot, whereas the Ministry of Health service specification document brackets the 'At Risk/High Risk' foot together.

Subsequent events

Transfer to Northland DHB — October 2020

87. Health NZ told HDC that in October 2020 Northland DHB was satisfied with the adequacy of the resourcing model and clinical oversight of the podiatry service, but at that time it had decided to reorient the podiatry service to bring more services back into the diabetes clinic.

Regarding the concerns raised by Mr C in December 2019 about the individual patient (see paragraph 82), Health NZ told HDC:

> 'The failure by the podiatrist to adhere to the required referral process further cements Northland DHB's decision to shift the delivery of higher risk foot services back into the diabetes clinic.'

88. Health NZ said that while that decision had been made, there remained a need to retain community-delivered podiatry services. At that time, it had yet to decide how the community-based services should be resourced. The DHB said that the diabetes clinic would provide a greater level of clinical oversight than the PHE, but as highlighted in the Health and Disability System Review (March 2020),[12] there is also value in growing community networks, with podiatrists working more closely with general practice in multidisciplinary teams.

89. Health NZ said that it had committed to an executive management level response to the series of concerns raised about the community podiatry service. The following remedial activity was commenced and/or completed:

- Executive-level meetings commenced between the lead general manager for the then DHB and the CEO of the PHE.
- An additional podiatrist commenced in the diabetes clinic in February 2020, and recruitment was underway for an additional podiatrist for the diabetes clinic, which was approved following confirmation of the budget for 2020/2021.
- A Diabetes Governance Group was established and is developing a Northland Diabetes Strategy, with key areas of focus identified and priority activities being progressed.
- As part of the priority focus on podiatry, patient 'journey maps' were being completed, with the aim of developing specific solutions to address poor patient outcomes, and to action these solutions.

90. Health NZ also said that it was monitoring the performance and improvement activity of PHO 3, which included education, increased use of funded packages for eligible patients, and workshops.

Transfer of management of community podiatry services — September 2021

91. PHO 3 told HDC that from 1 September 2021 the management of community podiatry services was withdrawn from PHO 3 and passed to Northland DHB.

[12] Health and Disability System Review — Final Report Pūrongo Whakamutunga (March 2020). Published online June 2020: https://www.health.govt.nz/publications/health-and-disability-system-review-final-report

92. Health NZ stated:

> 'For a seamless transition for patients and referrers all contracts were rolled over from [PHO 3] for all the current podiatry contract holders. All referrals are managed by the high risk foot clinic at [Health NZ Te Tai Tokerau].'

93. Health NZ said that at that time, a working group was to be set up in the coming months with representation from community podiatrists, Northland DHB podiatrists, referrers, and consumers, to review and enhance the current model of care for podiatry across Northland.

Ms B: Information gathered during investigation

Background — prior to Month2

94. Ms B was a Māori woman who was in her thirties at the time of events. She developed type 2 diabetes associated with her morbid obesity when she was aged around 23 years. She had poor control of her blood sugar for many years before commencing insulin therapy in 2016.[13]

95. Ms B suffered significant complications of diabetes, including retinopathy (damage to blood vessels in the back of the eye), nephropathy stage 3 (mild to moderate kidney damage), chronic kidney disease with nephrotic syndrome (damage to blood vessels in the kidneys), and ischaemic heart disease (narrowed heart arteries) with a previous heart attack. Ms B was a current smoker. She also had admissions to hospital for treatment of cellulitis (a bacterial skin infection) in 2010.

96. In 2014 Ms B was seen by Mr C in the diabetes clinic for a wound between her right great toe and second toe. She was treated with wound debridement (removal of dead or infected tissue) and the plan was to refer her to the community podiatry clinic because of the risky condition of her foot. Mr C discharged Ms B from the diabetes clinic because she did not have any active diabetic foot complications at that time.

97. On 25 July 2016 internal medicine consultant Dr D saw Ms B for a first visit in the nephrology clinic. She had been referred to the clinic because she had protein in her urine and renal dysfunction. Dr D noted that she had been started on insulin therapy about a year previously, but her blood sugars had been poorly controlled, and she had developed significant diabetic retinopathy. Dr D noted that she was likely to have diabetic neuropathy (nerve damage) in her feet, but she had not developed any foot ulcers at that stage. She was continuing to smoke but was trying to cease.

[13] Clinical notes from 2010–2014 record that she was not taking her diabetes medication and had very high blood sugar levels. In 2012 her feet and toes had been numb, and it was recorded that she had been discharged from the diabetes service because of non-attendance at appointments.

98. In early 2017, clinical notes from several providers[14] record that Ms B had stopped taking her diabetes medications and was not checking her blood sugars, and instead was using alternative therapies and eating healthily.

99. On 2 Month1 Ms B saw GP Dr E, who noted that she had toe sepsis and prescribed a ten-day course of antibiotics.

100. On 20 Month1 Dr D saw Ms B in the nephrology clinic. Her chronic kidney disease was getting worse, and she had not been taking any of her medications for at least the previous five days, but likely for longer. Dr D documented:

> '[Ms B has] her own approach to health care which often involves not taking her medications. She is certainly able to consider the pros and cons of this and I am happy to support her as best we can.'

Referral to community podiatrist — 28 Month2

101. On 28 Month2 GP Dr F at the medical centre conducted Ms B's routine three-monthly review. He noted that she had some mild respiratory symptoms and ongoing right knee and ankle pain following a fall. Dr F recorded that Ms B's last blood sugar result (from March 2017) had been stable at 53mmol/mol.

102. Dr F ordered repeat blood tests, and Ms B was then seen by the practice nurse, registered nurse (RN) G,[15] for her annual diabetes review.

103. RN G told HDC that she was an experienced senior practice nurse and had worked in that role at the medical centre for 20 years, during which time she had assessed many feet as part of diabetic care. RN G said that she always undertook a foot assessment as part of the annual diabetic review. The foot assessment included viewing the feet to check the foot colour and skin integrity, and the condition of the nails. She said that she also checked the dorsalis and tibial pulses (a check of the blood supply to the legs), temperature, callouses, and other skin lesions and infections.

104. RN G stated that she noticed that Ms B had a small bandage on the second toe of her left foot, which RN G removed and saw a small scab. She told HDC that the lesion was not infected, oozing, necrotic, or giving Ms B any concern at that time. RN G stated: 'I believed that the course of antibiotics [prescribed on 2 Month1] had treated the concern and her toe was nearly healed. As such I did not believe this lesion was a concern.'

Assessment of risk and electronic referral

105. RN G said that she documented the information regarding Ms B's foot assessment in the NDFSRS tool/foot assessment form in their patient management system.

106. RN G said that the electronic assessment form has a decision-making formula, which calculated from the information input that the assessment was of a 'high-risk' foot that

[14] Dr D at the nephrology clinic, district nurse notes, and GP notes.
[15] RN G has now retired.

should be referred to the community podiatrist. She said that she followed the instruction and ticked that she wished to proceed with the referral to the community podiatrist.

107. RN G stated that she did not see the 'pop up' that indicates that if the patient has an 'active risk' foot they should be referred to the diabetes clinic. She noted that this 'pop-up' is given as an option, rather than as part of the decision-making tool that had given her an instruction.

108. RN G said she believed that the lesion was very small, and not causing Ms B any concern, so she did not classify it as an 'active' foot ulcer, but rather as an all-but-healed ulcer that was not actively infected or causing pain to the patient. RN G said that her main concern at the time was that she could not detect pedal pulses due to the swelling and coldness of Ms B's feet.

109. RN G informed Ms B about her risk status and noted that she was not currently engaged with any podiatry service. RN G then sent an e-referral 'with the reason for the referral documented as: "Feet assessment done today = gives a result of 'High Risk' feet and recommends seeing a podiatrist"'. The completed template was attached to the referral.

110. In relation to training and referral advice given in 2017, RN G told HDC:

> 'The definitions and referral pathways for diabetes foot screening and assessment have been confusing. Though I am well qualified to assess a foot, ensuring it meets the correct definition, follows the correct method for submission and the correct pathway have been a challenge. The process has been fraught with various changes and the process to complete a referral to [the diabetes clinic] is not straightforward.'

111. RN G said that the definitions regarding foot assessment were made clear to her, and she became aware of the difference in the referral pathways and the correct method for referral. She said that going forward she referred any form of ulcer to secondary services as an 'active' foot.

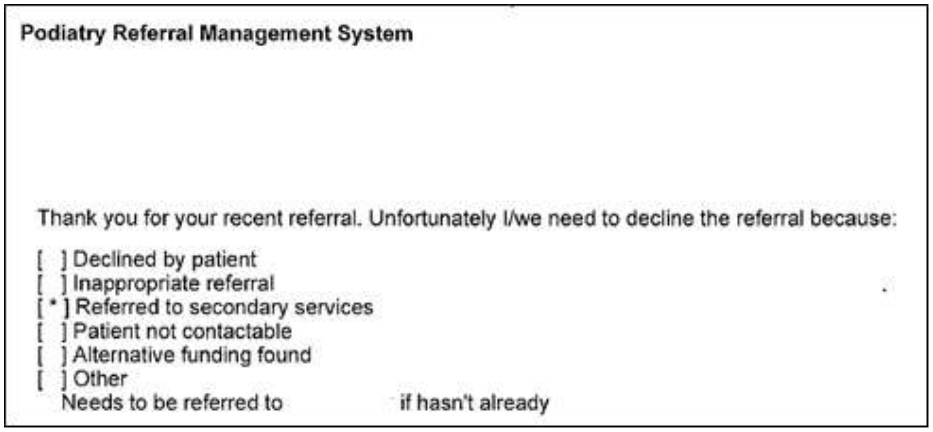
Management of referral

112. The referral was received by community podiatrist Ms H[16] on 28 Month2. On 31 Month2 Ms H viewed the referral and, that day, she returned it to the system administrator. Health NZ Te Tai Tokerau told HDC that no notes were kept of this decision by the system administrator.

113. In response to the provisional opinion, Ms H stated that her understanding was that when she declined the referral and re-sent it to the system administrator, it should have been forwarded directly to the diabetes clinic.

114. On 2 Month3 the system administrator sent a rejection of the referral back to RN G, which states:

[16] At the time of events, Ms H was self-employed.



Podiatry Referral Management System

Thank you for your recent referral. Unfortunately I/we need to decline the referral because:

[ ] Declined by patient
[ ] Inappropriate referral
[*] Referred to secondary services
[ ] Patient not contactable
[ ] Alternative funding found
[ ] Other
Needs to be referred to if hasn't already

115. RN G said that she interpreted 'Referred to secondary services' as referring to an action that had already been undertaken by the community podiatry administrator.

116. RN G said that she overlooked the comment that Ms B needed 'to be referred to Mr C if hasn't already', but that had she noted it, she would have interpreted that this had been done already, as it had said 'referred to Secondary Services'. She stated that she interpreted the response as meaning that no further action by her was required.

117. RN G said there is a lot of 'push back' of referrals for podiatry. She stated: 'Obtaining Podiatry care in Northland is very limited and the delay in accessing Secondary Services podiatry care is at least 2–4 weeks.'

Admission to Kaitaia Hospital — 17 Month3

118. On 17 Month3 Dr E referred Ms B to Kaitaia Hospital Emergency Department (ED) with fluid overload and chronic leg ulcers on both feet, and she was admitted on 18 Month3. She had oedema up to her abdomen and a necrotic ulcer on her left second toe, which she stated had been there for over a month.

119. Ms B was treated with intravenous furosemide (a medication used to treat fluid build-up). An echocardiogram showed deterioration of her heart function. Swabs were taken of her right leg, and she was started on oral cephalexin (an antibiotic).

120. There is no documentation of the pulses in, or the vascular status of, her legs.

121. Health NZ said that Ms B's toe was noted to be poorly perfused, but after fluid was offloaded the perfusion improved and she was discharged on appropriate antibiotics to treat infection. Health NZ said that Ms B presented with multiple comorbidities, which were cared for by multiple practitioners, and her admission focused on her acute complaint, which was fluid overload.

122. Health NZ stated that while the ulcers are noted, aside from antibiotic treatment, predominantly they were cared for by the nursing staff during this admission, and district nursing staff were also involved. Health NZ said that the admission note suggests that the

cause was thought to be diabetes, and possibly this was not challenged, as during this admission the ulcer management did not give cause for acute concern.

123. Regarding the checking of pulses in Ms B's legs, Health NZ stated that it is possible that a pulse check may have prompted action sooner, and it is also possible that it was not considered because of Ms B's oedema and diuresis (increased urination), and the improvement in the state of her wound with the antibiotic therapy.

124. Ms B was not seen by the podiatry service during this admission.

125. RN G commented that Ms B was in Kaitaia Hospital from 17–31 Month3, during which time the clinicians would have had direct access to Mr C, as he visits there fortnightly. RN G said that the staff could have expedited a review of Ms B's feet by Mr C, given that she was admitted to hospital with concerns about her feet. However, Ms B was not referred to Mr C until 28 Month4. Health NZ said that the ulcer was chronic and already receiving directed care (both before and after the admission), and Ms B was admitted for a different acute issue, which was improving.

126. On 5 Month4 Ms B was reviewed by the district nursing service. She was in fluid overload and had blisters on both feet and on her toes, and wounds on her heels. Her right foot wound was debrided.

127. The district nursing record dated 8 Month4 contains the note, 'Needs referral to podiatry Mr C,' but there is no record as to whether this referral took place.

Presentation to Kaitaia Hospital — 15 Month4

128. On 15 Month4 Ms B was seen by the district nurses. She had pain in her foot, and the toes on her left foot were black and had no capillary refill. Her pain was worse with mobilising, and both her feet looked 'dusky'. The nurse was concerned that Ms B had an ischaemic foot (inadequate blood supply to the foot) and referred her to the ED.

129. A specialist saw Ms B in the ED at Kaitaia Hospital. He documented that her blood sugar level was over 90mmol/mol and that she was taking no treatment for her diabetes. Ms B had pitting oedema[17] to both legs, and blood tests indicated an infection.

130. On examination, the specialist's impression was that Ms B had peripheral vascular disease and poor circulation caused by her low cardiac output.[18] His plan was to start her on intravenous antibiotics, refer her to the vascular surgery clinic, and have her return to the ED for a review the following day. She was then discharged home.

[17] Pitting oedema occurs when excess fluid builds up in the body, causing swelling. When pressure is applied to the swollen area, a 'pit' or indentation remains.

[18] The clinical notes record that a bedside Doppler found that she had some flow in her left posterior tibial artery and no Doppler flow on the right. A bruit (blowing vascular sounds resembling heart murmurs that are perceived over partially occluded blood vessels) was heard in her right femoral artery. She had reddening of the skin (erythema) on her left shin.

131. There is no documentation in the Northland DHB or DHB2 records for Ms B indicating that the referral was made.

Reviews in ED — 16 and 17 Month4

132. On 16 Month4 Ms B returned to the ED for her scheduled review. It is documented that she stated that the pain in her left shin was better. The doctor noted that she had dusky feet and toes. She was given another dose of antibiotics and asked to return the following day.

133. On 17 Month4 a nurse noted that Ms B had received her antibiotics, and that the specialist had reviewed her and was happy for her to follow up with her GP. The nurse documented that Ms B was awaiting vascular follow-up.

Referral to diabetes clinic — 18 Month4

134. A note in the district nursing record dated 18 Month4 states: '[District nurse] has referred [Ms B] to [Mr C] Podiatrist [diabetes clinic]. Referral sen[t] [and] copy in patients DN file.' However, there is no copy of this referral in the records.

135. On 19 Month4 Ms B had severe left leg pain, and the district nurse advised her to see her GP.

Deterioration of feet — 22 Month4

136. On 22 Month4 the district nurse documented that Ms B had severe pain in her left foot, which she described as feeling 'dead'. Her toes had been black and mottled since the previous week. The district nurse documented that she had a discussion with the specialist, and Ms B was for review on 26 Month4, she was to see Mr C on 27 Month4, and she was to have a Doppler assessment and renal outpatients appointment on 3 Month5.

137. On 26 Month4 the district nurse was called to see Ms B because she was unable to walk due to pain in her right foot. The district nurse referred Ms B to the Kaitaia Hospital ED for review and to receive adequate pain relief.

138. Ms B presented to the ED at 12.05pm on 27 Month4. A doctor saw Ms B in the ED and documented that since the previous admission she had been having constant pain in her left foot, which was worse at night. Her left toes appeared necrotic at the tips and there was no capillary refill. The dark area extended to her midfoot, and the foot was red above that point. There was a popliteal pulse (at the back of the knee) and a femoral pulse (in the groin) but no pulses further down her left leg.

139. Ms B had ulcers on her right leg, but pulses were found by Doppler. She was admitted to hospital and given intravenous antibiotics, and fentanyl for the pain. The ED doctor documented that he had a discussion with the vascular registrar at DHB2, who agreed that Ms B needed transfer to DHB2 for advanced imaging and vascular input, but the vascular registrar said that currently no beds were available. The plan was to transfer her to DHB2 when a bed became available in approximately one to two days.

140. Ms B was seen by Mr C on 28 Month4 while she was an inpatient at Kaitaia Hospital. It was noted that she was awaiting transfer to DHB2 and would be seen at Kaitaia Hospital upon discharge.

Transfer to DHB2 — 29 Month4

141. On 29 Month4 Ms B was transferred to the DHB2 vascular service by ambulance for further management.

142. Subsequently, a toe on her left foot was amputated, and on 3 Month5 she had a below-knee amputation. She required further surgical debridement and angioplasty procedures. However, sadly, she died on 21 Month6 from septic complications of a bacterial infection (necrotising fasciitis) of her right groin.

ACC advice

143. An ACC claim was made following Ms B's death. ACC obtained advice from a podiatrist and an emergency medicine specialist.

144. Regarding the referral on 28 Month2, the podiatrist advised ACC:

> 'If the referral was to be forwarded to the diabetes clinic, and this did not occur, this omission of the podiatry clinic to forward the referral would need to be considered as not reasonable and appropriate.'

145. The podiatrist advised ACC that if the referral should have been returned to the referring nurse by the podiatry clinic administrator requesting that the referring nurse complete a new referral for Ms B to the secondary care diabetes clinic, and this did not occur, this omission would be considered not reasonable and appropriate. The podiatrist said that no referral to the diabetes clinic was actioned, which was contrary to the applicable guidelines.[19]

146. The podiatrist advised ACC that Ms B should have been referred to the diabetes clinic on 28 Month2 and, as that did not take place, she should have been referred subsequently and pressure offloading recommended before infection set in. The podiatrist considered that the referral should have been made to the diabetes clinic as an active foot ulceration, and, failing that, the podiatry clinic should have referred the patient on to the diabetes clinic.

147. The emergency medicine specialist noted that the vascular team was not contacted during Ms B's ED visit on 15 Month4. He said: 'In my professional opinion I feel this was a mistake.' He considered that a telephone call and sending pictures of her foot to the on-call registrar in DHB2 or to the internal medicine specialist at Kaitaia Hospital for advice could have occurred.

148. The emergency medicine specialist stated that Ms B's pain, black toes, and history of blisters on 15 Month4 should have been a red flag for acute limb-threatening ischaemia, but there

[19] https://www.health.govt.nz/system/files/documents/publications/standard-11.pdf.

is no documentation of a referral to the vascular surgery clinic. He said that her current medical situation should have been discussed with the on-call vascular team and plans made for urgent follow-up and possible transfer.

149. The emergency medicine specialist noted that on 16 Month4, again there was no referral or discussion with the vascular surgery team. He said: 'In my professional opinion this does not meet a reasonable standard.' He considered that this could then have been discussed with the on-call vascular surgery team.

150. Overall, the emergency medicine specialist considered that the care Ms B received on these two dates was not appropriate and did not maintain a reasonable standard. However, he did not consider that this contributed to the poor outcome and eventual death.

Responses to provisional opinion

Mrs A/ whānau

151. Mrs A and whānau were given the opportunity to respond to the 'information gathered' section of the provisional opinion but HDC did not receive any comments.

Health NZ Te Tai Tokerau

152. Health NZ Te Tai Tokerau was given the opportunity to respond to the provisional opinion, and its comments have been incorporated into the report where relevant and appropriate.

RN G

153. RN G was given the opportunity to respond to relevant sections of the provisional opinion but did not provide any comments.

Ms H

Ms H was given the opportunity to respond to relevant sections of the provisional opinion, and her comments have been incorporated into the report where relevant and appropriate. In addition, Ms H offered her sincerest condolences to the whānau.

PHO 2

154. PHO 2 was given the opportunity to respond to relevant sections of the provisional opinion (including my opinion about PHO 1, as PHO 2 had replaced it as Northland's PHO), but it had no further comments to make.

Opinion: Health NZ Te Tai Tokerau — breach

Care provided to Ms B Month2–Month4 — breach

155. Ms B had a complex medical history including type one diabetes. She developed several diabetes-related complications and was at high risk of deteriorating further as time progressed, in part because of poor compliance with her diabetes treatment plan and a lifestyle that predisposed her to poor glycaemic control and development of significant diabetes-related complications. This extremely challenging situation was exacerbated

further by several deficiencies in the care she received, most notably delaying Ms B's access to specialist-level vascular care, as discussed below.

Admission 18 Month3

156. Ms B was referred to the ED with fluid overload and chronic leg ulcers on both feet and admitted for treatment on 18 Month3.

157. Rural hospital medicine specialist Dr Jennifer Keys advised that Ms B was reviewed daily during her admission, with the medical team concentrating on the treatment of her kidney damage (nephrotic syndrome). However, there is no record relating to the treatment of her diabetes or the potential causes of her foot ulcers.

158. Dr Keys noted that on the day of admission, a wound swab showed a heavy growth of two organisms, which was not referred to or actioned, and there is no record of either palpable or Doppler peripheral pulses.

159. Dr Keys stated:

> 'I would anticipate that, at a minimum, in a diabetic patient [with a previous heart attack] that peripheral pulses (either by palpation or Doppler) would be checked. Depending on the presence or absence of pulses a referral should have been made to either the diabetes clinic … or the vascular service in DHB2.'

160. Dr Keys advised that in her opinion, the failure to consider the causes of Ms B's ulcers during this admission was a moderate departure from the standard of care. Dr Keys noted that Ms B was seen by many doctors at Kaitaia Hospital, with overall responsibility remaining with the team rather than with one individual doctor, which is usually the case in bigger hospitals. Dr Keys stated: 'Despite being seen by many [senior medical officers] over 14 days there is no discussion about the underlying cause of her necrotic ulcer (which is the secondary problem during her admission).' I accept this advice. It appears that a holistic approach to the management of Ms B's presenting symptoms was not taken at the time.

Referrals to vascular service and diabetes clinic not made

161. Ms Mueller advised that several opportunities for referral to the diabetes clinic were missed, and these delays in the referral process increased the risk for Ms B, with delayed access to secondary/tertiary level care.

162. On 18 Month3 Ms B's discharge summary from Kaitaia Hospital ED to the ward indicated that she met the criteria for a referral to the diabetes clinic, but no referral was made at that time. The discharge summary stated that she had chronic ulcers on both feet and a necrotic ulcer on the second toe of her left foot.

163. On 8 Month4 the district nurse commented in her clinical notes that a referral to the diabetes clinic was needed but had not been actioned. The notes from Ms B's presentation to Kaitaia Hospital ED on 15 Month4 refer to a 'leg ulcer right heel', necrotic 4th and 5th toes, a weak pulse, and increased pain.

164. Despite these ongoing issues, a referral to the diabetes clinic was not made until 18 Month4, by the district nurse. In my view, the lack of a timely referral represents a failure on the part of multiple health professionals involved in Ms B's care over the preceding month. Ms B was seen by Mr C during her inpatient stay at Kaitaia Hospital on 28 Month4.

165. A referral to the vascular service was also not made during this period.

166. On 15 Month4 Ms B was seen at the ED, and, while the intended plan to refer her to the vascular surgery clinic was documented in the clinical notes, there is no evidence in the Northland DHB or the DHB2 records for Ms B that the referral was actually made.

167. On 16 Month4 Ms B returned to the ED for antibiotic treatment. A referral to the vascular service was not made on this date.

168. Dr Keys advised that it appears that there was intent to make a referral on 15 Month4, and it is not clear why this was not done, and it is not clear whether the doctors who subsequently reviewed Ms B either thought that a referral was not necessary, or believed that one had been made. Dr Keys said:

> 'The standard of care at this point (on 15th or 16th/17th [Month4]) would be to make an urgent referral to Vascular Services … I would consider that the lack of referral to Vascular Services at this point represents a departure from the standard of care, although the intent to make the referral seems to have been present, and it would appear that others reasonably believed that the referral had been made. The clinical judgement appears to have been correct but the administrative process was not followed through. Failure to make an urgent referral at this time (even if the intent was there) represents a severe departure from the standard of care.'

169. I agree and consider that multiple clinicians failed to make the referral.

Conclusion

170. Guided by my independent advisor, I consider that during Ms B's two-week admission in Month3 the clinicians involved failed to assess and consider the cause of her ulcers adequately. She was seen on multiple occasions over Month3 and Month4 and, despite a clear need, she was not referred to the vascular service or the diabetes clinic. In my view, this was a failing of multiple staff over the course of her care.

171. Health NZ Te Tai Tokerau was the group provider with overall responsibility for ensuring that Ms B received timely intervention to try to avert the profound difficulties she ultimately experienced. Accordingly, I find that Health NZ Te Tai Tokerau did not provide services to Ms B with reasonable care and skill and breached Right 4(1) of the Code of Health and Disability Services Consumers' Rights (the Code).

Opinion: RN G — adverse comment

172. Ms B was assessed by RN G on 28 Month2 (see paragraph 102). RN G identified Ms B as having a 'high risk foot' rather than 'active foot disease'. RN G said that she believed the lesion on Ms B's toe was very small, and not causing Ms B any concern, so she did not classify it as an 'active' foot ulcer, but rather as an all-but-healed ulcer that was not actively infected or causing pain to the patient.

173. My in-house clinical advisor, Dr David Maplesden, advised that the foot assessment undertaken was competent, and RN G followed the instructions in the template for 'high risk' foot. However, Dr Maplesden advised that RN G erred in her classification of Ms B's foot disease, which should have been 'active foot disease' (given the presence of an ulcer), which led to an inappropriate referral to the community podiatry service rather than the diabetes clinic.

174. RN G documented the information regarding Ms B's foot assessment in Medtech Evolution, which calculated from the information provided that the assessment was of a high-risk foot. RN G said that she did not see the 'pop up' that indicated that if the patient had an active-risk foot they should be referred to the diabetes clinic. In any event, she did not classify it as an 'active' foot ulcer.

175. Dr Maplesden said that there was potential for confusion with the processes in place at that time, meaning that a 'high-risk foot' was not referred to the 'high-risk foot clinic' but rather to the community podiatry service, while an 'active foot disease' patient would be referred to the 'high-risk foot' clinic. The user guide referred to the term 'acute foot', which was not one of the defined categories, rather than 'active foot disease' when referring to the diabetes clinic, and the use of the diabetes clinic was not emphasised.

176. Ms Mueller similarly noted that there was potential for confusion at the time with the use of this terminology. She said that the wording in all relevant documents should align with the nationally consistent terminology.

177. I am critical of the error made by RN G, but I acknowledge that she was working within a system where guidance and terminology were confusing, which enhanced the likelihood of an error.

178. The referral was received on 28 Month2. On 2 Month3 the system administrator sent a rejection of the referral back to RN G, who interpreted the statement 'Referred to secondary services' on the rejection as referring to an action that had already been undertaken by the community podiatry administrator.

179. RN G overlooked the comment to 'refer to Mr C if hasn't already' but said that had she noted it she would have interpreted that this had been done already, as it said above, 'referred to Secondary Services'. She said that she interpreted the rejection template response as meaning that no further action by her was required.

180. Dr Maplesden advised that the template carried the risk of misinterpretation, as occurred in this case. He said that the use of the checked phrase, 'referred to secondary services' rather than, for example, 'requires referral to secondary services' could quite reasonably be interpreted as 'the referral had been sent on to secondary services', which in itself was not an unreasonable expectation.

181. Dr Maplesden advised:

> 'While there is specific reference to referring [Ms B to Mr C], the formatting of the document I feel means this particular could be easily overlooked once the checked box "referred to secondary services" had been identified.'

182. I am concerned that RN G overlooked the comment 'refer to [Mr C] if hasn't already'. However, I accept Dr Maplesden's advice and agree with his sentiments about the template. I consider that the rejection letter template had ambiguous and confusing formatting that carried a risk of misinterpretation.

Opinion: Ms H — educational comment

183. Ms B's referral to community podiatry was received on 28 Month2. On 31 Month2 community podiatrist Ms H viewed the referral and returned it to the system administrator. Ms H did not keep notes of this decision. On 2 Month3 the system administrator sent a rejection of the referral back to RN G.

184. Ms Mueller advised that the delays in the referral process to the diabetes clinic increased the risk for Ms B, with delayed access to secondary/tertiary-level care. Ms Mueller said that Ms H should have made a referral to the diabetes clinic herself, given that Ms B was referred with an ulcer on her left toe, which met the criteria.

185. Ms H correctly identified that the referral needed to go to the diabetes clinic, but this did not occur. The referral was declined and sent back to the general practice.

186. The declined referral form template was completed in a confusing manner, and the referring practice nurse interpreted the statement, 'Referred to secondary services' as an action that had already been undertaken by the community podiatry administrator. The practice nurse overlooked the comment to 'refer to [Mr C] if hasn't already' but said that in this context, again she would have thought that this had been completed. She interpreted the rejection template response as meaning that no further action by her was required.

187. In response to the provisional opinion, Ms H accepted that she should have been more explicit in her explanation to 'refer to [Mr C] if hasn't already' but stated that there was no default requirement from the system to leave a note or explanation and the only applicable checkbox option for the declined referral was 'referred to secondary services'.

188. My in-house clinical advisor, Dr Maplesden, advised that the template carried a risk of misinterpretation, as occurred in this case. He said that the use of the checked phrase 'referred to secondary services' rather than, for example, 'requires referral to secondary services' could quite reasonably be interpreted as 'the referral had been sent on to secondary services', which in itself was not an unreasonable expectation.

189. Dr Maplesden advised that although there is specific reference to referring Ms B to Mr C, 'the formatting of the document … means this particular could be easily overlooked once the checked box "referred to secondary services" had been identified'.

190. Ms Mueller was critical that Ms H did not refer Ms B to the diabetes clinic, did not respond clearly in the rejection to the general practice, and did not document any rationale for her decision. However, Ms Mueller noted that it is not clear from the documentation provided whether the referral system enabled 'the right thing to do the easy thing to do' for Ms H.

191. In response to the provisional opinion, Ms H accepted that she did not refer Ms B directly to the diabetes clinic but stated that this was not standard practice for a patient unseen and on the waiting list for triage by community podiatry. Ms B was not a registered patient of hers, and her contractual obligations require her to refer a patient who she has seen to the diabetes clinic if they present with an active ulcer (secondary care level of service is not included in her contract). Ms H stated that she believed '[i]n this instance, the delays to patient care did not relate to any level of care provided by [her] towards the patient'.

192. I acknowledge that Ms B had not been seen by Ms H and accept that the referral template carried a risk of misinterpretation. However, as acknowledged by Ms H, she did not respond clearly in her explanation for the rejection of the referral, which, regardless of whether the comment to 'refer to [Mr C] if hasn't already' had been sighted by the practice nurse, still could have resulted in the same misinterpretation. In my view, Ms H did have a responsibility to review and communicate the decision of the referral appropriately. Her explanation was unclear, which contributed to the delay in Ms B being referred to the diabetes clinic, although I acknowledge the issues with the referral system and that there was no default requirement to leave a note or explanation. Nevertheless, I remind Ms H of the importance of documenting clear and accurate reasons for rejection.

193. In considering the views of my advisor, I note also that PHO 1 had not provided the community podiatrists with any training on the referral process. Ms Mueller noted that at the time of the referral, Ms H was self-employed. Ms Mueller said that this, coupled with practising in a remote setting with the systems and processes and level of clinical governance at the time, would have made for a challenging practising environment. I acknowledge and accept these mitigating factors.

Opinion: PHO 2 — no breach

194. In 2019 PHO 2 established PHO 3 as the primary health entity (PHE) for Te Tai Tokerau. PHO 3 entered into a contract with Northland DHB for the community podiatry service and commenced delivery of services on 1 July 2019.

195. Following PHO 3's commencement of service provision, action was taken to implement the recommendations made in the 2018 review. Ms Mueller advised that remedial actions taken by PHO 3 appeared appropriate. I accept this advice, and I consider that the service provided by PHO 2 did not amount to a breach of the Code.

196. I acknowledge that Mr C continued to have concerns about the community podiatrists, but I accept that PHO 3 took appropriate action when the concerns were brought to its attention.

197. For completeness, I note that PHO 2 was not the responsible entity when care was provided to Ms B, and therefore was not involved in her care.

Opinion: PHO 1 — adverse comment

Community podiatry services in New Zealand

198. Foot problems are a recognised serious complication of diabetes and, as noted earlier in this report, the five-year mortality rate for a person with diabetes who has a foot ulcer is 2.5 times higher than for diabetes alone, and the mortality rate is greater than 70% for those people who undergo a related lower-limb amputation. Māori have an added risk factor for diabetes-related lower-limb amputation, with much poorer outcomes.

199. Prior to 2017, repeated concerns were raised about the podiatry clinic, which was the subject of internal Northland DHB adverse event notifications, HDC complaints, and reviews. There were also multiple attempts by Mr C to raise issues with the referral systems and processes, and community podiatrist referral behaviours. Despite this, concerns remained, and the 2018 review concluded that the model of care did not appear to support seamless care with clear clinical oversight and responsibility for the foot health of people with diabetes.

200. Northland DHB contracted PHO 1 to provide community podiatry services to the Northland community. Until 2019 the community podiatrists operated under contractual arrangements with PHO 1, with service specifications outlining the expectations of the service provided. Following the 2017 review of the service, referrals were sent directly to PHO 1 by general practices, rather than directly to the community podiatrists.

201. As outlined above, in 2019 PHO 1 closed and PHO 3 became the PHE for Te Tai Tokerau and entered into a contract with Northland DHB for the community podiatry service.

202. To assess the systems in place in Northland, I obtained advice from a systems advisor, physiotherapist Janice Mueller.

203. Ms Mueller said that there were a range of problems in the period during which PHO 1 provided its service, including:

- Poor/inconsistent knowledge of management of the diabetic foot (particularly the 'High Risk' foot and those with 'Active Foot Disease') by primary and secondary care referrers to podiatry.
- Insufficient attention being paid to early engagement with patients and whānau by podiatrists, including how to manage problems early and avoid foot ulcers.
- Lack of knowledge of both the community podiatry and the diabetes clinic referral systems and processes.
- Poor utility of the referral systems and processes for primary care referrers and podiatrists.
- Lack of clinical oversight and governance of the podiatry service by an experienced podiatrist.
- Lack of process and clinical guidelines for the diabetic foot for community podiatrists.
- Community podiatrists sending referrals back to general practice and requesting them to refer on to the diabetes clinic (or vascular services) when they had contractual and ethical requirements to refer on appropriately and promptly.

204. The systemic issues relating to community podiatry care in Northland include the inconsistent and confusing definitions used.[20] Ms Mueller said that the terms used in the 'How to Guide for GP Practices — How to use the Diabetes Foot Risk Assessment form and refer to Podiatry' (2014/15), which was in place at the time of events, differed slightly from the national screening tool (the NZSSD risk stratification tool[21]), which could be confusing for clinicians when considering a referral to the community podiatrist.

205. Ms Mueller advised that the service management and coordination, policies, and clinical governance and oversight of the service were all poor, as is evident by the persistent and ongoing problems documented by Mr C and the reviews of the community podiatry service. She said that there was no clear clinical governance of the community podiatry service, and a lack of clarity contractually, organisationally, and professionally regarding the accountability and level of 'authority' that the diabetes clinic podiatrist had towards the community podiatrists.

[20] Ms Mueller advised that the language used to describe risk in the Tier Three Service Specification (2013) was out of date in 2017 and did not reflect the NDFSRS tool used nationally at that time. The NZSSD guidelines were updated in April 2017, but the language used to describe risk stratification remained unchanged from the 2014 guidelines.

[21] The language used to describe risk stratification remained unchanged from the 2014 and 2017 versions.

206. Ms Mueller concluded that the community podiatry referral system and processes did not meet an accepted standard of practice in that:

- They did not enable people with diabetes who had foot conditions to access appropriate care pathways based on an accurately assessed level of risk within appropriate, evidence-based timeframes.
- The monitoring and auditing of these systems and process by the contract holder (the PHO/PHE) was poor.
- No training of referral systems and processes was provided to the community podiatrists.
- There was no podiatry-led clinical governance leadership and systems in place to ensure that the community podiatrists delivered a competent, timely service that met consumer needs.

207. Ms Mueller stated: 'Collectively, this would be viewed as a moderate departure from the standard of accepted practice and would be viewed adversely by professional and clinical peers.' I accept this advice.

208. PHO 1 was responsible for providing an adequate community podiatry service to people with diabetes in Northland. I am critical that PHO 1 did not provide an adequate community podiatry referral system and processes, which affected multiple consumers including Ms B. I note that as PHO 1 was removed from the Companies Register in March 2022 it no longer has legal status.

209. Given this, I intend to write to Manatū Hauora|Ministry of Health and the Health NZ National Office to highlight these concerns (see below).

Changes made since events

210. In response to the provisional opinion, Health NZ told HDC that for over a year, the podiatry service/diabetes clinic has been 'short' of podiatrists, although the service was planned to be fully staffed by the middle of April 2024 and there are now five community podiatrists across Northland with contracts with Health NZ.

211. In response to my recommendations made in the provisional opinion, Health NZ stated:

a) An audit of referrals of people with diabetes to community podiatrists over the previous six months is underway to identify any delays in treatment.

b) A review of current documentation is underway to ensure there is consistent terminology across all podiatry services, including Health NZ, community podiatrists, practices nurses, and referral pathways. Health NZ planned for consistent terminology to be established by June 2024.

c) A requirement of training for community podiatrists on the referral process was discussed at the High-Risk Foot (HRF) meeting on 15 April 2024. A new software provider[22] is reviewing referral pathway options.

d) Training for primary and secondary referrers to podiatry on management of the diabetic foot is ongoing and an education session was completed for practice nurses in February 2024 and twice-yearly education sessions take place for community podiatrists.

e) An advanced clinician was employed and is responsible for the clinical oversight of the community and HRF clinic podiatrists. Governance is the responsibility of the team lead, allied health and the directorate, scientific, technical and allied health.

f) Patient journey maps are under development.

Recommendations

212. In light of the changes made, I recommend that within three months of the date of this opinion, Health NZ Te Tai Tokerau:

a) Provide HDC with an update on the staffing numbers for the Northland podiatry service;

b) Provide HDC with a summary of findings of the audit outlined in paragraph 211(a), including corrective actions taken/to be implemented to address any delays;

c) Report back to HDC on the findings of the documentation review, including whether consistent terminology is now used and is in accordance with the Diabetes Foot Screening and Risk Stratification Tool;

d) Provide HDC with an update on the outcome of the HRF meeting convened on 15 April 2024 regarding requirements of training for podiatrists on the referral process, and the software provider's review of referral pathways options;

e) Provide evidence to HDC, in the form of education/training material and staff attendance records, of any education sessions for practice nurses and community podiatrists on management of the diabetic foot since February 2024;

f) Report back to HDC on the review of processes and clinical guidelines for the diabetic foot for community podiatrists and general practices and advise whether Ms Mueller's recommendation that the NZSSD's 2020 guidance provided to support the clinical triage of patients to prevent lower limb amputations during the COVID-19 pandemic was considered and incorporated into relevant guidance appropriately; and

g) Provide an update on the development of 'patient journey maps'.

[22] A company that creates web-based solutions for the health sector.

213. I recommend that within three weeks of the date of this opinion, Health NZ Te Tai Tokerau apologise to the whānau of Ms B for the failings identified in this report. The apology is to be sent to HDC for forwarding.

Follow-up actions

214. A copy of this report with details identifying the parties removed, except Health NZ Te Tai Tokerau, Kaitaia Hospital, and the advisors on this case, will be sent to the New Zealand Society for Study of Diabetes, the Podiatrists Board, Te Tāhū Hauora|Health Quality & Safety Commission, and ACC and placed on the Health and Disability Commissioner website, www.hdc.org.nz, for educational purposes.

215. I will write to Manatū Hauora|Ministry of Health and Health NZ National Office to highlight the concerns identified about PHO 1's services and the community podiatry referral system and processes in place at the time of events, which did not operate effectively for consumers in Health NZ Te Tai Tokerau.

Appendix A: Independent clinical advice to Commissioner

The following independent advice was obtained from a rural hospital medicine specialist, Dr Jennifer Keys:

> 'My name is Dr Jennifer Keys. I have been asked to provide an opinion on case C18HDC01677. I have read the Guidelines for Independent Advisors from the Office of the Health and Disability Commission and agree to follow them.
>
> I qualified MBChB in 1991 from the University of Dundee, Scotland. My postgraduate qualifications are MRCP(UK), MRCGP, MSc (Remote Healthcare) and FDRHMNZ. I work as a Rural Hospital Doctor and Clinical Director at Lakes District Hospital, a rural hospital, in Queenstown. In addition, I am Chair of Council of the Division of Rural Hospital Medicine.
>
> I have been asked by the Commissioner to advise whether I consider the care provided to [Ms B] during [Month3] and [Month4] by Kaitaia Hospital was reasonable in the circumstances.
>
> In particular, I have been asked to comment on:
>
> 1. The appropriateness of her treatment when she was admitted to Kaitaia Hospital in [Month3].
> 2. The appropriateness of her treatment for [Ms B's] presentations in [Month4].
> 3. Whether referral to the diabetes clinic should have been considered earlier.
> 4. Whether transfer to [DHB2] should have been considered earlier.
>
> I have been provided with the following documents, which I have reviewed.
>
> 1. Letter of complaint dated 6/9/18
> 2. Admission notes from admission to Kaitaia Hospital on 18 [Month3]
> 3. Admission notes from admission to Kaitaia Hospital on 27 [Month4]
> 4. Notes from Kaitaia Hospital ED attendances on 15-16-17 [Month4]
> 5. District Nursing notes
> 6. District Nursing Referral to [Mr C] on 18 [Month4]
>
> **Background**
> [Ms B] was initially referred to the podiatry clinic in [Month2], with an ulcer on her second toe. This referral was declined but not passed to the diabetes clinic.
>
> In [Month3], [Ms B] was admitted to Kaitaia Hospital with fluid overload secondary to chronic kidney disease. Her necrotic diabetic ulcer was noted on this occasion. She presented to Kaitaia Hospital again on 15 and 16 [Month4] for ischaemic fourth and fifth toe.
>
> [Ms B] was discharged on these occasions following IV antibiotic treatment. She was advised to follow up with her GP.

[Ms B] presented to Kaitaia Hospital again on 27 [Month4], and was admitted with a gangrenous foot. She was referred to [DHB2] that day for further management. [Ms B] subsequently underwent a trans-metatarsal amputation of the left foot and eventually a below knee amputation on 3 [Month5].

[Ms B] required further surgical debridement and angioplasty procedures and passed away on 22 [Month6].

Timeline
I have constructed a timeline of events (see table appended.)

Opinion
[Ms B] had a very complicated medical history, which included type II diabetes mellitus (commenced insulin therapy 2016), significant diabetic retinopathy, gout, previous morbid obesity (max 160kg), anterior STEMI [2015], impaired LV function, coronary angioplasty/stent [2015], CKD 3 (likely diabetic nephropathy) with nephrotic syndrome, smoker, dyslipidaemia and chronic pulmonary thromboembolic disease (on warfarin).

It appears from in-patient notes that she did not take the prescribed medication for diabetes, and her diabetes was poorly controlled. There is no note which suggests that, prior to this episode, [Ms B] had problems with her feet or lower legs.

[Ms B] had many different healthcare practitioners involved in her care during this episode, including renal specialists, a GP (or GPs), doctors at Kaitaia Hospital, registered nurses at Kaitaia Hospital and district nurses.

Regarding the Commissioner's questions:

1. **<u>The appropriateness of her treatment when she was admitted to Kaitaia Hospital in [Month3]</u>**

The admission note dated 18th [Month3] is thorough and appropriate with regard to the treatment of [Ms B's] fluid overload, which is thought to be due to nephrotic syndrome. Appropriate discussion with a specialist takes place, and she is treated with intravenous frusemide. An ulcer is noted to be a necrotic diabetic foot ulcer, and management is with dressings.

[Ms B] is reviewed daily during her admission, with the medical team concentrating on the treatment of her nephrotic syndrome.

I can find no medical note which discusses the lack of treatment of her diabetes (which may be longstanding and referred to in prior notes) or of the potential causes of her foot ulcer(s). I note that there was a wound swab which showed a heavy growth of two organisms on the day of admission, which is also not referred to or actioned.

Treatment for [Ms B's] fluid overload is effective, and monitoring of her renal function is regular throughout the admission.

There is no discussion of the potential cause of her foot ulcer(s) by medical staff. There is no record of either palpable or Doppler peripheral pulses. It is noted on the admission of 27 [Month4] that it was thought that, during this admission, [Ms B's] poor peripheral perfusion was related to gross fluid overload and that when this started to resolve her peripheral perfusion improved.

Management of [Ms B's] multiple chronic medical problems is clearly not straightforward. However, I would anticipate that, at a minimum, in a diabetic patient who is a known arteriopath (previous STEMI) that peripheral pulses (either by palpation or Doppler) would be checked. Depending on the presence or absence of pulses a referral should have been made to either the diabetes clinic (although I do not know if doctors at Kaitaia Hospital would be aware of this service) or the vascular service in [DHB2].

I would consider that failure to consider the causes of [Ms B's] ulcer(s) during this admission was a moderate departure from the standard of care. If peripheral pulses had been present then I would consider that no onward referral at that time (given that the case is very complex and that an alternative potentially remediable cause was present — fluid overload) may possibly have been appropriate. I believe that my peers would agree.

I note that on 8th [Month4] (after discharge from this admission) the District Nurse suggests that she needs referral to podiatry [Mr C], but it does not appear that a referral was made.

2. <u>The appropriateness of her treatment for [Ms B's] presentations in [Month4].</u>

[Ms B] was referred by a District Nurse to Kaitaia Hospital Emergency Department on 15th [Month4]. A note is made that her foot is dusky, and that she has two necrotic toes. Peripheral pulses are assessed by Doppler, but only the left tibialis posterior is found, which established that there was large vessel (not just microvascular) pathology. Both medical and nursing notes on that day note that a referral was made to vascular. NDHB are not able to locate this referral.

Review by medical staff occurs on 16th and 17th and after treatment with iv antibiotics [Ms B] was referred back to her general practitioner.

It appears that the doctor on the 15th had the intent to make a referral (which would have been appropriately marked as urgent), and it is not clear why this was not done. It is also not clear if the doctors who subsequently reviewed [Ms B] thought that a referral was necessary, or believed that one had been made (although they would have reason from the notes to believe that it had been). The nurse on 17th [Month4] notes that she is awaiting vascular follow-up.

The standard of care at this point (on 15th or 16th/17th [Month4]) would be to make an urgent referral to Vascular Services. Depending on knowledge of local practice this would be done either by paper or electronic means, or by telephone call to the Vascular registrar or specialist. If a paper/electronic referral was made I would anticipate that the referrer would know, or be able to check, that rapid action would result from that referral.

I would consider that the lack of referral to Vascular Services at this point represents a departure from the standard of care, although the intent to make the referral seems to have been present, and it would appear that others reasonably believed that the referral had been made. The clinical judgement appears to have been correct but the administrative process was not followed through.

Failure to make an urgent referral at this time (even if the intent was there) represents a severe departure from the standard of care. I believe that my peers would agree.

3. Whether referral to the diabetes clinic should have been considered earlier.

This has been addressed in answer to question 1.

4. Whether transfer to [DHB2] should have been considered earlier.

As per answer to question 2 — I consider that an urgent referral to [DHB2] Vascular Service should have been made when [Ms B] was seen on 15th [Month4]. Local knowledge would be required to know whether this would need to be an urgent out-patient referral or a telephone discussion with a vascular surgeon. It is unlikely that a direct transfer would have been made at this time, but urgent out-patient investigation or review should have been arranged.

5. Any other comments you wish to make on the care provided to [Ms B] at Kaitaia Hospital.

I note that the care provided to [Ms B] with regard to her nephrotic syndrome, and the monitoring throughout her hospital stay is thorough and the documentation is complete with regard to this condition. She is seen by many doctors during the stay, with overall responsibility remaining part of the team rather than of one individual (which is usually the case in bigger hospitals). Despite being seen by many SMOs over 14 days there is no discussion about the underlying cause of her necrotic ulcer (which is the secondary problem during her admission).

I also note that the nursing notes (both in-patient RN and District Nurses) appear to concentrate much more on the problems which [Ms B] was having with her feet, and on several occasions make accurate notes about the care that they believe should have been provided at that time. It is not clear whether RNs are allowed/enabled to make appropriate referrals.

With regard to referrals, it seems that referrals to other parts of the local (Northland or [DHB2]) medical services are not easily visible to those providing medical care.

Reduction of risk of recurrence

I have three suggestions which may reduce the risk of a similar occurrence:

- For patients with prolonged stays in rural in-patient units the handover process to multiple different SMOs can mean that the details of each case are not easily followed throughout the stay, and it may be that this happened during this case. There may be many different ways to locally mitigate this issue, and Kaitaia Hospital could consider

changes in their model of care which would minimise the chance of recurrence. For example, one SMO having overall responsibility for each patient, written problem lists or time for a thorough review of each patient admitted for longer than a week may all lessen the risk of secondary problems or significant details remaining unaddressed.

- Patients with chronic leg ulcers are often predominantly treated by nurses, who may be best placed to direct some of the investigation or referral required. Northland DHB could consider direct referral from nurses for Doppler studies (if this does not already happen) or look at any reasons why nurses did not make timely referrals despite seeming to know that [Ms B's] feet were high risk.
- It appears from these notes that a referral to [DHB2] vascular service could have been 12 days earlier than it was, and that an assumption that an appropriate referral had been made may have delayed the process. I do not know whether a referral would have been on paper or electronic, but electronic processes which give all practitioners access to a list of active referrals (and approximate wait times) may reduce the chances of inaccurate assumptions being made.

Table of timeline of events

18 [Month3]	Triage note	Blisters on R heel and non-healing wound on L toe
	Admission	Ulcer on L second toe which has been there for over one month — described as **necrotic diabetic ulcer second toe** L foot. Advice taken from … (?physician or renal specialist). Plan wound cares for feet as per nursing wound plan.
	Nursing	Spoke to DN about dressings. Nursing wound assessment notes non healing ulcer.
	Results	HbA1C 72. Swab L second toe – **heavy growth S Aureus and Strep pyogenes**.
19 [Month3]	Wardround	Necrotic 2nd toe L foot
20 [Month3]	Wardround	Start oral amoxicillin ?for green/brown phlegm
	Nursing	Using elbow crutches since trip on 19 [Month2]
23 [Month3]	Nursing	Wound assessment notes two wounds
25 [Month3]	Wardround	New fluid filled blister on R leg. To see Dr D on ward next week.
	Nursing	**Wound assessment notes seven separate wounds including dry cavity under R toe.**
28 [Month3]	Wardround	Improvement in foot ulcers
29 [Month3]	Nursing	Renal team unable to attend — for teleconference.
31 [Month3]	Wardround	R/v wounds with nurses/DN
	Nursing	Wound swab from R shin. Discharged. Refer D/N. Follow up with GP and renal next week.
	Results	ECHO EF25–30% (significant deterioration since 2015).
5 [Month4]	District Nursing	Wounds are starting to heal.
8 [Month4]	District Nursing	**Needs referral to Podiatry [Mr C]**
15 [Month4]	ED assessment	DN requested review. **Ulcer R heel with dusky feet L>R.** Family feel the toes look much better less swollen than when she was discharged. **L dorsalis pedis pulse had no flow with Doppler but tibialis posterior had some flow. No flow in right foot.** Bruit right femoral artery. Impression/cellulitis Left leg, poor circulation due to EF<30% and PVD. Plan — refer vascular surgeons. Given iv cefazolin, review tomorrow. (NOTE: NDHB confirm that no referral was done).
	Triage	4th and 5th toe necrotic.
	Nursing	For vascular follow up as out pt referral complete.

16 [Month4]	ED note	Dusky feet and toes but CR is <3 seconds.
17 [Month4]	Nursing	Follow up with GP, awaiting follow up with vascular
18 [Month4]	District Nursing	Referred the diabetes clinic.
19 [Month4]	District Nursing	Complaining of pain L leg. Advised to see GP regarding pain.
22 [Month4]	District Nursing	D/W Dr — will assess. (no medical note present with notes) Booked for Doppler 2 [Month5], Renal OPD same day, [Mr C] podiatry 27 [Month4]
26 [Month4]	District Nursing	Unable to walk due to pain in right foot. o/e R foot toes are black necrotic. Necrotic area extends to midfoot. Very painful when elevated. Referred Kaitaia Hospital A&M
27 [Month4]	Admission	Referred by DN with necrotic pulseless L foot. Progressively worsening over last month but worse over last 1–2 weeks. On previous admission grossly fluid overloaded so though impaired perfusion as a result. Once fluid off loaded appeared better perfused. Constant L foot pain, worse at night. R leg Doppler pulse over DP, palpable femoral. L leg cold toes, necrotic tips and no CR, dark area extends to midfoot. No pulses on Doppler in foot. Charted opiate analgesia. Impression/ PVD bilateral L>R Referred [DHB2] vascular service.
	Results	White cell count 23.3, neutrophils 18.7

Appendix B: Independent clinical advice to Commissioner

The following independent advice was obtained from physiotherapist and health management and governance services consultant Janice Mueller:

'**HDC REPORT — Case number 20HDC01184**

ABBREVIATIONS USED

CKD	Chronic Kidney Disease	[the diabetes clinic]	[the diabetes clinic]
COD	Change of Dressing	HXPC	History of Presenting Condition
DHB	District Health Board	IV	Intravenous
DN	District Nurse	MOH	Ministry of Health
DNKSF	Diabetes Nurse Knowledge and Skills Framework	NDFSRST	National Diabetes Foot Screening & Risk Stratification Tool
ED	Emergency Department	NZSSD	New Zealand Society for the Study of Diabetes
ESRF	End Stage Renal Failure	PHE	Primary Health Enterprise
FTE	Full Time Equivalent	PHO	Primary Health Organisation
GP	General Practice	PWD	Person with Diabetes
HDC	Health & Disability Commissioner	TTT PHO	Te Tai Tokerau Primary Health Organisation

Introduction

My name is Janice Mueller. I have been asked to provide advice to the Commissioner on case number 20HDC01184. I have read and agree to follow the guidelines "Guidelines for Independent Advisors" from the Office of the Health and Disability Commissioner.

I qualified as a physiotherapist in 1984 and have held an annual practising certificate continuously since that time. My postgraduate qualifications include an MBA (Dist) from Massey University in 2002. I was previously the inaugural Chief Health Profession's Officer for [DHB2] (2002–2012). I am currently a Director of Waipiata Consulting Limited and have worked as a Health Management Consultant since 2012. I provide health management consultancy and governance services across New Zealand and Australia with an emphasis on the allied health and health science professions, and have completed 12 allied health service/system reviews across Australasia. I am the current Chair of the Physiotherapy Board of New Zealand since 2014, and have been a Board

member since 2010. I am currently working as a Technical Expert for two auditing companies who are completing performance reviews of regulatory authorities.

I have been asked to advise the Commissioner whether I consider "*the care provided to [Ms B] and other consumers by Northland DHB, Te Tai Tokerau (TTT) PHO, and PHO 3 was reasonable in the circumstances, and why"*. I have been asked to comment on:

1. The management of [Ms B's] referral to the podiatry clinic, including whether referral to the diabetes clinic should have been considered earlier.
2. The adequacy of the podiatry referral processes in 2017. Please include comment on:
   a. Whether the terms "high risk" foot, "active foot", and "acute foot" were adequately defined in policies and referral templates at TTT PHO.
   b. The potential for confusion with processes indicating a "high risk foot" is not referred to the "high risk foot clinic" but to the community podiatry service, while "active foot disease" is referred to the "high risk foot clinic".
   c. Whether the template letter declining [Ms B's] referral carried the risk of misinterpretation, e.g. the template says "referred to secondary services" rather than "requires referral to secondary services".
   d. The timeliness of assessments by the PHO podiatry service.
   e. The adequacy of:
      i. triaging of referrals
      ii. training provided to community podiatrists
      iii. the management and co-ordination of the service
      iv. policies
      v. the clinical governance and oversight of the service
   f. Whether the process has since been improved, describe the improvements and suggest any further improvements.
3. The adequacy of reviews and changes made to the podiatry service in Northland since 2017.
4. Any other system comments you wish to make about the community podiatry services available in the Northland region. Such as the coordination between providers, service provision arrangements, and referral management.
5. Any other matters in this case that you consider warrant comment.

I have been provided with the following documents and records which I have reviewed:

1. Complaint from [Mr C] dated 6 September 2018
2. Complaint from [Mrs A] dated 25 May 2020
3. Complaint from [Mr C] dated 5 October 2020
4. Northland DHB response dated 8 April 2019
5. Clinical notes from Northland DHB for [Ms B]
6. How to Use the Diabetes Foot Assessment Form and Refer to Podiatry, in 2017
7. [The medical centre's] response dated 26 August 2019 and clinical records for [Ms B]

8. Northland DHB's response to notification dated 5 October 2020
9. [PHO 3's] response in October 2020, including:
   a. Letter to HDC dated 2 October 2020
   b. TTT PHO guide How to refer to podiatry (updated June 2018)
   c. Community based Diabetes Podiatry Service in Northland (updated November 2019).
   d. How to reject active foot referral admin process
   e. Podiatry Review Final
   f. Podiatry Services flow chart
10. [PHO 3's] response dated 16 November 2020
11. Northland DHB's response to independent advisor's questions dated 18 October 2021

Background

[Ms B], aged [in her thirties], was initially referred to the podiatry clinic in [Month2], with a diabetic ulcer on her second toe. This referral was declined five days later but [Ms B] was not referred on to the diabetes clinic. On 18 [Month3], [Ms B] was admitted to Kaitaia Hospital with fluid overload secondary to chronic kidney disease. Her necrotic diabetic ulcer was noted on this occasion. She was discharged on 31 [Month3] and referred to the District Nurses for ongoing wound care. She presented to Kaitaia Hospital again on 15 and 16 [Month4] for ischaemic fourth and fifth toes. [Ms B] was discharged on these occasions following IV antibiotic treatment. She was informed to follow up with her GP.

[Ms B] presented to Kaitaia Hospital again on 27 [Month4], and was admitted with a gangrenous foot. She was referred to the diabetes clinic and seen by podiatrist [Mr C] on 28 [Month4] while an inpatient at Kaitaia Hospital. A transfer had been arranged to [DHB2] that day for further management. [Ms B] subsequently underwent a trans metatarsal amputation of the left foot and eventually a below knee amputation on 3 [Month5]. [Ms B] required further surgical debridement and angioplasty procedures and passed away on 22 [Month6].

Additionally, [Mr C] refers to other podiatry consumers' care and wider systemic issues in his correspondence with HDC.

Advice to the Commissioner

1 The management of [Ms B's] referral to the podiatry clinic and/or the diabetes clinic should have been considered earlier

The referral of [Ms B] to [the diabetes clinic] should have occurred sooner than 18 [Month4], as [Ms B] was assessed as meeting the criteria for "Active Foot Disease"[1] on

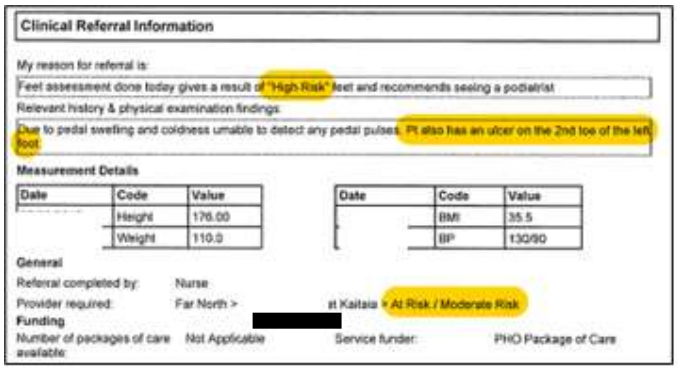
[1] As defined by the Diabetes Foot Screening and Risk Stratification Tool (2017) [accessed 9 September 2021]

28 [Month2]. There were several opportunities for referral to the diabetes clinic that were missed (including from the podiatrist), and these are outlined below.

a. By the general practice on 28 [Month2], rather than referring to [the podiatry clinic], given that [Ms B] was referred for an ulcer on her left toe (Figure 1 below)[2]. The presence of an ulcer met the "Active Risk" stratification and necessitated a diabetes clinic referral.

The description of Active Foot Disease at that time included the phrase "*Presence of active ulceration",* which was clearly identified on the reason for referral (second area of yellow shaded text). Additionally, the referral also uses the phrases "At Risk/Moderate Risk" (third area of yellow shaded text) which contradicts the text "reason for referral".

Figure 1: Screenshot of "Reason for Podiatry Referral"



Clinical Referral Information

My reason for referral is:

Feet assessment done today gives a result of "High Risk" feet and recommends seeing a podiatrist

Relevant history & physical examination findings:

Due to pedal swelling and coldness unable to detect any pedal pulses. Pt also has an ulcer on the 2nd toe of the left foot

Measurement Details

Date	Code	Value
	Height	176.00
	Weight	110.0

Date	Code	Value
	BMI	35.5
	BP	130/90

General

Referral completed by: Nurse

Provider required: Far North > [redacted] at Kaitaia > At Risk / Moderate Risk

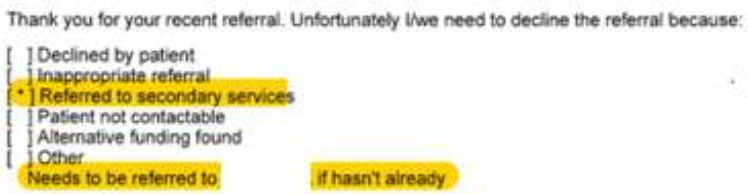
Funding

Number of packages of care available: Not Applicable

Service funder: PHO Package of Care

b. By the community podiatrist who received the referral from the general practice on 31 [Month2], given that [Ms B] was referred with an ulcer on her left toe[3]. While the Podiatrist correctly identified the referral needed to go to [the diabetes clinic], this did not occur. It was the professional responsibility of the podiatrist to refer directly to [the diabetes clinic], not to send it back to the general practice. It is not clear from the documentation provided whether the referral system enabled "*the right thing to do the easy thing to do"* for the podiatrist. Further feedback from Northland DHB[4] indicated that no notes were kept of this decision by the podiatrist.

Figure 2: Screenshot of "Reason for Declining Referral by the Podiatrist"



Thank you for your recent referral. Unfortunately I/we need to decline the referral because:

[ ] Declined by patient
[ ] Inappropriate referral
[*] Referred to secondary services
[ ] Patient not contactable
[ ] Alternative funding found
[ ] Other

Needs to be referred to [redacted] if hasn't already

[2] Doc 7 — pg. 9 of 35
[3] Doc 7 — pg. 8 of 35
[4] NDHB additional response 18 October, 2021

c. The discharge summary from Kaitaia Hospital ED on 18 [Month3] for her admission to the ward that day[5]. [Ms B] continued to meet the criteria for a referral to [the diabetes clinic], but no referral was made at that time.

> Secondary diagnosis included *chronic ulcers both feet*
>
> HXPC: … *has an ulcer on her left second toe which has been there over one month. Not painful to touch*
>
> Impression: Fluid overload secondary to CKD and *necrotic ulcer 2nd toe L foot*

> Plan: Admit to ward

d. On 8 [Month4] when the District Nurse first commented in her clinical notes[6] that a referral to [the diabetes clinic] was needed. This was not actioned at that time.

> COD *… debridement … needs referral to Podiatry [Mr C]*

e. On 15 [Month4] when [Ms B] presented at Kaitaia Hospital ED for management of her pain and worsening foot ulcers[7].

> *Review requested by DN, leg ulcer right heel with dusky feet, left>right. Family members feel the toes look much better, less swollen than when she was discharged*
>
> *Triage notes: … 4th & 5th toe necrotic. Pulse found on doppler but weak. Increased pain ++*
>
> Discharge Summary

> *Physical Examination: … clear pitting oedema both legs, left dorsalis pedis had no flow with Doppler but tibialis posterior had some flow. No flow in right foot. Bruit right femoral artery. Erythema of left shin*

> 1. *Plan: Cefazolin 2g IV, refer to vascular surgeons and review tomorrow*

The referral was finally made to [the diabetes clinic] on 18 [Month4] by the District Nurse (the same nurse who saw her on 8 [Month4]), and [Ms B] was seen by [the diabetes clinic] podiatrist during her inpatient stay at Kaitaia Hospital on 28 [Month4][8].

Requirements by the Podiatrist to Refer on to [the diabetes clinic]

There are four relevant documents to consider:

1. The *"Community Podiatry Service Specifications"*
2. TTT PHO podiatry treatment guidelines "Podiatry Referral Management System"
3. The Podiatrists Board of New Zealand "*Ethical Codes and Standards of Conduct"*
4. The Podiatrists Board of New Zealand *"Competency Standards"*

[5] Doc 5 — pg. 10 of 222
[6] Doc 5 — pg. 214 of 222
[7] Doc 5 — pg. 135 of 222
[8] Doc 5 — pg. 212 of 222 and Doc 4 — pgs. 11 and 12 of 61

Relevant excerpts from Community Podiatry Service Specifications (current in 2017[9]) are shown below.

> The contractor will provide best practice, quality podiatry services based on established professional standards and codes of practice to patients referred for assessment and treatment (pg. 1) … *and* … The contractor will treat patients in a timely manner as per the NZSSD Diabetes Foot Screening and Risk Stratification Tool … and Te Tai Tokerau Primary Health Organisation's ([PHO 1]) podiatry treatment guidelines … (pg. 1)

The service specification Exit Criteria clearly state:

> Patients requiring input from the secondary health care team for the management of active foot problems will be referred to the Secondary service, [the diabetes clinic] by the contractor[10], through their referral processes. The contractor will ensure the General Practice is notified that the patient's care has been transferred (pg. 2)

The TTT PHO podiatry treatment guidelines *"Podiatry Referral Management System[11]"* state that reasons for returning a referral include (but are not limited to) *"referred to a secondary service"*. The Podiatrists Board of New Zealand "*Ethical Codes and Standards of Conduct"[12]* state that Podiatrists should at all times:

1. Act in the best interests of their patients (pg. 4)
2. Practice in accordance with acceptable professional standards (pg. 5) and
3. Apply principles of best practice of podiatry to their professional activities (pg. 5)

The Podiatrists Board of New Zealand *"Competency Standards"[13]* state the minimum requirements for Podiatrists under six standards, all of which were relevant for [Ms B's] care:

1. Practice podiatry in a professional manner
2. Continue to Acquire and Review Knowledge for ongoing Clinical & Professional Practice Improvement
3. Communicate & Interrelate Effectively in Diverse Contexts
4. Conduct Patient/Client interview & Physical Examination
5. Interpret, Diagnose & Analyse
6. Develop a Patient/Client-focused Management Plan

Overall, the delays in the referral process to [the diabetes clinic] increased the risk for [Ms B] with delayed access to secondary/tertiary level care.

- A referral to [the diabetes clinic] should have been made on 28th [Month2] as [Ms B] met the criteria. This failure would be viewed as a severe departure from the standard of care/accepted practice, and would be viewed adversely by clinical peers, given [Ms B's] risk profile.

[9] Doc 4 — pg. 41 of 61
[10] Advisor's Emphasis
[11] Doc. 4 — pg. 19 of 61
[12] Source: Podiatrist's Board of New Zealand Code of Ethics [Accessed 9 September 2021]
[13] Source: Podiatrist's Board of New Zealand Competency Standards [Accessed 9 September 2021]

- The subsequent failure of the podiatrist to (a) refer on to [the diabetes clinic], (b) not make the intentions clear in the response back to general practice and (c) not document any rationale for the decision made, meant that the Podiatrist did not meet the contractual requirements, the Podiatrists Board of New Zealand Code of Ethics and the Podiatrists Board of New Zealand Competency Standards. Collectively, this would be viewed as a severe departure from the standard of care/accepted practice, and would be viewed adversely by podiatry peers.

2 The adequacy of the podiatry referral processes in 2017

(a) Were the terms "high risk" foot, "active foot", and "acute foot" adequately defined in policies and referral templates at TTT PHO?

To answer this question, an overview of the diabetic foot risk stratification terminology is shown below, including changes over the last seven years in key documents (Table 1 below).

Table 1: Risk Stratification Terminology

Year	Category 1	Category 2	Category 3	Category 4	Document	
2013	Low Risk Foot	At Risk / High Risk Foot	Active Foot Disease	Acute Foot Disease	MOH Tier Level Three Service Specification (2013)[14]	
2014/15	Low Risk Foot	At Risk Foot	High Risk Foot	Active Foot Disease	TTT PHO "How to Refer" GP Guidance (2014/15)[15]	
2014	Low Risk Foot	Moderate Risk Foot	High Risk Foot	Active Foot Disease	NZSSD Risk Stratification Tool (2014)[16]	
2017	**Low Risk Foot**	**Moderate Risk Foot**	**High Risk Foot**	**Active Risk Foot**	**NZSSD Risk Stratification Tool (2017)[17]**	
2018	Low Risk Foot	At Risk Foot / Moderate Risk Foot	High Risk Foot	Active Foot Disease	TTT PHO "How to Refer" GP Guidance (2018)[18]	
2020	**Low Risk**	**Moderate Risk**	**High Risk** • **High Risk** • **High Risk Foot in Remission**	**Active Risk** • **Highly Serious** • **Critical**	**NZSSD Clinical Triage Guide to prevent lower limb amputations during Covid-19 (2020)[19]**	

[14] Source: MOH (2013). Community Health, Transitional And Support Services — Allied Health Services — Podiatry For People With At-Risk/High-Risk Feet. Tier Level Three Service Specification (Pg 13). Link [Accessed 9 September 2021]
[15] Doc 6 — pgs. 3–5 of 5
[16] Refer also to https://www.podiatry.org.nz/assets/Diabetes_Foot_Screening_and_Risk_Stratification_tool_2018.pdf [Accessed 21 September 2021]
[17] Refer also to https://www.nzssd.org.nz/special-interest-groups/group/3/diabetic-foot-special-interest-group [Accessed 21 September 2021]
[18] Doc 4 — pgs. 57–61 of 61
[19] Ibid

Notes: Blue shading — Guidance documents used in 2017

Orange shading — Guidance documents currently in use (from 2018)

Bold Text — Current tools in use nationally

- The Tier Three Service Specification (2013) remains the current (albeit overdue for review) MOH Service Specification. The language used to describe risk in this document was out of date in 2017 (row one above) and did not reflect the National Diabetes Foot Screening & Risk Stratification Guidelines (2017) used nationally at that time (row four above)
- In [Month2], the National Diabetes Foot Screening & Risk Stratification Tool (the NDFSRST) used in Northland DHB was based on the 2014 guidelines (row 3 above). The guidelines were updated in April 2017, but the language used to describe risk stratification remained unchanged
- The terms used in the *"How to Guide for GP Practices — How to use the Diabetes Foot Risk Assessment form and refer to Podiatry"* (2014/15)[20] differed slightly from the national screening tool (red box) which could be confusing for clinicians when considering a Category 2 referral i.e. a referral to the community podiatrist
- The GP guidance was updated in 2018 by TTT PHO and is currently in use by [PHO 3] Primary Health Entity (row 5 above)
- In 2020 the New Zealand Society for the Study of Diabetes (NZSSD) published guidance to support the clinical triage of patients to prevent lower limb amputations during Covid-19. This provides clinicians with further differentiation in the High and Active Risk categories to better manage patients according to their clinical risk

While there is a minor difference in terminology (red box in Table 1 above) between the version of the Screening Tool in use at Northland DHB in 2017 and the general practice guidance (blue shaded rows), this did not impact on [Ms B's] care, as her referral incorrectly recorded her assessment as a "High Risk" Foot (rather than "Active Foot Disease") (row 3 above), and categories 3 and 4 of the final two risk categories are consistent in their titles.

While the terminology used in the general practice guidance for referral to podiatry services aligned with the risk stratification tool in use, no clinical policy or guidelines regarding the management of the diabetic foot was available. It may have been helpful in the general practice guidance to clearly list all categories of risk and the associated definitions, so that they were clear to all referrers. The screenshots used in the general practice guidance only show a single risk category that was selected for the guidance document.

(b) Is there potential for confusion with processes indicating a "high risk foot" is not referred to the "high risk foot clinic" but to the community podiatry service, while "active foot disease" is referred to the "high risk foot" clinic?

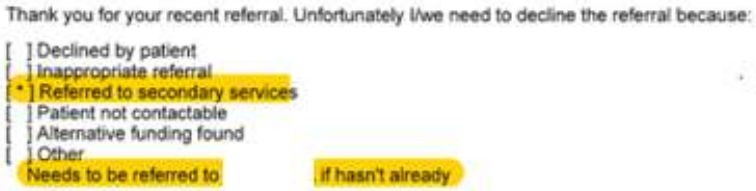
[20] Doc 6 — pgs. 3–5 of 5

There was the potential for confusion at the time with the use of this terminology as is discussed above in response to question 2(a) above. The wording in all relevant documents now needs to align with the nationally consistent terminology, including the *"NZSSD Clinical Triage Guide to prevent lower limb amputations during Covid-19"* (2020).

(c) Whether the template letter declining [Ms B's] referral carried the risk of misinterpretation, e.g. the template says "referred to secondary services" rather than "requires referral to secondary services".

The 2017 template letter declining [Ms B's] referral to [the podiatry clinic] (Figure 3 below) was able to be misinterpreted because of how the podiatrist completed the template[21].

Figure 3: Screenshot of Template Letter — Decline of Podiatry Service



- The template letter correctly says "*Referred to Secondary Services"*, which was the requirement of the podiatrist to do. The asterisk against the statement "*Referred to Secondary Services"* could reasonably be assumed that the referral had been declined and that the community podiatrist had referred [Ms B] on to secondary services
- The additional comment *"needs to be referred to [Mr C] if hasn't already"* appears to contradict the asterisked statement above. No referral to [the diabetes clinic] occurred at this point by the either podiatrist or the general practice.

While the podiatrist correctly recognised that the presence of an ulcer required a referral to [the diabetes clinic], the poor formatting of the form and the inappropriate and unclear decision-making by the podiatrist (including a lack of documentation regarding the rationale for this decision) contributed to a significant misunderstanding. Both parties thought the other had (or should have) made a referral to [the diabetes clinic], but neither did.

(d) The timeliness of assessments by the PHO podiatry service

There have been long-standing issues with the timeliness of community podiatry assessments by the community podiatry service, that have been consistently documented and the subject of both internal Northland DHB adverse event notifications, HDC complaints, and multiple attempts from the Diabetes Podiatrist (mostly via email) at [the diabetes clinic] at Northland DHB to resolve referral systems

[21] Doc 7 — pg. 8 of 35

and processes (and community podiatrist referral behaviours) from 2016 to at least September 2020[22] (the period covered by the documents provided).

The correspondence viewed indicates a range of problems including:

- Poor/inconsistent knowledge of management of the diabetic foot (particularly the "High Risk" foot and those with "Active Foot Disease") by primary and secondary care referrers to podiatry
- Insufficient attention being paid to early engagement with patients and whānau by podiatrists, including how to manage problems early and avoid foot ulcers
- Lack of knowledge of both the community podiatry and [the diabetes clinic] referral systems and processes
- Poor utility of the referral systems and processes for primary care referrers and podiatrists
- Lack of clinical oversight and governance of the podiatry service by an experienced podiatrist
- Lack of process and clinical guidelines for the diabetic foot for community podiatrists
- Community podiatrists sending referrals back to general practice and requesting them to refer on to [the diabetes clinic] (or vascular services) when they have contractual and ethical requirements to refer on appropriately and promptly[23]

The adequacy of referral triage, training provided to community podiatrists, service management and coordination, policies, clinical governance and oversight of the service

The referral triage timelines in the *"Community based Diabetes Podiatry Services in Northland"* process map (undated but assumed in use in 2017)[24] have remained unchanged from at least 2017. From the initial foot assessment to when the podiatrist should see a "High Risk" foot is seven working days, while an "At Risk" foot is nine working days. The actions put in place to address the systemic issues have not resolved the referral and workflow issues, as they continue to be present in the current process map[25].

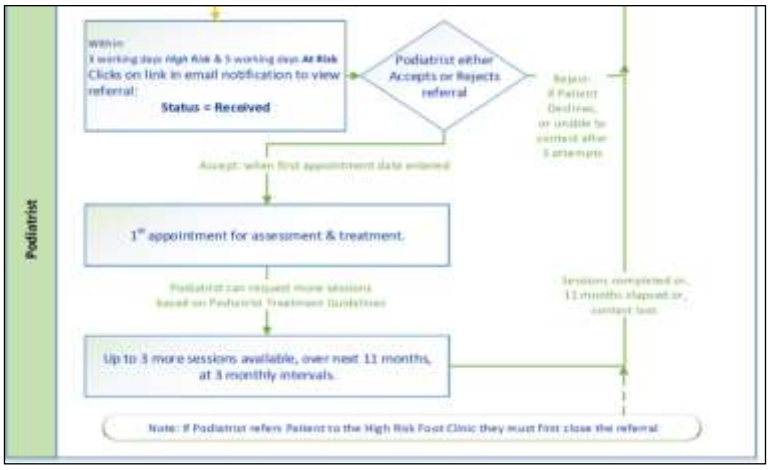
- The status of the referral should always reflect where the patient is at. For the podiatry component of the flow chart (Figure 4 below), you cannot determine the status of the patient from this logic
- The podiatrist may conduct an initial assessment and then discharge (would need to also document the reason for discharge), and there is no reflection of option in the

[22] Doc 3 — pg. 3 and pg. 48–49 of 73
[23] Doc 3 — pg. 43 of 73
[24] Doc. 4 — pg. 56 of 61
[25] This was not an issue for [Ms B's] complaint as she came via a different route

process. For example, they may decide the patient needs to be referred-on directly to [the diabetes clinic] as the referral was incorrectly referred to them

- The referral status also needs to change from "Received" when the podiatrist is completing the additional followup visits
- Should the workload of the assigned podiatrist preclude the 1st appointment timeframes being met[26], there is no guidance in this flow chart for what needs to happen next
- Regular status updates for each patient should be sent to general practice so that they are aware of the patient's journey at all times. Currently there is only a single notification once the referral status is "Closed"
- E-referrals have been in place for [the diabetes clinic] since June 2015[27], but the 2018 Podiatry Review and subsequent email conversations were all clear that this system was not consistently being used by community podiatrists, despite multiple efforts to seek engagement[28]

Figure 4: Community Diabetes Podiatry Service in Northland ([PHO 3])



It is not clear from these flow charts what value the PHO added to this process by requiring the referrals to be filtered through their organisation, then sent on to a community podiatrist. As the contract holder, they absolutely need regular and appropriate monitoring and reporting of the community podiatry providers' service (including referral status, waiting times, reasons for referral on, discharge etc), but there are other ways to do this rather than filtering all referrals and creating an additional step in the process.

[26] The podiatrist needs to see a "High Risk" foot within 3 working days and an "At Risk" Foot within 5 working days
[27] Doc 3 — pg. 33 of 73
[28] Doc 3 — pgs. 31–32 and pg 38 of 73

Training provided to community podiatrists up to and in 2017 did not occur as part of a planned (diabetes) education strategy from either TTT PHO or the podiatrists themselves. There was no training provided to podiatrists by the PHO regarding referral systems and processes[29]. Some podiatrists had chosen not to participate in the education sessions and collegial meetings that were available[30]. When gaps in the knowledge of community podiatrists were identified (e.g., the quality of their referrals to vascular services and completion of Doppler assessments) it was not clear how this identified gap was addressed e.g., whether it was a lack of knowledge, and/or not owning/accessing the requisite equipment, or other reasons[31].

Much of the communication between [the diabetes clinic] podiatrist and the community podiatrists appear to have been via email, probably due to a combination of workload pressures of all parties, and the large geographical area that is covered by the Northland DHB. This can leave messages open to misinterpretation. Use of zoom technology and kanohi ki te kanohi korero (face to face meetings) would be preferred communication channels for educative discussions and education sessions. Sufficient time for all podiatrists must be allocated for this activity.

Service management and coordination, policies, clinical governance and oversight of the service were all poor during this time, as is evident by the persistent and ongoing problems that have been well documented by [the diabetes clinic] podiatrist and the reviews of the community podiatry service. There was no clear clinical governance of the community podiatry service, and a lack of clarity contractually, organisationally and professionally regarding the accountability and level of "authority" that [the diabetes clinic] podiatrist had towards the community podiatrists. Communication between both groups indicates that this relationship was strained at times.

Review of Process Documentation

- The updated TTT PHO General Practice *"How to Guide for Diabetes Podiatry Services"* (2018) did not align with the 2017 NDFSRST tool that was in use in 2018. There was still inconsistent use of terminology i.e., rather than saying At Risk/Moderate Risk foot[32], all documentation should have been aligned to the 2017 NDFSRST tool, with categories of low, moderate, high risk and active foot disease (refer also to Table 1 above). It was clear, however, where each category of patient should be referred to for podiatry care
- The *"Community based Diabetes Podiatry Services in Northland"* (2019) flow chart[33] and the *"How to Guide: How to Refer to Podiatry"*[34] have had minor amendments only between 2017 and 2019, reflecting the change from TTT PHO to [PHO 3], and the use of the e-referral management system. The system issues regarding referral

[29] NDHB additional response 18 October, 2021
[30] Doc 3 — pg. 18 and 31 of 73
[31] Doc 3 — pg. 42 of 73
[32] Doc 4 — pg. 60–61 of 61
[33] Doc 9 — pg. 7 of 47
[34] Doc 9 — pg. 4–6 of 47

status noted in this response to question 2(d) above still appear to be present. A 2019 email from [the diabetes clinic] podiatrist indicates that community podiatrists are continuing to send patients to general practice to be referred to [the diabetes clinic][35]

- The flow chart still does not use the NDFSRST Tool (2017) categories. It uses "At Risk" and "High Risk" foot, rather than "Moderate Risk" and "High Risk" foot. This increases the potential for confusion, particularly as the still in use (but outdated) MOH service specification document brackets the "At Risk/High Risk" foot together
- The *"How to reject an Active Foot Referral"*[36] process appears to be an improvement on the letter template used in 2017 (Figure 3 above). The current e-referral form provides more clarity if a referral is rejected due to "Active Foot Disease". It is acknowledged that the administrator at [PHO 3] who processes the podiatry referrals had access to clinical support, but this does not include a named podiatrist[37]. It is not the responsibility of an administrator to identify if a referral has been (for example) inaccurately risk stratified (as occurred with [Ms B]). This triage activity needs to be undertaken by a clinician, and preferably a suitably experienced podiatrist
- No community podiatry clinical guidelines for the diabetic foot were able to be sourced

IT Systems Used by Community Podiatrists

- Since 2017 there has continued to be educational email conversations provided to community podiatrists by [the diabetes clinic] podiatrist regarding referral processes to [the diabetes clinic]
- Referral-on by a community podiatrist to [the diabetes clinic] may be hindered by the IT systems that some community podiatrists use, as can be seen from correspondence between [the diabetes clinic] podiatrist and a community podiatrist in 2018: "*You cannot refer patients to [the diabetes clinic] via Predict on the 1st visit or any visits. It has never had the ability to on-refer patients to other services such as [the diabetes clinic]"*[38]. A community podiatrist at that time commented*: "I have also identified that MEDTECH is the easiest solution for access to Healthlink but the cost to self-employment is not achievable"*[39]
- *"[The software provider's] helpdesk may have provided some notes/training around referral processes, but this is unknown by current PHO staff"*[40]

[35] Doc 3 — pg. 31 of 73
[36] Doc 9 — pg. 8 of 47
[37] Doc 9 — pg. 2 of 47
[38] Doc 3 — pg. 39 of 73
[39] Doc 3 — pg. 41 of 73
[40] NDHB additional response 18 October, 2021

(e) Whether the process has since been improved, describe the improvements and suggest any further improvements.

This sub-point is addressed in question 3 below.

When considering all of the information provided regarding the systems and processes in 2017, the community podiatry referral system and processes did not meet an accepted standard of practice:

- They did not enable diabetes consumers with foot conditions to access appropriate care pathways based on an accurately assessed level of risk within appropriate, evidence-based timeframes
- The monitoring and auditing of these systems and process was poor by the contract holder
- No training of referral systems and processes was provided to the community podiatrists
- There was no podiatry-led clinical governance leadership and systems in place to ensure the community podiatrists delivered a competent, timely service that met consumer needs

Collectively, this would be viewed as a moderate departure from the standard of accepted practice and would be viewed adversely by professional and clinical peers.

Recommendations for Improvement

- The MOH review and update the Level Three Service Specification (2013) for community podiatry services
- Definitions within policies, templates and process maps need to be clear and consistent with current national clinical guidelines
- The referral management systems need appropriate system status/alerts built in
- All referrers to podiatry services and community podiatrists require ongoing education regarding management of the diabetic foot, including referral processes
- Community podiatry providers must use the e-referral system to refer to secondary services (i.e., [the diabetes clinic] and vascular services), and may require additional IT support/investment to enable this
- A more effective referral management service that is consumer focused (and does occur in other DHBs) would have all referrals centrally triaged daily by an appropriately skilled podiatrist who allocates referrals based on referral urgency, patient domicile, and the capacity and skill-mix of the entire community podiatry team
- The community podiatry contract must clearly articulate regular activity reporting and auditing requirements, as well as regular clinical governance activity (including,

but not limited to clinical audits, documentation audits and peer review) to monitor clinical outcomes

- Routine monitoring and reporting of when the initial podiatry assessments occur by risk category needs to be part of contractual performance management
- Given the known healthcare inequities for Māori and their increased prevalence of diabetes and foot-related complications, every effort should be made to engage with clients and whānau. If there is no response after three attempts by the podiatrist to contact a patient and their whānau, systems need to be in place to follow up with the referrer to ensure the opportunity to engage with patients and whānau is not lost
- A training needs analysis of all community podiatrists should be conducted by a suitably experienced podiatrist and an education plan developed and resourced following this analysis

3 The adequacy of reviews and changes made to the podiatry service in Northland since 2017

The community podiatry service review in October 2018 was initiated due to "*concerns raised around variance of practice, clinical oversight and the management and coordination of this service"* [41] . The review was comprehensive and led by an experienced and well respected podiatrist. The review made six recommendations which were accepted by Northland DHB in October 2020, who agreed to "*bring more services back into [the diabetes clinic]"*, while acknowledging that *"there remains a need to retain a degree of community delivered podiatry services"*[42].

Remedial Actions from the 2018 Community Podiatry Review

- The remedial actions taken (as at October 2020) appeared appropriate and both Northland DHB[43] and [PHO 3][44] have been working through implementation of these recommendations[45] (listed in Appendix One)
- Effective from 01 September 2021, the contracts for the community podiatrists are now managed by Northland DHB [46]. *"To ensure a seamless transition for patients and referrers, all contracts were rolled over [from PHO2] for all the current podiatry contract holders. All referrals are managed by the high-risk foot clinic at Northland DHB. A working group is to be set up over the coming months with representation from community podiatrists, NDHB podiatrists, referrers, and consumers to review and enhance current model of care for podiatry across Northland"*[47]

[41] Doc 4 — pg. 3 of 61
[42] Doc 8 — pg. 4 of 13
[43] Doc 8 — pg. 4 of 13
[44] Doc 9 — pg. 2 of 47
[45] NDHB additional response 18 October, 2021
[46] Ibid
[47] Ibid

- The community podiatry service must have effective clinical leadership and clinical governance in place, and there is a clear need to continue to strengthen these systems. The working relationships, leadership, clinical governance and accountability for podiatry service provision across secondary and community providers for Northland DHB needs urgent resolution to better meet the needs of the local population

The 2018 community podiatry service review and particularly the recent changes made in September 2021 will better support the community podiatrists to meet accepted standards of practice. The management of all referrals by [the diabetes clinic] is a positive step to improve clinical oversight of services, and ensure consumers receive the most appropriate services in a timely manner. Establishment of the working group will also facilitate much needed change, particularly the involvement of consumers in the process.

There was no departure from accepted practice. The review was appropriately initiated, conducted thoroughly, and both Northland DHB and [PHO 3] accepted (and are implementing) the recommendations.

Recommendations for Improvement

- That the working group considers revisions to the terminology in all general practice guidance regarding the diabetic foot to clearly align with the current National Diabetes Foot Screening & Risk Stratification Tool (2017) categories of moderate and high-risk foot, and active foot disease
- If not already in place, a suitably experienced and competent podiatrist is appointed as a member of the leadership of the Diabetes Governance Group to assist in ensuring the podiatry-focused clinical leadership and governance elements are prioritised and implemented as soon as possible
- An integrated relationship with [the diabetes clinic] and increased oversight and clinical governance by the Professional Leader for podiatry at Northland DHB needs to remain a priority, as articulated in the 2018 Review of Community Podiatry Services[48]
- Of note, the Reviewers did recommend that the service was formally and externally reviewed again in three years, and this could be scheduled once the new model has had at least six months of implementation i.e., around March 2022

4 Other system comments about the community podiatry services available in the Northland region

- In 2020 the New Zealand Society for the Study of Diabetes (NZSSD) published guidance to support the clinical triage of patients to prevent lower limb amputations

[48] Doc 4 — pg. 36 of 61

during Covid-19[49]. This provides clinicians with further differentiation in the "High Risk Foot" and "Active Foot Disease" categories to better manage patients according to their clinical risk. This guidance needs consideration (if this has not already occurred) by the Northland DHB Diabetes Governance Group (and the working group referred to above that Northland DHB will be establishing), and appropriately incorporated into the revised general practice and podiatrist clinical guidance.

- The recently published *"Competency Framework for Podiatrists and Healthcare Clinicians Working in Diabetes Lower Limb Care in Aotearoa/New Zealand"* (2020)[50] describes four levels of Foot Protection Services for a person with diabetes (PWD) (Table 2 below), and this document will be a helpful reference for the podiatry working group.

Table 2: Foot Protection Service

Level	Role of Foot Protection Services
A	**Foot Screening** Involves routine basic assessment and risk stratification and general education, advice and care of the low risk foot.
B	**Community Foot Protection Service** Community based podiatry services involving the expert assessment and care of the moderate risk foot, but without high risk features or an active foot pathology.
C	**Advanced Foot Protection Service** Services provided in either the secondary or community care setting dependent on the level of service required for management of the PWD with in-remission or high risk foot features.
D	**Specialist MDT Foot Care Team** Secondary based specialist podiatry services and multidisciplinary foot care service involving the expert assessment and management of existing foot ulcer or acute Charcot foot. This also includes inpatient care.

- This document provides excellent guidance regarding competencies for diabetes foot care, and could be used to develop education programmes for general practices, district nurses and other referrers to community podiatry services, as well as articulating clear diabetes foot competency standards for the Northland community podiatry service and [the diabetes clinic].

Recommendation for Improvement

- Both of these documents could be used to support the education and ongoing competency development of all participants in this system

5 Any other matters in this case that you consider warrant comment

[49] Refer to https://www.nzssd.org.nz/special-interest-groups/group/3/diabetic-foot-special-interest-group [Accessed 27 September 2021]

[50] Garrett M, Beeler E, Haggart P, Holbrook R, Ihaka B, Kriechbaum J, O'Shea C, Randall L, Reed K, Wu J (2020). *Competency Framework for Podiatrists and Healthcare Clinicians Working in Diabetes Lower Limb Care in Aotearoa/New Zealand*. Online, New Zealand Society for the Study of Diabetes. Link [Accessed 9 September 2021]

A search of the Podiatrist Board of New Zealand public register[51] showed that the community podiatrist who was involved with [Ms B's] referral was … self-employed. A self-employed new graduate based in primary care and practising in a remote setting … with inadequate systems and processes, poor training and a lack of clear clinical governance is practising in a very challenging environment.

This raises concerns and significant questions for [PHO 3] as the contract holder and Northland DHB regarding the specific support, training, regular peer review, mentoring, professional supervision and clinical governance offered to self-employed new graduates, particularly those practising in rural and/or remote settings …

Recommendation for Improvement

- Both Northland DHB allied health leadership and the working group that will be established by the DHB[52] specifically consider what additional clinical governance measures are required for new allied health graduates (including primary care-based podiatry graduates) in their first two years of practice

Appendix One — October 2018 Podiatry Review Recommendations

Reviewers

…

Recommendations

We recommend the six points below are considered and actioned under one of three proposed models of care.

1. Additional hospital specialist podiatry FTE capacity is created for the hospital podiatry service to meet its current and future demands.
2. The hospital podiatry service provides continuing care to all patients with Active Foot, Active Foot in Remission, and end stage renal failure[53]
3. The community podiatry service is reoriented and sufficiently resourced to ensure the high-risk foot cohort can access free or subsidised podiatry services monthly if required as per evidence-based guidelines
4. Develop new opportunistic foot risk screening programmes across Northland to improve the annual foot risk screening coverage, especially for the group of patients who are, or are likely to be, in the high-risk foot group
5. Effective clinical leadership and clinical governance of the community podiatry services needs to be developed, to include service standards and a credentialing framework

[51] Source: Podiatrist's Board of New Zealand Public Register [Accessed 8 November 2021]
[52] NDHB additional response 18 October, 2021
[53] This will need additional salaried podiatry FTE offering extra regular clinics within community hospitals and other appropriate health care clinic facilities throughout Northland

6. If resources allow, the continuation of a free or subsidised community podiatry service for the moderate foot risk group of patients, at a frequency of one or two sessions per year

Proposed Models of Care

A. Centralised contract that is managed by the High-Risk Foot service within the Medicine, Health of Older People, and Emergency & Clinical Support directorate
B. Mixed Model:
   a. High-Risk Foot service being responsible for the Active Foot, Active Foot in Remission, and end stage renal failure AND
   b. The High-Risk Foot and Moderate Risk Foot contracts are managed by [PHO 1][54]
C. Mixed Model:
   a. High-Risk Foot service being responsible for the Active Foot, Active Foot in Remission, end stage renal failure (ESRF) and the High-Risk Foot AND
   b. The Moderate Risk Foot contract is managed by [PHO 1][55]'

[54] Now PHO 3 as of 1 July 2020
[55] Ibid

Appendix C: In-house medical advice

The following advice was obtained from GP Dr David Maplesden:

'1. Thank you for the request that I provide clinical advice in relation to the complaint from podiatrist [Mr C] about the care provided to [Ms B] in relation to a foot ulcer. In preparing the advice on this case to the best of my knowledge I have no personal or professional conflict of interest. I agree to follow the Commissioner's Guidelines for Independent Advisors. I have reviewed the documentation on file: complaint from [Mr C]; response from Northland DHB and DHB clinical notes (Kaitaia Hospital (KH); PHO Podiatry Referral policy and process in place at time of the events in question; [medical centre] response and clinical records.

2. You have provided the following background:

[Ms B], aged [in her thirties], was initially referred to [the podiatry clinic] in [Month2], with a diabetic ulcer on her second toe. This referral was declined five days later but [Ms B] was not then referred to [the diabetes clinic]. The complainant, [Mr C], is a Diabetes Podiatrist working in [the diabetes clinic]. He states that a diabetic ulcer requires an urgent referral to [the diabetes clinic]. He considers it was inappropriate that the GP practice referred the matter to Community Podiatry in the first instance.

In [Month3], [Ms B] was admitted to Kaitaia Hospital with fluid overload secondary to chronic kidney disease. Her necrotic diabetic ulcer was noted on this occasion. She presented to Kaitaia Hospital again on 15 and 16 [Month4] for ischaemic fourth and fifth toes. [Ms B] was discharged on these occasions following IV antibiotic treatment. She was informed to follow up with her GP.

[Ms B] presented to Kaitaia Hospital again on 27 [Month4], and was admitted with a gangrenous foot. She was referred to [the diabetes clinic] and seen by [Mr C] on 28 [Month4]. A transfer was arranged to [DHB2] that day for further management. [Ms B] subsequently underwent a trans metatarsal amputation of the left foot and eventually a below knee amputation on 3 [Month5].

[Ms B] required further surgical debridement and angioplasty procedures and passed away on 22 [Month6].

3. I have been asked to provide the following advice:

i. The management of [Ms B's] referral to [the podiatry clinic], including whether referral to [the diabetes clinic] should have been considered earlier.

ii. Any individual staff issues including, [RN G], [Dr F], and/or [Dr E].

iii. The adequacy of relevant policies, processes and procedures in place for high risk diabetic foot referrals at the time of these events at [the medical centre].

iv. Any other system comments you wish to make about the community podiatry services available in the Northland region. Such as the coordination between providers, service provision arrangements, and referral management.

v. Any other matters in this case that you consider warrant comment.

4. [Ms B] was [in her thirties] at the time of the events in question. She had a past history of previous morbid obesity (however significant weight loss by 2017) with type 2 diabetes diagnosed around age 23 years and poor glycaemic control for many years before commencing insulin therapy in 2016. She suffered significant complications of diabetes including retinopathy, nephropathy (CKD 3) with nephrotic syndrome, ischaemic heart disease with previous myocardial infarction (2015, stenting post-event). She also suffered from gout, hyperlipidaemia and chronic pulmonary thrombo-embolic disease (on warfarin), and was a current smoker. Her confirmed cardiovascular disease, smoking and diabetes placed her at high risk of peripheral vascular disease.

5. GP notes are available from 28 [Month2]. On that date [Ms B] underwent routine three-monthly review by [Dr F]. He noted [Ms B] had some mild respiratory symptoms and ongoing right knee and ankle pain following a fall. Most recent HbA1c (March 2017) was very satisfactory at 53 mmol/mol[56] (compared with values as high as 149 mmol/mol in 2012). Cardiorespiratory examination was unremarkable apart from chronic dependent oedema. Repeat blood tests were ordered and [Ms B] was then seen by practice nurse (PN) [RN G] for diabetes annual review.

Comment: Management was consistent with accepted practice. [Ms B] was attending for issues not specifically related to her diabetes and these were addressed in a satisfactory manner. I would not expect [Dr F] to have inspected [Ms B's] feet. In most practices nursing staff have been upskilled to undertake comprehensive diabetes patient education and annual diabetes reviews including foot assessments, and in some practices nursing staff are making medication adjustments including initiation of insulin in conjunction with the GP.

6. [RN G] noted [Ms B's] diet and exercise regime was satisfactory and she was under ophthalmology and renal specialist review regarding her eye and kidney issues. An electronic "Diabetes Foot Screening and Risk Stratification" template was completed indicating intact sensation but an inability to detect peripheral pulses in [Ms B's] feet and a current active foot ulcer. These factors were additionally recorded as *Due to swelling and coldness of feet cannot detect any pedal pulses. Also has a ulcer on the 2nd toe of the left foot.* [RN G] identified [Ms B] as having a "high risk foot" with actions recommended in the template for such patients being: *Annual assessment by podiatrist. Agreed and customised management and treatment plan by podiatrist according to patient's needs. Provide written and verbal education. Referral for specialist intervention if/when required.* [Ms B] was informed of her risk status and it was noted she was not currently engaged with any podiatry service. [RN G] then sent an e-referral "Primary/Community Podiatry Referral for Assessment and Treatment" with reason for

[56] See https://www.healthnavigator.org.nz/health-a-z/h/hba1c-testing/ for explanation of values

referral documented as: *Feet assessment done today =gives a result of "High Risk" feet and recommends seeing a podiatrist.* The completed template discussed above was attached.

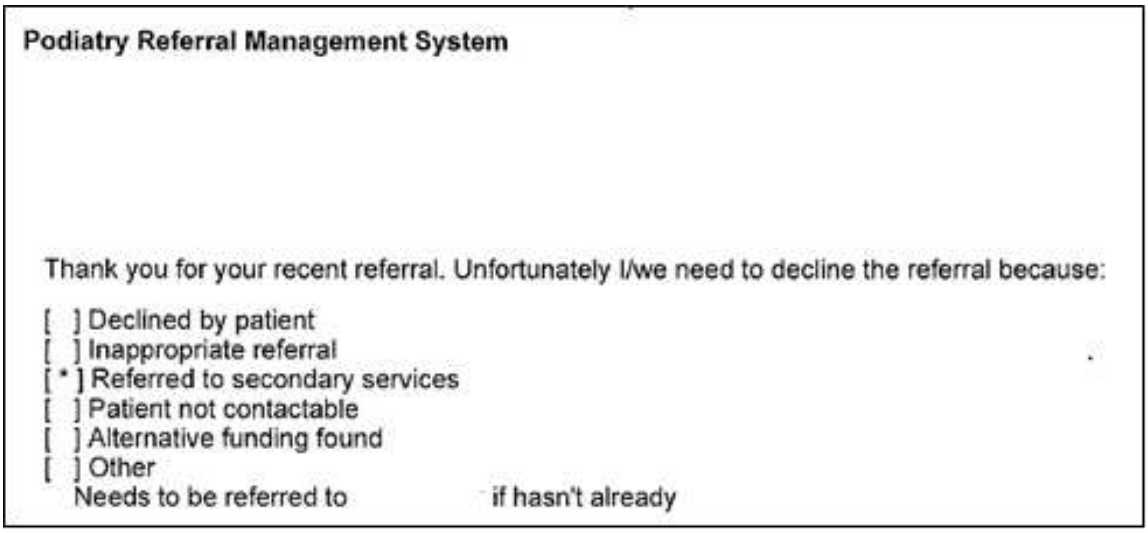
Comments:

(i) I have been provided with user instructions in place in 2017 regarding referral to podiatry services following foot review. This includes screenshots of the screening template where "high risk foot" is defined as *Previous amputation or ulceration or two or more risk factors present eg loss of sensation, absent or diminished pulses, PAD, foot deformity with significant callous formation, pre-ulcerative lesions, end-stage renal failure, or Māori ethnicity.* The foot assessment undertaken by [RN G] was competent and she followed the instructions in the template for "high risk foot" ie referral to a community podiatrist via the Northland PHO Podiatry referral form. It appears this process is still in place as illustrated by the current Northland Health Pathways reproduced in the Appendices (see later comments) and current (2018) user guide I have viewed. The crucial error in [RN G's] management on this occasion was mis-identification of [Ms B's] foot category as "high risk" when in fact she had "active foot disease". This was a separate check box in the template. I am unable to determine the definition of "active foot disease" and recommended management at the time from the screenshots provided but have assumed these mirror the current information shown in the appendices ie the presence of an active foot ulcer (as [Ms B] had) fulfils the definition of "active foot disease" with referral to the *Northland DHB [the diabetes clinic]* advised. The user guide included a brief comment: *Please note: the referral pathway for "ACUTE FOOT" must be sent via the usual DHB diabetes e-referral pathway with a phone call to the DHB Podiatry clinic* but a majority of the guide related to referral to the PHO community podiatry service. Assuming [Ms B's] ulcer was small with no signs of infection or critical limb ischaemia, I think it was reasonable for [RN G] to complete a referral without discussion with [Dr F].

(ii) It appears there is potential for confusion with processes in place at the time (and apparently currently) indicating a "high risk foot" is not referred to the "high risk foot clinic" but rather to the community podiatry service, while an "active foot disease" patient should be referred to the "high risk foot" clinic. The user guide referred to above also referred to "acute foot" which was not one of the defined categories, rather than the defined category of "active foot disease" when noting use of the DHB rather than PHO referral pathway, and use of the DHB pathway was not emphasised. The current user guide (2018) has a specific section on "active foot disease" and is far clearer in its referral process recommendations than the version used in 2017. It could be argued that all "high risk feet" require prompt specialised podiatry attention rather than what were apparently significant waits for community podiatry intervention, but there is likely to have been an issue of resource (financial and manpower) requiring the prioritisation process in place.

(iii) I have not viewed any specific statement from [RN G] regarding the rationale for her decision to identify [Ms B] as having a "high risk foot" rather than "active foot disease",

or her impression of the quality of training in foot assessment or clarity of referral advice she had been given in 2017. These factors might influence a quantification of any departure from accepted practice in this case. However, I think it is reasonable to state that [RN G] erred in her classification of [Ms B's] foot disease and it seems this led to an inappropriate referral to the PHO podiatry service rather than the DHB clinic. [The medical centre's] response suggests the incorrect referral did not ultimately affect [Ms B's] secondary care assessment as a wait of at least two weeks was common following referral to the DHB clinic and [Ms B] was admitted to secondary care (KH) less than three weeks after the referral was sent (see below).



Podiatry Referral Management System

Thank you for your recent referral. Unfortunately I/we need to decline the referral because:

[ ] Declined by patient
[ ] Inappropriate referral
[*] Referred to secondary services
[ ] Patient not contactable
[ ] Alternative funding found
[ ] Other
Needs to be referred to if hasn't already

7. The referral was declined by the podiatry service and a letter sent to the medical centre about five days after the referral was sent. Details in the body of the letter are reproduced below:

[The medical centre's] response indicates [RN G] noted the declined referral and the asterisked "referred to secondary services", but did not see the comment regarding referral to [Mr C] (who runs the DHB [diabetes clinic]. [RN G] understood the referral had been passed on to the appropriate secondary service and took no further action other than filing the "decline" letter. [The medical centre's] response elaborates: *At the time [Ms B] was seen by [RN G] she was identified as high risk however the foot was not nephrotic* [presumably "necrotic"]*. The wait time is at least 2 weeks or more in the Kaitaia area to be seen at [the diabetes clinic]. [Ms B] was admitted to hospital only 3 weeks after being seen in [Month2] and was being managed by secondary services. [RN G] believed [Ms B] would gain access to the necessary care so no further action was required as the patient would not have received the appointment due to being hospitalized.*

Comment: I feel the "decline template" reproduced above carried the risk of misinterpretation as occurred in this case. The use of the checked phrase "referred to secondary services" rather than, for example, "requires referral to secondary services" could quite reasonably be interpreted as "the referral had been sent on to secondary services" which in itself was not an unreasonable expectation. While there is specific

reference to referring the patient to a named individual (who I assume the referrer would identify as representing the DHB High Risk Foot clinic), the formatting of the document I feel means this particular could be easily overlooked once the checked box "referred to secondary services" had been identified. I recommend the decline document be reviewed if it is still in use in the format above. Again, it is difficult to quantify departure from accepted practice without direct feedback from [RN G] regarding the rationale for her actions at the time of viewing the declined referral. Accepted practice would be to follow the advice on the referral which was to refer to [Mr C] (DHB clinic) if this had not already been done.

8. [Ms B] was next seen by [Dr F] on 3 [Month3] with complaint of increased fluid retention without shortness of breath since commencing prednisone for an acute attack of gout. There is no reference to complaint related to her toe ulcer. Vital signs were collected by a health care assistant (HCA) and are recorded as "stable" but readings do not appear in the notes provided. Cardiorespiratory assessment was unremarkable other than chronic peripheral oedema and management was cessation of prednisone, leg elevation and temporary increase in the dose of diuretic (frusemide) [Ms B] was already taking.

Comment: Management was consistent with accepted practice. There is no record of [Ms B] complaining of toe or foot pain, and notes suggested [Ms B] had been referred to the PHO podiatry service in any case and was presumably awaiting review. Best practice would be to provide and document "safety-netting" advice. It is unclear why observations apparently undertaken by the HCA did not appear in the notes.

9. [Ms B] next attended [the medical centre] on 17 [Month3] and was assessed by …. Notes include: *Has a very sore R) foot, painful heel as well. Patient feels she has an infection under her big toe. Also seen is L) foot and toe appears to be necrotic. Patient states that fluclox does not work.* [Ms B] was afebrile and was referred to the GP for consideration of oral or IV antibiotics. She was then reviewed by [Dr E] who noted: *Rt foot heel blistering. Lt second toe sepsis with darker hue. Poor circulation. Anaerobic smell.* Vital signs were recorded and were satisfactory. [Dr E] recorded an examination of [Ms B's] feet and concluded she had signs of *foot sepsis with PVD* [peripheral vascular disease]. He referred [Ms B] to KH for inpatient care. [Ms B] re-attended the medical centre on 8 [Month4] for an iron infusion but this did not proceed as management of the infusion was passed on to secondary care where it had occurred in the past. [Ms B] was not seen at [the medical centre] again.

Comment: Management was consistent with accepted practice. Hospital admission was indicated and facilitated. I think it was a reasonable assumption by [Dr E] that given the primary reason for referral to hospital was apparent foot infection and ulcer in a patient with diabetes, there would be appropriate investigation of the vascular status of her feet while in hospital and referral made for specialist vascular assessment if this was felt to be indicated clinically.

10. [Ms B's] care in KH is not the subject of this advice. Hospital discharge summaries note [Ms B] was assessed as having *fluid overload secondary to CKD, necrotic diabetic ulcer 2nd toe L foot.* She was treated with IV diuretics with the comment: *Perfusion to lower legs improving as fluid overload decreased. Some signs of mild infection around lesion on R shin — swab taken and started on a course of oral cephalexin for this … Follow-up will be arranged with Renal Clinic and CKD nurse.* [Ms B] was discharged home on 31 [Month3].

Comment: There is no record in the discharge summary of specific in-hospital assessment of [Ms B's] PVD (eg Doppler pulse assessment/ABI) or treatment provided for the diabetic toe ulcer, or progress/follow-up of the ulcer on discharge. I think it was a reasonable assumption by any clinician reading the discharge summary that the ulcer was not a cause of particular concern and, noting the comment regarding improved lower limb perfusion, the ulcer was likely to have improved and circulation was not felt to be an issue requiring specific follow-up by the GP.

11. [Ms B] was subsequently managed solely in secondary care. She was seen at KH ED on 15 and 16 [Month4] for treatment of left leg cellulitis. Assessment findings include: *left dorsalis pedis had no flow with Doppler but tibialis posterior had some flow. No flow in right foot. Bruit right femoral artery. Erythema of left shin. Impression: Cellulitis left leg, poor circulation due to EF <30% and PVD.* Treatment was provided with IV antibiotics (discharged on 15 [Month4] with review and further antibiotics the following day) with apparent improvement of the infection. There is also a note *refer Vascular surgeons.* [Ms B] was readmitted to KH on 27 [Month4] after referral by the district nurse with concerns regarding rapid deterioration in the state of her left foot (pain, ulceration, colour change). Contact was made with the vascular service ([DHB2]) and [Ms B] underwent a number of limb salvage procedures in [DHB2] from 29 September 2019, sadly culminating in her death on 22 [Month6].

12. Final comments in relation to requested advice:

(i) *The management of [Ms B's] referral to [the podiatry clinic], including whether referral to [the diabetes clinic] should have been considered earlier*:

I am unable to comment on management of [Ms B's] diabetes or foot disease prior to [Month2]. Correspondence from [Mr C] indicates he had reviewed [Ms B] about three years prior to the events in question and if she satisfied criteria for a high risk foot at that time or subsequently, she should have been receiving at least annual podiatry review. A nurse-led annual diabetes review (including foot assessment) is also accepted practice but relies on cooperation of the patient. With respect to available documentation, referral to the DHB [diabetes clinic] should have been undertaken following the assessment by [RN G] on 28 [Month2] as discussed in section 6. Management of the referral was discussed in section 7.

(ii) Any individual staff issues including, [RN G], [Dr F], and/or [Dr E].

I could not identify any concerning issues regarding management of [Ms B] by [Dr F] or [Dr E] between [Month2] and [Month4]. Possible concerns regarding [RN G's] management have been discussed in sections 6 and 7.

(iii) The adequacy of relevant policies, processes and procedures in place for high risk diabetic foot referrals at the time of these events at the medical centre.

I would expect all clinical staff undertaking diabetes annual reviews or foot checks on diabetic patients to have reviewed and been familiar with the information provided by the Northland PHOs in relation to podiatry referral processes, and for that written guidance to be freely available to staff. I am unable to confirm if this was the case in 2017 but expect it to be so. The PHO instructions at the time I feel did not provide sufficiently clear guidance regarding the DHB referral process (see sections 6 and 7) but this has been remedied in subsequent versions of the advice. I feel the PHO "decline" template in 2017 was not sufficiently clear with its recommendation to avoid the misinterpretation by [RN G] which apparently took place in [Month2].

(iv) Any other system comments you wish to make about the community podiatry services available in the Northland region. Such as the coordination between providers, service provision arrangements, and referral management.

I feel a systems expert would be best placed to comment on the processes in place in 2017 and adequacy of reviews and changes since that time. However, I would like to emphasise the potential for confusion regarding "high risk foot" currently requiring community podiatry referral rather than "high risk foot clinic" referral and perhaps the nomenclature needs to be reviewed. The current e-referral process appears relatively straightforward from a technical perspective, and clear referral criteria and recommendations are available on the Northland Community Health Pathways (see Appendices) available to practices in the region. I understand there have been significant issues in the past with timeliness of assessments by the PHO podiatry service which is outside the scope of this report.

(v) Any other matters in this case that you consider warrant comment.

I have no additional comments or recommendations.'

Appendix D: Actions required under the NZSSD guidelines (2014)

The NZSSD 'diabetes foot screening and risk stratification form' defines risk stratification and required actions as follows:

> 'LOW RISK FOOT
>
> No risk factors present e.g. no loss of protective sensation or absent or diminished pulses.
>
> ACTION
>
> Annual screening by a suitable trained nurse or health professional. Agreed self-management plan.
>
> Provide written and verbal education with emergency contact numbers. Appropriate access to podiatrist if required.
>
> MODERATE FOOT
>
> One risk factor present e.g. loss of sensation, absent or diminished pulses without callus or deformity.
>
> ACTION
>
> Annual risk assessment by a podiatrist. Agreed and customised management and treatment plan outlined by podiatrist according to patient's needs. Provide written and verbal education with emergency numbers.
>
> HIGH RISK FOOT
>
> Previous amputation or ulceration or more than two risk factors present e.g. loss of sensation, absent or diminished pulses, PAD, foot deformity with significant callous formation, pre-ulcerative lesions, end stage renal failure or Māori ethnicity.
>
> ACTION
>
> Annual assessment by podiatrist. Agreed and customised management and treatment plan by podiatrist according to patient's needs. Provide written and verbal education. Referral for specialist intervention if/when required.
>
> ACTIVE FOOT DISEASE
>
> Presence of active ulceration, unexplained hot, red, swollen foot with or without the presence of pain (suspected Charcot foot[1]), severe or spreading infection or critical limb ischaemia[2].

[1] Charcot foot is a condition in which the nerves in the lower legs and feet have been damaged. The damage causes a loss of sensation in the feet.
[2] A severe blockage in the arteries of the lower extremities, which markedly reduces blood-flow.

ACTION

Urgent referral to Multi-disciplinary or Hospital Foot Clinic for active ulceration and suspected Charcot foot. Urgent Hospital admission for severe or spreading infection or critical limb ischaemia.

Provide written and verbal education with emergency contact numbers.'