

Navigating the long journey of heart failure—experiences of Māori and Pacific peoples

Sandra Hanchard, Karen M Brewer, Tua Tauetia-Su'a, Sione Vaka, Shanthi Ameratunga, Taria Tane, Rochelle Newport, Vanessa Selak, Matire Harwood, Corina Grey

ABSTRACT

AIMS: Māori and Pacific peoples in Aotearoa New Zealand experience significant inequities in heart failure rates, treatment and outcomes compared to NZ Europeans. We aimed to understand the experiences of Māori and Pacific people living with heart failure as they navigated care across primary and secondary settings.

METHODS: This research involved a secondary analysis of data collected in a wider qualitative study investigating evidence–practice gaps of cardiovascular care experienced by Māori and Pacific people. From the wider pool of semi-structured interviews, we identified 24 people (seven Māori and 17 Pacific peoples, 23 from the North Island) living with heart failure, and applied template and framework analysis to explore their distinct experiences.

RESULTS: Two major themes identified related to participants: 1) Condition—need for more support to understand and self-manage their heart failure condition, and 2) Journey—desire to feel well-connected to the health system in their heart failure journey.

CONCLUSIONS: Addressing heart failure inequities for Māori and Pacific peoples requires that providers engage in clear and meaningful communication to support patient self-management. Strengthening pathways for Māori and Pacific patients and whānau (families) between primary and secondary services is required to reduce their likelihood of becoming disconnected from care.

There are significant and long-standing inequities in heart failure (HF) rates, management and outcomes for Māori and Pacific peoples in Aotearoa New Zealand. In fact, inequities are widening, with HF hospitalisation rates in older Europeans declining and no corresponding improvement for Māori and Pacific peoples.¹ HF prevalence and hospitalisation rates are much higher for Māori and Pacific peoples than for non-Māori non-Pacific people, particularly in younger age groups where HF is generally less common.^{2–4} Māori with a primary diagnosis of HF have higher hospital readmission rates compared with non-Māori.⁵ After adjusting for age, Pacific peoples are more than twice as likely as the total Aotearoa New Zealand population to be discharged from hospital with a diagnosis of HF.⁶ A study by Hikaka et al.⁷ illustrated persistent inequities in medication uptake among Māori with HF; the authors called for culturally revamped approaches to health literacy. Māori are more likely to die younger from HF⁵ even after controlling for socio-economic deprivation.⁸ These are imperatives to better understand and address contributors to inequities in the HF care pathway.

HF is a long-term, progressive condition that

is managed in hospital and community health settings.⁹ Continuity of care for HF is associated with improved survival, fewer unplanned readmissions, better medication management and clinic attendance, positive engagement with providers and increased quality of life.^{10,11} Specialist-managed programmes that centre cultural safety, including nurse-led cardiac services, have been shown to have high acceptance by Māori HF patients.^{12,13} Considering chronic disease management more generally, a programme with education materials provided by Pacific staff in Pacific languages was found to improve understandings of HF and medications among Pacific patients with HF.¹⁴ Whānau (family) centric models of care have also been demonstrated to work for Māori and Pacific peoples with chronic conditions such as type 2 diabetes,¹⁵ suggesting useful parallels for HF management.

Despite increasing attention to inequities, few studies have investigated Māori and Pacific peoples' experiences of HF and their preferences for care. A Māori- and Pacific-led programme of research—Manawataki Fatu Fatu (MFF) for ACCESS, which means Māori and Pacific Hearts in Unison for Achieving Cardiovascular Care in Equity Studies

—is investigating how to improve heart health-care for Māori and Pacific peoples.¹⁶ There are three streams of the programme: i) cardiovascular risk assessment and management in primary care, ii) pre-hospital care for a cardiac event in the community, and iii) HF long-term management. The present paper follows on from a wider qualitative study¹⁷ that examined the reasons for evidence–practice gaps in heart healthcare based on the experiences and perspectives of Māori and Pacific peoples. The analysis here explores how Māori and Pacific patients and whānau experience HF as a fluctuating condition requiring coordination of care across primary and secondary settings. The findings will contribute to one of the overarching goals of the MFF programme—to identify models of heart healthcare that are responsive to the needs and aspirations of Māori and Pacific peoples.

Method

In this study we applied qualitative Kaupapa Māori methodologies and Pacific research frameworks to interview Māori and Pacific peoples across Aotearoa New Zealand with personal, or whānau, experience of HF. This research involved a secondary analysis of data collected in a wider qualitative study investigating evidence–practice gaps of cardiovascular care experienced by Māori and Pacific peoples.

Methodology

The guiding principles of the MFF programme¹⁶ are inspired by a navigational framework, *te kapehu whetū* (the Māori star compass), offering a metaphor for examining the journey of HF. In our relational approach to qualitative research, we value Māori and Pacific knowledge (*Kāinga*), apply a strengths-based lens to our analysis (*Ngoi*), aim to collaborate with providers and stakeholders in the health system (*Ngā Rangi*), and centre and elevate the voices of whānau (*Ngā Reo*). The translational goal of our programme (*Manu*) reminds us to centre the aspirations of communities and where they see the destination of living well with HF. For Māori and Pacific peoples, the health journey is as much a spiritual endeavour as a physical one. For example, Tongans at the start of each year (*Uike Ha'amo*) will spiritually prepare their *vaka* (*Kavenga mafasia*) for what highs and lows may come their way (*O'e hala fononga*) during a long journey ahead. Our own *vaka* (vessel) is led by senior researchers (MH, CG) with expertise in Kaupapa Māori and Pacific

methodologies^{18,19} and is carried forwards by a team comprised mostly of Māori and Pacific researchers.²⁰

Participants

The participants in the wider qualitative study had a personal or whānau experience of acute coronary syndromes and/or HF or were eligible for cardiovascular risk assessment. We drew on professional networks in the health sector and our own communities for recruitment. Participants self-identified with Māori and/or a Pacific ethnicity, were aged over 18 years and provided informed consent. For this paper, we report a focussed analysis of the subset of participants with experience of HF. From a total of 61 patients and whānau interviewed in the wider study, 24 participants (seven Māori, 17 Pacific peoples) had lived experience of HF. Pacific ethnicities represented were Samoan, Tongan, Cook Islands Māori and Tokelauan. We had a higher proportion of Pacific participants in large part due to co-author TTS's strong community relationships in the Capital, Coast and Hutt Valley. HF participants comprised 16 males and eight females (no other genders), with five aged 25–44, 11 aged 45–64 and eight aged 65+ years. Most participants (23) were from the North Island, encompassing rural and urban areas (the rural/urban split was not recorded). One participant was interviewed as a whānau member. Each participant was asked to choose a pseudonym.

Data collection

We conducted semi-structured interviews between November 2021 and August 2022 in English, Samoan and Tongan. Cultural protocols and language choice, guided by the participants, were incorporated into interviews, including opening and closing *karakia* or *lotu* (incantation or prayer), *whakawhanaungatanga* (making introductions and connections), and allowing space and time for *talanoa* (free-flow dialogue). Interviews, lasting up to 60 minutes, invited participants to discuss their heart condition experience and journey in care management, what made them comfortable or uncomfortable in their interactions with healthcare professionals and services, what was important to them for heart health and their ideas for improving heart health services in Aotearoa New Zealand.

Analysis

All interviews were analysed using template analysis, a type of thematic analysis,²¹ through

which we developed five themes. The five main themes identified in the wider study were:

- Context—social, whānau, cultural and spiritual contexts and values of patients and whānau.
- Mana—desire by patients and whānau for mana (dignity) in their experiences of healthcare.
- Condition—the role of good and reciprocal communication with providers to support self-management of heart health.
- People—influence of important people in heart healthcare.
- Journey—the heart healthcare journey—from getting in to staying in.

We found many similarities across Māori and Pacific groups regarding heart healthcare in the wider study. For example, there were commonalities in the contexts of patients and whānau (“Context”), a desire for reciprocal communication with providers (“Condition”), participants’ expectations for mana-enhancing heart care (“Mana”), aspirations for a health workforce with greater representation of Māori and Pacific providers (“People”) and gaps in accessible, connected healthcare pathways (“Journey”). However, we noted that participants living with HF had distinct experiences with self-managing their condition over the long term, compounded by episodic needs to access care across primary and secondary settings. To bring these experiences to the fore, we conducted a secondary analysis using two original themes in the wider study where the distinctions were most apparent: “Condition” and “Journey”. We used the framework method developed by Gale et al.²² to elaborate on the experiences of HF participants by tabling key insights into a matrix of cases and codes across the five themes identified in the wider study. Analytical memos were written up to deepen our understanding of issues captured by the themes.

Ethics approval

This study was approved by the Auckland Health Research Ethics Committee (AHREC), ref. 22609.

Results

Condition

This theme relates to the ability of participants to understand their condition and be partners in self-management.

Participants expressed a desire to recognise their HF symptoms, to understand when it was important to seek care and to feel confident in doing so: *“Our people need to be aware of the signs and when to call for help.”* – Penny. Resources to monitor daily symptoms, such as weight and fluid intake, were actively taken up by participants and, for some, formed part of their new identity of living with their condition. Participants who were confident on their journey of self-management also wanted *“somebody [clinical] still monitoring me.”* – Jason.

Opportunities to improve communication and health literacy efforts by providers were apparent in participants’ confusion about their HF treatments: *“There are seven tablets in a pack for me to take. I cannot remember what each tablet is good for.”* – Isaac. Participants found that explanations from providers were insufficient, *“They [doctors] don’t really explain what the pill’s for.”* – KB1. However, they valued resources such as the *“yellow card, which has the name of the tablets and what they do.”* – Sela.

Relationships with providers could hinder or facilitate participants’ understanding and acceptance of therapies. Tina asked for explanations about medication but said, *“They look at you and they think that you are dumb ... I threw the tablets away because I did not know what they were for.”* Through facilitation by a Samoan nurse, Tina was later happy with another provider, who *“would sit with me and break things down for me to understand.”* Participants valued two-way communication and partnership with their provider: *“I always check in with [my nurse] to say, oh yeah, that actually worked. I mean, I’m still doing my journey, but it’s been great having her just in the background.”* – KB1.

Provision of health advice in the participants’ first language was preferred but uncommon. If provided, it may have better supported informed choices for participants in managing their HF condition over the long term. For example, Pita kept working against medical advice, because he needed to support his family. Later, he felt certain that if he had been seen by a Tongan doctor from the beginning and had the consequences of continuing to work explained in the Tongan language, he *“would have listened more closely.”*

Journey

This theme relates to the participants’ desire to feel well-connected to the health system in their HF journey, from diagnosis to discharge, from hospital

to care in the community.

Participants reported that receiving a HF diagnosis was delayed in both primary and secondary care, despite seeking care for symptoms such as breathlessness: *“I was admitted to the hospital yearly for my pneumonia attack, they should have checked me thoroughly to see if I had HF; instead I was told it was pneumonia.”* – Maka. Eva similarly expressed disappointment: *“If my doctor did his part thoroughly, address my problem properly, organised for me to see the specialist early, maybe I would have had the surgery much earlier.”* Participants also experienced difficulties in being taken seriously. Sione described his wife taking him to the hospital ED after he tried to make an urgent appointment with his GP and was only offered a booking for 5 days later: *“I tell my wife if she didn’t take me to hospital maybe I die at home with the [GP] receptionist booking me for next Tuesday. But I told her [receptionist] this is an emergency you know, but she thought I was kidding.”* Once participants could access in-hospital care, positive experiences were reported: *“Everyone at the hospital, down to the cleaners, interact with you really well.”* – Tom.

Problems with the discharge process were raised by participants: *“We were never given discharge notes about his conditions and what to do or any follow up.”* – Tim. Feeling abandoned in community care was another concern: *“They see you for like a year and then if you’re doing well, you know, you’re put back out in the world by yourself, and sometimes that’s the hardest thing.”* – Jason. In comparing diabetes to HF services, Maka observed: *“My wife suffered from diabetes, their team from health service are always in touch with her. The HF patients are not well contacted compared to my wife.”*

Regular appointments with GPs could be difficult to obtain for participants, affecting ongoing management of their HF condition. Participants enrolled in a tertiary service reported strong relationships with cardiac nurses, which in turn could elicit better support from their GP: *“Now the GP’s seeing what [name] the nurse has been doing for the cardio thing in [hospital outpatient clinic], she’s there and my GP looked at all the records and he goes, ‘oh, you’re doing really good,’ and I said ‘yeah’. Now he’s following up with me how things are going. Whereas before I never had that follow-up.”* – KB1.

Participants sought political solutions to address the high demand for HF services. Maka explained, *“There are a lot of patients died, it is*

as though the Government do not want to know, to understand the big picture, it is like a river that claims the lives of HF patients.” Pat similarly commented, *“I think they should make it more political so that we can get more results. It’s the only way it’s going to happen. That Treaty’s [Treaty of Waitangi] not been followed and we’re disappearing in the crowds.”*

Discussion

This study explored experiences of seven Māori and 17 Pacific patients and whānau with HF as they navigated care across primary and secondary settings. Guided by Kaupapa Māori theory and Pacific frameworks, we undertook semi-structured interviews and used both template and framework analysis to explore HF experiences. Poor communication from providers and a lack of continuity of care from diagnosis of HF to hospital discharge and community management were common. Even as patients and whānau adopted resources for self-management, it was reciprocal relationships with providers, often through nurse-led services, that notably contributed to positive experiences in the HF care journey.

Despite the availability of guideline-directed therapies for HF management, Māori and Pacific peoples have not shared equitably in the benefit of treatments and services.²³ Participants struggled to understand their treatment regimen when there was poor relationship-building by providers. This is a reminder that the onus is on providers to ensure the delivery of information meets patients’ and whānau needs and expectations, and to take time to understand what barriers might exist in their social contexts.²⁴ The Aotearoa New Zealand Ministry of Health’s health literacy framework²⁵ is premised on a health system where consumers have the capacity to understand health advice, make informed decisions and navigate services. Despite widespread dissemination of these health literacy principles, findings of this research suggest that they have not been consistently translated into practice in the heart health space. Our findings align with an international study by Lambert et al.²⁶ demonstrating that health professionals had a limited understanding of the health literacy needs of Indigenous patients on a cardiovascular disease (CVD) pathway. As asserted by Carlson et al.,²⁷ the responsibility for CVD health literacy sits with front-line providers, but requires systems changes to meet the needs of marginalised communities.

Many participants struggled throughout their HF care journey, from getting a timely diagnosis in both primary and secondary care settings, receiving regular care from a GP and being given a clear picture of the management strategy post-discharge for both medical care and social support. While inconsistent diagnosis and management for HF has been documented,²⁸ Māori and Pacific patients and whānau also face compounding barriers to care, particularly institutional racism, and inequitable access to the social determinants of health.²⁹ Given the detrimental physical, emotional and spiritual impacts of a HF condition, there was a strong desire by participants to remain closely connected to the health system, even after being deemed medically stable. Participants understood they had a lifelong condition and reasonably expected regular and proactive monitoring; they were concerned that they would not be able to access heart health expertise when they needed it. The findings of this study emphasise the need to address inconsistencies in the implementation of HF care pathways in Aotearoa New Zealand, particularly in relation to communication practices by providers, and re-examine discharge planning to meet the needs of Māori and Pacific peoples. This is the focus of a research plan that has been initiated by the MFF programme.

A key strength of this study has been the elevation of the voices of Māori and Pacific whānau, overcoming power differentials that typically privilege provider perspectives. A limitation of our research is Māori representation of participants being predominantly from Auckland. We were not able to further investigate inequities that

might be experienced by whānau in rural settings. A more in-depth analysis with more regional data may have revealed different experiences by participants of HF management approaches across localities.

Te Pae Tata, the interim New Zealand health plan mandated by the *Pae Ora Act (2022)* sets out two key actions in their strategy for people living with chronic health conditions: 1) ensuring nationally consistent clinical pathways for integration of care between primary and secondary settings, and 2) supporting Māori and Pacific community providers to work alongside whānau for self-management. This provides a framework to address the gaps identified in our study. The success of a “walk alongside” approach where Kai Manaaki (case managers in primary care settings) help Māori and Pacific peoples living with type 2 diabetes to manage their clinical and social support needs¹⁵ suggests opportunities to boost community-driven services for HF management.

There are considerable pressures in the Aotearoa New Zealand health system that affect optimal HF management and patient-centred care; some include affordable and timely access to primary care, adequate funding for nurse-led services to meet the increasing demand for care in the community³⁰ and routine screening with echocardiograms. Despite these system constraints, healthcare workers are obligated to provide culturally safe care. To meet our obligations to Te Tiriti o Waitangi and the *United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP)*, the Aotearoa New Zealand health system urgently needs to address the significant burden of HF on Māori and Pacific whānau and communities.

COMPETING INTERESTS

Matire Harwood and Corina Grey report financial support was provided by the Heart Foundation of New Zealand. Matire Harwood and Corina Grey report financial support was provided by Healthier Lives National Science Challenge.

Funding: This research was jointly funded by the Heart Foundation of New Zealand and Healthier Lives National Science Challenge, grant number 1819. The funders had no role in this research.

Financial interests: Authors KB, VS and CG receive funding from the Health Research Council of New Zealand. KB and SH receive funding from Pūtahi Manawa Healthy Hearts for Aotearoa New Zealand Centre of Research Excellence (CoRE). SH receives funding from the Heart Foundation of New Zealand. KB received travel support from the Cardiac Society of Australia and New Zealand. VS receives funding from the Auckland Medical Research Foundation.

Non-financial interests: SH is a member of the Whānau, Consumer and Clinician Digital Council and National Cardiac Clinical Network – Te Whatu Ora Health New Zealand. VS is a member of the Data Safety Monitoring Board for the Cess@Tion clinical trial and a board member and deputy chair of the medical assessment committee for the Auckland Medical Research Foundation. KB is co-director of Pūtahi Manawa. All other authors declare no relevant financial or non-financial interests.

ACKNOWLEDGEMENTS

We wish to thank the participants who generously shared their experiences and time with us. This study, under the Manawataki Fatu Fatu programme, was funded by the Heart Foundation of New Zealand and Healthier Lives National Science Challenge, grant number 1819. The funders had no role in this research.

AUTHOR INFORMATION

Sandra Hanchard: Research Fellow, General Practice and Primary Health Care, The University of Auckland, Auckland, New Zealand.

Karen M Brewer: Senior Research Fellow, General Practice and Primary Health Care, The University of Auckland, Auckland, New Zealand.

Tua Tauetia-Su'a: Senior Research Fellow, General Practice and Primary Health Care, The University of Auckland, Auckland, New Zealand.

Sione Vaka: Associate Professor, Poutumatua Pasifika, Tausisoifua Ass, Te Huataki Waiora School of Health Dean's Office, University of Waikato, Hamilton, New Zealand.

Shanthi Ameratunga: Honorary Professor, Section of Epidemiology and Biostatistics, The University of

Auckland, Auckland, New Zealand; Senior Medical Researcher, Te Whatu Ora – Health New Zealand – Service Improvement & Innovation, South Auckland.

Taria Tane: Doctoral Student, School of Population Health, The University of Auckland, Dargaville, New Zealand.

Rochelle Newport: Doctoral Student, School of Population Health, The University of Auckland, Auckland, New Zealand.

Vanessa Selak: Associate Professor, Section of Epidemiology and Biostatistics, The University of Auckland, Auckland, New Zealand.

Matire Harwood: Associate Professor, Faculty of Medical and Health Sciences, The University of Auckland, Auckland, New Zealand.

Corina Grey: Senior Research Fellow, General Practice and Primary Health Care, The University of Auckland, Auckland, New Zealand.

CORRESPONDING AUTHOR

Dr Sandra Hanchard: General Practice and Primary Health Care, The University of Auckland, Level 3, Building 507 School of Population Health, The University of Auckland Grafton Campus, 22–30 Park Ave, Grafton, Auckland. Ph: +649 923 6000 extn 84676. E: sandra.hanchard@auckland.ac.nz

URL

<https://nzmj.org.nz/journal/vol-137-no-1603/navigating-the-long-journey-of-heart-failure-experiences-of-maori-and-pacific-peoples>

REFERENCES

1. Chan DZ, Grey C, Doughty RN, et al. Widening ethnic inequities in heart failure incidence in New Zealand. *Heart*. 2024;110(4):281-289. doi: 10.1136/heartjnl-2023-322795.
2. Chan DZL, Kerr A, Grey C, et al. Contrasting trends in heart failure incidence in younger and older New Zealanders, 2006-2018. *Heart*. 2022;108(4):300-306. doi: 10.1136/heartjnl-2021-319853.
3. Wall R, Bell A, Devlin G, Lawrenson R. Diagnosis and treatment of heart failure in Maori and New Zealand Europeans at the Waikato Hospital. *N Z Med J*. 2012;126(1368):35-44.
4. Westbrooke I, Baxter J, Hogan J. Are Maori underserved for cardiac interventions? *N Z Med J*. 2001;114(1143):484-7.
5. Carr J, Robson B, Reid P, et al. Heart failure: ethnic disparities in morbidity and mortality in New Zealand. *N Z Med J*. 2002;115(1146):15-7.
6. Sopoaga F, Buckingham K, Paul C. Causes of excess hospitalizations among Pacific peoples in New Zealand: implications for primary care. *J Prim*

- Health Care. 2010;2(2):105-10.
7. Hikaka J, Abey-Nesbit R, McIntosh B, et al. Utility of Big Data to Explore Medication Adherence in Māori and Non-Māori Community-Dwelling Older Adults with Heart Failure in Aotearoa New Zealand: A Cross-sectional Study. *Drugs Aging*. 2023;40(9):847-855. doi: 10.1007/s40266-023-01044-2.
 8. Riddell T. Heart failure hospitalisations and deaths in New Zealand: patterns by deprivation and ethnicity. *N Z Med J*. 2004;118(1208):U1254.
 9. Wasywich CA, Gamble GD, Whalley GA, Doughty RN. Understanding changing patterns of survival and hospitalization for heart failure over two decades in New Zealand: utility of 'days alive and out of hospital' from epidemiological data. *Eur J Heart Fail*. 2010;12(5):462-8. doi: 10.1093/eurjhf/hfq027.
 10. Phillips CO, Wright SM, Kern DE, et al. Comprehensive discharge planning with postdischarge support for older patients with congestive heart failure: a meta-analysis. *JAMA*. 2004;291(11):1358-67. doi: 10.1001/jama.291.11.1358.
 11. Senot C. Continuity of care and risk of readmission: An investigation into the healthcare journey of heart failure patients. *Prod Oper Manag*. 2019;28(8):2008-30. doi: 10.1111/poms.13027.
 12. Gilmour J, Strong A, Chan H, et al. Primary health care nurses and heart failure education: a survey. *J Prim Health Care*. 2014;6(3):229-37.
 13. Dewar SJ. Experiences of patients attending and participating in clinical nurse specialist-managed heart failure clinics: a thesis submitted to Massey University of Wellington in partial fulfillment of the requirements for the degree of Master of Philosophy (Nursing) [dissertation]. Wellington (NZ): Massey University; 2007
 14. Tracey J, Bramley D. The acceptability of chronic disease management programmes to patients, general practitioners and practice nurses. *N Z Med J*. 2003;116(1169):U331.
 15. Tane T, Selak V, Hawkins K, et al. Māori and Pacific peoples' experiences of a Māori-led diabetes programme. *N Z Med J*. 2021;134(1543):79-89.
 16. Grey C, Brewer KM, Ameratunga S, et al. Manawataki Fatu Fatu for ACCESS (Māori and Pacific Hearts in Unison for Achieving Cardiovascular Care in Equity Studies). Protocol for a Mixed Methods Programme of Research. *Int J Qual Methods*. 2023;22:1-11. doi: 10.1177/16094069231176348.
 17. Brewer KM, Tauetia-Su'a T, Hanchard S, et al. Māori and Pacific families' experiences and perspectives of cardiovascular care; A qualitative study. *Aust N Z J Public Health*. 2024;48(3):100149. doi: 10.1016/j.anzjph.2024.100149.
 18. Smith LT. Decolonizing methodologies: Research and indigenous peoples. London (UK): Bloomsbury Publishing; 2021.
 19. Anae M. Pacific research methodologies and relational ethics. *Oxford Research Encyclopedia of Education*. 2019. doi: 10.1093/acrefore/9780190264093.013.529.
 20. Huria T, Palmer SC, Pitama S, et al. Consolidated criteria for strengthening reporting of health research involving indigenous peoples: the CONSIDER statement. *BMC Med Res Methodol*. 2019;19(1):173. doi: 10.1186/s12874-019-0815-8.
 21. King N. Doing Template Analysis. In: Symon G, Cassell C, editors. *Qualitative Organizational Research: Core Methods and Current Challenges*. London (UK): Sage; 2012. p. 453-78.
 22. Gale NK, Heath G, Cameron E, et al. Using the framework method for the analysis of qualitative data in multi-disciplinary health research. *BMC Med Res Methodol*. 2013;13:117. doi: 10.1186/1471-2288-13-117.
 23. Selak V, Poppe K, Chan D, et al. Identification of clinically relevant cohorts of people with heart failure from electronic health data in Aotearoa: potential, pitfalls and a plan. *N Z Med J*. 2022;135(1563):96-104. doi: 10.26635/6965.5881.
 24. Reid S, White C. Health literacy in New Zealand: A tale of serendipity and indigenous health. In: Okan O, Bauer U, Levin-Zamir D, et al., editors. *International Handbook of Health Literacy*. Bristol (UK): Policy Press; 2019. p. 505-520.
 25. Manatū Hauora – Ministry of Health. A Framework for Health Literacy [Internet]. Wellington (NZ): Manatū Hauora – Ministry of Health; 2015 [cited 2023 Sep 4]. Available from: <https://www.health.govt.nz/publication/framework-health-literacy>
 26. Lambert M, Luke J, Downey B, et al. Health literacy: health professionals' understandings and their perceptions of barriers that Indigenous patients encounter. *BMC Health Serv Res*. 2014;14:614. doi: 10.1186/s12913-014-0614-1.
 27. Carlson T, Moewaka Barnes H, McCreanor T. Health literacy in action: Kaupapa Māori evaluation of a cardiovascular disease medications health literacy intervention. *AlterNative*. 2019;15(2):101-10. doi: 10.1177/1177180119828050.
 28. Fuat A, Hungin AP, Murphy JJ. Barriers to accurate diagnosis and effective management of heart failure in primary care: qualitative study. *BMJ*. 2003;326(7382):196. doi: 10.1136/bmj.326.7382.196.
 29. Harris RB, Stanley J, Cormack DM. Racism and health in New Zealand: Prevalence over time and

associations between recent experience of racism and health and wellbeing measures using national survey data. *PLoS One*. 2018;13(5):e0196476. doi: 10.1371/journal.pone.0196476.

30. Doughty RN, Devlin G, Wong S, et al. 2023 position statement on improving management for patients with heart failure in Aotearoa New Zealand. *N Z Med J*. 2024;137(1590):93-99. doi: 10.26635/6965.6461.