

# Cultural safety in paramedic practice: experiences of Māori and their whānau who have received acute pre-hospital care for cardiac symptoms from paramedics

Sarah Penney<sup>A,\*</sup> , Bridget Dicker<sup>A,B</sup>  and Matire Harwood<sup>C</sup> 

For full list of author affiliations and declarations see end of paper

## \*Correspondence to:

Sarah Penney  
Department of Paramedicine, Faculty of  
Health and Environmental Science,  
Auckland University of Technology,  
AUT South Campus, Private Bag 92006,  
Auckland, 1142, New Zealand  
Email: [sarah.penney@aut.ac.nz](mailto:sarah.penney@aut.ac.nz)

## Handling Editor:

Felicity Goodyear-Smith

**Received:** 31 January 2024

**Accepted:** 8 April 2024

**Published:** 3 May 2024

**Cite this:** Penney S *et al.*

*Journal of Primary Health Care* 2024;

16(2): 180–189.

doi:[10.1071/HC24010](https://doi.org/10.1071/HC24010)

© 2024 The Author(s) (or their employer(s)).  
Published by CSIRO Publishing on behalf of  
The Royal New Zealand College of General  
Practitioners.

This is an open access article distributed  
under the Creative Commons Attribution-  
NonCommercial-NoDerivatives 4.0  
International License ([CC BY-NC-ND](https://creativecommons.org/licenses/by-nc-nd/4.0/))

OPEN ACCESS

## ABSTRACT

**Background.** Cardiovascular disease is a major health issue for Māori that requires timely and effective first-response care. Māori report culturally unsafe experiences in health care, resulting in poor health outcomes. Research in the pre-hospital context is lacking. This study aimed to explore experiences of cultural (un)safety for Māori and their whānau who received acute pre-hospital cardiovascular care from paramedics. **Methods.** Utilising a qualitative descriptive methodology and Kaupapa Māori Research (KMR), in-depth semi-structured interviews were undertaken with 10 Māori patients and/or whānau, and a general inductive approach was used for analysis. **Results.** Three key themes were identified: (1) interpersonal workforce skills, (2) access and service factors and (3) active protection of Māori. Participants described paramedics' clinical knowledge and interpersonal skills, including appropriate communication and ability to connect. Barriers to accessing ambulance services included limited personal and community resources and workforce issues. The impact of heart health on communities and desire for better preventative care highlighted the role of ambulance services in heart health. **Conclusion.** Māori experience culturally unsafe pre-hospital care. Systemic and structural barriers were found to be harmful despite there being fewer reports of interpersonal discrimination than in previous research. Efforts to address workforce representation, resource disparities and cultural safety education (focussing on communication, partnership and connection) are warranted to improve experiences and outcomes for Māori.

**Keywords:** emergency medical services, experience, health disparity, indigenous health, kaupapa Māori, Māori health, pre-hospital, qualitative research.

## Introduction

Cardiovascular disease (CVD), defined as a group of disorders of the heart and blood vessels, is the primary cause of death and a significant cause of morbidity in adults within Aotearoa, New Zealand (NZ).<sup>1</sup> The burden is disproportionately greater for Māori, who experience a higher prevalence of CVD and at younger ages compared with non-Māori.<sup>2</sup>

The reasons for CVD inequities are complex. Research has demonstrated negative experiences for Māori compared to non-Māori within the health care system, including poor communication, differential treatment and intolerance towards cultural needs, resulting in unmet health care needs.<sup>3–5</sup> The relationship between Māori and health practitioners influences ongoing engagement in health care and outcomes for Māori.<sup>6–9</sup>

Cultural safety, a term introduced in the 1990s by Doctor Irihapeti Ramsden and Māori nurses, enhances clinical care by highlighting assumptions and biases and addressing power imbalances within health care. This requires health care professionals and their associated organisation to self-reflect on the potential impact that their culture may have on clinical interactions to ensure they can acknowledge and address any biases that may affect the quality of care provided.<sup>10</sup> Thus, it is within the scope of health care professionals to ensure that patients receive accessible, timely and high-quality culturally safe care as defined by the patient and their communities.<sup>11</sup>

## WHAT GAP THIS FILLS

**What we already know:** Culturally unsafe care negatively impacts health outcomes and further health care utilisation for Māori. Inequities exist in access to and quality of pre-hospital cardiovascular care for Māori. The reasons for such inequities in pre-hospital care are not well understood.

**What this study adds:** This study provides an insight into pre-hospital care from the perspectives of Māori and whānau who utilised the ambulance service for chest pain or cardiac symptoms. A culturally appropriate research approach, using Kaupapa Māori Research, identified interpersonal interactions between Māori and paramedics and systemic and structural barriers as key drivers of poor experiences while highlighting areas where improvements could occur.

Information about pre-hospital cardiovascular care for Māori within the emergency services (EMS) context highlights significant inequities regarding access to and quality of pre-hospital cardiovascular care for Māori.<sup>12–16</sup> This included critical delays between the onset of cardiac symptoms and first medical contact (FMC), which predominantly occurs due to the decreased likelihood of Māori, who experienced Acute Coronary Syndrome (ACS), traveling to hospital by ambulance. Furthermore, those who do travel to hospital by ambulance often delay calling 111 or present to their physician or an accident and medical centre first. Yet, when an ambulance was called directly, the biggest cause of the delay was the time between symptom onset and the decision to call 111.<sup>12</sup> This results in delayed availability of defibrillation and reperfusion therapy, causing poorer long-term outcomes for Māori.<sup>12</sup> Focused action is required to reduce the barriers that prevent patients experiencing cardiac symptoms from calling 111 early. However, no research exists regarding Māori experiences of accessing pre-hospital EMS care for these symptoms. Thus, this research addresses a knowledge gap, aiming to explore Māori experiences of (un)culturally safe pre-hospital cardiovascular care.

## Methods

### Kaupapa Māori research

Kaupapa Māori research (KMR) informed the research's structure and ensured it was informed by mātauranga Māori and under Māori control from the outset, incorporating Māori ways of being while remaining academically rigorous.<sup>17–19</sup>

The research was Māori led, with two of the researchers, including the main researcher, identifying as Māori, utilising a by-Māori-for-Māori approach. This contributed to

increasing indigenous research capacity and, alongside engagement and consultation with the Māori responsiveness team at Hato Hone St John and a range of Māori clinicians and researchers, meant the upholding of tino rangatiratanga. Additionally, the researcher's position as an 'insider' contributed to whanaungatanga with participants and allowed them to talk more freely to share their experiences.<sup>17,19,20</sup> However, this 'insider' status also required a level of reflexivity from the researcher to avoid bias.<sup>19</sup>

KMR influenced the methods used for data collection and analysis, and guided tikanga around karakia and kai, which also facilitated the process of whanaungatanga. This increased trust between participants and the researcher further added richness to the results, allowing for a deeper understanding of Māori and their whānau who have received acute pre-hospital care for cardiac symptoms from paramedics.

### Eligibility criteria

Inclusion criteria were: Māori aged 30 years or older, living in Tāmaki Makaurau and Te Tai Tokerau and attended to by Hato Hone St John Ambulance service between 1 January 2018 and 30 December 2023 for cardiac symptoms (chest pain, dyspnoea, tachycardia).

Whānau were also invited to participate in the study and could be interviewed with the participant or act as a support person. Alternatively, whānau could participate if they had not had a personal experience but instead wanted to discuss a Māori whānau member's experience, particularly if that whānau member was unable to or had since died.

### Recruitment

A range of methods for recruitment were used including participants being identified retrospectively from Hato Hone St John records, consultation with community groups and personal contacts. This involved sending a pānui (recruitment flyer) by mail to potential participants who met the inclusion criteria across a chosen 1-month period, through Hato Hone St John. This pānui was also posted on social media platforms, and other community contacts and agencies also made initial contact with potential participants or posted the pānui on the researcher's behalf. Potential participants were then able to contact the researcher to express interest. Snowballing was also used for recruitment which allowed for possible participants to be identified from current participants.

Consultation with community groups, personal contacts and snowballing were particularly important in adhering to KMR principles, which utilises pre-existing relationships and whanaungatanga as a mechanism for recruitment and to increase trust regarding participation in research.<sup>21</sup> Whānau were also invited to participate due to the emphasis within KMR on the cultural values, practices and customs

that are organised around whānau.<sup>22,23</sup> Furthermore, it has been increasingly recognised that whānau and individual well-being are inherently connected. Thus, whānau could provide another perspective adding richness to data collection and analysis. A koha was also provided following participation in interviews adhering to KMR principles.<sup>22</sup>

## Ethics

Ethics approval was acquired from the Auckland University of Technology Ethics Committee (AUTC) (21/388) before commencing the study.

## Interviews

Semi-structured interviews were undertaken by the main researcher with 10 Māori and/or whānau utilising open-ended questions ensuring participants could voice their experience in their own words, enabling traditionally marginalised voices to be heard.<sup>20</sup> Whakawhanaungatanga (relationship building) was an essential part of this process. While 'Kānohi ki te Kānohi' (face-to-face) is the preferred method for conducting interviews through a KMR lens,<sup>20</sup> COVID-19 restrictions made it difficult to travel, thus these were conducted either in person, at a location agreed to by the participant, or via Zoom or telephone, starting and ending with karakia as participants desired.

## Data analysis

Interviews were audio recorded and transcribed by an external transcription agency that offered Māori transcription services. When requested, transcripts were returned to participants to check for accuracy. A general inductive approach provided a systematic procedure for analysis.<sup>24</sup>

The main researcher analysed transcripts by reviewing audio recordings, associating factors like tone with written transcriptions. This allowed for the noting of factors such as silence, laughter, sarcasm and apprehension or hesitation that are not obvious on written transcripts and helped to avoid intangible meanings. NVivo 12 was used to manage initial raw coding and similar codes were merged into five categories. Categories were revised, core quotes selected and similar categories combined, prioritising those aligned with research objectives.<sup>24</sup>

## Results

Of the 10 participants, three were urban-dwelling and seven lived rurally. Five participants identified as female and five as male. Seven participants discussed their own experiences as a patient themselves, one discussed their experience as a whānau member and one discussed both their own experience and their experience of being a whānau member.

Three distinct themes: interpersonal factors, access and service factors and active protection of Māori, and nine sub-themes regarding experiences of cultural safety in pre-hospital cardiovascular care were identified (summarised in Table 1).

## Interpersonal factors

Interpersonal factors describe the clinical skills and interpersonal interactions between participants and ambulance officers.

## Skills and knowledge

Participants acknowledged an appreciation for and expectations of staff knowledge, professionalism and empathy. However, experiences were mixed, particularly for participants who lived in rural communities that were not permanently staffed at the time of their experience and likely relied on volunteers/first responders.

It was certainly professional ... they didn't have, I thought, the scale or care level that I otherwise thought the ambulance service would provide ... it was adequate.

## Communication

Communication was discussed and went beyond 'being informed' to feeling included, listened to and heard and extended to whānau.

Although mostly positive, one participant emphasised the need for clear communication, especially when seeking consent.

They said, "It could cause bleeding." In my mind as a non-clinical person, 'oh, bleeding, okay, they can stop that'. My mind automatically went to bleeding like women bleed, period bleed. It didn't think like brain bleed ... probably explain that a little bit more, say it's a high chance and not just a chance.

## Connection, rapport and trust

Participants sought interpersonal connections with officers. However, these were not always prioritised by paramedics.

Connections were strengthened through familiarity, relatability and storytelling, particularly when officers disclosed information about themselves that humanised them.

I enjoy people's stories, and to hear a couple of them [staff] exchange stories, I was like, 'wow, that's what it looks like in your world'.

Connections were deepened when the officers were local and from the area. This led to participants feeling more

**Table 1.** Themes and sub-themes identified during the interviews with selected participant quotes.

Themes	Sub-themes	
Interpersonal factors	Skills and knowledge <ul style="list-style-type: none"> <li>• professional, knowledgeable and skilled paramedics</li> <li>• caring and empathetic paramedics</li> </ul>	'The type of profession that the officers have requires empathy. Empathy in treatment, and connection, and genuine wanting to be of service ... I don't think you can teach that. I think you have it, or you don't.'
	Communication <ul style="list-style-type: none"> <li>• listened to and heard</li> <li>• importance of communication with whānau</li> <li>• communicating clinical information</li> </ul>	'So, they were doing their stuff, getting what they needed from my body and my heart especially, but also communicating with me the whole time and it wasn't just them talking at me, they let me talk too.'
	Connection, rapport and trust <ul style="list-style-type: none"> <li>• connection important, fostered through context, relatability and storytelling</li> <li>• initial approach as a barrier to connection and rapport</li> <li>• whakamā and fostering trust</li> </ul>	'Yeah it was a bit messy at the start and that wasn't the best way to meet each other but once we got over that and I put that down to them listening to me and probably like seeing that I was okay after they did the tests and things and spoke to the office, so if they carried on like the way they first started I probably wouldn't have liked it'
	Partnership and autonomy <ul style="list-style-type: none"> <li>• involvement in decision-making</li> </ul>	'The only way to enhance your own mana is to enhance the mana of others ... I think that [enhancing someone's mana through autonomy] would be a beautiful way to koha something and begin a compounding process of really allowing people to stack on that, for themselves.'
Access and service factors	Calling an ambulance <ul style="list-style-type: none"> <li>• recognising 'non-specific' symptoms</li> <li>• health literacy</li> <li>• delayed decision to call or calling Healthline/GP first</li> </ul>	'Something that I thought would be a good learning for whānau, to be aware of these sorts of indicators. Rather than me thinking, 'sore throat, oh nah, you'll be okay', but it's definitely a sign [of a heart attack] which I never knew about.'
	Barriers and resourcing issues <ul style="list-style-type: none"> <li>• cost</li> <li>• long response times and lack of resources within communities, particularly rural</li> <li>• other challenges with living rural</li> </ul>	<p>'Ever since I was a kid, I prayed to God to keep me healthy for as long as he could because I knew we was poor and couldn't afford to go to the hospital or doctor. And I heard that you have to pay for the ambulance too, so you know I don't really like having big things like ambulance rides.'</p> <p>'Now there's a disconnect there, as far as I'm concerned and the community in this area has grown substantially and the resources haven't followed suit, or maybe they have and things are gonna change, but there's no evidence of that.'</p>
Active protection of Māori	Workforce <ul style="list-style-type: none"> <li>• lack of Māori representation</li> <li>• local connection and knowledge necessary</li> </ul>	'I wish we had more Māori who do that training, I've never met a Māori ambulance person. Do they even exist?'
	Cultural safety of the health system <ul style="list-style-type: none"> <li>• trust in the system, a system not made for Māori</li> <li>• living with heart disease, impact on individual, whānau and community</li> <li>• need for better preventative care for Māori</li> </ul>	<p>'I mean you hear all these stories about people ringing the ambulance and waiting for hours or not even turning up at all for whatever reason, or if they do come just give up on you and leave you at home and I've heard of people who died at home when that happened to them which is bloody disgusting.'</p> <p>'It just affects so much other than the families. To me, up here, in the north we need to be looking after our health because we don't have the access like in the cities, like that, if something happens.'</p>
	Responsiveness of the ambulance service to Māori <ul style="list-style-type: none"> <li>• ambulance service as a lifeline and essential</li> <li>• view of the ambulance service as an emergency service</li> <li>• the ambulance and a role in prevention</li> <li>• co-design</li> </ul>	<p>'When you get into an ambulance it's sterile. It's like being in a laboratory ... a little Māori mural on the inside of the back doors – you know when you're lying there would help you identify your culture with being in a sterile situation.'</p> <p>'I think wānanga [group learning] is important, and it doesn't have to be ten hours on a marae it can be 20 minutes in an ambulance on the way to the hospital. Sometimes sharing and knowing, and in rapport with somebody you can do a lot in that time to hold space for them to really stand for themselves.'</p>

understood and less judged as they felt that the officers knew their context, which was particularly important when the officers were non-Māori.

These two [local officers] didn't even flinch about coming into our whare [home] on this street which probably looks a bit rough ... Cos they come from here, they know our context.

Additionally, local connection meant staff had valuable knowledge about geography and tikanga for Māori specific to that region.

I'll tell you, if they hadn't been locals, I dread how they would have found us.

If we were looking at specific rohe or takiwā, that having knowledge about it [Mātauranga Māori] locally would be a nice space to hold for Māori.

Equally, connecting through whakapapa was important.

Rather than saying my name is XXX, I feel more comfortable saying I'm XXX and I'm Ngāi Tahu from XXX.

However, officers prioritised clinical interactions and skills at the expense of forming connections which, for some participants, led to negative initial interactions.

Sensitivity to participants being Māori, especially for wāhine (women) and kaumātua (elders), was important due to feelings of whakamā (embarrassment) around exposing body parts. When officers displayed sensitivity, it fostered trust.

They [officers] fostered trust. That's the only way I can think of putting it ... that's a big thing for Māori – especially when the man wasn't Māori and was Pākehā [non-Māori].

## **Partnership and autonomy**

Partnership and autonomy in decision making contributed to mana enhancement in and beyond the experience.

The autonomy given to me, like everything was always my choice.

## **Access and service factors**

Access and service factors describe barriers to accessing ambulance services as well as the impact of service factors on experiences of care.

### **Calling an ambulance**

The type and nature of cardiac symptoms influenced participants' decision to call an ambulance early, particularly

when experiencing 'non-specific' pain in the neck, throat or arm that participants did not realise could be a sign of a cardiac issue.

I thought, 'oh sore throat, oh that's okay, just have a rest', and not ever thinking that a sore throat is pain travelling up [from the heart], and that's why they have the sore throat.

Participants also tried more accessible options first, such as Healthline or their GP services.

## **Barriers and resource issues**

Cost was a significant issue for ambulance callouts, preventing or delaying some participants from calling 111. Some were unaware of costs until receiving a bill. During interviews, there was some discussion about reducing ambulance costs through health insurance or ambulance memberships, with annual payments to receive free ambulance services when needed. Not all participants were aware of membership options until after their incident, but there was general interest in joining. Participants who received the \$98 bill said that as Hato Hone St John is a charity, that is only partial government funded, they were happy to pay.

Concerningly long response times occurred in rural and urban locations but were more impactful for rural participants. It is worth noting that stations in some rural communities are not staffed 24/7.

There must be a lot of people that fall down the cracks waiting for the ambulance to arrive.

Some expressed frustration that their communities were not being adequately served. One participant also described a situation whereby an ambulance was called for a whānau member, and they were advised to arrange self-transport, resulting in feeling dismissed.

The last times has been hurtful that she's not being heard and cared for especially while she's worried about her health.

These experiences impacted on participants' future decisions to phone an ambulance, self-transport and/or not seek help.

The location that we're in, what I would probably do is get my wife to drive me and meet the ambulance halfway or drive me right to the station.

Māori and rural communities also lacked appropriate resources. One participant required a bariatric ambulance (an accessible ambulance capable of transporting patients who are overweight) to be transported, however, despite



having a medical alarm and being a frequent user of the ambulance, was consistently sent a standard ambulance. This resulted in delayed care as the officers assessed them in a standard ambulance before having a bariatric ambulance dispatched.

Living in a rural location was a barrier to accessing health care, including a lack of primary care options, reduced access to specialists and a greater distance from hospitals. These factors may increase reliance on the ambulance service in rural regions.

Rurality also creates logistical challenges with transporting patients. Depending on the severity of the condition and the location, transport via helicopter may be required. This was upsetting for one participant who sent their Mum to hospital in a helicopter without any whānau support due to constraints within the helicopter.

If it's serious then it means travelling away, organising your home and whānau to get down there, and of course we don't like that, mum going off without somebody there with her.

## Workforce representation

A workforce representing participants as Māori and with local knowledge and connections was desired, noting a lack of Māori representation in the ambulance service.

Reasons included increased comfort and connection when being treated by other Māori, a longing to have Māori look after their own and to have Māori paramedics visible as positive role models. It was also noted that having a nationally representative workforce (at 16%) is not enough within areas with increased Māori population.

Especially in areas like this where there are heaps of Māori patients, we'd all love to see more Māori staff being successful and looking after our own. And even better it'd be good to get kids thinking about training to do something good like ambulance work. Cos there are heaps of kids at college and that who probably haven't even thought about something like that, I know I didn't.

## Active protection of Māori

Active protection of Māori describes experiences of cultural safety within the health system for Māori and the responsiveness of the ambulance service to Māori including the role of the ambulance service in wider heart health care.

## Cultural safety of the health system

Participants described their perceptions of, and challenges within, the health system, influencing their views of the

ambulance before they had arrived, particularly regarding how Māori had been treated.

I probably worried about that when they first arrived, you know. Had some beef with the ambulance from the stories I'd heard about how they treated some of our people.

Additionally, trust in the health system also influenced views of the ambulance service.

So, I think my own feelings, and trust in the health system, made me feel wary of them when they arrived. But we both got over that and I can only thank them now.

One participant who identified as being Māori and Pākehā described the opportunities that were available to her based on her Pākehā side and the realisation that not all Māori have these opportunities.

I wonder sometimes if my experiences would be different had I not been with my mum who's white, or who looks white, and my grandparents who both look white and have a different image placed on top of them ... I haven't had to really fight for somebody to listen or hear me.

Furthermore, they described questioning these differences and how they impacted the life span of their Pākehā grandparents compared to their Māori grandparents.

Sometimes when I look at health I think, 'gosh, did my Pākehā grandparents live longer because of their Pākehā genetics [or how society privileged them], and how has that contributed to my health and my trajectory?'

These conversations gave the impression of being aware of the nature of the health system and how it inherently disadvantages Māori.

Participants described the impact of living with heart disease which extended beyond the individual and included whānau and communities, and participants described being aware of their risks and how being sick might impact their whānau.

My second child was born 6 months before I had the heart scare, so on the day it happened, I was worried because I knew I had these risks, and I was worried about being there for my kids.

Whānau often witness other whānau members suffer from a drawn out and debilitating disease that limited life span and affected communities, raising questions regarding the structure and funding of the health system and its focus on curing instead of prevention.

Sometimes I wonder if we're putting our money in the right space? Not that I don't support the kaupapa, but sometimes I wonder if instead of being the ambulance at the bottom of the hill, we go up the top and stop the people from jumping.

It was acknowledged that in order to prevent heart disease for Māori the approach needs to be specific to Māori.

Prioritise what's required earlier in the process for Māori, especially Māori men when they start to show signs, whatever it is, if it's medical or doing those operations, and giving them information that will endeavour anyway to help them and make life better.

### **Responsiveness of the ambulance service to Māori**

Participants described the ambulance service as being essential. Although they expressed gratitude, there was a sense that patients' lives were in the hands of the paramedics.

I was prepared to do whatever they wanted me to do, to get me to hospital.

Participants also described the quickness and urgency of the 'emergency response' by officers and while they understood the importance of an emergency response, not all participants felt satisfied with this, particularly as they felt it impersonal and did not help to build rapport or facilitate connections.

Next minute there's a bang at the door and my son opens it and in barge in these ambulance people with their big bag and oxygen and looking all concerned, shouting at us about 'who is it that has chest pain here'.

Although not overtly stated, there was a sense that the ambulance was there merely to provide transport.

They came here and [we] went to the hospital. There was not a great deal in between, with cardiac it's quite simple.

Despite the overwhelming desire for better preventative heart health, only one participant described the ambulance service as playing a role in this.

Participants described specific improvements that could be made by the ambulance service particularly around responsiveness to Māori, including ideas on indigenising the space and people in it.

It might be nice to be able to weave that [Maramataka and te Whare Tapa Wha] into conversation, gently. I guess that would also contribute to mana enhancement.

While the use of te reo Māori, including pronunciation, was desired by some participants, it was acknowledged as being complex.

The opportunity to actually speak [te reo Māori]. Even if I know a few words then I can answer them in a few words.

It's I guess never for me about how much te reo do you know. I think it can be a little bit complicated because people get upset. Some love it if you pronounce the kupu beautifully, and then others get upset if you don't.

Ultimately partnership between Māori and non-Māori is pivotal in honouring te Tiriti o Waitangi and improving outcomes for Māori.

It's really about instead of just having this constant conversation of two parties, how do you transform the middle section ... that enables non-Māori to show up to this space, with Māori, and be good Treaty partners?

### **Discussion**

This qualitative study explored the experiences of cultural (un)safety for Māori and their whānau who received acute pre-hospital cardiovascular care from paramedics. It was underpinned by KMR principles, centring Māori narratives and providing a framework to critically analyse systems and the root causes of inequities, including colonialism and racism.<sup>17,22,25</sup> Semi-structured interviews identified three themes: interpersonal factors, access and service factors and active protection of Māori.

Inequities in health are caused by poor experiences when accessing health care due to unequal partnerships, ineffective communication and lack of empowerment, respect and trust rather than a lack of cultural knowledge.<sup>26</sup> These concepts are critical to delivering appropriate, equitable and culturally safe care.<sup>10</sup> Cultural safety extends beyond acquiring cultural knowledge and the development of appropriate attitudes and skills, instead focussing on understanding and addressing bias and stereotypes, as well as acknowledging and preventing barriers to clinical effectiveness that arise from any power imbalance between patients and practitioners at both individual and organisational/systemic levels.<sup>10</sup>

The theme of interpersonal skills recognised the importance of communication, connection and whakawhanaungatanga. When participants experienced good communication in their clinical care, they felt informed, included, listened to and heard. One participant's experience highlighted the importance of communicating in language that can be understood by Māori and whānau. The whānau appeared unaware of the severity of the potential adverse effects of a treatment due to insufficient information provided by paramedics. Māori face challenges in accessing information about health care<sup>3,5,27,28</sup> due to issues such as complex language used by practitioners.<sup>3,27</sup> There was a sense here

of 'what if? Had we known the risks for a brain bleed, would we have chosen the treatment?'. Communication is key to empowerment and autonomy.<sup>9,29</sup> As participants suggested, both positive and negative communication experiences will have long-term impacts regarding (not) trusting health providers and (not) seeking timely health care.<sup>5,30–34</sup> Critically, trust is also based on the experiences of whānau and others within communities.<sup>35</sup>

Whakawhanaungatanga builds trust and influences positive experiences of care for Māori,<sup>31,33</sup> but was not always prioritised. Paramedics are trained to quickly and effectively identify life-threatening problems in critically ill or injured patients and treat them.<sup>36</sup> However, several participants felt this approach undermined key relationship-building.<sup>34</sup> Medical students in NZ currently receive training in whakawhanaungatanga, learning the Hui Process to enhance the doctor–patient relationship with Māori by applying the traditional principles of Mihimihi (greeting and introducing), Whakawhanaungatanga, Kaupapa (purpose of the encounter) and Poroporoaki (closure of an encounter) to the setting of a medical consultation.<sup>37</sup> However, the pre-hospital environment is complex, and relationship-building with patients, using frameworks such as the Hui Process, particularly in time-critical pre-hospital situations, can present many challenges given it was developed predominantly for use in more controlled primary care settings. Thus, a lack of pre-existing relationships,<sup>33,38</sup> coupled with short interactions, particularly in urban and urgent settings, can prevent connections between paramedics and Māori. Furthermore, participants sought Māori paramedics yet Māori are significantly underrepresented within the pre-hospital workforce,<sup>39</sup> as well as the wider health workforce,<sup>26,34,40</sup> undermining efforts to realise the benefits of ethnic concordance between practitioner and patient.<sup>41,42</sup> Additionally, despite the common misconception that the process of whakawhanaungatanga is simply about rapport, Māori establish relationships through talking about whakapapa first and foremost.<sup>32</sup> While non-Māori may believe they are establishing rapport, rapport is interpreted differently by different cultural groups.<sup>33</sup> Thus, a focus on increasing the Māori pre-hospital workforce is necessary.

The theme of access and barriers illustrated issues relating to health literacy, structural barriers, ambulance resourcing and workforce demographics. Discussion about 'when to call an ambulance' included the role of 'non-specific' symptoms emphasising the need for accessible culturally appropriate information for Māori and whānau regarding the range of cardiac symptoms and when to seek medical assistance. However, improved health literacy does not guarantee timely access as significant structural barriers, including cost and availability of services, impact Māori and whānau's ability to access care.<sup>8</sup> Rural areas within NZ have poorer access to primary care<sup>43</sup> and advanced-level hospitals, longer emergency service response times and reduced personnel.<sup>44</sup> Māori are more likely than non-Māori to live in

rural and remote areas and to be socioeconomically deprived,<sup>43,44</sup> thus resulting in poorer access to pre-hospital care, increasing overall morbidity and mortality for Māori.<sup>45</sup> Thus, while improving communication and resources around cardiac symptoms and when to phone 111 are key, pre-hospital services must also be optimally organised to address geographical and socio-demographic factors to ensure timely and equitable access to care.

Active protection for Māori, as outlined and guaranteed by the signing of te Tiriti,<sup>46</sup> was demonstrated as participants questioned the scope of ambulance services providing care to Māori, including preventative care.<sup>47</sup> The nature of the ambulance service has changed due to an increasing population, overrun emergency departments and decreased access to primary care services, particularly rurally,<sup>48</sup> with low acuity (status 3 or 4) patients making up approximately 85% of patients attended to by an ambulance in NZ.<sup>49</sup> Consequently, more patients are treated and left at home or referred to other health and social services.<sup>48</sup> As highlighted by one participant, further shifts to provide education about heart health and disease prevention, such as in the back of an ambulance during a trip to the hospital, could also be considered.

A major strength of this study was the use of a Māori methodological approach, which was beneficial for Māori, under Māori control and informed by mātauranga Māori to give the study rigour. While findings of this research provide an insight into pre-hospital care from the perspectives of Māori, it is not entirely representative or comprehensive – it was limited to those who did phone an ambulance and (unintentionally) excluded Māori who avoided accessing pre-hospital care due to distrust in the ambulance service. Additionally, those who had very poor pre-hospital experiences may have felt disenfranchised and unwilling to participate.<sup>50</sup> Further research exploring perceptions of the ambulance within communities and whānau that have less engagement with pre-hospital services is recommended.

## Conclusion

Māori experience culturally unsafe pre-hospital care for cardiac symptoms. Although there were few reports of interpersonal discrimination, systemic and structural barriers were harmful. Efforts to address workforce representation, resource disparities and cultural safety education (focussing on communication, partnership and connection) is warranted to improve experiences and outcomes for Māori.

## References

- 1 Ministry of Health. Annual Update of Key Results 2015/16: New Zealand Health Survey. Wellington; 2016. Available from: <https://www.health.govt.nz/publication/annual-update-key-results-2015-16-new-zealand-health-survey>
- 2 Chan WC, Wright C, Riddell T, *et al.* Ethnic and socioeconomic disparities in the prevalence of cardiovascular disease in New Zealand. *N Z Med J* 2008; 121(1285): 11–20.



- 3 Health Quality and Safety Commission New Zealand. A window on the quality of New Zealand's health care. 2017. Available from: <https://www.hqsc.govt.nz/resources/resource-library/a-window-on-the-quality-of-new-zealands-health-care-2017/>
- 4 Wilson D. The significance of a culturally appropriate health service for Indigenous Māori women. *Contemp Nurse* 2008; 28(1-2): 173-88. doi:10.5172/conu.673.28.1-2.173
- 5 Wilson D, Barton P. Indigenous hospital experiences: a New Zealand case study. *J Clin Nurs* 2012; 21(15-16): 2316-26. doi:10.1111/j.1365-2702.2011.04042.x
- 6 Mbuzi V, Fulbrook P, Jessup M. Indigenous peoples' experiences and perceptions of hospitalisation for acute care: a metasynthesis of qualitative studies. *Int J Nurs Stud* 2017; 71: 39-49. doi:10.1016/j.ijnurstu.2017.03.003
- 7 Palmer SC, Gray H, Huria T, et al. Reported Māori consumer experiences of health systems and programs in qualitative research: a systematic review with meta-synthesis. *Int J Equity Health* 2019; 18(1): 163. doi:10.1186/s12939-019-1057-4
- 8 Graham R, Masters-Awatere B. Experiences of Māori of Aotearoa New Zealand's public health system: a systematic review of two decades of published qualitative research. *Aust N Z J Public Health* 2020; 44(3): 193-200. doi:10.1111/1753-6405.12971
- 9 Pene BJ, Aspinall C, Wilson D, et al. Indigenous Māori experiences of fundamental care delivery in an acute inpatient setting: a qualitative analysis of feedback survey data. *J Clin Nurs* 2022; 31(21-22): 3200-12. doi:10.1111/jocn.16158
- 10 Curtis E, Jones R, Tipene-Leach D, et al. Why cultural safety rather than cultural competency is required to achieve health equity: a literature review and recommended definition. *Int J Equity Health* 2019; 18(1): 174. doi:10.1186/s12939-019-1082-3
- 11 Miner-Williams W. Racial inequities in cardiovascular disease in New Zealand. *Divers Equal Health Care* 2017; 14(1): 23-33.
- 12 Garofalo D, Grey C, Lee M, et al. Pre-hospital delay in acute coronary syndromes: PREDICT CVD-18. *N Z Med J* 2012; 125(1348): 12-22.
- 13 Dicker B, Garrett N, Wong S, et al. Relationship between socio-economic factors, distribution of public access defibrillators and incidence of out-of-hospital cardiac arrest. *Resuscitation* 2019; 138: 53-8. doi:10.1016/j.resuscitation.2019.02.022
- 14 Dicker B, Todd VF, Tunnage B, et al. Direct transport to PCI-capable hospitals after out-of-hospital cardiac arrest in New Zealand: Inequities and outcomes. *Resuscitation* 2019; 142: 111-6. doi:10.1016/j.resuscitation.2019.06.283
- 15 Dicker B, Todd VF, Tunnage B, et al. Ethnic disparities in the incidence and outcome from out-of-hospital cardiac arrest: a New Zealand observational study. *Resuscitation* 2019; 145: 56-62. doi:10.1016/j.resuscitation.2019.09.026
- 16 Kerr A, Lee M, Grey C, et al. Acute reperfusion for ST-elevation myocardial infarction in New Zealand (2015-2017): patient and system delay (ANZACS-QI 29). *N Z Med J* 2019; 132(1498): 41-59.
- 17 Curtis E. Indigenous positioning in health research: the importance of Kaupapa Māori theory-informed practice. *AlterNative* 2016; 12(4): 396-410. doi:10.20507/AlterNative.2016.12.4.5
- 18 Mahuika R. Kaupapa Māori theory is critical and anti-colonial. *MAI Rev* 2008; 3(4): 1-16.
- 19 Smith LT. Decolonizing Methodologies: Research and Indigenous Peoples, 2nd edn. Otago Press; 2012.
- 20 Moyle P. A model for Māori research for Māori practitioners. *Aotearoa N Z Social Work* 2014; 26(1): 29-38. doi:10.11157/anzswj-vol26iss1id52
- 21 Rewi T. Utilising kaupapa Māori approaches to initiate research. *MAI J* 2014; 3(3): 242-54.
- 22 Pihama L, Cram F, Walker SS. Creating methodological space: a literature review of Kaupapa Maori research. *Can J Native Educ* 2002; 26: 30-43.
- 23 Smith LT Kaupapa Māori research- Some Kaupapa Māori principles. In: Pihama L, South K, editors. Kaupapa Rangahau A Reader: A Collection of Readings from the Kaupapa Maori Research Workshop Series Led. Te Kotahi Research Institute; 2015. pp. 46-52.
- 24 Thomas DR. A general inductive approach for analyzing qualitative evaluation data. *Am J Eval* 2006; 27(2): 237-46. doi:10.1177/1098214005283748
- 25 Pihama L. Kaupapa Māori theory: transforming theory in Aotearoa. *He Pukenga Korero* 2010; 9(2): 5-14.
- 26 Reid P, Robson B. Understanding health inequities. In: Robson B, Reid P, editors. Hauora: Māori standards of health IV A study of the years 2000-2005. Wellington: Te Rōpū Rangahau Hauora a Eru Pōmare; 2007. pp. 3-10.
- 27 Kerr S, Penney L, Barnes HM, et al. Kaupapa Maori action research to improve heart disease services in Aotearoa, New Zealand. *Ethn Health* 2010; 15(1): 15-31. doi:10.1080/13557850903374476
- 28 Arlidge B, Abel S, Asiasiga L, et al. Experiences of whānau/families when injured children are admitted to hospital: a multi-ethnic qualitative study from Aotearoa/New Zealand. *Ethn Health* 2009; 14(2): 169-83. doi:10.1080/13557850802307791
- 29 Leitch S, Smith A, Crengle S, et al. The views of New Zealand general practitioners and patients on a proposed risk assessment and communication tool: a qualitative study using Normalisation Process Theory. *Implement Sci Commun* 2021; 2(1): 16. doi:10.1186/s43058-021-00120-1
- 30 Newport R, Grey C, Dicker B, et al. Upholding te mana o te wā: Māori patients and their families' experiences of accessing care following an out-of-hospital cardiac event. *Am Heart J Plus* 2023; 36: 100341. doi:10.1016/j.ahjo.2023.100341
- 31 Anderson A, Mills C, Eggleton K. Whānau perceptions and experiences of acute rheumatic fever diagnosis for Māori in Northland, New Zealand. *N Z Med J* 2017; 130(1465): 80-8.
- 32 Levack WM, Jones B, Grainger R, et al. Whakawhānauanga: the importance of culturally meaningful connections to improve uptake of pulmonary rehabilitation by Māori with COPD - a qualitative study. *Int J Chron Obstruct Pulmon Dis* 2016; 11: 489-501. doi:10.2147/COPD.S97665
- 33 Cram F, Smith L, Johnstone W. Mapping the themes of Maori talk about health. *N Z Med J* 2003; 116(1170): 1p following U353.
- 34 Walker RC, Abel S, Palmer SC, et al. "We Need a System that's Not Designed to Fail Māori": experiences of racism related to kidney transplantation in Aotearoa New Zealand. *J Racial Ethn Health Disparities* 2023; 10(1): 219-27. doi:10.1007/s40615-021-01212-3
- 35 Espiner E, Paine SJ, Weston M, et al. Barriers and facilitators for Māori in accessing hospital services in Aotearoa New Zealand. *N Z Med J* 2021; 134(1546): 47-58.
- 36 Thim T, Krarup NH, Grove EL, et al. Initial assessment and treatment with the Airway, Breathing, Circulation, Disability, Exposure (ABCDE) approach. *Int J Gen Med* 2012; 5: 117-21. doi:10.2147/IJGM.S28478
- 37 Lacey C, Huria T, Beckert L, et al. The Hui Process: a framework to enhance the doctor-patient relationship with Māori. *N Z Med J* 2011; 124(1347): 72-8.
- 38 Reid J, Cormack D, Crowe M. The significance of relational continuity of care for Māori patient engagement with predominantly non-Māori doctors: findings from a qualitative study. *Aust N Z J Public Health* 2016; 40(2): 120-5. doi:10.1111/1753-6405.12447
- 39 Morrison TA, Tunnage B. Reporting Māori participation in paramedic education and the EMS workforce in New Zealand. *Australas J Paramed* 2014; 11: 1-6. doi:10.33151/ajp.11.5.58
- 40 Curtis E, Reid P. Indigenous Health Workforce Development: challenges and successes of the Vision 20:20 programme. *ANZ J Surg* 2013; 83(1-2): 49-54. doi:10.1111/ans.12030
- 41 Cooper L, Powe N. Disparities in patient experiences, health care processes, and outcomes: the role of patient-provider racial, ethnic, and language concordance. 2004. Available from: <https://www.commonwealthfund.org/publications/fund-reports/2004/jul/disparities-patient-experiences-health-care-processes-and>
- 42 LaVeist TA, Nuru-Jeter A, Jones KE. The association of doctor-patient race concordance with health services utilization. *J Public Health Policy* 2003; 24(3-4): 312-23.
- 43 Ministry of Health. Rural Health Strategy 2023. Wellington; 2023. Available from: <https://www.health.govt.nz/publication/rural-health-strategy>
- 44 Lilley R, de Graaf B, Kool B, et al. Geographical and population disparities in timely access to prehospital and advanced level emergency care in New Zealand: a cross-sectional study. *BMJ Open* 2019; 9(7): e026026. doi:10.1136/bmjopen-2018-026026
- 45 Crengle S, Davie G, Whitehead J, et al. Mortality outcomes and inequities experienced by rural Māori in Aotearoa New Zealand.

- Lancet Reg Health West Pac* 2022; 28: 100570. doi:[10.1016/j.lanwpc.2022.100570](https://doi.org/10.1016/j.lanwpc.2022.100570)
- 46 Waitangi Tribunal. Hauora: Report on Stage One of the Health Services and Outcomes Kupapa Inquiry. WAI2575. Lower Hutt, New Zealand; 2019. Available from: <https://natlib.govt.nz/records/42948781?search%5Bi%5D%5Bcreator%5D=Jones%2C+Carwyn%2C+1976-%2C+INNZNA&search%5Bpath%5D=items>
- 47 Heart Foundation. Coronary artery disease. 2022. Available at <https://www.heartfoundation.org.nz/your-heart/heart-conditions/coronary-artery-disease>
- 48 Swain AH, Hoyle SR, Long AW. The changing face of prehospital care in New Zealand: the role of extended care paramedics. *N Z Med J* 2010; 123(1309): 11–4.
- 49 Todd VF, Swain A, Howie G, *et al.* Factors associated with emergency medical service reattendance in low acuity patients not transported by ambulance. *Prehosp Emerg Care* 2021; 26: 66–77. doi:[10.1080/10903127.2020.1862943](https://doi.org/10.1080/10903127.2020.1862943)
- 50 Ellard-Gray A, Jeffrey NK, Choubak M, *et al.* Finding the hidden participant: solutions for recruiting hidden, hard-to-reach, and vulnerable populations. *Int J Qual Methods* 2015; 14(5): 1609406915621420. doi:[10.1177/1609406915621420](https://doi.org/10.1177/1609406915621420)

**Data availability.** The data that support this study cannot be publicly shared due to confidentiality concerns (contains information that could compromise participant privacy) but may be available from the corresponding author upon reasonable request.

**Conflicts of interest.** The authors declare no conflicts of interest.

**Declaration of funding.** The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This research has been undertaken as part of Manawataki Fatu Fatu, a research programme that is joint funded by the Heart Foundation of New Zealand and Healthier Lives National Science Challenge, grant number 1819. S. P. is funded by Manawataki Fatu Fatu, and the Auckland University of Technology (AUT) Faculty of Health and Environmental Sciences (FHES) 2022 Staff Postgraduate Research Fellowship.

**Acknowledgements.** The authors thank the participants who kindly contributed to this research, by sharing their experiences and giving up their time in support of this kaupapa.

**Author contributions.** Author 1: conceptualised the structure of the article and methodology, collected the data, conducted the analysis and wrote the original manuscript. Author 2: provided research supervision and reviewed and edited the manuscript. Author 3: provided research supervision and reviewed and edited the manuscript.

#### Author affiliations

<sup>A</sup>Department of Paramedicine, Faculty of Health and Environmental Science, Auckland University of Technology, AUT South Campus, Private Bag 92006, Auckland, 1142, New Zealand.

<sup>B</sup>Clinical Audit and Research, Hato Hone St John, 600 Great South Road, Ellerslie, Auckland, 1051, New Zealand.

<sup>C</sup>Department of General Practice and Primary Care, Faculty of Medical and Health Sciences, University of Auckland, Building 507, 28 Park Avenue, Grafton, Auckland, 1023, New Zealand.