Pacific nurses' experiences of informal interpreting and language assistance in healthcare settings in Aotearoa New Zealand: results of an alumni survey

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ABSTRACT

AIM: We aimed to examine the experiences of Pacific nurses in Aotearoa New Zealand who provide informal language assistance to Pacific patients with limited English proficiency (LEP).

METHODS: A cross-sectional online survey was distributed to 229 alumni of the Aniva Leadership Programme. The survey included quantitative and qualitative questions about interpreting experiences. Descriptive statistics and logistic regression were used for quantitative analysis; framework analysis was applied to free-text responses.

RESULTS: The response rate was 69% (n=159). Of respondents, 80% spoke a Pacific language and 85% of these had been asked to interpret in clinical settings, most commonly by patients, families and colleagues. While 75% felt confident interpreting, many reported difficulties with technical terminology. Nurses observed improved patient trust, understanding and engagement when using Pacific languages. However, interpreting often conflicted with core duties, raised ethical concerns and was not formally recognised or supported.

CONCLUSION: Pacific nurses routinely provide informal interpreting, significantly enhancing patient care. Yet this work is uncompensated, untrained and exposes nurses to professional risks. Health systems must reduce reliance on informal interpreting by investing in professional services, offering interpreter training for bilingual staff and formally recognising the cultural and linguistic labour of Pacific nurses to support equitable care.

Effective communication between patients and clinicians in a shared language is critical for safety and positive health outcomes.[1] Research from English-speaking countries demonstrates that patients with limited English proficiency (LEP) face barriers to accessing services, incomplete information transfer, reduced understanding of medical care, less effective self-management and longer or additional follow-up consultations.[1]

In Aotearoa New Zealand, for example, research with Pacific mothers has highlighted that those who speak Pacific languages at home are significantly less likely to receive or act on safe sleep information, pointing to system-level communication failures within mainstream services and underscoring the need for linguistically aligned communication within the health system.[2]

The New Zealand Code of Health and Disability Services Consumers' Rights[3] guarantees the right to a competent healthcare interpreter,[4] while the *Health Practitioners Competence Assurance Act 2003* mandates cultural safety standards, including effective communication.[5] Consistent with global literature, professionally trained and, where applicable, certified in-person interpreters are considered the gold standard for addressing patient–clinician language discordance.[6] However, untrained interpreters are often being utilised instead.[7–9] The reasons for the reliance on untrained interpreters include budget constraints; workforce shortages, particularly for Pacific languages with low diffusion; and the dynamic nature of healthcare, where pre-planning for interpreters is not always feasible. International literature has documented how clinicians and health workers navigate language barriers,[10,11] often relying on family members or untrained bilingual staff and facing structural constraints in accessing professional interpreters.[12] Aotearoa New Zealand research similarly shows that even when clinicians

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recognise the risks of poor communication associated with LEP patients, trained interpreters are under-utilised.[13] Although there is substantial qualitative research in this area,[14] little work has examined how often nurses themselves are called upon to interpret, and almost none has explored this in Pacific or Aotearoa New Zealand contexts.

Aotearoa New Zealand has a limited tradition of integrating Pacific language interpreting services into public healthcare,[4] compounded by insufficient data on the number of LEP individuals or those requiring interpreters.[8] Pacific peoples, the fourth largest ethnic group in Aotearoa New Zealand, make up approximately 9% of the national population[15] and encompass over 17 distinct ethnic, cultural and linguistic communities. Two-thirds of Pacific peoples are Aotearoa New Zealand–born, with 25% identifying with multiple ethnicities. Among overseas-born Pacific peoples, 46% have resided in Aotearoa New Zealand for over 30 years.[16]

An immigration survey (2005–2009) found that Pacific migrants had significantly lower English proficiency than non-Pacific migrants, with only 38% reporting English as the language they spoke best, compared with 62% of non-Pacific migrants.[17] English proficiency varied widely: 58% of Fijian migrants reported English as their best language, compared to 16% of Samoans and 20% of Tongans. The 2018 Census indicated 92% of Pacific people spoke English, leaving 8% (33,684 individuals) who did not.[18] The ability to speak Pacific languages varied among groups, ranging from 9% who spoke Cook Island Māori to 50% who spoke Samoan.[19] However, the accuracy of these findings is limited by a 65% census response rate, which is skewed toward Aotearoa New Zealand–born, English-speaking individuals, likely leading to an underestimation of language proficiencies.[20]

In 2023, Pacific nurses represented 4% (2,722) of Aotearoa New Zealand's nursing workforce.[21] Ethnic composition included Fijian (32%), Samoan (31%), Tongan (18%), Niuean (5%) and Tokelauan (4%). Most Pacific nurses trained in Aotearoa New Zealand, while 17% trained overseas, primarily in Pacific countries.[22] This study reports on nurses' experiences providing informal language assistance to Pacific patients and families with LEP in healthcare settings.

Methods

Study design and setting

This cross-sectional study was conducted using an online survey. Data were collected between 9 October and 27 November 2023. This research is part of a broader evaluation of the first 11 years of the Aniva Pacific Workforce and Leadership Development Programme (Aniva) for Pacific nurses in Aotearoa New Zealand.[23] Funded by Health New Zealand – Te Whatu Ora (HNZ) and delivered through Whitireia Polytechnic by Pacific Perspectives Ltd (an independent Pacific health provider), the primary strategic goal of the programme is to significantly increase the number of Pacific nurses and midwives holding postgraduate qualifications in Pacific health leadership, thereby preparing them for leadership roles within the health sector. The Aniva programme offers New Zealand Qualification Authority (NZQA)–approved qualifications including a Postgraduate Certificate and Diploma (Pacific Health), and a Master of Professional Practice (Leadership).

Ethics

This study received approval from the Te Pukenga—Whitireia and Weltec Ethics and Research Committee (RP 483—2025).

Recruitment and data collection

The survey was open to all 229 individuals who had previously enrolled in the Aniva programme. While this group included a small number of midwives, the vast majority were registered nurses. Therefore, for clarity and consistency, we refer to participants collectively as "nurses" throughout this article. Recruitment was conducted via email invitations using contact details in the Aniva administrative database. Reminder emails and follow-up phone calls were used to boost response rates. As an incentive, all nurses who completed the survey were entered into a draw to win one of 10 grocery vouchers. The survey was administered using Jotform, a Cloud-based online survey platform (Jotform Inc., San Francisco, California, United States of America), selected for its user-friendly interface. Responses were exported into Microsoft Excel (version 16) for data management and descriptive analysis.

Questionnaire

The questionnaire comprised 104 questions (Appendix Table 1), predominantly closed-ended with some open-ended prompts, covering demographics, experiences with the Aniva programme, qualifications and alumni work roles. Demographic questions were aligned with the Te Kaunihera Tapuhi o Aotearoa | Nursing Council of New Zealand tracking survey. This article focusses on responses to questions 20–24 regarding Pacific languages

and interpreting in the workplace, with additional insight from an open-ended question (question 25). The questionnaire was developed by the research team (DR, DN, SF, AV, AS, HK, GS) drawing on their practical and academic experiences in education, nursing workforce development and Pacific health, and piloted among the first 20 alumni.

Analysis of quantitative data

Descriptive statistics and Chi-squared tests were used to summarise participants' characteristics and asses participation-related associations. To evaluate potential response bias, we compared the demographic and professional characteristics available in the Aniva administrative dataset between respondents and non-respondents. Logistic regression identified factors linked to confidence and training in interpreting or translation tasks. Analyses were conducted using R version 4.2.2 (R Foundation for Statistical Computing, Vienna, Austria) and IBM SPSS Statistics version 29.0.2.0 (IBM Corp., Armonk, New York, United States of America).

Analysis of the free-text responses

The open-ended (question 25) responses provided insights into participants' experiences. Framework analysis, a systematic qualitative method, was chosen to enhance rigour and transparency when working with this multidisciplinary team and large dataset.[24] This method involved two main stages and five steps: stage one was creating an analytical framework and stage two was applying this framework to the dataset. The five steps were: 1) familiarisation with responses, 2) development of a coding framework (informed by both the survey topics and an initial scan of the free-text answers), 3) indexing data to codes (applying the coding framework), 4) charting coded responses into a matrix (summarised text entered into cells) and 5) mapping and interpretation (finding patterns, clarifying concepts, developing themes). This approach facilitated the identification of patterns, comparisons and variation across the free-text dataset, leading to themes beyond the predefined closed question responses. Coding was performed independently by two researchers (DR and TT). Discrepancies were resolved through discussion with other team members (GS, HK, AA, SF, AS) at regular team meetings, enhancing the rigour and consistency of the analysis.

Results

The response rate for the survey was 69% (159/229). Respondents were more likely than non-responders to be younger (χ^2=14.22, df=3, p=0.0026), born in Aotearoa New Zealand (χ^2=8.35, df=1, p=0.0039) and of Samoan descent (χ^2=7.19, df=1, p=0.0073). They were also more likely to be enrolled more recently in Aniva (χ^2=41.76, df=2, p<0.0001) and to have been more recently registered as nurses (χ^2=4.58, df=1, p=0.0324). In contrast, city/region of residence, gender, Pacific ethnicity other than Samoan descent, country of birth within Pacific sub-groups, country of citizenship and country of residence showed no significant association with survey response (all p>0.05).

Quantitative findings

The characteristics of the 159 respondents are shown in Table 1. The majority were female (91%), aged between 36 and 65 years (83%), and over half (52%) were born in a Pacific country. Most overseas-born respondents had migrated to Aotearoa New Zealand in the past 25 years, or since the 2000s (39%), followed by the 1990s (20%) and 1980s (13%).

Eighty percent (127) of respondents spoke a Pacific language, and 46% reported that it was their first language. The most spoken languages were Samoan (45%), Tongan (20%) and Fijian (17%). Among these, 113 (91%) spoke one Pacific language, 12 (9%) spoke two, and two spoke three Pacific languages (data not shown).

Of the 127 respondents who spoke a Pacific language, 120 answered questions about language use at work (questions 21–25). Of these, 118 (98%) reported using their Pacific language in the workplace, and 102 (85%) indicated that they had received requests to translate or interpret for patients and families in other areas of the workplace. Requests for assistance with interpreting or translating were made by colleagues (89%), patients and families (75%), and supervisors or managers (64%); 51% had been asked by all three groups. The majority of respondents (75%) reported feeling confident and possessing the skills to provide this assistance (Table 2). Confidence with interpreting or translating appeared higher among older participants, Fijian speakers and those with a Pacific first-language; however, none of these associations reached statistical significance (all odds ratios [ORs] 1.6–3.5, all p>0.05). By contrast, being born in a Pacific country was a statistically significant predictor (OR 3.2, 95% CI 1.3–8.1, p=0.015).

Qualitative findings

The open-ended prompt (question 25) yielded

Table 1: Characteristics of Aniva participants who participated in the Aniva Alumni Survey 2023, including Pacific languages spoken.

Characteristics	Total n (%)	Speaks Pacific language/s
Highest Aniva qualification	**159 (100%)**	**127 (80%)**
Master's	35 (22%)	26 (74%)
Diploma	53 (33%)	41 (77%)
Certificate	65 (41%)	54 (83%)
Not completed	6 (4%)	6 (100%)
Gender	**159 (100%)**	**127 (80%)**
Female	145 (91%)	116 (80%)
Male	14 (9%)	11 (79%)
Age category	**159 (100%)**	**127 (80%)**
≤25 years	0	0
26–35 years	16 (10%)	13 (81%)
36–45 years	35 (22%)	33 (94%)
46–55 years	65 (41%)	48 (74%)
56–65 years	32 (20%)	26 (81%)
>65 years	11 (7%)	7 (64%)
Ethnicity[a]	**230 (100%)**	**166 (72%)[b]**
Samoan	78 (34%)	62 (79%)
Tongan	32 (14%)	29 (91%)
Fijian	27 (12%)	24 (89%)
Cook Island Māori	18 (8%)	6 (33%)
NZ European	15 (7%)	<5 (n/a)
Tokelauan	13 (6%)	8 (62%)
Niuean	11 (5%)	8 (73%)
Tuvaluan	5 (2%)	<5 (n/a)
Other Pacific	12 (5%)	10 (83%)
Other non-Pacific	19 (8%)	14 (74%)
First language	**159 (100%)**	**127 (80%)**
English[c]	84 (53%)	52 (62%)
Pacific	73 (46%)	73 (100%)
Other	2 (1%)	2 (100%)
Country of birth	**159 (100%)**	**127 (80%)**
Pacific country	82 (52%)	79 (96%)
Aotearoa New Zealand	75 (47%)	46 (61%)
Other	2 (1%)	2 (100%)

Table 1 (continued): Characteristics of Aniva participants who participated in the Aniva Alumni Survey 2023, including Pacific languages spoken.

Speak a Pacific language	**159 (100%)**	
Yes	127 (80%)	-
No	32 (20%)	-
Pacific languages spoken[d]	**143 (100%)**	
Samoan	65 (45%)	
Tongan	28 (20%)	
Fijian	24 (17%)	
Niuean	8 (6%)	
Tokelauan	7 (5%)	
Cook Island Māori	5 (3%)	
Other Pacific	6 (4%)	
First arrival in Aotearoa New Zealand (decade)[e]	**84 (100%)**	**81 (96%)**
1960s	2 (2%)	2 (100%)
1970s	8 (10%)	6 (75%)
1980s	13 (15%)	12 (92%)
1990s	17 (20%)	17 (100%)
2000s	39 (46%)	39 (100%)
2010s	5 (6%)	5 (100%)
2020s	0	0

Notes: [a)] Total numbers add up to more than the total number of participants because some people identify with more than one ethnic group. [b)] The total number of participants, by ethnic group they identify with, who speak a Pacific language. [c)] Participants who identify with more than one ethnicity may be counted more than once as Pacific language speakers. [d)] One participant reported both English and Pacific as their first language. We have categorised them as "Pacific". [e)] Total numbers add up to more than the total number of participants because some people speak more than one language. Only includes the participants who were born in a Pacific country.

101 free-text responses. Of these, 115 useable quotes were identified, systematically coded and charted using the predefined thematic framework. The analysis resulted in three main themes and nine sub-themes, which are summarised in Table 3 and elaborated below with representative participant quotes.

Theme one: nurses' linguistic and professional capabilities

Respondents frequently reported high levels of confidence in their interpreting abilities, often attributing this to fluency in Pacific language(s), prior training and personal backgrounds including upbringing in traditional church settings.

> *"I am fluent in Samoan and confident to interpret for clients/families."*

> *"I am a confident Fijian speaker, and I speak two different types of Fijian language."*

> *"...growing up in a Niuean traditional church, taught me to vagahau Niue* [the Niuean language], *I was happy to* [interpret]."

Table 2: Characteristics of 102 alumni who participated in the Aniva Alumni Survey 2023 who had been asked to translate or interpret in other areas of the workplace, and determinants influencing their confidence and skill.

Characteristics	Total n (%)	Confident/skilled n (%)	OR (95% CI)	p-value
Total	**102 (100%)**	**76 (75%)**		
Gender				
Female	94	69 (73%)	1	0.395
Male	8	7 (88%)	2.5 (0.3–21.7)	
Age Category				
≤25 years	0	-	-	
26–35 years	12	6 (50%)	1	0.485
36–45 years	26	19 (73%)	2.7 (0.7–11.3)	
46–55 years	39	30 (77%)	3.3 (0.7–13)	
56–65 years	18	14 (78%)	3.5 (0.7–17.1)	
>65 years	7	7 (100%)		
Country of birth				
Aotearoa New Zealand	39	24 (62%)	1	0.015*
Pacific country	61	51 84%)	3.2 (1.3–8.1)	
Other	2			
First language				
Pacific	60 (59%)	47 (78%)	1.6 (0.7–4.0)	
English	42 (41%)	29 (69%)	1	0.292
Country first registered				
Aotearoa New Zealand	78	56 (72%)	1	0.081
Pacific country	22	20 (91%)	3.9 (0.8–18.2)	
Other	2	-		
Time since registration in Aotearoa New Zealand				
0–10 years	23	17 (74%)	1	0.784
11–20 years	28	19 (68%)	0.7 (0.2–2.5)	
21–30 years	27	21 (79%)	1.2 (0.3–4.5)	
>31 years	24	19 (79%)	1.3 (0.3–5.2)	

Table 2 (continued): Characteristics of 102 alumni who participated in the Aniva Alumni Survey 2023 who had been asked to translate or interpret in other areas of the workplace, and determinants influencing their confidence and skill.

Who asked participant to translate or interpret[a]				
Asked by colleague				
Yes	91 (89%)	67 (74%)	1	0.559
No	11 (11%)	9 (82%)	1.6 (0.3–8.0)	
Asked by supervisor/ manager				
Yes	65 (64%)	48 (74%)	1	0.839
No	37 (36%)	28 (76%)	1.1 (0.4–2.8)	
Asked by patient/ patients' family				
Yes	77 (75%)	59 (77%)	1.5 (0.6–4.2)	
No	25 (25%)	17 (68%)	1	0.392
Languages spoken[b]				
Speaks Samoan				
Yes	53	39 (74%)	1	0.824
No	49	37 (76%)	1.1 (0.5–2.7)	
Speaks Fijian				
Yes	16	14 (88%)	2.7 (0.6–12.8)	
No	49	62 (72%)	1	0.209
Speaks Tongan				
Yes	24	18 (75%)	1.0 (0.4–3.0)	
No	78	58 (74%)	1	0.950

Notes: [a)] Participants were allocated to one or more categories based on their responses. [b)] Participants are counted more than once if they speak more than one of these languages. OR = odds ratio; CI = confidence interval.

Nurses reported being comfortable using their Pacific language for general conversations, but for many, there were challenges with formal language and technical medical terminology lacking direct Pacific translations, such as anatomical terms.

> *"When it comes to organs in the body and the science … it's very hard to explain or even know what those organs are called."*

Despite these challenges, interpreting was consistently described as "*rewarding*" and "*gratifying*", driven by cultural values like *tautua* (service) and a desire to "*give back to my community*". Many viewed language support as central to their professional and cultural identity. Nurses drew on their clinical expertise and cultural insights to translate complex clinical details, employing diagrams and culturally relevant metaphors, for example, using Lali (Fijian) drumbeats to explain

Table 3: Thematic framework for analysing Pacific nurses' experiences with language interpretation developed as part of the Aniva Alumni Survey 2023.

Themes and definitions	Sub-themes and definitions
1. Nurses' linguistic and professional capabilities: Nurses' Pacific language abilities, experiences with interpreting/translation in the workplace and the professional context for taking on interpreting roles.	**Language proficiency and confidence:** Nurses' self-reported fluency, perceived skill level in Pacific languages, confidence in providing interpreting, challenges when using Pacific languages in more formal contexts and challenges with interpreting complex medical terms and information.
	Motivations and professional values: The personal, professional and cultural factors—e.g., *tautua* (concept of service/duty)—that motivate nurses to provide language support, expressing it as part of their professional and Pacific identity.
	Use of prior experience, clinical knowledge and networks: Nurses drawing on clinical expertise, prior interpreter training, work experience and family and community networks to facilitate interpretation and communication in healthcare settings.
2. Impact on patient experiences and clinical outcomes: Positive contributions to healthcare delivery and other impacts.	**Enhanced patient comfort, trust and engagement:** How language support and cultural connections foster a sense of comfort, strengthen trust and increase patient and family participation in healthcare.
	Improved health literacy and quality of care: Examples of where nurses interpreting leads to better patient understanding, informed consent, improved health literacy and more timely and appropriate care.
	Cultural work and building rapport: The role of nurses in mediating cultural nuance, understanding cultural protocols and building rapport to overcome communication and cultural barriers beyond transfer of information.
3. Health system gaps and concerns: Structural issues and health system gaps and their impact on Pacific nurses.	**Structural issues with the formal interpreter services:** The problem with the lack of availability of professional interpreters and systems that do not attend to cultural safety, leading to reliance on Pacific nurses for last-minute requests and nurses feeling obligated to fill gaps and assume advocacy roles.
	Absence of training and support: The lack of training for nurses in medical interpretation and translation and the desire for skill development.
	Unrecognised and unpaid work, "cultural loading". Potential risks and ethical challenges: The professional and personal costs to Pacific nurses associated with informal interpreting, including unpaid time, increased workload, interference with core role, privacy concerns, anxiety about getting translations wrong and the lack of recognition in job descriptions and remuneration. The unacknowledged assumptions and expectations that Pacific nurses will step into the role of interpreter, cultural broker and patient advocate.

atrial fibrillation. They also utilised prior training and personal networks to enhance their support.

Theme two: impact on patient experiences and clinical outcomes

Communicating in a patient's Pacific language significantly enhanced their "*sense of comfort, trust and engagement*" leading to "*immediate positive change in demeanour*", including relaxation and expressions of "*relief*", "*happiness*" and "*appreciation*". The support also improved patients' understanding of their medical conditions, health literacy and experiences of medical processes. "*When patients understand their care plan, they feel more confident and are more likely to follow through with treatment.*"

Nurses described interpreting to assist in emergency medical situations and pre-operative preparations and how this support contributed to improved clinical outcomes. Nurse interpreting roles were a "*clinical necessity*" for "*appropriate care in a timely manner*".

A shared cultural background was essential for rapport, navigating cultural protocols and respectfully addressing sensitive or "*tapu*" (prohibited or sacred) topics.

Theme three: health system gaps and concerns

Despite positive impacts of their interpreting roles, nurses consistently raised concerns about system gaps in professional interpreter resourcing and availability. They often felt "*obligated … to step in at the last minute*" due to limited availability of translators, "*last minute cancellations* [by] *interpreting services*" or acute patient conditions, despite a lack of formal training or recognition of this role. Nurses advocated for equitable patient care to address language barriers. "*I believe that language barriers can adversely impact the person … advocating for them is paramount in my focus to ensure they get a fair deal.*"

On the other hand, informal interpreting was time-consuming, interfering with core duties, and raised anxiety about translation accuracy. The absence of institutional support led to a desire for formal medical interpreter training. Significant ethical dilemmas, particularly concerning patient privacy, when interpreting on sensitive topics for individuals they knew personally, were common. "*I had to interpret for someone I knew, and it was a sensitive topic.*"

Despite these concerns, nurses often felt obligated to assist, particularly if the patient's condition was acute or in the absence of viable alternative options. This additional work and responsibility to act as interpreters, cultural brokers and patient advocates suggested a significant cultural loading that was uncompensated and absent from job descriptions. "*It's like we're wearing multiple hats, but no one sees the extra work we're doing.*"

Discussion

This study highlights the essential yet largely informal and unacknowledged role that Pacific nurses play in interpreting for Pacific patients with LEP in Aotearoa New Zealand. Their linguistic capability and deep cultural knowledge enable effective communication, improve patient engagement and enhance clinical outcomes. These contributions are vital to health equity, yet remain structurally unsupported.[19,25] These findings align with prior research during the COVID-19 response, where Pacific nurses were called upon to provide language and cultural support across the health sector, often voluntarily and without recognition.[26]

A key finding is the scale at which Pacific nurses are called upon to interpret. Among those who spoke a Pacific language, 85% reported being asked to interpret or translate in areas beyond their usual nursing role. These requests came not only from patients and families, but also from colleagues and supervisors, with more than half receiving requests from all three groups. This clearly demonstrates that Pacific nurses are not merely stepping in informally; they are actively and routinely approached to provide language support, revealing both their value and the systemic gaps in professional interpreter provision. Interpreting is not an occasional task for many; it is woven into the fabric of their everyday clinical responsibilities. This reflects broader patterns seen in the health workforce, where Pacific nurses are regularly relied upon to bridge cultural and linguistic gaps without formal support.[26,27]

Our findings build on and extend the current literature, which largely focusses on the risks and benefits of using trained versus untrained interpreters.[6,8] While international and national guidelines often frame the use of trained interpreters as best practice,[1,4,28] they rarely consider the culturally nuanced, context-sensitive communication provided by bilingual healthcare staff.[6,16] Pacific nurses in this study described interpreting complex medical concepts using diagrams, metaphors and cultural references that made infor-

mation more understandable and relatable for patients.[16,22] Their shared cultural background not only improved comprehension but also helped to build rapport, ease patient anxiety and ensure communication aligned with cultural protocols and sensitivities.[6,16] These interactions were more than translation, they were a form of cultural mediation that directly supported patient dignity, safety and engagement.[4,16] The COVID-19 pandemic demonstrated the critical role of culturally grounded communication, with studies showing that the use of Pacific languages improved community understanding and trust, while a lack of such communication contributed to delays in contact tracing and exacerbated health disparities among Pacific populations.[26,29,30]

Despite their contributions, Pacific nurses in this study faced ethical and professional challenges in taking on interpreting roles. Many described feeling obligated to say yes, even for highly technical or sensitive procedures, because of last-minute cancellations, a lack of available professional interpreters or an overarching sense of cultural responsibility. These experiences disrupted their primary nursing duties and introduced stress around accuracy, privacy and professional liability, echoing patterns also observed among Māori nurses navigating dual cultural and clinical responsibilities.[31] For some, the pressure to interpret for individuals they knew personally further complicated ethical boundaries and emotional wellbeing. It has previously been observed that Pacific nurses often internalise stress and avoid labelling their experiences as burnout, instead continuing to meet community needs out of cultural commitment.[26]

This unrecognised labour is compounded by cultural drivers embedded in Pacific worldviews, such as *tautua* (service), *alofa* (love) and *tausi* (provide care or stewardship).[16,32,33] Unlike Western notions of volunteering, these acts of service are often understood as inherent cultural obligations, not optional extras. Pacific nurses may feel an intrinsic responsibility to help their communities, which the health system can inadvertently exploit.[16,26,32] As other authors have argued, public services may "*cynically and knowingly exploit these values and behaviours*" and thereby abdicate formal responsibility for resourcing culturally safe care.[29,32] Our study confirms that while Pacific nurses are motivated by cultural values, their contributions are not formally recognised, resourced or protected, creating a moral and operational imbalance. This dynamic has also been noted in workforce responses during public health emergencies, where Pacific nurses were mobilised to serve in high-pressure contexts but later saw their needs and professional contributions deprioritised once the crisis subsided.[26]

Implications and recommendations

To address the challenges identified in this study, a coordinated set of reforms in policy and practice is urgently needed. First, there is a clear need for the development of targeted training programmes for bilingual nurses. These should focus on Pacific medical terminology, the ethics of interpreting in clinical settings, and guidance on when to refer to professional interpreters, ensuring nurses are equipped to navigate these responsibilities safely and effectively.

In addition, greater investment in professional interpreter services is essential to improve accessibility and reduce the over-reliance on informal interpreting, particularly in under-resourced or high-pressure healthcare environments. It is also important to establish formal recognition and compensation for nurses who regularly provide language and cultural support. This includes defining the scope of these roles, ensuring appropriate workload protections and implementing systems of support and supervision.

Furthermore, policy language and data collection tools should be reviewed and adapted in consultation with Pacific communities.[16,22] Standard terms such as "unpaid work" often fail to capture the cultural significance of contributions embedded in Pacific values like *tautua* and *tausi*. Recognising these forms of cultural service within official frameworks would enable more accurate reflection of Pacific nurses' work and support more culturally responsive policy development.[32,33]

Finally, a system-wide commitment is needed to embed culturally informed approaches to workforce planning, resource allocation and care delivery. This will not only lead to improved service outcomes for Pacific patients but also support the wellbeing and professional sustainability of the Pacific health workforce.

Strengths and limitations

This study's key strength lies in its mixed-methods approach, combining quantitative data on prevalence and demographic patterns with rich qualitative insights into nurses' lived experiences. The high response rate (69%) strengthens the representativeness of the findings, though some

response bias may exist, as participants were more likely to be younger, Aotearoa New Zealand–born, and Samoan.

Limitations include the self-reported nature of the data and the constraints of written responses to open-ended questions, which may not have fully captured the complexity of nurses' experiences. Time constraints, survey format (e.g., mobile devices), or discomfort with written expression may have limited participation. Future studies should consider in-depth interviews or focus groups to build on these findings and explore the emotional, cultural and ethical dimensions of informal interpreting in more detail.

Conclusion

This study reveals a significant gap in Aotearoa New Zealand's healthcare system: the informal, unpaid and under-recognised interpreting work carried out by Pacific nurses. While their contributions are vital to clinically competent and culturally safe care and patient and family wellbeing, the burden of responsibility has been shifted onto individuals, often without adequate support or acknowledgement. If left unaddressed, this practice risks undermining both patient safety and nurse wellbeing.

Structural solutions, not individual goodwill, must underpin safe and equitable care. This requires a coordinated response: one that recognises and supports Pacific nurses' dual roles as clinical professionals and cultural intermediaries,[31] backed by meaningful investment, policy reform and a deeper understanding of the cultural frameworks they bring to healthcare practice. These issues were also observed during the COVID-19 Delta outbreak, when Pacific nurses were central to the health system's frontline response, yet their professional wellbeing and workforce needs were deprioritised once the immediate crisis passed.[26] Addressing this recurring undervaluing of Pacific nurses will require sustained attention beyond times of emergency response.

Finally, the anticipated use of AI-supported interpreting tools in healthcare raises new research questions. These include the need to validate tools for Pacific languages, assess cultural appropriateness and clinical safety and understand how such technologies might alter the ethical responsibilities of nurses asked to use them. These issues should be part of wider implementation research on language access strategies in clinical settings.

COMPETING INTERESTS
Nil.

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REFERENCES

1. Wearn A, Goodyear-Smith F, Everts H, Huggard P. Frequency and effects of non-English consultations in New Zealand general practice. N Z Med J. 2007 Oct 26;120(1264):U2771.
2. Langridge FC, Paynter J, Ghebreab L, et al. A study of Samoan, Tongan, Cook Island Māori, and Niuean infant care practices in the Growing Up in New Zealand study. BMC Public Health. 2024 Jan 12;24(1):166. doi: 10.1186/s12889-024-17680-1.
3. Parliamentary Counsel Office/Te Tari Tohutohu Pāremata. Health and Disability Commissioner (Code of Health and Disability Services Consumers' Rights) Regulations 1996 [Internet]. Wellington, New Zealand: Parliamentary Counsel Office/Te Tari Tohutohu Pāremata; 2021 Nov 6 [cited 2024 Nov 26]. Available from: https://www.legislation.govt.nz/regulation/public/1996/0078/latest/DLM209080.html.
4. Raído VE, Crezee I, Ridgeway Q. Professional, ethical, and policy dimensions of public service interpreting and translation in New Zealand. Transl Interpreting Stud. 2020;15(1):15–35. doi:10.1075/tis.20007.enr.
5. Parliamentary Counsel Office/Te Tari Tohutohu Pāremata. Health Practitioners Competence Assurance Act 2003 [Internet]. Wellington, New Zealand: Parliamentary Counsel Office/Te Tari Tohutohu Pāremata; 2023 Jun 15 [cited 2025 Oct 16]. Available from: https://www.legislation.govt.nz/act/public/2003/0048/latest/DLM203312.html
6. Gray B, Stubbe M, Hilder J. Better health outcomes as the goal of working with healthcare interpreters: the perspective of patients and clinicians. In: Wakabayashi J, O'Hagan M, eds. Translating and Interpreting in Australia and New Zealand: Distance and Diversity. Routledge; 2021:105-124. doi:10.4324/9781003150770.
7. Gray B, Hilder J, Donaldson H. Why do we not use trained interpreters for all patients with limited English proficiency? Is there a place for using family members? Aust J Prim Health. 2011;17(3):240-9. doi: 10.1071/PY10075.
8. Gray B, Hardt EJ. A comparison of the use of interpreters in New Zealand and the US. N Z Med J.

2017 Jun 2;130(1456):70-75.
9. Federici FM, O'Hagan M, Cadwell P, et al. Ecosystems of preparedness in New Zealand. In: Wakabayashi J, O'Hagan M, eds. Translating and Interpreting in Australia and New Zealand: Distance and Diversity. Routledge; 2021:125-145. doi:10.4324/9781003150770.
10. Flores G, Abreu M, Barone CP, et al. Errors of medical interpretation and their potential clinical consequences: a comparison of professional versus ad hoc versus no interpreters. Ann Emerg Med. 2012 Nov;60(5):545-53. doi: 10.1016/j.annemergmed.2012.01.025.
11. Diamond LC, Schenker Y, Curry L, et al. Getting by: underuse of interpreters by resident physicians. J Gen Intern Med. 2009 Feb;24(2):256-62. doi: 10.1007/s11606-008-0875-7.
12. Karliner LS, Jacobs EA, Chen AH, Mutha S. Do professional interpreters improve clinical care for patients with limited English proficiency? A systematic review of the literature. Health Serv Res. 2007 Apr;42(2):727-54. doi: 10.1111/j.1475-6773.2006.00629.x.
13. Gray B, Stanley J, Stubbe M, Hilder J. Communication difficulties with limited English proficiency patients: clinician perceptions of clinical risk and patterns of use of interpreters. N Z Med J. 2011 Sep 9;124(1342):23-38.
14. Albury S, Lawton B, Crengle S. "We just want someone to listen": Indigenous health workers' experiences using language to build trust and break down barriers. Int J Equity Health. 2022;21:57.
15. Stats NZ Tatauranga Aotearoa. 2023 Census population counts (by ethnic group, age, and Māori descent) and dwelling counts [Internet]. Wellington, New Zealand: Stats NZ Tatauranga Aotearoa; 2024 May 29 [cited 2025 Oct 16]. Available from: https://www.stats.govt.nz/information-releases/2023-census-population-counts-by-ethnic-group-age-and-maori-descent-and-dwelling-counts/.
16. Teariki MA, Leau E. Understanding Pacific worldviews: principles and connections for research. Kōtuitui N Z J Soc Sci Online. 2023 Dec 13;19(2):1-20. doi: 10.1080/1177083X.2023.2292268.
17. Sin I, Ormsby J. The settlement experience of Pacific migrants in New Zealand: Insights from LISNZ and the IDI [Internet]. Wellington, New Zealand: Motu Economic and Public Policy Research; 2019 Mar [cited 2025 Oct 16]. Available from: https://motu-www.motu.org.nz/wpapers/19_02.pdf.
18. Stats NZ Tatauranga Aotearoa. Pacific Peoples, Place and ethnic group summaries – languages spoken [Internet]. Wellington, New Zealand: Stats NZ Tatauranga Aotearoa; 2019 [cited 2025 Jul 29]. Available from: https://tools.summaries.stats.govt.nz/ethnic-group/pacific-peoples#languages-spoken
19. Ministry of Health – Manatū Hauora. Tupa Ola Moui: Pacific Health Chart Book 2025: Volume 1: Pacific Population in New Zealand [Internet]. Wellington, New Zealand: Ministry of Health – Manatū Hauora; 2025 Apr 17 [cited 2025 Jul 29]. Available from: https://www.health.govt.nz/system/files/2025-05/tupu-ola-moui-volume-1-pacific-population-new-zealand-v2.pdf.
20. Stats NZ Tatauranga Aotearoa. Data sources, editing, and imputation in the 2018 Census [Internet]. Wellington, New Zealand: Stats NZ Tatauranga Aotearoa; 2019 Dec 17 [cited 2025 Oct 16]. Available from: https://www.stats.govt.nz/methods/data-sources-editing-and-imputation-in-the-2018-census/.
21. Te Kaunihera Tapuhi o Aotearoa | Nursing Council of New Zealand. Nursing Council Quarterly Data Report: March 2023 Quarter [Internet]. Wellington, New Zealand: Te Kaunihera Tapuhi o Aotearoa | Nursing Council of New Zealand; 2023 [cited 2025 Oct 16]. Available from: https://nursingcouncil.org.nz/Public/NCNZ/publications-section/Workforce_statistics.aspx.
22. Ministry of Health – Manatū Hauora. Tupa Ola Moui: Pacific Health Chart Book 2025: Volume 2: Pacific Health Workforce [Internet]. Wellington, New Zealand: Ministry of Health – Manatū Hauora; 2025 Apr 17 [cited 2025 Jul 29]. Available from: https://www.health.govt.nz/system/files/2025-07/tupu-ola-moui-volume-2-pacific-health-workforce-v2.pdf.
23. Pacific Perspectives Ltd. Aniva Pacific Workforce and Leadership Development Programme [Internet]. Wellington, New Zealand: Pacific Perspectives Ltd; [cited 2025 Jul 29]. Available from: https://www.pacificperspectives.co.nz/aniva.
24. 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 Sep 18;13:117. doi: 10.1186/1471-2288-13-117.
25. Biggs LY. Understanding the challenges and opportunities for Pacific allied health staff to enable culturally responsive care in Aotearoa [Internet]. Auckland, New Zealand: Auckland University of Technology; 2023 Jun [cited 2025 Oct 16]. Available from: https://openrepository.aut.ac.nz/server/api/core/bitstreams/bf5c80e9-3f1f-4372-9a99-54726b8af95b/content.
26. Smith A, Fereti S, Adams S. Inequities and perspectives from the COVID-Delta outbreak: the imperative for strengthening the Pacific nursing workforce in Aotearoa New Zealand.

Nurs Praxis Aotearoa N Z. 2021;37(3):94-103. doi: 10.36951/27034542.2021.040.
27. Gray B, Hilder J, Stubbe M. How to use interpreters in general practice: the development of a New Zealand toolkit. J Prim Health Care. 2012 Mar 1;4(1):52-61, A1-8.
28. Ministry of Business, Innovation and Employment – Hīkina Whakatutuki. Language assistance services: operational policy for New Zealand public sector agencies and those they fund 2024 [Internet]. Wellington, New Zealand: Ministry of Business, Innovation and Employment – Hīkina Whakatutuki; 2024 Jun [cited 2025 Oct 16]. Available from: https://www.mbie.govt.nz/assets/language-assistance-services-operational-policy-for-new-zealand-public-sector-agencies-and-those-they-fund-2024.pdf.
29. Soon HNW, Crezee I. Exploring the accuracy and appropriateness of the translation of important government information for Samoan-speaking communities in Aotearoa New Zealand and Australia during the COVID-19 crisis. In: The Routledge Handbook of Translation, Interpreting and Crisis. Routledge; 2023:321-343.
30. Sonder GJ, Grey C, Anglemyer A, et al. The August 2020 COVID-19 outbreak in Aotearoa, New Zealand: Delayed contact tracing for Pacific people contributes to widening health disparities. IJID Reg. 2023 Mar;6:177-183. doi: 10.1016/j.ijregi.2023.01.014.
31. Komene E, Gerrard D, Pene B, et al. A tohu (sign) to open our eyes to the realities of Indigenous Māori registered nurses: A qualitative study. J Adv Nurs. 2023 Jul;79(7):2585-2596. doi: 10.1111/jan.15609.
32. Tamasese TK, Parsons TL, Sullivan G, Waldegrave C. A qualitative study into Pacific perspectives on cultural obligations and volunteering [Internet]. Wellington, New Zealand: Pacific Section and the Family Centre Social Policy Research Unit; 2010 [cited 2025 Jul 29]. Available from: https://familycentre.org.nz/publications/
33. Mo'a SV. Culture as a Foundation for Care [Internet]. Wellington, New Zealand: Pacific Perspectives Limited; 2015 Nov 25 [cited 2025 Jul 29]. Available from: https://www.pacificperspectives.co.nz/research-and-publications/culture-as-a-foundation-for-care

Appendix

Appendix Table 1: Aniva nurses survey questions 2023.

Ref	Survey question
1	What Aniva qualification/qualifications have you completed? Aniva Postgraduate Certificate in Specialty Care Pacific Health Aniva Postgraduate Diploma in Specialty Care Pacific Health Aniva Master of Professional Practice (Leadership) Did not complete an Aniva qualification
2	Which Aniva qualification did you not complete? Aniva Postgraduate Certificate in Specialty Care Pacific Health Aniva Postgraduate Diploma in Specialty Care Pacific Health Aniva Master of Professional Practice (Leadership)
3	What were the factors that contributed to you withdrawing/not completing?
4	Which Pacific country/countries are you descended from? (Select all that apply) American Samoa Cook Islands Federated States of Micronesia Fiji French Polynesia (Tahiti) Hawaii Kiribati Marshall Islands Nauru New Caledonia Niue Palau Papua New Guinea Rapanui (Easter Island) Rotuma Samoa Solomon Islands Tokelau Tonga Tuvalu Vanuatu Wallis and Futuna

Appendix Table 1 (continued): Aniva nurses survey questions 2023.

Ref	Survey question
5	What ethnic group/groups do you belong to? (Select all that apply) New Zealand European Māori Samoan Cook Island Māori Tongan Niuean Chinese Indian Other (please specify)
6	What is your gender? Male Female Non-binary
7	What is your date of birth?
8	What is your country of birth? New Zealand Australia Pacific Island Other

Appendix Table 1 (continued): Aniva nurses survey questions 2023.

Ref	Survey question
9	Which Pacific country were you born in? American Samoa Cook Islands Federated States of Micronesia Fiji French Polynesia (Tahiti) Hawaii Kiribati Marshall Islands Nauru New Caledonia Niue Palau Papua New Guinea Rapanui (Easter Island) Rotuma Samoa Solomon Islands Tokelau Tonga Tuvalu Vanuatu Wallis and Futuna
10	What year did you first arrive in New Zealand?
11	What is your country/countries of citizenship? (Select all that apply) New Zealand Australia Pacific Island Other (please specify)

Appendix Table 1 (continued): Aniva nurses survey questions 2023.

Ref	Survey question
12	Which Pacific country/countries do you hold citizenship in? American Samoa Cook Islands Federated States of Micronesia Fiji French Polynesia (Tahiti) Hawaii Kiribati Marshall Islands Nauru New Caledonia Niue Palau Papua New Guinea Rapanui (Easter Island) Rotuma Samoa Solomon Islands Tokelau Tonga Tuvalu Vanuatu Wallis and Futuna
13	Street address
14	Street address line 2
15	City
16	Postal/zip code
17	What is your usual address?
18	Is English your first language? (Yes/No—please specify)
19	Do you speak any Pacific languages? (Yes/No)

Appendix Table 1 (continued): Aniva nurses survey questions 2023.

Ref	Survey question
20	Which Pacific language/languages do you speak? (Select all that apply) Cook Island Māori Fijian Hawaiian I-Kiribati Marshallese Nauruan Palau Rotuman Samoan Tahitian Tongan Tuvaluan
21	Are there times at work when you need to use your Pacific language to communicate with colleagues, patients and families? (Yes/No)
22	Have you been asked to assist other areas of the workplace to translate or interpret for patients and families? (Yes/No)
23	Who has asked you to translate or interpret? (Select all that apply) Colleagues Supervisor Manager Patients Patients' families
24	Did you feel you had the confidence, skills and/or training to undertake this interpretation/translation? (Yes/No)
25	Please provide any insights from your experience in this area.
26	Do you speak any other languages? (Yes/No)
27	Which other language/languages do you speak?
28	In which country did you first register as a registered nurse? New Zealand Pacific country Other

Appendix Table 1 (continued): Aniva nurses survey questions 2023.

Ref	Survey question
29	Which Pacific country did you first register as a registered nurse? American Samoa Cook Islands Federated States of Micronesia Fiji French Polynesia (Tahiti) Hawaii Kiribati Marshall Islands Nauru New Caledonia Niue Palau Papua New Guinea Rapanui (Easter Island) Rotuma Samoa Solomon Islands Tokelau Tonga Tuvalu Vanuatu Wallis and Futuna
30	In what year did you first register as a registered nurse?
31	Have you practiced as a registered nurse before you came to New Zealand? (Yes/No)
32	How many years did you practice as a registered nurse before you came to New Zealand?
33	Did you have any issues with any of the following when you moved to New Zealand? (Select all that apply) Immigration Work permits Citizenship Recognition of skills Nursing registration Other
34	Please describe the issue/issues.

Appendix Table 1 (continued): Aniva nurses survey questions 2023.

Ref	Survey question
35	In what year did you first register as a registered nurse in New Zealand?
36	Tell us about your current employment (Add rows for additional/secondary employment): Job title (in full) Employer Employment setting (please select): Health New Zealand – Te Whatu Ora hospital (acute), Health New Zealand – Te Whatu Ora (community), Health New Zealand – Te Whatu Ora hospital (other), educational institution, government agency, Māori health service provider, nursing agency, Pacific health service provider, primary healthcare/community, private hospital, rest home/residential care, rural, self-employed, other Location (please select): Auckland, Bay of Plenty, Canterbury, Hawke's Bay, Manawatū/Whanganui, Nelson/Marlborough, Northland, Otago, Southland, Tairāwhiti, Taranaki, Waikato, Wellington, West Coast, Other Area of nursing (please select): addiction services, assessment & rehabilitation, child health, continuing care (older person), district nursing, emergency & trauma, intellectually disabled, intensive care/cardiac care, medical, mental health (community), mental health (inpatients), nursing administration & management, nursing education, nursing professional advice/policy, nursing research, obstetrics/maternity, occupational health, oncology, palliative care, perioperative care, primary healthcare, public health, school health, surgical, youth health, non-nursing role, other Hours per week (please select): 1 to 4 hours, 4 to 8 hours, 8 to 12 hours, 12 to 16 hours, 16 to 20 hours, 20 to 24 hours, 24 to 28 hours, 28 to 32 hours, 32 to 36 hours, 36 to 40 hours, 40 hours, 40 to 44 hours, 44 to 48 hours, 48 to 52 hours, more than 52 hours
37	Please list all your tertiary education qualifications including the institution and year of completion. Qualification (including specialisation) Tertiary institution City Country Year completed
38	Overall, how would you rate your Aniva experience? (1=Did not meet expectations, 5=Exceeded expectations)
39	Comment.
40	Why did you choose the Aniva pathway for gaining postgraduate qualifications?
41	Rate: Teaching (1=Did not meet expectations, 5=Exceeded expectations)
42	Comment.
43	Rate: Mentoring/pastoral care (1=Did not meet expectations, 5=Exceeded expectations)
44	Comment.
45	Rate: Supervision/guidance (1=Did not meet expectations, 5=Exceeded expectations)
46	Comment.
47	Rate: Networking/exposure to Pacific and health sector leaders through Aniva (1=Did not meet expectations, 5=Exceeded expectations)
48	Comment.

Appendix Table 1 (continued): Aniva nurses survey questions 2023.

Ref	Survey question
49	During your Aniva studies, did you receive any additional support other than through the Aniva programme? (Yes/No)
50	What was the nature of the additional support?
51	Did you have any family commitments or caregiver responsibilities that put additional demands on you during your Aniva studies? (Yes/No)
52	Please describe.
53	Did you get any assistance? (Yes/No)
54	What was the nature of the assistance?
55	Were there any financial factors that affected your Aniva studies? (Yes/No)
56	Were these (select all that apply): Cost of living for family Remittances to family in the Islands
57	How well were you supported by your employer to complete your Aniva studies? (1=Did not meet expectations, 5=Exceeded expectations)
58	In what ways did your employer support you?
59	The requirement for COVID-19 positive people to isolate began in 2020 and was lifted in August 2023. Did COVID-19 affect your Aniva studies? (Yes/No)
60	In what ways did COVID-19 affect your Aniva studies?
61	Did you work in the COVID-19 response for Pacific health? (e.g., testing, outreach, vaccination, healthline, contact tracing, care in the home, etc.) (Yes/No)
62	Please specify the area/areas in which you worked. (Select all that apply) Testing Outreach Vaccination Healthline Contact tracing Care in the home Management Policy Other

Appendix Table 1 (continued): Aniva nurses survey questions 2023.

Ref	Survey question
63	What setting/settings did you work in? (Select all that apply) Pacific provider organisation Primary and community care Public health Hospital Aged care Community organisation Managed isolation facility Quarantine facility
64	What was the nature of this work? Part of my regular job A temporary deployment A change of job Voluntary community work Other
65	Please describe.
66	Were you well supported by the organisation/organisations you worked for to carry out this work? (1=Not supported at all, 5=Supported very well)
67	Please describe.
68	For this work, how important were the following: Knowledge of the local communities (Not important/Very important/Not applicable)
69	Knowledge of the local churches (Not important/Very important/Not applicable)
70	Community networks (Not important/Very important/Not applicable)
71	Ability to speak a Pacific language (Not important/Very important/Not applicable)
72	Nursing skills (Not important/Very important/Not applicable)
73	What other factors were important?
74	Did you return to your previous role? (Yes/No)
75	What was the reason?
76	Since your Aniva studies began, have you worked in an emergency response role? (Yes/No)

Appendix Table 1 (continued): Aniva nurses survey questions 2023.

Ref	Survey question
77	Please provide details, such as: Role Organisation (please select): MFAT, DHB, PMA, philanthropic, other Pacific provider, other Deployment location Duration Nature of emergency (e.g., flood, tsunami, cyclone) Type of deployment (please select): paid, voluntary Year
78	Were you well supported by the organisation/organisations you worked for to carry out this work? (1=Not supported at all, 5=Supported very well)
79	Please describe.
80	What was your role when you started your first Aniva qualification? Job title Employer Place of work Nature of work City Country
81	How many jobs/roles have you held between commencing your first Aniva qualification and your current job/role? (Including contract, temporary, secondment, full-time, part-time, etc.)
82	Please list the different roles you have held, including any overseas work experience and periods off work, between commencing your first Aniva qualification and your current job/role. Job title Employer Place of work Nature of work City Country
83	How has your role/employment changed since you commenced your first Aniva qualification? (e.g., promotion to charge nurse, new area of practice, new employer, new geographic location, role outside health sector)

Appendix Table 1 (continued): Aniva nurses survey questions 2023.

Ref	Survey question
84	Do you plan to change your current employment such as seeking: (Select all that apply) Promotion New area of practice New employer New geographic location Role outside the health sector No changes
85	Please explain.
86	Have you been employed as a nurse in a Pacific country since completing your Aniva qualification? (Yes/No)
87	In which Pacific country/countries? (Select all that apply) American Samoa Cook Islands Federated States of Micronesia Fiji French Polynesia (Tahiti) Hawaii Kiribati Marshall Islands Nauru New Caledonia Niue Palau Papua New Guinea Rapanui (Easter Island) Rotuma Samoa Solomon Islands Tokelau Tonga Tuvalu Vanuatu Wallis and Futuna
88	For how long?

Appendix Table 1 (continued): Aniva nurses survey questions 2023.

Ref	Survey question
89	As part of what organisation were you working? (Select all that apply) New Zealand government Pacific country health organisation Pacific country volunteer organisation Other local employer Other
90	Please list: Organisation name Your role
91	What leadership roles have you held since the completion of your Aniva qualification? (Work-related team leader, manager with direct reports, committees, boards, community/church/other)
92	Did your Aniva experience contribute to attaining these leadership roles? (Yes/No)
93	In what ways did your Aniva experience contribute to attaining these leadership roles?
94	Please list the advisory groups and professional organisations you are involved in and/or support: Organisation/group name Your role
95	Have you enrolled in and/or completed any course/courses other than Aniva since completing your Aniva qualification? (Yes/No)
96	Please provide the course details: Course name Provider Year
97	Did you experience any of these benefits from participating in the Aniva programme? (Select all that apply) Knowledge about Pacific culture, worldviews and academic frameworks Strengthening cultural identity Identification of gaps in current settings for policy, service and resources with respect to meeting the needs of Pacific people Awareness of Pacific nursing leadership Exposure to Pacific leaders and health leaders Knowledge of evidence and research resources for Pacific health Pacific clinical networks Increased personal advocacy for Pacific health and Pacific communities Increased understanding of Pacific health outcomes and equity Other (please specify)

Appendix Table 1 (continued): Aniva nurses survey questions 2023.

Ref	Survey question
98	What is your master's thesis topic area? (Select all that apply): Addiction services Assessment & rehabilitation Child health Continuing care (older person) District nursing Emergency & trauma Intellectually disabled Intensive care/cardiac care Medical Mental health (community) Mental health (inpatients) Nursing administration & management Nursing education Nursing professional advice/policy Nursing research Obstetrics/maternity Occupational health Oncology Palliative care Perioperative care Primary healthcare Public health School health Surgical Youth health
99	How have you used the learnings/recommendations from your master's thesis? (Select all that apply) Conference presentation Seminar presentation Publication (peer-reviewed journal) Publication (other) Workplace application Other

Appendix Table 1 (continued): Aniva nurses survey questions 2023.

Ref	Survey question
100	Please describe.
101	Are you planning to enrol in further Aniva qualifications? (Yes/No)
102	Reasons.
103	Please add any further comments you would like to add about the areas covered in this questionnaire.
104	Can we contact you if we have further questions? (Yes/No)