



NEW ZEALAND
WORK RESEARCH INSTITUTE



te hiringa hauora
HEALTH PROMOTION AGENCY

Māori Māmā views and experiences of vaccinating their pēpi and tamariki: A qualitative Kaupapa Māori study

Report for Te Hiringa Hauora/Health Promotion Agency



AUT
UNIVERSITY
NEW ZEALAND

AUTHORS

Shirleyanne Brown (Ngāpuhi; WotMatters), Lorraine Toki (Ngāpuhi; WotMatters) and Terryann Clark (Ngāpuhi; Faculty of Medical and Health Sciences, University of Auckland; Mahitahi Hauora PHO).

DETAILS OF COLLABORATION

| | |
|----------------------------|--|
| Researchers: | Shirleyanne Brown and Lorraine Toki, WotMatters Consulting |
| Research Lead: | Dr Terryann Clark, Associate Professor, University of Auckland |
| Project Leads: | Dr Nadia Charania, Senior Lecturer, Auckland University of Technology Professor Gail Pacheco, Director, New Zealand Work Research Institute |
| Design Agency Lead: | Miriame Barbarich, Indigenous Design & Innovation Aotearoa |

WotMatters Consulting and Dr Terryann Clark were engaged to conduct qualitative Kaupapa Māori research with Māori parents/caregivers on Māori childhood immunisations. This report for Te Hiringa Hauora/Health Promotion Agency presents an extension of the *Ethnic differences in the uptake of healthcare services in New Zealand*, a multi-methods study led by Auckland University of Technology and funded by the Health Research Council (HRC) (19/263). The aim of this extension study was to contribute to an evidence base that will underpin and inform a creative communications approach to address decreasing Māori childhood immunisation rates in New Zealand. As such, the formative research is Kaupapa Māori in design, analysis and interpretation. Te Hiringa Hauora/Health Promotion Agency is working alongside Indigenous Design and Innovation Aotearoa (IDIA) as part of this project to increase Māori childhood immunisation rates. The researchers (WotMatters Consulting) and design agency (IDIA) have been procured in parallel by Te Hiringa Hauora/Health Promotion Agency, enabling both providers to work together.

ACKNOWLEDGEMENTS

We have many Tai Tokerau Māmā and caregivers to thank for giving of their time to participate in this research project. This report and research would not have been possible without the support of our Māori Māmā for their enthusiasm, knowledge, and attention to detail. This went a long way to keeping the research authentic and honest. Your knowledge, lived experiences, and solutions will contribute to ensuring our tamariki and your decisions matter. It is our intention to ensure that *'your voice is heard and seen'* in this report.

The expertise and generosity of time given by Associate Professor Terryann Clark who oversaw this mahi, enhanced the methodology, helped write and critique this report to improve the academic rigour.

To Miriame Barbarich from Indigenous Design & Innovation Aotearoa (IDIA), your presence and contribution was immediately felt. Embracing our Māmā and reaching out to them on another level was nothing short of inspirational. The 'voices' of our Māmā are in safe hands.

PUBLISHED

New Zealand Work Research Institute, Auckland, New Zealand

ISBN (PDF): 978-1-927184-88-2

2021

Suggested citation: Brown, S., Toki, L. & Clark, T. C. (2021). *Māori Māmā views and experiences of vaccinating their pēpi and tamariki: A qualitative Kaupapa Māori study*. WotMatters Consulting contracted by NZ Work Research Institute, Auckland NZ.

DISCLAIMER

The views and interpretations in this report are those of the researchers conducting the qualitative research and are not that of Te Hiringa Hauora/Health Promotion Agency.

CONTENTS

| | |
|--|----|
| EXECUTIVE SUMMARY | 1 |
| 1 Background and objectives | 5 |
| 2 Methodology..... | 6 |
| 2.1 Kaupapa Māori methodology..... | 6 |
| 2.2 Study site and recruitment of participants | 6 |
| 2.3 Data collection | 7 |
| 2.4 Data analysis | 8 |
| 2.5 Ethical approval and considerations | 8 |
| 3 Results..... | 9 |
| 3.1 Demographic features | 9 |
| 3.2 Themes | 11 |
| 4 Summary..... | 23 |
| 5 Recommendations | 24 |
| 5.1 Mo Mātou | 24 |
| 5.2 Te Taonga..... | 25 |
| 5.3 Tūhonohono | 26 |
| 5.4 Mātauranga Whakakoranga..... | 27 |
| 5.5 Pūtea tautoko | 28 |
| 5.6 Hanga Mahere | 28 |
| 6 Strengths and limitations | 29 |
| 7 Conclusions | 30 |
| 8 References | 31 |
| 9 Glossary | 32 |
| 10 Appendix | 33 |

EXECUTIVE SUMMARY

Disparities in health outcomes by ethnicity in Aotearoa New Zealand (NZ) continue to exist with Māori faring worse in a range of health indicators relative to NZ Europeans. Importantly, inequities continue to exist for Māori tamariki and immunisation rates. Using a qualitative Kaupapa Māori approach, this report presents findings from Māori Māmā and their perspectives about childhood vaccines and immunisation service and delivery for their pēpi and tamariki. These findings are based on focus groups undertaken with 87 Māori Māmā in 2021, by WotMatters Consulting - a Kaupapa Māori community-based organisation. The main findings are summarised as follows.

Māori Māmā said that **vaccinating their tamariki is related to the political, economic, and social fabrics of their communities**. This makes communication and understanding of information about immunisation a complex task - Can we trust who delivers the message? What is their agenda? Will they judge me and my whānau? There was stigma around whether their tamariki were vaccinated or not. Not getting their tamariki vaccinated could be associated with judgement, and impact on whether their tamariki could attend early childhood education (ECE) facilities/kura or other opportunities. Hence, immunisation is not just about good quality information, but the ways in which it is communicated, perceived, enforced, and entrenched in New Zealand society.

“If given information and (we) have the opportunity to kōrero NOT be told – you will get a practical response.”

Given Māori have a history of being misled, and discriminated by government agencies and health services, it is not surprising that there is a healthy level of mistrust and the politicisation of healthcare. This has negatively influenced health seeking behaviours of Māori Māmā for their tamariki. Any service delivery and messaging for whānau Māori must consider this ‘social fabric’ and have a genuine desire to provide trustworthy and culturally centred, culturally safe care. Based on focus groups with Māori Māmā, the following themes were identified:

1. **‘We are kaitiaki for our tamariki’** - Māmā want the best for their tamariki, they want them to be healthy, happy and loved. Māmā needed to trust their providers before they engaged in care. This included ‘knowing’ and ‘feeling’ that the provider shared their values, cared about their pēpi/tamariki, and were genuinely interested in their welfare.

“Makes it easier for me to give my babies over because I know them now and trust them to care.”

2. **‘Vaccination is not a tick box exercise, but an opportunity’** - Māmā wanted interactions with health professionals based on genuine whanaungatanga, a time to celebrate their baby, motherhood as well as a time for vaccination. Many Māmā felt it was a missed opportunity to check-in with them to share their joys, concerns, and challenges and to be genuinely interested in the wellbeing of their tamariki as well as their entire whānau. The transactional nature of the vaccination event, being given pamphlets and rushing any questions or concerns, rather than genuinely engaging with Māmā was considered problematic.

*“The people are important. I went through three previous people before I had someone I could relate to. They are coming into **myspace**.”*

3. **‘Not averse to vaccines, averse to oppressive actions’** - a Māmā’s desire to protect her babies and understand vaccination should be celebrated and supported, not shut down. Overwhelmingly Māori Māmā were not opposed to vaccination per se but were uncomfortable with coercive tactics used to get their tamariki vaccinated. Māmā suggested that providers ask them questions, without judgement or ‘emotional blackmail’ to maintain their mana and acknowledge their role as kaitiaki/protectors for their children.

“And I had the mana to decide.”

4. **‘Mātauranga Māori in tandem with Western medicine’** – Māmā spoke with knowledge and experience of mātauranga Māori. These practices provided comfort and reassurance when placed alongside Western medicines. In addition, the practices helped Māmā feel that they were contributing to the wellbeing of their pēpi/tamariki during vaccinations, so they were not passive recipients of care. Māmā were often criticised or made to feel ashamed when including traditional Māori practices.

“We accept the Doctors injecting our kids, so I will accept karakia as well.”

5. **‘Kanohi te kanohi, with people like me and my whānau’** – Māmā wanted quality information, messages and services delivered by people like them. Pamphlets, posters, and other materials were not well used by Māori Māmā to get information about vaccinations. They wanted to hear the stories of people like them, they wanted honest conversations with people they trusted and health professionals who were willing to take time to explain things to them.

“It makes a difference to have Māori nurses, they understand us. They do not talk down to you or make you feel uncomfortable or judge you. They’re sweet to sit on the floor. It is like having whānau in your home.”

Recommendations

Our findings support several recommendations for policy, practice, programmes, services, and campaigns related to Māori childhood immunisations. Listed below are a selection of key recommendations (see Recommendations 5 for a complete list):

1. **Māmā as kaitiaki** - If we start from a place of recognising that Māori Māmā want the best for their pēpi/tamariki and are in the role of ‘fiercely protecting’ their tamariki, we can utilise this knowledge to promote positive messaging, clinical service delivery and policy, that is not deficits focused or shaming. The emphasis on protecting tamariki is an important lever, as Māmā are actively seeking and wanting information and services that meet their needs.
2. **Māmā need trusting relationships and holistic whānau-centric care** - Meeting the needs of Māori Māmā must come first, which involves a trusting relationship and a commitment to the whole person, whole whānau, not just parts of them (e.g., vaccinating their tamariki without engaging with other whānau members and their wellbeing). Health services

and providers must be genuinely interested in the wellbeing of whānau as a whole.

3. **Māmā have their own networks** - Māmā are the experts in their own lives, their complexities, challenges, and their strengths - yet health providers and services see Māori Māmā as *passive recipients* of care and information. If Māmā do not have the information they need, they will source it. The first point of contact when they were concerned about the wellbeing of their tamariki was whānau and friends. Utilising these relational and trusted collective networks to share information would be a much more effective strategy, rather than resisting them. Māori Māmā wanted to be involved in sharing information through their own networks – a peer-support type strategy.
4. **Take time to hear us, to hear our concerns** - Clinicians and service providers should provide Māmā with opportunities to tell their stories and genuinely engage in dialogue about vaccination. Māori Māmā have all heard both good and bad stories about vaccination. Allow time to ask Māmā about their previous (good and bad) experiences with vaccination, any stories they have heard and concerns they might have. There must be options and choices for vaccinations and whānau health services, Māori Māmā wanted to be able to ‘shop around’ and seek out people who they felt respected them.
5. **Kanohi te kanohi, with people like me** - One of the main findings was the mistrust of the Well Child sector. Nurses, Doctors, and other people working to vaccinate tamariki can act in ways that make Māori Māmā feel inadequate, fearful, resistant, or uncomfortable. This required them to be brave and push back, risking their relationships with health providers. To address mistrust, service providers must develop consistent services and relationships that are ongoing, holistic and listen to the concerns of Māmā. We need the most skilled people working with Māori, and people who look like them. We also need to address the transactional nature of health and wellbeing and seek new ways to engage with whānau.
6. **Current systems are racist and exclude Māori worldviews** - The impact of institutional racism and bias in healthcare was painfully evident in the stories Māori Māmā shared, resulting in them disengaging from care or having poor vaccination experiences with their tamariki. Training for health professionals in cultural safety, non-racist systems of care, how to engage in tikanga, and how to engage in healthy conversations is required. This could be done by *strengthening* the capacity and scope of providers, *developing* a workforce with service-worker training, and *including* Māori Māmā to develop and deliver training. Being nice, is not enough.
7. **Seeking new solutions: Mātauranga Māori and Western healthcare** - The use of tikanga, rongoā and culturally appropriate practices in health services was associated with greater satisfaction and stronger relational outcomes. There was a strong desire for culturally relevant interventions for the whole whānau rather than individualised, ‘checkbox’ care. Māori Māmā wanted culturally and clinically safe practices. The whānau ora approach to care was also highly desired – to be seen as a whole person, within the context of their whānau and hapū. Māori Māmā wanted rongoā Māori practices alongside Western/mainstream healthcare.

8. **In pursuit of Mana Motuhake** - To achieve Mana Motuhake within a whānau ora setting, several pre-requisites are required. Addressing the social determinants of wellbeing, poverty, housing, food security and discrimination are pre-requisites. Each community should be able to have services that make sense for them, embrace their uniqueness, and see them as collectives who are relational and want the best for their tamariki. This will require a multi-faceted and intersectoral approach with the common goal to create and maintain healthy whānau.

In summary, overwhelmingly, Māori Māmā felt that the current way that we approach and communicate about vaccination is judgemental and lacks a political, economic, and social analysis. Their message was clear, don't undermine whānau fears, don't be coercive, don't be racist and provide time for discussions within the context of mutually respectful relationships. They were sick of their tamariki being treated like they are a tick box exercise and being humiliated for asking questions.

Instead Māmā seek holistic, culturally centred, and culturally safe ways to engage in healthcare that embrace them, their tamariki and their whānau aspirations. There was a desire to utilise their own knowledge as Māmā, the collective knowledge of those around them and mātauranga Māori from their tupuna, alongside quality Western/mainstream knowledge systems. Māori Māmā have a desire to be treated as a whole person, that is connected, celebrated, and valued – and they want this to be reflected in the services that they engage with.

We note, many of these findings and learnings could also be transferred to other vaccination programmes, including engaging whānau Maori around Covid-19. Māori Māmā gave this knowledge freely in the hope that it will be integrated transparently into communications strategies and service delivery models to provide more effective health and social outcomes for future Māori Māmā and their whānau – *'they will see their input and hear their voices.'*

1 Background and objectives

There are large disparities in health outcomes by ethnicity in Aotearoa New Zealand (henceforth Aotearoa NZ; Aotearoa; and NZ will be used interchangeably), with Māori faring worse in a wide range of health indicators relative to NZ Europeans (Marriot & Sim, 2014). Hobbs et al. (2017) found evidence of increasing rates of infectious disease hospitalisation rates for Māori with delayed immunisation being a factor that was strongly associated with this outcome. Several data sources have been utilised to explore these ethnic differences in health outcomes, particularly for Māori and highlight the importance of the following domains: (i) accessibility (e.g., access to transportation, distance to provider); (ii) mobility (e.g., frequency and distance of residential movement); (iii) socio-economic status (e.g., deprivation index); (iv) parental characteristics (e.g., maternal education, English language proficiency); and (v) child characteristics (e.g., parity, involvement in social groups, etc.) (Walker et al., 2019; Clark et al., 2020; Ministry of Health, 2021). While these quantitative findings provide insight regarding some of the key factors related to vaccination uptake, we do not fully understand the complex social and cultural reasons that Māori may be less likely to engage with vaccination services. Thus, the goal of this qualitative Kaupapa Māori study was to explore these reasons and support Te Hīringa Hauora/Health Promotion Agency to inform a communications strategy to improve vaccine uptake among Māori.

First, we must acknowledge the complex underlying structural and social determinants for whānau Māori. These include the impact of **social exclusions** (e.g., colonisation, cultural alienation, stigma, and media influences), **economic conditions** (e.g., employment, education, housing, food security and income inequality), **policy settings** (e.g., government agencies' information and data, Te Tiriti, health policies, equity policies) and **social and health support** (e.g., health service delivery models, health equity delivery, vaccination schedules). Secondly, there are factors that may be experienced by an individual over the course of a lifetime and likely will influence health care access. These include **adverse life experiences** (e.g., traumatic events, abuse, violence, adverse childhood experiences), **health challenges** (e.g., previous bad experiences with health services, observing family difficulties in healthcare), **stress related to the social determinants of wellbeing** (e.g., poverty, safety, housing) and **relational challenges** (e.g., partner relationship difficulties, whānau alienation, cultural alienation). This is not an exhaustive summary, but it gives an indication of the areas to be considered when planning activities and interventions for Māori Māmā. These underlying factors make Māori Māmā more vulnerable to poor health outcomes; thus, it is important to explore the levers and factors that might influence childhood vaccine uptake among Māori Māmā.

This research is an extension of an HRC-funded research project - *Ethnic differences in the uptake of healthcare services in New Zealand: A qualitative study* - which used interviews and focus groups to explore the experiences of parents of different ethnicities (NZ European, Māori, Pacific, and Asian) with accessing health services, specifically GPs, dental checks, and vaccinations, for their children. The objective of this Kaupapa Māori extension study was to explore Māori parents'/caregivers' perspectives about childhood vaccinations. The focus was on engaging Māori caregivers to gain an understanding of their ngākau/thoughts, feelings, and reactions towards childhood immunisations to enable Te Hīringa Hauora/Health Promotion Agency to develop a communications strategy to improve Māori childhood immunisations, as well as contribute to the main research project.

2 Methodology

2.1 Kaupapa Māori methodology

The Kaupapa Māori methodology utilised intentionally engages and values the knowledge, social, political and historical contexts of our whānau. The study was led and facilitated by Māori researchers and representative from IDIA (SB, LT, and MB), and analysed and written up by the authors who are wahine Māori (SB, LT, and TC). Kaupapa Māori research is research by Māori, for Māori and with Māori. It is very different from other forms of research in which Māori may participate, but over which we have no conceptual, methodological, or interpretative control (Pihama, 2010). One of the attributes of Kaupapa Māori methodology is that it intentionally engages and values the work of whānau – Māori parents and caregivers - when working with complex health and social issues. While this rangahau is part of a larger project, the methodology used here is unique and provides a critical Māori lens for the development and incorporation of knowledge that is effective for our communities.

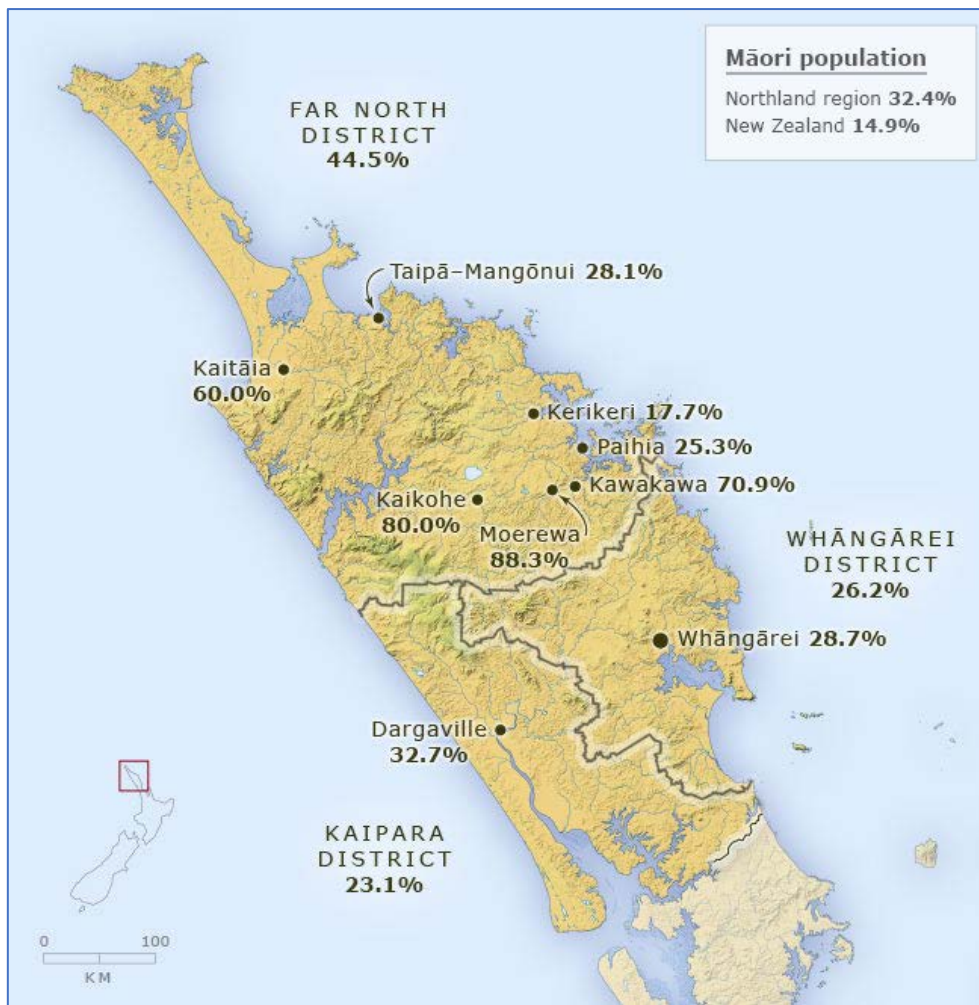
The knowledge generated here can be integrated transparently into programmes, communications strategies and policy that is effective for the intended Māori communities. For this research to be effective and ‘real’ for Māori Māmā, it is essential that our Māori social fabric has a presence that is real and genuine – *‘the participants will see their input and hear their voices’*.

2.2 Study site and recruitment of participants

For this research it was fundamental to ensure a geographical spread of Tai Tokerau Māori was included. This enabled the capture of rural and urban ‘voices’ thereby allowing the researchers to obtain greater input into the experiences of participants and what works well or not related to immunisation service delivery, and factors that may or may not have influenced their children being immunised.

We have a combined network that enabled the recruitment of a diverse group of Māmā. We reached out to existing networks throughout Tai Tokerau who are primarily involved in working with the wellbeing of Māmā and their tamariki. This included Hippy Coordinators, community groups, Church groups and whānau networks. We chose the sites for focus groups based on high proportions of whānau Māori living in each rohe (Figure 1).

Figure 1. Māori Population, Northland, 2013



Notes: Map showing concentration (as opposed to absolute numbers) of Māori in Northland districts and towns.
Source: Orange, C. (2015). *Māori population, Northland, 2013*. Te Ara: The Encyclopaedia of New Zealand.
<https://teara.govt.nz/en/map/7530/maori-population-northland-2013>.

2.3 Data collection

Two wahine Māori researchers (SB and LT) carried out the fieldwork with Māmā and caregivers. Both were present during all focus group discussions – one to facilitate the kōrero and the other took detailed notes verbatim. One other wahine Māori (MB) attended one of the focus groups representing IDIA, the design agency that will utilise these findings for a campaign with Te Hiringa Hauora/Health Promotion Agency. Focus groups began with a karakia and whakawhānaungatanga that included participants and researchers, a briefing on the purpose of the research and the rules of participation. All focus groups had on-site childcare to allow Māmā to participate in the kōrero. This made a difference to the quality of kōrero and engagement.

Focus groups allowed us to explore natural social interaction in comparison to individual interviews as Māmā shared their collective views. Alongside this engagement between participants, we also encouraged participants to consider alternative views and experiences. A semi-structured interview guide was used to generate kōrero for all focus groups. All focus groups were held in venues (e.g.,

Church Hall, community buildings, whare, and library) agreed to by participants. The duration of the focus groups was approximately two to three hours. During the focus groups additional prompts were posed to participants to encourage further comments and elaboration. In some cases, participants' responses did not relate directly to the structured questions, but this was understandable particularly because the subject is familiar to the participating Māmā and caregivers. Participants also completed a brief form to collect basic demographic information.

The total number of participants in the full sample was 103. For the main HRC-funded study, we conducted five focus groups with Māori parents and caregivers, participants ranging from 5 to 31 in each group, for a total of 66 participants. Data collection for the main study took place from February to March 2021. For the Te Hiringa Hauora/Health Promotion Agency extension project, we conducted five additional focus groups with Māori parents and caregivers, with 3 to 13 participants per group, for a total of 37 participants. Data collection for the extension project took place from May to June 2021. The resultant two samples are referred to as the **main sample** and the **HPA booster sample** (and when combined – the **full sample**) in the remainder of this report. While focus groups varied in size and composition, ultimately the themes were fairly consistent across the focus groups.

2.4 Data analysis

Data were transcribed verbatim either by us or a transcribing service, and then read and re-read to familiarise ourselves. Utilising notes taken from the focus groups alongside the transcribed data, common threads were identified and grouped. Initial codes were developed and then reviewed and refined as part of the thematic analysis process. Data were analysed and interpreted utilising Braun and Clarke's (2012) method for reflexive thematic analysis, and a Māori social constructionist epistemology that privileges mana wahine worldviews (Le Grice et al., 2017). This method explores the language and social meanings of the stories of Māori Māmā and how these shape their social worlds, including their whānau decisions to engage with healthcare services or not, and how so. These are often foregrounded by historical and current experiences of colonialism, but also of their great desire to protect the wellbeing of their pēpi/tamariki. Interpreting data utilising a Kaupapa Māori methodology requires the researchers to be conscious of Māori systems, knowledge, people, and processes. This includes acknowledging our own knowledge and biases in interpreting and analysing these data.

2.5 Ethical approval and considerations

Ethical approval was obtained by the Auckland University of Technology. All participants were provided with a written participant information sheet (PIS) that included details of the purpose of the study, what their involvement entailed and what would happen to the data collected. All participants were advised that partaking in the research was voluntary and that the research team would keep all personal information confidential, ensuring their identity was protected when presenting the data collected. Participants provided informed written consent before participating and were offered a koha (voucher) and kai in recognition of their time and valuable contributions.

3 Results

3.1 Demographic features

Here we present the demographic details of participants from the main sample (n=66) and the HPA booster sample (n=37) separately. We have then analysed and presented these data together so that we have a larger sample to draw from; however, we only utilised the data from participants who identified as Māori (n=87) from the full sample (N=103). See Table A.1 for full demographic characteristics for the main, HPA booster and full samples.

3.1.1 Characteristics of main sample

For the main sample, we conducted five focus groups with Māori parents and caregivers, participants ranging from 5 to 31 in each group, for a total of 66 participants. Data collection took place from February to March 2021 (Table 1).

The focus group held at the Papakura Marae had a wide range of ethnic groups, many with Māori plus Pacific whakapapa. In total there were 19 who had Māori whakapapa. There was one Pākehā participant and some participants who were sole Pacific ethnicity. There were also four fathers in this group. Between the participants, they had 104 tamariki in their care. Ages of the parents/caregivers ranged from 18-60+ years.

The Whangarei focus group had 5 participants, all wahine Māori. They had 22 children in their care between them. Ages of these Māmā ranged from 18-49 years old. The Kaikohekohe group had 8 participants, 7 Māori and one Pākehā females. They had 9 tamariki between them, with one hapū first time Māmā. Their ages ranged from 18-29 years old. The Kaitaia group had 9 participants, 8 Māori and 1 Chinese participant. There was one father, and the rest were Māmā or grandmothers. There were 27 tamariki between them and one hapū Māmā. Ages ranged from 18-59 years old. The second focus group held in Whangarei had 13 participants, all females. They cared for 25 tamariki between them and their ages ranged from 18-39 years old.

In total, there were 66 participants in this sample, 52 with whakapapa Māori. Māori participants came from a range of iwi and hapū (participants could choose multiple ethnic groups) (Table 2). Most participants used English as their preferred language.

Table 1. Details of focus groups (main study)

| Location | Date | Participant numbers | No. of children cared for (group total) |
|----------------|-------------|---------------------|---|
| Papakura Marae | 22-Feb-2021 | 31 | 104 |
| Whāngarei #1 | 10-Feb-2021 | 5 | 22 |
| Kaikohekohe | 8-Mar-2021 | 8 | 10 |
| Kaitaia | 3-Feb-2021 | 9 | 27 |
| Whāngarei #2 | 9-Feb-2021 | 13 | 25 |
| TOTAL | - | 66 | 188 |

Table 2. Self-reported ethnicities, iwi and hapū of participants (n=66) (main sample)

| Iwi/Hapū | Number of people | Iwi/Hapū | Number of people |
|----------------------|------------------|-----------------|------------------|
| Te Atiawa | 1 | Ngāti Wai | 4 |
| Tongan | 7 | Ngāti Hine | 4 |
| Samoan | 8 | Niuean | 1 |
| Ngāpuhi | 32 | Te Mahurehure | 1 |
| Tainui | 7 | Ngāti Rehia | 1 |
| Ngāti Kahungunu | 2 | Te Rarawa | 4 |
| Cook Islander | 6 | Ngāti Hau | 2 |
| Pakeha | 2 | Te Uri o Tai | 1 |
| Tuhoe | 1 | Ngāti Porou | 3 |
| Ngāti Maniapoto | 1 | Ngai Takoto | 1 |
| Te Arawa | 4 | Chinese | 1 |
| Māori (no iwi given) | 4 | Ngāti Kawa | 1 |
| Ngāti Pāoa | 1 | Ngāti Rahiri | 1 |
| Ngāti Hinemihi | 1 | Ngāti Whakaeke | 1 |
| Tuhourangi | 1 | Ngāti Tautahi | 1 |
| Tutewha | 1 | Te Aupouri | 1 |
| Tutemohuta | 1 | Did not specify | 1 |

Notes: Participants could select multiple affiliations.

3.1.2 Characteristics of HPA booster sample

For the HPA booster sample, we conducted five additional focus groups with Māori parents and caregivers throughout Tai Tokerau, with three to 13 participants per group, for a total of 37 participants. Data collection for the extension project took place from May to June 2021.

Across the five focus groups, participants were predominantly Māori Māmā, although there was one Māori male (a brother of one of the participants), and two Pākehā participants. Of the 37 participants, there were 35 Māori participants caring for 94 tamariki between them. There was a range of rural and urban sites and size of groups (Table 3).

Māori participants came from a range of iwi and hapū (participants could choose multiple ethnic groups) (Table 4). All spoke English and approximately 50% spoke te reo Māori. One participant also used sign language for a whānau member who was hearing impaired.

Table 3. Details of focus groups (HPA booster sample)

| Location | Date | Participant numbers | No. of children cared for (group total) |
|-------------------------|--------------|---------------------|---|
| Taipa (Far North) | 19-May-2021 | 13 | 28 |
| Whāngarei | 20-May-2021 | 3 | 11 |
| Kaikohekohe (Mid North) | 20-May-2021 | 7 | 15 |
| Whāngarei | 26-May-2021 | 7 | 19 |
| Moerewa | 23-June-2021 | 7 | 24 |
| TOTAL | - | 37 | 97 |

Table 4. Self-reported ethnicities, iwi and hapū of participants (n=37) (HPA booster sample)

| Iwi/Hapū | Number of people |
|-----------------------------------|------------------|
| Ngāpuhi | 8 |
| Ngāpuhi / Te Rarawa | 4 |
| Ngāpuhi/ Ngātikahu | 1 |
| Ngāpuhi / NgātiManu | 2 |
| NgātiKahu Ki Whaingaroa | 1 |
| Ngāpuhi / NgatiHau | 2 |
| Ngāpuhi / NgātiHao / NgātiHau | 1 |
| Ngāpuhi / NgātiRehia / NgātiPorou | 1 |
| Ngāpuhi / NgātiHine | 4 |
| Ngāpuhi/ NgātiWai | 2 |
| Te Rarawa / TePaatu | 1 |
| Ngāti Hine | 1 |
| Ngāpuhi / Tangata whenua | 1 |
| Pacifica Ngātitautilu | 1 |
| Tainui | 1 |
| Māori (no iwi given) | 4 |
| NZ European | 2 |

Notes: Participants could select multiple affiliations.

3.2 Themes

The kōrero from the focus groups provided insights and understandings of participants' experiences, good and bad, of health agencies and provider practices, what influenced their decision to immunise their tamariki or not, and how important relationships were when making decisions. The collected data from the focus groups provided rich and nuanced narratives about vaccination for Māori tamariki. We identified 5 key themes that were different yet interconnected (Table 5). We will discuss each of these themes in more detail using participants' quotes to illustrate key ideas and nuanced meanings.

Table 5. Key themes and sub-themes from Māori participants in the full sample (n=87)

| Themes | Sub-themes |
|--|--|
| 'We are kaitiaki for our tamariki' | <ul style="list-style-type: none"> - Kaitiaki Māmā as advocates and protectors - Respect and trust must be earned, not assumed |
| 'Vaccination is not a tick box exercise, but an opportunity' | <ul style="list-style-type: none"> - Transactional nature of vaccination programmes - Whanaungatanga/Relationships are the key |
| 'Not averse to vaccines, averse to oppressive actions' | <ul style="list-style-type: none"> - A place of vulnerability and resistance - Not averse to vaccines, but cautious |
| 'Mātauranga Māori in tandem with Western medicine' | <ul style="list-style-type: none"> - We have valuable knowledge |

| | |
|---|--|
| | <ul style="list-style-type: none"> - Awakening and stepping into our voice - We have collective knowledge and power |
| ‘Kanohi te kanohi, with people like me and my whānau’ | <ul style="list-style-type: none"> - People who look and feel like me - The reality of my life requires flexibility and understanding - I do this for my tamariki, my whānau, my hapū, my iwi |

3.2.1 Theme 1: ‘We are kaitiaki for our tamariki’

Māori Māmā want the best for their tamariki; they want them to be healthy, happy and loved. Māmā are kaitiaki for their tamariki and needed to trust their providers before they engaged in care. This included ‘knowing’ and ‘feeling’ that the provider shared their values, cared about their pēpi/tamariki and were genuinely interested in their welfare.

“Makes it easier for me to give my babies over because I know them now and trust them to care.”

Kaitiaki Māmā as advocates and protectors

The first and overwhelming message in this theme, is that Māori Māmā wanted to emphasise their role as ‘kaitiaki’ for their tamariki. They wanted to protect their tamariki and be good role models. This included seeking help when needed, to ensure their future generations would flourish.

“... growing strengths with others, being involved with our tamariki growing, being the best you can be, self-awareness, when to reach out for help when you need to.”

“If you get your kids immunised, they make you feel like very special. They say, well done. Like you get a certificate. The opposite is not getting a certificate so where’s the balance. They try to force you to do it.”

This also meant that they would protect their tamariki by deciding for themselves, what would keep their tamariki safe and healthy. This included being a ‘fierce and sceptical kaitiaki’ when evaluating the trustworthiness of health professionals and their messages – “can we trust who delivers the message?”

“I haven’t seen the long-term effects. Generationally, it is tried and true. More inclined to test it, but not be the test dummies.”

Respect and trust must be earned, not assumed

The second sub-theme was about trust and respect. Respect is generally accepting someone for who they are, their differences and values. It is also about the relationships that are built on the feelings of trust, the safety of one’s whānau and wellbeing.

“... integrity, honesty and being genuine. Lot of people that are full of shit... but if someone lies to you it affects your trust in them.”

"You feel pressured to immunise, sometimes they turn up at your house."

Māori Māmā wanted to be respected for their roles as kaitiaki, they needed to trust and have a positive relationship with their providers. However, there were several times when Māmā shared stories of how they were disrespected, making them feel like 'bad parents' with regards to immunisation.

"[Doctor] fully judged me for being late. It was a negative experience, she really made me feel like shit for being a week late."

"What stopped me is [Doctor], I don't like her. She calls my kid obese. Fully judged me for being late. It was a negative experience."

"... [I was] bought up with colourful language, but speak nice to people – if nothing nice to say, don't say it at all."

"They're pushy..."

"I don't like the push – for both sides, that push is everywhere, and it divides. Immunisation is a big divide 'your kids aren't immunised, stay away'. It's vicious."

What did help establish respect and trust, was a shared sense of values and connection. Māori Māmā spoke of the values that made them feel respected and fostered trust with their health providers. If there was a genuine connection and a shared sense of values - engaging in vaccinations was easier.

"The certain nurses that I have, they talk to me, not at me or down to me. They're touching our kids but they need to be precious about this, so I've had positive experiences."

"Our Doctors these days are learning te ao Māori as well, so you feel more comfortable, even a 'kia ora' is good."

3.2.2 Theme 2: Vaccination is not a tick box exercise, but an opportunity

The transactional nature of vaccination, using pamphlets as a sole source of information and rushing any questions or concerns, rather than engaging with Māmā was problematic. Māmā wanted interactions with health professionals to be based on genuine whanaungatanga, a time to celebrate their baby, motherhood, as well as a time for vaccination. Many felt it was a missed opportunity to check-in with Māmā about their joys, concerns and challenges and genuinely be interested in the wellbeing of their tamariki.

"... you have to look after the family, not just thinking about ticking a box."

Transactional nature of vaccination programmes

Māori Māmā felt the current approach by service providers was cold and transactional. The procedural nature of immunisations, rather than a genuine check-in and opportunity to connect with them and their tamariki was viewed as problematic. This 'tick a box' concept also extended to midwives, Well Child providers and General Practices – there was a perception that none of the services knew what the others was doing and they were only vaccinating to fulfil their contracts.

“They care about your kids if they've got kids, and if they don't have kids, they're kind of just like, ‘Oh, yep. So you're here for this, tick. You need this, tick’.”

“It wasn't an active decision, I was a tired new mum, it was the thing to do. I didn't have another plan to go the other way.”

“I was feeling uncomfortable, made to feel like I'm not doing my baby any favours. Plunket nurse had no kids – could tell...”

Tai Tokerau has a large and diverse Māori population, some of whom live in hard-to-reach rural communities. They described great variability in the approach and implementation of vaccination programmes. Reducing inconsistent service approaches to Māori Māmā health included both experiences of non-Māori and Māori service providers. If they felt that their values were not being reflected by their health providers, they would disengage or seek out other health providers. They emphasised the importance of trust, open relationships, and respect, referring to having an experience that had no hint of racism or discrimination where they were accepted for who they were – and not being judged.

“I didn't know you could pick and choose.”

“We have so many decisions to make, my brain goes crazy.”

“Tamariki ora and Plunket aren't the same, you have to choose one. I had both coming into my house. And they were asked to tell me what they can do for me, then I used both of them and they had to sort out between them who was doing what.”

Māori Māmā were often unaware of their right to choose their provider, they were just busy being a new Māmā and the information was not easy to access – who do they turn to? There was often a lack of choice in providers, and as kaitiaki, Māori Māmā would ‘shop around.’ If they were unhappy with the service, exercising their Mana Motuhake as kaitiaki meant they would try and find someone else they felt comfortable with, and who they trusted. There must be choice, and some Māmā had limited options.

*“The people are important. I went through three previous people before I had someone I could relate to. They are coming into **my**space.”*

Whanaungatanga/Relationships are the key

The second sub-theme, which threaded through all the focus groups, was about the missed opportunity to connect through whanaungatanga. Supporting Māori Māmā to participate in all levels of care is about whanaungatanga - effective relationships within their communities, with their primary health provider, midwife, or Well Child provider.

“Whānau Doctors matter. Feel like if have a relationship with our Doctor they care, a locum ticks boxes and kicks you out the door.”

“She is a nurse and trust her more than a Doctor, they rotate Doctor – She is always there, it's constant.”

“Whakapapa – to be connected, all connections through mahi and relationships, knowing who you are and proud about where you are going. To give tamariki a sense of who they are.”

A theme that continues to be present is the major role respect, trust and relationships play in how a decision is made. Importantly, this can have a positive or negative impact – for instance, decision making could be restricted by what information is available or who is providing the advice.

“Met a woman in Kaitaia. She talked about immunisation, came from a place of love, gave information as is, loved how she delivered it. Can tell a person’s knowledge.”

“Some Mums are more demanding than others, so you don’t get much time. They’re there for the baby, but also looking for post-natal depression.”

They also spoke of the strength and support offered by the natural support systems within whānau, hapū and marae (and other social fabrics). These collective systems can positively impact Māori Māmā and their whānau, but are often unrecognised and under-utilised.

“Everyone is different. I’m adopted, don’t know who my parents are, my blood line are my kids. Not about blood, it’s about heart, family is what you make it, spirit resilience, heritage could be people you meet on the journey, morals, values, religions and compromise.”

3.2.3 Theme 3: ‘Not averse to vaccines, averse to oppressive actions’

The desire of a Māmā to protect her pēpi and understand vaccination should be celebrated and supported, not shut down. Overwhelmingly, Māori Māmā were not opposed to vaccination per se but were uncomfortable with coercive tactics used to get their tamariki vaccinated. Māmā wanted to ask questions, without judgement or ‘emotional blackmail’ and for services to acknowledge their role as kaitiaki/protectors for their children.

A place of vulnerability and resistance

Māmā in all focus groups identified a feeling of vulnerability when faced with a decision to have their tamariki vaccinated. When they did try to ask questions, they were dismissed or made to feel ‘stupid’ or ‘oppositional.’ Also, when professionals asked questions that they felt were too nosy, it made them feel suspicious about the reasons for those questions. This led to Māmā feeling coerced and stigmatised when talking to health professionals or when seeking information about immunisations.

“Plunket... they’re not great. I have had bad experiences. When I had my first baby they were supposed to come and see me, but they said come in and see them. Then they said I look highly likely to harm my baby because I looked tired. I didn’t see Plunket for about a year.”

“Sometimes I feel when you ring Healthline, they ask you questions – dumb questions. They want to know personal details and you don’t want to have to do that.”

“I don’t know, I’m paranoid, but feel like they ask too many questions and I am wondering why.”

Māmā often felt they lacked information and there were examples throughout the focus groups of vaccination misinformation and myths. They were suspicious of professionals that were not willing to have open and honest conversations with them so that they were informed. Generally, Māori Māmā wanted quality information and wanted to have conversations about vaccination, side effects, their fears - but often felt rushed or 'talked to' rather than 'talked with.'

"We don't know what's in it [vaccines]. Just told this is going to help our kids." "I decided to because everyone else was doing it, that's what you do. When I think about it now I did it because I got a paper to say do it. No thoughts or questions asked – for all my boys."

"The internet, google, Doctor Google. The Doctor, Mum, asked whānau first, friends with kids/children. When you have more and more, you know the signs and confident to assess things yourself. People with kids who are older have heaps of experience and better to ask them than the Doctor."

Māori Māmā accessed information from a range of settings and people including the internet and Facebook. However, there were some rural Māmā who did not have access to the internet or reliable phone signal/data. They actively sought stories and advice from other Māmā about their tamariki wellbeing and wanted to have real and honest conversations with health professionals.

"Google – people post symptoms, pictures and others have their opinion – this is on Māmā pages. It's pretty good, you get alternatives like panipani etc for eczema."

"... be open, have a conversation about it, an honest one."

Māori Māmā spoke of the stigma around whether their children are vaccinated or not. This impacted on whether their tamariki were allowed to attend early childhood education (ECE) facilities – and often meant they felt forced into vaccination if they wanted to their tamariki in kohanga reo or ECE. When faced with blame and shame around their parenting practices, Māori Māmā responded with resistance, as an act of self-determination. If Mana Motuhake was eroded, then Māmā would disengage from services.

"Society has impacted my decision to get my girl immunised – she can't go to that school because not immunised. Society plays a big impact on what I do as a parent. I'm not informing myself and learning. COVID, not informed enough yet to get it done. I can't go on holiday unless immunised."

"If given information and [we] have the opportunity to kōrero NOT be told – you will get a practical response."

"It's part of being colonised – you do it or else."

Some Māmā talked about their difficult relationships with Oranga Tamariki – Ministry for Children, and the fear that not vaccinating their tamariki would be seen as another reason to call them bad mothers or remove their children.

"Oranga Tamariki say the children have to be immunised. They don't check but it says in the plan that we have to immunise. It's a national standard by Oranga Tamariki but it might affect"

their ability to be parents. Then you have the kid's lawyers who say that we shouldn't have had them immunised without the permission of the parents."

"There are a lot of families in situations where domestic violence, drug and alcohol is involved and you don't want them to come to your home because you get judged, they might take baby."

Not averse to vaccines, but cautious

Māori Māmā in these focus groups were not opposed to vaccinations per se – rather they were wary of information and the coercive actions by health professionals to convey this information and to get their tamariki vaccinated.

"I'm not averse to vaccines, I'm averse to oppressive actions."

They felt that health professionals' focus tended to be on getting the tamariki vaccinated rather than supporting Māmā to make an informed decision - how the information is packaged and who shares that information was equally important.

"The Doctor was good, I asked him for his personal opinion, he said he is going through it with his own daughter and her children – she hasn't decided, and he hopes she gets her baby immunised, can't force you. Made it relatable."

Māmā in the focus groups shared their experiences and stories of serious side effects and the life-changing impact on tamariki and whānau as a whole. These stories ranged from their tamariki feeling unwell, to seizures and death. Māmā also described the timing of the vaccinations being associated with a change in health with their tamariki. This made them cautious about future vaccinations, especially if they had not been told about possible side-effects.

"Pono, tika – not just the benefits, but the side effects. They don't tell you."

"Because my sister died after getting her first vaccination, she died that night. She had a weak immunity system."

"Just in the media around autism, but not anyone I know."

Another common concern was the timing of vaccinations. Māori Māmā were unsure why six weeks was the timing of the first vaccination. To them, it seemed their pēpi were too young, small, and vulnerable to be vaccinated at such a young age.

"Six weeks is the youngest [vaccination]. It is too young."

The Māmā had a sense of responsibility as kaitiaki to be informed before making a decision about immunising their tamariki. There was no suggestion that Māmā in the focus groups were vaccine hesitant, rather they just wanted to have the conversations without coercion, shame or being made to feel stupid.

"Babies are so vulnerable, so you do things to protect them on schedule."

“My reason for vaccinating is to prevent the disease. As far as I know, it’s been around long enough. These are known due to generations, COVID is different.”

First time Māori Māmā felt like they needed more time, conversations with whānau, friends and others to feel reassured and okay about their decision. Māmā were generally more confident after having their second or third child and had personal positive immunisation experience.

“I got a fright when I took my son to the nurse, she immunised him and then said, ‘that’s a new one, we don’t normally do that’.”

3.2.4 Theme 4: Mātauranga Māori in tandem with Western medicine

Māmā spoke with knowledge and experience of mātauranga Māori. These practices added value when placed alongside Western medicines and practices, and helped Māmā feel that they were contributing to their baby’s wellbeing during vaccinations. Māmā were often criticised or made to feel ashamed when including traditional practices. Māmā also spoke of their collective knowledges and impact when harnessed.

“My Dad, he is the Doctor, growing up we always used rongoā, we ask him first.”

We have valuable knowledge

Doctors and service providers are often elevated to a degree of ‘godliness’ where their knowledge is seen as more important. Western/mainstream services often place themselves as the experts in wellbeing; however, Māori Māmā understand the collective nature of knowledge. Mātauranga Māori has existed for centuries and can sit alongside the Western knowledge systems. Māori Māmā felt that mātauranga Māori would add value to current Western/mainstream services and make them more acceptable and holistic.

“The ideal, would be a tikanga Māori research-based rongoā that can back-up a vaccine – a whakaaro Māori perspective.”

“Vaccination, cleanse the wairua – karakia the vaccination, clear it and karakia. Clear babies wairua, provide a safe space. I’m okay with being me, some others aren’t.”

“Our family Doctor is cool and likes the rongoā.”

*“The young new Doctors coming through are very aware of Māori rongoā. I can prescribe you this and it’s synthetic, it will work within this time, rongoā Māori is natural and may take some time. **And I had the mana to decide.**”*

They wanted a more holistic strategy that acknowledged the mana of whānau, them and their tamariki. They described times when they were able to combine mātauranga Māori with Western/mainstream care with good outcomes.

“Have seen this in practice. Mum took hapū [pregnant] Māmā, we experienced this, it helps. It’s beautiful when it is done properly, involved kai, and gifts, had rongoā Māori, had toi Māori

and had people coming in to share their experience and we could all connect.” (referring to Ngā Tātai Ihorangi – a hapūtanga [pregnancy] programme in Taitokerau)

Māori Māmā agreed that rongoā practices alongside mainstream practices were useful and for some, essential. They said that policy and legislation did not recognise mātauranga Māori in this context although it is widely accepted that rongoā Māori has a place in improving the wellbeing of whānau and indeed mainstream Aotearoa New Zealand. This is demonstrated by the increasing number of rongoā being marketed and distributed globally and some District Health Boards (DHBs) and Māori providers establishing Rongoā Māori clinics.

Awakening and stepping into our voice

Awakening their role as Māmā and kaitiaki meant sometimes being resistant to Western processes and services. When they were questioned about their tamariki, made to feel like bad mothers, or they felt people were being coercive about their care – this required ‘stepping into their voice’. This involved challenging the system and ‘the way things are done’, the racism and judgements, and required significant strength by Māmā.

“They [Māmā] have permission to be open about it. Don’t tell anyone that we’re doing karakia. My Nan lost her job for doing rongoā.”

“She [Nan] taught us about the Tohunga Suppression Act. They weren’t allowed to practice.”

Māori Māmā described a sadness and reluctance at stepping into a ‘resistance space’ to protect their tamariki, because they knew they would be labelled as difficult and perhaps damage their relationship with their health providers.

“Have a big trust issue – baby got first three vax [vaccines], meant to have six. Only because had a liver transplant. Now she needs the next ones, Doctor said vaccination – told him he was colonised. He got upset that I said that. He spoke to my nurse about it. My nurse doesn’t agree with vax [vaccines], but needed to get it because of her employment. I don’t trust.... I just need to be safe.”

“They told me to put my baby on the bed, I didn’t like that. I refused but they said it was easier for them, but told them I would breast feed while they immunised. The nurse said its never done like that but said to her that’s how I have always done this.”

There was also resistance required in dealing with whānau members who might not agree with vaccination. When Māmā had decided to get their tamariki vaccinated against the wishes of other whānau members, they had to figure out ways to maintain whānau relationships, but also do what was right for their tamariki.

“My Nan is always against immunising. She taught us about the Tohunga Suppression Act... This is part of colonisation – there are natural things. If my Nan was here, it would be mirimiri because that’s what she did, there’s a link to Te Ao Wairua. I immunise my babies and say sorry to Nan. If they say immunise, I do, it makes me feel safe. I feel bad because of my Nan.”

We have collective knowledge and power

The first place Māori Māmā said they sought information from was their whānau and friends who had ‘lived experience’ with their own tamariki. It is this collective commitment of whānau problem-solving issues that is not well understood by Western/mainstream services. Māori do not exist in isolation of whānau and whakapapa and are therefore not likely to achieve whānau ora if they are individuals in isolation from their wider collectives.

“Vaccinations have always been an open dialogue in my whānau. My Nan is always against it. The conversations have always been around this. When I was immunised, I had a seizure. My cousin died of meningitis – my Nan said the vaccine would not have helped her. She taught us about the Tohunga Suppression Act. They weren’t allowed to practice. That was designed to take Māori practice out and to give Māori penicillin. It hasn’t been practiced in recent years; it’s just been removed from the Act. This is part of the colonisation – there are natural things.”

“Maybe if there is a clinic that only does these immunisations and tie it up with the Plunket visits – all child services together. Have a hub/pop-up.”

Māori Māmā spoke to this ‘collective impact’ of whānau, and how these knowledge systems should be seen as a vehicle for engaging a broad range of whānau within Māori communities. These knowledge systems are often under-mined by health professionals, yet they are relational and carry more weight.

“Kotahitanga is vital for us to be on the same page as information comes in.”

“Empowering Mums is so important. Even in schools not taught to be sure.”

3.2.5 Theme 5: Kanohi te kanohi, with people like me and my whānau

People who look and feel like me

Māori Māmā wanted quality information, messages and services delivered by people like them. They wanted to hear the stories of people like them, they wanted honest conversations with people they trusted, and when they spoke to health professionals – they wanted them to be willing to take time to explain things to them thoroughly and not dismiss their concerns.

“You can trust those who have had kids.”

Pamphlets, posters, and other materials were generally not used by Māori Māmā to get information about vaccinations. Awareness of vaccinations alone was not enough to influence meaningful engagement with Māmā and their tamariki. Health providers, mainstream and Māori, require a consistent and tailored approach when working with Māmā. This involves closing the information gap between what Māmā ‘know’ and ‘feel’ about vaccinations and helping them weigh the benefits and risks without minimising their fears for their tamariki. They need the people delivering the message and the messages themselves to be meaningful to them, tailored to them.

“Knowing and having information. Comes down to personal experience. If seen someone that has had a disease, there is an immunisation. My son got meningitis, no vaccines in those

days. Now we have these vaccines and I'm particular on the meningitis vaccine because of what I went through. A personal experience puts another perspective on it."

There is an expectation by participants that Māori service providers are ideally better placed to work with whānau in a holistic way. The experience of the practice and approach differs from this expectation, with some Māmā commenting that funding has seen a drop in the quality and consistent application of service, often when they (participants) are at their most vulnerable. However, several Māori Māmā also had good experiences with Western/Mainstream providers as well.

"It makes a difference to have Māori nurses, they understand us. They do not talk down to you or make you feel uncomfortable or judge you. They're sweet to sit on the floor. It is like having whānau in your home."

"Nurses are under paid for that job."

The reality of my life requires flexibility and understanding

Alongside needing messaging by people like them – Māmā described the importance of programmes, services and messaging reflecting their lives. The impacts of discrimination, poverty, and colonisation are daily struggles for many Māmā.

"It is so white, and we have become accustomed to that."

It was important for them to be able to make appointments that fitted in with their lives, that didn't make them 'jump through hoops' or feel judged if other things came up. Also, the cost of gas and managing other children and whānau members who were sick often meant that healthy children who were not vaccinated had to wait a bit longer to get vaccinated. A flexible system that came to them and that addressed all their issues in a whānau – not just one child – would be ideal.

"Home visits with nappies"

"Offer something for our more needy whānau, they don't have cars, where they don't want people in their homes, a safe place."

I do this for my tamariki, my whanau, my hapū, my iwi

Māmā described the decision-making to get immunised was easier when they had witnessed personal whānau experiences of vaccine preventable diseases. Several Māmā described the impact of not having the vaccination or vaccines available (e.g., meningococcal vaccine) for whānau members.

"My son got meningitis, no vaccines in those days. Now we have these vaccines and I'm particular on the meningitis vaccine because of what I went through. A personal experience puts another perspective on it."

"Measles outbreak made it easier to get it. My brother had meningitis and is deaf from that. That's what made me feel my kids needed that vaccination."

Finally, the collectivist nature of whānau Maori, recognises the collective responsibility to look after each other, and to act in ways that support the wider wellbeing of whānau, hapū and iwi. Māmā gave examples of how whakapapa and wider whānau and hapū influenced their health decisions.

“Whakapapa – everything starts with whakapapa; your mind is healthy when your whakapapa is healthy. Our kids constantly interact through Kura and Kohanga. We can lean on our own vines that spread out and interact.”

“I’m pro-vaccine. No family illnesses. Normal process for both sides of our family. Normal way to go as long as all okay. Vaccines all on time.”

“Tamariki thrive when there’s a grandmother on every corner. That’s like a village brings up a child.”

4 Summary

Māori Māmā had expectations that immunisation and Well Child services would be consistently delivered, by providers who were familiar, genuinely interested, culturally appropriate and of the highest clinical quality.

Māori Māmā felt that the current systems that govern their child's wellbeing undermined their Mana Motuhake/self-determination as kaitiaki for their tamariki. Māori Māmā wanted the best for their tamariki, however the procedural nature of vaccinations, coercive communications and actions about vaccinations, lack of consideration for mātauranga Māori and whakawhānaungatanga meant that trust was eroded.

Despite these concerns, none of the participating Māori Māmā were against vaccinations per se, instead they had a healthy wariness and scepticism in the absence of quality conversations with health professionals. They wanted to hear stories from people they trusted, that looked like them. They wanted open and honest conversations about vaccinations with trusted and familiar health professionals, and to be able to choose their preferences and receive consistent care. This should involve the participation of our Māori Māmā at all levels.

Finally, there was a desire to utilise their own knowledge of their tamariki, the collective knowledge of those around them and mātauranga Māori from their tupuna, alongside quality Western/mainstream knowledge systems. Māori Māmā have a desire to be treated as a whole person, that is connected, celebrated, and valued – and they want this to be reflected in the services that they engage with.

5 Recommendations

Based on these findings we will now discuss the recommendations for policy, practice, service delivery and communications for Māori Māmā around childhood immunisations. The following kupu have been framed in a manner that captures the essence of kōrero with participating Māori Māmā:

1. **Mo Mātou** – find out who we are, what we want and how we can work together;
2. **Te Taonga** – provide opportunities for us to tell our stories;
3. **Tūhonohono** – connect to our culture, mātauranga (knowledge systems), rongoā (healing practices) and ensure unfettered access to choices in care;
4. **Mātauranga Whakakoranga** – learning and training opportunities to share knowledge;
5. **Pūtea tautoko** – resource Māori Māmā to participate and engage; and
6. **Hanga Mahere** – develop tools and models of engagement.

We will now discuss each of these recommendations in more detail.

5.1 Mo Mātou

5.1.1 Māmā as kaitiaki

If we start from a place of recognising that Māori Māmā want the best for their tamariki and are in the role of ‘fiercely protecting’ their pēpi/tamariki - we can utilise this knowledge to promote positive messaging, clinical service delivery and policy, that is not deficits focused or shaming. The emphasis on protecting tamariki is an important lever as Māmā are actively seeking and wanting information and services that meet their needs.

5.1.2 Māmā need trusting relationships and holistic whānau-centric care

Meeting the needs of Māori Māmā must first involve a trusting relationship and commitment to the whole person, not just parts of them (i.e., vaccinating their tamariki). Services must be genuinely interested in the wellbeing of whānau, as a whole. An example of a whole of whānau approach is whānau ora. Whānau ora as an outcome, is defined as a “vibrant and flourishing whānau, who are economically secure, culturally confident, educated in both te Ao Māori and te ao Pākehā, and making a meaningful contribution to our society”; in other words, whānau ora refers to our *aspirations as Māori to thrive as Māori* (Te Puni Kōkiri, 2016).

Further, whānau ora is not another government policy or programme that has contracted out, instead it is a way of ‘being and working’ that Māori naturally adopt because Māori work collectively to support each other to achieve Mana Motuhake. In the context of this research, it is about Māori Māmā, determining what their aspirations are, and the achievement of those aspirations without having to compromise being Māori. It is about Māori Māmā determining their own visions for the wellbeing of their whānau and being supported to achieve those aspirations, in a way that best suits them.

5.1.3 Māmā have their own networks

Māmā are experts in their own lives, their complexities, challenges, and their strengths - yet health providers and services view Māori Māmā as *passive recipients* of care and health information. If Māmā do not have the information they need, they will source it elsewhere. For most participants, the first point of contact when they were concerned about the wellbeing of their tamariki was whānau and friends (e.g., their mothers, partners, nannies, koro, aunties, and other Māmā). Utilising these relational and trusted collective networks to share information would be a much more effective strategy than fighting against (i.e., myth-busting) these natural ways of sourcing knowledge. These Māmā wanted to be involved in sharing information through their own networks – a peer-support type strategy. These findings should be central in health promotion campaigns and when considering contracting practices, health and social service delivery for Māori Māmā.

5.2 Te Taonga

5.2.1 Take time to hear us, to hear our concerns

Clinicians and service providers should provide Māmā with opportunities to tell their stories and genuinely engage in a dialogue about vaccinations. Māori Māmā have heard good and bad stories about vaccinations. So, it is vital to allow time to ask Māmā about their previous (good and bad) experiences with vaccination, any stories they have heard, and/or concerns they have. Their fears and questioning should be seen as strong indicators of kaitiakitanga, expressions of love, rather than seen as being ‘vaccine resistant’.

This is evident in other areas; for instance, Alan Merry, Chairman of the Health Quality and Safety Commission noted, “that Māori children with asthma have more prescriptions for reliever medications contributing to the 30 per cent higher rate of hospitalisation” (Jones, 2019). He also noted that Māori consistently rated the communication with hospital staff and doctors lower than other groups. This was linked to experiences of racism and discrimination by whānau Māori. Don’t undermine whānau fears, don’t be coercive, don’t be racist and provide time for discussions.

5.2.2 Kanohi te kanohi, with people like me

Communications about vaccination should be focused on relational factors, with people who look like them, with discussions about how these factors influence whānau whakapapa. The content should be factual and address the positive aspects (e.g., benefits, etc.), concerns (e.g., side effects, etc.), fears about vaccination, timing of vaccinations (e.g., explain why vaccinations are given so early/at six weeks) and how mātauranga Māori can be utilised in this context (e.g., a story of a Māmā Māori who used mātauranga Māori in tandem with vaccinations). There must be options for Well Child care. Māori Māmā wanted to be able to ‘shop around’ and seek out people who they felt respected them and listened to them. There should be conversations about expectations of quality service and how Māmā can move to another provider if they are not getting their needs met, or services are undermining their Mana Motuhake. These communications should be easily consumable, short, fun and engaging on various digital platforms.

5.2.3 Māmā have their own networks

Again, as a public health strategy, utilising the natural information networks of Māori Māmā was suggested. They wanted to build safe collective networks that encourage the participation of interested Māmā; to engage in safe storytelling – whakawhitiwhiti kōrero, kōrero, whakapapa, reconnecting and healing. For example, the majority of Māmā had their tamariki enrolled in Kohanga reo/early childhood education. Māmā felt that holding wānanga to share information on vaccinations would benefit Māmā, tamariki and whānau in general. Day-care providers, caregivers, grandparents, and others are involved in the care of tamariki and are important to share information and have conversations with, as the Māmā see them and value them as sources of reliable information. Sharing of information that was correct by Māmā themselves, rather than perpetuating myths and fears fostered in social media networks. The distribution of resources in relation to these factors can be best achieved by working with the community and across agencies to ameliorate or change approaches to have a greater impact. What was important was how the information was packaged, presented and who delivered/facilitated the sharing of information.

5.3 Tūhonohono

5.3.1 Current systems are racist and exclude Māori worldviews

The impact of institutionalised racism and bias in healthcare was painfully evident in the stories Māori Māmā shared, resulting in them disengaging from care or having poor vaccination experiences with their tamariki. Māori are entitled to non-racist healthcare as partners in Te Tiriti o Waitangi (Came-Friar et al., 2019; Durie, 1998). Alongside Te Tiriti o Waitangi, there are other legislative policies that support the rights to non-racist care as noted in the Human Rights Act (1993) in general accordance with United Nations Covenants and Conventions on Human Rights, the New Zealand Public Health and Disability Act 2000, the Health and Disability Services (Safety) Act 2001, the Health Practitioners Competence Assurance Act 2003, the Health Act 1956 and others.

Being overrepresented in deficit health statistics is not because of employment, education or economic factors, it is a result of systemic institutionalised racism within our health system that is supported by racist policies. There are numerous studies showing that people exposed to racism have poorer health outcomes, alongside reduced access to health care and poorer patient experiences. Strategies, policies, and programmes that address racism and resist the colonising influence of ‘policing our tamariki’ are required for Māori Māmā to trust health services. Supporting Māori health providers to engage fully and holistically with whānau Māori is required.

5.3.2 Seeking new solutions: Mātauranga Māori and Western healthcare

The use of tikanga and culturally appropriate practices in health services was associated with greater satisfaction and stronger relational outcomes. There was a strong desire for culturally relevant interventions for the whole whānau rather than individualised, ‘tickbox’ care. Māori Māmā wanted culturally and clinically safe practices. The whānau ora approach to care, was also highly desired – to be seen as a whole person, within the context of their whānau and hapū. Māori Māmā wanted rongoā Māori practices alongside mainstream healthcare. Although Māori Māmā felt rongoā Māori was gaining

acceptance in Western healthcare systems (e.g., some health clinics engaging in rongoā Māori), there were still few options where this was happening with vaccination.

An understanding that Māori do not exist in isolation of whānau and whakapapa and are therefore not likely to achieve whānau ora if treated as individuals in isolation from their wider collectives. Collectives may be whakapapa-based (whānau, hapū or iwi), organisational or community-based or based around sports teams or other collective structures.

5.3.3 In pursuit of Mana Motuhake

First, to achieve one's Mana Motuhake within a whānau ora setting, several pre-requisites are required. That is, whānau ora (the wellbeing of a family) will not occur nor be achieved without the basic conditions being met. Addressing the social determinants of wellbeing, poverty, housing, food security and discrimination are pre-requisites. This will require a multi-faceted and intersectoral approach with the common goal to create and maintain healthy whānau.

Secondly, health providers, Māori and non-Māori, must be able to respond to whānau needs, and consider solutions from a position of the collective. What is required to address and achieve participation by Māori Māmā and achieve their aspirations? Each community should be able to respond to this question in ways that make sense for them, embrace their uniqueness, and sees them as collectives who are relational and want the best for their tamariki.

5.4 Mātauranga Whakakoranga

5.4.1 Address mistrust

One of the main findings was the general mistrust of the Well Child sector. Nurses, Doctors, and other people working to vaccinate tamariki can act in ways that make Māori Māmā feel inadequate, fearful, resistant, or uncomfortable. This required them to be brave and push back, risking their relationships with health providers. To address mistrust, service providers must develop consistent services and relationships that are ongoing, holistic and involve listening to the concerns of Māmā. We need the most skilled people working with Māori, and people who look like them. We also need to address the transactional nature of health and wellbeing and seek new ways to engage with whānau.

5.4.2 Non-racist workforce

Despite the Crown's commitment to honouring Te Tiriti o Waitangi, New Zealand's health system still practices inequity, inequality and racism – also referred to as systemic racism. Training for health professionals in cultural safety, non-racist care, how to engage in tikanga, and how to engage in healthy conversations is required. This would require the Ministry of Health to accept Māori Māmā taking responsibility for services being delivered in ways that are culturally acceptable, appropriate and of the highest quality. This would include mātauranga Māori, rongoā and Western medicine sitting side by side and sharing two common goals – to improve the health and wellbeing of whānau and tamariki in Aotearoa New Zealand with the consistent coordination and delivery of services to Aotearoa New Zealand communities.

This could be done by *strengthening* the capacity and scope of providers, *developing* a workforce with service-worker training and *including* Māori Māmā to develop and deliver training. This should be core competency for anyone working in communities and primary care with whānau Māori. Being nice, is not enough.

5.4.3 Increase Māori workforce and Māori health providers training

More Māori clinicians are required who are skilled in providing whānau ora care. While there was poor service in both Māori and Western service providers, Māmā preferred a whānau ora approach to care. Some felt that Māori providers were becoming contract-driven with regards to vaccinations, much like mainstream providers. A whānau ora approach requires strong generalist skills, so that clinicians are competent to deal with whatever health issues arise within the whānau. We recommend that specific specialised training is delivered so that Māori clinicians working in the ‘whānau ora’ space are competent in providing care in tandem with mātauranga Māori modalities. To be experts in both types of knowledge will require our most skilled clinicians to work with Māori. In this regard, Māori providers and nurses require at least pay equity and should be acknowledged for their specialised skills.

5.5 Pūtea tautoko

Again, Māori Māmā who participated in these focus groups were eager to share their knowledge and be part of campaigns to share their knowledge for the benefit of whānau and other Māori Māmā. They wanted to be involved and provide peer support, education, and reassurance around this kaupapa. There are networks of Māmā around Aotearoa New Zealand, who are keen to do this mahi with some support and education. We should be utilising this network of Māmā, investing in their education and training – especially given the shortage of Māori health workforce. We recommend training to support Māori community workers and peer leaders as a genuine strategy to improve knowledge in Māori communities, but also increase the Māori health workforce.

5.6 Hanga Mahere

There are examples of how whānau ora models of care can be rolled out with urgency. For example, Covid-19 demonstrated how Māori providers with high trust following a whānau ora approach can deliver on holistic outcomes for whānau Māori. As part of the lockdown, the Government developed a Māori response package focussed on supporting hard-to-reach and vulnerable whānau. The initial focus was on supporting health and social service providers to help whānau stay at home to break the chain of transmission of the virus. To support this package, a deliberate policy decision was made to take advantage of those institutions in Te Ao Māori best placed to deliver to care and services to whānau.

Throughout the lockdown, 132 Māori health and social service providers became the primary delivery agents to whānau and hapū across the motu. The Whānau Ora Commissioning Agencies were also involved, delivering over 100,000 care and hygiene packages to whānau. While to date there has been no formal evaluation of the ‘Māori response,’ what is known is that through these Māori-led initiatives

many whānau, who would otherwise have received little or no targeted support during the pandemic, had their immediate physical, emotional, and spiritual needs met as iwi and urban groups mobilised resources, including online karakia, food parcels and even firewood.

What is also of interest is just how effective and efficient whānau, hapū, iwi, marae and local Māori providers were when officials worked with a sense of urgency, a shared mission and gave way to local decision-making. It shows the sort of handbrake the kāwanatanga can be on Mana Motuhake when it is moving at its own pace and working in its silos. Before the pandemic, the conventional wisdom was that decisions needed to be made in Wellington, by senior officials. What appears to have worked well is flexible, shorter, and more local decision-making chains and acceptance that 'by Māori, for Māori' initiatives have worked well (Boulton & Te Kawa, 2020).

5.7 Strengths and limitations

This report is based on data collected from 10 focus groups primarily across Tai Tokerau with 87 Māori Māmā. Participants came from a range of settings and demographic features. There was a diverse representation of rural, small town and urban participants. They had a range of educational qualifications, with most having completed high school. There were a range of whānau experiences from first time mothers to very experienced mothers with 10 children. There was a range of experiences with various healthcare providers throughout the region and varying experiences with vaccination. Thus, the findings in this report relate to the experiences and thoughts of a diverse group of Māori Māmā. However, it should be noted that this region has its own unique landscape of healthcare providers and some of this information may not be generalisable. Despite this caveat, we have identified key factors that support a communications strategy informed by Māori Māmā that will likely resonate with other Māori Māmā and whānau throughout Aotearoa New Zealand.

6 Conclusions

These findings highlight the complex social lives of Māori Māmā and how these factors influence their decisions to vaccinate their pēpi/tamariki. Māori Māmā had expectations that vaccination and Well Child services would be delivered consistently, with providers who were familiar, genuinely interested, culturally appropriate and of the highest clinical quality. We also think there are learnings presented herein that can be transferred to the Covid-19 vaccine roll-out for whānau Māori.

Māori Māmā felt that current systems that govern their child's wellbeing undermined their Mana Motuhake (self-determination) as kaitiaki for their tamariki. Māori Māmā wanted the best for their tamariki; however, the procedural nature of vaccination, coercive communications and actions about vaccinations, lack of consideration for mātauranga Māori and whakawhānaungatanga, meant that trust was eroded. Furthermore, the wider social determinants of wellbeing, including institutional racism, poverty and poor access to healthcare eroded their ability to access services for their whānau wellbeing. The detrimental effects of institutional racism, racism in the media and subtle or symbolic racism against Māori have been thoroughly documented.

Despite these concerns, Māori Māmā were not against vaccinations per se – instead they had a healthy wariness and scepticism in the absence of quality conversations with health professionals. They wanted to hear stories from people they trusted, that looked like them. They wanted open and honest conversations about vaccinations with trusted and familiar health professionals, to choose their preferences and have some consistency. Māori Māmā wanted control of the wellbeing of their tamariki and wanted to be involved in 'how that looked' at all levels.

There was a desire to utilise their own knowledge of their tamariki, the collective knowledge of those around them and mātauranga Māori from their tupuna, alongside quality Western/mainstream knowledge systems. Māori Māmā have a desire to be treated as a whole person, who is connected, celebrated, and valued – and they want this to be reflected in the services and professionals that they engage with.

Finally, the right to have good self-determined lives should be a basic human right for Māori Māmā and their whānau. Flexible, consistent health and holistic models of vaccination that value mātauranga Māori and the natural networks and collectiveness of whānau are required. These findings highlight the many strategies, agencies, and services that will be required to address the current shortfalls in service provision. Weaving these many strands together will require cooperation and genuinely placing whānau at the centre of any model.

'Mā Whero, Mā Pango, ka oti te mahi' – With the red thread, and the black thread, the work will be completed'.

7 References

- Boulton, A., & Te Kawa, D. (2020). *Progressive Thinking: Raising waka, and not just yachts*. <https://www.psa.org.nz/assets/Uploads/ProgressiveThinking-Dr-Amohia-Deb-Te-Kawa-Raising-Waka-edited.pdf>
- Braun, V., & Clarke, V. (2012). Thematic analysis. In H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf, K. J. Sher (Eds.). *APA Handbook of Research Methods in Psychology, Vol 2. Research Designs: Quantitative, Qualitative, Neuropsychological and Biological* (pp. 57-71). Washington: American Psychological Association. <https://doi.org/10.1037/13620-004>
- Came-Friar, H., McCreanor, T., Manson, L., & Nuku, K. (2019). Upholding Te Tiriti, ending institutional racism and Crown inaction on health equity. *New Zealand Medical Journal*, 132(1492), 62-66.
- Clark, T., Dasgupta, K., Lewycka, S., Pacheco, G. & Plum, A. (2020). *Ethnic differences in the use and experience of child healthcare services in NZ: An empirical examination*. New Zealand Work Research Institute, Auckland, New Zealand. <https://bit.ly/3FMo96b>
- Durie, M. H. (1998). *Te Mana, Te Kāwanatanga: the politics of self determination*. Auckland, Oxford University Press.
- Hobbs, M.R., et al., (2017). Ethnic disparities in infectious disease hospitalisations in the first year of life in New Zealand. *Journal of Paediatrics and Child Health*, 53(3), 223-231.
- Jones, N. (2019). Urgent need for action: institutional racism killing and harming Māori, says Health Quality & Safety Commission. *New Zealand Herald*. <https://bit.ly/3uErRkb>
- Le Grice, J., Braun, V., & Wetherell, M. (2017). "What I reckon is, is that like the love you give to your kids they'll give to someone else and so on and so on": Whānaungatanga and mātauranga Māori in practice. *New Zealand Journal of Psychology*, 46(3), 88-97.
- Ministry of Health. (2021). *National and DHB immunisation data*. Immunisation. <https://www.health.govt.nz/our-work/preventative-health-wellness/immunisation/immunisation-coverage/national-and-dhb-immunisation-data>
- Marriot, L. & Sim, D. (2014). *Indicators of inequality for Māori and Pacific People*. Victoria Business School. <https://bit.ly/3BDU2M1>
- Pihama, L. (2010). Kaupapa Māori theory: transforming theory in Aotearoa. *He Pukenga*, 9(2), 5-15.
- Te Puni Kōkiri. (2016). The whānau ora outcomes framework: empowering whanau into the future. Te Puni Kōkiri. <https://www.tpk.govt.nz/docs/tpk-wo-outcomesframework-aug2016.pdf>
- Walker, L., Ward, E., & Gambitsis, D. (2019). *Improving New Zealand's childhood immunisation rates: Evidence Review 5 July 2019*. Allen + Clarke. <https://bit.ly/3BQGqgc>

8 Glossary¹

| Reo | Meaning |
|------------------------|--|
| Aotearoa | New Zealand |
| Hapū | Kinship group, clan, tribe, subtribe |
| Hapū Māmā | Pregnant, expectant with child |
| Kaitiaki | Trustee, minder, guard, custodian, guardian, caregiver, keeper, steward |
| Kanohi te kanohi | Face to face, in person |
| Karakia | To recite a prayer |
| Kāwanatanga | Government, dominion, rule, authority, governorship, province |
| Kohanga reo | Early childhood education, Māori language preschool |
| Kōrero | Talking together |
| Koro | Elderly man, grandfather, grandad, grandpa |
| Kotahitanga | Unity, togetherness, solidarity, collective action |
| Kupu | Words, to speak |
| Kura | School, education, learning gathering |
| Māmā | Mother |
| Mana | Power and status |
| Mana Motuhake | Self-determination |
| Māori | Indigenous people of Aotearoa New Zealand |
| Mātauranga Māori | Māori knowledge – the body of knowledge originating from Māori ancestors, including the Māori world view and perspectives, Māori creativity and cultural practices |
| Mirimiri | Massage |
| Motu | Island, country, land, nation |
| Ngākau | Affections, heart, soul |
| Pēpi | Baby, infant |
| Rangahau | Research |
| Rohe | Boundary, district |
| Rongoā | Remedy, treatment, solution, medication |
| Tamariki | Children, used in the plural |
| Te Ao Wairua | The spiritual world |
| Te Tiriti o Waitangi | The Treaty of Waitangi (founding document of Aotearoa) |
| Tikanga | Customary system of values and practices |
| Toi Māori | Māori arts |
| Tupuna | Grandparent or ancestor |
| Wairua | Spirit, soul, essence |
| Wānanga | To meet and discuss |
| Whakapapa | Genealogy |
| Whakawhānaungatanga | Process of establishing relationships, relating well to others |
| Whakawhitiwhiti kōrero | To discuss, deliberate, negotiate, communicate |
| Whānau | Family group, extended family |
| Whānau ora | Healthy, wellbeing of family |
| Whānaungatanga | Sense of being together, relationship through shared experiences |
| Whare | House, building, residence |

¹ Te Aka Māori-English; English Māori Dictionary Website

9 Appendix

Table A 1. Demographic characteristics across samples

| | Full sample | | Main sample | | HPA booster sample | |
|-----------------------------------|-------------|------|-------------|------|--------------------|-------|
| | Count | % | Count | % | Count | % |
| Age bracket (years) | | | | | | |
| 18-29 | 36 | 35.0 | 25 | 37.9 | 11 | 29.7 |
| 30-39 | 52 | 50.5 | 32 | 48.5 | 20 | 54.1 |
| 40-49 | 9 | 8.7 | 5 | 7.6 | 4 | 10.8 |
| 50-59 | 4 | 3.9 | 3 | 4.5 | 1 | 2.7 |
| 60+ | 2 | 1.9 | 1 | 1.5 | 1 | 2.7 |
| Gender | | | | | | |
| Female | 98 | 95.1 | 61 | 92.4 | 37 | 100.0 |
| Male | 5 | 4.9 | 5 | 7.6 | 0 | 0.0 |
| Languages spoken | | | | | | |
| English | 100 | 97.1 | 63 | 95.4 | 37 | 100.0 |
| Te Reo | 37 | 35.9 | 16 | 24.2 | 21 | 56.8 |
| Other | 15 | 14.6 | 13 | 19.7 | 2 | 5.4 |
| Education | | | | | | |
| School certificate | 59 | 57.3 | 40 | 60.6 | 19 | 51.4 |
| Trade qualification | 16 | 15.5 | 10 | 15.2 | 6 | 16.2 |
| Bachelor's degree | 2 | 1.9 | 1 | 1.5 | 1 | 2.7 |
| Post-graduate degree | 5 | 4.9 | 4 | 6.1 | 1 | 2.7 |
| Other | 16 | 15.5 | 8 | 12.1 | 8 | 21.6 |
| Missing | 3 | 2.9 | 3 | 4.5 | 0 | 0.0 |
| Occupation | | | | | | |
| At-home parent | 42 | 40.8 | 29 | 43.9 | 13 | 35.1 |
| Student | 8 | 7.8 | 8 | 12.1 | 0 | 0.0 |
| Unemployed | 11 | 10.7 | 7 | 10.6 | 4 | 10.8 |
| Employed | 34 | 33.0 | 16 | 24.2 | 18 | 48.6 |
| Missing | 8 | 7.8 | 6 | 9.1 | 2 | 5.4 |
| Family type | | | | | | |
| Couple with children | 57 | 55.3 | 36 | 54.5 | 21 | 56.8 |
| Single parent | 34 | 33.0 | 25 | 37.9 | 9 | 24.3 |
| Legal guardian | 5 | 4.9 | 3 | 4.5 | 2 | 5.4 |
| Other | 5 | 4.9 | 2 | 3.0 | 3 | 8.1 |
| Missing | 2 | 1.9 | 0 | 0.0 | 2 | 5.4 |
| Born in NZ | | | | | | |
| Yes | 96 | 93.2 | 59 | 89.4 | 37 | 100.0 |
| No | 7 | 6.8 | 7 | 10.6 | 0 | 0.0 |
| Number of children in care | | | | | | |
| One | 29 | 28.2 | 18 | 27.3 | 11 | 29.7 |

| | | | | | | |
|--------------------------------------|-----|------|----|------|----|------|
| Two | 20 | 19.4 | 11 | 16.7 | 9 | 24.3 |
| Three | 25 | 24.3 | 17 | 25.8 | 8 | 21.6 |
| Four | 13 | 12.6 | 9 | 13.6 | 4 | 10.8 |
| Five | 8 | 7.8 | 4 | 6.1 | 4 | 10.8 |
| Six or more | 7 | 6.7 | 6 | 9.1 | 1 | 2.7 |
| Missing | 1 | 1.0 | 1 | 1.5 | 0 | 0.0 |
| Number of people in household | | | | | | |
| Two | 4 | 3.9 | 2 | 3.1 | 2 | 5.4 |
| Three | 18 | 17.6 | 9 | 13.6 | 9 | 24.3 |
| Four | 16 | 15.5 | 9 | 13.6 | 7 | 18.9 |
| Five | 21 | 20.3 | 14 | 21.2 | 7 | 18.9 |
| Six or more | 43 | 41.7 | 32 | 48.5 | 11 | 29.7 |
| Missing | 1 | 1.0 | 0 | 0.0 | 1 | 2.7 |
| Household income | | | | | | |
| <25,000 | 32 | 31.1 | 25 | 37.9 | 7 | 18.9 |
| 26,000-50,000 | 26 | 25.2 | 13 | 19.7 | 13 | 35.1 |
| 51,000-75,000 | 16 | 15.5 | 11 | 16.7 | 5 | 13.5 |
| 76,000-100,000 | 9 | 8.7 | 8 | 12.1 | 1 | 2.7 |
| 100,000+ | 6 | 5.8 | 4 | 6.1 | 2 | 5.4 |
| Missing | 14 | 13.6 | 5 | 7.6 | 9 | 24.3 |
| Enrolled in ECE | | | | | | |
| Yes | 58 | 56.3 | 32 | 48.5 | 26 | 70.3 |
| No | 43 | 41.7 | 33 | 50.0 | 10 | 27.0 |
| Missing | 2 | 1.9 | 1 | 1.5 | 1 | 2.7 |
| Vaccination status | | | | | | |
| Fully vaccinated | 77 | 74.8 | 48 | 72.7 | 29 | 43.9 |
| Partially vaccinated | 15 | 14.6 | 10 | 15.2 | 5 | 7.6 |
| Not vaccinated | 2 | 1.9 | 2 | 3.0 | 0 | 0.0 |
| Do not know | 3 | 2.9 | 2 | 3.0 | 1 | 1.5 |
| Missing | 6 | 5.8 | 4 | 6.1 | 2 | 3.0 |
| Received vaccinations on time | | | | | | |
| Yes | - | - | - | - | 21 | 56.8 |
| No | - | - | - | - | 13 | 35.1 |
| Do not know | - | - | - | - | 2 | 5.4 |
| Missing | - | - | - | - | 1 | 2.7 |
| Observations | 103 | | 66 | | 37 | |

Notes: All measurements are taken as at the time of the survey. Age is in years. Participants may have picked more than one language spoken. Education is the highest formal qualification achieved. Household income is the combined annual income (NZD) of each household. ECE stands for early childhood education. 'Fully vaccinated' means that the child has received all of the recommended vaccinations, 'Partially vaccinated', the child has received some of the recommended vaccinations, and 'Not vaccinated', the child has received no vaccinations. The child has received their vaccinations on time if they have received the vaccination by the recommended age. This question was only posed to the participants in the HPA booster sample, thus this information is only given for this sample.



NEW ZEALAND WORK RESEARCH INSTITUTE

Auckland University of Technology, Auckland, New Zealand
work.research@aut.ac.nz | www.workresearch.aut.ac.nz

