Best Practice Recommendations for Engagement with Māori Whānau in the Neonatal Intensive Care Unit

A practice project for the degree of
Master of Health Practice
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HE WHAKATAUKĪ A MĀORI PROVERB

He rau ringa e oti ai.

Many hands make light work.

Whakataukī (Māori proverbs) play a vital role in *Māori* (Indigenous people of Aotearoa New Zealand) culture. Whakataukī embody the value and wisdom of Māori culture and are often used to convey key messages. The above whakataukī is symbolic, as it encourages people to work together. It was suitable for this practice project as it acknowledges the hard work already done by so many to improve neonatal services nationally for *whānau* (family); whilst at the same time, opening the invitation to others to participate in making neonatal services more welcoming environments for whānau.

ATTESTATION OF AUTHORSHIP

“I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.”

Signed: Date: 05/04/22

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ABSTRACT

Māori (Indigenous people of Aotearoa New Zealand) are overrepresented within the populations of Neonatal Intensive Care Units (NICUs). Admission to the NICU is a stressful event for Māori *whānau* (family). Cultural, social, and health inequities that disproportionality affect Māori contribute further to this stress and it has become evident that the current system in place at Capital & Coast District Health Board (CCDHB) NICU (Wellington NICU) is failing to support whānau.

Neonatal health practitioners (NHPs) need more support and guidance in order to improve the experiences of Māori whānau in NICUs across Aotearoa. Hence, the aim of this practice project is to develop recommendations for the development and implementation of a Recommended Best Practice (RBP) to guide NHPs for successful engagement with Māori whānau in the NICU environment.

The practice change project is directed by Rosswurum and Larrabee's (1999) model for evidence-based practice. The model contains six key stages that help guide health practitioners through a systematic process for change to evidence-based practice. These steps are: assessing the need for change in practice, linking identified problems with interventions and outcomes, synthesising the best available evidence, designing a practice change, implementing and evaluating the change to practice, and integrating and maintaining the change to practice.

Due to academic time constraints, only stages 1-4 of the model were completed as part of the practice project. Adaptions were made to the model to suit the development of the project which is presented across five chapters. The practice project includes consultations with CCDHB key stakeholders, an audit of CCDHB NICU referrals to Māori support services, a survey of the CCDHB NICU environment, and a literature review. The final recommendations for practice change are presented in chapter five.

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GLOSSARY

Given the topic of this project, Māori words are used throughout this report. Māori words and their English equivalents are provided in Table 1.

Table 1.

Glossary

Māori word	Definition
Aotearoa	New Zealand
Atua	God, supernatural being
Hapū	Kinship group, pregnant
Hapūtanga	Pregnancy
Hauora	A holistic view of health and wellbeing
He honohono kākano rua	Bicultural engagement
Hinengaro	Mind, thought, intellect, consciousness
Hoa rangatira	Partner
Hui	Meeting
Iwi	Tribal group
Kai	Food
Kaiāwhina	Māori healthcare support worker
Kaitiakitanga	Stewardship
Kanohi ki te kanohi	Face to face, in person
Karakia	Prayer, incantations
Kaumātua	Respected elder
Kaupapa	Purpose, policy, matter for discussion
Kaupapa Māori	Maori approach
Kaupapa Māori Research	By, with, for Māori research
Kawa Māori	Māori protocols
Kawakawa	Piper excelsum plant
Kawanatanga	The right of governance
Koha	Gift, offering
Kōrero	To say, speak, read, talk, address
Kōwhiringa	Options
Mana	Power, influence, prestige
Manaakitanga	Hospitality, kindness, generosity, support
Mana Māori	Māori autonomy, Māori authority, Māori rights
Mana motuhake	Self-governance. Unique and indigenous
Mana tangata	Power and status accrued through one's leadership. Human rights
Mana taurite	Equity
Mana whakahaere	Governance, authority
Mana whenua	Māori who have historic or tribal rights over land
Māori	Indigenous peoples of Aotearoa New Zealand
Mate	Deceased
Mate haere	Dying
Marae	Communal sacred place serving religious/social purposes
Māramatanga	Enlightenment, insight, understanding
Mātauranga Māori	Māori knowledge
Mātua	Parents
Mihi	Acknowledge, pay tribute
Mirimiri	Massage
Muka	Flax fibre

Māori word	Definition
Noa	Free from tapu (sacred)
Noho marae	Marae stay
Oritetanga	Equality
Papatūānuku	Mother Earth
Papamuka	Linen
Pepeha	A way of introducing yourself in Māori
Pēpi	Baby
Ranginui	Sky Father
Taha hinengaro	Mental wellbeing
Taha tinana	Physical wellbeing
Taha wairua	Spiritual wellbeing
Taha whānau	Family wellbeing
Tamariki	Children
Tangata whenua	People of the land
Taonga	Treasure, property, goods, anything of value
Tapu	Sacred
Te ao	The world
Te ao Māori	The Māori worldview
Te tautoko whānau	Family support
Te Tiriti o Waitangi	The Treaty of Waitangi
Te reo Māori	The Māori language
Tikanga Māori	Māori philosophies and cultural principles
Tino rangatiratanga	Autonomy, self-determination
Tīpuna	Ancestors, grandparents
Tohunga	Priest, healer
Tuku whēkau	Organ donation
Pākehā	New Zealander of European descent
Papakainga	Homeland
Pārongo	Information
Pātaka miraka	Milk storage
Pātuitanga	Partnership
Rangatira	Chiefs
Ritenga	Customary rituals
Rongoā Māori	Māori traditional medicine
Rōpū	Group
Ūkaipō	Mother, source of sustenance
Wahakura	Traditional woven bed
Wahine	Woman, female
Wāhine	Women, females
Wai tinana	Body substances
Waiata	Songs
Waiora	Health and wellbeing
Wairua	Spirit
Wairuatanga	Spirituality
Whakamarumarutia	Active protection
Whakapapa	Genealogy, continual layering of foundations
Whakataukī	Māori proverbs
Whakawhanaungatanga	Process of establishing relationships
Whānau	Family. Also means to give birth
Whāngai ū	Breastfeeding
Whare whānau	Family rooms
Wharenui	Meeting house
Wharepaku	Toilet
Whenua	Land, territories, placenta

LIST OF ACRONYMS

Table 2.

List of acronyms and meanings

Acronym	Meaning
ACNM	Associate Charge Nurse Manager
AUTEC	Auckland University of Technology Ethics Committee
CCDHB	Capital & Coast District Health Board
CNE	Clinical Nurse Educator
CNM	Charge Nurse Manager
CNS	Clinical Nurse Specialist
DHB	District Health Board
FCC	Family Centred Care
FICare	Family Integrated Care
HCA	Health Care Assistant
HDEC	Health and Disability Ethics Committee
HDU	High Dependency Unit
HNZ	Health New Zealand
HWNZ	Health Workforce New Zealand
ICU	Intensive Care Unit
MDT	Multidisciplinary Team
MHA	Māori Health Authority
MoH	Ministry of Health
NHP	Neonatal Health Practitioner
NICU	Neonatal Intensive Care Unit
NNCA	Neonatal Nurses College of Aotearoa
NNP	Neonatal Nurse Practitioner
NTA	National Travel Assistance
PIN	Parent Infant Nursery
RBP	Recommended Best Practice
RMHW	Ronald McDonald House Wellington
RMO	Resident Medical Officer
RN	Registered Nurse
SCBU	Special Care Baby Unit
SLT	Speech and Language Therapist
SMO	Senior Medical Officer
TA	Thematic Analysis
TN	Transport Nurse
WHO	World Health Organization
WCS	Whānau Care Services
WhICare	Whānau Integrated Care

OVERVIEW OF CHAPTERS

A brief overview of the five chapters presented in this project (refer to Table 3).

Table 3.

Overview of chapters

Chapters	
Chapter 1 Background	Provides background and contextual issues behind the project including, the history of colonisation of Aotearoa; honouring te Tiriti o Waitangi in health; Māori health inequities evident today; important Māori values, beliefs, and practices around birth and infants; how NICUs operate nationally, with a specific focus on CCDHB NICU; and overall aims of the project.
Chapter 2 Practice project design	Provides justification for the project, ethical considerations, and methodology used to guide the development of the project.
Chapter 3 Findings	Presents findings of the project including internal and external data. Problems are identified and linked with potential interventions and ideal outcomes.
Chapter 4 Synthesis of best evidence	Provides a synthesis of the best available evidence. This includes a literature search and literature review.
Chapter 5 Design practice change	Presents a discussion of the project's overall findings, including comments on the model, the impact of COVID-19, as well as limitations and key strengths of the project and the final recommendations for practice change .

CHAPTER 1 – BACKGROUND

Introduction

Māori (Indigenous people of Aotearoa New Zealand) are overrepresented across Neonatal Intensive Care Units (NICUs), accounting for 28 per cent of infants admitted (Malatest International, 2019). Admission to the NICU is a stressful event for Māori *whānau* (family). Cultural, social, and health inequities that disproportionality affect Māori contribute further to this stress, and it has become evident that the current system in place at Capital & Coast District Health Board (CCDHB) NICU (Wellington NICU) is failing to support whānau.

Neonatal health practitioners (NHPs) need more support and guidance in order to improve the experiences of Māori whānau in NICUs across Aotearoa. Hence, the aim of this practice project is to generate recommendations for the development and implementation of a Recommended Best Practice (RBP) to help guide NHPs for successful engagement with Māori whānau in the NICU environment.

Chapter one of this report will detail the background information and contextual issues that led to the development of the project.

Colonisation of Aotearoa

Māori are *tangata whenua* (people of the land) of *Aotearoa* (Māori name for New Zealand). The first Māori are believed to have sailed to Aotearoa from the East Polynesian region of Hawaiki, the original home of Polynesians. In Māori mythology, Hawaiki is the place where Io, the supreme being, created the world and its first people (Te Ahukaramū Charles Royal, 2015). Māori are believed to have first settled in Aotearoa sometime between 1250 and 1300AD. According to tribal narratives, the first Polynesian navigator to discover Aotearoa was named Kupe (New Zealand Now, 2020).

The first European to come to Aotearoa was Dutch explorer Abel Tasman in 1642. It was not until 1769 that Captain James Cook made his first expedition to Aotearoa (New Zealand Now, 2020). Following that expedition, European whalers and sealers started making regular visits to Aotearoa. Among them were missionaries, which lead to many Māori becoming Christians and adopting a *Pākehā* (New Zealander of European descent) way of life (Te Ahukaramū Charles Royal, 2005).

By 1830, the British Crown decided it was time to officially colonise and a build government in Aotearoa. This led to the drawing up of Te Tiriti o Waitangi (The Treaty of Waitangi) in 1840, a group of nine documents representing an agreement between the British Crown and Māori *rangatira* (chiefs). There are two versions of Te Tiriti, one in *te reo Māori* (the Māori language), which was predominantly signed by most Māori rangatira; and the English version, signed by representatives of the British Crown. Many rangatira spoke against a treaty, with many refusing to sign either version. Both versions contain a broad statement of principles over three articles (Ministry for Culture and Heritage, 2017). Both versions were prepared in just a few days, with the English version translated into te reo Māori overnight by European missionaries (Ministry for Culture and Heritage, 2017). This has led both texts to carry meanings with significant differences; most importantly, in Article 1, the word 'sovereignty' in the English text was translated as '*kawanatanga*' (governance). Many Māori rangatira believed they were only giving up governance over their lands but would retain the right to manage their own affairs. In Article 2, the English text also guaranteed Māori the 'undisturbed possession' of all their properties; however, in Te Tiriti, Māori were guaranteed to remain '*tino rangatiratanga*' (full authority) over their '*taonga*' (treasure, property, goods, anything of value). The Treaty is regarded as Aotearoa's founding document; however, there remains wide dispute and controversy behind the meanings and translations of the two texts (Came et al., 2020). By 1845, many Māori had lost status in their own country to British settlers, leading to a series of conflicts, collectively known as the New Zealand Wars. Throughout these conflicts, Māori attempted to defend their land and local authority, which resulted in a large number of Māori losing their land and possessions through confiscation and sale, mostly to British settlers. Today a high percentage of Māori remain alienated from their land, resources, and way of life due to the processes of colonisation. The Crown holds on to the notion that the Treaty legitimises their rule and governance over Aotearoa and, therefore, over Māori people (Stevenson et al., 2020b). However many people in Aotearoa today believe Māori are not bound by the Treaty and should be instead committed to upholding what their ancestors signed in te Tiriti.

Māori Population Today and Socioeconomic Inequalities

Today, Māori are a large, diverse heterogeneous group, with varying lifestyles, socio-economic circumstances, and identities (Kukutai, 2004). As of June 2020, the Māori population in Aotearoa was estimated to be at 850,500 (16.7% of the national population) (Stats NZ, 2020). By 2030, the Ministry of Health (MoH) predicts that the Māori population is projected to grow by 16.2 per cent compared to 13.5 per cent for the non-Māori population (MoH – Manatu Hauora, 2018). Higher fertility rates for

Māori females, and a Māori population with a younger age structure, are potential drivers behind this predicted growth (Ministry of Health, 2018).

Today, despite many Māori remaining closely linked to their traditional social structures of whānau, *iwi* (tribe), and *hapū* (subtribe), many Māori are highly mobile; and, as previously commented, have adopted 'Pākehā views' and way of life (Abel et al., 2001). The colonisation of Aotearoa denied Māori their right to develop in accordance with their own way of life, within *mātauranga Māori* (Māori knowledge) and belief systems. This has led to many Māori being alienated from their natural resources, such as *whenua* (land, territories) and the alteration or complete loss of many traditional Māori cultural practices over time. The result is the many cultural, social, and health inequities seen for Māori today, such as lack of access to employment, income, housing, land, education, and health care (Medical Council of New Zealand, 2019; Rutter & Walker, 2021). These inequities are a continual breach of what their ancestors signed for in *te Tiriti* where, in Article 3, Māori were guaranteed *Oritetanga* (equality) with their British counterparts.

Upholding Te Tiriti o Waitangi in Health

NHPs have a responsibility to ensure Te Tiriti o Waitangi is instilled into the values of their organisation. Principles of Te Tiriti were articulated by the Courts and the Waitangi Tribunal (Te Puni Kōkiri, 2002) to provide a framework for health practitioners working with Māori to ensure they meet their obligations under Te Tiriti in practice. The Waitangi Tribunal's (2019) Hauora report recommended a set of principles for the primary health care system; however, these principles are applicable to the entire health and disability system, including District Health Boards (DHBs) and services such as NICUs that operate under DHBs (refer to Table 4).

Manatū Hauora (the MoH) is the government's principal advisor on health and disability in Aotearoa. The MoH developed *Whakamaua* (The Māori Health Action Plan 2020–2025*)*, as the implementation plan for *He Korowai Oranga* (the Māori Health Strategy). Whakamaua is the MoH's current direction for Māori health development, until 2025, and is underpinned by the MoH's new *Te Tiriti o Waitangi Framework* (MoH, 2020c) (refer to Appendix A). Alongside the principles of Te Tiriti, already commented on (refer to Table 4), the framework includes four goals, each expressed in terms of *mana* (power, influence) (refer to Table 5) to provide a clear direction for the MoH, DHBs, and services that operate within DHBs, such as NICUs, to fulfil their obligations under Te Tiriti.

Table 4.

Principles of Te Tiriti o Waitangi for the health and disability system

The principles	Application
Kōwhiringa (Options)	The Crown is required to provide for, and properly resource, kaupapa Māori health and disability services. They are also obliged to ensure all health and disability services are provided in a culturally safe and appropriate way, recognising and supporting the expression of hauora Māori models of care (MoH, 2020e).
Mana taurite (Equity)	The Crown is required to achieve equitable health outcomes for Māori.
Pātuitanga (Partnership)	The Crown and Māori are required to work in partnership in the governance, design, delivery, and monitoring of health and disability services.
Tino rangatiratanga (Self-determination)	Māori are guaranteed their right to *mana motuhake* (self-governance) in the design, delivery, and monitoring of health and disability services.
Whakamarumarutia (Active protection)	The Crown must act to their fullest capabilities to achieve equitable health outcomes for Māori. This includes ensuring Māori and Crown agents stay informed on the extent and nature of both Māori health outcomes and efforts to achieve Māori health equity.

Table 5.

He Mana tō Te Tiriti o Waitangi (Expressing Te Tiriti in mana terms)

The goals	Application
Mana whakahaere Good Government	Effective and appropriate *kaitiakitanga* (stewardship) over the health and disability system. Mana whakahaere is the exercise of control in accordance with *tikanga Māori* (Māori philosophies and cultural principles), *kaupapa Māori* (Māori approach), and *kawa Māori* (Māori protocols). This goes beyond the management of assets and resources and towards enabling Māori aspirations for health and independence.
Mana motuhake Unique and Indigenous	Enabling the right for Māori to be Māori (Māori self-determination); to exercise authority over their lives on Māori terms and according to Māori philosophies, values, and practices, including tikanga Māori.
Mana tangata Fairness and Justice	Achieving equity in health and disability outcomes for Māori, enhancing the mana of people across their life course and contributing to the overall health and wellbeing of Māori.
Mana Māori Cultural identity and Integrity	Enabling *ritenga Māori* (Māori customary rituals), which are framed by *te ao Māori* (the Māori worldview), enacted through tikanga Māori and encapsulated within *mātauranga Māori* (Māori knowledge).

In April 2021, Minister of Health and Minister of Treaty of Waitangi Negotiations Hon Andrew Little announced the government's plan to abolish all existing 20 DHBs in favour of a single national health organisation, Health New Zealand (HNZ) (Kerr, 2021). Alongside HNZ will be the development of a new independent Māori Health Authority (MHA) with joint decision-making rights in healthcare strategies and policies affecting Māori. The reforms are expected to take three years to complete. This is a significant step by the government in attempting to work towards achieving equitable health outcomes for Māori, who remain undisputedly underserved by the current health care system in Aotearoa (Manch & Witton, 2021). It is uncertain what these changes will entail for neonatal services nationally other than they will be unified under HNZ and managed via regional networks. Unification of neonatal services nationally will hopefully provide more consistent care for whānau and more easily coordinated care across services.

Hauora Māori Models of Health

Hauora (a holistic view of health and wellbeing) Māori models of health can assist in promoting the health and well-being of Māori. Such models were developed over the years to assist mainstream health care services, such as NICUs, to help engage with Māori. Recognising and supporting the expression of hauora Māori models of care is honouring Te Tiriti principle *kōwhiringa* (options). Māori hauora is invariably holistic, and centres around whānau health and wellbeing rather than the sole health of an individual (Cram et al., 2003). More widely-known, Māori hauora models of health include both Mason Durie's '*Te Whare Tapa Whā'* (refer to Figure 1) and '*Te Pae Mahutonga'*, as well as Rose Pere's *'Te Wheke'* (MoH, 2015). *Te Whare Tapa Whā* depicts a *wharenui* (meeting house) with four equal sides, each side representing the four equally important dimensions of hauora (Thompson, 2009). The sides of the wharenui include *taha hinengaro* (mental wellbeing), *taha tinana* (physical wellbeing), *taha wairua* (spiritual wellbeing) and *taha whānau* (whānau wellbeing). Should one of the four sides of the wharenui be missing or damaged, in any way, an individual and/or their whānau collective may become 'unbalanced' and may subsequently become unwell (MoH, 2017).

Whakapapa and Māori Birthing Practices

Whakapapa (genealogy) form the foundation of Māori philosophy. Within mātauranga Māori, everything is interconnected through whakapapa - the gods, natural phenomena, humans, and all other living things. Birth is the instrument through which whakapapa is created. Whakapapa provides a way of understanding the universe, including its past, present, and future (Tupara, 2017). This is why many Māori words

have multiple meanings, such as ‘whānau’ meaning both family and to give birth; ‘hapū’ meaning both sub-tribe and to be pregnant; and ‘whenua’ meaning both land and placenta. The multiple meanings and layering behind such words demonstrate the importance of pregnancy and childbirth to Māori and their deep-rooted connection to the whenua in Aotearoa. Due to the processes of colonisation, many traditional Māori cultural practices surrounding pregnancy and birth have been lost or altered over time. Traditional Māori cultural practices still practised and seen within mainstream health providers, such as DHBs and neonatal services, include *wāhine* (women) returning to their *papakainga* (homeland) to give birth; using traditional *waiata* (songs) and *karakia* (prayers) during childbirth to welcome infants into *te ao* (the world); the tying of umbilical cords with *muka* (flax fibre) ties; the burying of whenua in ancestral whenua—forever linking infants to their tribal land; the use of a *wahakura* (traditional woven bed) for infants to sleep in; and supporting wāhine in *whāngai ū* (breastfeeding) (Matthews, 2020).

Māori and Perinatal Inequities

Māori continue to experience perinatal inequities compared to Pākehā, including higher rates of maternal mortality, infant mortality, and premature birth (before 37 weeks gestations). Māori infants are more likely to be born prematurely (8.1% compared to 7.4% for non-Māori) and are more likely to suffer preterm death (359 infants died from 2007 to 2013 compared to 319 Pākehā) (Filoche et al., 2018). Premature birth before 37 weeks gestation increases the likelihood of requiring admission to a NICU (Filoche et al., 2018). Māori are overrepresented across NICUs, accounting for 28 per cent of infants admitted (Malatest International, 2019). NICUs in Aotearoa will generally administer active treatment to support infants born as early as 23+0 weeks gestation (Gillon, 2019). The chances of survival for infants born at these extreme gestations are increasing, although the developmental consequences remain a big concern and the potential long-term effects on whānau collectives are considerable (Newborn Clinical Network, 2019). Māori are, therefore, more likely to suffer the greater burden of adverse outcomes associated with premature birth such as brain haemorrhage, cerebral palsy, infection, chronic lung disease, cognitive, visual and learning impairments, and death (Filoche et al., 2018; Simpson et al., 2017).

NICUs in Aotearoa

In Aotearoa, there are six tertiary Level 3 NICUs all located in densely populated areas. Four NICUs are located in the North Island of Aotearoa (Auckland, Middlemore, Waikato, Wellington) and two NICUs are located in the South Island of

Aotearoa (Christchurch, Dunedin) (MoH, 2005). Reasons behind admission to a NICU can vary and are dependent upon a variety of factors (refer to Figure 1).

Figure 1.

Main reasons for admission to NICU (Malatest International, 2019)

Gestational age	Main reasons for admissions
< 32 weeks	Peri-viability to 23 weeks. Previous preterm birth, PIH, Fetal medicine service in 3 centres and high-risk pregnancy management, LMC registration timing and access, Continuity of care protective
32-36 weeks	SGA pathway in pregnancy, Diabetes, PIH associated with BMI Baby management of SGA or at risk of hypoglycaemia. Multiple pregnancy
37-38 weeks	Diabetes induced if > 91st%, Maternal drugs, - methamphetamine, antidepressants Induction duration. Skin to skin effectively, temperature in the first 2 hours, NOC/NEWS Elective caesarean < 39 weeks – role of steroids
39 weeks plus	HIE, foetal distress, deferred cord clamping and polycythaemia and jaundice, caesarean section, respiratory distress, sepsis. Poor feeding and excess weight loss.

Infants born prematurely; unwell at term; or who require surgical, genetic, or metabolic input, often require admission to a NICU. Tertiary Level 3 NICUs will generally administer active treatment to support infants born as early as 23+0 weeks gestation (Gillon, 2019). Secondary Level 2 neonatal units, also referred to as special care baby units (SCBUs), are usually located in less densely populated areas (refer to Figure 2) (Neonatal Nurses College Aotearoa, 2018). SCBUs will generally accept and provide care for infants from 32+0 weeks gestation and above. Level 2A SCBUs, such as Mid Central DHB, will usually provide support for infants from 28+0 weeks gestation. Infants requiring a level of neonatal care not available at their closest hospital are transferred to the nearest hospital providing that level of care. As Māori are more likely to live in rural or smaller urban areas in Aotearoa, they are often at inequitable access to best-practice life-saving neonatal care; therefore, increasing the risk of poor health outcomes (Adcock et al., 2021).

Figure 2.

Numbers of resourced cots in total (SCBU & NICU combined) by DHB in 2004 & 2018 (Malatest International, 2019)

DHB	Total resourced cots – 2018	Total resourced cots - 2004
Level 3		
L3 – ADHB	40	46
L3 – C&CDHB	36	36
L3 - CMDHB	32	24
L3 - Waikato DHB	41	31
L3 - CDHB	41	37
L3 - Southern DHB (Dunedin)	16	16
Level 2A		
L2a - HBDHB	12	12
L2a - MDHB	14	17
L2a - TDHB	8	6
Level 2		
L2 – BOPDHB	11	16
L2 – Hutt Valley DHB	12	12
L2 – Wairarapa	4	1
L2 – Lakes DHB	8	10
L2 – NDHB	10	10
L2 – Hauora Tairāwhiti	6	6
L2 – Waitemata DHB	24	12 (about to open addition 12, Auckland to reduce)
L2 – Whanganui DHB	3	4
L2 – NMDHB	12	14
L2 – Timaru	2	2
L2 – West Coast DHB	2	2
L2 – Invercargill	8	5
Total across all levels	**342**	**319**

Wellington (CCDHB) NICU

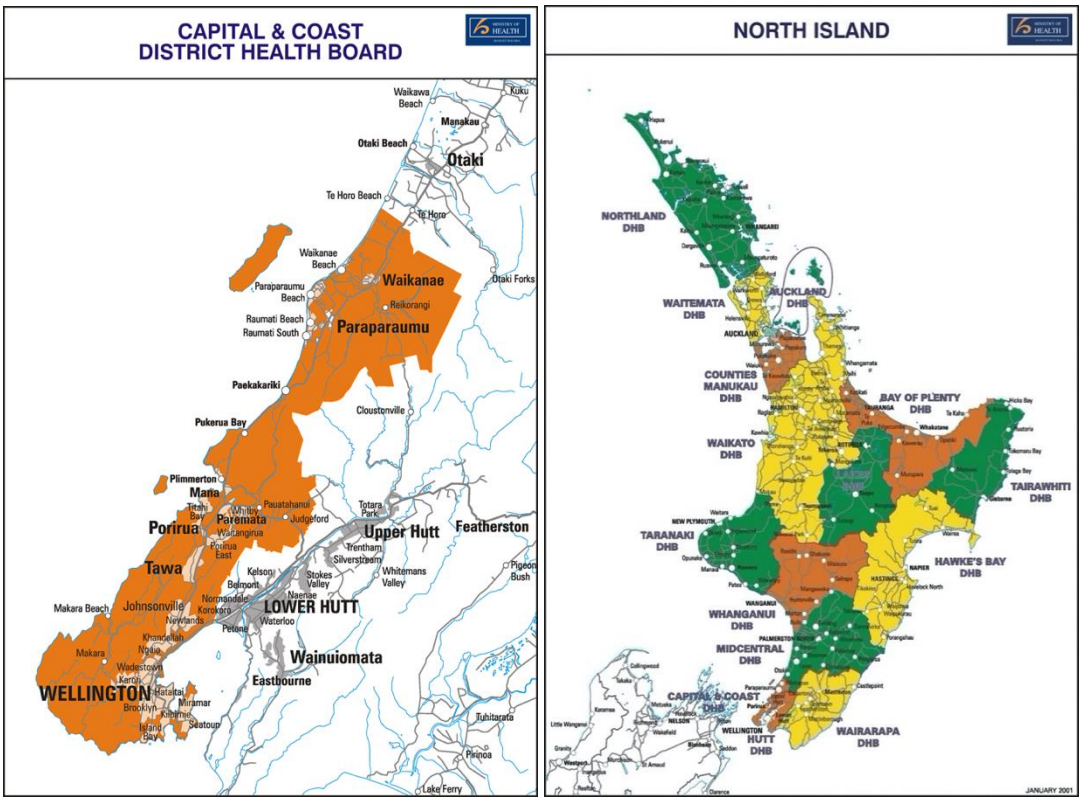
The geographical area of CCDHB stretches from Wellington, along the eastern coast to Peka Peka, just north of Waikanae. It is made up of three territorial local authorities: Wellington city, Porirua city, and parts of the Kāpiti Coast District, excluding Ōtaki and the surrounding areas (refer to Figure 3). Wellington NICU is located on Level 4, the main building of Wellington regional hospital. It provides 24-hour emergency services to Wellington delivery suites, local birthing suites, and SCBUs located across the central region of Aotearoa (from Blenheim and Nelson up to Hastings, Whanganui, Palmerston North, and Masterton) (refer to Figure 4) for infants in need of intensive or specialist care (CCDHB, 2020a).

Figure 3.

Area covered by CCDHB 2019 (CCDHB, 2019a)

Figure 4.

North Island of Aotearoa (MoH, 2020b)



Wellington NICU has 40 resourced bed spaces spread across six open nurseries and four single isolation rooms (refer to Figure 5). The NICU operates under a gestational model of care, nursing infants of similar gestational ages together. Nurseries can be adjusted in temperature, sound, and light to suit the gestational needs of infants in that room (CCDHB, 2021). There are six resourced bed spaces (refer to Figure 6) per nursery; however, it is not uncommon for the NICU to operate above and over capacity. Between 2012 and 2017, the occupancy of Wellington NICU exceeded 85 per cent of their resourced capacity for 93 per cent of days per annum (Malatest International, 2019). The NICU manages the demand for extra occupancy by fitting in additional bed spaces above the resourced number, transferring infants to other hospitals, and, on occasion, delaying deliveries until bed spaces become available (Malatest International, 2019). The NICU also has two communal parent lounges, one communal whānau lounge for non-parent visitors, and six parent rooms with beds for parents to stay in. The parent rooms often operate at full capacity, with preference given to breastfeeding on-demand mothers and parents of infants close to discharge home.

Figure 5.

Diagram of Wellington NICU (Gillon, 2019)

Wellington NICU – Accommodation for Whānau

Parents who reside outside the Wellington region are usually accommodated for free at Ronald McDonald House Wellington (RMHW), located across the road from the hospital. Parents, siblings, and up to a maximum of five whānau members can stay at RMHW, with one room allocated per whānau (Ronald McDonald House Charities New Zealand, 2019). Parents who reside within the Wellington region (up to Peka Peka and Hutt regions) are not eligible to stay at RMHW and, therefore, have to commute daily between the hospital and home. These parents are eligible for free parking and reimbursement of costs associated with travel, such as the cost of petrol, public transport, and airfares. However parents usually have to pay for costs associated with travel upfront and reimbursement is at the discretion of the National Travel Assistance (NTA) programme (MoH, 2020d).

Figure 6.

Admission bed space Wellington NICU

Wellington NICU – Length of Stay

Length of stay at Wellington NICU is influenced by a variety of factors and is dependent upon the medical and/or surgical needs of infants. The premature an infant is at birth, the longer they are expected to require specialist neonatal care. It is not uncommon for infants to spend many months in the NICU and it can be difficult to advise parents of the date of discharge or transfer until closer to the time. Infants are often transferred from NICU to an SCBU located in a hospital closer to their home when they are stable and/or above 32+0 gestation. Transfer between neonatal units is at the discretion of the Senior Medical Officer (SMO) in charge. As a general rule of thumb, and taking into consideration how stable the infant is, parents are often told to expect discharge from neonatal services around their infant's expected due date, plus or minus a few weeks.

Wellington NICU – Transfer Between Regions

Infants born outside of the Wellington region and who require transport to Wellington NICU are usually transported by Wellington Free road ambulance, Life Flight fixed-wing aeroplane, and Westpac rescue helicopter (refer to Figure 7) (Life Flight, 2021). The mode of transfer is usually dependent upon a variety of factors, including the level of urgency and location of the infant requiring retrieval. Infants are transported between services by an aero medically trained team of NICU nurses and doctors. For retrievals of infants via road ambulance and aeroplane, it is normally expected that a parent or nominated whānau member can accompany the infant; and the other

parent, usually the mother who has just given birth, will be transported later that same day or as soon as possible. Normally, for retrieval of infants via helicopter, no additional parent or nominated whānau member can accompany the infant on the trip due to severe weight restrictions on board (CCDHB, 2019b). Returning infants to their hospital of origin is usually done via road and/or air ambulance, and it is usually expected that both parents can accompany their infant.

Figure 7.

Westpac rescue helicopter

Wellington NICU - Multidisciplinary Team

Wellington NICU consists of a large Multidisciplinary team (MDT), including doctors and nurses with various skills, experience, and roles. The MDT also includes a biomedical technician who oversees and supports the use of technical equipment; health care assistants (HCAs); lactation consultants who assist mothers with breastfeeding and milk supply (CCDHB, 2020a); and a new milk bank coordinator who oversees *pātaka miraka* (milk storehouse), where donated breast milk is stored and pasteurised. The MDT also includes various health practitioners who visit the NICU regularly, including a neurodevelopmental therapist, physiotherapists,

surgeons, neurologists, pharmacists, radiologists, social workers, and a speech and language therapist (refer Table 6).

Table 6.

Wellington NICU MDT

Role	# of staff	Availability
Associate Charge Nurse Manager (ACNM)	8	Based in NICU. 1 Monday to Friday non-clinical 7 rostered & rotating shifts clinical
Biomedical Technician	1	Based in NICU Monday to Friday
Charge Nurse Manager (CNM)	1	Based in NICU Monday to Friday
Clinical Leader	1	Based in NICU Monday to Friday/on-call
Clinical Nurse Educator (CNE)	5	Based in NICU Monday to Friday
Clinical Nurse Specialist (CNS)	2	Based in NICU Monday to Friday
Dietician	1	Based in hospital visits NICU on referral
Discharge Facilitator	5	Based in NICU Monday to Friday full-time & part-time
Flight Service Coordinator	1	RN allocated 12 hours per week
Geneticist	2	Based in hospital visits NICU on referral
Health Care Assistant (HCA)	4	Based in NICU rostered & rotating shifts
Lactation Consultant	3	Based in NICU Monday to Friday. 1 full-time 2 part-time
Milk Bank Coordinator	1	RN allocated 10hrs per week.
Neonatal Fellow	1-2	Based in NICU Monday to Friday/on-call
Neonatal Nurse Practitioner (NNP)	6	Based in NICU rostered & rotating shifts/on-call
Neurodevelopmental Therapist	1	Based in hospital visits NICU on referral.
Paediatric Neurologist	1	Based in hospital visits NICU on referral
Paediatric Surgeon	3	Based in hospital visits NICU on referral
Pharmacist	1-2	Based in hospital visits NICU on daily and on referral
Physiotherapist	Varies	Based in hospital visits NICU on referral
Radiologist	2	Based in hospital visits NICU on referral
Registered Nurse (RN)	109	Based in NICU rostered & rotating shifts Full-time and part-time
Resident Medical Officer (RMO)	10	Based in NICU rostered & rotating shifts Alternate every 3-6 months
Senior Medical Officer (SMO)	5	Based in NICU rostered & rotating shifts 2 on each weekday and 1 on-call overnight
Social worker	3	Based in hospital visits NICU on daily and on referral 1 full-time 2 part-time
Speech & Language Therapist (SLT)	1	Based in hospital visits NICU on referral
Transport Nurse (TN)	20 RN	1 per shift. TN work clinically otherwise NNP/RMO/SMO will accompany on retrievals

Wellington NICU – Visiting Rules

Parents have open, unrestricted visiting (day and night) to Wellington NICU. All other visitors can visit Wellington NICU between the hours of 3.30 pm and 6 pm daily (CCDHB, 2019b). Only children who are direct siblings of an infant admitted to Wellington NICU are allowed to visit within set visiting hours. Visiting outside set visiting hours is at the discretion of the Charge Nurse Manager (CNM) or Associate Charge Nurse Manager (ACNM) on duty. Younger siblings of an infant admitted to Wellington NICU may be able to accompany their parent outside of the set visiting hours at the discretion of the ACNM or CNM. Set visiting hours are often relaxed at Wellington NICU for whānau and friends of critically unwell infants who will likely require redirection of care.

Māori Within Wellington NICU Workforce

Of the 5,766 employees at CCDHB (as of October 2018), only 5 per cent identified as Māori; while Māori make up over 11 per cent of the DHB's population. This percentage is even lower at Wellington NICU, with as little as 1.5 per cent of the NICU workforce identifying as Māori (D. Davenport [NICU ACNM], personal communication, June 2, 2021). This is lower than the national average, where 4 per cent of other NICUs' workforces identify as Māori (Malatest International, 2019).

CCDHB Māori Population

In 2016/2017 11.5 per cent of the CCDHB population identified as Māori, an estimated 35,300 people. Māori are not distributed equally throughout the CCDHB area: Porirua has a greater proportion of Māori (21%), Wellington city (8%), and the Kāpiti Coast District (11%) (CCDHB, 2019a). Of the people in the CCDHB area who identified as Māori in the 2013 Census, 8 per cent identified as *mana whenua* (Māori who have historic and territorial rights over land), affiliating with one of the three main iwi of the region: Te Ati Awa Ki Whakarongotai (1%); Ngati Toa Rangatira (5%); and Te Ati Awa (2%) (CCDHB, 2019a). By 2038, it is projected that there will be over 52,000 Māori living within the CCDHB area. Māori are disproportionately impacted by socio-economic deprivation within the CCDHB region compared to Pākehā. Māori are more likely to live in deprived areas, live with no heating or in overcrowded houses, live in low-income families, and have less access to a car or the internet (CCDHB, 2019a).

CCDHB – Whānau Care Services

CCDHB Whānau Care Services (WCS) provide clinical, advocacy, and support services to whānau admitted to Wellington hospital. WCS is located on Level 2, the

main building of Wellington hospital. WCS consists of a small team, including nurses, social workers, and *kaiāwhina* (Māori healthcare support workers). WCS is the main Māori support network for whānau with an infant admitted to Wellington NICU. The team at WCS can explain cultural and spiritual requirements of whānau to health practitioners, and work to ensure tikanga Māori needs are being met, such as the facilitation of whānau *hui* (meetings), returning of body fluids or parts, sorting out issues around *tapu* (restricted) and *noa* (unrestricted), and providing support for bereaved whānau (CCDHB, 2020b). WCS can also offer temporary accommodation to whānau who reside outside of the Wellington region at Te Whare Whānau o Te Pehi Parata (CCDHB, 2020b).

Aims of the Project

NHPs need more support and guidance to improve the experiences of Māori whānau in NICUs across Aotearoa. Hence, the aim of this practice project is to generate recommendations for the development and implementation of an RBP to help guide NHPs towards successful engagement with Māori whānau in the NICU environment.

CHAPTER 2 – PRACTICE PROJECT DESIGN

Rationale for Practice Project

Inspiration for this project grew out of a desire to improve service delivery for Māori whānau accessing neonatal services not only at Wellington NICU but across neonatal services nationally. I have worked as a Registered Nurse across neonatal services for seven years, working at the bedside alongside whānau as well as a Transport Nurse, transporting infants and their whānau between neonatal services around the central region of Aotearoa. Through personal observation, I have witnessed a lack of continuity between neonatal services in how they support and engage with whānau, as well as systems that appear to be designed for health practitioner ease, instead of what is in the best interest of whānau. It became evident to me that NHPs' required more guidance and support in order to successfully engage with Māori whānau. Therefore the aim of this practice project is to develop recommendations for the development and implementation of an RBP to help guide NHPs towards successful engagement with Māori whānau in the NICU environment.

I will take this opportunity to introduce myself to the reader, to be as transparent as possible and allow the process of *whakawhanaungatanga* (the process of establishing relationships). I am of Filipino and Pākehā descent. The following is my *pepeha* (a way of introducing yourself in Māori).

Ko Canlaon te maunga (Canlaon is the mountain)
Ko Guimaras Straight te moana (Guimara Straight is the sea)
Ko Piripīni te iwi (Philippines is the people)
Ko Hiligaynon te hapū (Hiligaynon is the subtribe)
I tipu ake ahau i Hataitai i Te-Whanganui-a-Tara, ēngari, kei tātahi i Ōtaki ahau e noho ana
(I grew up in Hataitai in Wellington but the beach in Ōtaki is where I stay now)
Ko Alexander Scanlan tōku hoa rangatira (Alexander Scanlan is my partner)
Tokorima ā māuā tamariki (We have five children)
Ko Analina Nelson tōku ingoa (Analina Nelson is my name).

Ethical Considerations

Before the project was undertaken, I carefully deliberated whether it would require formal ethical review. I reviewed the Auckland University of Technology Ethics Committee (AUTEC) guidelines and the Health and Disability Ethics Committee

(HDEC) website and, based on the information at hand, decided that the project did not require formal ethical approval due to the nature and content of the project. The project was being undertaken as an internal quality improvement initiative where I currently work at CCDHB NICU to help improve service delivery for Māori whānau. No discussions would be undertaken with whānau, no human tissue would be involved, and there would be no disclosure of private health information (as defined by the Health Information Privacy Code 1994). Prior to the commencement of the project, verbal consent was sought and granted from CCDHB NICU CNM. Verbal consent was also sought and granted from health practitioner key stakeholders prior to any interviews. Anonymity was maintained throughout the entire project. Funding and support for this project were generously granted by Health Work Force New Zealand (HWNZ).

The Framework (Methodology)

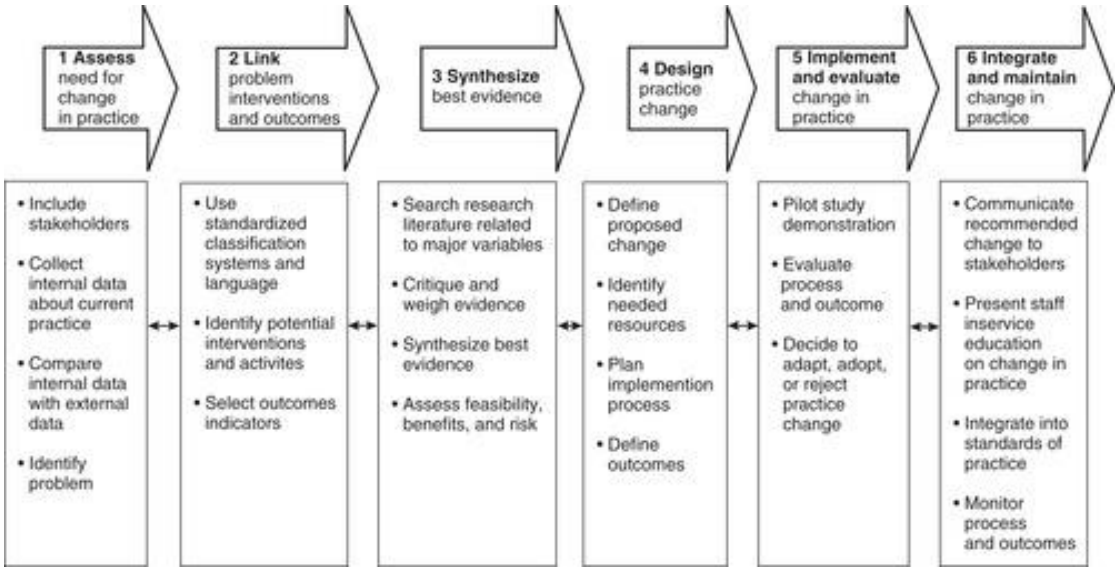
The project required a framework or model to help guide the development. Frameworks and models are useful tools for health practitioners when developing evidence-based practice. Models and frameworks usually begin with assessing the need for change in practice and end with the integration of an evidence-based protocol or guideline (Rosswurm & Larrabee, 1999). For the project, Rosswurm and Larrabee's (1999) model for evidence-based practice was selected (refer to Figure 8) to help guide the project's development toward the proposed practice change. The model includes six key stages presented across five chapters. This chapter will discuss the methods used at each stage, including any adaptions that were made to suit the development of the project.

Stage 1. Assess (the need for change in practice) and Stage 2. Link (problem, interventions, and outcomes)

Rosswurm and Larrabee's (1999) model begins with Stage 1. 'Assess' the need for change in practice and Stage 2. 'Link' the problem, interventions, and outcomes. For the purposes of this project, both stages were combined into Stage 1, reported on in chapter three under the heading *'Findings*'. Stage 1 included consultation with key stakeholders; collection of internal data; comparison of internal data with external data; identified problems; and linking of problems with potential interventions and outcomes.

Figure 8.

Rosswurm and Larrabee's (1999) Model for Evidence-Based Practice



Consultation with key stakeholders

The first step was to assess who the key stakeholders were for this report. Once identified, the list was narrowed down to six key stakeholders who work for CCDHB, either in the NICU or closely with Māori whānau. Consent for consulting with key stakeholders was first sought and approved by Wellington NICU CNM. Key stakeholders were invited to participate in the project via email or *kanohi ki te kanohi* (face to face). Data collected from the interviews were analysed using a method of qualitative analysis called thematic analysis (Braun & Clarke, 2012). This process helped to identify key themes relating to how whānau are currently supported at Wellington NICU and any recommended practice changes that could improve the experiences of whānau.

Collect Internal Data About Current Practice

Collection of internal data required me to investigate how Wellington NICU was currently operating to support whānau. The first area I wished to investigate was how successful Wellington NICU was at referring whānau to WCS, the main Māori support service based in Wellington hospital. A plan was made to conduct an internal audit and review of system databases for referrals of whānau made to WCS over a four-month period.

The next step was to investigate what Wellington NICU had in place within the physical environment that was supportive of whānau and the NHPs working with whānau. This would be carried out as an environmental survey and would assess

Wellington NICU for inclusion of te reo Māori, resources, whānau spaces, and internal policies and/or guidelines.

Comparing Internal Data with External Data

This stage required me to examine what other NICUs in Aotearoa are currently doing within their practice to support whānau. There are five other tertiary Level 3 NICUs located across Aotearoa. For the purposes of this report, three other NICUs, all located in the North Island of Aotearoa, were selected for comparison with Wellington NICU. They are Auckland, Middlemore, and Waikato NICUs. Comparing internal data with external data can be done either informally or formally via a benchmarking process. For the purposes of this report, a comparison was done informally, with information gathered from various sources such as DHB websites, the MoH's latest review of neonatal services (Malatest International, 2019), the Neonatal Nurses College of Aotearoa (NNCA; 2018) website, and through informal conversations with current or previous NHPs.

Identified Problem

After consulting with key stakeholders, collecting internal data and comparing it with external data, the identified problem from the overall findings was the lack of RBP for NHPs for successful engagement with Māori whānau in the NICU environment.

Linking Problem with Interventions and Outcomes

In the last step of Stage 1, I planned to link the identified problem with potential interventions and desired outcomes. Rosswurm and Larabee (1999) commented on the need to use standard classification systems for identifying interventions and desired outcomes. This is ideal when working with specific clinical conditions; however, it was difficult to do for this project given the nature of the topic. At this stage of the model, adaptions were made to suit the project development. The selection of potential interventions and desired outcomes was based primarily on clinical judgement and what would work well in the NICU environment. As previously stated, the identified problem was the lack of RBP for NHPs for successful engagement with Māori whānau in the NICU environment. The proposed intervention is the development of RBP for NHPs. Desired outcomes include more consistency across NICUs in how they engage with Māori whānau and overall improvement in the experiences of Māori whānau in NICUs.

Stage 3. Synthesise (best evidence)

The next stage of Rosswurm and Larrabee's model (1999) involves the synthesis of the best evidence relevant to the project's main aims. The problem, potential intervention, and desired outcomes became the major variables for reviewing the research literature. Steps taken in this stage include planning and undertaking a search of the literature and identifying types of evidence available most relevant to the project. The purpose of synthesising the research evidence is to determine whether it supports the need for change in practice. If the research synthesis indicates sufficient research evidence supporting a change in practice with desirable benefits and low risks, practitioners can proceed with designing the practice change (Rosswurm & Larrabee, 1999). Chapter four outlines key themes identified from the literature review.

Stage 4. Design (practice change)

After synthesising the best evidence, practitioners must describe the process variables or the detailed sequence of care activities for the proposed change in practice. The format for the proposed practice change would be in the form of recommendations for practice (Rosswurm & Larrabee, 1999). Recommendations were deemed the most appropriate for this project given the nature of the topic to help guide care. A policy or guideline was deemed too structured and inappropriate.

If the change in practice affects a standard of care in a large hospital, a pilot demonstration of the change is advised. Due to project time constraints, a pilot was unable to be undertaken. However, within the recommendations, I intend to identify any resources needed and how the recommendations for practice can be implemented.

Stage 5. Implement and Evaluate (change in practice) and Stage 6. Integrate and Maintain (change in practice)

As previously stated, due to time constraints, Stages 5 and 6 of Rosswurm and Larrabee's (1999) model for evidence-based practice were not able to be completed for this practice change proposal.

Chapter Summary

This chapter outlines the methodology of Rosswurm and Larrabee's (1999) model used to guide the development of the project towards a proposed change in practice. The model is used as a guide with adaptions made to suit the development of the project.

CHAPTER 3 – FINDINGS

Stages 1 and 2 of Rosswurum and Larrabee's (1999) model highlights the importance of assessing the problem and then linking the problem to identified interventions and outcomes. The model has depicted these as two separate stages; however, for the purposes of this project, both stages have been combined and presented in this chapter as the activities within each stage often overlap. The activities carried out in this stage include:

1) Consultation with key stakeholders
2) Collection of internal data
3) Comparison of internal data with external data
4) Identified problem
5) Linking of the problem with potential interventions and outcomes

Consultation with Key Stakeholders

Semi-structured interviews were conducted with six CCDHB health practitioners, five employed at NICU across various roles and one employed at WCS (refer Table 7). Stakeholders varied in race/ethnicity (1 British, 1 Australian, 2 New Zealand European, 2 Māori) and age (ranging from 34–65 years). All were recruited in June 2021. They were first approached to participate in this project via kanohi ki te kanohi or through email. A brief overview of the project was provided and, if acceptable, a time to meet in person for an interview was arranged.

Table 7.

Interviewed key stakeholders

CCDHB Stakeholder	**#**	**Role**	**Location**
NICU CNM	1	Management	Their office
NICU ACNM	1	Management	Their office
NICU RN *(Ngāti Tūwharetoa, Ngāti Raukawa, Ngāti Kahungunu)*	1	Clinical	Their home
NICU Discharge Facilitator	1	Clinical & non-clinical	NICU transport room
NICU Social Worker	1	Non-clinical	Postnatal ward office
Manager of WCS *(Ngāpuhi)*	1	Non-clinical	Their office

Interview Questions

In the semi-structured interviews, stakeholders were asked the same six questions (refer Table 8). The interview questions were embedded into the conversation so that the conversation was able to progress in a way that was comfortable and enjoyable. Interviews varied in length, each lasting anywhere from 20 to 40 minutes. All interviews were audio recorded with prior verbal consent gained from all stakeholders. A scented candle was gifted as *koha* (gift/offering) to each stakeholder at the conclusion of the interview in appreciation of their time and knowledge.

Table 8.

Interview questions for key stakeholders

Interview questions
1. What is your current role in the NICU and how long have you worked there?
2. How do you currently try to support Māori whānau and their babies in your role?
3. What have you observed as important for Māori whānau in regards to their health and the health of their baby?
4. What support services do you access or refer on to on behalf of Māori whānau in the NICU?
5. What key changes to practice in the NICU do you think would improve the experiences of Māori whānau?
6. What do you think would be the biggest barriers to implementing these recommended changes?

Analysis of Interviews

During and after each interview, field notes were taken which included reflective notes and my own personal observations. The audio recordings were listened to on multiple occasions and transcribed. The results of interviews were then analysed using a process of thematic analysis, a method of qualitative data analysis used for identifying, organising, and offering insight into the patterns of meanings behind a set of data (Braun & Clarke, 2012). The thematic analysis allows the researcher to see and make sense of collective or shared meanings and experiences, whilst concurrently identifying commonalities in the way a topic is talked about or written about (Braun & Clarke, 2012). The findings from the interviews were interpreted into three key themes, each with its own subthemes (refer to Table 9).

Findings from Interviews

The findings from the interviews were interpreted into three superordinate themes, each with its own subthemes (refer to Table 9). The first theme identified was '*A culturally diverse and holistic service*'. This theme addresses the need for more Māori working in roles across the NICU workforce to help raise the cultural responsiveness

of staff and foster a more holistic service. The second theme identified from the data was '*Whānau access controlled*'. This theme discusses how whānau access to their infant is controlled by the strict NICU policies and rules, the threat of infection, and a lack of welcoming whānau spaces. The third theme, '*Relationships in the NICU*', highlights the importance of empowering whānau in primary caregiver roles; and that through *whakawhanaungatanga*, meaningful relationships can be formed.

Table 9.

Superordinate themes and subordinate themes from interviews

Superordinate themes	**Subordinate themes**
1.A culturally diverse and holistic service	Increasing workforce diversity Raising cultural responsiveness More holistic NICU Access to WCS
2.Whānau access controlled	Strict visiting policies and rules Threat of infection Lack of whānau spaces
3.Relationships in the NICU	Power struggle Whakawhanaungatanga

Theme 1. A Culturally Diverse and Holistic Service

Increasing Workforce Diversity

All stakeholders identified that CCDHB NICU needs to increase the diversity of its workforce by employing more Māori in various roles. More Māori was identified as needed across the NICU to give Māori a voice in advocating for their people and their health and well-being. Currently, CCDHB NICU only employs a small percentage of Māori, and the service is not reflective of the population they are serving as noted by a manager, "*I've talked about workforce diversity and how important that is in regards to increasing our percentage of Māori nurses from 1.5%"* (Stakeholder, management). Issues surrounding getting more Māori within the NICU workforce included not enough Māori taking up the nursing profession and the NICU environment not being a favourable choice for newly graduated nurses.

Raising Cultural Responsiveness

Stakeholders within clinical and management roles identified a key priority of the NICU needs to be raising the cultural responsiveness of the NICU workforce.

> *If you haven't grown up around or you're not comfortable with speaking to Māori people and you know things like facial tattoos unsettle you, how are you gonna build a rapport and how will they open up to you?* (Stakeholder, non-clinical)

One stakeholder identified a particular group—"*those who we tend to call the white worried well of Wadestown*" (Stakeholder, management)—of the NICU workforce who require cultural safety education and more awareness around inequities that Māori face. This colloquialism was made by a Pākehā stakeholder in reference to other Pākehā health practitioners who reside within the wealthy Wellington residential area of Wadestown. Stakeholders voiced that despite the NICU workforce having the best intentions when working with Māori whānau, unconscious stereotyping and beliefs about Māori remain evident in practice today: "*Essentially if you don't look the same as someone you're looking after there are all sorts of they call it implicit bias"* (Stakeholder, management). The biggest barrier to raising the cultural responsiveness of the NICU workforce was identified as people's mindset and willingness to embrace change. Stakeholders within management roles praised individual efforts in the NICU to raise the profile and visibility of te reo Māori, such as posters on te reo Māori words and their correct pronunciation, and the undertaking of a sign audit to include te reo Māori alongside English on all doors throughout the NICU: "*We're sort of the last ones off the rank really in regards to changing our signage to te reo Māori"* (Stakeholder, management).

More Holistic NICU

Stakeholders in clinical and management roles spoke of the NICU needing to embrace more Māori models of health and wellbeing within practice. Stakeholders of Māori descent identified Mason Durie's '*Te Whare Tapa Whā*' Māori model of health as a tool they often use to help successfully engage with Māori whānau:

> *I try to use Te Whare Tapa Whā as my basis, for you know, the four cornerstones or roots of health. That's what I would use to look at how I can acknowledge those aspects of their baby's health and their whānau health.* (Stakeholder, clinical)

Non-clinical stakeholders were unaware of Māori models of health and wellbeing, citing this was most likely due to the training for their roles overseas. A stakeholder of Māori descent spoke of a disjunction between knowledge and practice. Māori models of health and wellbeing are routinely taught in undergraduate nursing training; yet, there remains little evidence of it in health practice:

> *Mason Durie's Te Whare Tapa Whā was developed and was being taught* (in Nursing schools) *yet we don't see really strong evidence of that in the*

workplace. There is what I've learnt and what I apply they are not the same thing. (Stakeholder, non-clinical)

Stakeholders in clinical and management roles spoke of the clinical needs of infants being the main focus in the NICU, leaving other areas of health and wellbeing, such as cultural and spiritual requirements and the health and well-being of the whānau collective, often overlooked:

> *We focus a lot on the clinical because to us that's what matters most...* from *what I've read and what I've seen or experienced in this role is that there are so many other aspects to what is important to whānau.* (Stakeholder, management)

Stakeholders of Māori descent expressed that they would like to see the NICU embrace mātauranga Māori in practice, including the use of *rongoā Māori* (traditional Māori medicinal practices) such as *mirimiri* (massage); herbs and plants, such as *kawakawa* (Piper excelsum plant); *karakia* (incantations/prayers); and *tohunga* (healers).

Access to WCS

All stakeholders identified WCS as their first referral option for Māori whānau in the NICU. Stakeholders felt the service was often underutilised, with many whānau missing out on access to the service. It is common practice at CCDHB NICU to offer Māori whānau referral to WCS upon admission to the NICU. However, if whānau do not tick a box on the admission paperwork declaring that they would like a referral to the service, it is usually not brought up again: "*I said it was reliant upon them ticking a box on their PIF form and she said to me well how on earth would these kids know that they're from the sticks*" (Stakeholder, management). Stakeholders in management roles suggested a blanket referral of whānau to WCS on a trial basis, to help prevent whānau from missing out on the service.

In summary, the theme of '*A culturally diverse and holistic service*' was prevalent across data obtained from all stakeholders. The theme addresses the need for more Māori in roles across the NICU workforce; the need to raise the cultural responsiveness of existing staff; the need to foster a more holistic NICU, one that acknowledges Māori models of health and wellbeing, such as rongoā Māori; and the need to support whānau with access to WCS.

Theme 2. Whānau Access Controlled

Strict Visiting Policies and Rules

All stakeholders identified that whānau access to NICU and their infants is controlled by the visiting policies and rules in place. Current policies and rules only permit parents and/or primary caregivers open-visiting to the NICU (day and night). Other visitors and whānau are permitted to visit the NICU daily between the hours of 3.30 pm and 6.00 pm. Children under 12 years of age who are direct siblings are allowed to visit within set hours with an adult, and there is a maximum of two people per bed space at any given time. Stakeholders in clinical and management roles identified that they would like to see the NICU create a more lenient visiting policy, one that permits nominated whānau members more access to the NICU outside of set visiting hours as this would give parents some respite: "*Showing leniency around its not just mum and dad that can visit out of hours if they've got key people"* (Stakeholder, management). It was suggested that the new visiting policy could be more clear around whānau *hui* (meetings) and Māori cultural ceremonies. Stakeholders in clinical roles expressed frustration at the limited timeframe other whānau members are allocated each day to visit their infant in the NICU: *"Two and a half hours in the afternoon when everyone is at work. Who says those are the best hours in the day? People are working"* (Stakeholder, clinical). One stakeholder, however, highlighted that the narrow visiting hours protected the many vulnerable parents who did not want numerous visitors. It was uncertain if this stakeholder was referring to both Māori and non–Māori parents.

> *I've heard time and time again people say that it is really good that we don't have everyone here all of the time so that we can actually work out how we parent and how we look after our baby.* (Stakeholder, management)

Threat of Infection

Stakeholders in clinical and management roles brought up the threat of infection in the NICU and how it impacts whānau visiting. Stakeholders were conflicted. One stressed the importance of maintaining infection control standards in the NICU, which is mainly achieved by restricting the number of people allowed entry: *"This is an intensive care unit and we have a lot of data telling us that too many people moving through an environment is detrimental*" (Stakeholder, management). Another stakeholder, however, felt that the threat of infection was used to purposely exclude whānau from the NICU despite the numerous benefits of allowing whānau in to support parents. This stakeholder also highlighted that the NICU frequently allows numerous rotating nursing, midwifery, and medical students, all of whom are able to

be taught about maintaining infection control standards, therefore why not whānau? *"I think with the right education and encouraging these parents to teach their extended whānau, you know, about infection control and how we like hand hygiene, not coming in when they're sick, utilising masks*" (Stakeholder, clinical).

Lack of Whānau Spaces

All stakeholders identified that CCDHB NICU lacks an adequate amount of supportive and welcoming spaces for whānau. Stakeholders in management and clinical roles highlighted that CCDHB NICU has gotten noticeably busier, with more nursing and medical staff, more routine medical rounds, and increasing tests and procedures. Stakeholders conclude that this has had a negative effect on whānau presence in the unit and has noticeably led to parents staying for shorter periods of time: "*Unfortunately we've already outgrown our unit already and it's only 13 years old, there are not enough beds, there's not enough room*" (Stakeholder, management). Stakeholders in clinical and management roles highlighted that the current gestational model of care under which the NICU operates has a negative impact on whānau presence in the NICU. These stakeholders expressed frustration around infants with different needs being nursed in the same nurseries, and how unfair this is for parents: *"I understand the concept of gestational model of care but I think it goes out the window when you've got well-ish babies in a room with babies that are borderline dying*" (Stakeholder, Clinical). A stakeholder within management highlighted that whānau in the NICU would benefit from single private rooms as opposed to the open planned nurseries: *"If we could use that Scandinavian model and have one room per baby and family for their whole time, I mean dream big right*" (Stakeholder, management).

Stakeholders in management and clinical roles spoke of inadequate spaces at CCDHB NICU for whānau. Mothers now lack a private area to express milk since the previous room used for expressing was converted to accommodate Pātaka Miraka, the NICU's new milk bank. Mothers can currently express themselves either at their infant's bedside behind privacy screens (refer to Figure 9) or in one of the two communal parent lounges. Stakeholders felt the repercussions of this included fathers and partners no longer wanting to use communal parent lounges to give mothers expressing privacy, resulting in inadequate welcoming spaces for fathers and partners:

> *We're seeing that some mothers already don't want to express here because there's not enough room so then what are we doing to their breast milk supply,*

you know, they're wanting to head back home or to Ronald McDonald House to express. (Stakeholder, management).

Figure 9.

Use of privacy screens in the open nurseries

Stakeholders in non-clinical roles identified that CCDHB NICU has an inadequate amount of parent rooms, which are usually allocated to breastfeeding mothers and to parents of infants close to discharge home. The six-parent rooms often operate at full capacity and, therefore, often delay the rooming-in process for some parents and the discharge of infant's home. Despite the preference for parent rooms being allocated to breastfeeding mothers, not enough parent rooms often mean many mothers delay the establishment of demand breastfeeding with mothers having to return to the postnatal ward, home, or to alternative accommodation overnight. A stakeholder in management voiced doubt the NICU would be granted any additional funding in the foreseeable future to alter the layout or size, and therefore proposed rearranging the current spaces available to help better accommodate whānau.

In summary, the theme of '*Whānau access controlled*' was prevalent across data obtained from all stakeholders. The theme addresses how whānau presence and access to their infant in the NICU are controlled by the NICU's narrow visiting policies and rules, the threat that infection poses, and the lack of unwelcoming whānau spaces.

Theme 3. Relationships in the NICU

The Power Struggle

Stakeholders in clinical and non-clinical roles identified the importance of empowering whānau in their primary caregiver roles. Empowering whānau includes encouraging whānau to take charge of their infant's care, participate in medical rounds, and carry out daily caregiving activities. Stakeholders identified that nurses play an important role in empowering whānau, and that all too easily power imbalances occur in the NICU. Stakeholders in clinical roles report observing power imbalances in the NICU, such as the MDT not acknowledging whānau during medical rounds, the MDT talking in complex medical terminology to whānau, telling whānau off for doing something (supposedly) wrong, and nurses carrying out infant care activities despite parents wishing to do so: "*We have them* (infants) *for such a short amount of time but I think we don't use that time to empower the parents I think we use that to almost control"* (Stakeholder, clinical). Stakeholders highlighted that repetitive episodes such as these foster an unwelcoming environment for whānau and can lead to whānau avoiding the MDT and the NICU altogether: *"When a family aren't coming not to assume that it's not because they don't care for their baby but to think why might that be, what's the environment that we've created"* (Stakeholder, non-clinical).

Whakawhanaungatanga

A stakeholder of Māori descent identified the importance of the Māori concept of whakawhanaungatanga—the process of establishing relationships and forming connections through the sharing of experiences. The stakeholder highlighted that this concept can help health practitioners become more mindful in the way they approach establishing relationships with whānau: *"You've got lots of places of joining that you might not understand, you've all got families, you know it's actually as simple as starting to talk about your family*" (Stakeholder, non-clinical). All stakeholders identified the importance of health practitioners taking the time to sit down to *kōrero* (talk) with whānau to establish rapport and give whānau the opportunity to get to know the people looking after their infant. All stakeholders identified the importance of not making assumptions about whānau and their needs simply due to the fact that they are Māori:

> *Which iwi, you know, are you an urban Māori or did you grow up rurally stepped next to your marae because your needs are like this different depending on that aye. Were you brought up in a te reo speaking household or not, asking those questions and asking what do you need?* (Stakeholder, non-clinical)

In summary, the theme of '*Relationships in the NICU*' was prevalent across data obtained from stakeholders in clinical and non-clinical roles. The theme addresses the importance of empowering whānau in their role as primary caregivers and that through mindfulness of the Māori concept of whakawhanaungatanga, meaningful relationships can be formed.

Collection of Internal Data

In this section, I report findings related to how CCDHB NICU is currently operating in supporting Māori whānau. Data for this stage were collected via an internal audit of NICU referrals to CCDHB WCS, a physical survey of the NICU environment, and a review of CCDHB databases for policies, guidelines, and training for CCDHB staff centred around supporting Māori whānau in NICU.

Audit of Wellington NICU Referrals to WCS

An audit was undertaken to assess the number of referrals made from Wellington NICU to WCS. The audit included a review of Wellington NICU systems' databases and was conducted over a four-month period, from June to September 2021, on the 21st or 22nd of each month. The audit was conducted to ascertain the number of Māori infants in the NICU and, of these infants, how many were referred to WCS. The results of the monthly audit estimate that on average, 24.2–37.5 per cent of infants admitted to Wellington NICU identify as Māori (refer to Table 10). This is similar to the MoH's latest review of neonatal services, where an estimated 28 per cent of infants admitted to neonatal services identified as Māori (Malatest International, 2019). The results of the audit also found that only a small percentage of Māori whānau, 14.3–25 per cent, was then referred to WCS, indicating that only 1 in 4 Māori whānau at Wellington NICU are referred to WCS.

Table 10.

Results of an audit of Wellington NICU referrals to CCDHB WCS

Date	**# of infants in NICU that day**	**% of Māori infants in NICU that day**	**% of Māori infants already referred to WCS**
21st June	33	24.2% (n=8)	25% (n=2)
22nd July	43	34.8% (n=15)	20% (n=3)
22nd August	32	37.5% (n=12)	16.7% (n=2)
22nd September	26	26.9% (n=7)	14.3% (n=1)

Survey of Wellington NICU Environment

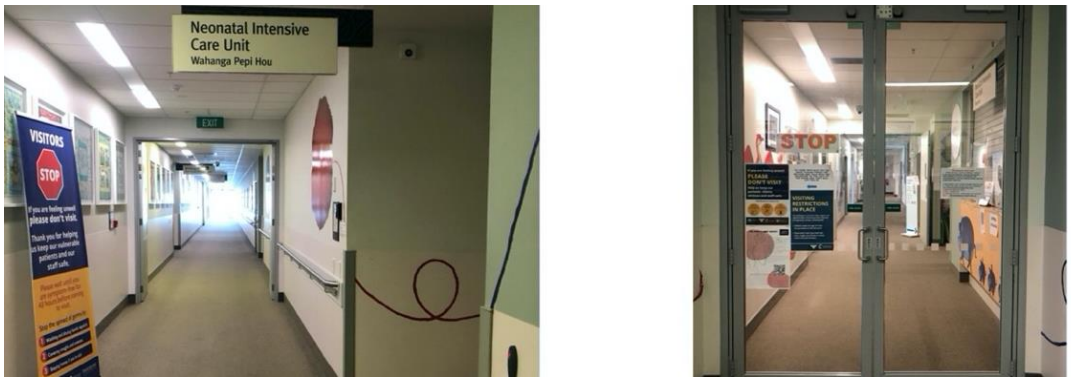
The next step was to investigate what Wellington NICU currently had in place within the environment that was supportive for whānau and the NICU health practitioners working with whānau. This was carried out as a physical environmental survey and assessed the NICU for inclusion of te reo Māori, resources, and welcoming whānau spaces.

Wellington NICU Entrance

Wellington NICU's main entrance includes signage in both English '*Neonatal Intensive Care Unit'* and te reo Māori '*Wahanga Pepi Hou*' (refer to Figure 10). Wellington NICU is a locked unit with an intercom for whānau to ring to gain access.

Figure 10.

Photos of CCDHB NICU entrance



The Neonatal Trust

The Neonatal Trust is a charity organisation in Aotearoa. They have a shop located on the first right upon entering Wellington NICU. They sell and rent a variety of maternity and infant-related items such as clothing, blankets, and expressing pumps. They often gift welcome packs to whānau, host weekly parent lunches, organise playgroups for ex-NICU parents, and organise fundraisers. Māori-specific items in the

shop are limited to a scrub hat with a Māori pattern and a book they gift to whānau available in te reo Māori (refer to Figure 11).

Figure 11.

Photos of The Neonatal Trust charity shop

Te Reo Māori Signage

The majority of signage throughout Wellington NICU is available in English. Te reo Māori signage is limited to the NICU entranceway and a few doorways. *Wharepaku* is written on the parents' toilet door and *Pātaka Miraka* on the new milk bank door (refer to Figure 12).

Figure 12.

Photos of signage at Wellington NICU

Welcoming Whānau Spaces

Wellington NICU has two communal parent lounges (refer to Figure 13, photo on left). These spaces are for parents only and include kitchen facilities, seating, portable privacy screens, and breast pumps. Staff are restricted from using these lounges

except in the instances when a whānau hui has been arranged. During whānau hui, these lounges are unable to be accessed by other parents. The lounges also double as expressing rooms for mothers. Wellington NICU also has one communal whānau lounge for visitors and other whānau and friends (refer to Figure 13, photo on right). The whānau lounge includes a television, seating, books, and toys. The whānau lounge is also used to host weekly parent lunches and parent teaching sessions.

Figure 13.

Photos of Wellington NICU parent lounge and whānau lounge

Wellington NICU has six parent rooms for parents to room in with infants (refer to Figure 14, photo on left). All rooms include a single bed with a pull-out single bed, desks, chairs, and phones. Priority of rooms goes to parents of infants close to discharge, mothers who are demand breastfeeding, or parents who require emergency accommodation for a few nights. These rooms often operate at full capacity. Siblings are not permitted to stay overnight. Parents are not provided with meals whilst they are rooming in. Parents in these rooms share a communal kitchen (refer to Figure 14, photo on right) in which they can store food; however, they cannot cook. The kitchen displays instructions on how to access the Ronald McDonald Family Room (RMFR), on located Level 3 of Wellington hospital. The RMFM is a space where parents of infants or children in Wellington hospital can go if they are ineligible for RMHW. The RMFR has a lounge, kitchen, and laundry facilities.

Figure 14.

Photos of Wellington NICU parent room and communal kitchen

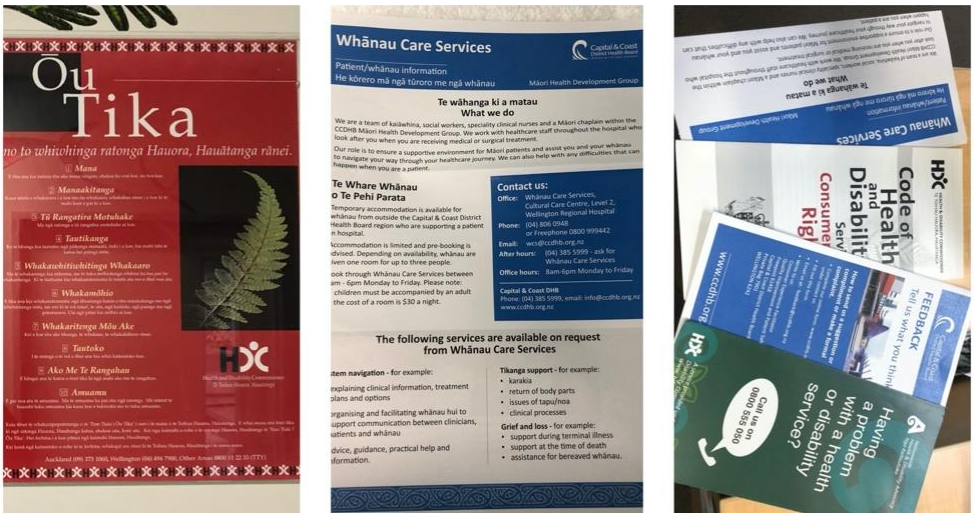
Physical Resources for Whānau and NHPs

Physical resources for NHPs are limited. There is a selection of pamphlets and posters available in te reo Māori and English on the *Code of Health and Disability Services Consumer Rights* as well as *Parent to parent - Matua ki te matua.* There are also pamphlets available in English on WCS (refer to Figure 15). These resources are located in the NICU main reception area, in the milk storage room, and in the communal whānau lounge.

There is a noticeboard in the staff corridor which was recently placed by the newly established NICU pro-equity *rōpū* (group) named *'Kohanga o te atawhai'* (meaning nest of kindness). The rōpu consists of NHPs with a dedicated interest in making the NICU environment more welcoming for whānau. The noticeboard is a dedicated space for NHPs to display helpful resources and education centred around supporting Māori health and wellbeing in practice. Individual NHPs have also placed posters on te reo Māori and correct pronunciation of words throughout staff communal spaces.

Figure 15.

Photos of physical resources for whānau and NHPs



Additional Supports

Wahakura and pēpi-pods (a plastic version of the wahakura) are not routinely offered to whānau; however, may be distributed to whānau at Wellington NICU on a referral basis and if whānau meet certain criteria. Expressing pumps can be loaned to parents not staying at RMHW on a temporary basis, otherwise, parents can hire them from the Trust shop on a weekly basis and/or apply to Work and Income for financial assistance with purchasing a pump if they meet income criteria. Parking is free for all parents with an infant at Wellington unless the parents are rooming in or the mother is an inpatient in the postnatal ward. The rationale is that parking is free for mothers who have to routinely come in to drop off breast milk. Inpatient meals are not provided to any parents in the NICU or to parents who are rooming in. The NICU has numerous recliner Lazy-boy chairs for parents to lie in with their infant for skin-to-skin cuddles however, there are not enough for each bed space; therefore, some parents have to wait. Privacy noise-cancelling headphones are located in each nursery for parents to wear during medical and nursing handovers so they can remain in the nurseries however, there are not enough for each bed space.

Internal Search for Policies, Guidelines, and Training

The next step was to investigate what documents, such as policies and guidelines, and training existed for NHPs that would help them support Māori whānau in practice in the NICU environment. This was carried out as an internal search across system databases.

Policies and Guidelines

An internal search across CCDHB databases was conducted for documents, such as policies and guidelines, that centred around supporting Māori whānau in NICU practice. No documents specific to the NICU environment were located; however, six organisation-wide policies and/or guidelines were located, including *Hauora Māori* (Māori health); *Te Pēhi Parata Whānau Whare accommodation; Koha/Whakaaro/Aroha* (Donation/unconditional gifting); *Partnering with whānau who are supporting patients*; *Bicultural safety*; and *Tikanga Māori – a Guide for Health Care Workers (Kaimahai Hauora*) (refer to Table 11).

Training

An internal search across CCDHB databases was conducted for training for CCDHB health professionals around supporting Māori whānau. One programme located was *Te Tohu Whakawaiora* (Certificate in Healthcare Capability) which was developed at CCDHB, first piloted in 2015, with the intention of developing a culturally responsive workforce and raising the capability of CCDHB staff to improve Māori health outcomes. The programme is a level three NZQA accredited course delivered over three modules: *The Treaty and Healthcare; Tikanga and Healthcare;* and *Cultural Competence and Healthcare* (refer to Figure 16). The course is a mix of self-directed learning, kanohi ki te kanohi workshops, and a *noho marae* (marae stay). CCDHB stated that they recognised not all staff have the time or desire to complete the full Te Tohu Whakawaiora course. Therefore, they offered three stand-alone modules: *The Treaty of Waitangi & Health and Wellbeing* (8 hours), *Tikanga Māori* (1 hour), and *te reo Māori* (8 hours). Each module is offered a number of times each year. The *Tikanga Māori* sessions are attended by the highest number of people as many staff, including NICU nurses, are required to attend these sessions as a part of their annual practising certificate renewal.

Table 11.

CCDHB policies and guidelines on Māori health and cultural safety

Type	**Title**	**Purpose of document**
Policy	*Hauora Māori (Māori Health)*	A policy outlining CCDHB Board and Māori Partnership Board expectations and commitment to addressing the issue of health and wellness disparity between Māori and non-Māori.
Policy	*Te Pēhi Parata Whānau Whare accommodation*	About offering affordable and culturally safe accommodation to whānau of patients at Wellington hospital who are from outside the CCDHB region.
Policy	*Koha/Whakaaro Aroha (Donation/Unconditional gifting)*	A policy providing staff with expectations and understanding of the concept of receiving donations and gifts from whānau.
Policy	*Partnering with whānau who are supporting patients*	Centred around how to facilitate the involvment of whānau in the care and support of patients.
Policy	*Bicultural safety*	A policy around supporting Māori whānau cultural needs and expectations.
Guideline	*Tikanga Māori – a Guide for Health Care Workers (Kaimahi Hauora)*	Provides CCDHB staff with expectations of culturally safe care for Māori. Guidelines are underpinned by Māori values, protocols, concepts, views of health, and Te Tiriti o Waitangi. Topics include use of *whare whānau* (family rooms), *karakia* (prayer), *taonga* (valuables), *te tautoko whānau* (family support), *te pārongo/whakapāpātanga* (information/communication), *te kai/papamuka/wai tinana* (food/linen/body substances), *te tuku whēkau* (organ donation), *te mate me te mate haere* (dying and death), and *he honohono kākano rua* (bicultural engagement).

Figure 16.

Number of people attending cultural competency training CCDHB, 2017-2018 (CCDHB, 2019a)

Training	**2017**	**2018**
Te Tohu Whakawaiora	48	51
Treaty of Waitangi & Health and Wellbeing	79	90
MHAID Treaty of Waitangi in Practice	76	91
Beginners Te Reo Course Level 1	108	112
Beginners Te Reo Course Level 2	160	64
Beginners Te Reo Course Level 3	0	10
Tikanga Māori	1,142	1,101
Total	**1,613**	**1,519**

Summary of Internal Data

The collection of internal data required me to investigate how Wellington NICU was currently operating and supporting whānau. Internal data collection included an audit of NICU referrals to WCS which identified only one in four Māori whānau being referred. An environmental survey was conducted of the NICU environment, identifying limited resources and inadequate amount of welcoming spaces for whānau. A review of CCDHB databases identified policies and guidelines centred around Māori health and cultural safety; however, none were specific to the NICU. Cultural competency training was available for all CCDHB staff in the form of an optional level three NZQA accredited course delivered over three modules. The only mandatory course for NHPs was the Tikanga Māori training sessions (1 hour).

Comparing Internal Data with External Data

The next stage of this report required me to look outside of CCDHB NICU and examine what other NICUs in Aotearoa are currently doing to support Māori whānau. For the purposes of this report, the search was narrowed down to three other tertiary level NICUs located in the North Island of Aotearoa: Auckland, Middlemore, and Waikato. Information surrounding how each NICU operates to support Māori whānau in their unit was gathered informally through various sources including DHB websites, the MoH's latest review of neonatal services (Malatest International, 2019), the NNCA (2018) website, and informal conversations with current or previous NICU health practitioners.

Auckland NICU

Region, Bedspaces and Model of Care

Auckland NICU provides care to infants born to parents from Central Auckland, West Auckland, and North Auckland (refer to Figure 17). Auckland NICU is the referral centre for infants in Aotearoa in need of paediatric cardiology services. Auckland NICU has 40 resourced bed spaces with an estimated 1,000 annual admissions (NNCA, 2018). Auckland NICU is divided into three areas of care: Intensive Care Unit (ICU), High Dependency Unit (HDU), and Parent-Infant Nursery (PIN) (Healthpoint Limited, 2022b).

Visiting Rules for Whānau

Parents have open unrestricted visiting to Auckland NICU. If parents are unable to be present for more than two days they can arrange for a designated person to visit. Visiting hours for other whānau and friends is 1.00-8.00 pm daily. Siblings of infants

can visit briefly in the company of parents; however, no other children are permitted. Visting whānau and friends must be accompanied by a parent or caregiver at all times. Maximum of two people at each beside at any given time (Starship, 2019).

Welcoming Whānau Spaces

Auckland NICU has a mothers room, a communal whānau lounge for whānau and other visitors, an interview room used for hui with whānau, and a room called *Waimarie,* with multiple uses, such as NICU MDT, whānau hui, and a space to nurse critically unwell infants in the presence of a large number of whānau. There are six parent rooms for parents to room in with their infant prior to discharge home; four are located in the NICU and two are located near the postnatal ward.

Support Services for Whānau

He Kamaka Waiora (HKW) is the main Māori support service at Auckland hospital. The support arm, *Kaiatawhai*, provides cultural and advocacy support services to Māori whānau with a child or infant at Starship Children's Hospital (Healthpoint Limited, 2022a). A referral of whānau is usually needed to access the service. Auckland NICU also employs nurse specialists in family liaison roles. Family liaisons help facilitate care between the MDT and whānau, and work to empower whānau in their primary caregiving role. Auckland NICU also has social workers based in the NICU who provide social support for whānau and assist them with networking with community service. Parking is free for NICU parents. Wahakura and pēpi-pods are routinely offered to Māori whānau. Topics on *whānau* and *equity* are routinely taught to nurses enrolled in the annual NICU neonatal course.

Middlemore NICU

Region, Bedspaces and Model of Care

Middlemore NICU look after infants born to parents from the Counties Manakau region (refer to Figure 17). Middlemore NICU (also referred to as Kidz First Neonatal Care) has 34 resourced bed spaces and is divided into two levels of care: ICU and SCBU. They have an estimated average of 900 admissions per annum (Counties Manukau Health, 2019).

Figure 17.

DHB Location boundaries (map) (MoH - Manatū Hauora, 2020b)

Visiting Rules for Whānau

Parents have open unrestricted visiting to Middlemore NICU. Other whānau and friends can visit the NICU daily between the hours of 2.00 pm and 8.00 pm. All visitors must be accompanied by a parent. Siblings over 17 years of age may visit with a parent. No other children are permitted. There is a maximum of two visitors per bed space at any given time (Counties Manukau Health, 2021b).

Welcoming Whānau Spaces

The NICU has two communal parent lounges and one communal whānau lounge for visiting whānau and friends. The ICU and SCBU have two parent rooms each. The SCBU recently had a refurbishment and each bed space has a fold-out bed for parents to stay overnight.

Support Services for Whānau

Te Kaahui Ora Maaori Health Whaanau Ora Service is the main support service for Māori whānau at Middlemore hospital. A referral is needed for whānau to access the service (Counties Manukau Health, 2021a). The NICU has two family liaison nurses based in NICU, one of Māori descent; and one social worker based in the NICU. Parking is free for all NICU parents. Mothers are offered free inpatient meals every day. Expressing pumps are loaned routinely to mothers on a temporary basis. Weekly education and teaching sessions are held for parents.

Waikato NICU

Region, Bedspaces and Model of Care

Waikato NICU look after infants born to parents from the Coromandel down to Mt Ruapehu (refer to Figure 17). Waikato NICU has 41 resourced bed spaces with an estimated 800–1000 annual admissions (NNCA, 2018). Waikato NICU is divided into three areas of care: ICU, HDU, and PIN.

Visiting Rules for Whānau

Parents have open unrestricted visiting to the NICU (day and night). All other whānau and visitors can visit the NICU between the hours of 3.00 pm and 6.00 pm daily. There is a maximum of two visitors per bed space at any given times.

Whānau Spaces

Waikato NICU has one communal whānau room for all parents and whānau, as well as five parent rooms for parents to room in prior to discharge home.

Support Services for Whānau

Kaitiaki Frontline Service is the main Māori support service for whānau admitted to Waikato NICU. Referral to the service is needed. Waikato NICU has one social worker based in the NICU of Māori descent. The social worker usually organises cooked breakfast for parents once a week. Meals are offered to all parents rooming in. Wahakura and pēpi-pods are routinely offered to whānau in the NICU.

Table 12.

Comparison of Auckland, Middlemore, Waikato, and Wellington NICUs

	Auckland NICU	Middlemore NICU	Waikato NICU	Wellington NICU
DHBs supported by each NICU	Auckland Waitematā Northland	Counties Manukau	Waikato Taranaki Lakes Bay of Plenty Tairāwhiti	Capital & Coast Hutt Valley Wairarapa Mid Central Whanganui Hawkes Bay Nelson Marlborough
Resourced beds	40	34	41	40
Annual admissions	1000	900	800-1000	1000
Model of care	Acuity based ICU, HDU, PIN	Acuity based ICU, SCBU	Acuity based ICU, HDU, PIN	Gestational model of care
Visiting rules	Parents open visiting Other visitors 1.00-8.00 pm daily and must be accompanied by a parent Max. 2 visitors per bedspace Siblings permitted in the company of adult	Parents open visiting Other visitors 2.00-8.00 pm daily and must be accompanied by a parent Max. 2 visitors per bed space Siblings over 17 permitted in company of parent	Parents open visiting Other visitors 3.00-6.00 pm daily Max 2 visitors per bed space	Parents open visiting. Other visitors 3.30-6.00 pm daily Visitors can visit with parent permission Max. 2 visitors per bed space Siblings permitted in company of adult
Parent & whānau spaces	1 mothers room 1 whānau lounge 1 interview room Waimarie room 6 parent rooms	2 parent lounges 1 whānau lounge 5 parent rooms	1 whānau lounge Five parent rooms	2 parent lounges 1 whānau lounge 6 parent rooms
Māori support services	He Kamaka Waiora/Kaiatawhai Māori Health Referral needed	Te Kaahui Ora Maaori Health Whaanau Ora Service Referral needed	Kaitiaki Frontline Service Referral needed	WCS Referral needed

	Auckland NICU	Middlemore NICU	Waikato NICU	Wellington NICU
Family Liason Nurses & Social Workers	2 x FLN NICU based 2 X SW NICU based	2 x FLN NICU based 1 x SW NICU based	1 x SW NICU based (Māori)	3 x SW based outside NICU
Other additional supports	Wahakura & pēpi-pods routinely offered Parking free for parents Expressing pumps loaned to mums Topics on whānau and equity taught to nurses on neonatal course Lazy-boys for parents	Parking free for parents Mums offered free inpatient meals everyday Expressing pumps loaned to mums Weekly education sessions for parents SCBU chairs convert to beds	Parking free for parents Cooked breakfasts once a week Wahakura & pēpi-pods Lazy-boys for parents	Parking free for parents Expressing pumps loaned to mums Weekly parent lunches and education sessions Lazy-boys for parents

Summary of External Data

This stage of Rosswurm and Larrabee's (1999) model required me to look outside of CCDHB NICU to examine what other NICUs in Aotearoa are doing to support Māori whānau. Many similarities exist between NICU services in regards to visiting; parents have open unrestricted visiting, only children who are direct siblings are allowed in, and a maximum of two people per bed space must be maintained at any given time. Other similarities between NICUs included the provision of parent and whānau lounges and rooming in rooms prior to discharge home. However, numbers varied across NICUs. All NICUs had in-hospital Māori support services that whānau could access; however, a referral was required. Parking was free for parents and expressing pumps were available on loan across the majority of NICUs.

There are many noticeable differences between NICUs, such as Wellington NICU operating under a gestational model of care, whereas other NICUs operate under an acuity-based model of care. There are also varied visiting hours for extended whānau and other visitors, anywhere from 2.5 hours at Wellington NICU to 7 hours at Auckland NICU. Auckland NICU also appeared to have the highest number of parent and whānau spaces available compared to other NICUs. Social workers were available across all NICUs; however, family liaison roles were only available to whānau in Auckland and Middlemore NICUs, with this role non-existent at Wellington NICU. Middlemore NICU is the only NICU that provides free inpatient meals to mothers with an infant in the NICU, regardless of if they are rooming in or not.

Identifying the Problem

After consulting with key stakeholders, collecting internal data and comparing it with external data, the identified problem was the lack of RBP for NHPs for successful engagement with Māori whānau in the NICU environment.

Linking the Problem with Interventions and Outcomes

In the last step of Stage 1, I planned to link the identified problem with potential interventions and desired outcomes. In Rosswurm and Larabee's (1999) model, they commented on the need to use standard classification systems for identifying interventions and desired outcomes. This is ideal when working with specific clinical conditions; however, was difficult to do for this project given the nature of the topic. At this stage of the model, adaptions were made to suit the project development. The selection of potential interventions and desired outcomes was based primarily on clinical judgement and what would work well in the NICU environment. As previously stated, the identified problem was the lack of RBP for NHPs for successful engagement with Māori whānau in the NICU environment. The proposed intervention is the development of RBP for NHPs. Desired outcomes include more consistency across NICUs in how they engage with Māori whānau, and overall improvement in the experiences of Māori whānau in NICUs.

Chapter Summary

This chapter presents Stages 1 and 2 of Rosswurm and Larrabee's (1999) model as one stage. Activities carried out included consultation with key stakeholders, collection of internal data, comparison of internal data with external data, identified problems, and linking of problems with potential interventions and outcomes. The '*Findings*' presented in this chapter support the need for the development and implementation of RBP for NHPs. Therefore, the next stage of the model is to synthesise best evidence.

CHAPTER 4 – SYNTHESISING BEST EVIDENCE

This stage of Rosswurum and Larrabee's (1999) model required a search for evidence across the literature. The purpose of synthesising the research evidence is to determine whether it supports the need for change in practice. If the research synthesis indicates sufficient research evidence supporting a change in practice with desirable benefits and low risks, practitioners can proceed with designing the practice change (Rosswurm & Larrabee, 1999). This chapter includes search strategies employed to locate evidence, as well as the key themes identified from the current literature.

Search Strategies

A comprehensive literature search was conducted across electronic databases Google Scholar, Medline, and CINAHL databases, as well as across the search engine Google. The problem, potential interventions, and desired outcomes identified in previous chapters became the major variables for reviewing the research literature. The initial search was for literature on Māori whānau within NICUs in Aotearoa; however, literature specific to this topic is scarce. Therefore, the search was extended to include literature specific to Māori whānau in similar or related hospital healthcare environments such as maternity and paediatric settings in Aotearoa New Zealand. The search for literature was then extended to explore other Indigenous people's experiences within NICUs internationally.

Search terms employed across databases included the following keywords in a variety of combinations: whanau, whānau, Maori, Māori, NICU, neonatal intensive care, neonatal, newborn, infant, paediatric, child, maternity, best practice, engagement, indigenous.

The search was limited to texts available in English published from 2001 onwards, allowing a 20-year margin. A variety of literature was considered for the review to get a clear understanding of how NICUs are currently operating to support Māori whānau. Literature in the review includes kaupapa Māori-based research, qualitative research, quantitative research, hospital policy and guidelines, journal articles, theses, and opinion pieces (refer to Table 13).

Table 13.

Types of evidence included in literature review

Types of evidence	**Number**
Kaupapa Māori research	5
Qualitative study	1
Quantitative study	1
Journal article	1
Report	2
Thesis	2
Hospital policy/guideline	1
Opinion piece	1

Review of the Literature

A literature review was conducted to investigate how Māori whānau are currently supported in NICUs. The limited literature available is predominantly informed through a kaupapa Māori-based lens, which is valuably descriptive in nature, as it gives Māori whānau a voice throughout the research. From the available literature, the following five themes were located relevant to the main aims of the project: acknowledgement of whānau; continuity of care and *whakawhanaungatanga* (development of meaningful relationships); lack of *rangatiratanga* (autonomy); isolation and unwelcoming spaces; and *manaakitanga* (hospitality/kindness) and respecting cultural practices.

Acknowledgement of Whānau

Acknowledgment of extended whānau support in the NICU is emphasised across the literature (Adcock et al., 2021; Pihama et al., 2010; Thompson, 2009). Pihama's (2010) kaupapa Māori-based study shared Māori whānau experiences of NICUs in Aotearoa and highlighted the importance of acknowledging extended whānau support in the NICU environment. Whānau who participated in Pihama's study spoke of often feeling debilitated by not having extended whānau support readily available to them during their time in the NICU due to strict visiting policies and rules. Whānau spoke of often feeling frustrated at having to repeatedly justify their whānau structure to NHPs, as many NICUs continue to operate under the construct of the nuclear family—fundamentally defined as two (heterosexual) parents and biological siblings—despite the vast majority of whānau structures not conforming to this mould (Pihama, 2010; Stevenson, 2018). Pihama's study is one of the few conducted into Māori whānau experiences of NICUs in Aotearoa and shares valuable insights. However, its findings may have limited relevance given the study's publication date.

Stevenson's (2018) kaupapa Māori-based study shared Māori wāhine and whānau narratives of their *hapūtanga* (pregnancy) journey which resulted in the harm or loss of their infant. This study, like Pihama (2010), reflected on how NICUs across Aotearoa continue to control and restrict extended whānau access despite the numerous benefits of whānau support to both infants and parents, such as improved infant weight gain, decreased infant nosocomial infection, decreased parent stress, decreased readmission rates, and improved breastfeeding rates (O'Brien et al., 2018). Stevenson's research sheds light on the lack of uniformity across NICUs in Aotearoa in regards to visiting rules and policies enforced for extended whānau and other non-parent visitors. This highlights how NICUs in Aotearoa unnecessarily operate in individual silos, often causing confusion for whānau when they are transferred between services.

Adcocks et al.'s (2021) kaupapa Māori-based study are one of the first longitudinal studies to examine Māori whānau experiences of their journey along the preterm care pathway in Aotearoa. This study validated the various important roles extended whānau members play to support parents and infants whilst in the NICU that NHPs are unable to assist with, such as running errands; picking up and dropping off parents; delivering food and clothing items; advocating for parents to receive entitlements such as food vouchers, accommodation, and transport assistance; and helping look after other *tamariki* (children). Most significantly, extended whānau were the key source of emotional support for parents throughout trying times whilst in the NICU (Adcocks et al., 2021).

Overall, these kaupapa Māori-based studies emphasise the important role extended whānau have in supporting parents and infants whilst in the NICU. NICUs around Aotearoa need to recognise and validate non-nuclear whānau structures, facilitate supportive whānau environments, and assess visiting rules and policies in place for extended whānau.

Continuity of Care and Whakawhanaungatanga

Across the literature, whānau emphasised a preference for less changeover of staff in the NICU to promote continuity of care for their infant and to allow the process of whakawhanaungatanga to occur. One of the key reasons whanau expressed this preference was believing NHPs were better able to pick up on problems with their infants quickly and address their infant's cues earlier (Adcock et al., 2021). This allowed whānau to feel more comfortable leaving their infant in the care of others and reduced stress and anxiety for whānau.

Having less changeover of staff in the NICU also enabled the process of whakawhanaungatanga to occur between whānau and NHPs on a relational and social level (Adcock et al., 2021). Engaging in whakawhanaungatanga is where NHPs take the time to sit and talk with whānau, listening and showing an interest in health history, and speaking with whānau, not at them, in appropriate easy to understand terms versus complex medical terminology (Stevenson et al., 2020a). When whakawhanaungatanga is avoided, Māori may feel unconnected to the place and the people within it (Stevenson et al., 2020b). Avoiding the process of whakawhanaungatanga occurs when NHPs do not take the time to introduce themselves, often rushing whānau and not allowing whānau the time to introduce themselves or *kōrero* (speak). During medical rounds, whānau reported feeling invisible when NHPs would discuss their infant's care plan with little or no interaction with whānau who were sitting right in front of them (Pihama, 2010).

The ways in which whānau were communicated with in NICU, in regards to information surrounding the needs of their infant, played a significant role in their overall perception of their NICU journey (Wright et al., 2020). Having multiple NHPs involved in their infant's care would often cause confusion for whānau, leaving them not knowing who was leading the care for their infant. Whanau also reported often receiving inconsistent information and, at times, information overload, with too many different treatment plans from multiple NHPs (Adcock et al., 2021). When whānau did have issues with certain NHPs, they appreciated being able to request that they were no longer involved in the care of their infant (Adcock et al., 2021).

Wright et al.'s (2020) qualitative study on Indigenous mothers whose infants were admitted to NICUs across Canada demonstrated that when NHPs provided good clear communication to families, they were perceived to be more knowledgable and competent, overall increasing parental satisfaction with care. This led to better engagement from parents, with parents more likely to voice their needs and concerns (Wright et al., 2020).

To improve practice across the maternal-infant healthcare system in Aotearoa, Stevenson et al. (2020b) developed a healthcare framework—*Te Ha o Whānau* (representing whānau voices leading maternity care in Aotearoa). The framework contains key practice points and examples that NHPs can apply when working with whānau in the NICU. The framework consists of three main *tikanga* (cultural principles), with the third tikanga being to work towards achieving tikanga

whakawhanaungatanga. To do this in the NICU setting, NHPs need to work towards alleviating power imbalances between whānau and NHPs, engage in meaningful relationship building with whānau, and change the NICU environment from being task-focused to whānau-focused.

Overall, the literature supports advocating for less changeover of staff in the NICU to promote continuity of care for infants and their whānau, assisting with the provision of consistent information and treatment plans. Having less changeover of staff in the NICU also facilitates the process of whakawhanaungatanga between whānau and NHPs, and the development of trustworthy meaningful relationships.

Lack of Rangatiratanga

The literature supports that whānau are often denied their right to exercise *rangatiratanga* (autonomy) over their infant whilst in the NICU. Whānau are routinely not integrated into the care of their infant and are still often treated as visitors to the NICU, despite evidence supporting whānau involvement in the care and decision-making processes (O'Brien et al., 2018). Whānau within Adcock et al.'s (2021) study described multiple instances of parenting roles becoming disrupted in the NICU, with NHPs routinely taking over the care of their infant, leaving whānau to feel like their infant was not really theirs. Whānau did, however, express gratitude towards NHPs when they demonstrated guidance and support, particularly in the early days following admission when they described feeling too frightened to touch or hold their infants.

After spending many weeks and/or months in the NICU, whānau reported living on hospital time—having a dictated routine every day—which would often change to suit the needs of NHPs each day. This change in routine would often result in whānau missing out on doing things with their infant that they deemed important, such as carrying out 'cares' (changing nappies, checking temperatures) (Adcock et al., 2021). Whānau also reported instances of NHPs dictating to them when and who could touch their infant and/or instances of NHPs telling whānau off for doing something (supposedly) wrong (Adcock et al., 2021). Such scenarios highlight how whānau lose their rangatiratanga over their infant whilst in the NICU and demonstrate how easily power imbalances can occur between whānau and NHPs, heightening stress and anxiety at an already tenuous time.

Stevenson et al.'s (2020b) kaupapa Māori-based study also reflected on how whānau are made to interact with and within healthcare systems based on Eurocentric worldviews. These systems operate under unfamiliar knowledge systems, hindering

whānau from having a voice and participating in the care and decision-making of their infant. To help provide whānau with a voice in the NICU environment, greater acknowledgement needs to be given to *mātauranga Māori* (Māori knowledge) and kaupapa Māori-based research. Stevenson et al.'s (2020) kaupapa Māori-based framework—*Te Hā o Whānau*—can provide NHPs with practice points to achieve *Tikanga Rangatiratanga* (cultural principles around exercising autonomy), the second tikanga within the framework. NHPs must attempt to recognise and alleviate epistemic injustice within the health system, value whānau voices and participation in the care of their infant, and aim to increase Māori in roles across the NICU (Stevenson et al., 2020b).

Adcock et al. (2021) suggested WhICare (standing for Whānau Integrated care) as a new neonatal model of care that could be implemented across NICUs in Aotearoa. Like other neonatal models of care, such as Family Integrated Care (FIC) and Family Centred Care (FCC) (O'Brien et al., 2018), WhICare recognises the importance of whānau as expert knowledge holders and important caregivers to their infants. WhICare could be implemented with an Indigenous focus, recognising the impact that colonisation has had on whānau (Adcock et al., 2021).

Isolation and Unwelcoming Spaces

Feelings of isolation and unwelcoming spaces are reported by whānau within NICUs across Aotearoa. Dr Kendall Stevenson, from the University's Centre for Women's Health Research in Aotearoa – Te Tātai Hauora o Hine, commented that *"Most participants in my previous research on whānau experiences following the admittance of their baby to the NICU felt alienated and isolated by their experiences in the NICU*" (New Zealand Media Entertainment, 2019). This is supported by Thompson (2009) who shared whānau stories and experiences of Waikato NICU. Whānau within Thompson's study reported often feeling isolated and alone throughout their NICU stay, with whānau describing NICUs as foreign intimidating environments, full of overwhelming technology, frightening alarms, and unfamiliar knowledge systems. Thompson also described her own experience through Waikato NICU, reflecting on how she and her whānau often felt like "*aliens; culturally inept, and totally alone during our time in the NICU*" (p. ii). Thompson's study is one of the few studies conducted into whānau experiences of NICUs in Aotearoa, adding valuable insights into whānau experiences. However, given its publication date, it may have limited relevance to the experiences of whānau in NICUs today.

More recently published is Stevenson et al.'s (2020a) Kaupapa Māori-based study which examined the impact that transfer to secondary or tertiary level hospitals in Aotearoa had on whānau wellbeing after disruption to their birthing journey. Whānau who participated in this study also expressed feelings of alienation and isolation during their time within the maternal-infant health system. Whānau reported it was particularly hard when mothers and their infants were transferred to, or birthed in, regions away from home and support systems of whānau, hāpu, and iwi. As per the latest review of neonatal services in Aotearoa, this is a common occurrence, with an estimated one-quarter of infants requiring neonatal care in Aotearoa being cared for in a NICU away from home (Malatest International, 2019).

Whilst transfer to a tertiary level hospital is often necessary for the health and wellbeing of both mother and infant, it is not without ramifications for the whole whānau collective. Such instances were described by mothers as terrifying experiences, as transfers were often always done alone, with partners and additional support people having to find their own means of transport to the hospital (Adcock et al., 2021; Stevenson et al., 2020a). Being away from home and support systems for lengthy periods of time, including whānau, partners, and other tamariki, further increased feelings of isolation for whānau and created additional stressors for the whole whānau, who often had to make trade-offs in order to support the infant and parent/s (Adcock et al., 2021). Partners, whilst often having open unregulated visiting to the NICU, were often kept busy juggling multiple other responsibilities including maintaining a home life, working to maintain an income, and looking after other tamariki. This was particularly hard on mothers who needed additional support whilst in the NICU, as in most cases anyone who was not a parent could only visit the NICU within strict and narrow visiting hours, with strict rules around ages and whether nonbiological siblings could visit (Adcock et al., 2021; Stevenson, 2018). Whānau were also faced with additional unexpected costs associated with the transfer, such as purchasing food, clothing, and toiletries. All of this took an understandable emotional and mental toll on whānau. As per the latest review of neonatal services in Aotearoa, the capacity to return infants, and, therefore, their mothers, back to their hospital of origin, was reported as always or often a problem by a high proportion of NHPs (Malatest International, 2019).

Feelings of isolation and inhospitable spaces were also evident in reports of racism experienced by whānau either within the hospital environment or hospital arranged accommodation (Adcock et al., 2021). Whānau described instances of being treated suspiciously, as if they were thieves, and having assumptions made about them, such

as their smoking status, ethnicity, parenting skills, and relationships. Whānau also described instances of feeling like they were treated poorly simply due to the fact that they were young and/or Māori (Adcock et al., 2021). Negative experiences such as these will lead to whānau choosing not to be in the presence of NHPs and avoidance of the health care system altogether (Graham & Masters-Awatere, 2019).

Through trying times, whānau reportedly found solace among peers and other whānau in the NICU. Peers and other whānau were seen as a potent source of support and strength for whānau, as they themselves were experiencing a similar situation and, therefore, could truly understand what was going on (Adcock et al., 2021). This was particularly important for parents where extended whānau support was less available. Seeing and having a kōrero with other whānau either within the NICU, around the hospital, or hospital arranged accommodation, helped whānau to become more familiar and comfortable within the NICU environment and helped to decrease feelings of isolation within inhospitable spaces (Adcock et al., 2021).

Overall, experiences of isolation and unwelcoming spaces are undoubtedly experienced by whānau in NICUs across Aotearoa. Returning wāhine and their infants to their home and/or hospital of origin as soon as possible enables access to key support systems of whānau, iwi, hāpu, partners, and other *tamariki* (children). As previously discussed, NICUs need to assess the strict visiting rules and policies in place that restrict whānau access; NHPs who exhibit racist behaviour need to be held accountable; relationships formed between peers and different whānau in the NICU need to be supported and facilitated; and welcoming spaces are needed for whānau in the NICU as places have a healing role (Stevenson et al., 2020b).

Manaakitanga and Respecting Cultural Practices

NHPs who demonstrate respect and support for Māori cultural birthing practices and values are seen by whānau as culturally safe and demonstrating *manaakitanga* (hospitality/kindness). It is common in te ao Māori for infants to be at the centre of *whakapapa (*genealogy) and *wairuatanga* (spiritual) practices. Whānau connect infants to their ancestors through important birthing ceremonies and practices, such as *whenua ki te whenua* (returning the placenta to the land). This practice is where the whenua is often buried on ancestral land to connect infants to their ancestors, spanning all the way back to *Papatūānuku* (earth mother) and *Ranginui* (sky father). This practice is believed by Māori to keep infants physically and spiritually safe (Adcock et al., 2021). When NHPs help facilitate such practices in the NICU and take the time to learn the *kaupapa* (purpose) behind such practices, they are seen by

whānau as culturally safe and to be demonstrating manaakitanga. Manaakitanga involves acting in a way that uplifts the *mana* (prestige) of others and, in turn, uplifts one's own mana (Stevenson et al., 2020b). Other positive experiences of manaakitanga were reported by whānau in the NICU when NHPs offered whānau access to Māori support services, such as in hospital-based Māori support services, Māori chaplains, and/or *kaumātua* (respected elder). NHPs were also seen by whānau as culturally safe when they themselves offered assistance with important cultural practices, such as *karakia* (prayer) and *waiata* (song). NHPs who helped whānau in being intimate with their infant were also seen by whānau to be demonstrating manaakitanga. This included assisting whānau to hold their infant, skin-to-skin cuddles, and feeding and caring for their infant. These demonstrations of manaakitanga helped whānau feel connected to their infant and helped promote bonding (Adcock et al., 2021). Reported absences of manaakitanga by whānau include when the NHPs looking after their infant lacked a general sense of kindness and/or concern for their cultural beliefs and practices.

Whānau connect their infants to their ancestors through the names they give them, a process of intergenerational whakawhanaungatanga (Adcock et al., 2021). Whānau reported instances of feeling disrespected in the NICU when NHPs mispronounced or avoided saying their infant's name instead of making an effort to learn them. When NHPs did make an effort, whānau described feeling impressed and respected (Adcock et al., 2021).

Other reported instances of culturally unsafe care include not assisting with the returning of body parts, fluids, or tissue to whānau and the losing or damaging of whenua when sent away for testing, as often whenua can unknowingly be treated with chemicals, such as formaldehyde, without whānau knowledge or consent. This occurence can often leave whānau in the position of being unable to practice whenua ki te whenua for fear of damaging other whenua or any trees or plants buried on ancestral land (Stevenson, 2018).

Other reported absences of manaakitanga by whānau include NHPs prohibiting certain whānau members from visiting their infant in the NICU due to their age, as well as NHPs not allowing grandparents or other close whānau members from touching and/or holding their infant. This situation was frustrating and hard for parents who wanted additional support from whānau, particularly young first-time parents (Adcock et al., 2021).

The third tikanga of Stevenson et al.'s (2020b) Te Hā o Whānau framework is *Tikanga Manaakitanga* (cultural principles around hospitality/kindness). To work towards this tikanga, NHPs need to demonstrate value for infants and their whānau, work towards providing standardisation of environmental supports (both whānau and social support services), and work towards providing supportive environments which respect, encourage, and facilitate Māori cultural values and practices (Stevenson et al., 2020b).

Overall, when NHPs help facilitate cultural practices in the NICU for whānau, and take the time to learn the kaupapa behind cultural practices, they are viewed by whānau as culturally safe and to be demonstrating manaakitanga. Assisting whānau in being intimate with their infant and facilitating access to Māori support services was also deemed very important by whānau.

Summary

The literature review and synthesis of the evidence revealed a limited selection of predominantly kaupapa Māori-based research. Such literature was invaluable to this literature review as it gave whānau a voice and helped identify areas of NICU practice that require urgent attention in order to improve engagement with Māori whānau. This chapter contributes to the overall findings thus far in this project and further supports the need for the practice change proposal.

CHAPTER 5 – DESIGN PRACTICE CHANGE

In this stage of Rosswurm and Larrabee's (1999) model, after synthesising the best evidence, practitioners must describe the activities that lead to a change in practice. This chapter will present reflections on the model, the impact that COVID-19 has had on whānau at Wellington NICU; a discussion of the project's overall findings, including limitations and key strengths of the project; and final recommendations for the practice change proposal.

Reflections on the Model

Rosswurm and Larrabee's (1999) model helped guide the development of the project towards a proposed change for practice. As previously mentioned, only Stages 1-4 of the model were able to be completed due to time constraints. The model was helpful in many ways to provide a clear direction for developing a proposed change in practice. However, it was also challenging as, at times, I needed to adapt the model to fit the project. The model also describes each stage as if the development of a practice change proposal occurs in a continuous straightforward process; however, I found many aspects of the model occurring simultaneously, hence the adaptions made. I was also unable to use standard classification systems to link identified problems with interventions and outcomes due to the nature of the project and, therefore, had to rely on findings and clinical judgement to develop potential interventions and desired outcomes.

Impact of COVID-19

Over the last two years COVID-19 has had a significant effect on the entire health care system in Aotearoa, including Wellington NICU. In March 2020, a State of National Emergency was declared across Aotearoa as the entire nation went into lockdown (New Zealand Government - Te Kāwanatanga o Aotearoa, 2022a). COVID-19, a disease caused by the coronavirus SARS-CoV-2, was declared a global pandemic by the World Health Organization (WHO) (New Zealand Government - Te Kāwanatanga o Aotearoa, 2022b). Over the last two years, visitation rules at Wellington NICU permitted only parents entry to the NICU, one parent at a time. No extended whānau or other visitors were permitted visitation over this two-year period. Despite these rules rules being put in place to protect the vulnerable infant population group in NICU, the repercussions and long-term effects on whānau and infants need to be considered.

Masks were also made mandatory for all NHPs and parents. However, there was concern about the developmental impact of infants not seeing faces and expressions, as well as the impact on bonding and infant-maternal mental health. As a result, parents were able to remove masks when holding their infant.

The internal and external data collected for this project were gathered throughout the COVID-19 pandemic. All data collected are reflective of what would normally occur in NICUs nationally in a pre-COVID environment, rather than what was occurring over the period of undertaking this practice project. The impact of COVID-19 on this practice project is that it reinforced the very real risk that infection poses to the vulnerable population group in NICU and potentially heightened stakeholders' anxiety and/or vigilance in regards to enforcing pre-COVID visitation rules. The final recommendations for this practice project are developed for a post-COVID NICU environment.

Discussion

The overall aim of this practice project is to develop recommendations for the development and implementation of an RBP to help guide NHPs towards successful engagement with Māori whānau in the NICU environment. This discussion does not intend to repeat what has been discussed thus far; rather, summarises the key themes identified from the overall findings with support from the literature.

More Māori in the NICU Workforce

The findings from this analysis show that more Māori NHPs are urgently needed across NICUs to truly reflect the population they are serving. As previously noted, only 1.5 per cent of Wellington NHPs identify as Māori (D. Davenport, personal communication, June 2, 2021) despite catering to a Māori population of 11.5 per cent (CCDHB, 2019a). This figure does not take into account Māori whānau transferred from outlying regions. The literature supports this finding (Adcock et al., 2021; Stevenson, 2018; Stevenson et al., 2020b), as Māori are the best advocates for their people, and their health and wellbeing. The analysis showed that NICUs employ social workers and/or family liaisons in social support roles for whānau. Perhaps having more Māori in these roles would help to empower whānau in being *rangatiratanga* (autonomous) over their infant.

Supporting Māori Birthing Practices and Values

The analysis showed the importance of NHPs supporting Māori birthing practices and values in the NICU. This is supported in the literature, with NHPs seen as culturally safe and demonstrating manaakitanga when doing so (Adcock et al., 2021). The internal search revealed DHB organisation-wide policies and guidelines centred around Māori health and cultural safety; however, none were specific to the NICU environment. One policy–*Tikanga Māori*—did provide important Māori tikanga principles and practices that NHPs could apply to the NICU environment, demonstrating the need for practice guidance specifically related to the NICU environment.

Referral to Māori Support Services

The analysis demonstrated that whānau in the NICU are routinely not offered access to in-hospital Māori support services. Whether this is due to a lack of referral on behalf of NHPs or a lack of information sharing this requires further investigation. Access to Māori support services is advocated for by whānau in the literature, with whānau reporting positive experiences of manaakitanga when NHPs referred them to engage with Maori chaplains, kaiāwhina, and kaumātua. It is apparent that a review of the processes of referral of whānau to Māori support services is required.

Raising Cultural Responsiveness

The analysis highlighted the need to raise the cultural responsiveness of NHPs as unfortunately unconscious stereotyping and beliefs about Māori are still evident in practice today. Reports of racist behaviour, assumptions, and Māori being treated poorly, simply due to the fact they are Māori, is supported by the literature and is simply unacceptable (Adcock et al., 2021). This needs to be addressed urgently as negative experiences such as these lead to negative associations with the health care system as a whole, and impact on whānau presence in the NICU (Graham & Masters-Awatere, 2019). The analysis revealed no specific NICU training sessions; although, CCDHB-wide training sessions were available on te reo Māori, Te Tiriti o Waitangi, and Tikanga principles. However, training sessions were optional and not widely used, with the exception of the Tikanga session, making cultural safety optional versus mandatory.

Whānau Visiting

The analysis showed that Māori whānau are undoubtedly restricted in accessing their infants and providing emotional support to parents in the NICU due to strict visiting

rules and policies. The literature supports this, with whānau reporting feelings of isolation, loneliness, and debilitation in not having extended whānau supports readily available to them (Adcock et al., 2021; Pihama, 2010; Stevenson et al., 2020b). This analysis brought to light the continuous debate of whether it is justified to deny whānau access to their infant in NICU due to the fear and relatively real risk that infection does pose to this vulnerable population group. As previously commented, the result of the COVID-19 pandemic has seen whānau denied any visitation to the NICU over a two-year period. The rationale behind this decision is understandable; however, the long-term repercussions on infants and whānau need to be considered as these rules remain in place today. The literature supports the need for greater uniformity between NICUs nationally and assessment of visiting rules for whānau (Adcock et al., 2021; Pihama, 2010; Stevenson et al., 2020b). At a system level, the literature supports ensuring infants are returned to their home and/or hospital of origin as soon as possible to enable access to key support systems and prevent whānau from enduring additional stressors associated with being in NICU (Stevenson et al., 2020a).

Welcoming Whānau Spaces

The analysis highlighted the lack of physical welcoming spaces for whānau in the NICU environment. The literature supports this claim with whānau repeatedly reporting NICUs as unwelcoming environments (Adcock et al., 2021; Pihama, 2010; Stevenson et al., 2020a; Thompson, 2009). Whilst Wellington NICU does provide some level of parent and whānau spaces, these are limited and multi-purpose, such as parent lounges doubling as expressing rooms, rendering such spaces unwelcoming for whānau. Analysis showed that Wellington NICU is unique from other tertiary level NICUs across Aotearoa in that they nurse infants together according to gestational ages versus acuity needs. The gestational model of care, whilst understanding its fundamental concepts, appears not to be in the best interests of whānau. The open planned nurseries can be chaotic, overwhelming, and lack privacy in what is an already intimidating and foreign environment; and perhaps challenges the appropriateness of the gestational model of care within a Māori whānau-friendly service. It also raises questions of whether it is appropriate or fair for parents to nurse relatively stable infants requiring minimal support in the same open nurseries as critically unwell infants simply due to the fact that they are of similar gestational age.

Whakawhanaungatanga

The analysis found that the Māori concept of whakawhanaungatanga was integral when working with whānau in the NICU. The concept is strongly supported in the

literature (Adcock et al., 2021; Stevenson, 2018; Stevenson et al., 2020b) as it can assist NHPs in becoming more aware of how they engage with whānau, and how to establish successful and meaningful relationships. The literature supports having less changeover of NHPs to provide whānau with continuity of care and familiarity in an unfamiliar environment and allow the natural process of whakawhanaungatanga to occur (Adcock et al., 2021).

Kaupapa Māori-Based Research

The literature strongly suggests that greater recognition and implementation need to be given to kaupapa Māori-based research to inform practice within the maternal-infant health care system in Aotearoa. This project recognises the important role that Kaupapa Māori research has in informing health practices that affect Māori; being that it is conducted by, with, and for Maori. Published Kaupapa Māori research was invaluable throughout this project, as it takes into consideration the impact that colonisation has had on Māori and the socioeconomic inequities they continue to face. Frameworks such as *Te Hā o Whānau* (Stevenson et al., 2020b) have already been developed and recommended for the maternal-infant system in Aotearoa and could be adapted to suit the NICU environment. WhICare, developed with an indigenous lens, was also suggested by Adcock et al. (2021) as a take on existing neonatal models of care, such as FIC and FCC.

Project Limitations

Despite using kaupapa Māori research to help support the development of a practice change proposal the project itself is not kaupapa Māori; therefore, it does not include the voice of Māori whānau who use NICU services. It is also important to acknowledge my Filipino and Pākehā ancestry and that I have viewed this project (in particular the gathering of internal and external data) and have interpreted the literature through a non-Māori lens. Māori are undoubtedly the best advocates for their people, and their health and wellbeing. This project was also carried out as a quality improvement initiative in one tertiary level NICU in Aotearoa and therefore may not be reflective of all NICUs nationally. More research is urgently needed to give voice to Māori whānau and their experiences with NICUs nationally.

Key Strengths of the Project

Key strengths include that this project has contributed to momentum gained at Wellington NICU to improve the service for whānau. Over the year it took to complete this project, as practice is ever evolving, several practice changes were implemented

in the NICU by the pro-equity rōpū '*Kohanga o te atawhai'*. Changes implemented include posters on te reo Māori words and correct pronunciation throughout NICU (Appendices B and C); Māori whakataukī decals on walls throughout NICU corridors; Aho Pēpi muslin wraps with Māori whakapapa designs for whānau (Appendix D); a vessel called *Te Wai* for whānau to use for spiritual cleansing (Appendix E); new signage on nursery doors with various *rakau* (trees) to reflect infants being cared for within each nursery (Appendix F); offering of name badges in te reo Māori; and working on fostering closer ties with WCS. These practices changes signify small steps are being taken to try and improve the NICU for whānau however much more is nneeded at a more in-depth systematic level.

Recommendations for Practice Change

The following are the project's final recommendations which should be considered when developing a RBP to help guide NHPs towards successful engagement with Māori whānau in the NICU environment:

- Consider how we can encourage and support Māori to enrol into local nursing programmes.
- Invite Māori whānau in NICU to provide feedback on what is of important to them and on what works or doesn't work from their perspective. Discuss with CNM the distribution of a questionnaire.
- Employ more Māori across the NICU workforce, including more Māori RNs and more Māori in social support roles, such as social workers and family liaisons.
- Develop NICU tikanga recommendations for practice that are informed by kaupapa Māori research to assist NHPs in supporting and facilitating Māori cultural practices in NICU, taking into account mātauranga Māori, such as rongoā Māori and hauora Māori models of care.
- Implement a neonatal family integrated model of care with an indigenous focus, such as WhICare, that acknowledges and respects whānau as rangatiratanga over the care of their infant.
- Make in-hospital training sessions on te reo Māori and Te Tiriti o Waitangi mandatory for NHPs (similar to the Tikanga training session) and/or create specific NICU education sessions to deliver to NHPs on annual NICU study days on similar topics, as well as on topics of equity.
- Review NICU visiting rules and policies nationally to provide uniformity across services, including assessment of narrow visiting hours and taking into

account the importance of extended whānau support and various non-nuclear whānau structures.

- Offer free inpatient meals to mothers whilst in NICU and to parents who are rooming in to help alleviate the additional financial stress of having to purchase food.
- Create additional welcoming parent and whānau spaces in the NICU environment by rearranging current spaces available. Have a dedicated expressing room separate from communal parent lounges and allocate more rooms for parents to room in prior to discharge home.
- Revise work rosters to ensure less changeover of nurses per whānau to allow continuity of care for infants and whānau in order to allow the natural process of whakawhanaungatanga.
- Ensure all whānau are offered referral to WCS. Trial a blanket referral for whānau, with whānau consent, and ask whānau for feedback.
- Return infants home and/or to their hospital of origin as soon as possible to ensure whānau have access to key support systems and prevent additional stressors associated with staying in NICU.
- Assess the current gestational model of care at Wellington NICU in comparison to the acuity-based model used nationally in other NICUs for the appropriateness within a Māori whānau-friendly service.
- With the abolishment of DHBs nationally, assess the ability to provide tertiary level neonatal care in existing secondary level SCBUs in order for women to birth as close to their home as possible and prevent transfer elsewhere, thereby preventing separation from infant and extended whānau.

Conclusion

Māori whānau remain chronically underserved by NICUs across Aotearoa, such as Wellington NICU. Wellington NICU NHPs urgently require more support and guidance at a systemic level in order to successfully support and engage with Māori whānau entering their service. The recommendations developed within this practice project are intended to provide a starting point for practice change and improvement, as well as the development of an RBP that could be implemented across NICUs nationally in the hopes of curating uniform spaces and consistent services that are welcoming and inviting for whānau.

References

Abel, S., Park, J., Tipene-Leach, D., Finau, S., & Lennan, M. (2001). Infant care practices in New Zealand: A cross-cultural qualitative study. *Social Science & Medicine, 53*(9), 1135-1148. https://doi.org/https://doi.org/10.1016/S0277-9536(00)00408-1

Adcock, A., Cram, F., Edmonds, L., & Lawton, B. (2021). He tamariki kokoti tau: Families of indigenous infants talk about their experiences of preterm birth and neonatal intensive care. *International Journal of Environmental Research and Public Health, 18*(18). https://doi.org/10.3390/ijerph18189835

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). American Psychological Association.

Came, H., O'Sullivan, D., Kidd, J., & McCreanor, T. (2020). The Waitangi Tribunal's WAI 2575 report: Implications for decolonizing health systems. *Health and Human Rights, 22*(1), 209. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7348423/pdf/hhr-22-01-209.pdf

Capital & Coast District Health Board. (2019a). *Taurite ora - Māori health strategy data profile 2019*. https://www.ccdhb.org.nz/news-publications/publications-and-consultation-documents/taurite-ora-maori-health-strategy-2019-2030/taurite-ora-data-profile-2019.pdf

Capital & Coast District Health Board. (2019b). *Transferring your baby to Wellington NICU for intensive care.* https://www.ccdhb.org.nz/our-services/a-to-z-of-our-services/neonatal-intensive-care-unit-nicu/1100922-transferring-your-baby-to-wellington-nicu-1.pdf

Capital & Coast District Health Board. (2020a). *Neonatal Intensive Care Unit (NICU)*. https://www.ccdhb.org.nz/our-services/a-to-z-of-our-services/neonatal-intensive-care-unit-nicu/

Capital & Coast District Health Board. (2020b). *Whānau care services*. https://www.ccdhb.org.nz/our-services/a-to-z-of-our-services/whanau-care-services/

Capital & Coast District Health Board. (2021). *Neonatal services*. https://www.ccdhb.org.nz/about-us/history/services-for-sick-children/neonatal-services/

Counties Manukau Health. (2019). *Women's health and newborn annual report 2018-2019*. https://countiesmanukau.health.nz/assets/Our-services/attachments/2019-CM_Health_-Womens-Health_and_Newborn_Annua_Report.pdf

Counties Manukau Health. (2021a). *Māori health services*. https://www.countiesmanukau.health.nz/our-services/maaori-health-services/

Counties Manukau Health. (2021b). *Neonatal Care*. https://www.countiesmanukau.health.nz/our-services/child-health-services/neonatal/

Cram, F., Smith, L., & Johnstone, W. (2003). Mapping the themes of Maori talk about health. *The New Zealand Medical Journal, 116*(1170), 1-7. https://researchspace.auckland.ac.nz/bitstream/handle/2292/4641/12659099.pdf;sequence=1

Filoche, S., Cram, F., Beard, A., Sim, D., Geller, S., Edmonds, L., Robson, B., & Lawton, B. (2018). He tamariki kokoti tau-tackling preterm: A data-linkage methodology to explore the clinical care pathway in preterm deliveries. *BMC Health Services Research, 18*(1), 1-6. https://doi.org/10.1186/s12913-018-3179-6

Gillon, S. (2019). *Neonatal intensive care unit*. https://www.ccdhb.org.nz/working-with-us/nursing-and-midwifery/nursing-at-ccdhb/clinical-learning-environment-undergraduates/clinical-learning-environment/nicu-ccdhb-student-orientation-booklet-feb-2019.pdf

Graham, R., & Masters-Awatere, B. (2019). *"More than bloods and obs"-Whānau Māori discuss health and hospital care*. University of Waikato, Māori and Psychology Research Unit. https://researchcommons.waikato.ac.nz/bitstream/handle/10289/13672/Harti%20Technical%20report_FINAL.pdf?sequence=2&isAllowed=y

Healthpoint Limited. (2022a). *Auckland DHB Māori health*. https://www.healthpoint.co.nz/public/other/auckland-dhb-maori-health/

Healthpoint Limited. (2022b). *Starship newborn services*. https://www.healthpoint.co.nz/public/paediatrics/starship-newborn-services/

Kerr, F. (2021). *Māori health made a priority in a raft of radical changes to the sector*. https://www.stuff.co.nz/national/health/300281545/mori-health-made-a-priority-in-a-raft-of-radical-changes-to-the-sector

Kukutai, T. (2004). The problem of defining an ethnic group for public policy: Who is Māori and why does it matter? *Social Policy Journal of New Zealand* (23), 86-108. https://msd.govt.nz/documents/about-msd-and-our-work/publications-resources/journals-and-magazines/social-policy-journal/spj23/23-pages86-108.pdf

Life Flight. (2021). *Meet our team*. https://www.lifeflight.org.nz/who-we-are/meet-our-team

Malatest International. (2019). *Review of neonatal care in New Zealand.* https://www.health.govt.nz/system/files/documents/publications/review-of-neonatal-care-in-new-zealand-aug2019.pdf

Manch, T., & Witton, B. (2021). Government announced radical plan to centralise healthcare, will abolish DHBs. *Stuff.* https://www.stuff.co.nz/national/politics/124901118/government-announces-radical-plan-to-centralise-healthcare-will-abolish-dhbs

Matthews, S. (2020). *Māori midwives on the power of Indigenous practices*. https://www.newsecuritybeat.org/2020/12/maori-midwives-power-indigenous-birthing-practices/

Medical Council of New Zealand. (2019). *He ara hauora Māori: A pathway to Māori health equity*. Author. https://www.mcnz.org.nz/assets/standards/6c2ece58e8/He-Ara-Hauora-Maori-A-Pathway-to-Maori-Health-Equity.pdf

Ministry for Culture and Heritage. (2017). *The Treaty in brief*. https://nzhistory.govt.nz/politics/treaty/the-treaty-in-brief

Ministry of Health. (2005). *A review of neonatal intensive care provision in New Zealand*. https://www.moh.govt.nz/notebook/nbbooks.nsf/0/b07fa1bf3f81b259cc2577370071a44e/$FILE/areviewofneonatalintensivecareprovision.pdf

Ministry of Health. (2015). *Māori health models.* https://www.health.govt.nz/our-work/populations/maori-health/maori-health-models

Ministry of Health. (2017). *Māori health models - Te whare tapa whā*. https://www.health.govt.nz/our-work/populations/maori-health/maori-health-models/maori-health-models-te-whare-tapa-wha

Ministry of Health. (2018). *Population projections*. https://www.health.govt.nz/our-work/populations/maori-health/tatau-kahukura-maori-health-statistics/tatauranga-taupori-demographics/population-projections

Ministry of Health. (2020b). *Location boundaries (map)*. https://www.health.govt.nz/new-zealand-health-system/key-health-sector-organisations-and-people/district-health-boards/location-boundaries-map

Ministry of Health. (2020c). *Whakamaua: Māori health action plan 2020-2025*. https://www.health.govt.nz/system/files/documents/publications/whakamaua-maori-health-action-plan-2020-2025-2.pdf

Ministry of Health. (2020d). *Who's eligible for travel assistance*. https://www.health.govt.nz/your-health/services-and-support/health-care-services/hospitals-and-specialist-services/travel-assistance/whos-eligible-travel-assistance

Ministry of Health. (2020e). *Treaty of Waitangi principles*. https://www.health.govt.nz/our-work/populations/maori-health/he-korowai-oranga/strengthening-he-korowai-oranga/treaty-waitangi-principles

Neonatal Nurses College Aotearoa. (2018). *National NICU/SCBU units*. https://www.nzno.org.nz/groups/colleges_sections/colleges/neonatal_nurses_college/national_nicu_scbu_units#AKL

New Zealand Government - Te Kāwanatanga o Aotearoa. (2022a). *History of the COVID-19 alert system.* https://covid19.govt.nz/about-our-covid-19-response/history-of-the-covid-19-alert-system/

New Zealand Government - Te Kāwanatanga o Aotearoa. (2022b). *What is COVID-19.* https://covid19.govt.nz/prepare-and-stay-safe/about-covid-19/what-is-covid-19/

New Zealand Media Entertainment. (2019). *Research looks to improve neonatal care experiences for Māori.* https://healthcentral.nz/research-looks-to-improve-neonatal-care-experiences-for-maori/

New Zealand Now. (2020). *A brief history*. https://www.newzealandnow.govt.nz/live-in-new-zealand/history-government/a-brief-history

Newborn Clinical Network. (2019). *New Zealand Consensus Statement on the care of mother and baby(ies) at periviable gestations*. https://www.starship.org.nz/guidelines/new-zealand-consensus-statement-on-the-care-of-mother-and-baby-ies-at/

O'Brien, K., Robson, K., Bracht, M., Cruz, M., Lui, K., Alvaro, R., da Silva, O., Monterrosa, L., Narvey, M., & Ng, E. (2018). Effectiveness of family integrated care in neonatal intensive care units on infant and parent outcomes: A multicentre, multinational, cluster-randomised controlled trial. *The Lancet Child & Adolescent Health, 2*(4), 245-254. https://nidcap.org/wp-content/uploads/2018/09/HENDSON-FICare-RCT-and-commentary.pdf

Pihama, L. (2010). *He kākano i ruia mai i rangiātea: Māori whānau stories of neonatal intensive care units.* http://www.maramatanga.co.nz/sites/default/files/Research%20Report%20-%20Whanau%20Stories%20of%20NICU%20.pdf

Ronald McDonald House Charities New Zealand. (2019). *FAQs at Ronald McDonald House Wellington.* https://rmhc.org.nz/stay-with-us/wellington-house/

Rosswurm, M. A., & Larrabee, J. H. (1999). A model for change to evidence-based practice. *Image: the Journal of Nursing Scholarship, 31*(4), 317-322. https://doi.org/https://doi.org/10.1111/j.1547-5069.1999.tb00510.x

Rutter, C., & Walker, S. (2021). Infant mortality inequities for Māori in New Zealand: A tale of three policies. *International Journal for Equity in Health, 20*(10). https://doi.org/https://doi.org/10.1186/s12939-020-01340-y

Simpson, J., Duncanson, M., Oben, G., Adams, J., Wicken, A., Pierson, M., Lilley, R., & Gallagher, S. (2017). *Te ohonga ake: The health status of Māori children and young people in New Zealand series two*. New Zealand Child and Youth Epidemiology Service & University of Otago. https://ourarchive.otago.ac.nz/bitstream/handle/10523/7390/MAORI%20REPORT%202015_20170620.pdf?sequence=5&isAllowed=y

Starship. (2019). *Visiting information for NICU*. https://starship.org.nz/visiting-information-for-nicu/

Stats NZ. (2020). *Māori population estimates: At 30 June 2020*. https://www.stats.govt.nz/information-releases/maori-population-estimates-at-30-june-2020

Stevenson, K. (2018). *Mā te wāhine, mā te whenua, ka ngaro te tangata. Wāhine and whānau experiences informing the maternal-infant health care system* [Unpublished doctoral thesis]. University of Otago. https://ourarchive.otago.ac.nz/bitstream/handle/10523/8474/StevensonKendall2018PhD.pdf?sequence=1&isAllowed=y

Stevenson, K., Cram, F., Filoche, S., & Lawton, B. (2020a). Impact on whānau wellbeing of transfer to secondary or tertiary hospitals after a disruption to the birthing journey. *Mai Journal, 9*(2). https://doi.org/10.20507/MAIJournal.2019.9.2.3 http://www.journal.mai.ac.nz/sites/default/files/MAI_Jrnl_2020_V9_2_Stevenson_02.pdf

Stevenson, K., Filoche, S., Cram, F., & Lawton, B. (2020b). Te hā o whānau: A culturally responsive framework of maternity care. *The New Zealand Medical Journal, 133*(1517), 66-72. https://assets-global.website-files.com/5e332a62c703f653182faf47/5ef3cbdc0706cdf4c100ad0d_Stevenson%20FINAL.pdf

Te Ahukaramū Charles Royal. (2005). Māori. *Te Ara - the Encyclopedia of New Zealand*. http://www.TeAra.govt.nz/en/maori

Te Ahukaramū Charles Royal. (2015). *Hawaiki*. Te Ara - the Encyclopedia of New Zealand. https://teara.govt.nz/en/hawaiki

Te Puni Kōkiri. (2002). *He tirohang ō kawa ki te Tiriti o Waitangi: A guide to the principles of the Treaty of Waitangi as expressed by the Courts and the Waitangi Tribunal.* https://waitangitribunal.govt.nz/assets/Documents/Publications/WT-Principles-of-the-Treaty-of-Waitangi-as-expressed-by-the-Courts-and-the-Waitangi-Tribunal.pdf

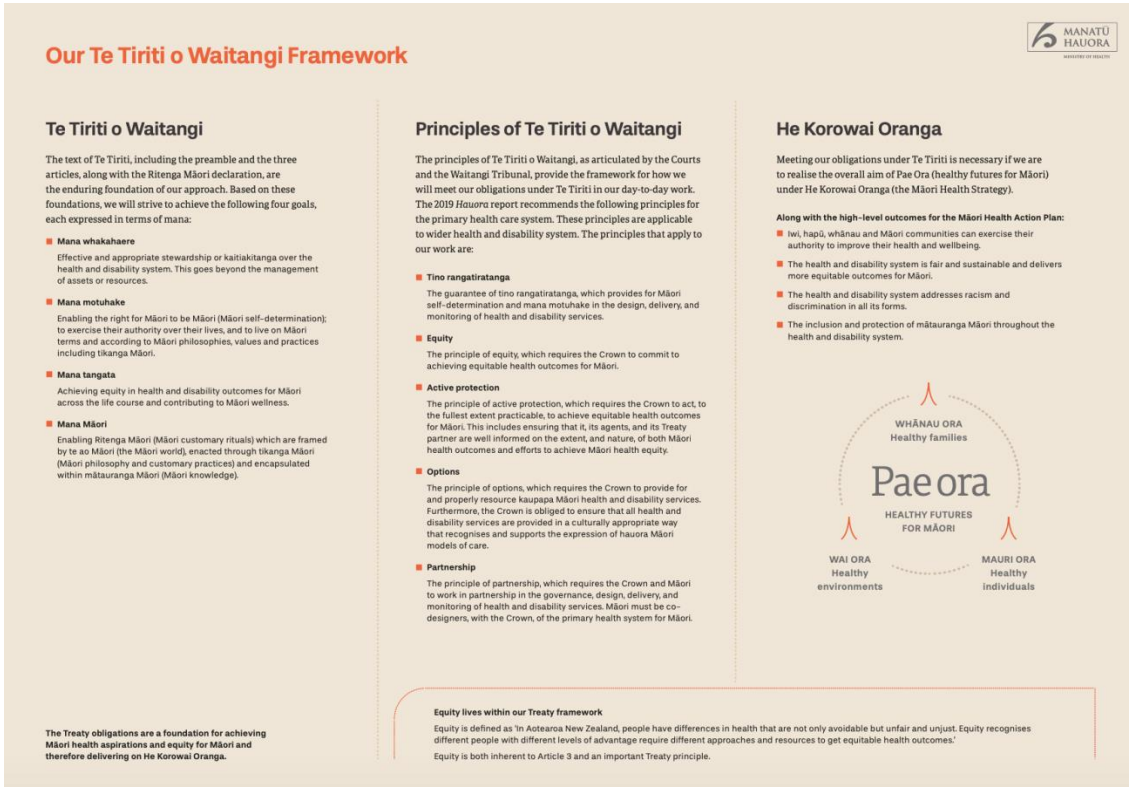
Thompson, K. (2009). *Māori whānau experiences of a neonatal intensive care unit: Waikato Hospital* [Unpublished Masters thesis]. University of Waikato. https://researchcommons.waikato.ac.nz/bitstream/handle/10289/3587/thesis.pdf?sequence=1&isAllowed=y

Tupara, H. (2017). Te whānau tamariki - pregnancy and birth. *Te Ara - the Encyclopedia of New Zealand*. https://teara.govt.nz/en/te-whanau-tamariki-pregnancy-and-birth

Waitangi Tribunal. (2019). *Hauora: Report on stage one of the health services and outcomes kaupapa inquiry (WAI 2575)*. https://forms.justice.govt.nz/search/Documents/WT/wt_DOC_152801817/Hauora%20W.pdf

Wright, A. L., Ballantyne, M., & Wahoush, O. (2020). Caring for Indigenous families in the neonatal intensive care unit. *Nursing Inquiry, 27*(2), e12338. https://static1.squarespace.com/static/5ef7eb3852f22e04c7a358ba/t/5fe39af9931ce35d819396d4/1608751867018/NICU+Nursing+Inquiry+Proof_Dec+17_19.pdf

Appendix A. Ministry of Health's Te Tiriti o Waitangi Framework



Appendix B. Te reo Māori o te whahanga pēpi hou (Te reo Māori in NICU)

Te Reo Māori O Te Whahanga Pepi Hou.

TE REO MĀORI IN NICU.

Pronunciation

Correct pronunciation of Māori words acts to show Māori whānau that you acknowledge their culture, which is such an important part of their identity. Vowel sounds in Te Reo are different to Pākehā languages, but there are many words that have the same sounds.

- **A** *"Ah", similar to the A sound in the word C**a**r*
- **E** *"Ea", similar to the E sound in P**e**ar*
- **I** *"Ee", similar to the I sound in the word Barb**ie***
- **O** *"Or", similar to the O sound in P**o**or*
- **U** *"Ew", similar to the U sound in R**u**de*

Some examples of correct pronunciation of words we may see in NICU include:

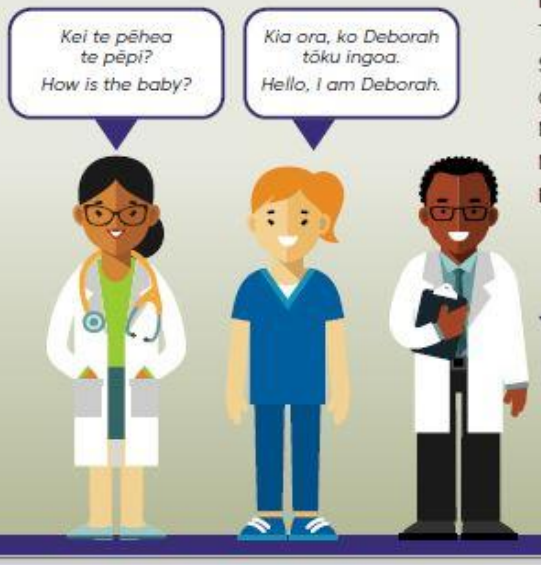
Whānau	Family	*"Far-no"*
Kai	Food / Meal	*"K-eye"*
Puku	Stomach	*"Pook-ew"*
Nāhi	Nurse	*"Naa-hee"*
Moe	Sleep / Dream	*"Moy"*

Items in NICU

Incubator	Pūrere awhi
Doctor	Tākuta
Nurse	Nēhi / Nāhi
Baby	Pēpi
Bottle	Pātara
Feed	Whāngai
Medications	Rongoa
Notes	Pitopito korero
Observations	Kitenga
Heart Rate	Hoto Manawa
Respiration	Ngā Whakahā
Temperature	Pāmahana
Thermometer	Ine-mahana
Nappies	Kope
PIVL	Raina Rongoa

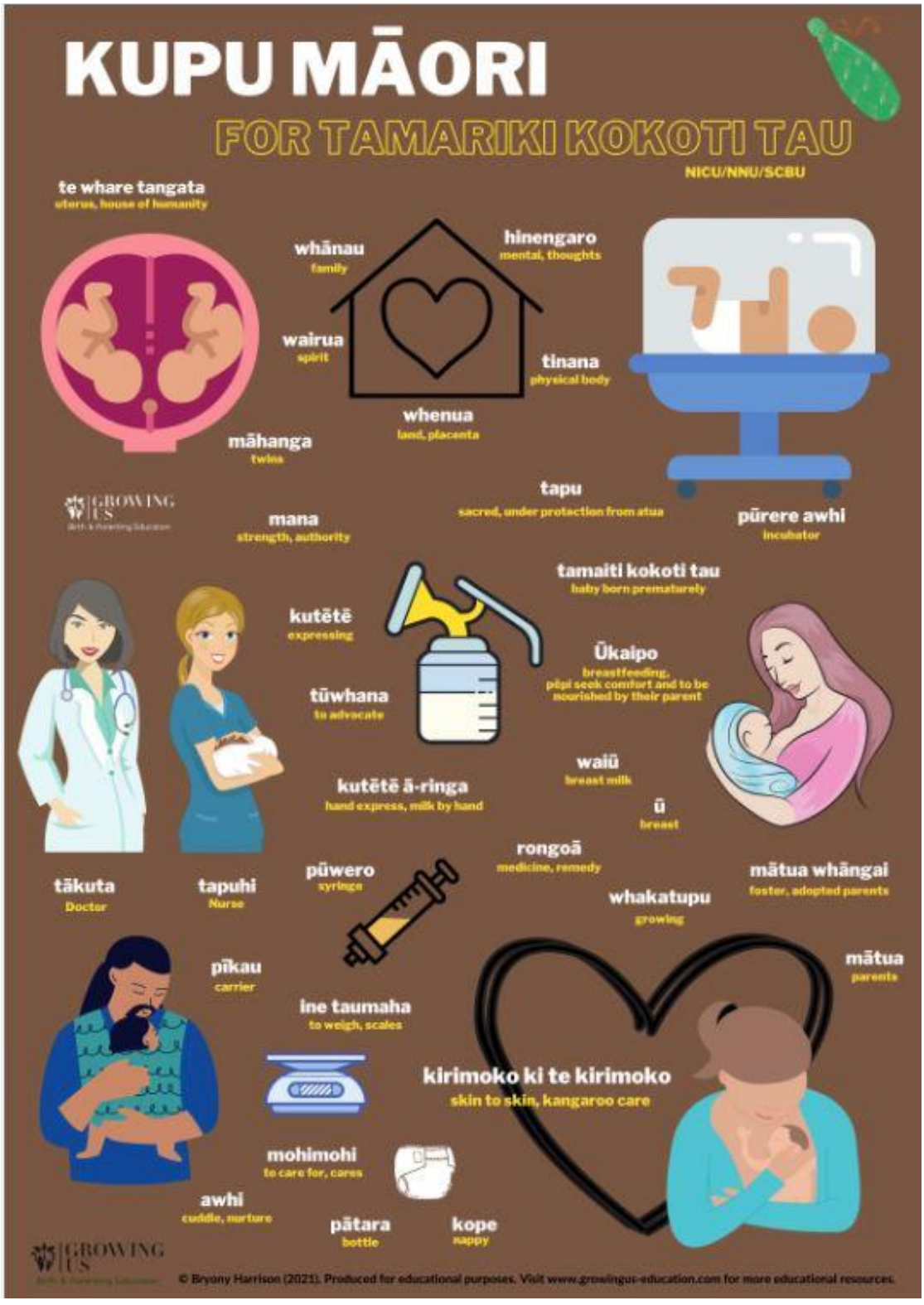
Greetings

Hi / Hey	Kia Ora
Good morning	Mōrena/Ata mārie
Hello 1/2/3 people	Tēna koe/korua/koutou
Have a good day	Kia pai te rā
Have a good morning	Kia pai te ata
Have a good afternoon	Kia pai te ahiahi
Have a good night	Kia pai te pō
Thank you	Ngā Mihi
See you again	Ka kite anō i a koe
Goodbye	Haere rā
My appologies	Mō taku hē / Nōku te hē
My name is	Ko ..... tōku ingoa
How are you?	Kei te pēhea koe?



Capital & Coast District Health Board
UPOKO TE URU HAUORA

Appendix C. Kupu Māori for tamariki kokoti tau (Māori words for children born prematurely)



Appendix D. AHO pēpi muslin wraps

Appendix E. Te Wai bowl for whānau for spiritual cleansing

Appendix F. New Nursery F door with Māori rakau