



# Utilising te Tiriti o Waitangi to approach health intervention development and research: pharmacist-facilitated medicines review interventions for Māori older adults

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## ABSTRACT

**INTRODUCTION:** te Tiriti o Waitangi guarantees Māori the right to: self-determination, equitable health outcomes, be well informed, health care options, including kaupapa Māori and culturally safe mainstream services, and partnership in the health care journey. Despite integration of these principles into policy, there remains a lack of application in health service development, and health inequities remain.

**AIM:** We aimed to use te Tiriti o Waitangi to structure the development of a culturally safe health intervention, using as an exemplar pharmacist-facilitated medicines review for Māori older adults.

**METHODS:** Previous research undertaken by our group (a systematic review, and interviews with stakeholders including Māori older adults) was used to inform the aspects to include in the intervention. Kaupapa Māori theory was used to underpin the approach. Intended outcomes, requirements for change, and outcome measures to assess change were mapped to te Tiriti o Waitangi principles as a way to structure the pharmacist-facilitated medicines review intervention and research processes.

**RESULTS:** Findings from our previous research identified 12 intended intervention outcomes, including that the intervention be flexible to adapt to diverse needs in a way that is acceptable and culturally safe for Māori and that it supports Māori older adults to control and have confidence in their medicine treatment and wellbeing.

**DISCUSSION:** We present an approach to the development of a pharmacist-facilitated medicines review intervention for Māori older adults, structured around the principles of te Tiriti o Waitangi, to support the implementation of a culturally safe, pro-equity intervention.

**KEYWORDS:** Māori health; pharmacist; Indigenous health; older adults; health service research; health equity.

## Introduction

In Aotearoa (New Zealand), inequities in health care exist. Across the clinical spectrum, Māori are more likely to have poorer access to and receive lower quality health services compared to non-Māori; this includes health care relating to medicines and medicines-related services.<sup>1</sup> te Tiriti o Waitangi (the Treaty of Waitangi (signed in 1840)) is one of Aotearoa founding documents and in relation to health, the principles it espouses have been articulated in the 'Hauora' Waitangi Tribunal Report on Stage One of the Health Services and Outcomes Kaupapa Inquiry (Wai 2575<sup>2</sup>) (Table 1).

These principles need to be enacted at a systems level, as well as carried through into the way services and interventions are delivered on a whānau (family) and individual level. Although te Tiriti o Waitangi and the principle of Māori health equity form the basis of numerous national and regional health policies, there is little subsequent action to instigate change and health inequities persist.<sup>3,4</sup>

The application of kaupapa Māori methodological approaches is seen as the 'best practice' for Māori health research,<sup>5</sup> allowing pro-equity intent to be explicitly incorporated in health intervention development. Kaupapa Māori can be defined as a 'Māori way' or ideology and incorporates the use of Māori knowledge systems, language and cultural practices.<sup>6</sup> An important part of a kaupapa Māori approach is the balanced application of both theory and praxis.<sup>7</sup> The application of kaupapa Māori theory and praxis privileges Māori knowledge, worldviews and cultural approaches<sup>8</sup> and requires examination of power relationships both in the research process and in the intervention that is developed. Kaupapa Māori methodology explicitly seeks positive, transformative change for Māori and there are numerous examples of kaupapa Māori health services research that demonstrate success.<sup>6,9,10</sup>

Theory has been described as a compass guiding the research journey.<sup>11</sup> The United Kingdom's Medical Research Council (MRC) has developed guidelines to support the robust development of health-care interventions, including the application of appropriate theory as an imperative fundamental stage of

## WHAT GAP THIS FILLS

**What is already known:** Pharmacist-facilitated medicines review services are underutilised in Aotearoa and, in general, have not been developed to explicitly address health inequities. Although te Tiriti o Waitangi underpins national and regional policy, there is limited utilisation of the principles in health service development.

**What this study adds:** This research articulates the application of te Tiriti o Waitangi in health intervention development and aims to support others to initiate pro-equity action and change.

the process.<sup>12</sup> Theory provides a basis to structuring health intervention components, research processes and outcome measures, to support ongoing development and service sustainability.<sup>13,14</sup> Theory also supports redesign and redevelopment of interventions to improve efficacy and ease of adaptability. Researchers may choose to use existing theory or may develop new theory that is relevant to the intervention under development.<sup>12</sup> The MRC suggests that the theoretical basis for interventions should be informed by drawing on existing knowledge; for example, a systematic review of the literature and undertaking new primary research such as interviews with key stakeholders, as required. The existing and 'new' knowledge can then be developed to map outcomes the intervention is expected to deliver, the key components required for these outcomes to be realised, and how the outcomes will be measured.<sup>12</sup> Theory guides the development of well-designed research<sup>12</sup> that has the potential to better support informed decision-making by policymakers and funders so that they

Table 1. Principles of te Tiriti o Waitangi<sup>2</sup>

1. Māori are guaranteed the right of **self-determination and autonomy** in the design, implementation and evaluation of health services.
2. Māori will experience **equitable health outcomes**.
3. Māori will be **actively protected** by the government, which includes the need for both the government (and its agents) and Māori to be **well informed** of actions and outcomes relating to Māori health and pro-equity strategies and activities.
4. Māori will be offered health care **options**, which include appropriately resourced kaupapa Māori services (see below) and culturally safe mainstream services.
5. Māori will be **partners** at all stages of the health care journey including design and evaluation.

appropriately resource new health-care interventions that target particular health outcomes.

Pharmacist-facilitated medicines reviews, whereby pharmacists review medicines in collaboration with prescribers and patients, intending to improve medicines-related therapeutic benefit and reduce potential harm, have been shown internationally to improve health outcomes for older adults.<sup>15</sup> They have been posited as a way to support the achievement of Māori health equity,<sup>16</sup> however, to do so, these interventions need to be culturally safe and developed in collaboration with Māori.<sup>16</sup> Pharmacist-facilitated medicines reviews remain underutilised in Aotearoa,<sup>17,18</sup> with the funding structures in community pharmacies largely linked to medicine supply rather than comprehensive medicines review. Review services that do exist do not take into account differing cultural requirements or need. They may increase disparities in medicines-related outcomes by having low Māori recruitment rates and being more effective for non-Māori than Māori, particularly in relation to improving adherence.<sup>19</sup> Māori older adults are more likely to experience adverse outcomes from inappropriate prescribing than non-Māori older adults<sup>20</sup> and, alongside compounding inequity with age,<sup>21,22</sup> older people are a population with high potential for medicines-related harm. Consequently, there is also great potential for culturally safe and clinically excellent pharmacist-facilitated medicines reviews to have a positive impact on improving the quality of medicines use in this group.

For health interventions to achieve desired outcomes in an equitable and resource-efficient manner, their development should be accompanied by robust research.<sup>12</sup> Our research group aims to develop a pharmacist-facilitated medicines review intervention for, and with, community-dwelling Māori older adults that will be tested in a feasibility study. The feasibility study will test intervention acceptability and the appropriateness of research processes, such as recruitment and outcomes measures. All primary and secondary outcomes of the feasibility study, as well as further rationale for feasibility testing, have been described in detail elsewhere.<sup>23</sup> The aim of the current paper is to describe how the te Tiriti o Waitangi was used to structure the development of a culturally safe<sup>24</sup> health intervention, using pharmacist-facilitated

medicines reviews for Māori older adults as an exemplar.

## Methods

The five principles of te Tiriti o Waitangi articulated in the Hauora report<sup>2</sup> were used to structure the development of the intervention and kaupapa Māori theory was used to underpin the approach. Kaupapa Māori theory situates the intervention within health, social and political contexts relevant to current inequities in health outcomes and gives power to Māori ways of knowing, being and doing to create positive solutions and change. This was an iterative process guided by our research group members' experience as Aotearoa health professionals and researchers in pharmacy, health service development, Māori health, older adult medicine and health equity.

This intervention development was informed by research previously undertaken by the current authors; these have been described more fully elsewhere,<sup>19,25,26</sup> but in brief, a systematic review and two qualitative studies were undertaken. The systematic review examined the existing literature in relation to medicines review services delivered by pharmacists in Aotearoa and their effect on equity for Māori and for older adults.<sup>19</sup> One qualitative study involved interviews with Māori older adults to elicit their experiences of medicines and medicines-related services.<sup>26</sup> Other stakeholders (eg general practitioners, District Health Board employees, pharmacists) involved in any of the planning, funding, contracting, delivery or cultural support of medicines-related services were interviewed in the other study to elicit their views on the design, implementation and evaluation of pharmacist-facilitated medicines review intervention for community-dwelling Māori older adults.<sup>25</sup>

Findings from the previous studies (systematic review<sup>19</sup> and stakeholder interviews<sup>25,26</sup>) were collated and summarised. The MRC approach to developing complex interventions<sup>12</sup> was employed to categorise the different aspects of the intervention we have presented as intended outcomes, requirements for change, and outcome measures to assess change. Relevant outcome measures were then identified with justification for tools that are used to perform these measures; this is reported in a separate publication.<sup>23</sup>

## Results

Review of the major findings from previous studies<sup>19,25,26</sup> led to the development of an intervention (Table 2) and the identification of 12 intended outcomes, 21 requirements for change, and 24 outcome measures that could be used to assess these changes. The findings were mapped to the five Te Tiriti o Waitangi principles (Table 3).

### Self-determination and autonomy

A pharmacist-facilitated medicines review intervention needs to be adaptable to meet the diverse, self-identified needs of Māori older adults. Māori cultural processes will be specifically incorporated. Participants also need to be provided with information relating to health and wellbeing that enables them to retain or to take back control over their own health care. Outcome measures used for evaluation will report the different choices made by participants, describe culturally specific processes and evaluate participant-perceived levels of control. An example in this study is that an acceptability questionnaire will be developed specifically for this intervention and will include questions relating to participant control and whether the intervention is culturally safe for participants.

### Equity

Inclusion of the equity principle in the intervention's development allows for explicit design and

evaluation of the intervention in relation to equity. As current medicines review services in Aotearoa may increase disparities between Māori and non-Māori,<sup>19</sup> the intended outcome is that a pharmacist-facilitated medicines review intervention will reduce disparities and not increase them. Current disparities in both access to medicines and the quality of medicines-related services exist and so pre-defined outcome measures that will evaluate the equity of health outcomes need to be included, such as medicines appropriateness, as defined by the internationally validated STOPP/START tool.

### Active protection and well informed

To ensure uptake and acceptance of pharmacists performing medicines review roles, both consumers and the non-pharmacist health professionals need to be informed about pharmacists' skills, training and ability to undertake these roles. Current consumer experiences of pharmacists relate almost solely to medicine supply transactions.<sup>26</sup> All contributors to the research and intervention development need to have information available about the research processes used, as well as research findings, and this needs to be communicated in a way that is relevant and accessible to the various stakeholders. These communication pathways need to be multi-directional to ensure the researchers are open to ongoing feedback that supports better translation of the research. For example, in the feasibility study, meetings with the study pharmacist and Māori older adult groups will be

Table 2. Pharmacist-facilitated medicines review intervention<sup>23</sup>

Two-component intervention		
<b>Medicines Education</b>	Face-to-face meeting with	Participant, pharmacist, whānau (optional)
	Setting	Participants' choice (eg home, general practice, community meeting room, workplace)
	Intervention tasks include	Review of medical history (before meeting), discussion of health and wellbeing goals, medicines information, provision of resources, identification of medicines-related issues and non-medicines-related issues
	Communication	From pharmacist to community pharmacy, general practice and participant
<b>Medicines Optimisation (optional)</b>	Face-to-face meeting with	Participant, pharmacist, primary prescriber (eg general practitioner or nurse prescriber), whānau (optional)
	Setting	General practice
	Intervention tasks include	In addition to medicines education component above, co-development of medicines management plan
	Communication	Documented in primary care records

Table 3. Development of a pharmacist-medicines review intervention for Māori older adults

<b>Self-determination and autonomy (Māori are guaranteed the right of self-determination and autonomy in the design, implementation and evaluation of health services)</b>		
<b>Intended outcome</b>	<b>Requirements for change</b>	<b>Outcome measures to assess change</b>
1. The intervention will be flexible to adapt to diverse needs in a way that is acceptable and culturally safe for Māori 2. The intervention will allow Māori older adults control in their medicine treatment journey	Participants can choose: - which aspects of the intervention they participate in - where the intervention will be delivered - who accesses their clinical information and the extent of access	Report: - consent rates for different phases of the intervention - location of intervention delivery - consent rates for pharmacist access to clinical notes
	The intervention will incorporate aspects to specifically allow for Māori ways of doing	Describe culturally specific considerations and processes
	Participant acceptability of the research and intervention will be valued	Report participant acceptability of intervention
	Participants will be provided with medicine and health information to support decision-making	Report types of information provided
	Participants will have time and space to make decisions	Report self-reported levels of control
<b>Equity (Māori will experience equitable health outcomes)</b>		
<b>Intended outcome</b>	<b>Requirements for change</b>	<b>Outcome measures to assess change</b>
3. The intervention will reduce, and not increase, disparities in health outcomes between Māori and non-Māori	Current disparities in access to the quality use of medicines will be acknowledged	Medicines knowledge Medicines appropriateness
	The intervention will improve the therapeutic benefit of medicines	Bio-medical markers of health status (eg blood pressure, renal function, HbA1c)
	The potential for interventions to cause harm will be acknowledged	Participant reported intervention-associated harms
<b>Active protection and well informed (Māori will be actively protected by the government, which includes the need for both the government (and its agents) and Māori to be well-informed of actions and outcomes relating to Māori health and pro-equity strategies and activities)</b>		
<b>Intended outcome</b>	<b>Requirements for change</b>	<b>Outcome measures to assess change</b>
4. Health providers and public will understand pharmacists' roles in improving the quality use of medicines	Research implementation will include education of health providers and public concerning the roles of pharmacists	Report methods used to educate and who education was delivered to
5. Tools used to measure outcomes will be culturally relevant and appropriate	Utilise current assessment measures if culturally appropriate, or develop study-specific tools as needed	Report the type of tools used Investigate appropriateness of outcome measures used in the analysis
6. Study results will be disseminated to all stakeholders	Establish dissemination pathways	Report dissemination methods and audiences
	Produce information that is accessible and relevant to a range of stakeholders	
<b>Options (Māori will be offered health care options, which includes appropriately resourced kaupapa Māori services and culturally safe mainstream services)</b>		
<b>Intended outcome</b>	<b>Requirements for change</b>	<b>Outcome measures to assess change</b>
7. Medicines supply should be correct and timely	Ensure that introduction of this new intervention does not adversely affect medicines supply or access	Report communication pathways between researchers and community pharmacies
	Medicines-related information communicated to community pharmacy in a timely manner	

(Continued)

Table 3. (Continued)

8. The workforce researching and delivering the intervention will be appropriately trained	Identify researchers and clinicians with appropriate clinical and cultural skills	Describe training and experience of the research team and clinicians involved in the intervention
9. The intervention will be approached in a holistic manner addressing the domains of wellbeing (physical and mental health, and social connectedness)	The impact of medicines across the domains of wellbeing will be included in the intervention	Report medicines-related interventions
	Non-pharmacological aspects impacting on the domains of wellbeing will be included in the intervention	Report non-pharmacological interventions Report change in Quality of Life scores
10. Māori participation in the research and intervention will be specifically sought	Recruitment will be open to Māori only	Report recruitment rates
	Employ culturally appropriate recruitment methods	Report recruitment methods
<b>Partnership (Māori will be partners at all stages of the health care journey including design and evaluation)</b>		
<b>Intended outcome</b>	<b>Requirements for change</b>	<b>Outcome measures to assess change</b>
11. A health care partnership will be established in the research and intervention process. The partnership will include power-sharing	Steps embedded in the research process that allow for the development of a relationship between researcher, clinician and participant (and whānau)	Describe methods used to develop relationships and report the number of contacts between participant (and whānau), researcher and clinician
	Include steps that give participant more power and control (see 'Requirements for change' under Equity above)	(see 'Outcome measures to assess change' under Equity above)
12. All partners will support the intervention on an ongoing basis if the intervention shows positive potential	Commitment made to ongoing discussions and alignment of expectations	Report steps required for and progress made towards ongoing intervention development and implementation

undertaken before recruitment to allow for full discussion about the study and intention of the intervention and research.

### Options

The development of this intervention provides an option for Māori older adults to support their medicines-related care that is different from currently available mainstream services. Current services have been developed internationally with no apparent adaption for differences in cultural requirements for the Aotearoa. There needs to be choice and flexibility about where the intervention is delivered, the various components that are included, and who has access to their health information. To ensure culturally safe care for Māori older adults, the holistic nature of health and wellbeing needs to be included in the development of the intervention. Appropriately trained clinicians are required to deliver high-quality, culturally safe care. Steps in the development of this intervention

include ensuring that participation in this research does not preclude participants from the option of other high-quality mainstream services. This intervention will also target Māori specifically as there has been low Māori representation in previous related research,<sup>19</sup> and a Māori pharmacist, with long-term commitments to the region where the research is being undertaken, will deliver the intervention.

### Partnership

Partnership in both the research process and delivery of the medicines review intervention is required. Processes to ensure equal power-sharing need to be embedded and reported. They will include allowing participants' whānau to be part of the partnerships. Further processes need to be put in place to ensure these partnerships can endure past the discrete research project to improve research translation and the ongoing development of pro-equity interventions.

## Discussion

The process undertaken in the intervention development in this paper sets out a guide for the development of a pharmacist-facilitated medicines review intervention for community-dwelling Māori older adults. It used previous work from this research group that included both peer-reviewed literature and engagement with key stakeholders, is underpinned by kaupapa Māori theory and is structured according to the principles from te Tiriti o Waitangi. It gives direction for the development of an intervention that will be tested in a feasibility study<sup>23</sup> and allows a structure for ongoing reflection and re-development.

The scope and applicability of our approach may seem narrow as it was constructed as a basis to develop a pharmacist-facilitated medicines review intervention for Māori older adults; however, there is the potential for this approach to be used in the development of other health interventions for Māori and in other populations. We see three potential applications of our approach:

- to support the review of current health services and interventions to understand if their delivery and outcomes align with te Tiriti o Waitangi;
- to identify features of health interventions that need further investigation before health intervention modelling;
- to structure the application of research findings to support health intervention development in a way that honours te Tiriti o Waitangi and has the potential to deliver equitable health outcomes.

Although te Tiriti o Waitangi provides a potential structure, we assert that modification of our approach should be informed by information that is centred on Māori experiences and realities. This approach is relevant in general Aotearoa study populations to ensure the rights of Māori are protected under te Tiriti o Waitangi, and pro-equity services, which aim to achieve Māori health equity, are developed. Again, although this intervention was developed in New Zealand and is underpinned by kaupapa Māori theory, it is a potential starting point for the development of health interventions in other marginalised population groups internationally.

Theory, and methods with which to apply this, are used to guide the research process.<sup>11</sup> Our approach to intervention development is presented at one point in time, before the feasibility study is undertaken.<sup>23</sup> Our approach to the intervention may therefore need to be adapted as the study progresses or in further iterations of the intervention development. This approach aligns with kaupapa Māori theory, which allows for fluidity and adaption over time, or in different contexts. The approach we describe can be a flexible starting point for others, to further encourage work in this space.<sup>27,28</sup>

The objective of the recent NZ Health and Disability System Review was to ‘identify opportunities to improve the performance, structure, and sustainability of the system with a goal of achieving equity of outcomes and contributing to wellness for all, particularly Māori and Pacific peoples’.<sup>17</sup> The review identified the need for the systematic planning of health services, including engagement with consumers and other stakeholders, which must prioritise equity. However, there is a lack of knowledge around how to practically implement pro-equity change and this continues to be a problem in the achievement of equity for marginalised populations.<sup>29</sup> We acknowledge that to achieve equity, systems-level change in health and the social determinants of health are required, which is beyond the scope of the currently proposed intervention. However, our approach to intervention development could be used as a basis for further development of a tool that would allow pharmacists, and other practicing clinicians, to review and reflect on their current practice and put individual plans in place to enhance their abilities to deliver pro-equity care. Our approach may be useful for clinicians who have the desire to implement practice change to address disparities in health care, but may lack knowledge and understanding of the steps required to action change.

This paper presents an approach to the development of a pharmacist-facilitated medicines review intervention for Māori older adults, structured around the principles of te Tiriti o Waitangi. In addition to supporting the development of this intervention, we believe this approach can be easily adapted to support the development of other pro-equity health service interventions both in Aotearoa and internationally.

## Competing interests

The authors declare there are no potential, perceived, or real competing interests relating to this work. Funders played no role in study design, data collection, analysis, interpretation or writing of the article.

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