Te Whatu Ora Health New Zealand



Measuring unmet health need for commissioning: a literature overview and stakeholder analysis.

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This report was undertaken as a registrar project by Rebekah Jaung (Public Health Registrar) with supervision from: Dr Doone Winnard (Public Health Medicine Specialist, member of Funder Forum) and Summer Hawke (Population Health Team Manager, member of Funder Forum).

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Double vowel use in this report:

Double vowels are used rather than macrons where appropriate in Te Reo Maaori words in keeping with the Tainui convention, as mana whenua of the Counties Manukau district.

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Executive Summary

There is currently no shared understanding or framework for unmet need in Aotearoa New Zealand that can be used to inform healthcare funding decisions. This risks rendering unmet needs invisible and limiting the health system's ability to address them.

This project utilised literature review and stakeholder interviews to derive a shared definition of unmet need and develop a framework for measuring unmet need for use by Counties Manukau Health (CM Health) Funder Forum to make commissioning decisions. The intent is also to share this framework as a contribution to those developing new commissioning models in the restructure of the health system in Aotearoa. A secondary goal of this project was to contribute to the reframing of how needs are considered within health, with the intention of highlighting strength-based and values-driven understandings of health needs, while honouring Te Tiriti o Waitangi and valuing perspectives of those most impacted by unmet needs (in particular, Maaori, Pacific and taangata whaikaha perspectives).

Key Findings

A shared definition of unmet need

Stakeholder interviews identified that although the functional components of the economic understanding of need was useful, many of those interviewed felt that this was too narrow and that the location of need within individuals rather than the role of the health system in how unmet need is distributed, contributed to deficit narratives. A shared, non-deficit and value-driven definition of unmet need that informs Funder Forum was proposed as follows: opportunities to (re)allocate health and other system resources to address patterns of inequitable health outcomes as a foundation for meeting wellbeing aspirations.

A framework for measuring unmet need

A framework was developed to reflect the values, key perspectives and aspirations expressed by the stakeholders. A time element was incorporated to map how measuring unmet need could expand alongside of the capacity of the healthcare system to hold a Tiriti-based relationship between the health system and mana whenua, facilitate engagement and shared decision-making with patients/whaanau/families across generations, particularly those most impacted by unmet needs, build relationships and communicate effectively with communities, and work with intersectoral partners to address health needs.

Recommendations

These recommendations are constructed with the intention that they are achieved in a stepwise fashion, with medium- and long-term tasks being achieved after short term recommendations are met.

Identifying unmet need (short term)

 Use existing data in new ways to identify unmet need and the areas in which shifting resource allocation would make the greatest difference to achieving health equity

Addressing unmet need (medium term):

- Work towards a Tiriti-partnership with mana whenua and expand the pool of stakeholders whose
 perspectives are reflected in decision-making, particularly those impacted most by unmet need,
 and use the data that is available to us to make more equitable funding decisions.
- Monitor how funding patterns are changing to be responsive to identified unmet needs (funder accountability).

Commissioning that supports Tiriti responsibilities and commitments, and equity (long term actions):

- Work with partners in non-health sectors to increase intersectoral commissioning to fund
 interventions beyond the provision of health services and that address the collective needs of a
 community; and regularly consider this commissioning 'within scope.'
- Acknowledge and commission to address unmet prevention needs alongside treatment needs.
- Monitor the performance of health services at addressing unmet need and support those who do
 well. Provide resources and training opportunities for non-health sector stakeholders to
 participate in commissioning decisions.

Introduction

When commissioning social services in a context of finite resources, we require information to inform resource allocation decisions. A key consideration is a population's need for services. A working economic definition of need is the population's ability to benefit from healthcare interventions.

Commissioning decisions always require the balancing of multiple priorities and sources of information supporting different priorities. Sources of information that 'fit' easily into the current commissioning processes are likely to be favoured, which results in the privileging of certain perspectives and voices. It is not currently feasible to factor unmet need into this process as there is no agreed framework for measuring unmet need. As such, the development of a tool to measure unmet need is a way of making 'invisible needs' visible and highlight voices which may have previously been unheard.

This study is sponsored by Funder Forum which is a decision-making body within Counties Manukau Health (CM Health) which has oversight over funding 'provider arm' (primarily hospital) services and commissioning health services across primary and community care, including child and youth health, mental health and Maaori and Pacific Kaupapa services.

Unmet need has been highlighted as an area of strategic focus, both by the CM Health Executive Leadership and Planning Teams, and the Ministry of Health, especially when key areas of unmet need are a barrier to progress toward equity of outcomes, particularly for Maaori and Pacific peoples, taangata whaikaha (disabled people), and other groups who are underserved by the health system.

Health system context and opportunities

This project was conceived before the formation of Te Whatu Ora Health NZ and Te Aka Whai Ora, the Maaori Health Authority, were announced or the passage of the Pae Ora Health Futures Bill was passed. Its initial focus was on supporting the role of Funder Forum in CM Health decision-making. However, as the national health system context developed, the project team felt that it was timely to contribute to and align the current project with work from the Maaori Health Directorate at the Ministry of Health on developing a "Pae Ora Commissioning Framework" and a "Commissioning for Equity and Wellbeing Framework", and the development of the commissioning function for the new national entities and their regional and local components. The new frameworks from the Maaori Health Directorate centre improving the health system response to whaanau wellbeing and health equity and have been shared with the Transition Unit at the Department of Prime Minister and Cabinet (DPMC) to contribute to the thinking about commissioning in the health system redesign. Therefore, this project was conducted with the intention of supporting an alignment of values and priorities between national and regional levels, to contribute to synergistic and co-ordinated processes and outcomes throughout the health system.

Unmet health need in Aotearoa New Zealand

To understand unmet health need, we must understand the underlying causes. Although the system is not aiming to meet every need, the approach to meeting need should be equitable. Prioritisation is a consideration in all health funding decisions and this current project seeks to highlight unmet need as a factor in this process, to strengthen the health system's ability to identify and address needs that may otherwise be overlooked.

Within this project, informed by the values of Funder Forum, the distribution of unmet need is considered the result of health and other systems failing to meet the needs of some patients/whaanau/families and communities. Although a full description and analysis of the historical and ongoing causes of inequitable distribution of health including colonisation and racism is beyond the scope of this report, it is important to locate the current distribution of unmet health need in context.

Unmet health need and inequitable health outcomes are not interchangeable, however the continuation of inequitable health outcomes in the absence of system interventions that address these outcomes are evidence of the system failing to meet a need. In this way, longstanding patterns of inequitable health outcomes can highlight where additional health resources, different models of care and modes of service delivery are required but not supplied.

Unmet need and Te Tiriti o Waitangi

A Tiriti-compliant understanding of unmet need can be mapped through the lens of the five principles¹ laid out in the Waitangi Tribunal Report on Stage One of the Health Services and Outcomes Kaupapa Inquiry (1). We have considered this as follows:

- Tino rangatiratanga: The right of Maaori to exercise tino rangatiratanga in health system decisions around unmet need
- Equity: Addressing unmet need is necessary to achieve health equity for Maaori
- Active protection: This requires the Crown to act to achieve Maaori health equity AND to protect wellbeing/a state of health (not just closing the gap)
- Options: The provision and appropriate resourcing of kaupapa Maaori health services and expectation that all health services are culturally safe and responsive
- Partnership: Maaori perspectives also determine definitions or measures of unmet need within a
 Tiriti partnership

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¹ There was also discussion with Mana Whenua i Taamaki Makaurau about the use of Te Tiriti o Waitangi articles in understanding and framing unmet need, and how considerations of equity and equality relate to unmet need.

Differences in health outcomes between Maaori and non-Maaori are in general the most marked and consistent health inequities documented in New Zealand. These inequities range from life expectancy to disease-specific outcomes, access to and quality of healthcare, and exist across gender and levels of socioeconomic position (2). Maaori are also chronically underserved by the healthcare system including health services and are also disproportionately affected by socioeconomic deprivation (3,4). The aforementioned Waitangi Tribunal noted that witnesses in the inquiry defined institutional racism as 'inaction in the face of need' (1). In acknowledging these current inequities, it is important to understand that equity between Maaori and non-Maaori is not an endpoint. As expressed during a stakeholder interview, "equity is a pathway to something else, it's not our endpoint or destination. If we're looking at unmet and inequitable results, it's a pathway to wellbeing, oranga and pae ora."²

Health equity and kaitiakitanga for Pacific peoples and other groups disproportionately experiencing unmet need

Health equity and mana whenua support for all communities achieving wellbeing requires us to look to other groups who experience health inequities and inequitable access to the determinants of health. Pacific peoples are also disproportionately affected by health inequities in Aotearoa New Zealand. These health inequities extend across the life course, different health conditions and are also reflected in the quality of care that people receive (6). This report will include a specific focus on Pacific health considering these entrenched inequities and as Pacific peoples are a significant proportion of the population that CM Health serves. Taangata whaikaha, disabled people, are also substantially impacted by unmet need. As kaitiaki, Mana Whenua i Taamaki Makaurau expect that inequities are addressed for all communities in their rohe. They also have a particular concern for taangata whaikaha Maaori.

Other groups for whom unmet health need can have a disproportionate impact includes LGBTQI people, those experiencing socioeconomic deprivation and people from other minoritised groups.

Project aims and logic model

The aims of this project were to:

- 1. Establish a working definition of unmet need
- 2. Determine how unmet need can be measured
- 3. Develop a tool/quideline that is useful for informing the commissioning cycle.

² Stakeholder interview with Sharon Shea.

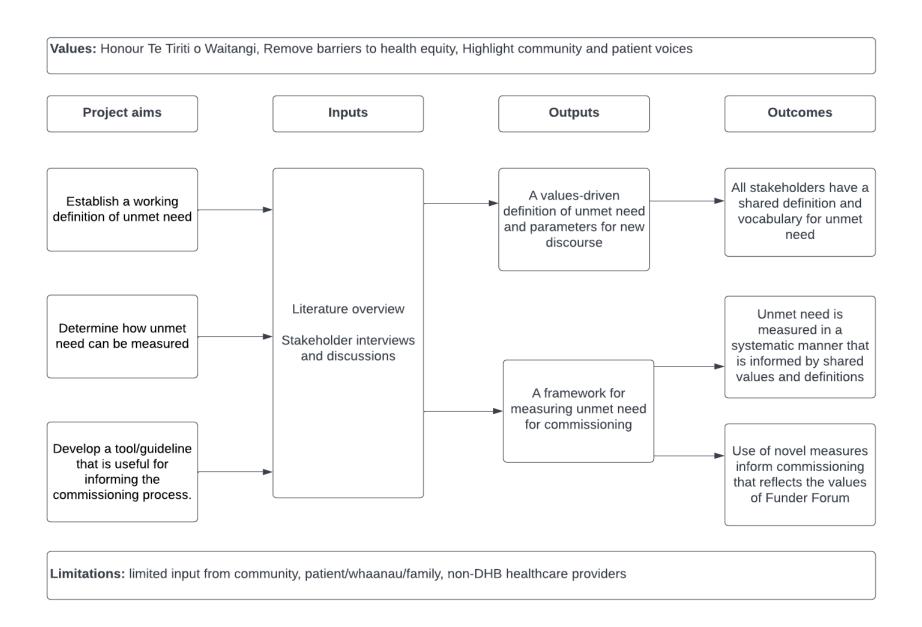


Figure 1. Logic model linking project aims to intended outcomes

Methods

A mixed-methods approach was utilised to undertake this work, which was conceptualised in conversation with the Funder forum and undertaken by the Population Health team.

The project used an iterative consultative process, starting with a scoping discussion for the project, as well as subsequent stakeholder interviews. The project included the following components:

- 1. Literature overview (health policy, clinical research)
- 2. Initial project brief
- 3. Scoping discussion at Funder Forum
- 4. Targeted literature overview of Funder Forum priorities
- 5. Stakeholder interviews
- 6. Stakeholder feedback on draft report.

A parallel process was used to facilitate input from mana whenua and embed their views within this project. In accordance with the tikanga at Counties Manukau Health, mana whenua engagement was negotiated with Te Manawhenua i Taamaki Makaurau (MWiTM). This process was guided by Sharon McCook, who is both a member of Funder Forum and General Manager Maaori Health Development for CM Health. It is our intention to stay in relationship with our mana whenua about this mahi, as we undertook this as part of our local work to serve the population of their rohe in Counties Manukau. Our mana whenua have given initial feedback on the work and their feedback has been incorporated. They would emphasise the need for all services, clinical, hospital and community to be aligned and considered together, and that processes need to incorporate Tinana, Hinengaro, Wairua and Whaanau together. They would like the opportunity to review this mahi again after feedback from others in the sector, so we would like to stay engaged with how it is used nationally, and at the appropriate point, bring it back to our mana whenua roopuu for their whakaaro. Doone Winnard is the point of contact for feedback – doone.winnard@middlemore.co.nz.

Responsiveness to Maaori and Te Tiriti o Waitangi

A key understanding which informed this project was that as tangata whenua and in accordance with Te Tiriti o Waitangi, Maaori have the right to exercise sovereignty, including when it comes to creating systems that support their health and wellbeing and that of tangata Tiriti and all who live in their rohe. This understanding enabled the project team to think about Maaori stakeholders, across generations, in multiple contexts which may overlap - as mana whenua, community members, patients, whaanau, Maaori health providers and mainstream health system stakeholders who are Maaori – explicitly valuing Maaori perspectives in addition to the focus on Te Tiriti o Waitangi.

Although Maaori involvement with the project occurred intentionally throughout the project, it fell short of being led by Maaori. Three of the four Maaori members of Funder Forum were involved in shaping the project brief and stakeholder interviews were conducted with one of these members as well as an external Maaori stakeholder. Another Maaori member of Funder Forum who is also part of the

Population Health Team provided peer review of the first draft of this report and was also a project supervisor from this stage of the project.

Additional Maaori input was facilitated through a number of zoom discussions involving the project team and three Maaori members of Funder Forum to discuss unmet need in the context of Te Tiriti.

Engagement with mana whenua in this project was achieved later than we anticipated due to the additional obligations placed on mana whenua and the project team as part of the COVID-19 response and the health system restructure. Due to these limitations, mana whenua participation in the project was confined to zoom discussions and prioritised feedback on the first draft of the report. Additional Maaori perspectives were incorporated into the project through two interviews with one internal and one external stakeholder respectively.

A focus on Pacific communities

This project engaged with Pacific health experts through two of the stakeholder interviews (total of four interview participants). Feedback from the first of these interviews included a critique about the invisibility of Pacific health in the project brief. This initiated a revision of our initial project brief which had a focus on equity but only included references to a specific focus on whaanau Maaori. As a result, the consequent steps of this project (revised project brief, data collection, analysis) included an additional specific focus on Pacific peoples, while continuing to uphold our Tiriti responsibilities as a priority. Guidance from mana whenua and other Maaori stakeholders informed the way this project held space for the specific position of Pacific communities. During the stakeholder interviews there were some preliminary plans to interview additional health system stakeholders who were Pacific health experts, however this did not transpire due to the high demands of the COVID-19 related workload at CM Health.

Project brief presentation and discussion with Funder Forum

The project was first discussed at a Funder Forum meeting on 3 November 2021 alongside a briefing paper introducing the project and raising several scoping questions to shape the direction and define the key values of the unmet need framework. These questions were:

- 1. Which definition(s) of need are the best fit for the values, priorities and purpose of the Funder Forum?
- 2. How can we articulate unmet need perspectives from a whaanau lens?
- 3. Which measures would provide useful additional insights for Funder Forum?
- 4. Where and how does a measure of unmet need fit into the existing decision-making process?
- 5. Generalised reporting/measurement tool vs one that is only used in certain circumstances?
- 6. Who will be using the tool/guidelines?

Following the presentation by one of the project team (RJ), an online discussion addressed the above questions and notes from this discussion were used to formalise the project plan.

Project priorities identified by Funder Forum

- 1. Highlight whaanau voices/perspectives
- 2. Bring awareness to unmet need, even if immediate action is not possible (a different way of framing issues as well as a measurement tool)
- Capture unmet need related to the absence of a service as well as services which are currently on offer
- 4. Consider the 'unintended consequences' of including unmet need in commissioning decisions.

Literature overview

It was decided that a systematic review of the literature was not the most appropriate approach for this mixed-methods project. Instead, a series of focused literature searches were carried out as necessary to contribute to answering the questions identified by the project aims and initial Funder Forum discussion. Search strategies for published literature included using structured Medical Subject Headings (MeSH) to guide searches in Ovid Medline and searches in Google Scholar. Additional grey literature was identified though Google searching. Snowball searching was also carried out to identify further resources of interest. Internal documents of interest were identified through project team discussions and stakeholder interviews.

Publications that focused on a values-based approach to measuring health need were prioritised, particularly if they had a focus on Maaori or other indigenous peoples, Pacific health, or had an explicit focus on health equity.

Internal and external stakeholder interviews

A list of potential interview candidates was derived from the initial presentation to Funder Forum and discussions within the project team (RJ and DW). Appendix 1 lists those interviewed. Interview candidates were formally invited to participate via email and a briefing paper was circulated to form the basis of interview discussions. The briefing paper also included the key questions that all stakeholders were asked:

- 1. What are your thoughts about the prompts from the literature review?
- 2. From your experience and expertise:
 - a. What should we add to the framework?
 - b. What other work should we reference?
 - c. How could we improve the framing of measuring unmet need?
- 3. Would you like to suggest other stakeholders we should interview?

Interviews were recorded with permission from the interviewees and transcribed by the interviewer (RJ). The analysis of the stakeholder interviews took a constructionist and iterative approach. Text was transcribed into NVivo Version 12 (QSR International Pty Ltd. (2018)). Data was coded according to project aims, and subsequent theme generation was informed by data from the initial Funder Forum discussion. In keeping with the values that informed the project, specific attention was paid to responses from Maaori stakeholders and Pacific stakeholders and all responses which pertained to honouring Te Tiriti, incorporating Maaori perspectives, and being responsive to Pacific peoples.

Results

Literature overview Understanding and measuring unmet health need

The initial literature overview was focused on economic and policy approaches to social needs. These findings were further informed by the second overview which supplemented these views with those of other key stakeholders including whaanau Maaori.

Social needs, including health needs can be considered according to the following technical categorisations (6):

- Normative need: is defined by experts based on whether an individual or group meets a
 determined standard, those who do not meet the standard are considered 'in need.' In health,
 this aligns with clinical and most epidemiological approaches to need
- 2. Felt need: is what people feel they need. It can be limited by individual perceptions/awareness of what can be need and the willingness of people to report that they are in need
- 3. Expressed need: "Felt need turned into action," (Bradshaw, 1972)
- 4. Comparative need: is determined by examining the population currently receiving a service. If there are people with similar characteristics who do not have access to this service, they are considered to be comparatively in need.

Needs can be considered met, partially met, unmet or inappropriately met (overallocation of resource) (7).

We can understand unmet need as having two components: a need (whether expressed/perceived or not) for healthcare, AND a service or intervention which results in a beneficial health outcome. Both of these components can be more specifically defined depending on the perspectives and purpose of measuring unmet need, in other words, understanding that not all population groups express or perceive health need the same way/ focusing on services or interventions which will have the greatest impact on health equity.

In some situations, there may be an expressed need for a service which is ineffective (e.g. mammography for younger women) or harmful (ivermectin for COVID-19). In this instance, balancing individual, community or system expressed need with measures of efficacy, cost-effectiveness and other considerations are required, as well as an approach for communicating decisions which do not address expressed needs and managing the impact that these decisions may have on relationships with the communities that are served.

Health needs may be conceptualised differently depending on underlying values and the scope of the commissioning decisions being made. This can range from understanding health needs as specific clinical services, to holistic definitions which encompass needs which may require input from services and approaches outside of healthcare.

We note that need is often discussed through an individualised biomedical lens and that this is where most of the literature is situated. However, we acknowledge the importance of looking wider, at whaanau and community needs, as well as the importance of strengths, aspirations, preferences, and context in shaping health needs (8).

Furthermore, although 'need' is one way of thinking about health and healthcare, when considering Maaori health equity and Tiriti o Waitangi obligations, a rights-based approach may be a better framework to apply (9,10).

Ways of measuring unmet need

- 1. Self-reported by patient/healthcare service users/whaanau/communities
 - a. Healthcare domains accessible³, timely and acceptable/quality (11)
 - b. Experiences, priorities, strengths, community views
 - c. What is needed to achieve wellbeing rather than 'an absence of disease'?
 - d. Ways to measure: survey data (patient feedback, national surveys (e.g. New Zealand Health Survey; patient experience surveys, national and local)), hui/focus groups.

As perceptions of need and unmet needs vary between individuals (12), often along lines of marginalisation and socioeconomic deprivation, there is no single best way to measure self-reported unmet need, and single question measures can under or overestimate the true prevalence of unmet need. Any self-reported measures of unmet need must be culturally and linguistically appropriate and be developed to be comprehensible across a broad range of health literacy levels.

Written surveys and sought written feedback often miss groups who are the most affected by unmet need. Face-to-face methods such as hui or talanoa supported by facilitators who are trusted by the participants may be more appropriate in these instances. Relying on 'conventional' methods of collecting feedback is likely to result in sample bias which amplifies the voices of majority or overserved groups.

These measures are an opportunity to consider different models of healthcare delivery, e.g., whaanau rather than an individual as the 'unit,' community rather than individual needs. Research conducted by Maaori public health academics suggests that experiences of racism are associated with higher levels of unmet healthcare needs (13).

A central tension when considering patient, whaanau and community feedback is when there is a conflict between felt need and normative need. This can lead to harm through overdiagnoses and overtreatment

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³ Noting the role of 'safe spaces' for delivering health services/facilitating wellbeing (meeting people where they are and feel comfortable)

or a breakdown in trust between individuals and health services. Building the capacity of commissioners to manage expectations and communicate decisions (with both patients/communities and health system colleagues) will be a key enabler for expanding shared decision-making to a broader group of stakeholders, particularly for communities who have historically been marginalised by the healthcare system.

2. Reported by clinicians/healthcare providers

- a. At a primary/community care level (e.g., pilot study of GP collection of unmet needs information (14))
- b. 'Did not attend' rates, 'non-adherence' measures
- c. Avoidable adverse events: avoidable adverse events can be a proxy for unmet need for preventative interventions due to limited supply/inaccessibility
- d. Often reported as failure to provide clinically indicated services due to resource constraints.

This dimension is an opportunity to consider where decision-making power sits within the process of defining and prioritising unmet needs and creates space to consider partnership and opportunities for sharing power in ways which honour Te Tiriti and promote equity.

3. System-level measures

- a. Generalised measures such as waiting times for elective surgery (may obscure prehospital barriers to care (GP referral, acceptance for specialist assessment (17)))
- b. Healthcare utilisation data (historic utilisation is not a good proxy for current need if there are existing inequities/unmet need)
- c. 'Expected needs analysis' (comparing expected prevalence of a condition/need for service vs what is currently reported/being supplied)
- 4. Examination of a 'care pathway' (bespoke analysis of a service or programme) or root cause analysis

When there is a population group/health service or programme where unmet need is a particular concern, a mixed approach which examines the care pathway may be warranted. This method may include data from a selection of the above sources, e.g., service user, provider, and stakeholder consensus (16), to identify sites along a care pathway where unmet need occurs.

Values-informed measures of unmet need

Following on from the initial funder forum discussion about the project, a targeted literature overview was conducted to identify measures of unmet need that reflected the values-based understanding of unmet need that the group hoped to highlight through this project.

This section highlights the range of literature that this overview identified, along with other texts which were recommended during stakeholder interviews.

Title	Type of literature	Focus population	Key findings	Relevance to the unmet healthcare needs framework
A whanau ora approach to health care for Maori (17)	Consultation methodology for developing a local definition of whaanau ora	Local Kaumatua in each of the Tainui iwi areas: Waikato, Maniapoto, Raukawa and Pare Hauraki	-Example of how kaupapa Maaori consultation can be done to develop locally relevant definitions	-Can add to other local experience to help inform our process of engaging with mana whenua
A window on the quality of Aotearoa New Zealand health care 2019 (18)	Governmental report	Aotearoa New Zealand	-Overview of different domains of unmet health need and inequities between Maaori and non-Maaori -Unmet need arises not only due to cost of care but due to inaccessibility of services	-Need to consider different causes/domains of unmet need to measure -Highlights existing inequities
Atlas of Healthcare Variation (19)	Governmental report / website resources	Aotearoa New Zealand	 -A collection of resources displaying variations by geographic area in the provision and use of specific health services and health outcomes. - A Te Ao Maaori Framework aiming to improve the quality of care afforded to whānau Maaori and advance the uptake and implementation of te ao Maaori and mātauranga Maaori concepts into general health system design and health practice 	-Unwarranted variation suggests under/over provision of services - Example of a Te Ao Maaori Framework in a related area of work
Bula Satu – A window on quality 2021: Pacific health in the year of COVID-19 (5)	Governmental report	Aotearoa New Zealand	-Highlights health outcome and quality indicators demonstrating the health inequities impacting on Pacific peoples using a lifecourse approach	-Critique of current health data for describing the health of Pacific peoples -Recommendations for improvement

Experience of racism and associations with unmet need and healthcare satisfaction: the 2011/12 adult New Zealand Health Survey (13)	Secondary analysis of New Zealand Health Survey data	Participants in the 2011/12 adult New Zealand Health Survey	-Outcome measures: unmet need to see a general practitioner [GP] and overall satisfaction with usual medical centre	-Survey collected system-level data can be used to gain insights into unmet healthcare need -Potential to advocate for the inclusion of questions around unmet healthcare need in routine data collection
Indigenous voices on measuring and valuing health states (20)	Interview study	6 Maaori participants who had experienced illness or cared for whānau experiencing long-term or terminal illnesses	-Health includes "physical, emotional and spiritual dimensions of both the individual and the collective" -Time as unit of measure (time taken to access services, loss of time to illness, the time of healthcare practitioners, leisure time as determinant of health) -Quality of care including cultural safety, experiences of racism -The hidden costs of accessing healthcare (caring for whaanau, secondary costs, cost of long-term conditions, loss of income)	-This early, question-generating work indicates Maaori measures and values around health would differ from currently used western ones -These insights inform how we should approach the design and definition of health measures, highlighting the need to explicitly create space and ensure that Maaori voices and perspectives are valued within any health-related measure which is intended as a departure from the norm -The need to start with culturally relevant definitions is echoed in the Pacific consumer group's talanoa on Bula Sautu (21)
"Hua Oranga" A Maori Measure of Mental Health Outcome (22)	Health outcome measurement tool	Maaori and whaanau who use health services	-Includes three perspectives: Clinical views, Tangata Whaiora/Client views, Whaanau views -Outcome measures are located within the four dimensions of te Whare Tapa Whaa - Outcomes measured at five clinical endpoints: Assessment, Inpatient Treatment, Outpatient Treatment, Community Care, Community Support	-Triangulation of perspectives as an alternative to usual siloed approach -Can measure unmet need at the level of individuals, whaanau and services

The unmet legal, social and cultural needs of Maaori with disabilities (24)	Policy and thematic analysis	Maaori with disabilities	-Has been used in a modified form for people using acute stroke care services (23) -Highlights Maaori with disabilities as a group at the intersection of health inequities -Neither Maaori nor mainstream disability frameworks are an ideal for Maaori w/disabilities - Tangata hauaa service delivery framework as a model for Maaori with disabilities	-Challenges us to think about intersections of marginalisation when thinking about the health needs of different communities
Unmet health needs and discrimination by healthcare providers among Indigenous people with multimorbidity (25)	Survey study	Urban Indigenous people living in Canada	-Recruitment using Respondent-Driven Sampling (RDS) methodology, developed specifically to identify "hard-to-reach" populations -Conducted in accordance with local Indigenous research ethics stands and using Indigenous community-based participatory research methods -Survey conducted in-person -Measured: unmet need and discrimination by healthcare providers in the last 12 months, prevalence of multiple long-term conditions (using a uniquely designed "respectful health assessment survey tool")	-Insights into how a survey for highlighting the experience of Indigenous people could be conducted
"You've got to look after yourself, to be able to look after them" a qualitative study of the unmet needs of caregivers of community based primary health care patients (26)	Interview study	80 caregivers from Canada and New Zealand	-Identified high level of unmet need felt by caregivers: unrecognised role; lack of personal resources; and no breaks even when services are in place	-Extends our understanding of unmet health need beyond the individual and highlights the importance of unpaid caregivers in the network of care

Stakeholder interviews The language of unmet need

As with the literature overview, the difference between the traditionally cited economic definitions of need and holistic, values-driven approaches were present during interviews. There were a range of views about the framing and definition of unmet need among the stakeholders, highlighting the importance of coming to a shared understanding of what is meant when 'need' is discussed in commissioning discussions.

Many stakeholders were critical of the word 'need,' seeing it as evocative of deficit narratives, i.e., 'needy people' and therefore was not in keeping with the mana-enhancing and strength-based approach to health and wellbeing that they championed. 'Need' was also critiqued as a word which obscured the resilience and capabilities of underserved patients and communities to which discussions of 'unmet need' aim to direct better services.

Some stakeholders did not feel as strongly about the word choice as they did about the directionality of the deficit with which the term 'unmet need' is associated. They felt that the unmet need was indeed the result of a deficit on the part of the healthcare system in failing to achieve equitable outcomes for the communities that it serves. A few stakeholders were supportive of retaining 'need' as the term of choice as it was not jargon and could be easily understood across all stakeholder groups.

There were also a range of views about the definition of unmet need. Some stakeholders indicated that the definition should be limited to the provision or allocation of health services and that other factors such as socioeconomic deprivation sat outside the scope of the role of health commissioners. However, several other stakeholders hoped that the project would be an opportunity to be bolder, expanding the role that health commissioning plays in addressing health inequities. This wider view included elevating community, patient/whaanau/family voices and using unmet need measurements to push for intersectoral commissioning, e.g., investing in community infrastructure, improving housing stock.

Finding strengths within 'unmet need'

One stakeholder demonstrated that measuring unmet need could be framed as an opportunity to highlight capabilities and strengths within underserved communities. Additionally, they proposed that in conjunction with describing unmet need, the framework had the potential to support capability building across different stakeholders (empowering communities to become active participants and upskilling health system stakeholders to work differently) and for identifying services that were effective at addressing health inequities to 'invest in what works.'

Summary

Mixed views about the language and definition of unmet need indicate the need for change, not only to the language of unmet need but also in coming to a shared understanding between different stakeholder groups. The tension between traditionally cited economic definitions of need and more holistic commonuse definitions may be a barrier to clear conversations about addressing unmet need and subsequent actions to do so.

Measuring unmet need

Characteristics of a fit-for-purpose framework

Stakeholders wanted a framework which was useful and 'worked' within the current commissioning cycle. For those who wished to strengthen the role of commissioning in achieving health equity, they hoped that the framework would help with this task. Many stakeholders thought that the discussions around unmet need that this project had initiated were timely, given the national-level changes that are currently taking place for the health system.

Many stakeholders expressed a desire for the framework to be a departure from what has already been done, with high usage of the following descriptors: different, changing, shift, aspirational, creative and new.

Key stakeholders

Key stakeholders identified whose views are important for understanding unmet health need included: commissioners in the system, providers, funders, whaanau, populations, consumers and communities. Key groups highlighted in our stakeholder interviews included Maaori and Pacific peoples, and other groups experiencing health inequities.

Components

When discussing what inputs a framework for measuring unmet need should have, stakeholders highlighted:

- 1. A range of perspectives and voices
- 2. Appropriate language and framing of unmet need
- 3. An understanding of the responsibilities that different stakeholders have
- 4. Processes for ensuring accountability
- 5. A commitment to values.

Summary

The stakeholders wanted a framework which represented a shift from the current ways in which unmet need is considered within the commissioning cycle. There was acknowledgement that there was a gap between where they wanted the discourse to be and where it currently was. At the same time, almost every stakeholder highlighted usefulness at the present time as the most important characteristic for the framework.

Limitations

The limitations of our project in responsiveness to Maaori and engagement with Pacific peoples are outlined in the Methods section of the report.

An additional key limitation of our project is the absence of voices from patients/whaanau/family and community from the rohe of Counties Manukau. The literature overview did identify studies that did incorporate these voices, but this falls short of meaningful participation or co-design in the derivation of our definition or measurement framework. As the project progressed, this limitation was identified in the intended scope and planning of the project, and remedying this was compounded by the COVID-19 situation. There is opportunity to mine the outputs of co-design undertaken for other recent initiatives in Counties Manukau, most notably *Te Ranga Ora*⁴. This can be done as a subsequent step, so that the initial report can be submitted in a timely way to support development of new commissioning functions for the new health system.

As the framework highlights the absence of these voices and lays out steps to give greater space to them as the health system adapts to our renewed understanding of unmet need, there is opportunity to remedy this limitation as this framework is progressed under the new health system structures and hence, it is hoped that absences such as these will become a thing of the past.

⁴ Te Ranga Ora is a system of care for primary and community services to support people and whaanau living with long-term conditions (LTCs) being developed in CM Health. It is unique in that it is being designed with service users and their whaanau and will be delivered in partnership with Te Mana Whenua i Taamaki Makaurau, the primary and community sector, lead government agencies, the Ministry of Health and CM Health.

Synthesis of findings

Through a literature overview and stakeholder analysis, we have derived a shared definition of unmet need and a framework for measuring unmet need to inform the commissioning work of Funder Forum and to shape the ways in which unmet need is discussed in health commissioning in Aotearoa.

A shared definition of unmet need

Returning to the basic definition of unmet need as: a need (whether expressed/perceived or not) for healthcare, AND a service or intervention which results in a beneficial health outcome; our findings have laid out the parameters which each of these components must include to meet the aspirations of the CM Health Funder Forum and the stakeholders interviewed.

The opportunity to identify need should be expanded beyond healthcare system stakeholders to include patients/whaanau, community and a Tiriti-relationship with mana whenua. Additionally, the level at which the need is located may be a collective, rather than being limited to an individual patient. Healthcare system stakeholders have a responsibility to increase their capacity to understand and work with needs which are based in worldviews and conceptualisations of health and wellbeing which are new to them. This includes ongoing investment in a health workforce that is trained in Tiriti responsibilities and cultural safety. Participation from stakeholders outside of the healthcare system also needs to be supported.

The potential for mismatch between clinical need and perceived need (of patients/whaanau/family/communities) and concerns about overdiagnosis and overtreatment are valid when considering the pivot to addressing unmet need as outlined in this report. However, these 'unintended consequences' are performance indicators which should be monitored by the health system, rather than being seen as a reason to limit the participation of these non-health sector stakeholders.

Bringing together these components, a shared, non-deficit and value-driven definition of unmet need that informs Funder Forum could read: opportunities to (re)allocate health and other system resources to address patterns of inequitable health outcomes as a foundation for meeting wellbeing aspirations.

On renaming unmet need

Unmet need is a term that works in the short term to start conversations, and the phrase has a long history in public health, with a well-established meaning and function in health system funding and planning. However, there is a concern from our stakeholders that embedding this language may also embed deficit-based perspectives which cause harm to Maaori, Pacific, taangata whaikaha and other groups experiencing discrimination and suboptimal care from the health system. As the health system is changing to orient its structure in a way which better reflects honouring Te Tiriti, achieving health equity and pae ora, it is a fitting time to change the way in which unmet need is discussed.

For changing the words used to be meaningful, it must be matched with a change in understanding. This report proposes prioritising a change process in which a health-system driven understanding of unmet need is expanded to encompass the views of a range of key stakeholders, and for greater power to be allocated to non-provider/funder voices. We suggest that this change in perspective and way of working is as important as any potential change in naming.

We have not attempted to propose a new term for unmet need but hope that our definition and proposed measurement framework support the development of a new discourse which reflects the values and aspirations of the full spectrum of stakeholders who are part of the 'unmet need' conversation.

Measuring and reimagining unmet need

To present a tool with immediate utility that could also facilitate the aspirational approach which stakeholders and the values of Funder Forum outlined, a time-element was incorporated into the framework to set a direction for changes to occur over time. This proposed framework approaches unmet need from a range of perspectives which expands to mirror the shift towards strengthening and expanding:

- 1. A Tiriti-based relationship between the health system and mana whenua, reflected in the new health system structures
- 2. Shared decision-making between services providers and patients/whaanau/families
- 3. The development of localities-based commissioning which incorporates community voices and intersectoral approaches to improving health and wellbeing
- 4. Capacity building for both community and health sector stakeholders
 - a. System capability to work differently and communicate decisions effectively
 - b. Investing in empowering patients/whaanau/families, across generations, and communities to be informed stakeholders
- 5. Highlighting services that are effective in addressing unmet need in the way that they work

6. System accountability to monitor equity and health outcomes as well as unintentional consequences of working differently

In keeping with the secondary goal of this project and our commitment to honouring Te Tiriti, we hope that this understanding of unmet need will support opening the door to future conversations that move beyond a focus on 'need' in Maaori health to honouring Maaori rights, aspirations and expectations as outlined in Te Tiriti o Waitangi. We further note that these priorities have been developed and championed by many within the health system to date and that the current renewed focus is a testament to their efforts.

A framework for measuring unmet health need for commissioning

The first part of the framework (Figure 2) outlines the current state of measuring unmet need. It suggests ways in which currently collected data may be used to identify unmet need based on patient and provider/health service perspectives.

The next part set out in the framework is a transitional phase in which commissioning addresses unmet need. Enablers that will facilitate a shift to this stage are:

- Adopting a shared, values-driven understanding of unmet need
- A health system commitment to act on Tiriti responsibilities
- Taking a health equity lens to address unmet need for communities experiencing inequities
- Making space for non-health system perspectives on health and unmet need

This transitional stage calls for incorporating measures of unmet need that that are culturally appropriate for patients and whaanau who are not well served by current 'standard' methodologies and for funder accountability through monitoring how funding decisions are responsive to identified unmet needs. It also makes the governance role of mana whenua explicit and leaves space for measures which align with mana whenua aspirations for identifying needs and determining when these needs are met or unmet.

The third part of the framework sets out an aspirational vision of where we want to be, in which commissioning supports Tiriti responsibilities and equity. The enablers of this stage are:

- Identifying and addressing collective unmet needs alongside the individual
- Monitoring the performance of interventions and services in addressing unmet need

- Building the capacity of communities, providers and funders to work collaboratively to address unmet need through commissioning
- Expanding the scope of commissioning to include intersectoral initiatives that can address determinants of health which sit outside of the health system.

This stage aims to support accountability and sustainability through monitoring how effectively services work to address unmet need, with a view to funding what works well and identifying leaders within the field. It also encourages investment in patient/whaanau/family and community empowerment.

At this stage, conversations with mana whenua are ongoing, therefore, the corresponding sections of the framework will be completed in a later version of the report.

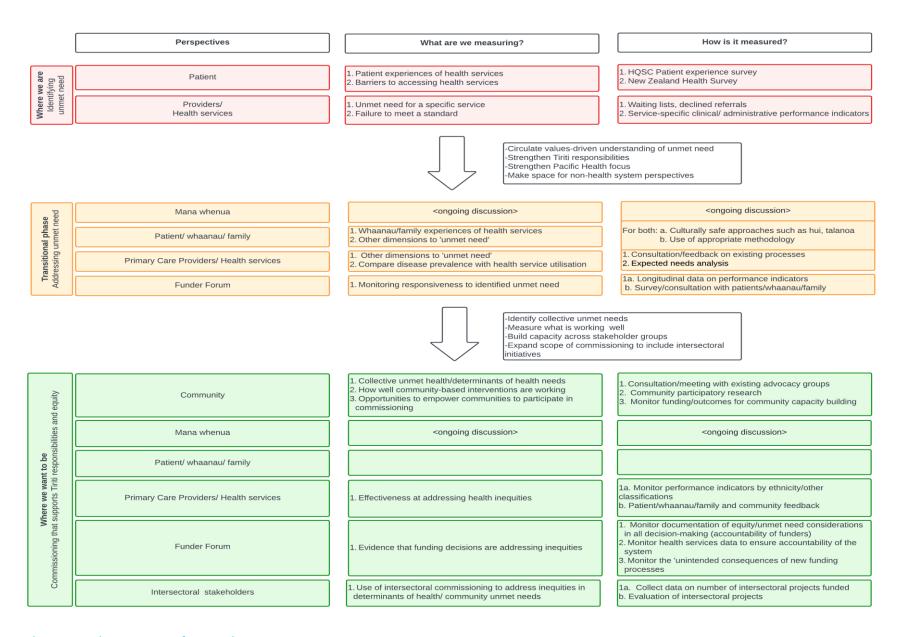


Figure 2. Proposed unmet need measurement framework

Recommendations

The results of this literature overview and stakeholder analysis have been shaped into a framework for measuring unmet health needs which aims to amplify whaanau and community voices, honour Tiriti responsibilities, hold space for Pacific peoples and contribute to achieving health equity for the population of Counties Manukau. We envision that this framework is used to guide a process in which the health system's understanding of unmet health need shifts to meet the aspirations of communities, patients and whaanau, while improving how we hold the tension and make transparent decisions when the views of some stakeholders are in conflict. To reflect this notion of shifting approaches, our recommendations are organised according to this change in understanding over time.

Although these recommendations are organised as short, medium, and long term, we recognise that some services or interventions may already be operating further along this timeline. Although care must be taken to not appropriate or take knowledge in an extractive manner, these are services that we can intentionally learn from and that should be supported in a values-driven commissioning approach that addresses unmet need.

Identifying unmet need (Short term, 1-2 years)

Short term actions are limited by existing decision-making processes, data collection and availability and the broad spectrum of understanding around unmet need. However, there are some existing data that could be analysed in new ways to identify unmet need and the areas in which shifting resource allocation would make the greatest difference to achieving health equity, with a view to highlighting these for commissioning under the new national health system structures. These data views could also be recommended for prioritisation in the work programme of the health intelligence groups established in the new health system.

- Acquiring customised data extracts from nationally collected data sources will enable CM
 Health to understand barriers to accessing healthcare and access patient experience data
 for those in the population we serve
- 2. Applying / reviewing existing analysis by ethnicity to locally collected waiting list, declined referral and performance indicator data will generate some initial insights into the performance of currently funded health services for Maaori and Pacific patients
- Reviewing and revising what data is currently collected to measure performance with a Tiriti
 and equity lens, with leadership from mana whenua, Maaori Health and Pacific Health
 experts.

Addressing unmet need (Medium term, 2-3 years)

Medium term actions are focused on translating our values and data into meaningful change in the commissioning cycle. This includes working towards a Tiriti-partnership with mana whenua, expanding the pool of stakeholders whose perspectives are reflected in decision-making, particularly those most impacted by unmet needs, and using the data that is available to us to make more equitable funding decisions. This work will need to be escalated to the groups responsible for health intelligence and commissioning in the new health system.

- Making use of data that identifies unmet need to make commissioning decisions that fund interventions that address these needs and support health equity
- 2. Partnership with mana whenua
- 3. Incorporating provider views to identifying unmet need
- 4. Communicating commissioning decisions to the full spectrum of stakeholders
- 5. Investing in a process within the commissioning cycle which highlights the voices of patients/whaanau/families across generations, particularly those most impacted by unmet needs, when identifying and addressing unmet need.

Commissioning that supports Tiriti responsibilities and commitments and equity (Long term,3-5 years)

Long term actions are aimed at ensuring that the values-driven changes that occur in the commissioning cycle are sustainable and evidence-informed. They are part of a commissioning landscape where mana whenua and health sector stakeholders are working within a Tiriti partnership. Increased implementation of intersectoral commissioning supports funding interventions addressing determinants of health and collective needs. It is also important that unmet prevention needs are acknowledged and addressed, alongside treatment needs.

- 1. Monitoring funders to determine how commissioning patterns have changed to address patterns of inequity (funder accountability)
- 2. Monitoring providers' performance in addressing unmet need (provider accountability), e.g. adoption of new, equity-focused approaches, development of Maaori and Pacific health workforces.
- 3. Monitor the health impacts of novel commissioning patterns (including unintended consequences)
- 4. Using data in a strength-based way to build capacity across different stakeholder groups:
 - a. Highlight initiatives and approaches that work well
 - b. Identify leaders in the field
 - c. Learn from successful community interventions
 - d. Provide resources and training opportunity for non-health sector stakeholders to participate in commissioning decisions.

Appendix 1: Stakeholders interviewed

Name	Role	Date of interview	
Justine O'Reilly (external stakeholder)	Ministry of Health (Pae Ora Framework)	2/12/21 10.30am	
Corina Grey and Debbie Ryan (external stakeholders)	Pacific Health, Public Health and Primary Care experts	2/12/21 3.30pm	
Sharon Shea (external stakeholder)	Chairperson of the Bay of Plenty District Health Board, co-chairperson of the establishment board of the Māori Health Authority	13/12/21 9.15am	
Doana Fatuleai	Funder Forum Member	3/12/21 2pm	
Teei Kaiaruna	Clinical Pharmacist		
Ajit Arulambalam	Funder Forum Member	09/12/21 10am	
Catherine Gerard	Health Quality & Safety Commission New Zealand	13/12/21 10am	
Kate Dowson	Programme Manager, System Improvement DHB Planning, Funding & Accountability	13/12/21 11.30am	
Campbell Brebner	Funder Forum Member	14/12/21 9am	
Jessica Ibrahim	Funder Forum Member	16/12/21 1pm	
Sharon McCook (including guidance on mana whenua group)	Funder Forum Member	20/12/21 12pm	

References

- Waitangi Tribunal. Hauora: Report on Stage One of the Health Services and Outcomes Kaupapa Inquiry. Wellington: Waitangi Tribunal. 2019.
- 2. Robson B, Harris R. Hauora: Màori Standards of Health IV. A study of the years 2000–2005. Wellington: Te Ropu Rangahau Hauora a Eru Pomare. 2007.
- 3. Reid P, Robson B. Understanding health inequities. Hauora: Maaori Standards of Health IV A study of the years 2000 2005:3-10.
- 4. Harris R, Tobias M, Jeffreys M, Waldegrave K, Karlsen S, Nazroo J. Effects of self-reported racial discrimination and deprivation on Maori health and inequalities in New Zealand: cross-sectional study. Lancet. 2006;367(9527):2005-9.
- 5. Health Quality & Safety Commission. 2021. Bula Sautu A window on quality 2021: Pacific health in the year of COVID-19. Wellington: Health Quality & Safety Commission.
- 6. Bradshaw J. taxonomy of social need. Problems and progress in medical care: essays on current research, 7th series. 1972:70-82.
- 7. Aragon, M. J., Chalkley, M., & Goddard, M. K. (2017). Defining and measuring unmet need to guide healthcare funding: identifying and filling the gaps. York: Centre for Health Economics, University of York.
- 8. [Draft working document] O'Reilly, J. (2021). Commissioning for better outcomes and improved stewardship of the health and disability system. Ministry of Health.
- 9. Simmonds, S., Robson, B., Cram, F., & Purdie, G. (2008). Kaupapa maori epidemiology. Australasian Epidemiologist, 15(1), 3-6.
- 10. Jones, R., Bennett, H., Keating, G., & Blaiklock, A. (2014). Climate change and the right to health for Maori in Aotearoa/New Zealand. Health & Hum. Rts. J., 16, 54.
- 11. Gauld R., Raymont A., Bagshaw P., et al (2014) The importance of measuring unmet healthcare needs. NZMJ 127(1404):63-7

- 12. Chowdhury, N., Naeem, I., Ferdous, M., Chowdhury, M., Goopy, S., Rumana, N., & Turin, T. C. (2021). Unmet healthcare needs among migrant populations in Canada: exploring the research landscape through a systematic integrative review. Journal of immigrant and minority health, 23(2), 353-372.
- 13. Harris, R. B., Cormack, D. M., & Stanley, J. (2019). Experience of racism and associations with unmet need and healthcare satisfaction: the 2011/12 adult New Zealand health survey. Australian and New Zealand journal of public health, 43(1), 75-80.
- Bagshaw, P., Bagshaw, S., Frampton, C., Gauld, R., Green, T., Harris, C., ... & Toop, L. (2017). Pilot study of methods for assessing unmet secondary health care need in New Zealand. NZ Med J, 130(1452), 23-38.
- 15. Inglis, T., Armour, P., Inglis, G., & Hooper, G. (2017). Rationing of hip and knee referrals in the public hospital: the true unmet need. The New Zealand Medical Journal (Online), 130(1452), 39.
- 16. Iliffe S, Lenihan P, Orrell M, Walters K, Drennan V, Tai SS, SPICE Research Team. The development of a short instrument to identify common unmet needs in older people in general practice. British Journal of General Practice. 2004 Dec 1;54(509):914-8.
- 17. Kidd J, Gibbons V, Lawrenson R, Johnstone W. A whanau ora approach to health care for Maori. Journal of primary health care. 2010 Jun 1;2(2):163-4.
- 18. Health Quality & Safety Commission (HQSC). A window on the quality of Aotearoa New Zealand health care 2019. Health Quality and Safety Commission New Zealand. Wellington, New Zealand.
- 19. Health Quality & Safety Commission (HQSC). Atlas of Healthcare Variation. Health Quality and Safety Commission New Zealand. Wellington, New Zealand. https://www.hqsc.govt.nz/our-programmes/health-quality-evaluation/projects/atlas-of-healthcare-variation/
- 20. Willing E, Paine SJ, Wyeth E, Te Ao B, Vaithianathan R, Reid P. Indigenous voices on measuring and valuing health states. AlterNative: An International Journal of Indigenous Peoples. 2020 Mar;16(1):3-9.

- 21. Kingi TK and Durie M. Hua Oranga" A Maori Measure of Mental Health Outcome. 2000. A report prepared for the Ministry of Health, Department of Maori Studies, Massey University, Palmerston North.
- 22. Harwood M, Weatherall M, Talemaitoga A, Alan Barber P, Gommans J, Taylor W, McPherson K, McNaughton H. An assessment of the Hua Oranga outcome instrument and comparison to other outcome measures in an intervention study with Maori and Pacific people following stroke.
- 23. Harwood M, Weatherall M, Talemaitoga A, Alan Barber P, Gommans J, Taylor W, McPherson K, McNaughton H. An assessment of the Hua Oranga outcome instrument and comparison to other outcome measures in an intervention study with Maori and Pacific people following stroke.
- 24. Hickey SJ. The unmet legal, social and cultural needs of Maaori with disabilities (Doctoral dissertation). 2008. The University of Waikato.
- 25. Kitching GT. Unmet health needs and discrimination by healthcare providers among Indigenous people with multimorbidity-A Respondent-Driven Sampling study of an urban Indigenous population in Toronto, Canada (Master's thesis). 2017. Department of Public Health and Nursing, Faculty of Medicine and Health Sciences, Norwegian University of Science and Technology
- 26. Kuluski K, Peckham A, Gill A, Arneja J, Morton-Chang F, Parsons J, Wong-Cornall C, McKillop A, Upshur RE, Sheridan N. "You've got to look after yourself, to be able to look after them" a qualitative study of the unmet needs of caregivers of community based primary health care patients. BMC geriatrics. 2018 Dec;18(1):1-1.