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Improving Māori health through clinical assessment: Waikare o te Waka o Meihana

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Abstract

Health professionals play an important role in addressing indigenous health inequalities. This paper describes the further development and a new conceptualisation of the Meihana model (2007) and the Hui process (2011), which together have formed the indigenous health framework in the University of Otago, Christchurch undergraduate medical education programme for 4th–6th year medical students over the past 5 years. The components of the framework are defined followed by description of their application to clinical assessment.

The indigenous health framework has been evaluated by medical students, health practitioners, Māori patients and whanau over this time and has been rated favourably as a clinically relevant framework that supports health practitioners to work effectively with Māori patients and whānau.

In New Zealand health disparities between Māori and non-Māori are well documented,[1,2] as is the role of the Treaty of Waitangi in health.[3] The Health Practitioners Competency Act (2003) identifies that all professional health regulatory bodies require health practitioners to demonstrate appropriate levels of cultural safety and competency in order to be fit for practice.[4,5] However, the evidence is less clear on how individual health practitioners can positively incorporate cultural competency into clinical practice.[6–8]

The Indigenous Health Framework developed at the University of Otago, Christchurch aims to translate the principles of cultural competency and safety into an approach that health practitioners can use in everyday practice and, by doing so, improve health service delivery for Māori patients/whānau. The Indigenous Health Framework is comprised of the Hui Process[9] and the Meihana model[10] and is used primarily in the medical interview, building on the widely used Calgary-Cambridge model.[11]

The Hui Process describes recommendations for enhancing the doctor-patient relationship with Māori. It includes *mihimihi* (initial greeting engagement), *whakawhānaungatanga* (making a connection), *kaupapa* (attending to the main purpose of the encounter), and *poroporaki/whakamutunga* (closing the session).

The Meihana model describes how the kaupapa (purpose of the encounter) can extend standard history taking to give a broader understanding of Māori patients' presentations. It has also been specifically developed for use by both non-Māori and Māori health practitioners.

The Meihana model was created using the foundations of the well-documented Māori health model, Te Whare Tapa Wha.[12] The Meihana model was initially published in

2007[10] and described six components of the model (whānau, wairua, tinana, hinengaro, taiao and iwi katoa) and introduced a concept referred to as Māori beliefs, values and experiences (MBVEs) which overlaid the six components.

Over the last 6 years the authors and their colleagues based at the University of Otago (inclusive of Christchurch, Wellington and Dunedin campuses) have trained medical students, medical doctors, allied health professionals (nurses, psychologists, physiotherapists, occupational therapists), Māori health workers and administrative staff on the principles and practicalities of implementing the Meihana model. These training initiatives have been evaluated through student/staff/patient feedback forms, a qualitative case study, case presentations and observed structured clinical examinations (OSCE) and have been shown to increase quality interactions between health practitioners, Māori patients and whānau.[9,10,13]

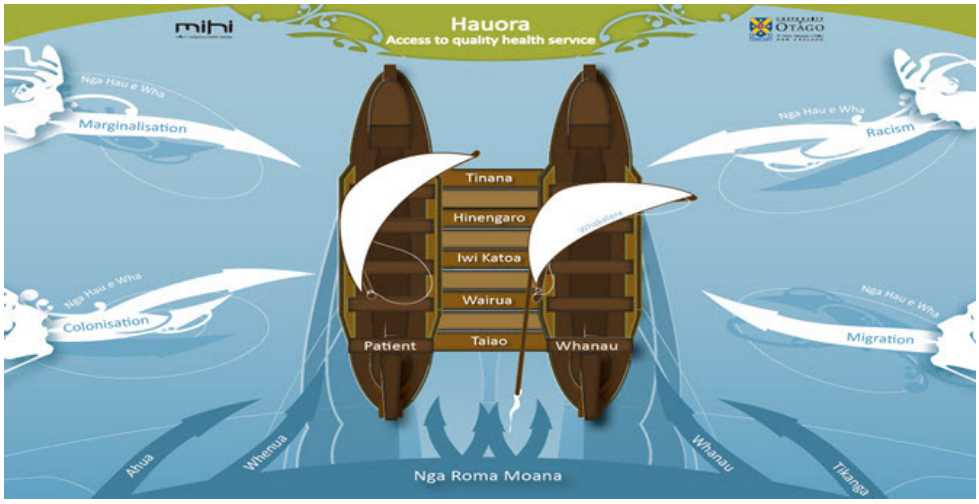
The use of this model in diverse health settings and advances in the research about factors contributing to health disparities has led to changes in the presentation and some of the concepts of the model compared to its original description. This includes further refinement of how each component of the model is defined and explored within a clinical assessment, and the inclusion of the concept of Nga Hau e Wha, which provides a further context to the health environment for Māori.

The purpose of this paper is to provide an updated descriptive overview of the Meihana model and its application to clinical assessment. The term 'Waikare o te Waka o Meihana' refers to the rippled waters from the Meihana waka and reflects the development of the model from its original description. It also encompasses our aspirations that this model may positively influence change in health practitioner's history taking and management behaviours.

Overview of Meihana model

The analogy of a waka hourua (double-hulled canoe) was developed to describe the elements of the Meihana model, their interactions and to assist with visual presentation of the model, see Figure 1.

Figure 1. Diagram of the Meihana model



A waka analogy has been previously used in other research and health models[14,15] This development of the Meihana model uses the components of the waka hourua and factors that can affect this voyage to summarise the breadth of information that may be required to fully understand a Māori patient's health status. The waka hourua was the traditional mode of transport used in the migration of Māori from Hawaiki to Aotearoa (New Zealand). Therefore this analogy draws on a voyage of a waka hourua across the moana (ocean) from one destination to another.

Figure 1 illustrates the two hiwi (hull – representing the patient and whānau) are attached through aku (crossbeams). Each voyage is charted towards a destination, for the waka hourua this involves the passage of attaining hauora (health/wellbeing), however the course can be influenced by nga hau e wha (the four winds of Tawhiri-matea), nga roma moana (ocean currents) and whakatere (navigation).

Components of Meihana model

Each of the components of the waka hourua, nga hau e wha (four winds) and nga roma moana (ocean currents) and whakatere (navigation) is described, beginning with a brief discussion of the term's use in Te Ao Māori (Māori world view), followed by the definition used in the Meihana model and its application to clinical assessment.

Waka hourua (double-hulled waka)—The waka hourua demonstrates the importance of considering both the patient and their whānau in assessment of health. Additionally, it is a role of the health practitioner to get onto this waka hourua and become a part of the patient's support network (kaupapa whānau) for a period of time. Assessing the health of a Māori patient should include developing an understanding of the strength and weakness of each of the aku (cross beams) and its role in the patient's health. The components of the waka hourua will not be new to health practitioners and are not unique aspects to Māori - they are components of any thorough clinical assessment. However this model describes their relevance for Māori in clinical assessment.

Component: **Patient**

Definition: Patient identifying as Māori with ethnicity correctly confirmed within the clinical context.

Application to clinical assessment: Despite the importance of ethnicity as a determinant of health, ethnicity data if often inaccurately recorded (16). Self-identification through the Ministry of Health ethnicity data protocols (17) is the most effective way to allow Māori patients the right to identify themselves as Māori.

Within clinical practice it should become common place for all patients to be asked their ethnicity, and to have this reviewed over time, because the more comfortable a patient becomes in the service, or the more a health practitioner demonstrates cultural competency and safety, the more likely a patient may feel willing to identify as Māori within the service.

The identification of Māori patients should ensure Māori health services and supports are offered to the patient (regardless of whether their physical salience is recognised by others as being 'typically' Māori).

Component: **Whānau**

Definition: Support network(s) for the patient

Application to clinical practice: Whānau may refer to biological family (whakapapa whānau) and/or other key support people (kaupapa whānau) who are stakeholders in the patient's health and well-being.[18]

Whānau often have a key role in establishing collateral history and family medical history. Assessment should also include whānau understanding of the patient's condition and their expectations around management and prognosis. For example, if a patient presents with chest pain and another member of the whānau previously died following a heart attack, is mortality the patient's expected outcome? Gathering an understanding of this can inform appropriate health education and management of the patient and their whānau.

Unfortunately whānau often feel excluded from participating in clinical assessment.[19] This may limit a health practitioner's ability to gain a comprehensive understanding of the patient's symptoms and family medical history (especially if it is unknown to the patient). Permission to include whānau in the clinical setting should be sought from the patient, as failure to include the whānau, may result in overlooking the impact of the patient's health on the whānau and if wider support networks are required. This also allows for the exploration of the perceived confidence of the patient/whānau to navigate through the health system. If a patient opts not to include whānau in the consultation, health practitioners can enquire about the patient's understanding and/or perceptions of their whānau support networks.

Component: **Tinana**

Definition: Physical health and functioning of the patient

Application to clinical assessment: This component incorporates the assessment of a standard medical history to draw an accurate profile of the patient's physical status (both past and current functioning). For example this includes physical symptoms, medications, substance use, diet, exercise and physical examination. It should be noted that tinana, while a vital part of the clinical assessment does not stand alone and cannot be considered without the other relevant components of this model.

Component: **Hinengaro**

Definition: Psychological and emotional wellbeing of the patient.

Application to clinical assessment: This component encourages health practitioners to explore psychological wellbeing but should also include assessment of the patient's concept and perception of their condition and the impact of this on their wellbeing. For example this may reveal the comorbidity of depression with chronic illnesses, or

stigma in relation to specific mental health illnesses. These beliefs and emotions may influence the manner in which a symptom or illness is discussed.

Component: **Wairua**

Definition: Beliefs regarding connectedness and spirituality

Application to clinical assessment: This component identifies the beliefs, values and priorities for the patient/whānau that may impact their engagement with the health system and/or their paradigm of health. Health practitioners can begin to explore this by enquiring about spiritual-religious belief and attachments to people, places and taonga (treasured items). Incorporating this component allows a conversation about religion, death and dying within an appropriate cultural context. This is especially important in palliative care and in situations where a lack of connectedness may be a key risk factor e.g. assessing depression and/or suicide risk.

Component: **Taiao**

Definition: The physical environment of the patient/whānau.

Application to clinical assessment: This component identifies the importance of gaining a clear understanding of the physical environment of the patient/whānau. This includes direct questions of the patient/whānau about their home environment, neighbourhood and workplace health and safety. It also involves critiquing the service or clinical environment that the patient/whānau are interacting with. This may include identifying whether the basic details of the physical and interpersonal spaces promote privacy and dignity (e.g. adequate seating for support networks to attend, appropriate clinical gowns/sheets in order to complete investigations) and whether the service has identified potential barriers to access in the service (e.g. car parking, close to amenities, Māori 'friendly' environment).[20]

Component: **Iwi Katoa**

Definition: Services and systems that provide support for patients/whānau within the health environment.

Application to clinical assessment: An integral part of the assessment process is to identify whether patients/whānau have had appropriate access to services and systems that can improve their broader health context and/or their engagement with the health environment. This includes access to mainstream services such as NGOs, Work and Income (community service cards, high user health cards), screening programmes, Plunket, other primary care services (e.g. brief intervention services), 'green prescriptions' and/or specific Māori health services such as Kaupapa Māori provider services (e.g. Tamariki ora, addiction services, Rongoa Māori) and Māori Health workers (in both primary and secondary care services). Exploring current barriers and enablers to accessing services allows the health practitioner to further tailor future care plans for the patient/whānau.

Nga Hau e Wha – The four winds

Nga Hau e wha in Te Ao Māori refers to "four winds"[21]; in this analogy these winds impact the journey of the waka hourua to Hauora (wellbeing). The four winds signify historical and societal influences on Māori as the indigenous peoples of Aotearoa/New Zealand. Knowledge and understanding of these winds assists in providing the appropriate context for Māori health (in a colonised society) and encourages the health practitioner to reflect on how these winds have influenced their perception of Māori patients/whānau/community.

In practice, each of the four winds are inter-related e.g. urban migration of Māori was highly influenced in the 1960s by governmental policies (colonisation) to meet workforce shortages in the cities.[22,23] This section outlines the broad framework of each component to provide a guide for health practitioners to consider in assessment – components may or may not be relevant to Māori patients and/or whanau.

Component: **Colonisation**

Definition: Colonisation, both historical and on-going, occurs through the loss of land, political re-organisation and dehumanisation of Māori patients and/or community.[3]

Application to clinical assessment: This component of the model challenges health practitioners to explore poverty, socioeconomic status, employment conditions, access to quality education opportunities, appropriate housing and financial ability to engage in the health system. Health practitioners should also consider the context of contemporary political events, which foster the inclusion or alienation of Māori communities in the development and implementation of services that may contribute to Māori health gains. This component may also include awareness of specific deficit stereotypes of Māori which may contribute to bias in clinical decisions.[24,25]

Component: **Racism**

Definition: Understanding of the impact of institutional, interpersonal and internalised racism on a patient's presenting complaint/wellbeing.

Application to clinical assessment: Racism has consistently been identified as a key determinant of health.[26] This component encourages the health practitioner to explore the patient's experiences of living in a racialised society, including questions around experiences in which they (or their whānau) have been discriminated against because they are Māori. This may have occurred in education, health or community settings.

Exploring racism with patients requires sensitivity. It also requires the health practitioner to identify when the patient/whānau may not attribute their experience to racism but something that 'just happens' and to be critical of the systemic processes that maintain the silence of racism within our community. This line of enquiry can identify reasons for the way the patient/whānau engage with health services and assist health practitioners to tailor their practice to reduce further likelihood of racist experiences in the health system.

More recent research has described three types of racism that influence health outcomes: interpersonal, institutional and internalised racism. Inter-personalised racism is the type most commonly thought of and includes "prejudice and discrimination, where prejudice means differential assumptions about the abilities, motives and intentions of others according to their race and discrimination means differential actions towards other according to their race".[27]

Exposure to this type of racism has been associated with lower health status.[28] It is included in the Meihana model to encourage health practitioners to explore if Māori patients have felt discriminated or treated differently within the health environment as well as wider society because of their ethnicity.

Institutional racism is differential access to goods, services and opportunities by race.[29] In order to understand the influence of institutional racism, health practitioners need to be aware of and encourage the evaluation of equity of services (including their own) as part of routine on-going quality improvement. The Health Equity Assessment Tool (HEAT) is a newly developed tool designed for this purpose.[30]

Internalised racism is the acceptance of negative messages about self-worth based on racial identity.[29] 'Clues' to recognising these beliefs in the clinical setting may include statements such as "I'm not into that Māori stuff" or "Just treat me like everyone else." Understanding the significance of this type of racism for Māori patients and whānau can be difficult to assess, however it is important that practitioners have an awareness of this type of racism and the impact it can have on Māori patient's self-worth and identity.

Component: **Migration**

Definition: Understanding internal migration of Māori from traditional iwi land to other regions within Aotearoa/New Zealand, tracking of possible external migration and establishing where their support networks are located.[18]

Application to clinical assessment: This assists the health practitioner to explore connections to whenua (land), where current support networks are located, reasons behind migration and how such events have engaged or disabled access to quality health care. This encourages a discussion around where the patient/whānau identify their whenua connection (if known), which can lead to further understanding of iwi/hapu identity. It also identifies who migrated (e.g. the patient or their parent, grandparent) and hence how long the patient/whānau has been in the current location and their connections to the current and 'historical' regions.

For some patients/whānau who are 2nd or 3rd generation descendants of Māori who migrated from traditional tribal areas, they may choose not to connect back with traditional iwi structures and associate with other Māori collectives that are urban based (e.g. urban authorities, urban marae). If there has been no migration and the patient/whānau live within their own iwi boundaries, this may lead to discussing the support networks available to the patient/whānau.

Component: **Marginalisation**

Definition: Knowledge of health information which identifies current Māori health status, including health disparities and health gains.

Relationship to clinical assessment: Knowledge of current Māori incidence, prevalence, morbidity and mortality rates (in relation to a specific illness/condition) can influence clinical assessment and practice. For example, knowledge of higher surgical readmission rates for Māori should prompt the health practitioner to carefully assess the adequacy of the discharge plan after a surgical procedure.[2]

Health practitioners are also encouraged to consider changes in Māori disease profile over time. For example understanding that current mental health disparities have only emerged since approximately the 1970s may help maintain therapeutic optimism and reinforce the potential for a better outcome for Māori. This component of the Meihana Model acknowledges the commitment required by health practitioners to be up to date with current Māori health information to reduce marginalisation of Māori within the health system.

Nga Roma Moana – Ocean Currents

Māori navigators understood how the currents influenced seafaring voyages. Familiarity with the currents influenced the timing of voyages and assisted to plot the course required to reach the destination. Harnessing the currents aided in time efficiency and energy required to undertake the voyage.

There are four specific ocean currents around the two larger islands of New Zealand, and these are used in this model to represent four specific components from Te Ao Māori (the Māori world view) that may influence Māori patients/whānau in clinical settings. It is important to note that the influence of these currents varies greatly due to individual patient experiences in Te Ao Māori and the effects of colonisation. The influence of these currents and the flexibility of the model allow for Māori patients' diverse experiences to be equally valued.

Component: **Ahua**

Definition: Personal indicators of Te Ao Māori that are important to the patient/whānau.

Relationship to clinical assessment: The identification of personalised indicators of Te Ao Māori that are important to the patient and whānau are opportunities to develop meaningful whakawhānaungatanga with the patient and whānau.[9] Enquiry of this component helps health practitioners to facilitate patients and whānau sharing more about themselves and validates the patient and whānau as Māori in the clinical setting. Specific indicators may include a patient and/or whānau using te reo within interactions, the wearing of specific taonga, ta moko, clothing with te reo or Māori motifs and/or having a Māori name (ingoa).[20]

Component: **Tikanga**

Definition: Māori cultural principles.

Relationship to clinical assessment: This requires the health practitioner to become familiar with specific cultural principles and how these are enacted (kawa) by the patient and/or whānau, and how these might be integrated with clinical investigations and practices. For example health practitioners should assess whether a Māori patient preparing for surgery has any expectations around disposal of body tissues or the right to have space or time for karakia (prayer).

Health practitioners should be familiar with their organisation's tikanga guidelines (such as those produced in every DHB) to ensure that they are able to inform Māori patients and whānau of the organisational processes available if specific tikanga practices are requested within the clinical setting.

Component: **Whānau**

Definition: The relationships, roles and responsibilities of the patient within Te Ao Māori, including whānau, hapu, iwi and other organisations.

Application to clinical assessment: Identifying the patient and/or whānau role and responsibility in the wider whānau may assist the health practitioner to understand the patient's (and often that of their whānau) priorities, values and beliefs. For example understanding a Māori patient's role on the marae, or within the family group, may help identify targets for motivational interviewing or barriers to attendance at a clinic.

It may also assist, in the clinical setting, to understand why some whānau members may be more actively involved than others in a consultation. For example at the time of a critical incident some whānau may take on roles such as providing emotional or practical support and others may take on more of a representative role such as speaking on behalf of the whānau. Understanding the nature and importance of these relationships, roles and responsibilities enables the health practitioner to be more confident, when required to approach the whānau as a collective. This can also assist in navigating through patient and whānau privacy expectations.

Component: **Whenua**

Definition: Specific genealogical or spiritual connection between patient and/or whānau and land.

Application to clinical assessment: When asking Māori patients where they are from, Māori may respond with the region where they have whakapapa (genealogical connections) rather than the place they currently reside. This place may be a key component of the patient and whānau identity and provides an opportunity to explore with the patient and/or whānau where they are from; how often they go back there; for what events; share experiences if the health practitioner has visited the location or to learn about the whenua if they haven't been there.

The health practitioner may also share where they are from (their whenua connection) to enhance whakawhānaungatanga (relationship building). This information is also particularly relevant when discussing expectations around proximity of whānau support, location where palliative care might occur and processes involved in death and dying.

Whakatere – Navigation

Whakatere refers to navigation which was a key component for the successful migration of Māori to Aotearoa. In the Meihana model, navigating the most appropriate course is influenced by the assessment of the aku, the waka hourua, the presence of nga hau e wha and nga roma moana. The process of plotting a course and setting the sails and rudder is analogous to the health practitioner and patient/whānau selection and implementation of proposed treatment interventions and recommendations. This component encourages the health practitioner to investigate and apply the best clinical practice guidelines for Māori.

Whilst there remains a need for further evidence based interventions and management recommendations for Māori, the number of evaluated Māori health interventions and management recommendations is increasing. For example, knowledge of the National Guidelines Group recommending cardiovascular screening at an earlier age for Māori is necessary in order to deliver best practice for Māori. Similarly health practitioners should be aware of areas where Māori are not receiving best practice.[31]

Discussion

Māori health models have been utilised within mainstream and Māori health provider services since the early 1980s in an attempt to address health disparities between Māori and non-Māori. Examples include Te Whare Tapa Wha,[12] Te Wheke,[32] Te Pae Mahutonga,[33] Powhiri process[34] and others. These models draw on key cultural beliefs embedded in Te Ao Māori to provide a framework for non-Māori health practitioners to tailor their services to Māori patients and whānau.

The Meihana model builds on the work of other Māori health models and is specifically designed to support health practitioners to gain a fuller understanding of the presenting complaint and the context of the patient and whānau. The purpose of the framework is to encourage health practitioners to broaden their range of assessment to provide quality health care and reduce health disparities between Māori and non-Māori.

This model allows diverse Māori realities within a colonised society to be recognised and responded to. The inclusion of fluid, variable elements that explore societal and cultural influences encourages health practitioners to identify which components are relevant to individual patients and whānau and prioritise such components. This not only provides opportunities to explore the presenting complaint but also extends health practitioners to consider wider influences of hauora that may lead to positive health outcomes.

The Calgary Cambridge model guides the content, structure and ideal communication skills required in clinical assessment[11] which has been adopted by the Faculty of Medicine, University of Otago. The earlier publication of the Hui Process in this journal described how communication skills described in the Calgary Cambridge model could be adapted for use with Māori. The Calgary Cambridge model recommends a revised content guide for the medical interview which includes the patient perspective alongside the biomedical perspective of disease.

The Meihana model describes how the Calgary Cambridge content can also be adapted for Māori. The Meihana model further extends the Calgary Cambridge model with inclusion of whānau and societal perspectives of illness as well as providing specific details to broaden aspects of the personal and social history.

Undergraduate medical students and other learners are taught how to explore the components of the Meihana Model within the Calgary-Cambridge assessment structure. This includes strategies and lines of enquiry to appropriately discuss potentially complex areas and to avoid awkward, direct approaches such as “how is your wairua?” or “how has colonization affected you?” in a way that maintains a safe environment for health practitioner, patient and whānau.

Conclusion

There is consistent evidence of biomedical, social, political and cultural factors that contribute to health inequalities of indigenous communities internationally. The Meihana model takes into account this research and provides a clinical assessment framework to assist health practitioners working with Māori patients and whānau to contribute to improved Māori health outcomes. Recently completed research evaluates the Meihana model in medical education and clinical practice and is being prepared for publication (13,35).

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