“As natural as learning pathology”

The design, implementation and impact of indigenous health curricula within medical schools.

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Abstract

Initially drawing on the field of cultural safety and cultural competency, indigenous health has developed as a subject in its own right, defined from the perspective of indigenous populations. Current Australian and Aotearoa/New Zealand medical school accreditation processes require culturally responsive curricula and initiatives for indigenous peoples. To date, there has been little evidence to demonstrate whether medical schools are implementing and/or evaluating indigenous health curriculum.

A Kaupapa Māori research theoretical framework was used to ensure an indigenous agenda was presented within the field of medical education. Two phases were employed: Phase one surveyed multiple medical sites in a case study (multiple sites bound by the concept of indigenous health curriculum), while phase two involved multiple stakeholders within one medical school site (multiple perspectives of indigenous health curriculum bound by one site). Semi-structured interviews were used to explore the same six subject areas of the medical school’s indigenous health curriculum across all stakeholder groups. Inductive analysis was used to encode and order the qualitative data. Data collected from quantitative surveys from each medical school site were collated and a comparative analysis presented.

The findings revealed that the design of an indigenous health curriculum is highly influenced by the level of systems support, the recognition of the role of the indigenous community and the role of an indigenous health framework.

The implementation of an indigenous health curriculum is characterised by a sequential method of delivery and the role given to stakeholders.

The findings suggest that meaningful engagement with an indigenous community promotes transformative education and that such an approach has positive impacts on health care. As a result of the research three specific evaluation frameworks are proposed. Framework one provides the components necessary to map an indigenous health curriculum. Framework two documents a method to determine what constructive alignment looks like in an indigenous health curriculum, and framework three highlights the process by which engagement with indigenous stakeholders promotes a model of social accountability between the medical school and the indigenous community.

This research argues for the use of evaluation frameworks that are able to draw on the complex interactions between variables that influence the design, implementation and evaluation of indigenous health curricula. The importance of an indigenous health framework as a core component of an indigenous health curriculum, which promotes transformative practice and community investment within a medical school and broader health environment is noted. This research also offers a counter narrative to those documented within the literature of negative health experiences by indigenous communities. This research found that an indigenous health medical curriculum can be a vehicle to promote positive health experiences as indigenous community members are re-positioned as key health stakeholders and experts in indigenous health, as opposed to solely ‘recipients’ of health care.
Acknowledgements

Te Rongoa tuturu o nga tupuna, a te kōrero. (shared with our team by Matua George Ehau)

This whakataukii (traditional Māori proverbial saying) loosely translated means “the first medicine of our ancestors, was to talk.” This whakataukii has captured my experience in completing this thesis, as I have found so much value in the conversations that I have had through this thesis process.

Firstly to the participants in this study, who shared with me their stories and experiences of the indigenous health curriculum, and the health system. Your stories helped me to understand what the literature could not explain – for this I will always be indebted.

My supervisors Tim Wilkinson, Catherine Savage and Pauline Barnett who let me talk, challenged the dialogue and whose advice acted as a healing balm.

To the whānau at MIHI, Tania, Cameron, Jane, Karen, Clara-Ann, Jarom, Mara, Jessica, and Joshua. Also to our extended MIHI whānau Shaun, Suetonia, Vicky, Allamanda and Lutz. Who provided me with the space to go and talk with others, while they maintained our work environment and completed outputs. Your words of encouragement helped me to continue and more importantly finish this part of a journey.

I would like to acknowledge my own whānau and friends, who were so amazing at hearing my ranting and raving about pedagogies and frameworks, while also taking the time to ask questions and be excited about this work. You are fabulous and amidst this project you have kept me grounded.

To Hare and Te Teira, from you I have learnt that talking is truly an amazing medicine, because your words of support acted as an anaesthetic - which helped this process be less painful than I think it had the potential to be.

Finally, I need to acknowledge that a large part of this thesis was undertaken during a time of time of great disruption, because of a series (x >12,000) of devastating earthquakes, to our city. I am therefore so thankful that the above mentioned, regardless of their own situations/experiences, allowed me to continue to prioritise my thesis – when I knew that this came at a personal expense to them.
Table of Contents

Abstract ii
Acknowledgements iv
Table of Contents vi
Glossary of Technical Terms and Selected Abbreviations xii
Glossary of Selected Māori Terms xvi

CHAPTER ONE INTRODUCTION 18
  1.1 Background 18
  1.2 Role of medical education in addressing indigenous health disparities 20
  1.3 The University of Otago, Christchurch 24
  1.4 Purpose of this thesis 28

CHAPTER TWO: LITERATURE REVIEW A SYSTEMATIC REVIEW OF LITERATURE ON THE DELIVERY AND EVALUATION OF INDIGENOUS HEALTH LEARNING IN MEDICAL CURRICULA 30
  2.1 Introduction 30
  2.2 Background 30
  2.3 Methods 32
  2.4 Results 38
  2.5 Discussion 55
  2.6 Chapter summary 58

CHAPTER THREE METHODOLOGY 60
  3.1 Introduction 60
  3.2 Theoretical framework 62
  3.3 Project development and implementation 76
4.1 Introduction 90
4.2 Section One: Design of the curriculum 91
4.3 Section Two: Implementation of the curriculum 105
4.4 Section Three: Evaluation/quality measures of the curriculum 116
4.5 Chapter summary 123

5.1 Introduction 126
5.2 Support of systems 126
5.3 Time in curriculum 135
5.4 Curriculum content 141
5.5 Chapter summary 157

6.1 Introduction 160
6.2 Curriculum resources 160
6.3 Teaching methods used in the implementation of the Hauora Māori curriculum 172
6.4 Challenges for implementing the Hauora Māori curriculum in the future 189
6.5 Chapter summary 193
Appendix I: Phase 2 – Interview Schedule for Stakeholders/Convenors/Indigenous health teaching team 310

Appendix J: Phase 2 – Interview Schedule for Māori health stakeholders 312

Appendix K: Phase 2 – Interview Schedule for Māori patients 314

Appendix L: Phase 2 – Interview Schedule for students 316

LIST OF TABLES

Table 1: Inclusion And Exclusion Criteria For The Systematic Review Of The Literature ..................... 36
Table 2: Summary Of Indigenous Health Curriculum Characteristics .................................................. 41
Table 3: Summary Of The Indigenous Health Curriculum Review Score (Ihcrs)................................... 43
Table 4: Process Of Coding Text Through To Stages Of Analysis.......................................................... 76
Table 5: Stakeholder Purposefully Selected By Group Names And Pool Numbers (That Met Inclusion Criteria) ....................................................................................................................................... 84
Table 6: Students Random Selection Outcomes By Gender And Ethnicity ........................................... 85
Table 7: Māori Patients Randomly Selected (Initial Selection) By Gender And By The Ethnicity And Year Cohort Of The Student That Interviewed Them. ............................................................... 85
Table 8: Māori Patients Randomly Selected (Final Selection) By The Student’s Gender/Ethnicity /Year Cohort That Interviewed Them. .................................................................................. 87
Table 9: Phase Two: Final Response Rates By Stakeholder Group......................................................... 88
Table 10: Learning Hours Allocated To Each Year Of Indigenous Health Teaching Within Medical School Curriculum In 2009 .......................................................................................................... 98
Table 11: Teaching Resources Allocated To Each Medical School In Relation To Timetabled Teaching Hours And Class Numbers .............................................................................................. 106
Table 12: Staff Resources Used To Deliver The Indigenous Health Curriculum In 2009 ................. 108
Table 13: Hours Of Unpaid Indigenous Community Resource Used To Deliver The Indigenous Health Curriculum In 2009 ................................................................................................................. 109
Table 14: Teaching Settings Of Indigenous Health Curriculum Content In 2009 ......................................... 111
Table 15: Types Of Assessments And Evaluations Utilised As Part Of The Indigenous Health Curriculum In 2009 .......................................................................................................................... 117
Table 16: The UOC Hauora Māori Timetable 2001-2009 .................................................................... 136
Table 17: The UOC Hauora Māori Timetable 2001-2010 .................................................................... 137
Table 18: Teaching Resources Allocated To Each Medical School In Relation To Timetabled Teaching Hours And Class Numbers In 2009 (Including The UOC) ................................................................. 161
Table 19: Staff Resources Used To Deliver The Indigenous Health Curriculum In 2009 (Including UOC) ........................................................................................................................................ 164
Table 20: Hours Of Unpaid Indigenous Community Assistance Used To Deliver The Indigenous Health Curriculum In 2009 (Including The UOC) .............................................................................. 167
Table 21: Teaching Setting Of Indigenous Health Curriculum Content In 2009 (Inclusive Of The UOC) ........................................................................................................................................ 173
Table 22: Types Of Assessments And Evaluations Used As Part Of The Indigenous Health Curriculum In 2009 (Including The UOC) .................................................................................................. 197
Table 23: Constructive Alignment In The Indigenous Health Curriculum At The UOC ......................... 232

LIST OF FIGURES

Figure 1: Summary Of Literature Search And Review Process ........................................................................................................ 39
Figure 2: Components Of An Indigenous Health Curriculum Map ..................................................................................................... 56
Figure 3: A Streamlined Codes-To-Theory Model For Qualitative Inquiry (Taken From Saldana, 2009) ........................................................................................................................................ 72
Figure 4: Process Of Random Selection In Qualitative Research ......................................................................................................... 83
Figure 5: Position Of Participants During The Manaaki Mai Teaching Method ......................................................................................... 179
Figure 6: Framework One: Mapping An Indigenous Health Curriculum ................................................................................................. 236
Figure 7: Framework One: Mapping An Indigenous Health Curriculum – Design Component .................................................................................. 237
Figure 8: Framework One: Mapping An Indigenous Health Curriculum – Implementation Component ........................................................................................................ 242
Figure 9: Poutama Model ........................................................................................................................................................................ 244
Figure 10: Framework One: Mapping An Indigenous Health Curriculum – Impact Component ......................... 248
Figure 11: Framework Two: Constructive Alignment Within An Indigenous Health Curriculum ................................................................. 262
Figure 12: Framework Three: Community As Stakeholders: A Model Of Social Accountability ................................. 265
<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>Advanced Learning in Medicine (ALM)</td>
<td>University of Otago uses this term to refer to their pre-clinical learning years (years 2 and 3)</td>
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<tr>
<td>Australian Medical Council (AMC)</td>
<td>The Australian Medical Council (AMC) is an independent national standards body for medical education and training in Australia and New Zealand</td>
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<tr>
<td>Calgary Cambridge model</td>
<td>Is a guide to increasing the quality of interactions between a clinician and a patient. It is inclusive of five stages: initiating the session, gathering information, physical examination, explanation and planning, closing the session</td>
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<tr>
<td>Canterbury District Health Board (CDHB)</td>
<td>Regional health board that funds a majority of the primary, secondary and tertiary health care provided in the Canterbury district (inclusive of the Christchurch area)</td>
</tr>
<tr>
<td>Case Based Learning (CBL)</td>
<td>CBL uses a guided inquiry method and provides more structure during small-group sessions unlike PBL which is an open inquiry approach where facilitators play a minimal role and do not guide the discussion, even when learners explore tangents</td>
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<tr>
<td>Committee of Deans of Australian Medical Schools (CDAMS): Former name of MDANZ</td>
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<tr>
<td>Constructive alignment:</td>
<td>It is a fully criterion-referenced system, where the objectives define what we should be teaching; how we should be teaching it; and how we could know how well students have learn it. The curriculum is stated in the form of clear objectives which state the level of understanding required rather than simply listing the topics to be covered. The teaching methods chose are those that are likely to realise those objectives...finally, the assessment tasks address the objectives, so that you can test to see if the students have learned what the objectives state they should be learning.</td>
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<tr>
<td>Term</td>
<td>Definition</td>
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<tr>
<td>Cultural Immersion</td>
<td>This term used to describe when students are ‘immersed’ in a community, this learning experience is then supported with specific learning objectives based on this ‘immersion’</td>
</tr>
<tr>
<td>Curriculum map</td>
<td>A curriculum map has two key functions. First, a map should make the curriculum more transparent to all stakeholders (including teachers, students, professionals and the public). Second, a map should demonstrate the links between different elements of the curriculum e.g. learning outcomes and learning opportunities.</td>
</tr>
<tr>
<td>Early Learning in Medicine (ELM)</td>
<td>University of Otago uses this term to refer to their pre-clinical learning years (years 2 and 3).</td>
</tr>
<tr>
<td>Faculty Curriculum Committee (FCC)</td>
<td>This board provides overall supervision and coordination of the MB ChB curriculum and reports to Faculty Board</td>
</tr>
<tr>
<td>Hauora Māori curriculum</td>
<td>The name that is used to identify the indigenous health curriculum within the University of Otago</td>
</tr>
<tr>
<td>Higher Education Development Centre (HEDC):</td>
<td>Is an academic department within the University of Otago that supports the review of curriculum as a component of its core business.</td>
</tr>
<tr>
<td>Hui Process</td>
<td>A Māori health model that focuses on appropriate engagement frameworks between clinicians and patients/families/communities</td>
</tr>
<tr>
<td>Indigenous</td>
<td>Primarily refers to ethnic groups that have historical ties to groups that existed in a territory prior to colonisation or formation of a nation state</td>
</tr>
<tr>
<td>Leaders in Indigenous Medical Education (LIME) Network:</td>
<td>A collaborative project funded by the Australia and New Zealand Medical Deans to build indigenous health curriculum capacity</td>
</tr>
<tr>
<td>Māori /Indigenous Health Institute (MIHI)</td>
<td>Unit within the University of Otago, Christchurch that oversees the design, implementation and evaluating the impact of the indigenous health curriculum</td>
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<tr>
<td>Medical Council of New Zealand (MCNZ)</td>
<td>An independent body that promotes and protects public health safety in Aotearoa/New Zealand.</td>
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<td>-------------------------------------------------------------------------------------------------</td>
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<tr>
<td>Medical Deans of Australia and New Zealand (MDANZ)</td>
<td>Is the peak body representing professional-entry level medical education, training and research in Australia and New Zealand</td>
</tr>
<tr>
<td>Medical Education Research Study Quality Instrument (MERSQI)</td>
<td>An instrument designed to measure the quality of a medical education research publication. It includes 10 items that reflect six domains or risk of bias; study quality, study design, sampling, type of data (subjective or objective), validity, data analysis and outcomes</td>
</tr>
<tr>
<td>Meihana Model</td>
<td>A Māori health model that encourages clinicians to use Māori concepts of health to explore clinical presentations and in the formulation of diagnosis and management plans</td>
</tr>
<tr>
<td>OSCE Objective Structured Clinical Exam</td>
<td>Is a type of examination often used in health sciences. It is designed to test clinical skill performance and competence in skills such as communication, clinical examination, medical procedures/prescription, exercise prescription, joint mobilisation/manipulation techniques, radiographic positioning, radiographic image evaluation and interpretation of results</td>
</tr>
<tr>
<td>Pacific Region Indigenous Doctors Congress (PRIDOC)</td>
<td>A formal network of indigenous doctors associations</td>
</tr>
<tr>
<td>Problem Based Learning (PBL)</td>
<td>Is a teaching pedagogy that can be used to enhance content knowledge while simultaneously fostering the development of communication, problem-solving, critical thinking, collaboration, and self-directed learning skills</td>
</tr>
<tr>
<td>The Indigenous Health Curriculum Review Score (IHCRS)</td>
<td>This instrument was designed specifically for this study as a further measure of quality in a publication. It includes a 10 point checklist.</td>
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# Glossary of Selected Māori Terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Ako</td>
<td>to learn/to teach</td>
</tr>
<tr>
<td>Aotearoa</td>
<td>literally means ‘the land of the long white cloud’; the original indigenous Māori name for New Zealand</td>
</tr>
<tr>
<td>Aroha</td>
<td>love, to show care for</td>
</tr>
<tr>
<td>Awhi</td>
<td>embrace/cherish supports (manaaki)</td>
</tr>
<tr>
<td>Hauora</td>
<td>health/well-being</td>
</tr>
<tr>
<td>Hauora Māori</td>
<td>overarching team that describes the health/well-being of Māori peoples</td>
</tr>
<tr>
<td>hapū</td>
<td>sub-tribe(s); kinship group(s)</td>
</tr>
<tr>
<td>hui</td>
<td>meeting; conference</td>
</tr>
<tr>
<td>iwi</td>
<td>tribe(s); large group(s) of many people who are descended from a common ancestor</td>
</tr>
<tr>
<td>kaupapa</td>
<td>topic(s); policy/policies; matter(s); theme(s)</td>
</tr>
<tr>
<td>kaupapa Māori</td>
<td>Māori ideology, Māori principles; Māori philosophy</td>
</tr>
<tr>
<td>Kaupapa Māori research</td>
<td>Kaupapa Māori research as a methodology emerged as a form of resistance to using research as a colonial tool, instead it re-positioned the voice/experiences/beliefs of the indigenous people (in this case Māori) as the conduit of valid knowledge</td>
</tr>
<tr>
<td>Māori</td>
<td>the indigenous people of Aotearoa/ New Zealand</td>
</tr>
<tr>
<td>manaakī</td>
<td>to care for; to look after; to provide hospitality</td>
</tr>
<tr>
<td>manaakī mai</td>
<td>to provide support for the person speaking</td>
</tr>
<tr>
<td>marae</td>
<td>is traditional land that belongs to Māori who have genealogical ties to that area. It is a place where the community activities are centred. It usually comprises a wharenui (large meeting house) and wharekai (a large dining room) and may have other</td>
</tr>
</tbody>
</table>
tribal/communal resources also (e.g. wharekarakia (church), urupa (cemetery)).

mihi / mihimihi greet; welcome; acknowledge; pay tribute

Nga hau e wha literally means the four winds. It is a traditional concept of describing different factors that can influence one’s course to well-being.

Ngai Tahu Tribal authority in the larger part of the South Island of Aotearoa/New Zealand

Noa common/non-restricted

noho marae staying at the marae; sleeping at the marae

Tapu sacred/restricted

Pakeha to be of New Zealand European descent

Poutama the poutama is a traditional Māori pattern that represents progressive steps towards one’s goals

te ao Māori the Māori world; Māori worldview

te reo Māori (or just te reo) refers to the Māori language

Te Tiriti o Waitangi The Treaty of Waitangi: an agreement signed in 1840 between Māori and the Crown; the founding document of Aotearoa/New Zealand

tikanga protocol(s); custom(s); procedure(s) method(s) way(s)

tikanga Māori Māori protocol(s), customs(s), procedure(s)

uara value/desire

Whakawhānaungatanga to build relationships/support networks

whānau family; families
CHAPTER ONE

Introduction

Indigenous people have a right to expect and experience a health care system that is responsive to their needs, respectful of their culture and delivers the best possible care. However, inequity in care is evidenced in indigenous health disparities the world over (1-3). This thesis intends to contribute substantially to the emerging research and evidence in the area of indigenous health medical school curriculum. As Burdick (4) et al notes:

“The link between capacity building in medical education and improved health can be demonstrated in several ways. First, the link between medical education and the long term outcomes of improved health outcomes can be strongly supported by a medical school curriculum that is aligned with population health needs…” (4)(p.6)

Clearly this notion offered by Burdick demonstrates the link between curriculum, population needs and outcomes. This research is based on the premise that developing a medical school curriculum which aligns with indigenous population health needs has the capacity to contribute to improved indigenous health outcomes.

1.1 Background

Internationally, indigenous health disparities are well documented (2, 3, 5, 6). The literature details the shared experience of the impact of colonisation of indigenous populations and its relationship to health inequalities and inequities (1, 7). The role of colonisation in the introduction of illness, loss of land, marginalisation to appropriate health care and adequate education services is positioned to assert colonial power (8). Today such structures continue to maintain colonial power and impact on indigenous health outcomes (3, 9).

Māori are the indigenous people of Aotearoa/New Zealand. Within Aotearoa/New Zealand the Treaty of Waitangi is acknowledged as the foundation document; it is a
Within the Treaty of Waitangi, the British Crown (under the then rule of Queen Victoria) agreed to protect Māori and to ensure that Māori (as the traditional owners of the land) would maintain their access to resources and well-being, and would enjoy the same rights and privileges as the English settlers (including holding British citizenship rights) (8, 10). However, when indigenous health outcomes are used as a measure of assessing how well the Crown has met its obligations under the Treaty of Waitangi, the Crown is shown as not meeting its statutory obligations (11).

He Korowai Oranga, as published by the Ministry of Health (12), is the government policy for Māori health in Aotearoa/New Zealand. It articulates the government’s on-going commitment to the Treaty of Waitangi by improving Māori health outcomes through reducing inequalities. However, indigenous health disparities between Māori and non-Māori continue to be documented (13-15) and determinants of health such as socio-economic disparities (13, 14), access to care (16-18), differential referral rates (2, 16, 19), differential rates of diagnosis (16, 20), differential intervention rates (17, 19, 21, 22), racism (23, 24), and health system barriers (15, 16, 18, 20, 21, 24) continue to contribute to inadequate health outcomes for Māori (11).

Recent cultural competence literature has highlighted the role of clinicians in contributing to racial/ethnic disparities in health (25, 26). Betancourt et al. (25, 27, 28) propose that unless sociocultural barriers to care are identified at structural (leadership/workforce, processes of care) and clinical (provider-patient encounter) levels, health disparities between racial/ethnic groups will continue. The literature focuses on the professional development of doctors and other health professionals at (post graduate levels) using cultural competence frameworks. This has resulted in postgraduate professional colleges and health service providers including cultural competence in on-going registration/competency requirements (28). Cultural competence as an intervention has had a focus on ‘ethnic others’ with less descriptive applicability to indigenous populations (29).

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1 Iwi: Māori tribal groups/tribal authorities
Hence, the evidence identifies that cultural competence has a role in reducing ethnic/racial health inequalities. The evidence also identifies that indigenous health disparities still exist. The indigenous health curriculum draws on elements from the field of cultural competence, but is a subject area in its own right drawing from the perspective of the indigenous peoples (30, 31). This has been acknowledged through medical school accreditation processes in Aotearoa/New Zealand and Australia, which are inclusive of indigenous health curriculum criteria (further discussed in 1.2). However, there is an absence of evidence in establishing the effectiveness of medical schools to produce graduates who are responsive to indigenous health disparities and who have the skills/knowledge to improve indigenous health outcomes.

1.2 Role of medical education in addressing indigenous health disparities
The literature concludes that services would be more culturally appropriate if the clinical workforce reflected the racial/ethnic/cultural of its communities (6, 10). The indigenous health workforce both internationally and nationally is still relatively small compared to the overall population and actual health needs of the community (6, 32). Therefore, there is a role within medical schools to address indigenous health disparities in two ways, first to actively have policies in place to increase indigenous health practitioner numbers (33), and second, to produce a medical workforce that has the knowledge and skills to contribute to better health care service delivery for indigenous peoples (30).

Aotearoa/New Zealand has two medical schools located within the University of Otago and the University of Auckland. The heads of each medical school are members of the Medical Deans Australia and New Zealand (along with the 19 medical schools located in Australia). The vision of the Medical Deans Australia and New Zealand (MDANZ) is articulated on their website\(^2\) as follows:

\[
\text{Medical Deans is committed to the continual development and advocacy of medical education in Australia and New Zealand leading to medical graduates who are competent, humane and dedicated to improving the health and well-being of the broader community.}
\]

\[
The \text{core objectives of the organisation are to:}
\]

\(^2\) http://www.medicaldeans.org.au/
- Uphold highest quality standards in medical education and clinical training
- Develop, implement and share innovative approaches to medical and interprofessional education
- Encourage students to reach for the highest personal and professional standards in their endeavours
- Identify, address and lead national issues in medical education
- Identify, address and lead national issues in medical research and translation into clinical care, policy and practice
- Promote broader understanding and awareness of the importance medical education plays in providing the future quality medical workforce
- Through leadership, foster communication and partnerships amongst medical schools, State and Commonwealth governments and the wider health community
- Support vertical integration of first medical degree in pre-vocational and vocational training
- Play an active leadership role in promoting and developing relationships with medical schools and universities in other countries concerning medical education and medical research
- Contribute to workforce planning in a constructive and future focused perspective
- In conjunction with our Indigenous partner organisations, jointly lead the way in realising the potential of Aboriginal and Torres Strait Islander and Māori medical students embarking on a career in medicine, and non-Indigenous medical graduates practicing with cultural competence and confidence in Indigenous health settings.

In line with their vision the MDANZ funded a project in 2002 (when they were then known as CDAMS (Committee of Deans of Australian Medical Schools)) (34) to undertake the following four functions:

1. Audit existing Indigenous health content in core medical education.
2. Develop a nationally agreed curriculum framework for the inclusion of Indigenous health in core medical curricula.
3. Develop a network of Indigenous and non-indigenous medical educators concerned with indigenous health.
4. Seek accreditation of the curriculum framework by the Australian Medical Council (AMC). (p. 5) (34)

The results of the project led to:
1. The publication of the CDAMS Indigenous Health Framework (based on indigenous academics’, indigenous community\(^3\) and medical school stakeholder feedback) which was inclusive of:

   a. Curriculum development processes (recommended subject areas and key student attributes and outcomes, content, pedagogical principles and approach, delivery and assessment, whole school partnerships and developmental processes over time).

   b. Resources, capacity and workforce development issues (human resources, operations and management, curriculum material, curriculum support, teaching and learning resources).

2. The formation of the Leaders in Indigenous Medical Education (LIME) network\(^4\), which led to the establishment of a reference group with membership (indigenous health leadership) from each medical school; a biennial LIME connection conference (for medical schools to disseminate progress achieved in relation to the CDAMS indigenous health framework); and a secretariat to assist in facilitating core business of LIME.

All medical schools in Australia and Aotearoa/New Zealand are required to meet the accreditation standards of the Australian Medical Council (AMC). According to the aims of the AMC accreditation process, the purpose of accreditation is “the recognition of medical programs that produce graduates competent to practise safely and effectively under supervision as interns in Australia and New Zealand, and with an appropriate foundation for lifelong learning and for further training in any branch of medicine.” (p. 4)\(^5\). The recommendations of the CDAMS indigenous health framework informed the AMC accreditation process and in 2006 specific indigenous health standards were introduced. The accreditation guidelines\(^6\) outline what the expected standards are within

\(^3\) The 2004 CDAMS document was based on Aboriginal/Torres Strait Islander expectations, but subsequent meetings with Maori academics in medical education have ratified this document as appropriate to use in both Australia and New Zealand (Phillips, personal communication 2005).

\(^4\) http://www.limenetwork.net.au/


each category. Each standard then has additional notes which provide specific information about what might be reviewed as part of the accreditation. These include:

1. The context of the Medical School.
   - Indigenous representation at a governance level (standard 1.1).
   - Indigenous health identified as a school-wide responsibility requiring indigenous leadership and adequate resources for training and professional development of all staff (in notes for standard 1.4)
   - Indigenous health initiatives should be considered core responsibilities within medical school business and reflected in the budget (not rely solely on special, additional or external resources) (in notes for standard 1.5)
   - Have effective partnerships with relevant indigenous communities, organisations and individuals (standard 1.6)
   - Staff recruitment includes active recruitment by Aotearoa/New Zealand schools of Māori, together with appropriate training and support. (standard 1.8)
   - Indigenous staff appointment, promotion and development (standard 1.9)

2. The outcomes of the medical course.
   - Mission (to address indigenous peoples and their health) (standard 2.1)

3. The medical curriculum
   - Course required to cover indigenous health curriculum endorsement of the Indigenous Health Curriculum Framework (standard 3.2.7)

4. The curriculum – teaching and learning
   - (not specifically mentioned – referenced in standard 3.2.7)

5. The curriculum – assessment of student learning
   - (not specifically mentioned – referenced in standard 3.2.7)

6. The curriculum – monitoring and evaluation
   - Medical schools should ensure they evaluate their implementation of the MDANZ Indigenous Health Framework on a regular basis (in notes for standard 6.1)
• That indigenous students should be consulted, as appropriate, but not expected to provide ‘expert’ advice on indigenous matters with teaching/learning environments or public settings (in notes for standard 6.1).
• Feedback and reporting from identified indigenous stakeholders (in notes for standard 6.3)

7. Implementing the curriculum – students
• Requirement for active recruitment of student cohorts from under-represented groups (including indigenous students) (standard 7.1).
• Specific indigenous student admission policy (standard 7.2)
• Appropriate indigenous student support (in notes for standard 7.3)

8. Implementing the curriculum – educational resources
• Students provided with experience in provision of health care to indigenous people in a range of settings and locations (standard 8.3)

Therefore, medical schools in Aotearoa/New Zealand and Australia are required to meet the AMC accreditation standards. If requirements are not met, ‘unsatisfactory process’ procedures are put into place, which require on-going formal monitoring procedures.

However, evidence exploring the impact of the CDAMS indigenous health framework and the AMC accreditation processes for medical schools in Aotearoa/New Zealand and Australia is limited (35). The AMC can under current legislation recommend to the National (Health Registration) Board that a medical school meet (or substantially meet) accreditation standards. This can include specific actions that are required to happen within a stated timeframe to meet the standards.

1.3 The University of Otago, Christchurch
In 1999, the University of Otago medical school was reviewed through the AMC accreditation process, where it was noted that there was a distinct absence of any significant indigenous health curriculum.

Since the AMC review of 1994 very little in the way of additional staff resources have been directed to improving training in Māori Health through the Faculty of Medicine. Currently, the Otago Faculty of Medicine employs only 1.3 full time
equivalent staff for this topic although it is regarded as a priority area by the Government and Ministry of Health.

There have been many good developments in Dunedin with the establishment of a joint research centre between Ngai Tahu and the University – the only one between an Iwi and University in New Zealand. The Patient, Doctor and Society module includes an integrated strand that explores Māori health beliefs, concepts and practices, and how these impinge on health status of Māori. In Fifth and Sixth Year at Dunedin there are specific objectives for Māori health within obstetrics and gynaecology, paediatrics, psychological medicine, general practice and community health. For the most part, the students saw these as providing an integrated program.

By contrast, students at the other two schools did not consider Māori Health to be an integrated part of the course but rather a set of separate topics not linked strongly to the students’ other experiences or goals.

Wellington students felt that an excellent resource existed within ... the Eru Pomare Māori Health Research Centre but this was under-utilised in their undergraduate program.

Overall, the team considered that Christchurch has the weakest program in Māori Health, relying on two Māori psychologists for input. The Dean at the Christchurch School of Medicine has been endeavouring to make an appointment for more than two years and is seeking part payment of the appointee’s salary.

At the present the curriculum in Māori Health has insufficient academic support and requires a greater level of commitment for the Faculty to meet its stated goals in this important area of medical education in New Zealand. (AMC report to the University of Otago, 1999)7

The University of Otago, Christchurch (UOC) responded to this report by making two indigenous academic appointments in 2001 and allocating teaching resources to an indigenous health curriculum.

The University of Otago’s medical school was founded in 1877 and is the oldest medical school in Aotearoa/ New Zealand. The school was required to establish clinical schools in Christchurch (1972) and Wellington (1977) to support clinical placements for growing student numbers. Today, the University of Otago hosts a six-year undergraduate medical degree for a class size of 240 students. Students complete their first three years at the Dunedin site (called Early Learning in Medicine (ELM)), then the class is divided into three cohorts and allocated to either the Dunedin School of Medicine (DSM), the University of Otago, Christchurch (UOC) or University of Otago, Wellington (UOW).

7 This is a confidential report of the University of Otago, but it is briefly reference on the AMC website. http://www.amc.org.au/index.php/about/media/archive#1999
The latter clinical years are referred to as Advanced Learning in Medicine (ALM). Although there are some curriculum differences between ALM sites, all three share the same learning outcomes and a common exam at the end of 5th year (there are no significant differences in exam results across the three ALM sites).

The University of Otago medical curriculum is taught in two ways: either as a block module (based in clinical teams/wards/general practices and taught in distinct blocks of time (e.g. 4 or 8 weeks)) or as a vertical module (where the content is integrated the curriculum throughout the ELM and ALM years). The Hauora Māori curriculum\(^8\) has always been assigned as a vertical module within the curriculum.

The Faculty Curriculum Committee (FCC) has oversight of the entire University of Otago medical curriculum. In 2004, a sub-committee of the FCC was formed for Hauora Māori, and the chair of this committee was given an official position on the FCC. The role of the Hauora Māori sub-committee was initially to develop the learning outcomes for the Hauora Māori curriculum. It was then assigned to monitor the design, implementation, and evaluation of the indigenous health outcomes and the responsiveness of the University of Otago medical curriculum to these outcomes.

Within the UOC campus the indigenous health curriculum has used three mediums of teaching: immersed (specific time dedicated entirely to Hauora Māori learning); integrated (Hauora Māori teaching integrated into block module teaching); and independent (students engage in assigned self-directed tasks)(30). Through the University of Otago’s Higher Education Development Centre (HEDC) formal evaluations have been used to capture student feedback on the Hauora Māori curriculum (which are used to gauge student acceptability of indigenous health outcomes within their curriculum) and to inform further curriculum development.

In 2008, the University of Otago underwent another review by the AMC and received the following review:

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\(^8\) Hauora Maori, literally translated means Maori health and is the term used within the University of Otago medical school to identify the Maori health (indigenous) curriculum.
iv. The educational expertise in undergraduate and postgraduate education and education research, and Māori academia is impressive.

vi. The new evidence based Hauora Māori program providing an experiential introduction to indigenous health issues. (p. 1)

The team commends the Māori staff and their commitment that has enabled development of the impressive Hauora Māori program. The team encourages the Faculty to act on its intentions to continue to recruit staff and provide support to sustain and grow the development of the Hauora Māori program. (p. 18)

Hauora Māori is regarded as integral to the mission. However implementation in the three schools is unsymmetrical, with the program at the Christchurch School being more developed and leading the other schools. Hauora Māori is underrepresented at the deanery level and an appointment at Associate Dean level could be considered. (p. 21)

The presence of the Hauora Māori as a program domain is commended. (p. 23)

The outcome evaluation processes, which the Hauora Māori group has been testing within years and modules, are impressive. Participation in the international indigenous network is adding valuable impetus and credibility. (p. 34) (AMC report the University of Otago, 2008)

The 2008 AMC report identified perceived development within the University of Otago Faculty of Medicine indigenous health curriculum, and specifically noted the progress that had occurred in Christchurch. However, what was less certain was the following:

1. Had the AMC itself been the catalyst for change at the University of Otago?
2. Were the AMC guidelines and policies relevant in supporting an indigenous health curriculum?
3. Did the new/improved indigenous health curriculum within the University of Otago have an impact on key stakeholders by positively influencing indigenous health outcomes?

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9 This is a confidential report of the University of Otago, but it is briefly referenced on the AMC website. http://www.amc.org.au/images/Medschool%20reports/200812-execsummary-Otago.pdf
1.4 Purpose of this thesis

The purpose of this thesis is to examine this ‘gap’ that exists in the literature and explore the role of medical schools in designing curriculum with a view to contribute to improved indigenous health outcomes.

It aims to do this by:

1. identifying how the literature links medical education initiatives in an indigenous health curriculum that may impact on indigenous health outcomes.

2. exploring how medical schools (multiple sites) design, implement, and evaluate the impact of their indigenous health curriculum.

3. using the UOC as a case study site, identify how multiple stakeholders perceive the indigenous health curriculum and its potential to reduce indigenous health disparities.

This chapter has provided the relevant background to indigenous health disparities, identified the role of medical schools in addressing disparities, and presented the context in which the UOC is positioned within the University of Otago Faculty of Medicine.

Chapter two will outline the systematic review of the literature that was undertaken to explore what current evidence exists that medical schools are being responsive to indigenous health disparities and presents the research questions for this thesis. Chapter three describes Kaupapa Māori research as a theoretical framework for the methodology of this research, and then in detail identifies the methods employed to address the research questions. Chapters four through to seven document the findings from this research. Chapter eight draws together the results of this study and discusses the implications of these findings for medical schools and for indigenous health. Chapter eight also reports recommendations from this research and proposes directions for future research.
CHAPTER TWO: LITERATURE REVIEW
A Systematic Review of literature on the delivery and evaluation of indigenous health learning in medical curricula

2.1 Introduction
The purpose of this research is to investigate the design, implementation, and impact of indigenous health curricula. To do this, a systematic review of studies that described and evaluated indigenous health curricula was undertaken. A systematic review of the literature provides a formulaic approach to search and synthesise the multiple themes across all available studies that might not be identified by evaluating single studies within a narrative review. This chapter documents the methods used to conduct this systematic review of the literature, and reports the results.

2.2 Background
The content and pedagogy of indigenous health curricula in Aotearoa/New Zealand has evolved from work by Ramsden in 1993 (36, 37) that introduced “Cultural Safety” to the nursing curriculum. Cultural safety, as proposed by Ramsden, was a construct of a Māori-centred paradigm and designed as an educational intervention to address health inequalities between indigenous and non-indigenous peoples in Aotearoa/New Zealand. The intervention had three main components: First, to educate learners on the process of colonisation; second, to propose the need for each clinician to understand their own culture and its influence on health service delivery; and third, to direct learners to identify the impact of power imbalances that exist between the health provider and health consumer. When all components of the teaching content were brought together, cultural safety was seen as an intervention that addressed health disparities, responding to a Treaty of Waitangi framework. Cultural safety, through political forces and other influences, was required to include broader ‘cultural’ domains (e.g. ethnicity, gender, sexuality, disabilities). Over the years, cultural safety has been the subject of critical analyses from both indigenous and non-indigenous perspectives (38-44) including it being reductionist in nature and measuring behavioural outcomes and competencies. However, overwhelmingly,
cultural safety is still seen as an important theoretical framework in addressing differential health outcomes.

Globally, cultural competency has widely evolved as a way in which health disciplines can understand the contributions of clinicians to health disparities. Within the Aotearoa/New Zealand undergraduate medical curriculum, an indigenous health curriculum is aligned to the construct of cultural competency within Aotearoa/New Zealand medical schools (30, 45-54). This has involved development of programmes that address how clinicians/students can establish effective interpersonal relationships that are inclusive and empathetic to the culture of their patients (25). Cultural competence, like cultural safety, has been subject to criticism (45, 55-59). Some authors have suggested that a weakness of cultural competence in medicine is the presumption that the white population is the baseline for ‘normal’ behaviour/beliefs and cultural competency content involves learning about ‘the other’ (presumed not white) (60). Another criticism of cultural competence is that it does not recognise the culture of medicine (which is in itself seen as affecting health care service delivery and privileging specific cohorts within the population) within its framework (61). Research has identified that cultural competency models might be too simplistic in their approach, because they assume racial bias is identified by the clinician. Consequent to this, investigators have recommended that there is a need to deconstruct the roles of unconscious and conscious biases about race and evaluate their impacts on clinician behaviours (62).

Regardless of these weaknesses, cultural competency, as a term, has become embedded as a compulsory component of medical education in Aotearoa/New Zealand (pre and post-graduation) and is an on-going requirement to maintain registration with the Medical Council of New Zealand (MCNZ) to practise (28). However, although existing international research records the impact of cultural competence training on the learner (often clinicians or students) (25, 29), and on patient outcomes (63-65), Beach et al. (63) and Lie et al. (65) conclude that further quality research is required to determine the impact of cultural competency on patient outcomes. They noted the high risk of bias within current cultural competency literature. Gozu et al. (66) also report that further quality research will be impacted by “the limited access to standard tools that evaluate the impact
of cultural competence training” (p. 186). It was noted that of the 23 tools/methods used to
evaluate cultural competency, most only addressed general concepts of culture (language
and patient-provider interactions), and very few explored other components now seen as
pivotal to cultural competence training (e.g. racism and stereotypes)(66).

Furthermore, when studies solely focused on measuring indigenous health competencies
(independent of the broader context of cultural competence), there is evidence that
although clinicians/medical students recognised the importance of indigenous health within
their practice environment, many did not feel adequately prepared to provide service for
indigenous patients/families/communities based on their training (67-69).

Therefore the two purposes of this systematic review of the literature were:

1. To synthesise and analyse the current content and pedagogies that are used in
   indigenous health curricula.

2. To determine which methods of evaluation/quality measurement are being used to
determine the impact of the indigenous health curricula.

2.3 Methods

The following section outlines the systematic review and design eligibility criteria and
processes employed for study identification, data synthesis, and measuring quality risk of
bias. This systematic review was undertaken solely by the researcher (SP), however
supervision was sought from Dr Suetonia Palmer (University of Otago, Christchurch) on
the process of undertaking a systematic review of the literature, and review of the content
was undertaken by the PhD supervisors.

2.3.1 Study design

In accordance with the Preferred Reporting Items for Systematic Reviews and Meta-
Analyses [PRIMA] guidelines (70), a systematic review of the literature was conducted to
search and analyse evidence of indigenous health curricula within medical curricula.

A systematic search was conducted in the following databases; (1) Ovid MEDLINE (1996
to April 2012), (2) OVID Nursing (1946 to April 2012), (3) Education Resources
Information Centre (ERIC) (1965 to April 2012), (4) PsychInfo (2002-April Week 3, 2012), (5) EMBASE (1974 to April 23 2012), (6) Web of Science databases (all dates and articles in English) and (7) PubMed. Search sensitivity was maximised using the exploded MeSH terms “indigenous” and “medical education”. Other search terms (including Māori, Aboriginal, Inuit, Metis, and First Nations) did not identify additional relevant citations and so were not included.

In addition to electronic database searching, additional hand-searching of selected medical education based journals was undertaken (specifically Medical Education, Medical Teacher, Focus on Health Professional Education: A Multi-Disciplinary Journal and Academic Medicine). Reference lists were also reviewed from key articles and all included studies. The results of searches were downloaded and imported into EndNote X4, reference software, which allows the storage of citations and tracking of all citation screening processes.

2.3.2. Criteria for considering studies for this review

Table 1 reports the inclusion and exclusion criteria for the Population (P), Exposure (E), Outcome (O) and Method (M) definitions for this systematic review and thematic analysis (Table 1).

2.3.2.1 Types of studies

The purpose of this systematic review of the literature was to determine the scope of indigenous health curricula being taught within medical curricula, and which evaluation/quality measurement tools were being used. Therefore, studies that used the following methods were included: pre and post- student evaluations and/or assessments; programme evaluations; and case study design. For the purpose of this review, the following study designs were excluded from the review: those with no original data (commentary, editorials, letters or reviews) and/or unpublished data (e.g. technical reports and conference proceedings), because peer review of the documentation could not be confirmed.
2.3.2.2 Types of participants

The focus for this research is on indigenous health curricula within mainstream medical education. Therefore, studies inclusive of two types of participants were included in this review. Firstly institutions were included that delivered indigenous health curricula within mainstream medical education, namely, medical schools, medical colleges, nursing schools/colleges, allied health professional training institutions and colleges, indigenous community organisations, traditional medicine training institutions, and indigenous health practitioner organisations (institutions that used an indigenous health curriculum within a complementary or alternative medicine training institutions were excluded from this review). Secondly, recipients of an indigenous health curriculum within mainstream medical education – medical students, postgraduate medical practitioner (registrars/residents), medical consultants/specialists, nursing students and practitioners and other allied health professionals were included (and students who were being trained in complementary or alternative medicine or traditional medicine were excluded from the review).

2.3.2.3 Types of exposures

Studies were used in the review when they included the following: learning objectives/outcomes aligned with indigenous health; indigenous health curriculum content; experiences/initiatives of an indigenous health curriculum (planned, experiences/initiatives of indigenous health curricula); and hidden time in curriculum; location of the curriculum (rural/urban, clinical/non-clinical and indigenous health provider/mainstream provider was deemed important to be able to determine whether there were specific locations favoured in teaching indigenous health). Excluded from the review were studies that focused on the indigenous health workforce, admission of indigenous students into healthcare education, cultural competence, health of ethnic others (exclusive of indigenous peoples), and health disparities status or policy.

2.3.2.4 Types of outcome measures

To meet the purposes of the systematic review of the literature, studies needed to include both primary and secondary outcomes as part of their results. These are detailed below.
2.3.2.4.1 Primary outcomes

The review included studies that evaluated the following:

- Map of the curriculum
- learning outcomes
- assessment of students
- evaluation of indigenous health curricula
- teaching methods used with indigenous health curricula
- specific teaching initiatives or teaching resources used.

If studies focused on workforce/student admissions issues, they were excluded from this review.

2.3.2.4.2 Secondary outcomes

In order for this review to document the impact of an indigenous health curriculum it included studies that used the following methods of evaluation/quality measurement:

- teacher/student evaluations
- health practitioner evaluations, and/or
- health service and patient outcomes

If studies used only the perceptions of others’ experiences as a way to describe the impact of the curriculum, they were excluded from this review.
Table 1: Inclusion and exclusion criteria for the systematic review of the literature

<table>
<thead>
<tr>
<th>Characteristics of the study</th>
<th>Inclusion criteria</th>
<th>Exclusion criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Population 1</strong></td>
<td>• medical schools</td>
<td>• complementary or alternative medicine training institutions</td>
</tr>
<tr>
<td>Delivers of the curriculum</td>
<td>• medical colleges</td>
<td>• traditional medicine training institutions</td>
</tr>
<tr>
<td></td>
<td>• nursing institutions/colleges</td>
<td></td>
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<tr>
<td></td>
<td>• other allied health professional institutions/colleges</td>
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<td></td>
<td>• indigenous community organisations</td>
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<td></td>
<td>• indigenous health practitioner organisations</td>
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<tr>
<td></td>
<td>• complementary or alternative medicine training institutions</td>
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<tr>
<td></td>
<td>• traditional medicine training institutions</td>
<td></td>
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<tr>
<td></td>
<td>• indigenous health curriculum</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• experiences/initiatives of IH curriculum -planned</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• experiences/initiatives of IH curriculum -hidden</td>
<td></td>
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<tr>
<td></td>
<td>• time in curriculum</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Location in the curriculum (rural/urban, clinical/non-clinical, indigenous health provider/mainstream provider)</td>
<td></td>
</tr>
<tr>
<td><strong>Population 2</strong></td>
<td>• medical students</td>
<td>• indigenous workforce focus</td>
</tr>
<tr>
<td>Defined Learners</td>
<td>• postgraduate medicine (registrars/residents)</td>
<td>• admission of Indigenous students to medicine focus</td>
</tr>
<tr>
<td></td>
<td>• medical consultants/specialists</td>
<td>• cultural competence main focus of curriculum not indigenous health curriculum</td>
</tr>
<tr>
<td></td>
<td>• nursing students and practitioners</td>
<td>• focus on health of ethnic others rather than indigenous health curriculum</td>
</tr>
<tr>
<td></td>
<td>• other allied health professionals</td>
<td>• policy and not practice focus</td>
</tr>
<tr>
<td></td>
<td>• complementary or alternative medicine students</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• traditional medicine students</td>
<td></td>
</tr>
<tr>
<td><strong>Exposure</strong></td>
<td>• learning objectives/outcomes aligned with IH</td>
<td>• focus on health disparities or health status not indigenous health curriculum</td>
</tr>
<tr>
<td></td>
<td>• indigenous health curriculum content</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• experiences/initiatives of IH curriculum -planned</td>
<td></td>
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<tr>
<td></td>
<td>• experiences/initiatives of IH curriculum -hidden</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• time in curriculum</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Location in the curriculum (rural/urban, clinical/non-clinical, indigenous health provider/mainstream provider)</td>
<td></td>
</tr>
<tr>
<td><strong>Outcomes</strong></td>
<td>• map of the curriculum</td>
<td>• workforce/student admissions issues as focus</td>
</tr>
<tr>
<td></td>
<td>• establishment of learning outcomes</td>
<td>• perceptions of others experiences</td>
</tr>
<tr>
<td></td>
<td>• assessment of students</td>
<td></td>
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<tr>
<td></td>
<td>• teaching methods used with indigenous health curriculum</td>
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<tr>
<td></td>
<td>• specific teaching initiatives used</td>
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<tr>
<td></td>
<td>• teaching resources used</td>
<td></td>
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<tr>
<td></td>
<td>• specific teaching initiatives used</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• teacher/student evaluations of the indigenous health curricula</td>
<td></td>
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<tr>
<td></td>
<td>• health practitioner evaluations</td>
<td></td>
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<tr>
<td></td>
<td>• health service and patient outcomes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• reflective learner experiences</td>
<td></td>
</tr>
<tr>
<td><strong>Methods</strong></td>
<td>• pre and post evaluations/assessments</td>
<td>• no original data (commentary, editorial, letters or review)</td>
</tr>
<tr>
<td></td>
<td>• programme evaluations</td>
<td>• unpublished data (e.g. technical reports and conference proceedings)</td>
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<tr>
<td></td>
<td>• case study design</td>
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</tbody>
</table>
2.3.3 Article Review

Table 1 was used as a standardised review form to determine whether citations retrieved by systematic searching met the inclusion criteria for population, exposure, outcomes and methods determined by the research protocol.

All citations were screened using the title and abstract. Potentially eligible studies were then evaluated in detail using full text. Studies meeting the inclusion criteria were included in the systematic review. When more than one publication of the same dataset existed, the publication that provided the most comprehensive data was included to avoid inclusion of duplicate data in the systematic review.

Data from all eligible studies were then entered into a standardised data extraction form. The data extracted included author, year and country of publication, population characteristics (curricula deliverers, curricula learners), study design and method, curricula characteristics (content, resources required for delivery, time allocation to indigenous learning within the curriculum, teaching location of indigenous health curricula) and evaluation/quality measurement characteristics (tools used, evaluators and findings).

2.3.4 Data synthesis

Because no single study provided perspectives of all components of indigenous health content and pedagogy, thematic synthesis was then used to analyse the breadth of teaching content and pedagogy described in the literature. Thematic synthesis allowed the literature to be analysed at a level where the reviewer could identify overarching themes described by the included studies. Thematic synthesis involved three stages: contextual coding of the findings within the primary studies; emergence of descriptive themes; and a development of analytical themes (71). Each study was read a number of times to ensure that no further descriptive or analytical themes could be identified.

2.3.5 Quality classification and risk of bias measurement

This review drew on two measures to determine the risk of bias in the included papers. The MERSQI (Medical Education Research Study Quality Instrument)(72) included 10 items that reflected six domains or risk of bias: study quality, study design, sampling, type
of data (subjective or objective), validity, data analysis and outcomes. The maximum score in each domain was three; the maximum score on the MERSQI was 18.

The MERSQI favoured sampling from more than one medical school, objective assessments and valid tools of evaluation (which as discussed by Gozu (66) were not yet developed for measurements of cultural competence); therefore, a second measure for risk of bias was designed specifically for the purpose of this review.

The Indigenous Health Curriculum Review Score (IHCRS) was designed for this review and included a 10-point checklist that reviewed the detail of the indigenous health curriculum presented in each paper. The tool reviewed and assessed the quality of: the description of the teaching institution; the description of the teaching specialty delivering the curriculum; the description of recipients of curriculum; the articulation of the curricula content; the intervention length; the evaluation method; the evaluation tool; the study response rates; the analysis; and a discussion. Low risk of bias was adjudicated when a publication met 9-10 of these requirements; moderate bias was when 6-8 items were assessed as adequate; and high risk of bias was present if the publication met five or fewer of these criteria.

2.4 Results

The following section presents the number of studies that met the inclusion criteria for this review, a summary of the indigenous health curriculum characteristics described in these studies, a summary of the quality and risk of bias scores, and a summary of the methods used to implement and evaluate indigenous health curriculum as reported within the literature.

2.4.1 Eligible articles

Eight hundred and fourteen citations were obtained by systematic electronic and hand searching (Figure 1). Of these, 82 were potentially eligible and underwent detailed full text analysis. On detailed review, 16 studies met the eligibility criteria. A full summary of the 66 citations that were included in full text review but did not fulfil inclusion criteria are
detailed in Appendix A together with reasons for exclusion. Figure 1 describes the literature review and search process.

Figure 1: Summary of literature search and review process

<table>
<thead>
<tr>
<th>Systematic literature search to April 2012</th>
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<tbody>
<tr>
<td>MEDLINE</td>
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<td>EMBASE</td>
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<tr>
<td>PsychINFO</td>
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<td>ERIC</td>
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<tr>
<td>OVID nursing</td>
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<tr>
<td>PubMed</td>
</tr>
<tr>
<td>Web of Science</td>
</tr>
<tr>
<td>Other sources</td>
</tr>
<tr>
<td>814 citations identified by literature searching</td>
</tr>
<tr>
<td>732 citations excluded on screening of title and abstract</td>
</tr>
<tr>
<td>Not population (n=409)</td>
</tr>
<tr>
<td>Not exposure (n=36)</td>
</tr>
<tr>
<td>Not method (n=20)</td>
</tr>
<tr>
<td>Not outcome (n=0)</td>
</tr>
<tr>
<td>Duplicate data (n=267)</td>
</tr>
<tr>
<td>82 citations examined in full text</td>
</tr>
<tr>
<td>66 citations excluded on screening of full text</td>
</tr>
<tr>
<td>Not population (n=7)</td>
</tr>
<tr>
<td>Not exposure (n=15)</td>
</tr>
<tr>
<td>Not method (n=32)</td>
</tr>
<tr>
<td>Not outcome (n=8)</td>
</tr>
<tr>
<td>Duplicate data (n=4)</td>
</tr>
<tr>
<td>16 studies included in systematic review</td>
</tr>
</tbody>
</table>
2.4.2 Summary of indigenous health curriculum characteristics

Studies evaluating indigenous health curricula have become more common over the last decade, with only one specific report of indigenous health curriculum evaluation published before 2000. However, within this systematic review 39 articles identified in the search (20 at abstract review and 19 at full text review) detailed indigenous health curricula (published between 1978 through to 2012) using commentaries or descriptive reviews, but could not be included as they did not contain an evaluative component. These articles described indigenous health curriculum initiatives that included details about:

- their content (e.g. health inequalities (73))
- systemic inequities (74)
- indigenous health learning outcomes (30, 45, 75)
- cultural literacy (76)
- traditional medicine (77)
- communicating with indigenous patients (in primary and secondary care settings)(78-81)
- and teaching methods (e.g. simulated patients (82), cultural immersion (placed in an indigenous health community and/or within an indigenous health centre) (78-80, 83-89), indigenous health electives/selectives (90) and the role of the indigenous community as teachers (88))

Other studies that combined rural health and indigenous health curriculum objectives were excluded from this study (at full text review) because indigenous health curriculum specific objectives were not evaluated (91-93)

Amongst the studies included (Table 2) were those from Australian universities that had the highest frequency of publications on the development and evaluation/quality measurement of indigenous health curricula. The literature was more likely to report teaching initiatives within a sole medical teaching site (14) and report on medical student teaching initiatives rather than in an inter-professional learning environment (2) where different health discipline students – e.g. medicine, nursing and pharmacy – are taught together. Four studies reported both attempting to measure indigenous health curricula and rural health outcomes within a single teaching initiative (39, 94-96). Nine of the 16 studies evaluated core components of their indigenous health curriculum, while the remaining
seven were either selective/elective components of their indigenous health curriculum (5) or the status (core or selective/elective) was not stated (2).

Table 2: Summary of indigenous health curriculum characteristics

<table>
<thead>
<tr>
<th>SUMMARY OF STUDIES</th>
<th>Number of studies</th>
</tr>
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<td>Curriculum methods*</td>
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<td>Simulated patients</td>
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<td>Block teaching at University/hospital</td>
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<td>Patient interviews in clinical settings</td>
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<tr>
<td>review of reflective commentary</td>
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* Responses not mutually exclusive
2.4.3 Quality classification and risk of bias measurement

The MERSQI favoured multiple test sites (as opposed to a single group post-test environment), assessment outcomes (as opposed to evaluation of student perceptions of the indigenous health curriculum (12 studies)) and the use of a validated evaluation tool (only 5 studies described a valid evaluation instrument). The MERSQI tool also favoured patient/health care outcomes (3 points) over learner outcomes (1-2 points). Therefore, in order to score a low risk of bias, studies needed to meet a number (not just one or two) of these methodological requirements. However, in this review the overall quality of the literature was variable (scores ranged between 4 and 13.5), and only six of the articles scored above 10 (out of 18), suggesting a moderate-high risk bias was present in most of the studies. This was likely because the requirements favoured curricula that had been established over time, that were measurable over more than one site, and that could use current validated evaluation instruments. Because indigenous health curricula are relatively new in medical education, meeting such requirements was unlikely. Appendix B details the study characteristics with both the MERSQI quality score and summary risk of bias for each article in this review.

Hence the IHCRS was designed to review the risk of bias based within a new curricular area, and therefore focused on the quality of what was reported within the study. Table 3 highlights the findings of the IHCRS to determine the risk of bias (see Table 3). The IHCRS identified the literature also being of generally moderate-high risk of bias; five studies were adjudicated as high risk, seven were moderate risk, and only four were of low risk. The summary risk score was highly influenced by a complete absence of studies giving a clear description of their student/learner cohort (including age, gender, ethnicity), (although one study did identify how many indigenous and Muslim students were in the cohort but did not give details of the remaining students). Another current weakness in the identified literature was that only four studies clearly articulated relevant details of how the evaluation was undertaken and only six studies stated the response rate.
### Table 3: Summary of the Indigenous Health Curriculum Review Score (IHCRS)

<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
<th>Description of teaching institution</th>
<th>Description of teaching specialty area</th>
<th>Description of recipients of curriculum content</th>
<th>Identification of evaluation method</th>
<th>Identification of the evaluation tool</th>
<th>Identification of the response rate</th>
<th>Intervention length</th>
<th>Evaluation findings articulated</th>
<th>Score out of 10</th>
<th>Risk of Bias</th>
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### 2.4.4 Time allocation and timetabling of the indigenous health curriculum

In an attempt to undertake an analysis of the time (and timetabling) allocated to the indigenous health curriculum within institutions, it was noted that seven studies did not specifically report the length of the indigenous health curriculum described (94, 97-102).

Four studies evaluated a component or components of the indigenous health curriculum of teaching between one and eleven hours per year (one hour, 90 minutes, three hours, seven hours, and 11 hours respectively in duration) (103-106). Three studies evaluated week-long indigenous health curriculum interventions which included two that were focused on both rural and cultural immersion learning outcomes (39, 96); the remaining programme was tailored to evaluate both inter-professional and cultural immersion learning outcomes (107).

Only one study reported a curriculum intervention of longer than one week. This indigenous health curriculum intervention in Canada was established for both medical students (two students at a time on one-two month blocks) and medical residents (eight medical residents...
for five days per month for eight months) and sought to meet both rural and cultural immersion learning outcomes (95).

Paul et al. (105, 108) and Zhou et al. (106) were the only three studies that clearly articulated the total time allocation (across all years) of the indigenous health curriculum. Paul et al. (105) reported that within the University of Western Australia’s six-year undergraduate programme, the 2003 student cohort was exposed to an overall yearly total of seven hours of indigenous health curriculum, whilst their 2004 cohort had an overall total of eleven hours. In Paul et al. (108) description of the student cohort of 2009, they noted an increase in overall (across six years) core teaching time to 55 hours in Aboriginal health (with further options for optional units, electives and selectives). Zhou et al. (106) reported that there had previously been no curriculum time for indigenous health within the medical school at the University of Western Ontario, Canada, and, therefore, the introduction of the three hour seminar was the only indigenous health curriculum in their four-year graduate programme.

Thus, there were only these three studies with which it was possible to map the indigenous health curriculum, in terms of time, teaching content, teaching delivery methods, and assessments/quality measurements.

However, the studies in this review did not specifically discuss levels of satisfaction with current time allocation and timetabling of the indigenous health curriculum. Therefore, it was not possible to determine within the studies what processes were used to advocate for time for the indigenous health curriculum or the process taken to correlate the time allocated with the indigenous health curriculum learning outcomes.

2.4.5 Content included in Indigenous health curriculum

The literature documented the content included in the indigenous health curricula. Eight studies explicitly stated that the curriculum content included learning objectives for

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10 Map: Harden identifies that a curriculum map as having two key functions. First, a map should make the curriculum more transparent to all stakeholders (including teachers, students, professionals and the public). Second, a map should demonstrate the links between different elements of the curriculum e.g. learning outcomes and learning opportunities. (p. 124) 109. Harden RM. AMEE Guide No. 21: Curriculum mapping: a tool for transparent and authentic teaching and learning. Medical Teacher. 2001;23(2):123-37.
indigenous health inequity and inequality (39, 99, 102, 103, 105-107) including a social-historical-political context to understand current indigenous health status data. Public health and epidemiological data were often the core evidence used in this component of the indigenous health curriculum.

Seven studies included content focused on the improvement of communication between students/clinicians and indigenous patient/communities (97, 98, 101, 102, 104, 106, 108). This involved a specific indigenous model of engagement (including use of indigenous language and indigenous protocols) and/or understanding of current barriers in communication caused by power imbalances between health systems and the indigenous communities.

Five studies exposed learners to indigenous cultural protocols/practices (39, 95, 96, 104, 107); it was the intent of this type of ‘cultural immersion’ (within an indigenous setting, or working with indigenous patients within a health setting) that students would gain a greater understanding of indigenous world views and beliefs. It was hoped that student exposure to this content would increase their ability to feel more confident with indigenous patients and have grounds to build better patient rapport and empathy. All studies reported that as a result of the cultural immersion initiative, student feedback identified that they felt better prepared to engage with indigenous people within a health setting than before the immersion experience.

Three studies specifically focused on educating students/clinicians on the theory and practice of indigenous medical knowledge (39, 95, 96). The purpose of this content was to provide the student/clinician with an understanding of indigenous medical knowledge, and to provide them with an appropriate framework by which to discuss such practices with indigenous patients when taking a medical history. However, the studies did not specifically report back on whether this outcome was achieved.

One study sought to educate learners on the role of indigenous health workers within a clinical context (hospital) through a training seminar (100). The content included the role of the indigenous health liaison workers (addressing health disparities), the level of expertise of
indigenous health workers, how their role complements a clinician’s role, and how collaborative practice between indigenous health workers and clinicians can improve health outcomes for indigenous people (which often involved examples/role model experiences). The study did identify that there was an increase in referrals to the indigenous health worker by those who attended this curriculum. It was interesting to note that the perspective of the indigenous health workers was also identified as a quality measurement in this study. The study reported 100% of the indigenous health liaison workers said there were positive outcomes from being involved in the curriculum.

Because most of the studies did not identify their overall map of their indigenous medical or overall school curriculum, or how the content of this study related to other components of their indigenous health curriculum, there was no way to determine the process by which constructive alignment might be prioritised within medical schools. However, what was noted within the studies included in this review was the likelihood of content that covered indigenous health inequities/inequalities, communication strategies, and indigenous cultural protocols and practices to be reported within the literature.

2.4.6 Teaching methods used to implement an indigenous health curriculum

The analysis focused on documenting the teaching methods used to implement an indigenous health curriculum, with the purpose of looking for patterns between time allocation, teaching content, and delivery mechanisms within an indigenous health curriculum.

Lectures and tutorials on a university campus were the most common method documented for the delivery of an indigenous health curriculum (100, 102-105, 107). This method of teaching was delivered to whole classes rather than small groups, and was often associated with providing an overall context of the health status of indigenous peoples. This was often the

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11 Constructive alignment: “It is a fully criterion-referenced system, where the objectives define what we should be teaching; how we should be teaching it; and how we could know how well students have learnt it. The curriculum is stated in the form of clear objectives which state the level of understanding required rather than simply listing the topics to be covered. The teaching methods chosen are those that are likely to realise those objectives…finally, the assessment tasks address the objectives, so that you can test to see if the students have learned what the objectives state they should be learning.” (p. 64) 110. Biggs J. What the Student Does: teaching for enhanced learning. Higher Education Research & Development. 1999;18(1):57-75.
only teaching method available to the indigenous health curriculum, and ensured that indigenous health was included as a ‘core’ component of the learner’s curriculum. In one study, lectures were favoured explicitly because they required less teaching and fewer funding resources (105).

Two studies used the university/hospital setting to deliver ‘block teaching’ (of more than four hours) that involved lectures/tutorials over the space of a whole day (in indigenous health) (99, 105). This method appeared to be favoured because it could be accommodated within existing institutional timetables and could draw on community/hospital indigenous resources (available on site) for a ‘one-off’ teaching/curriculum intervention.

In two studies, the curriculum was delivered through problem-based or case-based learning. Problem-based or case-based learning was considered advantageous, firstly because it could provide a ‘clinical context’ for the indigenous health curriculum, and secondly, that it ‘normalised’ the indigenous health content within this format (as it was the same format as all other content areas). However, investigators also noted that problem-based or case-based learning was disadvantaged through delivery by non-expert teaching staff (in indigenous health), which might invalidate or exclude the indigenous health curriculum from the learning scenario. (103, 105).

The use of simulated patients to teach the indigenous health curriculum (specifically regarding communication strategies) was described in two studies (97, 98). Simulated patients were seen as a safe way (for both the indigenous community and students) to assist students to apply appropriate indigenous health models/content/strategies with an appropriate vehicle for direct feedback. These studies reported high student engagement and positive feedback.

Five studies specifically targeted a ‘cultural immersion’ approach to their teaching delivery/method. This involved four studies taking students into rural communities with high numbers of indigenous people (39, 94-96), whilst the fifth study took the students into an
indigenous environment (marae\textsuperscript{12})(107). Both these experiences enabled students to be placed within a context where being indigenous was ‘normal’ and where cultural practices were deemed appropriate (as opposed to ‘token’). Students could learn and demonstrate cultural competencies within an indigenous context which involved learning specific indigenous protocols, practices and knowledge (including language). These studies reported positive feedback from students. Through student course feedback forms it was identified that they valued the opportunity to be immersed and they developed a greater appreciation of indigenous values and beliefs. Students noted that they saw that this immersion experience had prepared them better to work alongside indigenous peoples within the health system.

Five studies involved learners interviewing indigenous patients in clinical settings (98, 100, 102, 104, 108). This method of delivery was seen to provide an appropriate clinical context for the indigenous health curricula, while also promoting indigenous health curricula as a clinical skill and competency (as opposed to not being applicable to clinical practice). Often these patient interviews were part of student assessment in the indigenous health curricula. Students’ feedback confirmed they enjoyed this teaching method because it assisted them to see the ‘clinical’ relevance of the indigenous health curricula.

Two studies discussed the integration of indigenous health within clinical rotations; this was seen as advantageous in assisting students to see how ‘core’ indigenous health curricula applies to a clinical environment (especially with respect to taking a patient history) (103, 105). It was also used to highlight health disparities and inequities for indigenous patients (e.g. different levels of health care intervention). These studies reported a shift in student perceptions about how the knowledge/skills included in the indigenous health curriculum might assist them to provide more appropriate clinical care for indigenous patients.

A further two studies attempted to give a ‘clinical’ context to the indigenous health curricula by placing students in community clinical placements, where there were high numbers of

\textsuperscript{12} Marae: is traditional land that belongs to Māori who have genealogical ties to that area. It is a place where the community activities are centred. It usually comprises a wharenui (large meeting house) and wharekai (a large dining room) and may have other tribal/communal resources also (e.g. wharekarakia (church), urupa (cemetery).
indigenous patients/families attending that service (94, 104). Students placed within a remote indigenous community in Canada scored their satisfaction with this initiative 88% (on a likert scale) and reported it assisted them to develop a new appreciation for the indigenous culture and beliefs (95). Paul et al. (105) also used a likert scale and reported 48% of students (2004 cohort compared to 18% of the 2003 cohort) felt well prepared by the University of Western Australia medical course to contribute to improving the health of indigenous people.

Video media (including interviews with indigenous patients and a clinician interviewing an indigenous patient) and/or online teaching modules were used in four studies (98-100, 104). Teachers viewed this as an appropriate medium for indigenous stories and demonstrating indigenous health curriculum clinical competencies within a context that was tailored to the learners (including distance taught learners and clinicians). Learners identified a broader understanding of the history of indigenous peoples and an understanding of the perspectives of indigenous peoples within their health experiences. Facilitators noted that the self-directed approach “empowered students to come to their own understanding of how they can contribute”…(to indigenous health) ((99) p. 67).

Overall, in summary, lectures/tutorials was the most common method of implementing an indigenous health curriculum and were associated with the lowest indigenous health curriculum time (and perceived lowest financial costs) compared with other delivery method times (in hours). By comparison, immersion weeks in the indigenous community or health settings, were allocated the largest amounts of time (and had the highest financial costs). However, the relationship between time, content and teaching delivery in the indigenous health curriculum could not be understood because most studies did not extrapolate where the specifically studied indigenous health curriculum fitted with the entire indigenous health curriculum. Therefore, no inferences could be made about the constructive alignment that existed within the indigenous health curricula from these studies.
2.4.7 Standard tools/methods of evaluation used to determine the impact of the indigenous health curricula

A further aim of the systematic review and synthesis of the literature was to determine which methods of evaluation/quality measurement were used to determine the impact of the indigenous health curricula. Five specific types of evaluation/quality measurement were identified within the literature as being used by institutions to determine the impact/influence of an indigenous health curriculum on the learners. These were written student course evaluations, pre and post-tests of learner knowledge, programme evaluation, reviews of students’ reflective comments (as detailed in Table 3) and community feedback. Each of these types of evaluation formats will now be described with reference to the reviewed literature.

2.4.7.1 Written evaluation forms

The most common form of evaluation of indigenous health curricula consisted of written student evaluations; nine of the 16 studies in this systematic review used this evaluation method (39, 95-99, 101, 104, 105).

Five studies specifically reported that they used their institution’s standard evaluation forms (39, 96-99). Students were presented with statements about the course and asked to rate that statement on a Likert scale (most used a 1-5 scale but one study used a 1-7 scale). Students were also presented with one or more open-ended questions at the end of the evaluation form to invite other comments relevant to the course success or required improvements. Two studies reported a formal evaluation (including Likert scales and open-ended questions) but did not report it specifically on a standard institutional evaluation form (95, 104). One study (101) used a series of needs assessment questions to identify learners’ knowledge, attitudes and perceptions of indigenous health issues, then used an evaluation form (at the end of each of the six training modules) to determine whether the course had met learner expectations. The remaining study described in detail a 24-item questionnaire (using a Likert scale 1-5)(105).
Some authors reported the indigenous content areas that were the focus of the evaluations. These included indigenous health as a social priority, health issues/service provision/student preparedness and ability to work with indigenous peoples, ability to engage in indigenous protocols, value in meeting indigenous patients/community, awareness of indigenous health services, and future commitment to indigenous health.

Four of the studies used the written evaluation forms in combination with another type of evaluation format. Ewen et al. (97) evaluated the use of simulated patients over three different sites (and countries) and triangulated the written post-evaluation forms with commentary/data from the simulated patients and markers/facilitators. Hughes (104) combined the written evaluations with observational data collected during the training module. Jong (95) used the written evaluations alongside external feedback of tribal elders who had a teaching role in a component of the training module. Lacey et al. (98) discussed their findings in relation to the combination of written post-evaluations feedback, observation of student performance on summative assessments, and self-reflective comments from students (written as a component of an indigenous patient case).

All nine studies noted that students/learners reported having developed a better understanding of indigenous health issues, the intervention had assisted them to apply content to clinical reality, they felt more confident to undertake a history with, and care for, indigenous patients, and they were prepared to change their current practice (or already had done this as a result of the indigenous health curriculum) (39, 95-101, 104, 105).

2.4.7.2 Pre and Post-tests of learner knowledge

Five investigators used a pre- and post-test study design to explore and document the impact of the indigenous health curriculum on learner knowledge, attitudes and behaviour (100, 102, 103, 106, 107). Four of these used item surveys to gauge changes in student/learner responses.

Horsburgh and Lamdin (107) reported on a week-long inter-professional (medicine, nursing and pharmacy students) teaching initiative that focused on indigenous health. They noted that questions in two of their indigenous health curriculum content areas (Treaty of Waitangi and attitudes to Māori health) had low reliability of the questionnaire (Cronbach’s α 0.13) and
could not be used to measure whether the indigenous health curriculum had a positive, neutral or negative impact on student/learner outcomes. However, within the free text of the post-test study design, students did comment (un-prompted) that they valued the inclusion of the Māori language within the course and gained an appreciation of the need to pronounce the language (including patients’ names and other Māori words) correctly.

Sinnott et al. (100) focused on the education of intern doctors on the role of indigenous hospital liaison officers (IHLO) in Queensland, Australia. While a majority of interns (47%) had encountered an indigenous patient, only a few (12.5%) had used the IHLO. Those who had were participants in the intervention. However, the investigators also noted that approximately half of the interns (20) who had encountered an indigenous patient were able to provide examples of differences between indigenous and non-indigenous patient encounters. Only those interns who noted cultural differences indicated a change in their approach with indigenous patients.

Copeman (102) described a curriculum initiative that involved medical students interviewing indigenous patients. This was evaluated by the use of a likert rating scale with statements of opinion that were used before and after the teaching initiative. The findings showed a favourable attitude shift by students in articulating that land dispossession was connected to current indigenous health status and that restrictions should not be placed on indigenous people to protect them from themselves. However, there was an unfavourable attitude shift by learners towards “Aborigines are pretty much alike.” It was concluded by the author that students were likely to stereotype indigenous people after clinical contact with only a single indigenous patient.

Zhou et al. (106) reported that a three-hour indigenous health teaching session with medical students increased the number of correct responses to knowledge-based questions. It also resulted in students’ perceptions about sociocultural and economic factors showing a greater agreement regarding their impact on health, and that students recorded feeling more prepared to care for indigenous patients after the seminar.
The study by Ewen and Gough (103) used pre and post-written case method with medical students. Students/learners were asked how they would manage an indigenous child presenting with asthma by considering comments about how this might be done in both an inpatient context and upon discharge. The analyses compared changes in frequency of medical, social, and cultural factors – pre and post the teaching intervention. The study found that post-intervention, there was a decrease in students’ emphasis on a sole focus on the medical factors and a significant increase in students including and accounting for social and cultural factors in contributing to the presentation.

All of these studies showed a positive uptake of indigenous health curriculum content by students/learners. However, Zhou et al. (106) cautioned that, although small interventions (time allocations) may cause a direct reported effect, there was need for students/learners to have on-going exposure to an indigenous health curriculum to reinforce and build on learning opportunities. The authors also recommended the need for further investigation into the long-term impacts of indigenous curricula on future practice patterns of medical students.

2.4.7.3 Programme evaluation
Harrison and others (94) were the only investigators who did not evaluate the students/learners involved in the indigenous health curriculum. Instead they noted the changes to accessed care within the dental health service (intervention based in a First Nations village) by identifying the reduced need for dental treatment in their teaching site when compared to a “comparison community” over the two years that the project was in place. This was calculated by the time units needed to complete dental treatment in both the intervention and comparison communities (non-randomised) in 2001 (pre intervention) and 2004 (post intervention). The annual dental health report noted a positive trend in therapists’ time being used for preventative maintenance rather than restorative and surgical services. They also noted that anecdotally the consultant dental hygienist had reported an improvement in the oral hygiene of children at the teaching site.
2.4.7.4 Review of reflective commentary

Paul et al. (108) used content analysis on 413 (79.6%) student reflections (a component of their Aboriginal case history assignment within the medical rotation) to identify the impact and engagement with the indigenous health curriculum. This study noted its ability to draw key themes from the data including: fear/apprehension; knowledge/insight; professional development; racism; assumptions/stereotypes; and theory versus reality. The authors identified that significant learning had occurred from the structured learning task and that for some students the task provided an opportunity to self-direct their interest and engagement in Aboriginal health. The authors concluded that the role of the indigenous health curriculum is to address health disparities by improving the health and health care experience of Aboriginal Australians, and that there are indications from the data that students are developing a level of cultural competency that may assist them to provide a health context which is less discriminatory to indigenous health access and health service delivery.

2.4.7.5 Indigenous community feedback

Only two studies discussed using indigenous community feedback as a method of curricula evaluation. Ewen et al. (97) described how three different medical schools (from Australia, Aotearoa/New Zealand and Hawaii) sought feedback from indigenous community members who participated in indigenous simulated patient programmes within the indigenous health curricula. Participants reported that the experiences had assisted them to become advocates for indigenous health, and feel more confident in ‘real’ clinical interactions in the health system. Jong (95) discussed the Norfam program “which trains medical students and residents in rural and remote medicine with a special focus on indigenous health.” (p.45). Tribal Elders were pivotal in the design and implementation of the programme which involves students being immersed in a traditional cultural setting and learning about health from an indigenous perspective. Tribal Elders reported feeling more comfortable to undertake this teaching within their own setting (as opposed to a clinical setting). Jong identified that one of the greatest impacts of the teaching initiative is that it shifted the power from the learner (student/registrar) to the Elders; this was seen as a successful outcome because it aligned with indigenous pedagogies.
2.5 Discussion

This systematic review and thematic analysis of the literature has identified that evidence documenting the implementation and evaluation/quality measurement of indigenous health curricula is sparse. This may be due to two reasons: the placement of an indigenous health curriculum within medical education alongside or under the concept of cultural competency (so it becomes difficult to separate the focus being on ‘all’ cultures from that of indigenous peoples) and/or that indigenous health curricula are still emerging/developing as a medical education priority.

It was difficult to achieve a full understanding of the different institutions’ indigenous health curricula through the literature, as the studies did not always articulate whether the curriculum being evaluated represented the indigenous health curriculum in its entirety, or whether it was evaluating just a component of the indigenous health curriculum.

The information provided in the literature ranged in time from the studies by Copeman (University of Queensland, 1985)(102) and Zhou et al. (University of Western Ontario, 2010)(106) who had evaluated the first indigenous health curriculum delivered within their institutions, through to Paul et al. (105, 108) who documented curricula preceding 1998 through to 2011 within their two studies.

However, the University of Western Australia did provide a commentary which described a map of their indigenous health curriculum within their studies (105, 108) (see figure 2) which included: time in the curriculum (based on allocated teaching time); content (historical, cultural and social factors that impacted on indigenous people’s health and health care, indigenous health care issues today, special health care needs, ability to work in partnership with indigenous peoples using cultural competencies, socio-cultural context of health for indigenous peoples, and the development of services targeted to indigenous peoples); methods of teaching used; location of teaching (location within the overall map of the indigenous health curriculum, e.g. in Indigenous health curriculum specific time or within medical rotation time); and assessment (to measure uptake of knowledge/skills) and/or evaluation methods (to gauge any change in perceptions/attitudes in indigenous health).
Figure 2 also records the interaction between each of the ‘components’ of the map. None of the other literature identified or refined any further factors that might be considered as an influence or component of the map of the indigenous health curriculum.

The studies also did not provide enough adequate information (as reflected in the IHCRS risk of bias scores) through which to document what constructive alignment might look like, its application to a map of the indigenous health curriculum, or what components of constructive alignment might be similar or different across different medical schools.

This chapter has documented the two main types of study designs involved in determining the impact of the indigenous health curriculum, namely, student written evaluations and pre and post-tests (usually using item surveys of knowledge and attitudes). Patient outcomes and student reflective comments have also been used in an attempt to determine whether indigenous health curricula are having an impact on learners/communities. Regardless of the type of indigenous health curriculum or teaching method, all of the publications note a
change in student knowledge, and attitudes as a result of the intervention or a change in patient outcomes.

The finding that most studies are at higher risk of bias due to methodological limitations is similar to the findings by Lie et al. (65) in their review of cultural competency literature. In order to improve the quality of future research, Lie et al. (65) suggest an algorithm for education studies on patient outcomes which may be transferable to those attempting to evaluate indigenous health curricula. This includes (1) generating a hypothesis and determining the study population, (2) selecting either an experimental or observational research design, (3) measuring the impact of training on student/learners, and (4) analysing student/learner outcomes (amended for the indigenous health curriculum).

However, as noted by Gozu et al. (66), in order for researchers to produce higher quality research evaluations, there is a need to develop quality valid and reliable tools/methods by which to measure either cultural competencies or, more specifically, indigenous health competencies.

Zhou et al. (106) note that brief interventions with immediate or short-term follow-up may not effectively track whether the indigenous health curriculum continues to influence the student/learner or impact their practice with indigenous peoples; the study by Paul et al. (108) was the only one to look at the influence of their overall indigenous health curriculum on learners.

Although Ramsden’s (36) cultural safety model encouraged interaction with indigenous populations (as the consumers of the health service and monitors of the power relations), there were only two studies (95, 97) that sought to involve the indigenous community as part of the evaluation/quality measurement process. In attempting to ‘map’ the indigenous health curriculum, the noticeable absence of any qualitative studies also highlighted the over-emphasis on solely evaluation by student opinion and the lack of drawing from multiple stakeholders to provide a more holistic gauge by which to determine the impact of an indigenous health curriculum on the students, the wider medical school (including indigenous teachers), the indigenous community, and the broader health system.
Therefore, this systematic review of the literature has highlighted the following gaps in the evidence to inform the structure and methods used to deliver the indigenous health curricula:

1. How indigenous health curricula are currently delivered as complete indigenous health curricula are not clearly described.
2. How constructive alignment is used within indigenous health curricula and how this might impact learning and patient outcomes.
3. Institutional facilitators and barriers of indigenous health curriculum delivery;
5. Lack of consistent approaches to the study and evaluation of indigenous curricula. According to Gozu et al. (66), there is a need for the development of ‘quality tools’ to be made available to medical schools to assist them to have a ‘shared language’ in which to discuss indigenous health curricula.

2.6 Chapter summary

This systematic review and synthesis of the literature has highlighted that research on the implementation and evaluation of indigenous health curricula is limited by a paucity of studies and the methodological quality of available studies. The available evidence primarily focuses on students’ perceptions/experiences of the curriculum content and generally on standardised institutional evaluation forms (with tailoring to indigenous health curriculum objectives) as the principal form of measurement.

The systematic review and synthesis of the available literature has identified a number of areas that warrant further investigation. Five questions posed by this study arising from the evidence synthesis of available literature are:

1. How can a theoretical map of an indigenous health curriculum identified in the literature be converted, in practice, to an 'actual' map of an indigenous health curriculum that exists within medical schools?
2. What does constructive alignment of an indigenous health curriculum look like within a medical school and are there differences/similarities within different institutions?

3. In what ways do the institutional systems impact on indigenous medical education?

4. What might multiple stakeholder perspectives add to what we understand about the indigenous health curriculum?

5. What quality tools/methods might be used to measure/research the indigenous health curriculum?
CHAPTER THREE
Methodology

3.1 Introduction
The purpose of this chapter is to show how the research was undertaken. The chapter is divided into three main sub-sections. The first section will outline the aim of the research, the research questions and the ethical considerations included in the study. The second section will describe the methodological framework in which the study was positioned, the study methods, and the justification for the tools used in analysis of the data. The final section of the chapter will describe the details involved in the project development and implementation.

3.1.1 Aim of research
The aim of this research is to add to our understanding of effective ways to design, implement, and evaluate indigenous health curricula within medical education curricula.

3.1.2 Research questions
1. How can a theoretical map of an indigenous health curriculum identified in the literature be converted, in practice, to an 'actual' map of indigenous health curriculum that exists within medical schools?
2. What does constructive alignment of an indigenous health curriculum look like within a medical school and are there differences/similarities within different institutions?
3. In what ways do the institutional systems impact on indigenous medical education?
4. How might multiple stakeholder perspectives add to the understanding of the effects of an indigenous health curriculum?
5. Which quality tools might be used to measure/research an indigenous health curriculum?

This research seeks to understand the processes and outcomes involved in the design, implementation, and measuring of the impact of an indigenous health curriculum within medical schools through two phases. The first phase used a multiple case study design to
identify differences and similarities between cases (medical schools), using multiple sites bound by the concept of the indigenous health curriculum. The second phase uses a single case study and a descriptive study design to explore the concept of an indigenous health curriculum bound by one site, as reported by multiple stakeholder narratives.

3.1.3 Ethical considerations

In line with the University of Otago research protocols, consultation for this research was sought through the University of Otago, Christchurch (UOC) research office. This included an interview with the Research Manager Māori at the UOC to ensure the research process aligned with recommended practice guidelines for working alongside Māori participants. These guidelines involved the following processes:

1. Using the Ministry of Health ethnicity protocols to define who was Māori within the research.

2. Having a Māori advisory group for the project.

3. Seeking Māori leadership advice (external to the University) on the efficacy of this research within the community.

4. Having clear accountability guidelines to the Māori advisory group and external Māori leadership.

5. Ensuring the research question could contribute to Māori health gains in the health system (not deficit focused).

6. Having a process in place so that participants could request their data, and have the right to contribute to the analysis process.

7. Having a koha\(^{13}\) in place for all participants in the study (inclusive of indigenous stakeholders) in acknowledgment of their contribution to this research.

8. Having a communication strategy to disseminate findings to all participants, including Māori community members.

\(^{13}\) Koha; word from the Māori language, refers to a donation or gift that acknowledges one’s contribution. For the purposes of this research, participants received a voucher to the value of $40.
All participants were given a general information sheet (see Appendices C, D) before the interview that outlined the purpose of the research and what it would involve for each participant. The principal investigator reviewed the general information sheet with all participants, and then explained the consent form (see Appendix E). All participants were informed about their right to withdraw from the research and also who to call if they had any concerns they wanted to discuss as a result of the interview. They were all informed that their data would be stored for 10 years in a locked filing cabinet (to meet ethical guidelines) and then would be destroyed.

This study received ethical approval from the New Zealand South B ethics committee to interview patients who had been interviewed by UOC students for the purpose of their Hauora Māori patient case assignment (URA/09/06/039). Ethical approval was also received from the University of Otago B Committee to interview university staff, students, and staff of the Canterbury District Health Board.

3.2 Theoretical framework

The following section will define Kaupapa Māori research as the overarching theoretical framework in which this research was positioned. It will also present the intricacies of how Case Design Method was used in this research and the tools applied to the data.

3.2.1. Kaupapa Māori research

This study is situated in a Kaupapa Māori theoretical framework as it intends to investigate that which is inherently Māori: Māori health. Most medical education research is grounded in a Western scientific paradigm, hence by its inception has privileged the perspective of the coloniser (111).

Western scientific methods have developed from a paradigm that privileges colonial powers and seeks to silence/belittle/discredit the knowledge/skills of the colonised. Using this method, the voice of indigenous people/communities were/are deemed invalid and to have no scientific rigour (112, 113). Western science, through the ‘power’ of research, continued(s) to contribute to the colonial agenda of dehumanising indigenous peoples to justify the
continuation of colonisation through such processes as confiscations of land (and other economic resource), pillaging of intellectual property rights, and maintenance of political power (111, 114-116). Western science also adopted the colonial perspective of naming the ‘indigenous problem’, which often described the resistance to colonial will (that perhaps might have been written from an indigenous perspective as attempting to maintain their rights), then developed this problem into a research question. This alleviated colonial consciousness (and the scientific community) from positioning indigenous outcomes within a colonisation framework, and instead designed a deficit framework that justified colonial agendas. Such framing promoted racist ideologies and continued to marginalise Māori within Aotearoa/New Zealand as the ‘other’ (113-115, 117).

Kaupapa Māori research, as a methodology, emerged as a form of resistance to using research as a colonial tool; instead, it re-positioned the voice/experiences/beliefs of the indigenous people (in this case Māori) as the conduit of valid knowledge (114, 118). It re-positioned the lens of research from being focused on the colonised to the coloniser (or vehicle of colonisation). From this world-view, Kaupapa Māori research sought to ensure that the power of research was used to present evidence that would contribute to an indigenous (as opposed to a colonial) agenda (117, 119). Smith (115) argues that Kaupapa Māori research is a “local theoretical positioning which is the modality through which the emancipatory goal of critical theory, in a specific, historical, political and social context, is practised” (p. 186).

Kaupapa Māori research has been used extensively in education (120, 121) and health research (122-126) to challenge western scientific findings that have sought to promote a deficit perspective of indigenous outcomes. Kaupapa Māori research has challenged these ‘scientific’ conclusions that have traditionally blamed indigenous communities for not engaging with colonial institutions and have instead developed a growing body of evidence whereby the colonial institutions have demonstrated an inability to be responsive to indigenous communities, even after indigenous solutions have been tabled. (111)

Therefore, this study necessitates the use of Kaupapa Māori research to ensure that an indigenous agenda is presented within the field of medical education research. Specifically,
it will be accomplished by identifying the application of Kaupapa Māori research within a university, to show its relevance to a medical curriculum, and its application to an indigenous researcher.

3.2.1.1 Use of Kaupapa Māori research within a university

Smith (115) specifies two specific ways in which Kaupapa Māori can be applied to research, firstly by research methods enacted by the indigenous community, and secondly through “spaces gained within institutions by indigenous research centres and studies programmes.” (p. 125). Smith (115) discusses the challenge of being positioned within an institution (university) that in itself sees Western science as the foundation of its existence. Research has highlighted the challenges and struggles that indigenous peoples face in attempting to promote a critical consciousness of indigenous issues within a university space (112, 127). However, Smith (115) also notes that “the form that racism takes inside a university is related to the ways in which academic knowledge is structured as well as to the organizational structures which govern an institution” (p. 133). Therefore, it is also the role of Kaupapa Māori research to take into account the university structures (including curriculum structures) that work to protect the colonial position of privilege.

In more recent times, the development of indigenous spaces (including units, departments and schools of indigenous knowledge) has led not only to the recruitment and retention of a growing indigenous presence within universities, but also to access to the academic structure that validates the “creation of new knowledge” (115) (p. 129). Kaupapa Māori research, as it is currently constituted, emerged from one such indigenous unit located within a university. It has grown in currency as its authors and those who have subsequently used Kaupapa Māori research hold both the credentials of the university (Masters, PhDs) and also have published in reputable peer reviewed journals (117, 128). Smith (115) comments that indigenous developments within a university can assist in developing new relationships between “institution and community, between indigenous people and non-indigenous people, between communities of the ‘researched’ and communities of ‘researchers.’” (p. 134). She identified that this is achieved through Kaupapa Māori research as indigenous communities become stakeholders in the research, as opposed to only having a role in being researched. A university
also provides a context that has “two purposes; it supports and strengthens indigenous approaches globally; and it strengthens and supports indigenous developments locally.” (115)(p. 134)

3.2.1.2 Relevance of Kaupapa Māori research to a medical curriculum

For the purpose of this research project, the role of Kaupapa Māori research is to place the theoretical framework specifically on medical schools and their ability to be responsive to indigenous health. Smith (115) identifies that “the curriculum of a university shapes the way knowledge is reproduced as a curriculum for schools and for society. Intellectuals provide leadership for society in relation to knowledge.” (p. 129).

Hence, if Kaupapa Māori research produces evidence on how indigenous health should be placed within medical education, this may in turn influence the weighting of which knowledge is deemed ‘acceptable’ to the institution. This evidence then has the potential to shape the curriculum, which in turn shapes the way knowledge is reproduced as a curriculum for the medical school, which in turn influences future clinicians’ perspectives of Māori health which, if they are presented in a non-deficit way, may benefit Māori society/communities.

Smith (115) warns of the impact of the hidden curriculum (in education) which through prescriptive narratives continues to promote colonial understandings of knowledge, and has strong implications for ‘un-doing’ the intended curriculum and placing indigenous students in unsafe and unethical teaching environments.

Therefore, the role of Kaupapa Māori research in medical education is to provide a critical perspective in identifying colonial perspectives that have a strong influence of the underlying culture of medicine and to identify how this influence impacts on the indigenous health curriculum and indigenous health outcomes.

3.2.1.3 Relevance of Kaupapa Māori research to an indigenous researcher

Positivist research promoted the need for scientists to be objective (in search of ‘the’ truth), which led to the justification of western science studying the ‘other’. It also created a cohort of
scientists who used a colonial lens (which drove a western science agenda) to document the ‘truth’ about indigenous communities (e.g. Elsdon Best (129)) with little or no direct critique from the community in which they researched. It disempowered the researched community and positioned it as ‘outside’ the research; it placed the researcher as the expert about the researched because of the research method employed. This type of positivist approach contributed to educational, health and anthropological studies reinforcing the colonial agenda and prevented the development of an indigenous research workforce.

Smith (115) noted that traditional western science required that an expert be an ‘outsider’ (external to the research population) in order to reduce bias within the research. This did not account for the impact of this position on the analysis of the data and the data’s relationship to the impact of a colonial lens on the researcher’s understanding of different institutional structures, appropriate cultural protocols, and familiarity with language used. The idea that a researcher could be an ‘insider’ (belonging to the research community) was dismissed.

Feminist research and other critical theoretical approaches have made the insider model more acceptable within scientific research. In terms of Kaupapa Māori research, Smith explains that within an indigenous community the definitions of an outsider/insider differ from those used in feminist research, because it is not just based on gender but on which Māori community you belong to and what role you have within that community. Therefore, it is a prerequisite that to lead Kaupapa Māori research one has to be Māori. This is because a Māori researcher is a member of the whānau (the traditional basic unit of a Māori community) which makes Kaupapa Māori research distinct from western philosophies, because it ties the researcher through biological blood lines to be accountable to their community. It embraces the concept of a clear ethical practice and a framework in which to discuss and disseminate findings back to one’s community (114).

Smith (115) explains that “insider research needs to be as ethical and respectful, as reflexive and critical, as outsider research. It also needs to be humble. It needs to be humble because the researcher belongs to the community as a member with a different set of roles and relationships, status and position.” (p. 139). Being an ‘insider’ can raise specific challenges,
especially if the narrative being shared or the analyses being undertaken are not in line with the beliefs of the researcher. Smith (115) points out that such difficulty can be addressed through an appropriate support structure placed around the researcher. She suggests that the support structure has both academic and community membership.

In this study, the researcher (SP) is positioned as both an ‘insider’ of the indigenous community and an ‘insider’ of the academic community. Therefore, in accordance with Smith’s writings there is a need for the researcher to be able to validate the voice of the indigenous community and the place of the indigenous agenda (Hauora Māori curriculum) whilst also challenging the institution to which she belongs to transform institutional practices and research frameworks (114).

The researcher in this study (SP) could also be positioned as an ‘outsider’ by both the indigenous community and the academic community because she would have access to all the information shared and have control over how this information was organised and presented. Hence, Smith (115) notes that the researcher would have to establish appropriate levels of trust with participants, be clear about confidentiality of the information shared, and allow participants to provide feedback on the analysis of the data (when requested). (117)

Two support structures were put into place to support the researcher (SP), who undertook all the interviews (as both an ‘insider and outsider’) within this study. Firstly, three PhD supervisors (one of whom was Māori) made up the university advisory group to identify the potential barriers and enablers between the institution and the Kaupapa Māori research agenda and to assist with navigation with roles as both an insider and outsider for this research project. Secondly, a Māori stakeholder group was formed that included Māori health workers, Māori patients, and Māori clinical lecturers to identify the potential barriers and enablers of the research in maintaining a Kaupapa Māori research agenda through Māori community accountability.

Hence, Kaupapa Māori research supports a researcher having the role of both insider/outsider roles and maintains that this works to ensure that the validity of the voice of the indigenous agenda is not lost within a colonial institutional agenda (112, 114, 117).
3.2.2 Case study design

A case study design was identified as the best approach for this research as it allows for a specific, intensive description and analysis of an individual social unit, such as an institution or community (130). As a method, case study design captures activity within its ‘true’ environment and is further validated if the researcher is familiar with the environment (131). A qualitative case study approach is noted as being valuable in health science research because it helps “to develop theory, evaluate programs, and develop interventions because of its flexibility and rigor” (132) (p. 544).

A case study can be defined as a “detailed investigation, often with data collected over a period of time, of phenomena, within their context….to provide an analysis of the context and processes which illuminate the theoretical issues being studied” (133)(p. 323). Case study itself is not a method, but a research strategy which is focused on the theoretical underpinnings and interest in a specific phenomenon (134). The methods used to progress a case study are determined by the research questions.

Case study research is a heterogeneous activity covering a range of research methods and techniques, a range of coverage (from single case study through carefully matched pairs up to multiple cases), varied levels of analysis (individuals, groups, organizations, organizational fields or social policies), and differing lengths and levels of involvement in organizational functioning. (133) (p. 332)

Case study design has been used within education (135-137) and health research (138-140) as a medium of communicating how the complexities within a context contribute to an understanding of the site, and in this way provides the context to interpret the results to be meaningful for both the site, and also to other settings that may have similar complexities.

Criticism that case study design is not generalisable to a broader context and therefore is not a relevant research tool is acknowledged by researchers engaged in case study design (132). However, case study design advocates also note that there is a need for understanding that it is the reader, not the researcher, who will determine in what form the case study can be applied to their context (141). Yin (130) notes that it is not the specific content from a case study that is generalisable, but the theories that are generalised from the data:
Case studies [...] are generalizable to theoretical propositions and not to populations or universes. In this sense, the case study [...] does not represent a 'sample', and in doing a case study, your goal will be to generalize theories (analytical generalization) and not to enumerate frequencies (statistical generalization). (130) (p. 10)

There are only a few research studies in medical education (142) that have used case study design; however, its ability to document multiple perspectives within the appropriate context (143) confirms that it is an appropriate match to the aims of this research. For the purposes of the research, two phases were used, with a case study within each phase.

For phase one, a multiple-case study design was employed. This allowed the research to look at differences and similarities between the cases (cross-case analysis) (144) while also looking for predictability between cases based on a theory (130). (This is further discussed in 3.3.) Therefore, this case study used multiple sites bound by the concept of an indigenous health curriculum.

For phase two, the UOC was used as a single site with a descriptive study design applied. This type of case study design allowed the narrative of participants to describe the indigenous health curriculum within the UOC context both within case analysis (144) and within the context in which it occurred (130). Hence, this case study explored the concept of an indigenous health curriculum bound by one site.

Kaupapa Māori research does not dictate which specific research methods are used within a research project, but provides a framework by which the researcher can determine which research methods will provide scientific rigor that will support the indigenous agenda (115). Case study design is a well-accepted qualitative research tool; it also aligns with Kaupapa Māori research as it has the ability to explore narrative (from multiple perspectives) about an indigenous health curriculum and maintain the context in which the narrative is based. Hence, it is less likely to produce findings that favour only one research agenda, but is able to present different perspectives as valid.

3.2.2.1 Data collection

There were two specific methods of data collection for this research. For phases one and two of the study, qualitative interview data were gathered through both individual interviews and focus
group interviews. For phase one a brief survey was also used to gather profile information from the medical school sites. The following section will give an overview of the two main methods of data collection. The study design, showing where each of these methods was applied, and the recruitment of participants, are described later in section 3.3.

3.2.2.1.1 Qualitative interviews
All participants had the choice to participate in the research either in a one-on-one interview or through a focus group interview.

In line with Kaupapa Māori research theory, all interviews used a Māori protocol of engagement which included the sharing of the role of the researcher, her tribal/genealogical connections, her connections to the area where the interview was undertaken, and encouraging the participant to share something about themselves. This process was seen: first, to establish an indigenous approach as acceptable within a research forum; second, to build a relationship with the participant; and third, to provide a forum by which a sharing of power was instigated from the onset of the research.

The interview schedule for all participants explored six subject areas by asking open-ended questions about participant experiences of the medical curriculum. The questions were tailored to each of the stakeholder groups to encourage them to share their perspectives on each of the six subject areas. The interviews opened with a broad question with specific prompts when required to assist the participant to explore the question as fully as possible. This allowed for each interview to be personalised to the requirements of each participant/focus group (this included a range of no prompts for some participants and multiple prompts, sharing of specific experiences and re-wording the question for other participants) to provide participants with a safe space to share their perspectives while also ensuring they were clear on the line of enquiry (to maintain a shared power balance within the interview) that the research question was exploring.
3.2.2.1.2 Survey of medical schools
After medical school representatives had completed their interviews they were asked to complete a survey (Appendix F) that captured institutional data about their medical school (explained further in 3.3.1.5).

3.2.2.2 Qualitative Analysis
Qualitative research also provides a context by which subjectivity and values are seen as ‘normal’ human responses that cannot be eliminated or manipulated through a study design. For the purposes of this study, a qualitative research paradigm is also able to provide a framework by which the researcher’s own subjectivity and values can be factored into the kaupapa (phenomenon) being researched. In this way, qualitative research further aligns with the aspirations of Kaupapa Māori research, in that there is strength to being an ‘insider’ to the research and that position is worked into the method of the research design.

The role of qualitative analysis is to use the data to generate hypotheses. This type of approach specifically fits well within a Kaupapa Māori Research approach, because it does not assume a meaningful hypothesis prior to engaging with the community of interest. Hence, it is open to being informed by cultural and value differences within the research cohort. Also it does not assume predetermined independent and dependent variables that may inform the hypothesis/es, providing an appropriate tool for exploring subjective experiences and incorporating specific stories that illustrate complex interactions and cause/effect outcomes. In order to review the quality of the analysis the researcher undertook the first cycle of coding alongside one of the PhD supervisors where definitions of codes and the use of themes were negotiated. All supervisors reviewed the coding structure and provided feedback after the second cycle of coding.

Within this research project the case study design drew on primarily interview data (and some written reports of specific experiences by students and staff). Interview data were transcribed into a Microsoft Word document and then imported into NVIVO 9. The following section outlines the qualitative data analysis procedures used to apply theoretical coding to the content.
This section will identify the tools used to organise the qualitative data, including an explanation of how inductive analysis was used within this research and the coding strategies that were applied to the first and second cycles of coding.

### 3.2.2.3 Inductive Analysis

For the purposes of this research, inductive analysis was used within the case study design to encode and order the qualitative data (145). Figure 3 illustrates the logistical process of how inductive analysis was applied to this study (146).

![Figure 3: A streamlined codes-to-theory model for qualitative inquiry (taken from Saldana, 2009)](image)

An inductive qualitative analysis was employed to support the development of hypotheses that emerge from the content data, rather than imposing a theoretical construct to sort the data as in a deductive approach *questioning rather than measuring, and generating hypotheses using theoretical coding* (147) (p. 7).

The process of coding allows the researcher to group similar qualitative data together. The researcher will search for patterns in the data that identify commonalities/differences about a specific topic/concept. Such patterns may emerge because of use of a similar word/phrase or description of an event/occurrence. The researcher then puts in place specific rules that note inclusive and exclusive criteria for each data set, which is then labelled a **code**. Within this
research, coding was undertaken using an inductive approach so that the codes could be mapped to the data from which they were taken (148).

The coding process then further seeks to organise the codes that have emerged from the data into similar ‘family’ groups. The researcher again places specific rules that denote inclusive and exclusive criteria for each data set (or set of codes), which is then labelled a category (146, 148). If a code is likened to a sentence, a category is a paragraph that draws sentences that are describing a similar event together. Within the category the richness or diversity of data may then warrant the formation of sub-categories. Sub-categories allow the data to be easily ordered and their relationship to the broader category is made clear.

The coding process then further seeks to organise the larger data sets by defining relationships between the categories, which results in the identification of concepts or themes (146, 148). A theme is a complex unit (of categories and sub-categories) that has clear inclusive and exclusive criteria and is able to represent a high level of order to the qualitative data.

The development of multiple themes from the data set results in the researcher being able to look for the inter-relationship between the themes and work to generate hypotheses and/or a conceptual/thematic theory about what the data represents (146, 148). A thematic theory then may be discussed in terms of its applicability to a group that is wider than that from which the data were drawn.

An inductive analysis sits well within a Kaupapa Māori Research approach because it positions the research participants as not only the source of knowledge but places them as experts on what is being studied. The research questions then draw from the participants their subjective experiences and the researcher then generates hypotheses from this data. Inductive analysis is concerned with constructing theory, as opposed to testing theory (149).
3.2.2.4 Coding procedures

The research question/concern and theoretical framework for the study were kept on a page and referred to during the coding process to ensure that all coding processes were consistent with them.

Due to the amount of qualitative data, it was not seen as useful (although it was tried and was found to be ineffective) to use descriptive analysis directly on the initial data. Therefore for the first cycle of coding, structural analysis was used on the data (3.2.2.4.1) to provide a clear framework in which to position the data. However, in order to allow the richness of the data and diversity of narrative to be captured, descriptive analysis (3.2.2.4.2) was then used to further order the data. The second cycle of coding involved the use of theoretical coding (3.2.2.4.3) to refine the data further. The following sections will give more detail about these cycles of coding.

3.2.2.4.1 First cycle coding: Structural analysis

First cycle coding is the type of coding employed initially to organise and construct meaning to qualitative data. It may involve one or a number of methods of analysis to best fit the type of data, and draw the researcher closer to the research’s proposed theoretical framework. For the purposes of this study, two types of analyses were involved in the first cycle coding process; structural and descriptive.

Saldana (146) defines structural coding as:

> Structural coding applies a content-based or conceptual phrase representing a topic of inquiry to a segment of data that relates to a specific research question used to frame the interview. (p. 66)

Structural coding is often employed in studies where there are multiple participants and where there is a standardised semi-structured data-gathering process (in this case a semi-structured interview schedule using the same six themes of inquiry across all cohorts). Structural coding uses specific questions to drive the initial analysis, and data that answer the relevant question are organised under that heading. These specific questions are formulated from the over-arching research questions.
The questions used in the structural analysis for this research were:

a) Is this related to the design of the curriculum?
b) Is this related to the implementation of the curriculum?
c) Is this related to the impact/measuring the curriculum?

Through the structural analysis, all data were allocated to an area determined by the above questions and reflected in three broad initial concepts or themes.

3.2.2.4.2 First cycle coding: Descriptive analysis

Once data had been organised into three initial ‘themes’ descriptive analysis was employed. Descriptive analysis is described by Saldana (146) as summarising:

\[
\text{in a word or short phrase – most often as a noun – the basic topic of a passage of qualitative data. (p. 70)}
\]

Descriptive analysis provided a framework by which to further organise the data to determine codes and categories that logically could show relationships to each other. The descriptive coding technique applied to the data is to identify the topic being discussed, not the content (150).

3.2.2.4.3 Second cycle coding: Theoretical coding

Saldana(146) discusses second cycle coding as a process “that provides an advanced method of reorganising and reanalysing data coded through first cycle methods.” (p. 147). Second cycle coding is able to offer the researcher the opportunity to further refine and ‘make sense’ of the data. Therefore, the data that are already organised into codes, sub-categories and categories (through the first cycle analyses processes) were further refined through the process of theoretical coding. Theoretical coding is described as it: “functions like an umbrella that covers and accounts for all other codes and categories formulated thus far in grounded theory analysis.” (146) (p. 163)

If the category (as determined by the first cycle of coding) is the paragraph, perhaps theoretical coding is best explained as the process that would ensure each paragraph linked succinctly together, built on what the previous paragraph had presented, and was confident that it had presented the ‘overall’ story (theoretical direction) that best represented what the
participants had shared in their narrative. Table 4 demonstrates the process of coding from text through the stages of analysis.

Table 4: Process of coding text through to stages of analysis

<table>
<thead>
<tr>
<th>Structural analysis</th>
<th>Descriptive coding</th>
<th>Theoretical Coding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design of curriculum</td>
<td>I think it’s really important to make medical students a bit more culturally sensitive towards Māori and to give, especially people who have grown up in a predominantly Pākehā area a bit more insight into the culture itself. Just because some people haven’t grown up with many Māori in their school or in their social circle so it’s kind of really good to introduce them to the culture, make it a bit more familiar for them.</td>
<td>Cultural sensitivity</td>
</tr>
<tr>
<td>Impact of curriculum</td>
<td>Thank you. What value if any do you think that the current Hauora Māori curriculum has added to your medical education?</td>
<td>Prior exposure to Māori communities</td>
</tr>
<tr>
<td>Implementation of curriculum</td>
<td>I think it’s taught me more about how to interact with Māori patients and more what to expect from them as patients and know the way that they expect us to respect certain things about them and to expect always to be involved with the whānau as well as the patient themselves. I think that’s really important that you don’t get surprised by the amount of people that need to be around them when they’re concerned.</td>
<td>Indigenous knowledge/culture</td>
</tr>
<tr>
<td>Implementation of curriculum</td>
<td>Thank you. And how did you find the experience of entering the patients for your short/long cases?</td>
<td>Interaction with Māori patients</td>
</tr>
<tr>
<td>Impact of curriculum</td>
<td>In 4th year I found it a bit more challenging than in 5th year just because I felt more pressure with the assignment. I hadn’t ever been told no from either of my patients who I asked to interview. And they were more than forthcoming with information about the culture. But I just think in 5th year I was a bit more comfortable and I knew what more to ask and I think we were educated a bit more on what you expected from us and so it was a bit easier to get that information from the patient.</td>
<td>Understanding of Māori cultural expectations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Application to clinical practice</td>
</tr>
<tr>
<td></td>
<td>Patient consent</td>
<td>Application of Indigenous health content to a clinical interview</td>
</tr>
<tr>
<td></td>
<td>Interview process</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Applying teaching content to clinical interview</td>
<td></td>
</tr>
</tbody>
</table>

3.3 Project development and implementation

The following section will outline how each study phase identified stakeholders, and how sampling, recruitment, and data collection strategies were undertaken.
3.3.1 Phase one: multiple case study design

The systematic review of the literature revealed a dearth of published literature describing an indigenous health curriculum, the institutional influence on an indigenous health curriculum, and the tools used to establish the efficacy of the curriculum. Therefore, the purpose of case study one was to gain a broader and more in-depth understanding of:

1. how medical schools had developed their indigenous health curriculum over time.
2. what they identified as the key components of their indigenous health curriculum.
3. what institutional influences they noted that impacted on the development and implementation of the indigenous health curriculum.
4. what measures they used to determine the influence/impact/quality of their indigenous health curriculum.

This involved accessing staff leading the indigenous medical education in five medical schools external to the University of Otago and documenting the features of their curriculum design, implementation and impact. It was perceived that identifying similarities and differences between the curricula would provide a benchmark of indigenous medical education.

This section will document how these five medical schools were selected and recruited for the study, the interview schedule that was used, and procedures about a survey they were invited to complete.

3.3.1.1 Stakeholder groups (participants) defined

For the purposes of this research it was determined that in order to establish a benchmark of indigenous medical curricula, the medical schools approached would need to fill the following criteria:

1. That the medical school had an indigenous medical curriculum in place for at least five years, so the data collected were able to reflect both barriers and enablers of curriculum attempts.
2. That at least one indigenous lecturer was employed by the medical school to capture the indigenous perspective of the barriers and enablers for indigenous medical education.
3. That curriculum time was allocated to the indigenous medical curriculum, so that comparisons could be made between medical schools that were actively attempting to promote an indigenous medical curriculum as part of their core curricula.

4. That the medical school had indigenous students enrolled within their programme, in order to discuss the impact of the indigenous medical curriculum on indigenous students.

Hence the criteria for selection were based on the need for this project to draw on a diverse range of experiences within a medical school, and to allow for comparisons between medical school experiences.

3.3.1.2 Sampling strategy

Purposeful selection utilises the researcher’s networks (and those of their support groups) to identify participants who meet the criteria to participate in the research (151). The researcher was familiar with a number of medical schools through the LIME and PRIDOC (Pacific Region Indigenous Doctors congress) networks (approximately 25 medical schools). The LIME and PRIDOC\textsuperscript{14} networks draw on medical schools predominately in the Pacific region (or within the Pacific Rim). For this research five medical schools (from four different countries) were purposefully selected because the researcher knew through her networking that these medical schools met the above criteria (3.3.1.1).

3.3.1.3 Recruitment of participants

Each institution was approached (specifically the person leading the design and development of the indigenous health curriculum) via a formal letter inviting participation in the research. Participants were asked to undertake an interview as well as complete a brief survey of the institution’s attributes. Two weeks after the formal invitation was sent out, follow-up phone calls were used to book interview times with each institution. All interviews were completed between December 2008 and March 2009.

\textsuperscript{14} PRIDOC: Pacific Region Indigenous Doctors Congress Conference. Members of indigenous doctors’ organisations from Australia, USA, Canada, New Zealand and Taiwan hold a biennial conference.
3.3.1.4 Semi-structured interview schedule

A semi-structured interview schedule was developed (Appendix H) exploring six specific topic areas, namely:

1. Capturing the antecedents that precipitated participants becoming involved in the indigenous health curriculum.
2. Perceptions of where participants saw indigenous health to be positioned within their medical curriculum.
3. The contribution of the indigenous health curriculum to a medical curriculum.
4. The exploration of enablers and barriers to implementing an indigenous health curriculum within their institution.
5. Participant views about the role of non-indigenous staff in teaching indigenous health content/curriculum.
6. The potential future place and position of indigenous health within the medical school institution.

It was hoped that the topic areas would capture the developmental journey of indigenous health within each medical school institution to provide an appropriate context to illustrate firstly, the current indigenous health curriculum (and how it had evolved within each medical school), and secondly, perceptions of possible changes to the indigenous health curriculum in the future (with clear reasons why these changes may occur). It was perceived that in understanding the current and future indigenous health curriculum a commentary could be made about the broader indigenous health curricula within medical schools in describing a context in which to compare and discuss the indigenous health medical curriculum at the UOC.

3.3.1.5 Survey of medical schools

Upon completion of the interview, participants were sent a brief survey (Appendix F) comprising three sections: medical school profile (4 questions), staffing resources (3 questions), and indigenous health curriculum (3 questions). Ten questions in total required participants to
tick an option box or fill in a number (e.g. student numbers/ hours teaching). All participants were expected to complete the survey electronically and return it to the researcher by email. The purpose of the survey was to collect data about the characteristics of each medical school; a survey was seen as a more succinct way to collect the data rather than through the interview, because it allowed participants time to access the required information from their institutions.

3.3.2 Phase two: Descriptive case design

Upon completion of phase one, phase two was then undertaken. The purpose of case study two was to gain an in-depth understanding of the intricacies of the design, development and impact of an indigenous health curriculum within one medical school. The descriptive case study design also provided the opportunity to draw perspectives of the indigenous health curriculum from multiple stakeholders.

The following section describes how stakeholder groups were defined, how participants were recruited, the content explored within the semi-structured interview schedule, and other sources of data that were accessed for the purposes of gaining further in-depth information to establish the relationship between medical education and its responsiveness to indigenous health at the UOC.

3.3.2.1 Stakeholder groups defined

Three specific stakeholder groups were identified by the researcher for this project. Given the different types of stakeholder groups (and the numbers within each group), the following section will outline the criteria for selection and the sampling method undertaken for each specific group.

1. The UOC staff. These were defined as containing three specific groups:

   A. **Systemic stakeholders** were defined as those specifically involved in the UOC management and curriculum development, and who contributed to key decision-making processes that influenced the development of the UOC indigenous health curriculum (as determined by their support group).
B. **Convenors of block modules** who had engaged at some level with the UOC indigenous health curriculum for at least two years. This was to ensure that convenors could share specific experiences they had with the UOC indigenous health curriculum, which was seen as important to ensure the depth of information was drawn for the purposes of the case study design.

C. **Indigenous health teaching team** (past and present). The UOC had employed six Māori staff members between 2001 and 2009 with specific teaching roles (either as lecturers or clinical lecturers). All of these staff members were invited to participate in this project. Three were currently employed at the UOC in 2009 at the time of the research.

2. The UOC students. For the purposes of this research, it was determined that students would have needed to have completed at least one full year at the UOC to be able to comment on the indigenous health curriculum there. Therefore, four groups were selected in 2009:

   A. Those students who started at the UOC in **2007** (excluding Māori students).
   
   B. Those students who started at the UOC in **2008** (excluding Māori students).
   
   C. Those students who started at the UOC in **2009** and who were interviewed at the end of that academic year (excluding Māori students).
   
   D. All students who identified their ethnicity as Māori on their student records.

3. Māori community stakeholders within the Christchurch area. This comprises two specific groups.

   A. Māori patients who had been interviewed by the UOC students (as part of their Hauora Māori patient case (a summative assessment)) in 2008 or 2009, and were able to be contacted by phone.
B. Māori health stakeholders who were identified as having had interaction with the UOC medical students on the ward and/or Māori patients who had reported their interactions with the UOC medical students to them.

3.3.2.2 Sampling strategies

Because phase two sought to capture multiple stakeholder perspectives, this phase also needed to employ different sampling strategies to ensure appropriate recruitment of participant cohorts. The following section clarifies which sampling strategies were used to recruit specific participant cohort groups: purposeful selection or random selection.

3.3.2.2.1 Purposeful selection

Purposeful selection is a common sampling technique in case study designs (151). The role of purposeful selection has been previously discussed in 3.3.1.2. and documents how this sampling strategy uses the researcher’s networks to locate participants who meet the inclusion criteria for the study. Because the researcher was a staff member of the UOC and the Māori health community, purposeful selection was able to be used to identify the UOC Staff (systemic stakeholders, course convenors and indigenous health teaching team) and Māori health stakeholders who met the inclusion criteria for the study.

3.3.2.2.2 Random selection

Random selection is a usual method for quantitative research which uses a register to sample from a whole population. Random selection usually requires large numbers of participants; the number selected being determined by calculated statistical power. However, random selection is also used in qualitative research when the research uses a nested sampling design. This type of design specifies that there needs to “be a credible comparison of two or more members of the same sub-group...wherein one or more members of the sub-group represents a sub-sample of the full sample.” (as illustrated in Figure 3) (144).
For this research a complete register of the population being studied (students and patients\textsuperscript{15}) was able to be determined and identified through the UOC indigenous health teaching team’s database. Therefore, stratified random selection was able to be used for students (by year group and non-Māori /Māori) and patients (attributes of students (gender and ethnicity)). Secondly, due to the researcher being an ‘insider’ at the UOC (and having direct teaching contact with each student at the UOC) and the Māori community, this sampling technique removed any possibility of selection and researcher bias. For this project, random selection was also used to respond to criticism that qualitative research could include key informant bias (and researcher bias) because it used unrepresentative key informants (144).

\textbf{Figure 4: Process of random selection in qualitative research (from Onwuegbuzie & Leech, 2007).}

\textsuperscript{15} All patients who are interviewed by a UOC student for the purposes of the Māori patient case are asked to sign a consent form. On the consent form they can identify if they are willing to be contacted about the interview they had undertaken. Patients who agree to this on the consent form are entered into a database which is audited for quality purposes each year.
All potential participants were allocated a study number and the RANDSAMP programme\textsuperscript{16} was used to complete the random selection process. An administrative manager oversaw the random selection process to ensure integrity of the process.

Unlike random selection in quantitative methods where the number of participants is selected on statistical power, it was assumed that the numbers selected would result in a saturation of codes/categories (152). Onwuegbuzie and Leech (144) report that for subgroup sampling there should be between 7 and 10 cases to provide enough data; if saturation of codes/categories was not met within this number of cases for this research, more students would be randomly selected.

3.3.2.2.3 Overall cohort group selection process

The following section describes how each cohort group selection process was undertaken. Table 5 highlights those selected as part of the purposeful selection process and identifies how many potential participants met the criteria to be selected. Table 6 and Table 7 detail the random selection process for the student and patient groups.

Table 5: Stakeholder purposefully selected by group names and pool numbers (that met inclusion criteria)

<table>
<thead>
<tr>
<th>Stakeholder group</th>
<th>Participant group</th>
<th>No. selected/how many in pool</th>
</tr>
</thead>
<tbody>
<tr>
<td>The UOC Staff</td>
<td>Systemic Stakeholders</td>
<td>4/4</td>
</tr>
<tr>
<td>The UOC Staff</td>
<td>Convenors</td>
<td>6/6</td>
</tr>
<tr>
<td>The UOC Staff</td>
<td>Indigenous health teaching team</td>
<td>6/6</td>
</tr>
<tr>
<td>Māori Community</td>
<td>Māori health workers</td>
<td>8/14</td>
</tr>
</tbody>
</table>

\textsuperscript{16} RANDSAMP is a programme specifically designed to randomly select participants from a list of potential participants. All names on the register are assigned a study number, the total study numbers are entered into RANDSAMP and then the number of required participants for each cohort. RANDSAMP then produces the study numbers of those randomly selected. This programme was designed specifically for the UOC biostatistics and has since been used in a number of research projects at the UOC.
Table 6: Students random selection outcomes by gender and ethnicity

<table>
<thead>
<tr>
<th>Students: Gender x Ethnicity Subgroup Sampling Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td>2007</td>
</tr>
<tr>
<td>2008</td>
</tr>
<tr>
<td>2009</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>2007</td>
</tr>
<tr>
<td>2008</td>
</tr>
<tr>
<td>2009</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Table 7: Māori Patients randomly selected (initial selection) by gender and by the ethnicity and year cohort of the student that interviewed them.

<table>
<thead>
<tr>
<th>Patients: Gender x (Ethnicity and year cohort of student that interviewed them)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td>2008</td>
</tr>
<tr>
<td>2009</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>2008</td>
</tr>
<tr>
<td>2009</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

3.3.2.3 Recruitment

All participants were sent an invitation to participate in the research via letter. Follow-up emails were then made with the UOC staff, the UOC students and Māori health stakeholders in order to organise interview times (either via face-to-face or via phone). Follow-up phone calls were made to Māori patients who had been selected to organise interview times (either face-to-face or via phone). All interviews were completed between October 2009 and March 2010.

3.3.2.4 Semi-structured interview schedule

An interview protocol was followed with all interviews (Appendix G). The semi-structured interview schedule used in phase one (Appendix H) was amended for phase two for each participant group (Appendices I-L) to explore the same six specific subject areas, namely:

1. Capturing the antecedents that precipitated participants becoming involved in an indigenous health curriculum.
2. Perceptions of where participants saw indigenous health curriculum is positioned within a medical curriculum.

3. The value added (or not added) by an indigenous health curriculum to a medical curriculum.

4. The exploration of enablers (and possible barriers) to implementing an indigenous health curriculum within their medical school institution.

5. Participant beliefs about the role of non-indigenous staff in teaching indigenous health content/curriculum.

6. The potential future place and position of indigenous health within the medical school institution.

It was hoped that this list would capture the perspectives of all stakeholders on firstly, the current indigenous health curriculum (and how it had evolved within each medical school institution), and secondly, perceptions about possible changes to the indigenous health curriculum in the future (with clear reasons why these changes may occur). It was proposed that using the same subject areas for each stakeholder group would allow for different experiences and perspectives of each cohort to be compared and contrasted. It was also hoped that the narrative would assist in understanding the context of the indigenous health medical curriculum at the UOC.

3.3.2.5 Other sources of data

Other sources of data pertaining to the years 2001-2010, in relation to the Hauora Māori curriculum, were accessed for the purpose of this thesis. These included actual clinical scenarios/experiences that had been emailed or reported from medical students, Māori health workers, and patients to the UOC indigenous health teaching team. The data were routinely available information collected by the indigenous health teaching team.

3.3.3 Response rates

The following section will present the response rates and how they were calculated for both phase one and phase two.
3.3.3.1 Phase one: multiple case study design

Five schools were identified by the researcher (and agreed to by the supervisors) as meeting the criteria for selection.

All five schools agreed to take part and interviews were completed. This involved three individual interviews and two focus group interviews. One focus group had three members and the other had two members.

Interviews with individuals ranged from 30 to 40 minutes, and between 40 to 60 minutes for the focus groups. All participants were given the option to be interviewed face-to-face or via telephone. Three interviews were completed face-to-face; the other two were via teleconference (for ease of time and travel commitments by the participants).

All schools returned the completed surveys. However, one school was unable to complete one question that required them to report the number of indigenous students, because their school did not break down the student population data by ethnicity/race.

3.3.3.2 Phase two: descriptive case design

Table 8 provides information on the final (random) selection of patients by characteristics of the student who interviewed them and Table 9 best illustrates the response rates of phase two, by stakeholder group.

Table 8: Māori Patients randomly selected (final selection) by the student’s gender/ethnicity/year cohort that interviewed them.

<table>
<thead>
<tr>
<th>Gender</th>
<th>NZ European</th>
<th>Asian</th>
<th>Other</th>
<th>Māori</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>n.4/11</td>
<td>n.2*/11</td>
<td>n.1/11</td>
<td>n.1*/11</td>
<td>n 15</td>
</tr>
<tr>
<td>2009</td>
<td>n.6/12</td>
<td>n.1/12</td>
<td>n.0/12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>n.3/11</td>
<td>n.1/11</td>
<td>n.0/11</td>
<td>n.0/11</td>
<td>n 8</td>
</tr>
<tr>
<td>2009</td>
<td>n.1/12</td>
<td>n.2/12</td>
<td>n.1/12</td>
<td>n.0/12</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>n 14</td>
<td>n 6</td>
<td>n 3</td>
<td>n 1*</td>
<td>n 23</td>
</tr>
</tbody>
</table>

* 1 patient was interviewed by two students, one of Māori ethnicity and one of Asian ethnicity. The patient is only counted once (under Asian ethnicity as this is the one they were randomly selected for) but also highlights that the patient commented on their experience with a Māori student.
### Table 9: Phase two: Final response rates by stakeholder group

<table>
<thead>
<tr>
<th>Stakeholder group</th>
<th>Type of Selection</th>
<th>No. of those initially selected</th>
<th>No. no longer eligible</th>
<th>No. of those that completed interviews</th>
<th>No re-selected</th>
<th>No. no longer eligible</th>
<th>No. that completed interviews</th>
<th>Total No. in each cohort</th>
<th>Response rate %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student: 2007</td>
<td>Random selection</td>
<td>8</td>
<td>1*</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>86</td>
</tr>
<tr>
<td>Student: 2008</td>
<td>Random selection</td>
<td>8</td>
<td>0</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td>100</td>
</tr>
<tr>
<td>Student: 2009</td>
<td>Random selection</td>
<td>8</td>
<td>0</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td>100</td>
</tr>
<tr>
<td>Māori students</td>
<td>Random selection</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>100</td>
</tr>
<tr>
<td>Course Convenors</td>
<td>Purposeful</td>
<td>6</td>
<td>1**</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>100</td>
</tr>
<tr>
<td>IH Teaching Team</td>
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<td>6</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>100</td>
</tr>
<tr>
<td>Systemic Stakeholders</td>
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<td>4</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>100</td>
</tr>
<tr>
<td>Māori Health Stakeholders</td>
<td>Purposeful</td>
<td>8</td>
<td>0</td>
<td>12***</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>12</td>
<td>150</td>
</tr>
<tr>
<td>Māori patients: 2008</td>
<td>Random selection</td>
<td>15</td>
<td>7****</td>
<td>8</td>
<td>8</td>
<td>5****</td>
<td>3</td>
<td>11</td>
<td>100</td>
</tr>
<tr>
<td>Māori patients: 2009</td>
<td>Random selection</td>
<td>15</td>
<td>8****</td>
<td>7</td>
<td>5</td>
<td>2****</td>
<td>3</td>
<td>11</td>
<td>100</td>
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<td>65</td>
<td>11</td>
<td>5</td>
<td>6</td>
<td>72</td>
<td></td>
</tr>
</tbody>
</table>

* One student had withdrawn from the UOC
** Had recently left position with the UOC
*** The focus group attracted more participants than were contacted, because they were Māori health stakeholders they were included.
**** Patient had either passed away or our contact information (according to their consent form) was out of date at the time of recruitment.

One student (2007) chose not to respond to the invitation letter and two follow-up emails (it was discovered later that this student was on an overseas elective at the time of the interviews, and because it was during the fourth quarter, they did not return to the UOC prior to graduation). All other eligible participants invited to be part of the study agreed to participate.

In total, 62 interviews were completed. This involved 60 individual interviews and two focus group interviews. One focus group was held with the present Indigenous health teaching team (three individuals) and the other was with a Māori health stakeholder group (nine individuals).

Interviews for individuals ranged from between 15 minutes and 40 minutes, and between 40 and 60 minutes for the focus groups. All participants were given the option to be interviewed face-to-face or via telephone. Thirty four participants chose to be interviewed via telephone (citing familiarity with the interviewer, or ease of time commitment). The remainder
(including both focus groups) of interviews occurred face-to-face at a UOC venue. All individuals received a koha for the time they contributed to the study.

The narrative shared by participants identified that students and Māori patients had a diverse range of experiences within the health system and the Māori community. Contrary to potential fears that cultural diversity of participants would not be achieved through random selection, students that were randomly selected (from the cohorts 2007-2009) came from different socio-economic, religious and ethnic groups. Māori student narrative was collected separately to ensure Māori student voice was included in the data. Within the numbers selected for each cohort, saturation of codes/categories (or otherwise known as theoretical saturation) was achieved, and therefore no further participants were sought.

3.4 Chapter summary

This chapter has described the methods chosen to address the main research aim. As this research addresses an indigenous health topic and has the potential to contribute to an indigenous medical education agenda, a Kaupapa Māori research methodology was employed. This research undertook two specific phases in an attempt to understand indigenous health curricula (international and national) and how they are positioned within medical education curriculum frameworks. Phase one, a multi-case study design, identified five different medical schools and documented how indigenous health was included within their medical school curricula. Phase two, a descriptive case study, explored multiple stakeholder perspectives on their understanding of the relationship between medical education and indigenous health within the UOC.

Inductive analysis was used to draw data from the narratives that were shared, using the tools of structural analysis, descriptive analysis and theoretical coding.

Both case studies used semi-structured interview schedules that explored the same six subject areas within all stakeholder groups, allowing contrast and comparisons to be made within the data. High response rates within the study highlight an acceptability of the research question, research approach, and implementation of the research.
Chapter Four: Results

Phase One: A Systematic Survey of Medical Schools in the Pacific Region in Relation to Delivery of Indigenous Health Curricula

4.1 Introduction

A key finding from the literature is the evidence that research into indigenous health curricula tends to focus on single case sites. As a result, this research sought to understand the processes and outcomes involved in the design, implementation, and measuring of the impact of an indigenous health curriculum within medical schools through the use of a multiple case study design (explained in 3.3.1). This design enables the researcher to identify differences and similarities between cases (medical schools). The multiple sites are bound by the concept of an indigenous health curriculum.

This initial project was undertaken with five medical schools from within the Pacific Rim countries (namely Aotearoa/New Zealand, USA, Canada and two from Australia). At the time of interview, three of the schools were six-year undergraduate-entry schools (although two were about to transition from an undergraduate programme to a four-year graduate programme) and two had always operated as four-year graduate-entry programmes. The schools varied in student numbers (ranging from 180 students per year group to 330 students per year group). Overall, indigenous student numbers were low in all schools varying from less than 1% to 9.7%. International student numbers within the institutions varied between 12.8% and 50%.

Data were collected using interviews and a survey. Semi-structured interviews were conducted with convenors/facilitators who were responsible for the indigenous health curriculum within their medical schools. Each convenor/facilitator then also completed a survey (one per school) that provided information on their broader school demographics and curriculum. The findings from the qualitative analysis and the survey responses have been synthesised to draw together an understanding of the complex factors and intricacies that contribute to the components of teaching an indigenous health curriculum.
Using the analysis process set out in Chapter 3 (3.2.2.3), data were allocated to the three sections: design of the curriculum, implementation of the curriculum, and impact of the curriculum. Each of these sections is presented using sub-categories to illustrate the depth and breadth of data located within each category.

This chapter reports how those responsible for indigenous health teaching within their medical schools have navigated their way through institutional structures and systems. In turn, it explains how they have constructed the framework for an indigenous health curriculum, and contributed to the growing body of knowledge on indigenous health curricula.

4.2 Section One: Design of the curriculum

Participants articulated how the design of the curriculum within their school had evolved over time due to different influences. These influences were captured within three specific sub-categories: support of systems, time in the curriculum, and indigenous health content.

4.2.1 Support of systems

The role of systemic influence was identified by participants in the shaping and/or re-forming of the indigenous health curriculum. These systemic influences were external to the indigenous health units and were seen as having the ability to either strengthen or weaken indigenous health curriculum gains. Specifically, participants discussed the systemic influence of the accreditation bodies, university leadership (such as Deans), the broader medical curriculum, and the indigenous community.

4.2.1.1 Accreditation bodies

Three of the five medical schools are based in Australasia, and hence are required to meet the accreditation standards of the Australian Medical Council (AMC). Since 2006 the indigenous health curriculum has become a compulsory section of the auditing process (153). Participants reported that the inclusion of indigenous content and teaching, within the AMC process, had institutional influence and encouraged their medical schools to include indigenous health as a core component of the medical curriculum:
There is also the AMC curriculum framework which is now part of the medical school accreditation so there is a little bit of teeth to actually having to have indigenous health curriculum embedded across your medical school teaching. This gives us I think more of a mandate or at least more power in saying well hold on a minute we have to have this curriculum because this is part of the medical school’s accreditation. (MS4)

Participants commented that the opportunity to be reviewed against standards external to their own institution supported them to advocate for the inclusion of an indigenous health curriculum that was aligned to the accreditation guidelines. The AMC accreditation process was identified as being a key driver to ensure indigenous health remained a recognised priority for Australasian medical schools.

The AMC process also provided cyclic feedback to medical schools about how well they were doing against the standards in between major auditing timeframes. Participants felt this was a useful process, not just for proposing changes but also for identifying strengths of indigenous programmes within schools:

> Often externalities like mid-way through their AMC review, that in the review at 5 years they acknowledge that the whole order of the Indigenous domain was quite exciting and they wanted to see more muscle on the skeleton by the time of the next review, this has been very important feedback. (MS1)

4.2.1.2 Graduate profile

Some participants credited the writing of a medical school graduate profile as assisting them to develop a clear direction for the design of the curriculum. These graduate profiles contained specific learning outcomes that their medical schools had committed to support. Within these medical schools, specific graduate learning outcomes were mapped to indigenous health. The graduate profiles were used to map the curriculum and to push for time and resources to ensure that learning outcomes could be achieved for each student:

> So we do have year-end graduate outcomes and we hope that we actually meet those outcomes...And that’s where it is very important to have control over the content of the curriculum because if other people try to chop and change it, then we lose our overall vision of what we are trying to achieve at the end of the day. (MS4)

Participants agreed that the formalisation by their institutions of the graduate profile also assisted in placing the indigenous health curriculum in a position of being more embedded in
the overall medical curriculum profile, and hence was seen to promote the longevity of an indigenous health curriculum:

_Making it more formalised and hopefully less vulnerable so really trying to think about what we want our graduates to be like at the end of things and working backwards from there has helped us to define what we teach and how we teach it, and when we teach it._ (MS1)

4.2.1.3 University leadership

It was perceived that systemic support from university leadership sent a clear message to the medical curriculum that the place of indigenous health was valued, and seen as ‘core’ business. Participants reported that within their medical schools the support of university leadership, such as deans, positively influenced the design and implementation of the indigenous health curriculum through two pathways. Firstly, systemic support (by those in university leadership positions) had assisted participants to be allocated time within the curriculum and to have resources to support the curriculum:

_I think it (indigenous health) is a critical piece of our curriculum. It’s certainly one that most of the people in power, like the Dean and the Head of the Office of Medical Education, they all agree that it is important._ (MS3)

Secondly, support from university leadership led to two specific systemic outcomes:

a. The creation of an indigenous health leadership role, which had the mandate to lead the indigenous health curriculum design and be a member of management committees that were key to making global curriculum decisions.

b. The formation of indigenous health units, which supported the development of capacity building to resource the implementation of the indigenous health curriculum.

_The Department of Indigenous Health was formed then we actually were part of the education division, we were then given the task of addressing Indigenous health disparities and cultural competency in the curriculum._ (MS3)

However, participants also noted that on-going university support would be required to address challenges for indigenous health within the curriculum, which included; small numbers of indigenous staff, changes to the curriculum (including timetabling changes), and structural changes (i.e. moving from undergraduate programmes to graduate programmes).
4.2.1.4 Indigenous Health curriculum within other health science disciplines

Some participants were responsible for the development of an indigenous health curriculum within both medical education and within other health science courses (e.g. occupational health, nursing), post-graduate courses (registrar/residency training), and also professional development for staff within their institutions. This meant that the design of their curriculum, although initially tailored to meet the needs of a medical curriculum, was often also required to be transferable to other health curriculum areas. Participants had developed general principles and objectives within indigenous health to enable this transferability to occur:

*So there is a real feeling I think from the lecturers as well as the Director of the Bachelor of Health Sciences that it is quite a useful process for the (health science) curriculum as a whole not just for an indigenous medical curriculum.* (MS1)

*In development at the moment are modules that we can use for staff...like generic modules that all staff can have so that they can at least improve their knowledge, awareness and understanding, but also to have clinical modules so they (staff/registrars) can really pick up and use depending on the level that they are working at within the system. From Specialists to PGY1 type level.* (ME4)

Participants identified that the absence of components of a humanistic curriculum within medicine/health sciences had also influenced the design of the indigenous health curriculum. They had seen a need to include a broader teaching content (such as self-reflection, clinical engagement, health disparities, social justice and unequal treatment) to provide students with a framework with which to understand the indigenous health curriculum. However, participants also noted that teaching broader content areas reduced time they were able to dedicate to teaching content aligned with indigenous health leaning outcomes. As this participant explained:

*So an example might be something like a critical reflection where we come to 5th year or wherever in the programme you are with the students to critically reflect on their own practice and on their own cultural competence development and yet it doesn’t seem to be part of their teaching and learning and so they actually haven’t been taught how to reflect and how to critically reflect on their own practice and professional development.* (MS1)

The data demonstrated that the indigenous health curriculum was of value to the overall medical curriculum because it supported not only the learning of indigenous health but contributed to broader educational objectives.
4.2.1.5 Indigenous community accountability

Participants identified three levels of community accountability, firstly, to the indigenous students who came through their institution, then to their local and regional indigenous stakeholders, and lastly to other national/international indigenous peers.

4.2.1.5.1 Indigenous students

Participants noted that in designing the curriculum they were mindful that although the majority of the students were not indigenous, there was a need to include content that supported the learning for indigenous students. This included two specific components, firstly having a structure within the school that indigenous students could access if they were exposed to backlash related to the indigenous content, and secondly ensuring that indigenous students had opportunities for extension learning when required. Some participants pointed out that the design of the curriculum was influential in their confidence around the recruitment and retention of indigenous students:

The other thing that it has done is that we made a conscious decision although we had a reasonable amount of curricula in place sometime ago, was not actively recruit students into an unsafe curricular environment and now that we are at least approaching a safer curricula environment it is a safer place to recruit students into. So while we still haven’t done very well in recruiting students, comparatively I would now happily recruit students into a medical environment. I think there are other schools within our university that I wouldn’t actively recruit students in for that same reason. (MS5)

Other participants reported that indigenous students’ motivation to support their community and indigenous health influenced the design of the curriculum by highlighting the need for indigenous students to have exposure to indigenous communities during their time within the medical curriculum:

It is very inspirational I think to see our indigenous students come through with the passion and commitment that they have to improving not only the health of their people but also going back and contributing to the community as a role model and in various other ways. (MS4)

Hence the indigenous health teaching team and systemic stakeholders identified that the design of the indigenous health curriculum was influenced by risk management for
indigenous students and providing opportunities to ensure indigenous students had opportunities for engaging with their own communities.

4.2.1.5.2 Indigenous communities

All participants discussed their membership in their indigenous communities, and how they were required to balance the demands of their institutions and the expectations of their communities. Participants reported that involvement in their communities assisted them to be grounded in current indigenous realities, while also challenging them over how they should work within the medical institution to support indigenous health gains:

*I think it is easy to turn around and say well it should always be by the community and I think that needs to be a balancing act between, what we as hopefully informed indigenous academics know in research... and ground that in community needs and community’s articulation of what they want as well.* (MS5)

The ability for the indigenous health curriculum to meet the needs of the indigenous community was identified as a specific institutional driver by participants in the design of the indigenous health curriculum. Therefore, participants articulated their accountability (as indigenous community members) to monitor the medical school’s responsiveness, as an institution, to the indigenous community:

*I think there is much more commitment of medical schools (than in previous years) to the indigenous community because I think as a group of doctors they see that they have actually failed to improve indigenous health so they do see medical education as a way of improving indigenous health.* (MS4)

4.2.1.5.3 National and international indigenous peers

Participants reported national and international medical school collaborations had provided opportunities for peer review and sharing of new ideas. Such opportunities had arisen from the PRIDOC and LIME networks. These collaborations had allowed participants to share resources, do site visits, and seek collegial advice within what was regarded as a small specialist workforce. Participants noted that these collaborations had allowed them to develop a larger indigenous support network than was possible within their own faculties/communities:
Actually I think that conversation I had with X, it really changed how we looked at trying to address things and helped me gain the confidence in asking for things, and having the strength to just say no we are looking at indigenous health and no I am not going to do more bi-culture health care. (MS3)

National and international collaborations provided the opportunity for participants to collate the findings from different medical schools’ research activities, evaluation results and other initiatives:

Certainly interestingly international more than national collaboration about how you guys do things for example, and how X does things and through thinking and critiquing more broadly on how it applies. Those relationships I think are quite important in the development of how we do what we do. (MS5)

4.2.1.6 Summary

The following summary points are drawn from this section.

- Systemic support was critical to the positioning of indigenous health within the medical curriculum for all five medical schools. Specifically, accreditation boards were identified as having a major influence in defining the place of indigenous health within a medical curriculum.

- Medical school leadership provided an influential vehicle in which to support the design and development of indigenous health within medical and other health science courses.

- Participants were mindful that indigenous students and the indigenous community were important stakeholders and there was a need for consistent monitoring of the indigenous health medical curriculum to ensure it was tailored to meet the needs and improve outcomes for both these stakeholders.

- Participants also noted the importance of the broader peer support that came from other indigenous health convenors/facilitators from other medical schools (nationally and internationally).
4.2.2 Time in the curriculum

Participants identified that the first stage in designing a curriculum was to secure time within their institutions. Table 10 illustrates the teaching hours that were allocated to indigenous health in 2009 across the five medical schools.

Table 10: Learning hours allocated to each year of indigenous health teaching within medical school curriculum in 2009

<table>
<thead>
<tr>
<th>Teaching year</th>
<th>Medical School A</th>
<th>Medical School B</th>
<th>Medical School C</th>
<th>Medical School D</th>
<th>Medical School E</th>
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<tr>
<td></td>
<td>Learning hours</td>
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<td>10</td>
</tr>
<tr>
<td>Total Hours</td>
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<td>8</td>
<td>9.5</td>
<td>55</td>
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</table>

The following section will explore the context in which indigenous health convenors/facilitators sought to establish the above times within their individual medical schools and their perceived levels of satisfaction with current allocated learning hours and timetabling.

4.2.2.1 Institutional processes for negotiating curriculum time

Participants commented that although the graduate profile showed their institution’s commitment to meet the indigenous health curriculum learning outcomes, gaining time to teach against the learning outcomes was complicated.

Participants were able to map the history of their medical school teaching in indigenous health, which ranged from 3 years to 27 years for the five medical schools. Participants noted that their institutions had traditional teaching areas that were well embedded in the curriculum timetable. Therefore, their experience in trying to gain time within the curriculum was often met with the narrative that their allocation of time would mean a traditional teaching area would lose time (which was articulated as not ideal by the institution).
All other medical school sites clearly articulated that negotiating time within the curriculum was an on-going and difficult process. Participants noted that within their medical schools the institutional processes for re-negotiating the structure of the medical curriculum and time allocations was not clear and/or lacked transparency. Participants had engaged in different strategies to accumulate more time within their existing curriculum structure. This involved: working alongside other convenors to integrate indigenous health into their modules/cases (e.g. diabetes), identifying ‘unused’ time within the current curriculum and using this time, and teaching outside the usual curriculum times (e.g. weekends). It was noted by participants that using weekends was a last resort because it increased pressures on the indigenous health teaching team and was often met with resistance by students:

So that was when things started and the first thing we got really was we asked for weekends so it didn’t take anytime from the curriculum. (MS3)

Participants discussed different strategies that had enabled them to ‘prove their worth’ as a new area in medical education, seeking more curriculum time. One such strategy used at a number of the medical schools included the indigenous health team teaching a session/course (in formal learning time or outside of usual hours) and then evaluating that part of the programme. After these initiatives student evaluations had shown the initiative to be of value to the curriculum. This feedback was presented to various institutional stakeholders (including medical education committees). Because of positive student (and sometimes staff) feedback, time within the curriculum was ‘freed up’ by others to ensure that the initiative could be repeated in subsequent years within ‘usual’ teaching hours:

We got a really good response from the students...so that gave us confidence to go back to the Office of Medical Education and say we would like to do more...every year they have been giving us a little more time and so I have been grateful for that. The first year we got an hour and then next year we got a workshop for 4 hours and then the next year we got the workshop plus an additional hour and then this year we got the workshop and an hour, and an hour and a half of an elective. (MS3)

Only one medical school reported that the allocation of time to indigenous health was well supported and the barrier was less about timetabling and more about ensuring that there was collegial support for the expected teaching initiatives. The vehicle for this time allocation was due to the entire medical curriculum transitioning to a new curriculum:
Not really finding space in the curriculum because people … are quite agreeable to finding ways to work together to integrate indigenous health curricula. But … other barriers are a very small percentage of what I would describe as not team players have taken out indigenous content without consultation. (MS5)

4.2.2.2. Satisfaction with time in curriculum

Only one medical school was satisfied with their curriculum time, and noted that this was because they had been able to ask for specific timetable requirements during an overall restructure of the entire curriculum. However, participants from the other four medical schools noted that, despite some gains in curriculum time, to achieve their learning outcomes more time would be required. Therefore, the overall levels of satisfaction with time allocations were low. They pointed out that unless a broader medical education mapping exercise within their medical institutions was undertaken so that allocation to other curriculum areas could also be evaluated, they could not see how indigenous health could advocate for the necessary time to meet its learning outcomes:

Although we have made quite a bit of progress in terms of getting the indigenous health curriculum into various bits of the [medical] curriculum over the last decade, I think it is still pretty marginal and there is still huge room for improvement and room for getting more into the curriculum and much more presence and in a much more integrated way...although it is a bit of a battle at each step of the way. (MS1)

All participants had a number of curriculum initiatives they would like to trial if more curriculum time became available, including an increase in indigenous patient/community contact time and assessments.

4.2.2.3 Summary

The following summary points are drawn from this section.

- The design of an indigenous health medical curriculum is highly influenced by the time secured for the indigenous health curriculum.

- Indigenous health was in constant negotiation with the broader medical school timetable for space, as a resource, to design a course that aligned with learning outcomes.
Four out of five medical schools did not perceive that they were receiving adequate time in the curriculum to design a course that would align with the graduate learning outcomes.

4.2.3 Curriculum content

Participants acknowledged the work of those who had gone before them in attempting to embed the curriculum within the medical school, and their own role in now using new evidence in both indigenous health and medical education to develop a course that would be responsive both to student demands and indigenous health priorities:

*It wasn’t something that was born the other day, it has actually been there but it has been in various forms of vulnerability and now how do we build on it, embed it. It is always going to need constant work, constant refinement and constant development. Just like I imagine the cardiovascular system does and infectious disease does and public health does in the curriculum.* (MS1)

Designing the curriculum had been a difficult task, with the dearth of relevant literature or role model cases about indigenous health curricula that were transferrable to their own school. Therefore, participants and their teaching units had sought to trial different approaches to work through which content and teaching methods were best aligned to their learning outcomes:

*I think you look back and what I would have done nearly a decade ago and cringe but this is part of developing in a world still quite relatively new. That is to be expected.* (MS5)

The following section will highlight the priority content areas identified from the data including re-presenting perspectives of indigenous health, inequalities, patient engagement strategies, and indigenous health initiatives.
4.2.3.1 Re-presenting perspectives of indigenous health

Participants identified that one of the greatest influences on their content – external to the University – was the course content within each country’s primary/secondary school system. The current education system and the content it covered were noted as continuing to be a strong colonising tool. Participants noted that a lot of their teaching content was trying to ‘un-teach’ incorrect historical facts or biased opinions about indigenous communities. It was hoped that if primary/secondary school curricula were changed to reflect more current evidence, then the role and content of indigenous health within the curriculum might be able to be refined further and advanced:

*I hope the future for us will be that we have proper indigenous health history and culture teaching in schools (primary and secondary) so that we are not addressing everything in the tertiary sector. I am really hoping that once the school’s programme is actually fixed up then we can actually start at a more sophisticated level instead of indigenous 101 kind of thing, and that will make a huge difference.* (MS4)

Participants explained that unless they put time aside within the beginning of their curriculum to present an indigenous perspective on colonisation and settlement of the country, it was impossible to present further content without student opposition and bias. Therefore, this was seen as the priority content and viewed as pivotal to providing an appropriate foundation for all other indigenous content, regardless of how much time was allocated to the indigenous health curriculum.

4.2.3.2 Health Inequalities and inequities

In the discussion about content within the school’s indigenous health curriculum, there was a strong emphasis from all schools on the need to include content that covered current health inequalities and inequities between indigenous and non-indigenous populations. The emergence of a clear evidence base for health inequalities (technical reports, government reports and publications over the last 20 years) had assisted in providing a framework for

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17 The author acknowledges Linda Smith who references this term. It acknowledges learners have already had prior exposure to a colonial perspective on the history of a country, and the role to present the learner with the history of a country from an indigenous perspective. Hence - the need to re-present the information. This term was referenced in 115.

teaching indigenous health inequalities. This included differential health care service provision, racism, determinants of health, and the impact of differential service delivery:

*I think it (the curriculum) probably has a pretty big public health focus and has quite a population approach compared to other people who seem to want more of an individual, how do I….deal with my individual patients and their family…and yet we are trying to pull it back and say well where do we as health professionals fit into the creation maintenance and elimination of inequalities and therefore indigenous health improvement. (MS1)*

*We probably have been at odds though with some of the other educators thinking that they just want us to teach the students how to manage diabetes, whereas we want to teach the students about racism and health inequality and social determinants, so it is important to be in control of your content. (MS4)*

However, participants also noted that it was not their sole responsibility as indigenous health teachers to provide students with information about health inequalities for indigenous peoples, and that throughout the medical curriculum this content could be integrated through other courses by all teaching staff:

*And I also think that whether people or not realise, that just about everyone is doing some element of indigenous health teaching….when I was at medical school I just remember every little disease or thing you learnt about – they would go through the epidemiology and surprise-surprise there would be inequality between indigenous and non-indigenous. (MS1)*

### 4.2.3.3 Engagement with indigenous patients

Another area of content development that was seen as pivotal to the indigenous health curriculum was a large emphasis on learning how to engage with indigenous patients. This skill was perceived as supporting medical students in improving their clinical interactions with indigenous patients/communities, and was described as a strategy that was tailored to address health inequalities. Each medical school had, over time, developed its own model for teaching strategies in improving clinician/indigenous patient communication. These included specific frameworks on: how to introduce oneself (as a clinician) in line with indigenous protocols/expectations; rules of engagement on specific health topics or in relation to particular body parts/disease; understanding culturally appropriate boundaries; how to direct lines of clinical enquiry using cultural guidelines; and learning how to involve the family/community within the consultation process:
It is really about establishing trust and how to do that and so that’s what I am hoping
the benefits are and that when they see an indigenous patient in the office, that they
don’t just think about the traditional patient/doctor interaction, that they remember that
the family is a crucial part of this patient’s care and they might think of resources in
the community to help the patient address these things. (MS3)

Not all of the medical school sites were in a position where they had time in the curriculum
for teaching this aspect of the content, but all viewed it as being an important aspect of
competency training in indigenous health.

4.2.3.4 Indigenous health initiatives
Medical school sites over the years have developed relationships with their local indigenous
community stakeholders. These stakeholders included indigenous health provider networks,
indigenous health workers within mainstream organisations, indigenous doctors/allied health
professionals, and indigenous healers. Their expertise in cultural issues and their willingness
to see this content included in the curriculum was noted as a crucial influence on the design
of the curriculum and the tailoring of the content.

Participants expressed the importance of students being presented with case studies and
community examples which illustrated indigenous responses to current health outcomes.
This was pointed out as important to ensure that students could see that the community is
proactive in attempting to improve their own health outcomes. It also allowed students to
view indigenous patients/communities from a non-deficit lens, and assisted with countering
beliefs about indigenous patients/communities being lazy, non-motivated and/or fatalistic. It
also provided students with models of health that were based on indigenous beliefs/practices
and that were successful in working with indigenous populations:

We spend a lot of time with the students focussing on the positive stuff so it is not all –
they see an Indigenous patient and automatically associate them with the high risk of
diabetes and cardiovascular disease and cancers – but they also realise that it is a very
vibrant, strong culture that is still quite alive...so they understand the relevance of
health, land and water...and also the role of traditional healing and traditional healing
practices. (MS3)

To ensure this content was placed into an appropriate context for students, participants
reported using traditional healers, site visits to places of traditional significance or of healing,
site visits to indigenous health providers (with both indigenous and/or non-indigenous staff) and indigenous health stakeholders:

*It gives him (indigenous healer) this abundant autonomy that he can really do whatever he needs to do with the students… they are going out to the community, they are going on plant walks, he’s taken them out on the land… connecting them with other healers that they might need for their own growth and personal development.* (MS2)

4.2.3.5 Summary

All five schools had developed the following similar indigenous health curriculum content areas:

- The opportunity to teach an indigenous perspective of their country’s history supporting the presentation of the on-going impact of colonisation on indigenous populations.

- Participants noted the importance of health inequalities and inequities of indigenous populations, engagement with indigenous patients, and indigenous health initiatives that provided the basic scaffolding for their indigenous health medical curricula.

4.3 Section Two: Implementation of the curriculum

Once the curriculum was designed, the logistics of implementation presented further challenges for participants. These included negotiation for resources, integration of content within other areas of the medical curriculum, the role of non-indigenous colleagues, and the importance of future planning for the sustainability of indigenous health within the curriculum.

4.3.1 Curriculum resources

In terms of resourcing the indigenous health curriculum (i.e. of teaching staff and costs involved in running a programme), four out of five of the medical schools funded indigenous health teaching initiatives as a core part of the overall medical education curriculum. However, for the fifth medical school it was expected that convenors/facilitators would seek external funding for some of their curriculum initiatives. Externally funded initiatives were seen as leaving the indigenous health curriculum vulnerable from year to year in what could be planned as ‘core’ curriculum and what would be seen as ‘possible curriculum’:

*We got a big grant which will allow us to really work into the curriculum more. My concern is and when we come with money it is easier to get time, my concern is if we*
should lose this grant and it is not renewed, that the whole issue of institutionalisation is critical, because I might have to say we can’t do the immersion this semester because we have no budget...but then the next semester if I get the money then it is in the curriculum...the students love it, they showcased it when we had accreditation for our medical school...I think that is a concern ...in the future...not so much getting people to buy the value of what we are doing, but to actually get the money behind the talk I think is going to be the challenge. (MS3)

For all schools, participants reported that the employment of teaching staff (with allocated teaching tenths) was not naturally aligned with time in the curriculum, nor with indigenous health learning outcomes. Participants shared their experiences of the employment of one person (usually part time) allocated to start the development of the curriculum, and then, over time, the teaching time increased for that person and/or other teaching resources were provided for other staff members. There was no clear process identified by participants to determine if their medical school had a formula for the allocation of teaching resources aligned with the medical curriculum. They were unsure whether they had similar, fewer or more resources than other teaching disciplines. However, they did note that unlike the other clinical disciplines they did not have the ability to draw on registrars/residents, because indigenous health was not a clinical speciality.

Table 11 documents the 2009 full time equivalent (FTE\textsuperscript{18}) resource allocated to the teaching of indigenous health in relation to the allocated learning time of indigenous health and class numbers per year in each medical school. This table illustrates the variation across medical schools of how indigenous health is resourced.

\begin{table}[h]
\centering
\begin{tabular}{|l|c|c|c|c|c|}
\hline
& Medical School A & Medical School B & Medical School C & Medical School D & Medical School E \\
\hline
Total Indigenous Health learning time (hours) & 57 & 8 & 9.5 & 55 & 54 \\
\hline
Number of students in each class (per year group) & 170 (x5) & 160 (x4) & 85 (x4) & 200 (x6) & 330 (x6) \\
\hline
FTE Allocation & 4 & 2 & 0.5 & 4 & 1 \\
\hline
\end{tabular}
\caption{Teaching resources allocated to each medical school in relation to timetabled teaching hours and class numbers}
\end{table}

\textsuperscript{18} FTE: In this context it refers to the full time equivalent paid for lecturer/teacher salaries within each medical school.
4.3.2 Indigenous leadership

In all schools the employment of indigenous staff to teach the curriculum preceded the formal employment of indigenous leadership positions (convenors/facilitators/ Associate Professor or Associate Dean roles). Although participants noted that FTE allocation was vital to curriculum delivery, they highlighted the need for a specific indigenous leadership role within the institution. This role was seen as pivotal to ensuring that there was some capacity to develop and lead a clear and succinct curriculum:

> From my perspective once we started, once someone started to take a key responsibility for it, it became much easier to incorporate in my own teaching because there was actually a planned approach and development going on rather than a pressure to contribute here and there but not in a particularly organised way. (MS1)

Participants commented that without an indigenous leadership position there were risks that a curriculum would be vulnerable to institutional change. They saw it as important that an indigenous staff member was given the mandate (by senior management) to have a voice on curriculum committees and to advocate for indigenous health to remain on the curriculum agenda:

> I am optimistic that we will lead indigenous health teaching into a more cohesive and thoughtfully considered endeavour, so that it’s not the ad hoc approach and not a reactive approach but having a vision and map of how and where we are heading, which we don’t have the moment. So that is where I would hope we would go but given that I don’t know, we have this huge resource issue and also new leadership, don’t actually know what will happen. (MS2)

4.3.3 Indigenous Health teaching teams

Specifically, in relation to staffing issues, it emerged that the greatest reported satisfaction came from the employment of teaching teams as opposed to individual indigenous health lecturers:

> I think they (the medical school) had a real need for indigenous representation. But it was really difficult because there weren’t enough of us to be representative. And when X and Y came along there was more capacity. (MS1)

Participants reported that being part of a team assisted in developing ideas about content and delivery, gave the ability to do smaller group work, provided opportunities for peer review, and
made them feel more part of the institution. Sometimes this ‘team’ approach was not achieved within medical schools and the participants reported building support with other indigenous health workers who would give time to support the implementation of the curriculum:

*I have a couple of people on the team that have been volunteering to help me with this work for years and I have finally been able to get some grant funding to at least give them a small FTE and I think I have just been very lucky that I have had people that are willing to help with this work because it is really something that not one person can do…but it has really been a team approach.* (MS3)

*I am hopeful and optimistic because we have just shifted and physically moved our indigenous programme, so it’s a coordinator and an administrative assistant, myself and X, so the four indigenous employees.* (MS2)

The schools used a range of staff resources to deliver the indigenous health curriculum. Table 12 identifies the range of expertise used within the five medical schools to deliver the 2009 indigenous health curriculum.

**Table 12: Staff resources used to deliver the indigenous health curriculum in 2009.**

<table>
<thead>
<tr>
<th></th>
<th>Medical School A</th>
<th>Medical School B</th>
<th>Medical School C</th>
<th>Medical School D</th>
<th>Medical School E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indigenous Doctors</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Non-Indigenous Doctors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Indigenous Allied Health Professionals</td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Indigenous Educationalists</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Non-Indigenous Educationalists</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Indigenous Administrative Staff</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Non-Indigenous Administrative Staff</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (Specify)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

|                         |                  |                  |                  |                  |                  |

4.3.4 Working with the indigenous community

Participants had designed a curriculum that was responsive to the learning needs of the indigenous community and the medical students; however, to implement this curriculum often required more resources than the employed FTE allocation to the indigenous health teaching resource. Thus, participants had drawn on the indigenous health community in an
attempt to deliver a curriculum that matched the learning outcomes. Table 13 presents the hours of unpaid indigenous community resource used to support the indigenous health curriculum within each of the five medical schools in 2009, it shows the high variability of use of the indigenous community between each medical school.

Participants noted that students benefited from exposure to the indigenous community, who brought with them experiences within the health system that gave context to the indigenous health curriculum (from health provider, indigenous health advocate and indigenous patient perspectives). However, the sustainability of such resources over time was difficult for participants to predict, because indigenous health providers/advocates had their own outputs to achieve and their involvement in the indigenous health curriculum was reliant on the goodwill of their employers. It was also unknown if indigenous patients would continue to prioritise time to support the delivery of the indigenous health curriculum.

Table 13: Hours of unpaid indigenous community resource used to deliver the indigenous health curriculum in 2009

<table>
<thead>
<tr>
<th>Hours</th>
<th>Medical School A</th>
<th>Medical School B</th>
<th>Medical School C</th>
<th>Medical School D</th>
<th>Medical School E</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – 2</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>3-5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6-10</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>11-15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16-20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21-25</td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>

4.3.5 Vertical and horizontal integration of indigenous health content

It was clear from participants’ dialogues that indigenous health taught in isolation from a clinical context was perceived by students as having less relevance and therefore placing a lesser value on the indigenous health curriculum. It was therefore suggested that all indigenous health teaching needs to have some level of integration within clinical attachments to be successful:
I think that it is really important that indigenous health isn’t siloed and there actually needs to be integrated teaching...when we got this then we needed to work out how we embed that and we have got some focus on it. (MS1)

Participants did not foresee that the next 5-10 years would bring about significant systemic structures that would change their current teaching resources (people and money). The discussion of the future of the indigenous health curriculum was firmly based in the reality of working within an institution as it currently operated as opposed to any upcoming radical change:

I think in a general direction given that we are hoping to increase the footprint if you like of our indigenous health curriculum, but we are unlikely to significantly increase our capacity in terms of indigenous health teaching academic staff. (MS1)

I think ultimately...we will get the same outcomes because I don’t think the outcomes really change. I mean you really want doctors to be much more responsive and sensitive and understand culture and diversity and a whole pile of things that is going to make them better practitioners and better citizens in regards to their relationships with the indigenous population. So I don’t think that sort of outcome will change. (MS3)

Because of this, participants discussed ‘realistically’ that their greatest hope would be that there would be more integration of the indigenous health content within the overall medical school.

Where should it be in my mind, it should be woven throughout the entire curriculum and it should really be a thoughtful considered evolution whereby the students are given some building blocks and some foundation that is subsequently built on to accommodate into their actual clinical practice. That would be my ideal to be able to see that flow and that fluidity so that ultimately at the end of their training they would have developed an awareness and self awareness. (MS2)

Table 14 identifies where indigenous health curricula are being implemented within the five medical schools in 2009. The tables identified large variations between medical schools with medical school D occupying a larger scope of teaching settings than other schools.
Table 14: Teaching setting of indigenous health curriculum content in 2009

<table>
<thead>
<tr>
<th>Teaching setting</th>
<th>Medical School A</th>
<th>Medical School B</th>
<th>Medical School C</th>
<th>Medical School D</th>
<th>Medical School E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within clinical attachments</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Within specific Indigenous health allocated time in small teaching sessions</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within specific Indigenous health allocated time in teaching blocks (of a day or more)</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Within mainstream community placements with Indigenous patients</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Within Indigenous community placements</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>With guest Indigenous presenters</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independent student learning time</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Co-taught alongside non-indigenous teachers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taught by non-indigenous teachers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.3.6 Using PBL/CBL

When a medical school used the medium of teaching course content via Problem Based learning (PBL) or Case Based learning (CBL), then the indigenous health curriculum content was driven by the structure of this teaching medium. Specifically, these cases were required to contain content that identified specific indigenous cultural indicators that would influence the assessment or management of the patient:

And another alternative example would be in PBLs for example having the socio-cultural context of perhaps a Sudanese refugee and then your final question is how would your management differ if this was an indigenous patient? And you get the students to reflect on the decision around their case, that you ask them to reflect on how might this be different if this was your grandmother and they have to reflect on their own context then about what they might do differently. (MS5)

Participants identified that if the case was facilitated by an indigenous tutor the teaching was seen as more likely to be in line with indigenous health objectives because the content was known by the indigenous tutor:
So one of the good things that we had was after they were done with the indigenous case…we had an hour and a half with them and we talked about why the culture and the psycho-social issues were put in the case and we were able to focus on those issues. (MS3)

However, one of the perceived weaknesses of using this teaching method for indigenous health was when the case was facilitated by tutors without indigenous health expertise, because student feedback pointed out that the ‘indigeneity’ of the case was then often overlooked. Tutor background often influenced what the tutor was prepared to teach about the case, and when tutors were not confident with indigenous issues or when tutors were not clinicians who had worked with indigenous patients there was more likely to be an absence in delivery of the intended indigenous health curriculum.

I think with the PBL our issue has been trying to get them to talk of the psycho-social cultural issues has been more a tutor factor and I don’t think it has been so much a clinician factor as a basic scientist versus a clinician factor. (MS3)

In response to this, some participants had been able to put into place specific training for tutors for these sessions in an attempt to ensure indigenous content was not excluded from the teaching:

We say in the PBLs ….we will do a session with the tutors to prepare them for that indigenous PBL so there is always that up-skilling process because we can’t provide that many indigenous tutors. We do actually provide indigenous community members to come in for the first year of the indigenous PBL so they do get an indigenous voice but there is an up-skilling process for the tutors which we do every year. (MS4)

4.3.7 Role of non-indigenous colleagues

All participants were clear that development of the indigenous health curriculum is the role and responsibility of the indigenous health team. However they also saw a clear place for non-indigenous colleagues within the implementation of the indigenous health curriculum.

Participants highlighted that because the existing indigenous health workforce is small, it means that there are few available indigenous teachers, indigenous students and indigenous resources to draw on to teach the planned curriculum. Therefore, the ability to use non-indigenous staff to implement the curriculum was seen as vital for schools to be able to cover the required content in order to meet their learning objectives/outcomes:
You are never going to have a medical school in (Country) taught all the way through indigenous academics...so there is a pure workforce issue there. So you need to have jobs done, and you need people to do it...I think that are inevitable because of our workforce issues, we just don’t have the capacity to deliver the content exclusively from our indigenous faculty. (MS2)

The ability to have non-indigenous staff teach was also seen as positive because it provided a teaching medium by which students could hear about indigenous content from the perspective of a non-indigenous teacher/doctor. This was seen as valuable for three main reasons: first, it showed that there is a role for non-indigenous doctors to be informed and advocate for indigenous health; second, it provided a space for non-indigenous doctors to discuss issues they had faced when working alongside indigenous patients/community; and lastly, it allowed non-indigenous colleagues to reinforce the importance of the indigenous health curriculum:

*I think absolutely there is a responsibility for non-indigenous teachers to demonstrate their cultural competence through their teaching and that they have to be culturally competent teachers.* (MS1)

There appeared to be two different approaches to the inclusion of non-indigenous teachers. The first was to have non-indigenous colleagues teach content (on their own) in line with the indigenous health curriculum; the other was to only have non-indigenous teachers teach content if an indigenous colleague was present:

*We should be doing it in tandem. I think our responsibility is to model the very dynamics and relationship that we want our students to take up and so the best way to do that is just to model it through our own interaction...I think that any time we are discussing indigenous health issues we need to have indigenous people in the room.* (MS2)

*But in terms of impact on students (non-indigenous teacher on their own) ...I think a partnership approach is fairly important because that’s what they are going to be faced with when they get out of medical school anyway as well as what I mentioned in terms of mentoring.* (MS5)

Participants saw the strength in non-indigenous colleagues as being able to teach within their own speciality areas and apply indigenous health content within this context. They saw this medium as an effective vehicle to apply vertical/horizontal integration of indigenous content throughout the curriculum:
I think one of the things that we are still trying to do and have lots of work to do is developing the capacity for non-indigenous people to include indigenous aspects and indigenous health in their teaching in their areas, because indigenous health is important...it is applicable across every area. (MS1)

### 4.3.8 Future considerations for the indigenous health curriculum

Participants noted that the general medical education environment was changing to meet the needs of growing numbers of medical students within each of their institutions. Participants also reflected that in the future such changes to the wider curriculum would affect the way they delivered indigenous health. Specifically, participants discussed the impact of students being placed away from the main medical school campus and their aspirations to change the broader medical curriculum through new indigenous health curriculum initiatives.

#### 4.3.8.1 Distant taught learning initiatives

Participants remarked that they would like to develop distant taught tools to support the indigenous health teaching, in order to meet the changing needs of their institutions. They discussed how more students were being placed in rural and/or other teaching sites away from the main school campus and that future plans for the schools would see more students spending some or all of their time in other teaching locations. They wanted to re-design the curriculum to meet the needs of the changing ‘classroom’. Some of their ideas included being responsive to distance learning through: e-learning opportunities; running courses through learning management platforms such as Moodle® or Blackboard® and other online products; working with indigenous health resources currently in those communities; and a greater role for non-indigenous colleagues:

*I imagine the future holds different technology. I can see that we may teach differently in the future. There may be more e-learning for example. I mean if you think about what students do today ...they can just download it off the internet...so face-to-face teaching in some respects has become a little bit redundant...I wouldn’t want to lose face-to-face teaching...I think that it is really important...but we are going to have to compete with new technology, new teaching techniques as they come in. And how we then translate whatever the future holds within a culture model will be I guess one of those things we are going to have to tease out as we go along. (MS4)*

*I think there is going to be much more of a need for, you know, us to be overseeing rather than doing all the teaching and assessments of indigenous health and I think that also ties in with the non-indigenous workforce and having much more culturally competent clinicians. I sort of see that as a key direction. (MS1)*
4.3.8.2 Aspirations for the indigenous health curriculum

Although most participants were very pragmatic when discussing their vision for the future of the indigenous health curriculum, some aspired to new initiatives within the curriculum. One participant wanted to be able to follow another medical school’s lead in developing an indigenous health speciality stream\(^{19}\) into their curriculum within the next 5 years. Another participant hoped that one of the outcomes from a growing indigenous health workforce might include the opportunity for all students to experience working alongside an indigenous clinician during their training:

\begin{quote}
We are hoping to have an indigenous health speciality stream like X have...so that we graduate maybe up to 5 or 10 students (per year) with an indigenous health specialisation. (MS5)
\end{quote}

\begin{quote}
An important aspect of indigenous health is that we want our students to meet indigenous people in a professional role well and truly before they meet indigenous peoples in the deficit model as a patient with problems. (MS4)
\end{quote}

Overall, participants identified that they hoped that the place of indigenous health would become solidified enough within the curriculum that its place would be valued and not threatened by changes in staffing or institutional reform.

4.3.9 Summary

The following summary points are drawn from this section.

- Participants explained that implementing an indigenous health medical curriculum within their current work context required understanding how to increase their resources through current institutional processes/protocols. However, it was noted that a clear formula within one’s medical school on how to determine ‘appropriate’ levels of resources was difficult to determine.

- A key success factor in indigenous health curriculum development was noted as including indigenous leadership and the presence of indigenous health teaching teams. This

\(^{19}\) A course that students gain entry into and that throughout their medical school are offered opportunities to undertake specific indigenous placements and indigenous health training. Modelled after rural speciality courses available in medical schools.
supported indigenous health being kept on the medical school agenda while also improving levels of satisfaction within the working environment.

- Participants had accessed indigenous community stakeholders and non-indigenous colleagues to assist in the delivery of the indigenous health curriculum.

- All participants pointed out that there would be a need to develop distance taught tools to teach indigenous health within the future.

### 4.4. Section Three: Evaluation/quality measures of the curriculum

Participants were very motivated not only to design and implement a curriculum but also to measure its impact. All participants discussed how they took the opportunity to measure the uptake (knowledge and skills) of the curriculum (through a variation of assessments) and also to gauge whether students saw value in this curriculum (through formal and informal student feedback mediums). Table 15 identifies the types of assessments used as part of the indigenous health curriculum at each school and identifies whether student evaluations were also undertaken in that year, in relation to the learning hours allocated to the indigenous health curriculum at each school. The table illustrates that there is high variability in the amount of assessment relative to the learning time in the curriculum amongst each of the medical school sites.
Table 15: Types of assessments and evaluations utilised as part of the indigenous health curriculum in 2009

<table>
<thead>
<tr>
<th>Types of Assessments and Evaluations</th>
<th>Type</th>
<th>Medical school A</th>
<th>Medical school B</th>
<th>Medical school C</th>
<th>Medical school D</th>
<th>Medical school E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning time in the curriculum</td>
<td></td>
<td>57</td>
<td>8</td>
<td>9.5</td>
<td>55</td>
<td>54</td>
</tr>
<tr>
<td>Interview with an indigenous patient and required to present it in written or oral form.</td>
<td>Assessment</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple Choice Questions (MCQ)</td>
<td>Assessment</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Short Answer Questions.</td>
<td>Assessment</td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Objective Structured Clinical Exam (OSCE)</td>
<td>Assessment</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (Specify)</td>
<td>Assessment</td>
<td>Are doing case based assessment in 2011</td>
<td>Case reports, reflective commentary, longitudinal study, clinical supervisor report forms</td>
<td>PBL, pre and post testing of course content</td>
<td>Reflective journal; essay, tutorial presentation, PBLs; CBLs</td>
<td>Essays</td>
</tr>
<tr>
<td>Written formal student feedback undertaken</td>
<td>Evaluation</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

The following section will explore how participants measured the impact of their delivered curriculum.

4.4.1 Assessment of indigenous health learning

All medical schools engaged in some level of student assessment as part of their indigenous health curriculum (see Table 6). Participants noted that the level of assessment had developed organically over time was often based on teaching resources, time of indigenous health being taught at the school, and time available within the current curriculum to host the assessment.

Participants acknowledged that to ensure indigenous health was valued by the institution and by students; assessments were an important vehicle for measuring the learning outcomes. However, it was also noted that the assessment of indigenous health learning is a relatively new field of development within indigenous health for many of the schools:
**Good to do the teaching and the assessment, I think that is another area that we are starting on but sometimes there are certain things that land a bit behind and I think that we possibly need to do more there.** (MS1)

The participants noted that some of the assessments were solely allocated to indigenous health, whereas other assessments were integrated into other discipline areas, e.g. paediatrics. Because assessment of indigenous health is a new area, participants reported that they are still working through which assessments are best aligned with the learning outcomes of their curriculum, where they are best placed (within years of the curriculum, within indigenous health specific time or within other attachments), and what resources are required to implement and mark such assessments. Because of this, peer review and student evaluations played an important part of how the impact of these assessments was measured:

*I can guide a discussion around these issues but really the experts are going to be the students because they are the ones that have had the content integrated for them, that’s really the most important piece right – that self-reflective piece.* (MS2)

Therefore, although there was an aim to create constructive alignment among planned learning outcomes, teaching methods and assessment, the quality of this constructive alignment was highly influenced by the resources (personnel, time in curriculum) available to the indigenous health curriculum.

### 4.4.2 Written formal student course evaluations

Participants identified that their medical schools used written formal student course evaluation data to gauge the acceptability and quality of the programmes being delivered. All participants discussed how this method of collating student feedback had assisted them to identify that some of their attempts to teach particular learning objectives had been successful, while others had disengaged students from their programme. This was seen as invaluable to allow the convenor/facilitator to further refine and tailor their programme until student feedback aligned with the expectations of the convenor/facilitator:

*To be fair, a few years ago when I started the students could possibly have rightfully complained that we were given the same lecture which was possibly a post-graduate lecture to every single year. Well that is how I started off…they started complaining they were getting the same thing over and over…So I face up to my naivety and lack of understanding and that when I started and so it is about how you develop a curriculum*
that has got the layers of the onion in it...so how do you start with some basics and then increase people’s depth of understanding and drag them kicking and screaming into a critical analysis sort of thing. (MS1)

(in terms of one of the assessments)...I think as I understood from our evaluations we got this year, it really was creating more resentment around the topic of indigenous health rather than actually opening the dialogue. So that needs to change. (MS2)

Some participants noted that assessments could measure uptake of knowledge and skills, but evaluations allowed for the students to identify changes in their perspective/attitude as a result of the course. Participants were impressed by comments from students which reflected their journey of de-colonisation, re-addressing racist discourse and an awakened sense of social justice:

And the students who are resistant or who are antagonistic actually a lot of them are noisy but then some of the work that we get them to do is very useful in getting them to shift their focus and go oh, I thought I knew and now I know I don’t or now I know a different way of thinking about these issues, so it has actually been, some of the learning that we get them to do is quite strategic in shifting focus and shifting understanding. (MS4)

Positive student evaluation data were noted to have the power to advocate for the indigenous health curriculum, especially when systemic challenges over time and value in the curriculum were raised. Students’ ability to identify strengths of the indigenous programme and ‘broader applicability’ was often utilised as strong evidence of the place of indigenous health within the medical curriculum:

Because we are fairly strong on our evaluation process so the evaluation stuff that we do is often very useful if we ever come across people in faculty who aren’t so keen. (MS4)

Informal student evaluations (e.g. brief discussion as a class, email feedback from class/individuals, face to face conversation) were also seen as useful in assisting the participants to gauge engagement in the curriculum and the value of particular components that were being trialled:

The students came away from her lecture feeling like they had concrete tools they could use. (MS2)
This informal feedback channel at times also allowed participants to gauge when indigenous health was being taught by other disciplines, and was seen as counterproductive or in conflict with the indigenous health curriculum by students:

One of the best recording mechanisms actually is some of the exposure that our indigenous students get that they then bring back to us, and then we have to go and address with whoever the lecture was or whatever. But because we have got this mandate and it is clear within the faculty, we have no qualms about going and addressing individual tutors or lecturers or whatever if we think that something is a bit amiss. (MS4)

Student feedback (formal and informal) also highlighted gaps within the wider medical curriculum, including teaching about other ethnic cultures. It was perceived that because indigenous health was the only place students were taught about ‘another culture’, other than biomedical, it became a logical place for students to raise their concern about perceived weaknesses in the broader curriculum:

Like I said about once a year we get a student on their evaluation that says you know what about all the other groups (ethnic cultures) or you know just doesn’t get it (why they were teaching indigenous health). (MS3)

Student assessment data and course feedback were the main evaluation methods used to measure the impact of the indigenous health curriculum. There was clear articulation that often student engagement in indigenous health was influenced by students’ prior knowledge and perspectives rather than the curriculum that was being presented. It was also noted that from a life-long learning perspective, many of the principles of the indigenous health curriculum would only be seen as valuable at the point where students were having more exposure to indigenous patients, which perhaps might be post-graduation:

We have done some evaluation of what we do. I found that quite a hard thing in terms of resources and time...It is certainly not driven by student quality of teaching questionnaires because I don’t think most students who don’t do the readings don’t have a right to have an opinion on the quality of teaching. (MS5)

I guess improving the quality of the curriculum on an on-going basis but sometimes it is also difficult when with some of the feedback, in sort of saying well we actually think that this is important even if students don’t actually highly value it, because they don’t quite understand the impact of it until later on down the track. So there is a kind of...jostling around how you do evaluate your curriculum and what you keep and what
you don’t because some of it I think is important for a different reason that what the students’ perception might be, so there is a bit of difficulty there. (MS4)

However, participants also were clear that student feedback could not be the sole marker of a quality course. They identified the importance of gathering information from other stakeholders (including indigenous health teaching staff and the indigenous community), although to date this had not been formally instituted.

4.4.3 Impact on post-graduate training

In terms of measuring the impact of the indigenous health curriculum, many participants commented that there is not always a clear alignment between the medical school and post-graduate courses. It was difficult to determine whether the current indigenous health curriculum does or could be manifested in changes to health outcomes for indigenous patients/communities. This was further confounded by the data that noted many practising clinicians may also have been trained overseas and have had no local indigenous health induction upon starting in their new position.

Participants felt positive about the vertical integration of indigenous health extending beyond the medical school into the environment where junior doctors were having more contact with indigenous patients/communities. However, they also noted that this extension of the curriculum raised many challenges for the resourcing of such programmes:

*The thing is it is going to have to be different, quite different learning; it is going to have to be a lot more. I think we are going to a whole different field of teaching and learning with mechanics of technologies and stuff like that...* (MS1)

*We do meet with students (in post-graduate courses) 2 hours 4 times a year which is actually pretty good but it is really hard to get into this curriculum time because they only have a half day once a week where they all get together for lectures and stuff... Right now our funding doesn’t give us any money to do post-graduate stuff so that would be something we would have to find some other funding for if we wanted to push through some of the other post-graduate programmes.* (MS3)

Participants noted that the relationships between universities and specialist college training programmes required further development before it was feasible to actually start planning how indigenous health could be included in post-graduate courses:
We already do psych registrar training…the relationship between the colleges and the universities is something I don’t fully understand but I do think that we are particularly well placed to help with the vertical integration of indigenous health within the colleges. Whether the university want that or not is unclear but it is clear in some colleges that it is what they want. (MS5)

4.4.4 Peer networks

The idea of working alongside other indigenous health units, where an indigenous health curriculum was being taught within different medical schools, was seen as very attractive by participants. The opportunity to discuss similar institutional challenges (time in curriculum, resourcing), student feedback and teaching innovations was noted as a vehicle for overall curriculum development. Participants used these opportunities to seek peer review as part of their process of measuring the impact of their curriculum:

Because we are isolated we don’t get as much collaboration as we would like…I think hearing about other programmes and results of research would be really good learning for us as well…I think to look at medical indigenous health or medical education across the other universities and other countries would be great for the future if we had a closer relationship. (MS4)

Participants perceived that more national and international collaborations between medical schools would allow for an evidence base on the impact of an indigenous health curriculum to develop and provide a solid scientific basis to future curriculum development:

And I think there is a need for it…it will provide a greater evidence base around how we do, what we do and what the impact and effect of what we do is. (MS5)

It is much more than developing that body of knowledge around indigenous health teaching and learning nationally and internationally. I think hopefully that will inform future direction. (MS1)

4.4.5 Summary

The following summary points are drawn from this section.

- Although assessment of indigenous health learning is a relatively new field of development, all participants were excited about its ability to measure student uptake of indigenous health curriculum outcomes.
• Student evaluations are the only method currently used to measure the impact of the indigenous health curriculum. To date, feedback has been pivotal in the on-going development of indigenous health curricula, and provides data to advocate for indigenous health curriculum resources.

• There is a need to develop other methods of measuring the impact of the indigenous health curriculum which involved a wide range of stakeholders (including indigenous health teaching staff and community).

• It was identified that medical schools need to build relationships with post-graduate medical courses to ensure students are further extended along the indigenous health curriculum.

• Participants would like to work more collaboratively with their national and international peers to further refine indigenous health assessment.

4.5 Chapter summary

From phase one of the research, a picture begins to emerge of the factors that contribute to the development and evolution of indigenous health curricula in medical schools.

Participants reported that because indigenous health was a relatively new discipline within medical education, it was still negotiating its place within a traditional framework. This included proving to other disciplines that indigenous health had a rightful place within a biomedically dominated curriculum. Because of this, participants discussed the importance of systemic support in the form of university leadership and accreditation processes as both influential and vital to the validation of indigenous health within the medical curricula.

Systemic supports (university leadership and accreditation processes) had led to providing indigenous health with time in the curriculum. Although the processes within medical schools varied in negotiating this time, the available time allocated to indigenous health in the curriculum was seen to have the greatest influence over the design of the curriculum. Participants would determine what time they had, and in what format before then prioritising which content areas could be covered. This design was highly influenced by class sizes and
how often classes were required to be taught. Inequalities and communication strategies were identified across all medical schools as their prioritised content areas based on allocated time in the curriculum.

Some of the greatest challenges to the implementation of the indigenous health curriculum were to teach the planned curriculum with limited teaching resources (both staffing and monetary). These challenges were often addressed through working alongside the indigenous community volunteers and the support from non-indigenous colleagues (through vertical/horizontal integration of content in other courses). However, participants were keen to continue to develop the curriculum and find other ways of gaining resources so that they could implement the type of curriculum that they felt would better meet learning outcomes and community expectations.

All participants had trialled and explored different assessment and evaluation techniques in order to measure the impact of their curriculum. However, all participants confirmed that without assessment the indigenous health curriculum had no way of establishing whether or not there was an uptake of course content, or whether the teaching methods were able to meet the identified learning outcomes. Therefore, current assessment undertaken within the schools was seen as pivotal to supporting students to be measured against the graduate profile. The variation of types of assessments utilised by medical schools was reflective of both the length of time the indigenous course had existed within the curriculum and teaching resources. Interestingly, no school reported using the results of such assessments as an evaluation method.

All schools used formal student evaluations as a method of exploring the students’ perceptions of the course, and to gain an understanding of which content and teaching methods were accepted as strengths/weaknesses of the curriculum delivery. These data were then used to further refine curriculum content and delivery as well as advocate for the place of indigenous health within the curriculum. However, there were concerns expressed by participants that student evaluation data could not be the only means of evaluating the content and quality of the course. Hence, participants had sought peer review from indigenous
colleagues working within other medical schools (nationally and internationally), indigenous stakeholders, and non-indigenous colleagues to gain other perspectives on how to determine the relevance and quality of the delivered curriculum.

Although the institutional and curriculum structures varied across all five sites, what did emerge is that participants were able to provide a broad context in which to understand the current strengths and vulnerabilities of indigenous health within medical schools. The framework used to explore the design, implementation and impact of the curriculum provides an appropriate structure for the exploration of the UOC as a case study.
CHAPTER FIVE: RESULTS 2
Phase Two: University of Otago, Christchurch - Factors influencing the design of the indigenous health curriculum

5.1 Introduction
The categories of design, implementation, and impact were used within the analysis, in an attempt to understand the UOC Hauora Māori curriculum in relation to other indigenous health medical curricula.

The following three chapters will present the findings in that same order; firstly this chapter will document the factors that have influenced the design of the UOC Hauora Māori curriculum. Chapter six will explore stakeholder perceptions of the implementation of the UOC Hauora Māori curriculum, and lastly chapter seven will identify how stakeholders determine the impact of the UOC Hauora Māori curriculum.

Specifically, this chapter will present the findings that were allocated to the category of Design. The method employed in phase two has been previously documented in 3.3.2. In brief, it involved purposeful selection of informants from the indigenous health teaching team, UOC conveners, systemic stakeholders, and indigenous health stakeholders. It also involved random selection of students and indigenous patients who had been interviewed by the UOC students. All participants were interviewed using a semi-structured interview schedule which explored six pre-determined subject areas. Data analysis drew together both similar and diverse perspectives from the UOC stakeholder groups. From this data analysis three sub-categories emerged: support of systems, time in curriculum, and curriculum content.

5.2 Support of systems
Like the other medical schools (4.2.1), stakeholders reported on the influence of systemic processes/protocols on the indigenous health curriculum. Within the findings, five sub-
categories emerged which included the influence of accreditation bodies, the graduate profile, university leadership, the broader medical curriculum, and indigenous community accountability.

5.2.1 Accreditation bodies

The findings identified that the accreditation processes of the AMC and the MCNZ had a strong influence on the design of the indigenous health curriculum. This was because each accreditation body specifically provided institutions with criteria for indigenous health curricula.

Stakeholders perceived the AMC requirements were not tokenistic, because the learning outcomes for indigenous health were extensive and covered a broad range of areas. They also noted that the development of these objectives was completed in consultation with indigenous health stakeholders:

“So the AMC, you know, they tell us – to meet those requirements… there’s lots of things we have to do for the AMC and that is one (indigenous health) of them.” (SS3)

Stakeholders noted that the MCNZ’s cultural competence programme (which included indigenous health outcomes) was a compulsory component of the on-going registration requirements for all doctors in Aotearoa/New Zealand. Stakeholders articulated the need for these accreditation guidelines to be integrated into the undergraduate curriculum so that graduating students met the requirements for registration with the MCNZ. Stakeholders commented that the MCNZ competencies validated the role of an indigenous health curriculum within medical schools:

“The Medical Council now requires doctors for their professional development and re-accreditation to achieve points or accredits for cultural competency. Now in my college we have quite a detailed process around that and it’s expected of us. It’s expected that in order to remain competent practitioners in ‘X’ medicine we will achieve culturally competent practice. It’s a given.” (SC 1)

Māori health stakeholders noted that accreditation protocols/processes provided systemic accountability to ensure that the indigenous health curriculum was delivered within medical schools. They noted that accreditation processes solidified good practice, so that when
students graduated they were more likely to continue this type of ‘competent’ practice because it had been ‘normalised’ within their training. Thus, they saw it as important for the medical school to design the curriculum in line with current protocols/processes by appropriate accreditation bodies.

5.2.2 Graduate profile

The ‘Medical Graduate Profile’ at the University of Otago articulates the personal, interactive and disciplinary attributes that should be attained by its medical students upon graduation. Within this graduate profile, the University of Otago affirmed the importance of its graduates being culturally competent practitioners and able to contribute to Māori health gain through their practice.

The indigenous health teaching team reported that the presence of indigenous health outcomes within the graduate profile validated the presence of an indigenous health curriculum. It also influenced the design of the curriculum because it highlighted learning outcomes that would be assessable, therefore which curriculum content was deemed as ‘core’. Drawn from the University of Otago graduate profile, the following graduate outcomes were identified as having a direct alignment to the indigenous health curriculum:

1.12 A commitment to advocate for the health needs of individuals and communities
2.4 Respect for, and an ability to respond to the cultural context and aspirations of patients, colleagues, other health care workers and communities
2.5 An understanding of and an ability to respond to the obligations of the Treaty of Waitangi
2.6 Oral and written communication skills, including an ability to communicate effectively with individuals, groups and communities, both within and beyond the health sector
3.3 A sense of social responsibility and an understanding of the contribution of doctor, health services, society and political influences to the health outcomes of patients
3.6 Knowledge of factors impacting on the health status of Māori and other cultures
3.14 A sense of social responsibility and an understanding of the roles and functions of healthcare institutions in the social and political environment
Systemic and Māori health stakeholders discussed the graduate profile as a tool by which to monitor the medical school’s responsiveness to Māori health:

*And what I see ... that Hauora Māori has added to this curriculum and the learning that students ... is a knowledge of Hauora Māori and how they, as graduating clinicians... how they contribute to health outcomes of Māori and hopefully improving those health outcomes overall.* (SS 4)

Systemic and Māori health stakeholders also commented that over time the graduate profile should be re-visited to ensure that the current assessment results and graduate feedback could act as evidence for either maintaining the status quo or changing content areas.

Māori health stakeholders saw the graduate profile and course design as iterative. They identified their aspirations for the medical school to produce students who were both clinically and culturally competent to work with Māori, and pointed out that health inequalities for Māori would not be addressed until such a goal was achieved:

*I would like to think that those who graduate from the University of Otago would have sufficient confidence and knowledge to understand the fundamentals of ... in particular Māori cultural difference, ... if they graduate prepared to improve their skills and knowledge ... armed with the tools to know where to go when they need help, when they are out of their depth, but have enough (skills) to actually ... do a basic consult in an appropriate way then that’s a good start.* (SMC 2)

### 5.2.3 University leadership

The indigenous health teaching team, Māori health stakeholders, and systemic stakeholders noted that the design of the UOC Hauora Māori curriculum had been influenced by the support of the UOC leadership. Specifically, stakeholders noted that two specific deans of the school had been highly influential in ensuring that Hauora Māori was not only recognised at the UOC, but also had a vehicle through which to deliver a Hauora Māori curriculum (an indigenous health teaching unit). The allocation of funds and resources had allowed the Hauora Māori curriculum to be designed using a gradual and developmental approach, because long-term funding for the curriculum was secured. It also provided funds to involve ‘guest lecturers’ and the appointment of clinical lecturers, which broadened the scope and potential of what could be included in the design of the UOC Hauora Māori curriculum.
The indigenous health teaching team also recognised that the design of the UOC Hauora Māori curriculum had been influenced by the Medical Education Advisor and other resources within the UOC medical education unit. This support had exposed the indigenous health teaching team to a wider medical education context, and assisted in assessing how this might be applicable to indigenous health, for example, understanding how to apply learning objectives to a vertical module, matching learning outcomes with relevant assessments tools, and gauging the measurement of professional attitudes.

The role of course convenors was also noted by the indigenous health teaching team as influential in the design of the UOC Hauora Māori course. Course convenors had provided time in the curriculum for Hauora Māori, but also suggested areas of content they thought were absent from the UOC medical course and that needed to be included because of its relevance to Māori (e.g. rheumatic fever, bronchiectasis). This allowed a ‘new curriculum area’ to work alongside traditional curriculum areas, establish relationships, and set the foundation for collaborative work between the disciplines.

5.2.4 General medical curriculum

Systemic stakeholders and course convenors acknowledged that absence of some content within the general medical curriculum (e.g. knowledge and skills in relation to cultural competence, racism and the impacts of racial profiling/stereotyping on health outcomes) also influenced the design of the Hauora Māori curriculum. Therefore, in order for the UOC Hauora Māori curriculum to be able to teach indigenous health concepts, it was also expected to teach a broader framework of cultural competence, so that students had a context in which to place the UOC Hauora Māori curriculum.

However, systemic stakeholders and course convenors also reported that with a full curriculum timetable, modules whose design had content that was transferable to other parts of the medical curriculum were seen to add greater value to the overall curriculum. Because the UOC Hauora Māori curriculum design required its content to include indigeneity, ethnicity, disparity, clinical skills, epidemiology, community engagement, institutional
structures and cultural competency, it was viewed by these stakeholders as adding value to the overall UOC curriculum:

*I think things that should have a priority in the curriculum are things that sort of tick more than one box...they’re generic... So to my mind, things that should have a priority are things that, yes, if you’d learn about it here, it’s actually going to have spin-offs for other things. So that’s, and Hauora ticks that box, doesn’t it? (SS 3)*

However, the indigenous health teaching team and indigenous community health stakeholders expressed their expectation that the broader medical curriculum needed to include more teaching of cultural competence and professionalism to provide an appropriate context for teaching the indigenous health curriculum.

The indigenous health teaching team, course convenors and Māori health stakeholders identified that within the broader area of medical education their colleagues were familiar with the core curriculum content, even if it was not their speciality area. However, the lack of knowledge about the Hauora Māori content/curriculum influenced the design of the curriculum. The indigenous health teaching team acknowledged that because their peers were not familiar with their curriculum, it was unlikely students would see the knowledge/skills they were being taught modelled on the wards:

*I think too that the other issue is when we sit round a convenors’ meeting ...is that nobody knows what we do, plus they don’t know how to work with Māori either so when... I go well you know they weren’t able to do whakawhānaungatanga you can see their faces going crap we wouldn’t know how to do that either ... so they also don’t know what we do cause they don’t do it, which is different from when we’re talking about other areas. (STT1)*

The Hauora Māori curriculum needed to develop opportunities for students to see this behaviour modelled to validate the relevance of the content. The indigenous health teaching team discussed the use of simulated patients, videos and clinical screening opportunities with the Māori community as a conduit to providing students with opportunities to see the curriculum modelled within a clinical setting.

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20 Whakawhānaungatanga: to build relationships/support networks
5.2.5 Indigenous community feedback

The indigenous health teaching team identified three key indigenous stakeholders who assisted them in the design of their curriculum: the indigenous students, the indigenous community, and their international indigenous peers.

5.2.5.1 Indigenous students

The indigenous health teaching team and some of the systemic stakeholders highlighted that the design of the Hauora Māori curriculum needed to also add value to the learning of indigenous students (because the overall curriculum tended to be focused on non-Māori learners due to their larger numbers). They noted that indigenous students were not homogeneous in their experiences with Māori cultural practices and beliefs, and thus they needed to ensure that the curriculum design provided indigenous students with the opportunity to acquire new Hauora Māori knowledge.

The indigenous health teaching team also commented that they actively sought feedback from indigenous students, often informally, about their experience in the curriculum. Indigenous students commented that if their peers were positive about the Hauora Māori curriculum then it created a more conducive learning environment for indigenous students. Therefore, the design of the course needed to be mindful of any potential backlash for indigenous students within the course. This included ensuring that the design of the UOC Hauora Māori curriculum was not dependent on indigenous students as ‘Hauora Māori experts’ but rather, included them with their class as learners.

5.2.5.2 Indigenous health stakeholders

The Hauora Māori curriculum design was highly influenced by the Māori health stakeholders. Formal and informal communication strategies were put into place to facilitate continual peer review of the indigenous health curriculum by the indigenous health stakeholders. This stakeholder group was depicted by the indigenous health teaching team as having high levels of ‘Hauora Māori competencies’. Over the period of 2001-2010, the indigenous health teaching team sought feedback from Māori health stakeholders, who reported on their own interaction with the UOC students (on the wards/community settings
and/or during their involvement with student assessments (e.g. OSCE). They also reported on feedback they had received from Māori patients who had interacted with the UOC students in the wards/community.

The indigenous health teaching team stated that they were grateful for the collegial support they received from the Māori health stakeholders. This included the sharing of clinical cases (discussed without patient name or identifiers) where Hauora Māori cultural knowledge and skills were necessary to understand the presenting complaint or the behaviour exhibited by the patient (often perceived by others as non-compliant, upset and/or withdrawn). These cases were then used to determine what Hauora Māori knowledge and skills would be required for a medical student to ensure good quality care. This content validation discussion then informed curriculum design and development. On some occasions, and with appropriate permission, these cases were used as paper-based cases or taught using a simulated patient method.

The current communication strategy in place between the indigenous health teaching team and the Māori health stakeholders was seen by the indigenous health teaching team as a good format to seek peer review of the curriculum. Māori health stakeholders also used it as a medium for monitoring the changes in approach by the indigenous health teaching team. Information exchanged between stakeholders was used to further tailor the design of the curriculum, as it highlighted weaknesses and strengths in the current programme and was able to identify the knowledge/skills that students were and were not applying within a clinical setting.

5.2.5.3 International indigenous peers

The indigenous health teaching team discussed how, over the years, they have become involved in the LIME network and PRIDOC. They explained how interaction with these two organisations had assisted them to see how other medical schools and post-graduate colleges were developing an indigenous health curriculum within medical education. This had led to developing specific relationships with other indigenous health teaching teams which included
staff exchanges to observe teaching methods and styles, and to gain more information about curriculum content and assessment.

These staff exchanges had influenced the design of the curriculum at the UOC by prompting changes to the curriculum or affirming confidence in methods they currently used, including the following:

1. Increased level of tribal and traditional Māori knowledge content throughout the Hauora Māori curriculum.

2. Acknowledging what students have already learnt in their wider medical school curriculum and its relevance to working with Māori patients.

3. Providing non-indigenous colleagues with a clear orientation to the expected cultural knowledge/skills they would need to be able to ‘teach’ components of the indigenous health curriculum.

4. The inclusion of teaching international indigenous health outcomes, to provide a context for the Hauora Māori curriculum.

5. Refinement of assessments.

One other content thing I think that’s been huge has been the international input like our international mates and our international experience which has helped us to kind of reflect on what we’re doing, how it sits with other people because some of our strongest lessons have been from people who have come from the outside. (STT 1)

Therefore, this interaction with international peers had continued to influence the design of the UOC Hauora Māori curriculum.

5.2.6 Summary

The following summary points are drawn from this section.

- Systemic support was seen as a key influence in the creation and retention of indigenous health within the UOC.

- The role of the AMC and NZMC was seen as pivotal in ensuring that indigenous health was retained as a priority area within medical education, while the university leadership
and their commitment to deliver a high quality indigenous health programme ensured teaching resources were allocated to this agenda.

- The influence of the medical education unit and course convenors was also identified as a key influence in the design of the Hauora Māori curricula at the UOC. Without this advocacy, the initial institutional drive to address indigenous health may not have occurred as ‘early’ as 2001.

- The indigenous health teaching team also reflected on the important role of the indigenous community (students, Māori health workers and their international indigenous peers) in assisting them to prioritise what should be included within the indigenous health curriculum.

5.3 Time in curriculum
The indigenous health teaching team identified the relevance of time allocations in the design of the UOC Hauora Māori curriculum. Specifically, the four sub-categories that arose were: initial time allocation model; impact of curriculum structural changes to time allocation; loci of time allocation; and satisfaction with time allocation.

5.3.1 Initial timetable (2001-2009)
The initial design of the Hauora Māori curriculum was dictated by the ability of the indigenous health teaching team to negotiate with individual block module convenors for curriculum time. Table 16 details the allocated learning time assigned to the Hauora Māori curriculum, categorised by whether it was immersed (taught in full day(s) specifically allocated to Hauora Māori) or integrated (Hauora Māori content within clinical teaching areas). It is noted, that until 2009, time allocation was highly influenced by a systemic support for specific ‘immersed’ time in Hauora Māori and existing relationships or the goodwill of course convenors to surrender their allocated time of ‘traditional’ content for the teaching of indigenous health.
Table 16: The UOC Hauora Māori timetable 2001-2009

<table>
<thead>
<tr>
<th>Year/FTE allocation</th>
<th>Immersed Hauora Māori Teaching time (per student)</th>
<th>Integrated within block modules (per student)</th>
<th>Total hours of Hauora Māori for each student</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4th Year</td>
<td>5th Year</td>
<td>4th Year</td>
</tr>
<tr>
<td>2001/ (0.2)</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>2002/ (0.4)</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>2003 / (0.6)</td>
<td>14</td>
<td>0</td>
<td>1</td>
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<tr>
<td>2004 / (0.6)</td>
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<td>0</td>
<td>2</td>
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<tr>
<td>2005 / (0.8)</td>
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<td>0</td>
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<td>2006/ (0.8)</td>
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<tr>
<td>2007/ (1.2)</td>
<td>14</td>
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<td>2008/ (1.2)</td>
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<td>2.5</td>
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<tr>
<td>2009/ (1.4)</td>
<td>14</td>
<td>14</td>
<td>2.5</td>
</tr>
</tbody>
</table>

The design of the curriculum was highly influenced by these initial negotiations between the Indigenous health teaching team and course convenors, as some course convenors were happy to have the Indigenous health teaching team determine the content and method of teaching during that time, whereas others were clear that the content had to align within the block module’s learning objectives.

5.3.2 Impact of structure change to timetable (2010)

The Indigenous health teaching team and systemic stakeholders explained that in 2010 there was a change within the UOC timetable structure, where vertical modules were allocated separate learning hours from block module times. Within this re-allocation of time Hauora Māori was allocated the same teaching hours as Clinical Skills, Science and Medicine and Ethics/Professional Development, which increased the learning time to six hours per block rotation (four rotations per academic year). In addition to the new vertical module time allocation, immersed teaching times for Hauora Māori remained. Table 17 highlights the impact of the structural timetable change for Hauora Māori in relation to the earlier timetable model. It can be seen that the time allocation for Hauora Māori increased learning hours for both 4th and 5th year; the reduction in teaching tenths (noted in table 17 in 2010) came from a staff member leaving the UOC, and due to financial constraints within the UOC at the time, these teaching tenths were not fully replaced.
### Table 17: The UOC Hauora Māori timetable 2001-2010

<table>
<thead>
<tr>
<th>Year/FTE allocation</th>
<th>Immersed Hauora Māori Teaching time (per student)</th>
<th>Integrated within block modules (per student)</th>
<th>Specific vertical module allocated time.</th>
<th>Total hours of Hauora Māori for each student</th>
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*the new curriculum structural changes started in 4th year in 2010 and rolled into 5th year in 2011.

The immersed teaching time allocated to 5th year in 2011 was 24 hours.

The indigenous health teaching team felt confident that while the previous timetable model had been highly dependent on the goodwill of course convenors, the new timetable model highlighted Hauora Māori as an independent module and validated Hauora Māori as a ‘core’ component of the UOC curriculum:

> You being in a school where actually we’re allowed to take them away for 2 ½ days that we actually now have some control over… [our] teaching in terms of scheduling and, but that we’re not fighting, you know like when we first started we’d be filing for 1 or 2 hours and now Hauora Māori is on the same par as clinical skills, PD, science and medicine and we’re allocated similar periods of time…People and convenors kind of just take it for granted that Hauora Māori will be somewhere in their run, that’s the sense I get…: Yeah. There’s not as much opposition any more. (SST 1)

Systemic stakeholders noted that because of positive student feedback to the content and teaching methods of the indigenous health teaching team, the past vulnerability of Hauora Māori had been reduced. Systemic stakeholders reported that the development of the curriculum from a few hours to a vertical module was largely due to the passion and commitment of the indigenous health teaching team over the last 10 years. They pointed out that the time allocated to Hauora Māori had been earned because of the quality of curriculum being delivered:

> I do believe it has established itself quite nicely within the undergraduate curriculum to date. I’ve been associated with the school now for seven years and in that time, I’ve definitely seen the evolution of the place of Hauora Māori in the curriculum, the
Some students reported that Hauora Māori should have more time in the curriculum. This was within the context of trainee intern (6th year) teaching, as the only trainee intern teaching that had been completed in Hauora Māori was a two-hour course in traditional medicine in 2009. Students commented that they thought it was important that the teachings from the 4th and 5th year were carried through to the trainee intern year to enable students the opportunity to further develop their knowledge and skills in working with Māori patients/whānau and community. They were especially concerned about the need for this content to support them to transition into a house surgeon where they would have more expectations on them to work with Māori patients independently:

*I would think that time would be pretty important for some because you are working at the front field and you would be the first, especially like house surgeons, you would be in contact with patients so client contact … I think stressing it would be quite useful, but I mean I don’t know whether you do it in 6th year.* (SST 13)

However, other students were content with the current allocation of learning hours (that were applicable to their year group) because it did not overtake the learning of other curriculum content that they saw was of greater value:

*It’s not as if the whole indigenous health curriculum thing has not been taking up huge chunks of the time in the curriculum, it’s sort of one tutorial every run or so which is a reasonable thing I find.* (SST 9)

The indigenous health teaching team commented that the new timetable structure supported the design of the curriculum because it was not dependent on personal relationships (especially if conveners for block courses changed), with more predictable/consistent dates and times allocated for the year allowing for both broader Hauora Māori learning objectives to be covered and for re-negotiating with course convenors on including ‘other’ broader undergraduate course learning objectives.

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21 It should also be noted that within the UOC the formal teaching hours within the trainee intern (6th year) programme are minimal (no more than 6 hours a week).
Students articulated that the presence of Hauora Māori curriculum throughout the curriculum assisted them to identify Hauora Māori as a core component of their medical education:

*I mean it’s quite obvious to see that through 2nd, 3rd, 4th, you know teaching in all of these years suggests that it is quite important, at least the people who are deciding on the curriculum, to teach Māori health.* (SST 4)

Students raised a number of discussion points about whether Hauora Māori is best positioned as a vertical module or a block module at the UOC. They saw benefits in both, but all came to a conclusion that the vertical module was better because it ensured the content was woven throughout the curriculum. Students commented that if Hauora Māori was a block module, there would be a temptation to learn the content, pass the assessment, then not see it as necessary to apply the knowledge/skills within other components of the course where they were working alongside Māori patients/whānau. They saw the advantage of a vertical module being that they were required to revisit the content regularly and apply it to their on-going clinical learning through their ALM curriculum. Students also saw that their knowledge and skills in Hauora Māori needed to be built on each clinical year:

*I’ve learnt an awful lot and even though it’s like intermittent we’re only picking it up during all that integrated learning and then we have our immersed learning once a year, just kind of that repetitive, picking up on it all the time, it’s kind of engrained it. For me it clicked after our immersed one this year and it’s almost second nature now when talking to Māori patients. It’s kind of just nicely clear outline that’s just engrained in my head now.* (SST 14)

Course convenors reported that, in terms of the design of the UOC Hauora Māori curriculum, they thought it should be taught by the indigenous health teaching team within its own allocated time, and also within the block modules. Course convenors saw that the Hauora Māori content had already added value to their own block modules and hoped that joint content (clinical and Hauora Māori) would continue to be merged utilising different teaching methods:

*So I greatly like the idea of integrating, I greatly like the idea of teaching for example for rheumatic fever in the context of cardio-respiratory so that it’s rheumatic fever is just another cardio-respiratory illness; however, it tends to affect more the certain population and thereby it makes clear sense that it’s been, that it is being taught by Māori staff. So the direct integration and, cross fertilisation they are based on the*
Meihana model and based on our biological illnesses. I find it is very helpful to stick within this model and add the Māori dimension. (SC 3)

Course convenors also wanted the Hauora Māori curriculum design to include ways of providing feedback to course convenors about the students’ engagement with material, and also ways to support course convenors to teach and assess the content.

5.3.3 Satisfaction with timetable

Both systemic stakeholders and the indigenous health teaching team were confident that the current timetable (time allocated for Hauora Māori and location of this time within the overall curriculum) for the Hauora Māori curriculum supported the current learning objectives to be taught, and the prescribed learning outcomes to be measured. Therefore, there was considerable satisfaction within these two stakeholder groups.

The Māori health stakeholders reported that the increased time for the UOC Hauora Māori curriculum was being reflected in student competencies viewed on the wards. Māori patients were also impressed by the number of teaching hours allocated to Hauora Māori (as was presented to them within the course of the interview). They felt that such a time allocation reflected the UOC commitment to the wider Māori community and were confident that its fruits would be noticed in the Hauora Māori competencies demonstrated by the students in their interaction with Māori patients.

Māori health stakeholders also reported that they were pleased that students had on-going exposure to the Hauora Māori curriculum content over all their ALM years, as they perceived that on-going exposure to the curriculum would support students’ experiences and different learning needs while they were working within different Christchurch District Health Board (CDHB) work environments:

_I think it’s really important to include Hauora Māori at an undergraduate level because you’re up-skilling students as they are coming in to contact with patients and affecting the lives of patients and affecting the lives of their whānau and affecting the likelihood that they will choose to engage in health services in the future. So I think it’s really important to get in there early before people develop bad habits and while they are really keen and interested in learning and making a difference._ (STT 2)
Therefore, these stakeholders were pleased that the current timetable for Hauora Māori would support on-going design opportunities for a concise and succinct Hauora Māori curriculum.

5.3.4 Summary

The following summary points are drawn from this section.

- The initial process of timetabling of the Hauora Māori curriculum, although vulnerable to specific convenor decisions, was seen by stakeholders as reflecting a commitment within the UOC to support the implementation of the Hauora Māori curriculum.
- The structural timetable changes that occurred in 2010 were seen to solidify the place of Hauora Māori at the UOC, as an important core part of the medical curriculum.
- Stakeholders report feeling content with the current timetable model for the Hauora Māori curriculum.

5.4 Curriculum content

The data identified that the design of the Hauora Māori curriculum had been influenced by specific curriculum content areas that were seen as integral knowledge/skills required to produce doctors who would be able to be responsive to Māori health needs and contribute to Māori health gains. These content areas included: re-presenting perspectives of indigenous health; health inequalities and inequities; engagement with indigenous patients; and the role of doctors in contributing to Māori health advancement. The findings also highlighted that the Hauora Māori content was taught to students within a sequential format, to ensure learning objectives were introduced and taught in a way that built on prior learning sessions.

This section will extrapolate on stakeholder perspectives of the Hauora Māori curriculum content and then discuss stakeholder commentary on the sequential content format.

5.4.1 Re-presenting perspectives of indigenous health

The indigenous health teaching team noted that the design of the Hauora Māori curriculum had been highly influenced by prior learning students had on Māori history, knowledge and Māori health. The indigenous health teaching team reported how they had been continually
exposed to racist comments from medical students, especially from 2001 to 2005. They noted that these comments were often within the context of students only being presented with a colonial perspective of Aotearoa/New Zealand history, health disparities, and indigenous health. The indigenous health teaching team noted that a lot of their initial core teaching was to expose students to an indigenous health perspective. Hence, they saw the need to re-present indigenous health within an indigenous evidence-based context.

Māori health stakeholders in general discussed the lack of Māori knowledge and Māori perspectives provided within Aotearoa/New Zealand schools, and noted that in their interactions with students they were mindful to correct any ‘inaccurate’ comments that were shared with them. Course convenors also noted this area as being a learning gap for them, because they had not had access to Māori history and knowledge as high school students or as medical students/registrars.

From this category emerged two distinct sub-categories that stakeholders identified as important to the design of the Hauora Māori curriculum to ensure that indigenous health was re-presented – the application of both indigenous rights and indigenous knowledge to clinical practice.

5.4.1.1 Indigenous rights

The indigenous health teaching team, course convenors, systemic stakeholders and Māori health stakeholders reported that within the content of the curriculum, the place of Māori as the indigenous peoples of Aotearoa/New Zealand should be clearly articulated. Participants felt that this information should be taught within the context of Aotearoa/New Zealand history including the processes of colonisation, the role of the Treaty of Waitangi, and the impact of these on Māori health status.

Stakeholders were very specific that, regardless of the health status of Māori, indigenous rights should be a core component of a Hauora Māori curriculum:

For me we’re a New Zealand medical school. The population of New Zealand includes its indigenous population and that’s a given and that even if Māori health status were not as different as it is from non-Māori health status in New Zealand, we would still have an obligation to address the particular health needs of Māori. (SC 1)
Systemic stakeholders were clear that teaching about the Treaty of Waitangi and the partnership between Māori and the health sector was important. They saw that it had a role in ensuring that students were up-skilled in a way that would enable them to be responsive as clinicians to the Māori community:

You know, I guess in the New Zealand context, there’s sort of additional things about the Treaty and partnership and everything else, but I still think in the broader sense…our people have to be responsive to the communities they’re going to serve in the years to come. (SS 1)

Māori health stakeholders noted that the teaching of indigenous rights was essential; however, they expressed concern that the delivery of such content could either engage or put students off. They noted that from their experience within Aotearoa/New Zealand the teaching of indigenous rights could stir up feelings of guilt and defensiveness within non-indigenous people. Because of this prior experience, stakeholders were clear that this content needed to be evidence based and positioned within a safe context in which non-indigenous people could engage:

And that just getting a sort of a level of acceptance and embracing of Māori being a natural, being a fabric of this nation’s history and currency I think it’s really important even before you begin to look at the health aspect of it, so I think getting students exposed to it, getting them comfortable with it and I know that they will be more comfortable than the generation before and the subsequent generation is likely to be more comfortable, just getting them comfortable with the context of things Māori. (SMC1)

Some course convenors and Māori health stakeholders perceived that international students might find the content within Māori health complicated and less relevant to them. However, the international students within the participant group reported that they saw Māori health as important for two main reasons. Firstly, as they trained within Aotearoa/New Zealand they wanted to feel competent when working with the Māori population, and they reported positive experiences with Māori patients. International students often commented that the whakawhānaungatanga process was enjoyable because Māori patients would ask them many questions about their own country and culture. Secondly, international students reported that within their own countries indigenous rights was either widely discussed or not discussed at
all. Therefore, they saw that the principles of learning about Māori health would assist them in addressing indigenous health when they returned to their country of origin:

I thought it was really good because compared to other countries ... there is always in politics that the indigenous people are not getting quite enough attention. It's quite good that New Zealand focuses so much on Māori health and trying to improve things because I find there is quite a bit of discrepancies especially with the difficulties of all the colonisation that happened and it kind of ruined a lot of things in the culture that they used to have. (SST 1)

However, Aotearoa/New Zealand born students (both indigenous and non-indigenous) reported that the indigenous rights content was often difficult to engage with because of prior experiences with this content. Some participants noted that their prior learning of the Treaty of Waitangi in the primary/secondary school system and/or in their ELM years had caused them to struggle with its applicability to themselves, and their identity as New Zealanders. These students reported that learning about the Treaty of Waitangi and indigenous rights within the context of health had provided them with a framework by which they could understand how historical events continued to affect Māori health today. They were also able to see how they could participate in addressing inequalities and inequity, and act as change agents within the health system:

And learning about the background to why it's important, the disparities and things like the Treaty of Waitangi makes you see it is needed to teach, I would try and work on some of those things. Then I suppose some of the techniques, kind of skills we've learnt have been kind of useful in dealing with Māori. (SST2)

Students and course convenors reported that the types of teaching methods currently employed within the indigenous health curriculum, allowed indigenous rights content to be presented in a non-threatening and engaging way. This included the use of the marae in both 4th year, where the concepts of colonisation, racism, migration and marginalisation are introduced, and 5th year, where students work alongside the Māori community in a free health-screening clinic:

At the Marae we watched videos and we had to identify from the video were there some cultural issues there and that's fine cause that's what we do at the hospital as well, sometimes you don't realise that there is going to be a cultural need with a particular patient but they say something like that's one of those hints and that's your Māori radar picking up so I think that's probably the way to go with it. (SST 11)
Māori patients responded that they also saw indigenous rights as important to include within the content of the course. They wanted students to see them through the lens of indigenous rights, so that students could understand that the current health status of Māori was as a result of colonisation. Patients were keen for students to see them within an indigenous context so that students would not default to a Māori-blaming perspective within their practice:

*I think with most cultures that have had things taken away from them due to colonisation, that at the end of the day we sort of feel a bit out of place not quite knowing our full identity and not quite being fully immersed in that culture having to live you know within the European society. I think they (students) could look at that side of things maybe cause that with the mental health of Māori definitely plays a part, you know not knowing your full identity and your background.* (MP 1)

Māori patients articulated past experiences of racism within the health system and overall marginalisation within Aotearoa/New Zealand. They were keen for students to understand this context to ensure that they were being trained to be able to identify how these experiences affected Māori interaction with the health system, and to not see Māori within a deficit paradigm:

*Māori health is, like you get to over 60...of the old school. They are pretty closed with their body, don’t tell you so much, they don’t like to expose what’s really happening, it’s sort of, goes back to their childhood (experience in health), there’s been a lot of unhappy ones that don’t like to talk about those things.* (SP 2)

### 5.4.1.2 Indigenous knowledge

All stakeholder groups reported that they felt the teaching of indigenous cultural protocols, beliefs, and values was central to indigenous health content. Specifically, stakeholders identified the following critical areas: Māori historical content; cultural protocols for engagement; te reo\(^{22}\); understanding of tapu\(^{23}/\)noa\(^{24}\) and its application to clinical practice; how Māori whānau structures work and can be utilised within a clinical setting; understanding the structures of hapu\(^{25}\) and iwi\(^{26}\) and their role in clinical practice; and specific skills for engaging in marae protocols and processes.

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\(^{22}\) Refers to Maori language  
\(^{23}\) Tapu: sacred/restricted  
\(^{24}\) Noa: common/non-restricted  
\(^{25}\) Hapu: sub-tribe  
\(^{26}\) Iwi: tribal group
Whenever you are practising medicine … I guess when you’re talking to patients and … you’ve got sort of a basic idea of cultural normalised and cultural beliefs and that sometimes it’s easier to interview a patient and to be able to get their perspective on things, for example they say Māori depend a lot on their whānau quite often it’s a good idea to have their whānau in the room with them, because they can you know correct them. You get that kind of perspective from them, whereas with say some of the Europeans who preferred not to have anyone else in the room you’re more likely to get the history from them that way so I think it’s useful from that kind of perspective. (SST 3)

The indigenous health teaching team noted that the inclusion of indigenous knowledge within the content of the course had evolved from feedback about health service delivery from their whānau and community. Specific patient experiences that had been reported back to the team had assisted them to design the content based on what ‘could’ have been done differently that would have made the experience more positive for both the patient and the clinician:

I mean everybody deserves that anyway regardless of race and stuff but I think a lot of our elders, especially people like my dad, they are not comfortable in hospitals and, like it was a mission to get my dad there in the end…we nearly had to have an ambulance to him to get him to go, but not comfortable in that environment so when they need to be able to make them feel comfortable and not intrusive. (SP 4)

Māori patients reported that they perceived it was important for students to know about hapu and iwi identity. Patients believed that specific knowledge on different tribal histories would assist students to achieve a broader understanding of the diversity of experiences within Māori communities. These participants also noted that students knowing about different cultural protocols would assist them to be more accepting of cultural requests within a health setting. This was a common theme amongst all participants regardless of their level of engagement with the Māori world and its processes:

I think definitely that awareness, so that people have that knowledge that there are issues that some people won’t discuss or some things that are important to people. Cause I know for me bringing home the placenta of my children was really important but for others they’re like eww... (SP 3)

Māori health stakeholders commented that they felt that Māori patient dissatisfaction with service delivery could be attributed to the lack of indigenous knowledge on the part of practitioners. They stated that this cultural ignorance was hindering current practitioners’ abilities to practise medicine in a way that was culturally responsive to the Māori community. They therefore saw the inclusion of indigenous knowledge in the design of the Hauora Māori
Students come into the Hauora Māori curriculum with different competencies and levels of prior understanding and experience in Māori knowledge. This has implications for the design of the curriculum as the UOC indigenous teaching staff attempt to target the course to catch up, develop, and extend all students. Those students with no prior experience of the Māori community were keen to have more historical content within the curriculum than is currently included. For those who had prior experience, their emphasis was on clinical engagement and extending their understanding of Māori beliefs, values, and experiences within the health system.

For those students who had little or no prior experience with Māori communities or exposure to Māori knowledge, the curriculum was seen to move too quickly. This raised issues about the design of the course, and whether further discussions with the ELM curriculum needed to occur regarding whether a possible prerequisite on-line course should be developed for these learners:

I think for 4th year it is quite good. It is quite interesting for me because I am an immigrant here so prior to that there was not much exposure because I came in like two years of high school and then went to university...I found that some of the content is covered really quickly so I don’t really get what is happening. That was a lot of material to cover like I don’t get the history. But overall it just exposed me to the culture and I think the knowledge is valuable. (SST 7)

An important part of the curriculum design is the articulation of clear protocols and processes (such as engagement and history taking) that students are taught to apply to their clinical practice. Students described how they appreciated these guidelines within the current
content; they reported that these guidelines made them feel more confident that they could care for Māori patients in a way that was culturally responsive. Students also commented that the opportunity within the current curriculum to interview a Māori patient enabled them to develop better skills (through both successful interviews and interviews that could be improved) for future interviews:

*I think it’s really important to make medical students a bit more culturally sensitive towards Māori and to give, especially people who have grown up in a predominantly Pākehā area, a bit more insight into the culture itself. …I think it’s taught me more about how to interact with Māori patients and more what to expect from them as patients and know the way that they expect us to respect certain things about them and to expect always to be involved with the whānau as well as the patient themselves.* (SST 6)

Students commented that the ability to engage with the content was enhanced by their introduction to indigenous knowledge and its application to clinical practice being based at a marae, and being a two-day experience. Students commented that the teaching environment within the marae gave an appropriate context to the content, and made it more ‘real’:

*The environment helps… you just get a feeling that you can …sort of put yourself in the shoes of Māori because you’re in their whare28 … their house and you’re a guest… you can see what values, …and just a little window in to the culture. For just those two days I felt like I was part of the Māori culture and it was very helpful … I don’t think it would have been the same if we hadn’t had that trip actually.* (SST 4)

The indigenous health teaching team, Māori health stakeholders and systemic stakeholders noted that the noho marae29 experience for students was important to the integrity of the course, because it showed students Māori culture within a Māori environment and was identified as a critical part of the curriculum design. The marae is a place where the use of Māori language, customs and protocols is common. These stakeholders also noted that it incidentally exposed students to a place where being Māori is valued and ‘normal’, and therefore offers an opportunity for students to reframe how they may have viewed Māori prior to the noho marae experience. The marae was also seen as a context which focused on the strengths and resiliency of Māori communities, as opposed to focusing on deficit-based

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27 Meaning of New Zealand European descent  
28 Whare: house/home  
29 Noho marae: literally means to sit at the marae, in this context it refers to sleeping within the wharenui (carved meeting house) at the marae.
attributes, often adopted by the media. It provided a learning environment which could utilise Māori values as part of the teaching methods, e.g. collectivism, the use of humour, the use of waiata and oratory, and inclusiveness.

Students also requested that future curriculum design changes should include more content on the use of te reo. Students reported that some patients with whom they had contact tended to use te reo frequently in their interactions with them. Students were keen to be able to use the language to engage with patients to both build a better relationship, while also enabling the patient to use te reo to describe their experience without having to translate (especially when patients were using only a number of key words in te reo):

*You can’t have Hauora Māori without te reo it’s just impossible to try and separate them. I would have liked it taught in second year.* (SST 5)

Māori health stakeholders also agreed that it was important that students felt confident to use te reo both to engage Māori patients and to ensure that Māori patients felt valued within the consultation process:

*I think they may need to know some basic te reo, I accept that you know they’re never going to, we’re training health professionals here not linguists, but they do need to know the fundamentals.* (SMC 2)

### 5.4.2 Health inequalities and inequities

All stakeholders noted that current health inequalities, and the statistics that described the extent of health inequalities and health inequities in Aotearoa/New Zealand, were, and should be, included within the content of both the Hauora Māori curriculum and the broader medical curriculum. Course convenors and systemic stakeholders noted that inclusion of health inequalities content was used to assist students to understand their role as future clinicians to the Māori community. They also saw that the inclusion of this content was integral to the design of the curriculum as it supported the institution’s obligation to produce doctors who could address health inequalities within Aotearoa/New Zealand:

*The fact that there is also gross inequality in the health status of Māori and other population groups here to me implies that we have that obligation, an absolute obligation to teach about it, to encourage students to reflect and also I think for me it*
also reflects the demographic realities. If Hauora Māori is not incorporated strongly in their training at all levels then I don’t think they’re going be ready. (SC 1)

Students commented on current health inequalities between Māori and non-Māori, and also discussed how learning about colonisation and marginalisation of Māori within Aotearoa/New Zealand related to these inequalities. They noted that through learning about health inequalities and Māori they had a better understanding of why it was important for them to know about Māori health. Students discussed their future roles as doctors, and how this information would assist them in serving the Māori community.

Students reported that inequalities that related to Māori health should be discussed broadly throughout the curriculum and within the different block modules. However, overwhelmingly all students identified the best place for this content to be the public health block module. They reported that this block module provided the wider context in which to more fully understand all the epidemiological information. Most students appreciated how Māori health teaching converged with the learning objectives of the public health block module, and assisted them to learn how to critique current research. Students queried why Māori health was only allocated a short time within this module, and thought that a longer session on health inequalities and Māori health outcomes would have enhanced their learning in the public health block module:

First of all our public health attachment I think is a very good attachment when it comes to, you know, population…I think that has to be at least three weeks and one of those weeks should be about Māori public health issues. (SST 5)

However, one student stated clearly that they did not appreciate the readings that were allocated to the Māori health session within public health. The student made the point that the content of the readings did not focus on the Māori communities’ responsibility to address health inequalities, but instead focused on the role of the clinician and health service:

It (the literature assigned to the session) sounded almost a little bit racist. I wouldn’t call it racist actually rather you know…a bit aggressive, puts a lot of blame elsewhere but you know, some of that is a bit justified but you got to look at yourself a little bit sometimes, you can’t just blame everywhere and everyone else. (SST 9)
However, other students commented that they felt the public health readings contributed to their learning about Māori health, and provided them with appropriate methods by which to understand current Māori health inequalities. Students also noted that they saw value in the inequalities content because they knew it would feature in the 5th year common exam.

Students noted that, outside the public health module, few, if any, course convenors included teaching health inequalities. However, Māori students stated that they had noted that some course convenors had attempted to teach indigenous health inequalities within a case study. This often resulted in the case scripted to promote deficit racial profiling. Māori students commented that this then often promoted a victim blaming approach to Māori patients, and ‘untaught’ the broader context of Māori health taught in the Māori health vertical module. Thus, students identified a need for the Hauora Māori curriculum design to be included within the block modules to ensure there was consistency in teaching content across the whole curriculum:

*I think when it comes to when we looked at it a bit more closer in public health we’re sort of bringing all those reasons in to why … we sort of talked about Hauora Māori in a negative sort of context, an example if you meet a Māori they are more likely to be like a diabetic, obese and so on and so forth.* (SST 5)

### 5.4.3 Engagement with indigenous patients

The indigenous health teaching team reported that when the curriculum was in its early stages of development the focus was on public health statistics and addressing health inequalities through public health responses. However, within a short period of time they noted that this systems approach only addressed part of the issue; there was also a need to teach the relevance of good clinical relationships between a clinician and their Māori patient/whānau\(^{30}\)/community. Therefore, the team (after consultation with the Māori community) also identified the need to include engagement with indigenous patients/whānau as a key component of the curriculum, including both communication strategies and cultural specific knowledge/skills.

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\(^{30}\) Family and/or support network
This led to the development of new learning objectives including engagement with a patient/whānau and knowing how to explore a medical history using a Māori health model, and it resulted in the development (and evolution) of a model that combined the usual medical history-taking process with Māori health models (specifically the Hui process and Meihana model). The teaching team noted that they determined the model would need to align to current clinical practice (Calgary-Cambridge model (154)) for it to be user friendly for the students. This model had evolved over the last eight years, and was seen as continuing to evolve in response to student and patient feedback. They also reported that they did not feel they had the right balance between lectures/tutorials and clinical exposure to Māori patients. They commented that they were still investigating how different teaching models could increase time allocated to students interacting with Māori patients:

I think any future sort of developments needs to support more of a clinical interface especially for 4th and 5th years because they can get theory until the cows come home but it’s not until they actually sit in front of a Māori patient and their whānau that actually they begin to understand some of the concepts that we’re trying to teach them particularly in clinical practice... I think we still have a wee way to go to enable us to get that clinical aspect stronger. (STT 1)

Māori health stakeholders were supportive of students being taught how to enhance communication and their interaction with Māori patients/whānau/community. They did not see any benefit in students knowing about the problem unless they were also taught how to address it as an individual clinician. Māori health stakeholders had established a role for themselves in supporting the clinical application of the content by participating in the development of cases used in teaching and assessment, contributing to the Māori health OSCE (as actors and markers) and providing feedback to the indigenous health teaching team about the Hauora Māori patient case (including their observations of students and feedback from patients):

Top of the list it’s important, it’s paramount, they want to deliver a service that is appropriate for Māori then they need to have an understanding of what Hauora Māori is all about. (SMC 3)

This move to ensure the clinical application of indigenous knowledge was supported by the systemic stakeholders who saw cultural competency as complementing alongside clinical and
ethical competencies. They reported that, as a university, it was vital to ensure that students were given a toolkit to assist them as they developed their competencies when working with Māori patients/whānau/community. A few course convenors shared stories of how Māori health was absent from their training, and when they had graduated they had little or no competence working with Māori. Course convenors noted that they had observed that the UOC students were more confident in working with Māori patients/whānau than they had been at the same stage. Because of this they saw that students would be better placed to assist in addressing Māori health:

*I mean my observation at the health day ... on the marae was that students were actually probably much better accustomed to dealing with Māori patients even than I was and they have more cultural sensitivity in some respects and they were more savvy with how to greet people and how to make them feel at home. So I think that it is effective.* (SC 2)

Students spoke positively about the clinical relevance of the teaching. Specifically, they liked the integration of the indigenous health framework (Hui process/Meihana models) with the clinical interview process. Students noted that this structure supported them to feel more confident when interacting and interviewing Māori patients/whānau. They also reported that it assisted them to organise the information they were more familiar with, and see the relevance of the extra information that was gained because of the use of the Māori health model.

All students commented on the importance of having an indigenous health framework as part of the curriculum design, and that this was an important part of the course. International students also noted that they thought the principles of the model could be applied to the indigenous people of their country – and commented that it had made them think about the appropriate way to engage with the indigenous people and to understand the impact of colonisation and its impact on their current health status.

This indigenous health framework assisted not only non-Māori students in working with Māori patients, but also Māori students, who discussed the relevance of the framework with them, and commented that it had helped them understand how to fuse their cultural knowledge with their new clinical knowledge. It also gave them the tools with which to
frame and articulate Māori health realities within a broader context, not just their own lived realities.

5.4.4 Social accountability

The indigenous health teaching team discussed the importance of teaching students that part of their social accountability of medical students and doctors was to address health inequities and inequalities within Aotearoa/New Zealand (and other countries in which they might practise) and to be responsive to indigenous populations (noting that indigenous populations have the highest rates of inequities and inequalities). The role of social accountability needed to be a specific content area that was vertically integrated into all sessions. This content area included how doctors could be ‘agents of change’ within the health environment through demonstrating that they were clinically and culturally responsive to Māori patients/whānau/community:

I think it’s really important for them to get to know about the health disparities there are and yeah like why these are there. And what are all our positions in reducing these health disparities? Like how even now as students we can have input into this and obviously what our role is going to be in the future. (SST12)

In order to teach this content all stakeholders noted the need for ‘champions’ (both indigenous and non-indigenous) to be identified and their narrative as change agents to be documented. These stories were collected from all stakeholders who had seen/heard/been told of specific incidences within the Canterbury District Health Board (CDHB) where a clinician/clinical team or a student had demonstrated cultural responsive practice which had resulted in a positive clinical outcome for a Māori patient/whānau/community. Students commented that they enjoyed being challenged by their current and future role to become ‘change agents’ and were keen to have further demonstrations in clinical settings of how senior doctors modelled social accountability with Māori patients/whānau/communities:

I think getting a bigger bank of case studies in a variety of areas has helped to solidify the curriculum, especially for the students because …some of the cases are coming from the students which is amazing …I think that getting more and more clinical case studies is only going to enhance the curriculum more. (STT1)
The design of the curriculum was therefore influenced by how these narratives were collated by the indigenous health teaching team and the method of delivery deemed appropriate for this content. These methods of delivery included sharing of narratives within case studies, OSCE stations, simulated patient scenarios and/or film (recorded narrative).

5.4.5 **Sequential content format**

Students recounted their previous exposure to the Hauora Māori curriculum through its vertical integration throughout their ELM programme. They explained that due to large numbers in their classes, they did not feel they had to engage with the content within the lecture format. However, they noted having basic knowledge of Māori protocols/beliefs as well as health disparities and inequities from their ELM course. They saw their ALM years as an opportunity to further extend this learning and its relevance to clinical practice:

> And that’s part of the bigger picture, the fact that It’s been developed within a clear curriculum framework, it’s not just a whole bunch of random things, there’s actually a coherence to the whole thing from the point of view of the content, the content of the actual curriculum to the processes to the strategic thing and I think that’s probably there’s been some strong leadership and commitment to creating space. (STT 1)

The indigenous health teaching team and Māori community stakeholders saw it as imperative that the design of the curriculum was sequenced in a way that students were introduced to core components of the curriculum before they had exposure to Māori patients/whānau on the ward. The indigenous health teaching team saw it as integral that students were introduced to the ALM Hauora Māori curriculum within their clinical orientation at the UOC. This was seen as important to keep both students and the Māori community safe.

The indigenous health teaching team identified that their curriculum had developed over time to reflect introducing students to Hauora Māori content in a graduated manner, and was further reinforced by the new structural changes to the timetable. This allowed the indigenous health teaching team to start the course with basic knowledge of Māori protocols and processes and their relationship to the context of current Māori health status, within an environment where Māori perspectives were ‘normal’ (marae based teaching – during clinical orientation), then to include lectures/tutorials on the clinical relevance of this content,
introducing simulated patients to allow students to practise application of the indigenous health model to clinical history taking, through to working alongside Māori patients/whānau/community using the skills/knowledge they had learnt within the curriculum.

Students also commented that they felt more confident working alongside Māori patients/whānau/community because they had been prepared within the Hauora Māori curriculum to do so. They noted the graduated complexity of the content and reported that this allowed them to see their own knowledge/skills developing:

Yeah, so I guess initially I didn’t feel that there was a lot of advantage in me doing the indigenous health curriculum stuff because I was like well this is old hat, I’ve had this before, I know the basic concepts but then … as we got slightly further through and started talking about some of the more advanced concepts of it, and in particular how it relates to working in a medical practice, then it had some benefit and in particular the role-play scenarios, I thought were the best….I did my assessment which was when I actually got to practise on a real person. (SST 11)

The indigenous health teaching team and Māori health stakeholders expressed that the sequencing of the delivery of the curriculum supported students to be able to digest one component of the curriculum at a time, while the indigenous health framework assisted students to see how the components fit together as a clinical practice model.

5.4.6 Summary

The following summary points are drawn from this section.

- The findings highlight that it is integral that the design of the curriculum is inclusive of the re-presentation of Aotearoa/New Zealand history and Māori health information from an indigenous perspective (as opposed to a colonial perspective) to provide an appropriate context to the Hauora Māori curriculum. This was inclusive of content on indigenous rights and indigenous knowledge.

- Health inequalities and inequities assisted students to understand the current impact of colonisation and marginalisation on Māori communities, and its application to current clinical practice.
• Engagement strategies/skills are integral to the design of the Hauora Māori curriculum, in an attempt to improve clinician/patient interaction.

• Social accountability provided a context by which students could identify how they could be ‘change agents’ within the health environment and contribute to Māori health gains.

• It is important to sequence content and curriculum to ensure it creates a safe learning/teaching environment for both student and Māori patient/whānau.

5.5 Chapter summary

This chapter has illustrated the three main influential factors in the design of the UOC Hauora Māori curriculum – the support of systems, the timetable model utilised by the system, and curriculum content.

Participants noted that the institutional support from the UOC leadership and other colleagues had created space and resources for a ‘new curriculum’ area at the UOC. External to the UOC, Māori health stakeholders provided the indigenous health teaching team with appropriate cultural support, and peer review, and ensured that the team remained accountable to their own community.

The initial format for timetabling of the new curriculum required the indigenous health team to negotiate with other ‘holders’ of the curriculum time. The findings showed that course convenors and systemic stakeholders were prepared to provide time for the indigenous health curriculum. Changes in 2010 to the structure of the timetable have been to the advantage of Hauora Māori in terms of increasing overall allocated learning hours. However, perhaps the most pivotal decision in the re-structure was to give Hauora Māori the same time allocation as other vertical modules. This was seen by Māori stakeholders as a clear indication of the institution’s support for the Hauora Māori curriculum.

In terms of curriculum content, the importance of the place of re-presenting perspectives of indigenous health to students was seen as a vital part in the design of the Hauora Māori curriculum. Stakeholders specifically saw value in the need to re-present indigenous rights and indigenous knowledge as core components of the curriculum. Stakeholders also
identified health inequities, health inequalities, engagement with indigenous patients/whānau, and social accountability as core curriculum.

Stakeholders also identified that the sequential content format provided a safe learning environment for students, whilst also ensuring patients were exposed to students once they had developed a basic level of knowledge/skill to be culturally responsive. However, what was also noted by students is that external to the indigenous health teaching team, the indigenous health curriculum was not being taught and/or reinforced within other components of the medical curriculum.
CHAPTER SIX: RESULTS 3

Phase Two: University of Otago, Christchurch Case Study – Factors influencing the implementation of the indigenous health curriculum

6.1 Introduction

The indigenous health teaching team identified the link between the evolution of the design of the curriculum and the implementation of different teaching/learning methods.

All stakeholders provided commentary on their perspective of the enablers and barriers to implementing the Hauora Māori curriculum at the UOC. From this narrative three main sub-categories emerged: curriculum resources; teaching methods used; and the perceived challenges with the future implementation of Hauora Māori.

This chapter will expand on the key findings within each sub-category in an attempt to capture the antecedents that instigated the development and retention of current implementation methods at the UOC.

6.2 Curriculum resources

Stakeholders noted that a range of resources (i.e. of teaching staff and course costs) was required to enable the Hauora Māori curriculum to be implemented. They also noted that the processes by which these resources were acquired and used impacted on how these resources could be implemented at the UOC.

The following section will explore how the curriculum resources influenced the implementation of the UOC Hauora Māori curriculum: funding for the curriculum; indigenous leadership; the indigenous health teaching team; the Māori community; and non-Māori colleagues.

6.2.1 Funding of the Hauora Māori curriculum

Similar to other national/international medical schools (4.3.1), the UOC funded the teaching resources (lecturers and course costs) of the Hauora Māori curriculum. The indigenous
health teaching team noted that as a unit they reported directly to, and therefore negotiated annual budgets directly with, the Dean. Systemic stakeholders identified that the increase in teaching resources (over the years) was also influenced by the allocation of core funding for Hauora Māori by the Faculty of Medicine to each clinical school. The UOC specifically prioritised this money to fund teaching positions. The teaching team noted that this increase in resources was seen as a positive institutional commitment to the Hauora Māori curriculum. Table 4 identifies the difference in indigenous health curriculum teaching resources (or allocated teaching time) between medical schools (inclusive of the University of Otago) by class size and allocated learning hours. Similar to Table 11 (4.3.1), Table 18 illustrates the variation across medical schools of how indigenous health teaching is resourced.

**Table 18: Teaching resources allocated to each medical school in relation to timetabled teaching hours and class numbers in 2009 (including the UOC)**

<table>
<thead>
<tr>
<th></th>
<th>Medical School A</th>
<th>Medical School B</th>
<th>Medical School C</th>
<th>Medical School D</th>
<th>Medical School E</th>
<th>UOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Indigenous Health learning time (hours)</td>
<td>57</td>
<td>8</td>
<td>9.5</td>
<td>55</td>
<td>54</td>
<td>36.5</td>
</tr>
<tr>
<td>Number of students in each class (per year group)</td>
<td>170 (x5)</td>
<td>160 (x4)</td>
<td>65 (x4)</td>
<td>200 (x6)</td>
<td>330 (x6)</td>
<td>85 (x3)</td>
</tr>
<tr>
<td>FTE Allocation</td>
<td>4</td>
<td>2</td>
<td>0.5</td>
<td>4</td>
<td>1</td>
<td>1.2</td>
</tr>
</tbody>
</table>

### 6.2.1 Indigenous leadership

Systemic stakeholders explained that prior to 2001 there had not been designated indigenous health leadership positions at the UOC. However, after seeing the progressive implementation of the Hauora Māori curriculum, systemic stakeholders commented that they were motivated to develop an indigenous leadership position within the medical school:

*Well, I think in part, it’s [the indigenous leadership] been enthusiasm, for making things happen. Because I think there were some earlier phases where people would turn up erratically and although some things would be done well, the other things wouldn’t be done well and we’d get negative feedback…* (SS1)

Systemic stakeholders commented that they were impressed with the UOC indigenous leadership which had directed key curriculum initiatives within the Hauora Māori curriculum.
They commented that the positive student feedback from the formal university evaluation process also reinforced the impact of indigenous leadership within the curriculum.

It was perceived by systemic stakeholders, the indigenous health teaching team, and Māori health stakeholders that the presence of an indigenous leadership position would ensure the indigenous health curriculum was not vulnerable to institutional changes (personally and structurally). The indigenous health teaching team reported that being able to be represented in decision-making, both within the UOC and the wider medical faculty, gave them confidence that indigenous health would remain on the undergraduate medical curriculum agenda. They explained that this position represented a Treaty partnership and the UOC’s commitment to Hauora Māori. The indigenous health teaching team recalled the lack of traction and development that occurred at the UOC prior to the leadership positions being put in place. They observed this position provided an appropriate basis for recruiting and retaining other Māori clinicians/researchers that in turn built indigenous health capacity within the UOC.

Therefore, overall stakeholders identified that the indigenous leadership position at the UOC was pivotal to ensuring indigenous health remained on the curriculum agenda, and that it provided an appropriate structure by which to support the implementation of the UOC Hauora Māori curriculum.

6.2.2 Indigenous health teaching team

The indigenous health teaching team discussed one of the ‘pull factors’ to join the UOC was to be part of an indigenous health teaching team as opposed to being a ‘sole Māori ’ within an institution. The indigenous health teaching team shared experiences of working in other institutions, or knowing other Māori within tertiary institutions who had not been retained in the position because they felt unsupported and isolated from appropriate Māori peer support.

Members of the indigenous health teaching team illustrated examples of being able to observe different teaching methods, joint-teaching opportunities, peer review of their teaching, and group discussions on pedagogical approaches. These experiences had assisted them to feel that they had the appropriate supports in place to develop as a ‘teacher’. This
ability to have professional development as a tertiary teacher was viewed by the indigenous health teaching team as an enabler for implementing the Hauora Māori curriculum:

*I really enjoyed not being the ‘only’ Māori …having peers that could critique me, understand my journey…be able to assist me identify what areas I could do professional development…I really liked being part of a group who were just like me.*

(STT3)

Members of the indigenous health teaching team also reported that the team environment assisted them to debrief about levels of resistance from staff and students towards the indigenous health curriculum. Participants described incidents of having to gauge levels of resistance by staff and students to indigenous health before being able to communicate their intended curriculum content. The level of resistance would also influence what teaching content and teaching method was used within that setting. Therefore, it was perceived that without the support of an indigenous health teaching team, an individual might not have had the personal and community resources to navigate through these levels of resistance. The indigenous health teaching team noted that the skills and knowledge required to combat racial stereotypes and profiling, as well as racist discourse, consumed a lot of curriculum development time, especially within the early years of teaching at the UOC.

However, the indigenous health teaching team explained that over the last seven years the prevalence of racist comments had declined, and credited this to two things: firstly, the commitment of the UOC as an institution maintaining indigenous health as a priority teaching area, and secondly, to the refinement of the overall indigenous health curriculum which had gained buy-in of other interest groups:

*I was just thinking about the racism thing… I think and we’ve noticed over the last seven years that the student attitudes (towards Hauora Māori) … have actually changed so possibly reflecting what’s going on in the educational system in terms of their exposure to things … but there is definitely institutional and interpersonal racism barriers still there…* (STT1)

Therefore, the indigenous health teaching team structure, in itself, was seen as an enabler for the implementation of the UOC Hauora Māori curriculum, because it served as a vehicle for both recruitment and retention of Māori health staff.
The indigenous health teaching team pointed out that from the onset in 2001, they had organically drawn together as Māori staff within the institution to contribute to the Hauora Māori curriculum. They noted after this formation that they were an interdisciplinary team. Table 19 compares the team at the UOC to the indigenous health curriculum resources at the phase one sites. Table 19 identifies that medical schools C and D also have interdisciplinary (clinical) teams.

**Table 19: Staff resources used to deliver the indigenous health curriculum in 2009 (including UOC)**

<table>
<thead>
<tr>
<th></th>
<th>Medical School A</th>
<th>Medical School B</th>
<th>Medical School C</th>
<th>Medical School D</th>
<th>Medical School E</th>
<th>UOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indigenous Doctors</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Non-Indigenous Doctors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indigenous Nurses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Indigenous Allied Health Professionals</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Indigenous Educationalists</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Non-Indigenous Educationalists</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indigenous Administrative Staff</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Indigenous Administrative Staff</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Indigenous Community Workers</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (Specify)</td>
<td></td>
<td>Traditional healer on staff</td>
<td></td>
<td></td>
<td></td>
<td>associate professor</td>
</tr>
</tbody>
</table>

The indigenous health teaching team, systemic stakeholders, and the Māori health stakeholders saw it as beneficial to have an inter-disciplinary teaching team. The main reasons for this were that it provided an opportunity for Māori health professionals to bring their different clinical and cultural experiences within health together and to tailor a programme that would benefit the medicine curriculum:

*Even though I think having the medical practitioners that’s been a strength, it’s also been a strength having non-medical practitioners and clinicians from other areas and dare I say…from psychologists cause I think the way they look at things and break things down helps to more clearly identify what the processes are and might be which has enabled us to teach... So it’s been a good mix I think of different elements. (STT1)*
6.2.3 ‘Other’ teaching resources

The indigenous health teaching team explained that in order to fully attain their aspirations and goals within the Hauora Māori curriculum, they needed to draw on the wider health community to assist the implementation of the planned curriculum. This involved accessing other health professionals (Māori and non-Māori), Māori health stakeholders, and Māori patients (located within the usual clinical teaching environment of the medical school). The following section will explore how the UOC drew on the expertise of these stakeholders to implement the Hauora Māori curriculum.

6.2.3.1 Clinical lecturers

The University of Otago defines the role of a clinical lecturer as to “carry out clinical teaching in undergraduate teaching clinics and clinical services when required, either in small groups or one-on-one to facilitate the learning of practical/technical skills; and provide clinical supervision”\(^{31}\) Clinical lecturers can either be paid with a large proportion coming from their employer and a small component of their salary from the University, or be paid full time by their employer, with the provision that they will provide some teaching to medical students as part of their already funded position. Accepting such an arrangement gives that person access to University library facilities and, when required, other university resources.

The indigenous health teaching team discussed how they had negotiated with some clinicians the appointment of a clinical lecturer position specifically for the purpose of assisting in the delivery of the Hauora Māori curriculum. They noted how they were impressed and grateful for the way these health professionals gave of their time to fulfil this position. Their view was that the benefit for the Hauora Māori curriculum was that the students had the opportunity to be taught by a range of passionate clinicians with expertise in Hauora Māori. However, they were also concerned that there was a further need to increase their clinical lecturer pool as a way of increasing the relevance and “legitimacy” of the curriculum for medical students:

\(^{31}\) [http://www.otago.ac.nz/humanresources/hr/development/academic-titles.php#titledetails](http://www.otago.ac.nz/humanresources/hr/development/academic-titles.php#titledetails) (accessed on 29 September 2012)
We have to look to developing the curriculum...so that existing clinicians see that they can actually have an effect on the way that they individually practise. I don’t think that’s still that well modelled comprehensively in the hospital environment, apart from a few individual practitioners who have got good relationships ...that’s where the students still struggle to see the relevance of the Hauora Māori curriculum. (STT1)

Because Hauora Māori does not have a clinical service/environment from which to draw registrars/consultants to assist with teaching, the clinical lecturers provided a valuable resource to the indigenous health teaching team, because they provided a clinical context for the implementation of the Hauora Māori curriculum.

6.2.3.2 Māori health stakeholders
In order to meet the aspirations of the planned curriculum, the indigenous health teaching team also used other Māori health stakeholders (Māori health workers, Māori health clinical workforce) to assist in curriculum delivery. This included the Māori health stakeholders contributing to the implementation of lectures, clinical experiences, simulated patient scenarios, and assessments (as both markers and actors).

Māori health stakeholders were not directly remunerated for their time in the indigenous health curriculum; however, they explained that because they saw this time as contributing to building a more Hauora Māori competent medical workforce, they hoped that their children/grandchildren would benefit from their contributions to the programme. However, a small koha (monetary gift aligned with cultural protocols) was given to those who assisted specifically with the assessment process of the 5th year students because this involved eight hours of direct contact time and one hour of pre-reading of scripts. The indigenous health teaching team hoped that the koha provided a small token of thanks and validated the Māori health stakeholders’ expertise within indigenous health. The UOC budget accommodated this koha.

Table 20 documents the hours of unpaid indigenous community assistance used to deliver the indigenous health curriculum in 2009. It highlights the fact that there is a lot of variation in the time that is required to ensure the indigenous health curriculum is delivered. The UOC, like Medical Schools C and D, use the greatest number of indigenous stakeholder hours.
Māori health stakeholders who worked within the hospital setting also assisted students to identify Māori patients on the wards (especially for log books or Hauora Māori patient cases) and gave cultural advice (when students sought this level of contribution). Māori health community workers discussed how they had been orientated to the Hauora Māori course objectives and the relevant assessment processes, which allowed them to clarify their role within the Hauora Māori curriculum.

The indigenous health teaching team identified that it would not be possible for the team to meet the learning outcomes of the Hauora Māori curriculum without the support of the Māori health community workers; thus, their role and contribution were vital to the implementation of the Hauora Māori curriculum in its current form.

6.2.3.3 Māori patients

Māori patients explained that they were not content with the current health status of Māori, and they believed that current health disparities were greatly influenced by a practitioner’s ability to work well with the Māori community. Māori patients commented that they consented to student interviews, because they saw this as an opportunity to contribute to Māori health education, with the aspiration that their contribution to medical student education would benefit not themselves, but the generations that would follow them:

*I like to support the students’ education to help them understand, that being Māori is important – and I want to have a role in this.* (SP 7)

---

Note that this only includes Māori health stakeholders, and excludes the time Māori patients give for student interviews (240 students an average of 2.5 hours per interview), because this was not measured within Case Study one.
Patients also reported that they believed it was important that students hear their experience (and the experience of other Māori patients) so that the students could understand that the Māori community has different perspectives and realities and is not homogenous. This belief was underlined by Māori patients’ perceptions that many students may have a deficit or particular view of the Māori community that might not be matched to their own experiences/realities.

The commitment of the Māori patients to student learning was acknowledged by the indigenous health teaching team. Student evaluation comments identified that they valued the opportunity to interview a Māori patient as the process validated what they had learnt in the Hauora Māori curriculum. Therefore, Māori patients’ on-going consent to participate in these interviews was seen as a very valuable resource available to the indigenous health teaching team:

You know I think that’s been real huge and all of those participants that have supported the curriculum over the years have added huge value to the on-going education of those students. (STT 3)

The indigenous health teaching team discussed how, because of the contribution of the Māori community to the Hauora Māori curriculum, it was essential that they (as members of that community) ensure that the UOC reciprocate by giving service back to this community. They shared examples that included staff joining the Māori Women’s Welfare League, supporting the Māori health workers to meet their work objectives, and providing a free community screening clinic (through an initiative dubbed the Māori Health Day):

And I particularly like the way that the team engages with the community, so the practitioners, in theory, actually get to meet some of the people that they will be engaging. To me, that’s quite an important aspect. It’s not just an internal exercise. (SS 5)

The teaching team acknowledged that without Māori patients the Hauora Māori curriculum, would lose its ‘clinical application’ and was vulnerable to being only a theory-based module. Thus, Māori patients were a key contributor to the implementation of the UOC Hauora Māori curriculum.
6.2.3.4 Non-Māori colleagues

All stakeholders were asked about how they saw the role of non-Māori in relation to the implementation of the Hauora Māori curriculum. All participants commented that they thought the role of non-Māori was to support the Hauora Māori curriculum by assisting it to be integrated as a ‘core’ part of the UOC curriculum:

But I think having non-Māori staff is equally as important as having Māori staff because it gives a practical reflection of partnership and joint participation in raising the issues that need to be raised around things Māori. (SMC 1)

Course conveners identified a number of factors that influenced their engagement with the Hauora Māori curriculum. Firstly, not all convenors were familiar with the Hauora Māori curriculum (through their own training or interaction within the UOC) and, therefore, were unsure what was expected of them within their block modules. Convenors described how they had to ‘find out for themselves’ what competencies they needed to provide good service to Māori patients. Therefore, conveners requested that they have the opportunity to have the Hauora Māori curriculum presented to them so that they could reinforce the curriculum within their block modules.

Secondly, some conveners saw their role as giving students exposure to Māori patients. These conveners were less concerned about exact matches to learning objectives/content and more interested in allowing students to see that non-Māori could work with Māori, and providing modelling of this behaviour. Conveners were keen for students to see that working appropriately with Māori patients should be the expectation of all students/staff. They saw that unless this work practice was promoted, it would continue to place the responsibility of Māori patients/Māori health gain solely on Māori health workers/clinicians:

Yes. I think it is quite good modelling too for the students isn’t it, that it is kind of something normalised? Yes, yes, that’s right, otherwise they just see Māori clinicians doing their bit and us possibly doing our thing and not actually meeting up really in the middle. (SC 4)

Convenors also pointed out that they needed to negotiate within the medical school what their individual role and contribution to the Hauora Māori curriculum might be, and also saw that there was room for their role to evolve over time. Conveners identified that they had a role in
Hauora Māori not only because of health disparities, but also because of Māori being the indigenous peoples of Aotearoa/New Zealand and current Māori health workforce shortages. All conveners saw the opportunity to advocate for Hauora Māori reflected their clinical realities in working alongside Māori patients/whānau/community:

*And as we went through, my role now is a little stronger on the role modelling … there are not enough Māori health professionals around to look after Māori people, so it is the role modelling of the acting of feeling comfortable in the culture of participating and of looking after Māori patients. So it is a model which needs to be reflected on carefully, and is probably more important than I had initially thought.* (SC 3)

Systemic stakeholders saw the role of non-Māori colleagues as imperative to supporting Hauora Māori within the medical education environment. They explained that as non-Māori colleagues took on board their role in teaching Hauora Māori, they would be given professional development opportunities to further learn skills and strategies to work effectively and efficiently with Māori patients/whānau/community. Systemic stakeholders noted the requirements by the NZ Medical Council for clinicians to be culturally competent and to demonstrate such competencies meant that they saw clinicians’ roles as teachers in a good environment for these competencies to be demonstrated:

*I think that they definitely have a function. I think the normalisation of cultural competency and Hauora Māori in the curriculum is all staff’s responsibility, so non-Māori staff have a pivotal role, as long as they get why it needs to happen and they have the competency to be able to deliver it.* (SS 5)

Systemic stakeholders also commented that it was important that the responsibility of being a role model in Hauora Māori should sit with a number of non-Māori colleagues, especially senior staff. They saw that if there were only a few non-Māori Hauora Māori champions, then possible staff turnover would make the resources at the UOC vulnerable. Therefore, it was illustrated that if senior staff are engaged in the process with appropriate succession training, the ability of non-Māori to support the Hauora Māori curriculum would become more sustainable:

*So I think all staff, or certainly all leadership staff … must be involved so that the organisation actually grows and matures and develops those skills so that when one person leaves it doesn’t all just fall over. So I think all of the senior staff I think should be involved.* (SS 2)
Systemic stakeholders also stated that the more committed non-Māori were to demonstrating appropriate Hauora Māori competencies, the more a strong message would be sent to students that the learning outcomes within Hauora Māori were clinically relevant and valued by senior clinicians:

*I think an important part that they have is helping students accept that this is mainstream medicine. It’s not fringe. It’s not optional add-on...If non-Māori staff don’t model that on their own, then it can be undermining and marginalise the Hauora Māori teaching rather than mainstreaming it.* (SS 1)

Unlike other stakeholders, students presented with a range of opinions about whether or not there was a role for non-Māori in teaching Hauora Māori. Students did identify that seeing a non-Māori colleague demonstrate Hauora Māori competencies was positive because it helped them feel confident that they could use the skills/strategies they had learnt throughout their medical course:

*It would be really good because there are so many poor examples in the hospital that it would be nice for the people who were recognised as being good at working with Māori patients to be able to show an example or stand up and talk about it.* (SST 16)

However, students also noted that they had seen very few ‘good’ role models by non-Māori clinicians, and therefore were not confident that many of their current consultants/registrarshad enough expertise in Hauora Māori to be able to teach them about it. Students suggested a brief orientation to the Hauora Māori curriculum may assist non-Māori to have the language and concepts in which to deconstruct and teach Hauora Māori more appropriately:

*Cause they don’t realise that they naturally have picked up all these Māori concepts or they’ve naturally worked out how to work with whānau you know they, so they can’t teach you what they can’t articulate.* (SST 10)

6.2.4 Summary

The following summary points are drawn from this section.

- The Hauora Māori curriculum is internally funded, but also uses ‘other’ resources to ensure the ‘planned curriculum’ is implemented. ‘Other’ teaching resources include clinical lectures, Māori health stakeholders, and Māori patients.
• Indigenous staff identified the need for the UOC to provide resources to reinforce ‘goodwill’ and maintain ‘other’ teaching resources.

• That the community buy-in and contribution allows the UOC to implement its core curriculum.

• There is a role for non-Māori colleagues to contribute to the implementation of the Hauora Māori curriculum; however, further institutional training needs to be developed to support this initiative.

6.3 Teaching methods used in the implementation of the Hauora Māori curriculum

The teaching pedagogy adopted by the Hauora Māori curriculum involved teaching students how to contextualise an indigenous health framework and apply it to clinical practice. This involved students being exposed to different teaching methods in order to assist them to develop the knowledge, skills, and strategies necessary to feel confident to transfer the skills learnt in the classroom to clinical settings.

The indigenous health teaching team identified that the types of teaching methods implemented were influenced by the teaching settings that were developed or made available for the Hauora Māori curriculum. Table 21 highlights the different teaching settings in which the Hauora Māori curriculum is located at the UOC in comparison to the medical schools in phase one of this research. It is noted that as the UOC curriculum has evolved and developed, it has found similar teaching placements as other indigenous health programmes.
**Table 21: Teaching settings of indigenous health curriculum content in 2009 (inclusive of the UOC)**

<table>
<thead>
<tr>
<th>Teaching Setting</th>
<th>Medical School A</th>
<th>Medical School B</th>
<th>Medical School C</th>
<th>Medical School D</th>
<th>Medical School E</th>
<th>UOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within clinical attachments</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Within specific Indigenous health allocated time in small teaching sessions</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Within specific Indigenous health allocated time in teaching blocks (of a day or more)</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Within mainstream community placements with Indigenous Māori patients</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within Indigenous community placements</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>With guest Indigenous presenters</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Independent student learning time.</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Co-taught alongside non-indigenous teachers</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Taught by non-indigenous teachers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Within indigenous settings</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

The UOC Hauora Māori curriculum used a number of different teaching methods within these different teaching settings (the sequential curriculum format discussed earlier (5.4.4)). However, the following section will only explore the various teaching methods that emerged from stakeholders through the data. The six sub-categories that emerged included the extrapolation of the following teaching methods: the use of Maori pedagogies; using an indigenous health framework; lectures and tutorials; a group interviewing technique; clinical interaction with Māori patients; and Hauora Māori content integrated in block modules

6.3.1 **The use of Māori pedagogies**

The first introduction for students to the UOC Hauora Māori vertical module is within a 2.5 day noho marae. Students often used the word ‘fun’ frequently when they discussed the noho marae experience. This was often in reference to having the opportunity to be taught using Māori pedagogy and the opportunity this provided to both teach and learn from their peers (an integral part of Māori pedagogy):
I think maybe the best thing from my point of view that we’ve had from the Hauora Māori point of view has been the immersed teaching staying at the Marae and the Marae visit earlier this year. (SST 15)

The indigenous health teaching team noted that although a marae does provide an indigenous space and indigenous learning environment for students, it also provides a context in which Māori pedagogies are best applied within the learning environment. This includes; supporting collective group work over individual achievement, sharing ideas based on Māori theory of practice, discussion formulated using the indigenous health framework, and reflective practice of concepts, as positioned differently from a Māori world view. This is especially solidified as the students sleep in the same living quarters (wharenui), share meals together, are allocated to different learning groups for the different activities, have learning tasks that can only be completed as a group, and enjoy some physical activities that have underlying Hauora Māori curriculum learning objectives (e.g. te reo).

For many students the experience of being on a marae and engaging in learning validated the place of indigenous health within the curriculum, because it presented the indigenous health content within an indigenous context. Regardless of whether it was a student’s first (inclusive of international students) or subsequent visit to the marae, they noted that this experience helped them to understand a Māori perspective on health, and why the indigenous framework was relevant to their practice:

I think that I learnt the most there in that setting (the marae) and I think being in that setting helps you learn it better as well…I think you just get really excited about it being there and I don’t know being surrounded by it makes you sort of more excited…When you are at the marae you are really in amongst it. (SST 8)

Students often referred to the marae as a ‘safe place’ to learn. They commented that they felt they could interact easily with the teaching staff, because they were sharing meals and living accommodation with them. Students also took time to talk to the local hapu members who visited the marae during their stay, and saw a lot of value in being able to ask them about their life experiences.

Māori patients discussed that they thought it was very important for students to attend local marae, so they could become more acquainted with Māori cultural protocols and customs.
They also explained that if doctors had more marae-based experiences, then Māori patients would not have to explain so much about themselves and their identity. Māori patients expressed the view that this might be one way in which they could improve the relationship between themselves and their doctors. Māori health stakeholders also noted ‘Māori’ ways of doing things could be delivered incidentally when the marae was used as a learning environment:

... like getting the students to go to a Marae is really valuable, for the large majority if not all of them they’ve never been there before and having it in that context is a big statement in itself, I mean the setting is beautiful at Onuku, but I think having it there has been a critical part to the success of the programme because it gives the context immediately. (SMC 1)

All stakeholders reported that the marae as a learning environment established a context in which Māori pedagogies were ‘normalised’ and reinforced. This in turn provided a safe environment in which students felt confident to engage themselves in activities and understand content that may have previously been difficult for them. Therefore the marae as a learning environment was seen as integral to the implementation of the Hauora Māori curriculum.

6.3.2 Use of an indigenous health framework

Students discussed how part of their role as doctors was to address health disparities, and so they were keen to learn strategies and adopt tools that could be applied to their clinical practice which would increase their rapport and efficacy in working with Māori. Because of this, students were very positive about the use of the indigenous health framework (5.4.4) for implementing Hauora Māori in their clinical practice. They expressed specifically their appreciation for having an indigenous health framework that could transform the theory of cultural competency into a clinically relevant interview tool when working with Māori:

I think it makes me feel a lot more comfortable interacting with Māori patients now, knowing that there is a proper structure to follow and that will fit for basically every person. And there is sort of something to fall back on. There is a little bit of guidance there. (SST 12)
Students found that using the indigenous health framework helped them to uncover aspects of the patient/whānau/community that they had not previously considered as factors influencing their patients’ presentation. This included identifying the impacts of colonisation on Māori patients/whānau/community, experiences of racism (institutional, interpersonal, and internalised), experiences of marginalisation, and the impact/effect of migrating within or external to one’s iwi or support networks. It also assisted them to gauge what the patient valued, and how cultural beliefs and protocols were included within this value system. Students also liked that the framework provided a structure that supported them to know what questions to ask, how to ask those questions, and how to understand the relevance of those questions to the presenting case.

Students used their Hauora Māori card (a tool that amalgamates the indigenous framework and the Calgary Cambridge model) to assist them in interviews; it acted as a prompt to check if they had covered the required content. It also worked as a visual tool to assist them to remember the content that was included within an indigenous health framework that differed from the bio-medical format:

*I think the core side of the card having the picture of all the Iwi and it gives you something to talk about …like it really helps that whole whakawhānaungatanga ….. you can just get out of your book like the Meihana model… that was most helpful.* (SST 10)

Thus, students identified that having a structured indigenous health framework to apply to their clinical practice was one of the most important components of the Hauora Māori curriculum, because it provided them with a tool by which to implement the learning theory in their practice.

6.3.3 Lectures and tutorials

Students spoke positively about the use of lectures as a means of teaching indigenous health (two of these happened on the marae, the rest within the UOC usual teaching venues). However, they noted that this was because the lecture content was tailored to how it could be applied to their clinical practice.
Students and systemic stakeholders specifically highlighted one lecture titled “Why Study Māori Health?” Within this lecture students are introduced to the concept of re-presenting perspectives of indigenous health (5.4.1). In this lecture, Aotearoa/New Zealand historical content and the process of colonisation and its impact on Māori health status was presented. They commented that this lecture supported them to engage in the Hauora Māori content, whereas traditionally they had been disengaged because their previous learning about Hauora Māori had been confrontational or had made them feel uncomfortable. Such previous learning was through the media, family perspectives, and/or through their prior schooling experiences:

*I think you need the background, a lot of the background kind of tutorials and lectures and stuff because it just puts everything in context and makes you see the importance of it and then you…teach us the model and I think it’s all pretty good.* (SST 10)

However, students also mentioned that other lectures could be improved by having hand outs for each session (it was noted that only one of the six sessions at the time gave hand outs). Students remarked this would have engaged them more in the teaching content because they would have been less distracted by note taking.

Some students also illustrated examples where they felt the same content was repeated too often, e.g. disparities. This made them feel less engaged in the course, and although they noted that repetition can be good in learning, they wanted the Maori/Indigenous Health Institute (MIHI) to gauge when the repetition became aversive for them:

*I understand the value of repeating things, it sort of drums it into you, but sometimes you get the feeling, and some of my classmates share and we grumble to each other a bit about how it gets a bit repetitive and sometimes to a point where you are a little bit resentful.* (SST 9)

Students spoke positively about all small group work. They felt the opportunity to be in small groups, engaging in activities that were task based and that had clear purpose, assisted them to have a better uptake of the learning objectives of the session. This teaching method was first used on the marae and then continued throughout the 4th and 5th year teaching course:
I really enjoyed...last year during the immersed learning (at the marae) and we would rotate around the stations and they were all quite different and they were all really engaging. I was really intrigued with that side of things. (SST 14)

Students identified the use of videos (clinical scenarios) during lectures and tutorials as being a successful teaching medium for learning about Hauora Māori because videos helped them see a ‘role model’ demonstrate the implementation of the indigenous health framework within a clinical interview. Students were very clear that they did not need to be shown ‘less effective’ examples as they saw these frequently on the wards. They expressed the view that the Hauora Māori curriculum could be improved if these video scenarios could be placed on Blackboard® so that students could refer to them as they were preparing for their interviews and assessments.

Students articulated they enjoyed a variety of lecture/tutorial-based teaching sessions and this variety was an appropriate vehicle for the implementation of the Hauora Māori curriculum. However, they also noted that although a level of repetition was good, there was a need to ensure that the level of exposure to content did not saturate students’ interest in the topic.

6.3.4  Manaaki mai (group interviewing technique)

The indigenous health teaching team reported that students are first introduced to manaaki mai (support me) as a teaching method at the marae (during clinical orientation), then it is used again throughout their 4th and 5th years. The first objective of this teaching method was to assist students to apply the indigenous health framework within a clinical interview. The second objective is to encourage students to work as a team, seek solutions, and to offer advice and guidance to each other. The genesis of the teaching method encapsulates principles grounded in traditional Māori beliefs and values, and was a way that the indigenous health teaching team sought to integrate Māori teaching pedagogy into the medical curriculum. It was based on the principles of collectivism (whānau), embrace/cherish (awhi), supports (manaaki) and value/desire (uara). These principles are enacted as the teaching method involves a student being positioned to only be the ‘mouthpiece’ for the group (i.e. saying what the group tells them to say), which makes the
student feel safe and supported while also encouraging the rest of the group to engage in the activity.

The manaaki mai technique involves a facilitator, a student and a simulated patient (where an ‘actor’ follows a semi-structured script) and a scenario. All three participants are seated as shown in figure 4.

![Figure 5: Position of participants during the manaaki mai teaching method](image)

The indigenous health teaching team commented that they liked this teaching method because the group was so engaged in the activity that facilitation and encouraging participation were relatively easy. They described how it allowed students to hear each other’s perspectives (on how to ask particular questions, or explore particular components of the presenting history) as well to create a non-competitive atmosphere that was perceived to enhance learning. It also provided an environment by which facilitators could allow each student to experience success within the group activity.

Overall, students commented that this teaching method assisted them to see the relevance of the indigenous health framework to clinical practice. It also helped them to reflect on their

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33 MIHI works alongside members of the Māori community to fulfil these roles. They are usually Māori health workers (sometimes the cases are based on those they have worked with in the hospital), but can also be friends/family of the MIHI network. All actors are given a script to assist them to see what information the facilitator wants them to reveal at which point in the interview, and prompts that can be introduced into the interview if the student is doing well, or is struggling.
own level of competency when interviewing, and they liked how they could hear how their peers thought it should be done. They felt that this was a good learning technique about how to interview, and reflected that it was less aversive than some other methods they had been exposed to in other areas of the medical curriculum:

*During the block course it was quite good when we went around and did the series of interviews because we could watch other people interview and think, oh I wouldn’t have done it that way, or I would have done it that way. Seeing other people who are at the same learning level as you, you’re not just making a fool of yourself out there on your own and I guess with actors as well you do get some practice and exposure. (SST 16)*

Students identified that although some of their peers initially reported that they did not want to participate in this activity, the way the teaching method was set up made it easy to engage in the activity; subsequently, the resistance declined during the course of the session and their peers actively engaged in the learning opportunity. Students expressed how when they were exposed to the teaching method during the rest of their clinical years, they took the opportunity to ask for more direct feedback and guidance from the facilitator.

Students also noted that using this technique often during their Hauora Māori curriculum had shown them how to move from the initial 45 minutes allocated for the interview on the noho marae to 15 minutes by the end of their 5th year. They further validated the use of the indigenous health framework within a clinical interview (based on the presumption that they perceived they might only have 15 minutes as a house surgeon with most Māori patients).

### 6.3.5 Clinical interaction with Māori patients

Māori health stakeholders commented that it was really important for students to have clinical interaction with Māori patients as early as could be scheduled within the Hauora Māori curriculum. They expressed concern that unless these interactions happened, students would not have installed in their clinical practice the important parts of the indigenous health framework that would assist them to work appropriately with Māori patients as future doctors:

*Like any job, experience is the biggest teacher, you need the building blocks to put your experience on. I think the Hauora teaching gives tools early on before they (students) get established in their clinical behaviour. To think about their attitudes, to think about*
their perspective, to think about their approach to Māori generally... so I think it’s very valuable. (SMC1)

Students also remarked that the opportunity to work alongside Māori patients assisted them to see the relevance of the Hauora Māori curriculum and be more engaged in future learning opportunities as they were provided:

If somehow you can make someone go and interview a Māori patient just for the experience then come back and learn again, interview another Māori patient, come back and learn again – I think that is the important bit. (SST18)

Stakeholders specifically highlighted two opportunities that students had to interact with Māori patients; first, the Māori Health Day, which was a student-led clinic initiative, and second through Māori patient interviews used as part of their summative assessment process (Hauora Māori patient case) requirements. This section will focus on what value stakeholders perceive is gained by students interacting with Māori patients.

6.3.5.1 Student-led Clinic (Māori health day)

The indigenous health teaching team explained that through student feedback they knew students wanted more clinical interaction with the Māori community. They discussed how this was a difficult need to meet, because they did not have access to the wards like clinical block modules. However, after brainstorming other possible learning environments they decided in 2010 to pilot a concept called the Hauora Māori Day. This involved the design and development of student-led clinics (18 in total34), with clear operational protocols and clinical supervision. The event was held at a local urban marae, and offered the Māori community the opportunity to have access to free screening. Over the four hours it was run, 165 community members participated with 605 individual visits to clinical stations.

The Indigenous health teaching team reported the success of the day was the students’ ability to practise what they had been taught within the Hauora Māori curriculum in a context that was safe for Māori patients. They also noted that the opportunity for students to observe non-

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34 Including BMI, Blood pressure, ECG, Cholesterol and diabetes screening, men and women’s health clinics, paediatrics, spirometry, sleep apnoea etc. Based on the clinical block modules they had completed in years 4 and 5.
Māori lecturers/clinicians on the day, provided great role modelling that doctors have a role to play in Māori health gain.

Students were very supportive of the initiative, and although they expressed apprehension about what to expect on the day, commented that it had allowed them to meet many Māori patients and it provided an environment for them to identify the competencies they had learnt within the Hauora Māori curriculum:

"Definitely gave a context and it definitely let you practise, the Meihana model and Hui process a lot and it kept reinforcing it. Every time you saw a patient you have to remember to whakawhānaungatanga, you have to remember every single step. That actually just reinforced it that I wouldn’t even need to look at my card. It was really good at reinforcing it, it was really good at giving everyone a bit more motivation and more of a positive attitude towards it and it was really rewarding seeing how Māori patients responded to you using the Hui process and how positive they were. And also you got to take the clinical skills and at the end of it a lot of people came out of it saying that it was good that we helped one another. People were stoked to get their cholesterol checked and we were stoked to be doing it. (SST 12)"

Students were able to clearly see the benefit in being able to implement the curriculum themselves, rather than teachers implementing a programme. This enabled students to lead their own learning and implement the content of Hauora Māori. It also further demonstrated the importance of students being able to transfer skills immediately after they had been learnt, and provided reinforcement that then validated the teaching content. However, it also highlighted that without the implementation of such teaching ‘initiatives’ there is a risk that students will not see the clinical validity of the indigenous health curriculum and not have opportunities for it to be reinforced for demonstrating indigenous health competencies.

6.3.5.2 Hauora Māori patient case

Interviewing Māori patients and writing up the interview as a Hauora Māori patient case using the template based on the indigenous health framework (further discussed in 7.2.1) provided opportunities for students to independently engage with a Māori patient/whānau to complete a full history-taking interview within a ‘real’ clinical setting.

The indigenous health teaching team and Māori health stakeholders were initially concerned that Māori patients might feel ‘obliged’ or pressured to undertake an interview with a medical
student if they were asked, and hence be part of the implementation of the Hauora Māori curriculum. However, Māori patients commented that they did not feel the interview was very time consuming, and felt that taking the time was an investment in the development of a better health service for the future:

*It didn’t bother me because I thought, well if it’s going to improve things for other Māori it wasn’t much time out of my, much time for me to put in to do my bit.* (SP 6)

*The first interview, you know, when they come in they ask if it was alright for me to do the interview because it was part of their programme. I said yeah, you know anything to help the generation coming up. Like for my generation to help those coming up, because my grandkids are getting all these sickness.* (SP 10)

Patients reported particular strategies they had developed in directing the interviews with the students. Many patient experiences that were shared illustrated how Māori patients (especially those who over the years had been interviewed more than once) showed both compassion and guidance towards the students. A particularly common example was encouraging the students to take their time and reminding them if they missed any questions that could have been asked, this would often mean their asking the student to try particular steps of the interview again:

*I don’t know the way that she interviewed me, I think it was pretty good, you know straight up, if I didn’t know the questions that she was questioning me about I’d ask her to explain, and she would put it in a way I would understand.* (SP 9)

Some Māori patients explained incidents where they had taken the time to discuss with the students how being Māori was an important part of their identity. They were very keen for students to understand this was the case, regardless of whether they were highly engaged with cultural activities or not. Patients discussed how they felt this level of content was important for them to share.

Patients also shared examples where they had highlighted to the student(s) specific cultural knowledge including tribal histories and cultural protocols that they felt should be relevant to the students’ future clinical practice. Patients identified feeling very positive towards students who asked specific questions on Māori cultural knowledge, perceiving this as respectful and appropriate. Patients interpreted this line of enquiry as the students having an interest in the Māori community and Māori health:
But because he was a student, that was why I actually had taken the time to talk to him and because he had respect for my Māori tikanga. He showed me that all the way through the conversation, therefore I had no hesitations whatsoever in conversing with him through these appointments we had made. (SP 5)

Patients gave numerous descriptions of positive interactions with the students as they were interviewed for the Hauora Māori patient case. They specifically mentioned examples of: not feeling rushed by the interview; the students being genuinely interested in their stories; feeling that as they were sharing things Māori with the students, the students understanding where they were coming from and showing appropriate cultural knowledge; and feeling comfortable in the interview to the point where they shared things they had not shared with any other health professional previously:

...definitely remember being comfortable with her so I don’t think it was a very short interview and it wasn’t like, sit down can I ask you a couple of questions, she sort of tried to get to know a little bit more about me to sort of, make that connection first and then sort of, becoming aware that I was a bit more comfortable and that’s where, the questions came after that so it was quite helpful. (SP 1)

Māori patients described how students had implemented aspects of the indigenous health framework within their clinical interviews. The indigenous health teaching team was confident that this was an indication that students were demonstrating transformative practice within the clinical setting:

Oh yeah, she introduced herself quite well actually, she even did a whakapapa about her genealogy and showing herself as a person inside, and it sort of gave the encouragement for me to speak about myself and what happens you know, the ups and downs in the medical area like me and others. (SP 2)

Patients (those who had been interviewed more than once over the years) pointed out that they had particular expectations of how a student should behave within a clinical interview, especially in the method of engagement. Patients commented that some students would miss out the process of whakawhānaungatanga as they commenced the interview. Patients reported that this led them either to opt out of the interview and not complete it, or encourage the student to start again by sharing something about themselves and learning more about the patient as a person:
I sit back and I wait for them to attempt to build a relationship with me, for those students who do attempt to build a relationship...I jump in there...I share something about myself...but for those who don’t build a relationship, don’t even try...well I’m not as open, I don’t share much with them, to be honest I’m just waiting for the interview to be over. (SP7)

Māori patients were also able to articulate when students struggled to undertake the interviews with fluency, and noted their inability to use appropriate engagement strategies with them as Māori patients. They perceived that some students did struggle with the application of the process because they had not engaged with the Māori community prior to medical school. They also perceived that the current curriculum may not include enough clinical exposure to Māori patients for all students to develop the confidence in working in a culturally competent way.

However, the principles of teaching the impact of colonisation, racism, marginalisation and migration in an attempt to illustrate ‘diversity’ in the Māori community were not always understood by students. Some students reported that they had the expectation that Māori patients would all report similar cultural experiences; when the patient they interviewed was not involved in te ao Māori, students struggled to see the relevance of the Hauora Māori curriculum. Others were ‘disappointed’ in the patient and so would actively seek another patient who was more involved in te ao Māori:

It’s difficult to find a patient and the ones that are found always said oh we are not very Māori blah blah blah...we don’t really worry too much about that, sometimes a bit difficult to really gain a Māori perspective....because it was very difficult identifying any just because they were so westernised I guess. (SST 3)

The 5th year and TI students expressed how they struggled the first year when they were required to interview a Māori patient; however, when they did it again the following year, they felt a lot more confident. They often described having quite different Māori patients in each year, which assisted them to have the concept of diversity of opinion and experiences that exist within the Māori community demonstrated to them. Students commented that completing an interview each year helped them to further understand how to consolidate the learning objectives of the Hauora Māori curriculum in clinical practice. All students
perceived that undertaking multiple interviews with Māori patients within their clinical years in the medical programme was a very valuable part of the Hauora Māori curriculum.

The indigenous health teaching team said that they were always impressed by how much information Māori patients were willing to share of themselves with the students. They noted that many student assignments showed that the students had learnt and could apply the learning objectives of the curriculum to a clinical interview. They also reflected that they had many times expressed to the students that there was diversity within the Māori community, but often students did not absorb this concept until the interview with a Māori patient exposed the student to this reality.

The indigenous health teaching team noted they had calculated that over 140 Māori patients (in 2009) had consented to and participated in the student interviews for the purpose of the summative assessment. This teaching method also provided an opportunity for students to apply the learning objectives within a clinical setting. Māori patient interviews were seen as integral to validating the content within the Hauora Māori curriculum; students noted specifically that multiple interviews with Māori patients were able to support the learning objectives of the Hauora Māori curriculum (as opposed to just a single interview).

6.3.6 Hauora Māori integrated in block modules

Systemic stakeholders noted that the integration of Hauora Māori content within block modules was integral to model the relevance of Hauora Māori to the ‘rest’ of the curriculum. Systemic stakeholders and conveners expressed the view that the integration of Hauora Māori content should be viewed as ‘core’ curriculum content.

Systemic stakeholders and conveners explained that although there were currently some levels of integration, they perceived that this could be increased. Specifically, the idea of training non-Māori staff in the Hauora Māori content was seen as a solution to growing the workforce that could teach and model appropriate cultural competence to the students:

*It is certainly a very important part of the curriculum. How does it compete for time with everything else, I mean in some ways if it were possible that everybody could integrate cultural awareness into their practice of teaching and medicine, your job*
would be solved, and the more integrated it is in a sense, the less it would be not competing. It would be competing with other material and rather be actually part of them and complementary to them. (SC 2)

Some conveners remarked that the integration within block modules was important because they could provide students with appropriate exposure to Māori patients, within their clinical settings. For convenors, this was what had motivated them to give time within their block modules to Hauora Māori. They had perceived that seeing Māori patients with a presenting complaint would be a more effective way of validating the importance of the Hauora Māori content:

"Yes I mean I think, it seems important to teach it to a large extent in the block modules because that is when...that is how people remember and learn you know when they see a patient in the hospital who is Māori and needs that sort of input then they are going to learn that a lot better than if say, if it is in its, just in blocks. (SC4)"

Students identified that while they had enjoyed the immersed teaching as an introduction to the indigenous health framework processes for engaging with Māori patients, they also reported that the integrated teaching within block modules assisted them to keep Hauora Māori on their ‘radar’. It also assisted them to apply the general concepts/principles they had learnt to different clinical scenarios. They commented that this had added value to how they perceived Hauora Māori and its relevance within the curriculum. Some students had noticed the absence of Hauora Māori content within some block modules, and commented that the block module would have been further enhanced by the inclusion of the Hauora Māori content:

"Yeah, one of the things I think quite good was the integrated teaching cause it kind of keeps it on your radar cause you kind of have like the really intense Māori days and then when you have the integrated stuff it just kind of like brings it back up again and you’re thinking about it again and like that was the big thing for me, quite good. (SST 10)"

The indigenous health teaching team noted that not all block modules at the time had Hauora Māori content integrated within them; this was mainly due to resource constraints in teaching and time allocations. The indigenous health teaching team clarified that all block modules that had been approached to include integrated teaching had provided time within the
Students and systemic stakeholders perceived that for Hauora Māori to be integrated within all aspects of clinical practice the Hauora Māori curriculum needed to be integrated and implemented within the block modules. Specifically, course convenors identified that block modules could provide the appropriate clinical setting by which students could apply the Hauora Māori learning objectives. There was also a need to further support course convenors to be taught the indigenous health framework by which they could support/reinforce the Hauora Māori curriculum.

6.3.7 Summary

The following summary points are drawn from this section.

- Students identified that having the indigenous health framework to apply to their clinical practice was one of the most important parts of the Hauora Māori curriculum, because it provided them with a tool with which to implement their learning theory in their practice.

- Content within lectures and tutorials promoted the rationale for the place of indigenous health within the medical curriculum. However, there is a need to ensure that the level of exposure to some content did not saturate students’ interest in the topic.

- All stakeholders reported that the marae environment as a context for teaching provided a space where Māori pedagogy was ‘normalised’ and reinforced.

- The manaaki mai teaching method not only provided students with a structure to feel confident in using the indigenous health framework, but also a forum in which to receive feedback for learning.

- The Māori health day added value to the curriculum because it directly allowed students to have a clinical setting in which to demonstrate the learning outcomes of the indigenous health curriculum.

- Interview with Māori patients are a vital part of the Hauora Māori curriculum as they provide opportunities for students to apply the Hauora Māori curriculum within their
clinical practice. Multiple patient interviews are seen as beneficial to help students learn about diverse realities and to build their confidence in implementing the indigenous health framework.

- Students, course convenors, and systemic stakeholders highlighted the importance of the Hauora Māori curriculum being integrated throughout all block modules.
- A training module needs to be developed to assist course convenors integrate the Hauora Māori curriculum within block modules.

6.4 Challenges for implementing the Hauora Māori curriculum in the future

At the conclusion of the interviews with stakeholders, students were asked how they thought the Hauora Māori curriculum should be implemented in 5 to 10 years time. The following section discusses the main sub-categories that emerged including the possible pathway forward utilising distance-taught learning initiatives, the further integration of Hauora Māori curriculum within block modules, and the development of indigenous health electives/selectives.

6.4.1 Distance-taught learning initiatives

Systemic stakeholders and the indigenous health teaching team noted more students were being placed in rural or other city/town placements away from Christchurch, for different lengths of stay (6 weeks to 1 year). This raised the issue of the need for the Hauora Māori curriculum to adapt new implementation methods that could ensure that all the UOC students had similar exposure to the ‘core’ curriculum. The ideas shared included the use of current learning platforms (e.g. online portals), exploring what teaching methods are currently employed by the rural medical immersion programme (RMIP) and also building relationships with Hauora Māori experts within other centres (especially Nelson where a number of the UOC students are based for their final year). The indigenous health teaching team also noted that they needed to review how indigenous health is taught in other international settings (rural communities or outposts of the major cities) as they perceived that this would be an
increasing area of research and development, particularly because many Australian schools used clinical settings outside of their city of origin.

However, the indigenous health teaching team reported that they were concerned about how some of the ‘success factors’ of the Hauora Māori curriculum (e.g. rapport built on the marae, the group interviewing technique) might be replicated if students were unable to have any time in Christchurch. They were sceptical about whether there would be the same opportunities to re-present Māori content if it was not initially positioned within a marae environment. The indigenous health teaching team saw distance taught courses as inevitable, but would also need to use face-to-face teaching (using a back to base teaching model) to ensure all learning outcomes were met.

Therefore, the indigenous health teaching team and systemic stakeholders raised the idea that possibly a new pedagogical approach may be required to implement the Hauora Māori curriculum to support distance-based learning. There were concerns that the absence of using a marae may diminish opportunities to re-present Māori perspectives within a Māori environment, and stakeholders were unsure what the repercussions of this might mean to the Hauora Māori curriculum. The indigenous health teaching team was keen to explore how other indigenous health curricula (e.g. Australia) were working through these issues.

6.4.2 Further integration for the Hauora Māori curriculum within block modules

When students were asked to give their vision for where they hoped the UOC Hauora Māori curriculum would be in 5 to 10 years time, they stated they hoped that Hauora Māori would be fully integrated and it would be seen as ‘core content’ at the UOC. They described their vision that every block module would have aspects of the Hauora Māori curriculum within their course. They speculated that for this to happen, there would need to be clear training programmes for all clinical teachers at the UOC; they also noted that this training should be extended to registrars.

Convenors pointed out that they also saw the future of Hauora Māori being more fully integrated within their own block modules, with a clearer accountability for non-Māori in
teaching the Hauora Māori learning objectives, and themselves feeling more confident to teach about Hauora Māori with possibly their own case experiences:

*I guess one thing is that I’d like to see that everyone regards it as just completely a natural integrated, just part of everything else and not out on its own or special or whatever that is or even questioning that that’s what should be included, it’s just I guess as natural as learning pathology, and you just wouldn’t question it and it is just part of what everyone does, everyone’s involved.* (SC5)

Systemic stakeholders envisaged that the Hauora Māori curriculum would also continue to become more embedded within the curriculum and were confident that it would maintain its status as a core part of the UOC curriculum.

The indigenous health teaching team and Māori health stakeholders also commented that they saw Hauora Māori becoming more accepted and ‘normalised’ as a core part of the curriculum. They described the future Hauora Māori curriculum as being more infused with clinical scenarios and clinical experiences. However, they were wary about it becoming ‘invisible’ and of ‘others’ taking full charge over the curriculum without an appropriate framework or level of expertise to ensure the intended content was not diluted. They saw Hauora Māori as its own speciality area that would need oversight by a Hauora Māori expert.

Māori health stakeholders also envisaged that the UOC Hauora Māori curriculum would be adopted by the CDHB (and wider) so that all staff (especially those trained overseas) would be taught a consistent method in working alongside Māori patients/whānau/community. They perceived this would have a big influence on the overall Hauora Māori competency of the institution, which would benefit Māori health:

*But I mean it would be lovely to see, the model that MIHI has developed spread throughout the land, throughout all the main centres, it would be lovely to see that because just imagine the number of doctors and the integration and the engagement and the, talk about improvement of people’s health it would just be phenomenal the changes.* (SMC4)

Thus, the future of the Hauora Māori curriculum was seen to involve the reduction of the stigma of Hauora Māori as an ‘other’ subject and seen as a core part of the UOC curriculum. In terms of the impact of this vision on the implementation of the curriculum, it identified perceptions that non-Māori should have a larger role/responsibility in including Hauora
Māori within their block modules, and that the indigenous health teaching team would work on collaborative models to either teach in block modules or provide a framework which other teachers could use to include Hauora Māori content within their curriculum.

6.4.3 Indigenous health electives/selective

The indigenous health teaching team was very keen to build on their current relationships with both Māori health stakeholders (and non-Māori who worked with high numbers of Māori patients/community) and with their international peers to develop specific electives/selective opportunities for the UOC students to extend their learning in indigenous health.

The indigenous health teaching team had already trialled some ‘national’ placements with the UOC students being placed in rural GP surgeries that accommodated a high number of Māori patients or had Māori clinicians within the practice. Students who had attended these placements commented that they really enjoyed the opportunity to put into ‘practice’ what they had learned from the Hauora Māori curriculum, and discussed how they had also extended their learning. One particular rural area had become popular as a choice due to positive student feedback:

*Putting students up the coast has been great...they have all enjoyed it, and it has assisted them to see the relevance of the Hauora Māori curriculum...and the skills/knowledge they have worked alongside Māori communities...they get excited that they are able to contribute to Māori health. (STT 1)*

Māori health stakeholders also saw the importance of students being able to work alongside ‘other’ indigenous populations (within other countries) so that they could see the similarities between indigenous communities (e.g. impact of colonisation), whilst also taking the opportunity to learn about a ‘new’ indigenous culture. The indigenous health teaching team also saw benefit in international placements to encourage students to apply what they had learnt about indigenous health within an international context.

Therefore, stakeholders identified that future developments within the Hauora Māori curriculum should include further development of local placements (Aotearoa/New Zealand) that extend students’ opportunities to develop Hauora Māori competencies, and international
indigenous placements to allow students to identify which aspects of the Hauora Māori curriculum are relevant to an international context.

6.4.4 Summary

The following summary points are drawn from this section.

- All stakeholders had a vision for the future of the Hauora Māori curriculum, and this involved the continuation of Hauora Māori content within the UOC curriculum.
- The changing teaching environments at the UOC is the change agent that has sparked discussion about how current Hauora Māori content could be taught using distance-taught methods; this will be a new challenge to the indigenous health teaching team and systemic stakeholders going forward.
- There is an expectation by stakeholders that Hauora Māori will become further integrated within block modules and become accepted as ‘normal’ within the core curriculum.
- The indigenous health teaching team and Māori health stakeholders see value in further developing national and international indigenous clinical placements to provide further opportunities for students to build their Hauora Māori/indigenous competencies.

6.5 Chapter summary

This chapter has explored the factors that influence the implementation of the Hauora Māori curriculum. The three main categories that emerged from the data were curriculum resources, teaching methods used within the Hauora Māori curriculum, and challenges for implementing Hauora Māori in the future.

The findings highlight that the current UOC Hauora Māori curriculum uses internal resources (indigenous health teaching team, course convenors, and other non-Māori colleagues) and resources from the wider community (clinical lecturers, Māori health workers, and Māori patients) in order to implement the current programme. The curriculum is fully funded internally by the UOC. The initial use of the community was to help boost the available resources to the Hauora Māori curriculum. However, the use of the community to assist in
the delivery of the Hauora Māori curriculum has now been identified as vital to the successful implementation of the programme.

The formation of an indigenous leadership position and the indigenous health teaching team in itself is a recruitment and retention strategy for other Māori health staff. The ability to undergo both medical educational professional development and cultural professional development and to navigate institutional and student bias (including racism) are seen as key enablers for the implementation of the Hauora Māori curriculum. The role of non-Māori as teachers was validated by stakeholder comments, but there is a need to develop a training programme for non-Māori teachers on the Hauora Māori curriculum.

In terms of teaching methods, students acknowledged the importance of the indigenous health framework (Hui/Meihana model) in assisting them to translate Hauora Māori theory into clinical practice. Stakeholders noted the transformative practice occurring within clinical practice and clinical health settings. Stakeholders also saw the relevance in teaching Māori health within an indigenous setting (marae) to provide a context for the indigenous knowledge. Students noted that the marae validated the place of indigenous pedagogies within their learning. Learning that focused on how to use the indigenous health framework received the best feedback, regardless of what teaching method it engaged with (lectures/tutorials, group interviewing technique, videos etc). Students would have preferred more hand-outs and more opportunities to practise interviewing a Māori patient during learning time. Interaction with Māori patients was seen by all stakeholders as pivotal to students understanding diverse realities within the Māori community and the relevance of the Indigenous health framework to their practice. The presence of Hauora Māori within block modules helped students identify the relevance of Hauora Māori to all their learning areas.

In terms of the future of the Hauora Māori curriculum, stakeholders saw Hauora Māori being viewed as not an ‘extra’ part of the curriculum but being a core learning component. Stakeholders identified that they saw Hauora Māori being further integrated into block modules. However, the move to place more students within ‘satellite’ or smaller hospitals outside of the main teaching centres would prompt a move for Hauora Māori to redevelop
their teaching methods and approaches in order to deliver the curriculum within a distance-taught framework. There were concerns that some of the strengths of the current curriculum would be lost in this process. The indigenous health teaching team and Māori health stakeholders also highlighted the need to extend the curriculum by providing both national and international indigenous placements to students (on an elective/selective basis).
CHAPTER SEVEN: RESULTS 4
Phase Two: University of Otago, Christchurch - Measuring the impact of the indigenous health curriculum

7.1 Introduction
The previous two chapters (5 and 6) have presented stakeholders’ perceptions of what factors had influenced the design and implementation of the Hauora Māori curriculum at the UOC. The purpose of this chapter is to present stakeholder perceptions of the impact and influence of the Hauora Māori curriculum. For the purpose of this chapter, impact is defined.

Given the various components of the Hauora Māori curriculum and the way in which different stakeholders were engaged with the curriculum, it became apparent within the analysis that no single measurement could accurately depict all stakeholder experiences. However, three categories that encapsulated a shared number of stakeholder perspectives emerged, including:

1. the role of summative assessment tools as a measure of determining the impact of the curriculum.
2. the influence of the curriculum on student professional development and clinical practice as a measure of its impact.
3. the influence of the curriculum on the wider health environment as a measure of determining its impact.

This chapter will report on the above three categories and triangulate the findings to determine the perceived impact of the Hauora Māori curriculum on its stakeholders.

7.2 The role of summative assessment tools in determining the impact of a curriculum.
Systemic stakeholders and the indigenous health teaching team noted that the Hauora Māori curriculum measures the impact of one component of the indigenous health curriculum
through summative assessment processes. Table 22 maps the types of summative assessments undertaken at the UOC in relation to other medical schools (4.4). Table 22 shows that the UOC uses similar assessment tools to those used at other medical school sites. There is no clear relationship between the time in the curriculum and number of assessments across the medical schools.

Table 22: Types of assessments and evaluations used as part of the indigenous health curriculum in 2009 (including the UOC)

<table>
<thead>
<tr>
<th>Type</th>
<th>Medical Site A</th>
<th>Medical Site B</th>
<th>Medical Site C</th>
<th>Medical Site D</th>
<th>Medical Site E</th>
<th>UOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning time in the curriculum</td>
<td>N/A</td>
<td>57</td>
<td>8</td>
<td>9.5</td>
<td>55</td>
<td>54</td>
</tr>
<tr>
<td>Interview with an indigenous patient and required to present it in written or oral form.</td>
<td>Assessment</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>MCQ Assessment</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Short Answer Questions Assessment</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>OSCE Assessment</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Other (Specify)</td>
<td>Are doing case based assessment in 2011</td>
<td>Case reports, reflective commentary, longitudinal study, clinical supervisor report forms</td>
<td>PBL, pre and post testing of course content</td>
<td>Reflective journal; essay, tutorial presentation, PBLs; CBLs</td>
<td>Essays</td>
<td>Log book, tutorial presentation</td>
</tr>
<tr>
<td>Written formal student feedback undertaken</td>
<td>Evaluation</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

* Note that the UOC only includes years 4-6. Years 1-3 are spent in Dunedin and the hours for this teaching are not included within the UOC allocated hours in the curriculum.

Although the students undertook a number of summative assessments (over their three years at the UOC), stakeholders’ comments centred on two specific assessments: the Hauora Māori patient case and the Hauora Māori multi-format assessment (inclusive of an OSCE).
Therefore, the following section will explore the stakeholder perspectives of both these assessments.

### 7.2.1 Hauora Māori patient case

The Hauora Māori patient case requires students within their 4\textsuperscript{th} and 5\textsuperscript{th} years to interview a Māori patient (whom they have located within a clinical setting) using the indigenous health framework. Students are then required to submit a written report using a template designed to align with the indigenous health framework. The following section will explore the perceived impact on both the students and patients involved in this assessment process.

#### 7.2.1.1 Student experience of the Hauora Māori patient case

The majority of students commented that when they received the 4\textsuperscript{th} year Hauora Māori patient case assessment (in February and the assignment is due between August and September), they had not initially been keen to undertake the interview with a Māori patient and produce the required written report. Students articulated that because vertical module time was woven within block modules, it often became difficult for them to balance the assessment requirements of both modules. Therefore, the timetabling for finding a Māori patient, conducting the interview, and then writing it up, was often seen to clash with block module commitments.

\textit{In terms of, I think the thing with the assignment is fitting it in to everything else... and I think things if we had a disadvantage in that we were always trying to fit it in, and everyone does different things at different times.} (SST 8)

Students also reported that prior to undertaking the interview with the Māori patient/whānau they felt that they would not benefit from the assignment and saw little value in it. However, after completion of the assignment the majority of students reflected on how beneficial they had found the experience. Students’ shared learning experiences from the Hauora Māori patient case included: initial fear in approaching a Māori patient; lessons learnt about their own competencies as an interviewer; lessons learnt about their Hauora Māori competence; recognising diverse realities of Māori patients’ experiences in the health system; sudden realisation about the impact of racism within the health system; and the identification of the impact of colonisation:
Because I think a lot of people think it is just a person, I can interview a person, and when you actually see how incompetent you are and how much you don’t know it’s quite a good wake up…and I think that’s the whole thing with the assignments and things, that was the point for me, that I practised it and you saw what an idiot and how much I didn’t know and then you could come back and learn some more. (SST 18)

Students also moved from discussing the interview as an ‘assessment’ and instead described it as a learning opportunity. The students reported that by using the indigenous health framework, they saw how they could be a change agent to influence a Māori patient’s journey within the health system:

…but just in terms of doing the assignments I know a lot of people to start with were kind of like oh this assignment, find a Māori patient like that doesn’t sound like a really good idea. But actually when you do it and you sit down and say to someone we are doing this project and I want to talk to you about being Māori, living and working in the New Zealand health system, getting health care or whatever, and then people will talk to you and they tell you very honest answers. Certainly the patients I talk to I almost felt like I was giving them an extra, somehow improving their time in hospital. Because someone cared and they were like I didn’t think any doctors cared about that kind of stuff. I felt like I certainly learnt a lot through the assignments and again having that as part of the curriculum and having it assessed is – it sort of seems frustrating at the start but then actually probably out of all the assignments I’ve done it was one of the best learning experiences because it forced you to do something scary that you didn’t want to do but you had to, and you learnt it wasn’t such a bad thing after all. (SST 16)

Students also reported that they realised that the indigenous health framework assisted them to get more relevant information from the patient than would have been achieved by using a standard medical approach. They noted that the ability to explore MBVEs (Māori Beliefs, Values and Experiences) and Nga Hau e wha35 (Colonisation, Racism, Marginalisation and Migration) concepts assisted them to develop less deficit views of the patient, and instead understand the broader context of the patient’s life:

Well when we first got the assignment we were all …not sure why we should approach it differently but once you did actually make use of the different approach … you find out a lot more than you actually would by just getting a medical history. It made it a lot easier to actually come up with a management plan and try to work with them rather than just telling them what you think they should do. I think it made the experience and their stay in the hospital a lot better … because they felt that someone actually listened to them for a change and they didn’t just gloss over the whole social

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35 Nga hau e wha: literally means the four winds. It is a traditional concept of describing different factors that can influence one’s course to well-ness, a component of the Meihana model.
aspect of it, but actually took that into account for their presentation with the medical condition. (SST 19)

One student stated that they thought the patient interview was relevant to any culture, and dismissed the relevance of the Hauora Māori curriculum in offering anything ‘new’ or relevant to their learning. Instead, they indicated that the broader concept of cultural competency skills was relevant to all people, regardless of race.

For the assignment I think it’s not really helping a lot. Like any other patients that we interview as long as we are sensitive and know that everyone has their own belief and their own whatever and be sensitive about its approach is pretty much the same as every patient regardless of whether they are Māori or non-Māori. (SST 20)

However, the rest of the students pointed out that the opportunity to interview Māori patients assisted them to take the theory from the classroom into a clinical setting. Students shared experiences of how the relevance of specific teaching content and/or skills became clearer and more meaningful within the context of interviewing the Māori patient/whānau:

Yeah definitely and especially the use of whakawhanaungatanga – I think that’s really good. With my long case last year, it established a really lovely relationship with a lovely woman and the same thing happened this year and it just gives you a lot more faith in the curriculum when you do see the benefits that it does have. (SST 14)

There were also opportunities within the UOC where an interview with a Māori patient could also be used to meet the relevant assessment method of a block module. Students were very positive about the ability (given their workloads) to meet two assessment requirements through one patient interview. They also discussed how, by using the indigenous health framework in their interview, they were able to provide more in-depth information (especially in social and family history) for both assignments, and felt that they could represent the patient more effectively by acknowledging their Māori status, as opposed to viewing them as a patient who happened to be Māori:

Now that we have been taught, that whole barrier has been removed and so I think it’s been really valuable and really rewarding having the kind of services in place..., like a patient last year that I did my men’s long case on was also the Māori patient that I interviewed. So you can kind of combine two into one, so you’re sort of finding out a whole heap of stuff about the patient you are doing the examination, taking not just the history but their Māori history as well and it’s a way better reward at the end. Just like throwing so much into one patient and seeing how it all works. (SST 12)
However, students commented that although they saw the value in the Hauora Māori patient case in 4th year as an assessment, they felt this being repeated in 5th year did not contribute further to their understanding and development of Hauora Māori. Two students instead suggested that the 5th year assessment should use the medium of an oral presentation. These students considered how an oral presentation (similar to that used in their obstetrics and gynaecology block module) would allow them to present what they had learnt about one patient while also having the opportunity to learn from what their peers had found out from the patients they interviewed. Students were confident that this would support their further learning in Hauora Māori. They also noted that because written assignments were not a preferred method of assessment, the move to an oral presentation would support further positive engagement with the Hauora Māori curriculum.

Therefore, most students affirmed that the Hauora Māori patient case, allowing them to take Hauora Māori theory into a clinical setting, overcame their fears of interviewing a Māori patient, built their confidence in working within an indigenous health framework, and allowed them to demonstrate transformative practice. Because of these factors, students reported the Hauora Māori curriculum as having a positive impact on their learning and practice.

7.2.1.2 Māori patient experience of the Hauora Māori patient case

As previously discussed (6.2.4.3), Māori patients were asked to assist in the implementation of the Hauora Māori curriculum by being interviewed within clinical settings. However, there were concerns from the indigenous health teaching team and the Māori health stakeholders about the impact on Māori patients of being involved in the Hauora Māori curriculum, so Māori patients were asked how they felt about being interviewed by students, specifically because of their ethnicity. All Māori patients reported they had felt comfortable with this request, and were happy to contribute to the medical students’ learning about the Māori community.

Yeah, but I mean if it helps I’ll answer it, especially to help us out you know – Māori.
(SP 9)
Many patients reported that, because of their chronic ill health, they had been asked a number of times (some patients up to 5 times a year) to participate in this Hauora Māori patient case. They reported that, although they knew the assignment was an important teaching tool, they did not feel obliged to participate in the interview. Patients indicated that they might have declined an interview because they were tired, had already been interviewed within the last few days, had visitors, or had not been impressed by the students’ initial engagement strategies. One patient described an incident where the student had mispronounced his name, so he had sent the student out of the room and told him only to return when he could pronounce his name. After an hour the student returned to the room pronounced the patient’s name correctly and completed an interview with the Māori patient. All Māori patients commented that they felt in control of the interview and did not feel that they were obliged to answer all the students’ questions. All patients interviewed stated that they would continue to participate in student interviews in coming years. They appreciated the thank you letter that was sent to them from the UOC for participating in the Hauora Māori curriculum:

Oh definitely yeah, I am always up for anything to do with you know … especially the young ones coming in to the profession to know more about, you know, the Māori side … I think sometimes you do have to separate the cultures and get a small understanding of each of them to deal with it so I am always happy to participate in surveys and interviews with medical students. (SP 1)

Many Māori patients shared that they had previous negative experiences within the health system (their own and those of their whānau). They specifically identified incidents where they perceived they had been talked to in a derogatory way, been exposed to clinicians’ comments and behaviour that reflected a lack of competency in working with Māori, and instances where appropriate cultural beliefs were undermined by clinical processes. However, in contrast, patients were impressed by their experiences with the medical students, and noted how they had identified a student’s approach, within these interactions, as different from the service they had received previously in the health system. They highlighted the competence of the students’ communication skills, ability to speak te reo, and their familiarity with te ao Māori. Because of this more positive interaction with the students (as compared to more senior staff), patients reported their belief that Māori would enjoy a better quality service from the new cohort of junior doctors:
When my dad was in hospital recently he was quite sick and there was a (medical student) who I think was in her last year and she stood out particularly for him because she had that respect if that’s the words, some of the others (clinicians) don’t…he felt she gave him that respect and she didn’t talk down to him … and that was one thing I do remember about her, that she treated him as a Kaumatua I guess and he clicked with her, he would answer her questions rather than anyone else, cause she made him feel comfortable. (SP 4)

A patient reported that her past experiences in the health system had been so demoralising, that she had disengaged with health services for a long period of time. However, due to a health condition she had been ‘forced’ to re-engage in a specialist service. It was within this context that she was asked to be interviewed by a UOC medical student. The patient stated that the student’s approach was so sincere, understanding, and different to what she had previously experienced that it took her by surprise. This resulted in the patient opening up about their journey in health for the first time; she explained a particular clinical procedure that left her feeling violated by the system. This experience had caused her to grieve for many years. The patient believed that the level of training the students had received in Hauora Māori had assisted the student to understand the context of their disengagement, as it was embedded in a breach of Māori cultural protocols. The patient was surprised that a student had been exposed to this knowledge and could appropriately discuss the relevant issues with her. This patient initially felt guilty that she had unleashed so much of their story on a young doctor, but then discussed how the student validated her story and showed appropriate empathy:

I knew it was a heavy thing to dump on a student, but I think because it was the first time a clinician had been responsive to me and kind that I just felt like I could tell her my story – about my abuse – I was worried that it might have been too much. But afterwards she told me she was thankful that I shared my experiences with her, and that it had helped her to understand my journey. (SP 11)

Other reports from Māori patients, and their levels of comfort with being interviewed by students were shared with Māori health workers and those previously employed in the indigenous health teaching team. These stories also highlighted that Māori patients were impressed with student competencies in Hauora Māori. These stakeholders remarked that such feedback from the Māori community gave an external validity to the content and approach being used within the UOC:
I’ve also talked to other Māori health workers who’ve said that their patients have reported feeling more responded to by graduates who have had the opportunity to undertake Hauora Māori at Christchurch.... a lot of people have said that because of the work that MIHI has done with students they would rather see a student than an older already established specialist in some cases because they feel like the students are more engaged in their health journey and understand their health journey better. (STT 2)

Māori health stakeholders and the indigenous health teaching team had observed the UOC graduates (usually house surgeons) using specific engagement and assessment strategies taught to them through the Hauora Māori curriculum. These stakeholders felt that it was a credit to the curriculum that graduate students had retained the content of the UOC curriculum and were continuing to implement it within their clinical practice:

Yeah, X (their child) broke his arm and we went to hospital and I saw very familiar face but I couldn’t pick her name but she was awesome, she was doing a really good job from what I could see in her interaction with the patients and yeah I was quite impressed. (STT 4)

However, some Māori patients said that the students who interviewed them did not use the indigenous health framework in the interview. They reported the student being clear about what information was needed, and some patients felt comfortable with this approach because this was the type of service they were used to in the health system. Some Māori patients reported that they did not feel the need for students to use an indigenous health framework because their own interaction with te ao Māori was limited and/or they did not want to be seen as being treated differently from other patients in the health setting:

They got to learn how to help not just Māori but there is other people you know Fijians like I said, there’s a whole multitude of, you know, countries getting invaded by them now and then to try and single Māori out I think that’s just not putting more pressure on them, you know what I mean? (SP13)

Three patients whose names were part of the first random selection process, on contact were recorded as having passed away prior to the time of the interview. However, whānau members (spouse/child) insisted on sharing experiences of how they had been present for the interview or the patient had discussed the interview with them. For one whānau member, they noted that the interview was the ‘highlight’ of their father’s stay in hospital. All whānau members noted that the patient had felt positively about being able to contribute to students’ education in Hauora Māori.
Overall, Māori patients interviewed reported that they did not feel obliged to participate in this assessment or burdened by it. They commented that they were motivated to participate in the interviews because they wanted to assist students to learn more about Māori health and the Māori community in order for Māori in the future to receive more equitable and appropriate health services. Māori patients reported having positive experiences with the medical students, which reinforced their engagement with the assessment, and that the interviews (for most Māori patients) enhanced their experience of being in a clinical setting. Hence this assessment had a positive impact on Māori patients because it provided them with a positive health experience and an opportunity to become an advocate for Māori health.

7.2.2  Hauora Māori multi-format assessment

The Hauora Māori curriculum introduced a multi-format (summative) assessment in 2007. The indigenous health teaching team described how they initially used an OSCE that involved three different clinical scenarios which was then reduced to two clinical scenarios (each requiring interaction between the student and a patient) and a short answer exam in 2008. In 2010, this was reduced further to one ten-minute patient interaction clinical scenario and a multiple choice questionnaire (based on compulsory readings from the course).

Stakeholders discussed in depth the insight gained from participating in the clinical OSCE station. The following section will explore both the student and Māori health stakeholders’ perspectives of the OSCE component of the multi-format assessment.

7.2.2.1 Student experience of the Hauora Māori OSCE

Students reported that an OSCE within the UOC was seen as an important assessment tool; thus, the Hauora Māori curriculum using an OSCE format for their assessment was seen by students as giving weight to its presence in the curriculum. It was also seen to send a clear message that the Hauora Māori curriculum was a core part of the UOC medical curriculum:

*The idea of an OSCE is good because it almost gives a bit of credibility as well. Like you are discipline in the Medical School.* (SST18)

In terms of the OSCE clinical station, students pointed out that although they knew what learning outcomes were being measured, it was easy for them to default back into their
‘usual’ (without an indigenous health framework) OSCE format of taking medical history. However, students identified that when they attempted their ‘usual’ engagement strategies, this was usually met with the actors appearing withdrawn and uninterested in them:

*I found the OSCE a little bit different to what I expected. It was a little harder than I expected ... the question seemed a lot simpler than what we had to do.... It was a kind of similar idea but if you use the same tactic or same technique of trying to build rapport (instead of whakawhânaungatanga) it didn’t work.* (SST 1)

Hence, they noted that the actor’s behaviour was a prompt to them of the purpose and expectation of the Hauora Māori OSCE. They reported that, if they used an indigenous health framework in their approach to the history taking, the actor positively reinforced their behaviour with engaging body language and more content sharing.

Students reported that the presence of an OSCE within the multi-formatted assessment sent a message that the UOC valued Hauora Māori as a core part of the curriculum and a ‘real’ medical discipline. Students also noted that it had a positive impact on their learning because it provided a ‘practice’ clinical setting by which they were expected to demonstrate their ability to implement the indigenous health framework within a clinical interview.

7.2.2.2 Māori Health Stakeholder experience of Hauora Māori OSCE

The indigenous health teaching team described how the Hauora Māori curriculum had always used Māori health stakeholders to participate as the ‘actors’ within the OSCE component of the multi-format assessment. This was for two main reasons: firstly, because it removed the ‘over acting’ of the case, as the Māori health stakeholders used their own experiences with Māori patients to bring a reality to each case, and secondly, this context provided an opportunity for Māori health stakeholders to provide peer review of the Hauora Māori curriculum (as demonstrated by the student’s knowledge/skills and quality of the OSCE clinical scenario).

Māori health stakeholders explained that prior to being involved in the OSCE they had previously believed that Asian/recent migrant students might struggle with the Hauora Māori content, specifically because they perceived that these students were less likely than New Zealand European students to have had prior exposure to the Māori community. However,
they had noted over the years that Asian/recent migrant students, in the clinical interviews, had demonstrated Hauora Māori competencies. This had led the Māori health stakeholders to re-evaluate their beliefs about this cohort of students. They noted how they had observed within the OSCE that Asian/recent migrant students were able to use the commonalities between their own culture and Māori culture to build an appropriate relationship with Māori patients. They had then formulated that because Asian/recent migrant students, as an ethnic minority, may have had previous experience with marginalisation and racism this positioned them to be able to demonstrate empathy with Māori patients. Thus, their perception of Asian/recent migrant students and migrant communities had changed, due to their engagement with this cohort of students through the OSCE process:

*I find when we’re doing OSCEs that I have found that the Asian students are the most respectful.* (SMC 4)

*Oh just the only other thing really is to, needs to be noted that over the years that I’ve been with OSCE that I actually find that the overseas students seem to be a lot more resilient with coming on board with, you know, their approach and especially with Māori situations that were being given to …* (SMC3)

Māori health stakeholders explained that students who appeared less engaged or competent with Hauora Māori competencies tended to be New Zealand European students. This had led them to conclude that this might be influenced by this cohort of students constantly being exposed to societal prejudices towards Māori. They noted that contrary to their earlier perceptions (that New Zealand European students would all have had exposure to the Māori community and an acceptance of its world view) there was a need to continue to support New Zealand European students to become more engaged in Hauora Māori:

*Yeah, some of them really have an attitude you know or is it my way of looking at them thinking you know ok you know you’re actually naughty but, or is it because you’ve been identified as being from Aotearoa so you should know all this…and maybe they don’t necessarily know all that, so they put the blocks up.* (SMC 3)

Māori health stakeholders identified their role as to peer review the UOC Hauora Māori curriculum. They noted that over the years they had seen the content become more refined which they felt was reflected in the students’ evolving to be able to undertake the interview using the indigenous health framework. They were also impressed with how students used the indigenous health framework within the interview. Over the years they questioned why
students were asking particular questions, or using a particular line of enquiry. They had always felt they could be ‘straight up’ with the indigenous health teaching team about what they thought was appropriate and what was not appropriate.

I think what MIHI is doing is about time you know...I think your structure there, your team you’ve got there they do an amazing job and I feel really proud whenever I go there and I see the staff and I see how they interact with the students and it’s like whānau, that’s got a really nice feeling about it so it just sort of makes you feel welcome, you know, and those are some of the things that we try to replicate here, you know, manaaki, aroha, those taonga tuku iho (precious things passed down from your ancestors). (SMC4)

Therefore, the OSCE was perceived as having a positive impact on Māori health workers because it provided an opportunity to challenge their own perceptions about medical students, and to reflect on the impact of societal prejudices about Māori on medical students. The OSCE also provided a context by which Māori health stakeholders could critique and review the Hauora Māori curriculum.

7.2.3 Summary

The Hauora Māori patient case was seen by students as a good learning opportunity and they noted its ability as an assessment to allow them to apply the indigenous health framework to a clinical interview. It was also noted that interviewing a ‘real’ patient also assisted them to see the relevance of validity of the content covered within the Hauora Māori curriculum.

- Māori patients felt positive about the Hauora Māori patient case because it provided them with an opportunity to teach the students about their experience of Māori health and to be an advocate for future Māori health service delivery.

- Students accepted the Hauora Māori patient case and the Multi-format assessment (especially the OSCE component) as an appropriate form of assessment for the Hauora Māori content.

- Māori health stakeholders summarised their contribution to the Hauora Māori OSCE as actors allowing them to monitor what was being taught within the UOC curriculum and to provide feedback on this; it also had worked to broaden their experience with other ethnic groups and gain a different perspective on these groups.
7.3 The influence of a curriculum on student professional development and clinical practice as a measure of its impact

The stories and experiences shared by the students about their learning within the Hauora Māori curriculum revealed a number of ways in which students had been ‘affected’ by the curriculum. These experiences included the influence on their professional development as clinicians and how the content had transformed or influenced their clinical practice. The following section will explore these two major sub-categories.

7.3.1 Impact of the Hauora Māori curriculum on professional development

Students identified a range of experiences prior to attending the UOC that had influenced their perspective of the Māori community and the factors that contributed to inequalities in health for Māori. These perceptions were often influenced by family beliefs, media and peers. Students therefore acknowledged that before they came to medical school they knew there were disparities in the health status in Aotearoa/ New Zealand, but did not see they had a role, or that it was their place, to contribute to Māori health gain.

However, through the course of their medical school years, students had developed new perspectives on Hauora Māori that had influenced both their professional and personal perspectives. Specifically, students identified the following sub-categories that will be further discussed in this section: strategies for dealing with racism; understanding an international indigenous health environment; value to practice; and the impact of the Hauora Māori curriculum on Māori medical students:

7.3.1.1 Strategies for dealing with racism

Having Hauora Māori taught within a clinical context and with direct relevance to how future doctors could play a role in addressing Māori health disparities had assisted some students to change their perspective not just on their role in Māori health, but their perceptions of the Māori community. This had included feeling as if they needed to challenge their family and colleagues when negative comments about Māori arose, which led some students to identify racist ideology within their family and/or peer environments. Students shared experiences of attempting to inform their family and colleagues about Māori health based on statistics and
other sources of relevant literature. They pointed out they now saw it as their role to challenge racist belief systems.

>You just want to see that the programme was fostering enjoyment and Hauora Māori and a respect for it. I have a boyfriend from the country and all of his rural friends are really quite … have grown up with quite a racist belief …but it’s quite good to be able to see the other perspective and really respect and enjoy another culture. (SST 2)

Therefore the Hauora Māori curriculum was noted by students as having a positive impact on their professional development because it had challenged them to understand the principles of racism and how they are perpetuated, and the possible outcomes of this.

7.3.1.2 Understanding the international Indigenous health environment

International students highlighted that learning about Hauora Māori had prompted them to be reflective about other indigenous peoples, often noting that they had not previously thought about the impact of colonisation, marginalisation and racism on the indigenous peoples in their own country. Some students commented that they wanted to commit to addressing the health disparities that exist between the indigenous and non-indigenous communities within their country of origin. They noted that although they would return home at the completion of their studies, there was still value in learning about the indigenous people in Aotearoa/New Zealand during their training, especially in terms of their contact with Māori patients on the wards.

Other students commented that the Hauora Māori curriculum had caused them to reflect on the characteristics of their culture, and how ‘others’ would view their cultural beliefs and values, where previously they had not considered what their culture was and how it might influence them:

>I do actually think it has a place in the curriculum. Each different place has an indigenous people. Coming in from a foreign country I realised my own culture has a certain sort of special funny practices some of which I’m not even aware of myself. Training doctors being aware of the local population is pretty useful. (SST 9)

Hence, the Hauora Māori curriculum assisted students to understand that the principles of indigeneity that they were learning in Hauora Māori were also at some levels applicable to the broader international context.
7.3.1.3 The Hauora Māori curriculum adding value to practice

Within the wider student group there were specific experiences shared that identified, for some students, that the value of Hauora Māori was not seen until they actively reflected on the course. This included stories of students being in a situation with a Māori patient, where they then realised that they had the Hauora Māori competencies to understand the impact of cultural beliefs/values on the presenting problem.

Students also shared other experiences of being encouraged by their registrar to work alongside the Māori patient. They thought this was probably because the registrar recognised that they were confident in working with Māori patients, and they had demonstrated competency in undertaking the interview with a Māori patient. Students also noted that, although they had initially been motivated to engage in Hauora Māori to ‘pass’ their assessments, over time their reasons for engaging had changed to more reflecting the value they felt it would add to them as a practitioner:

*I found, you know, practising for the 5th year exam when ... we were thinking what sort of education is this course giving? So I sort of started thinking to myself about all the experiences that we had with MIHI and all the tutorials and some of the questions that were asked... and you think back... These experiences that I have had, I don’t know if I can write them down in the exam paper... we are little bit more privileged ... in terms of Māori education.* (SST 9)

The indigenous health teaching team shared two incidents where students had reported events that had occurred on the ward which had required them to use their learning from the Hauora Māori curriculum, although it meant challenging senior clinicians. The indigenous health teaching team was impressed by the confidence and courage involved in both these incidents, and felt that they illustrated students valuing the knowledge/skills that they had acquired at the UOC. The indigenous health teaching team also noted the transformative nature of both incidents and how they demonstrated students’ abilities to change the current health environment. Both incidents are recorded below as described by the indigenous health teaching team.
Incident One: A 5\textsuperscript{th} year student presented to the indigenous health teaching team with the comment “I love Hauora Māori.” She then shared the story of how she had interviewed a Māori patient within a psychiatric ward. She noted that his story had specific MBVEs which gave context to some of his concerns. She then realised that a Māori health worker had not been involved in his assessment. At this point the patient was on his 2\textsuperscript{nd} readmission for the same presenting behaviours. The student talked to the consultant on the ward who dismissed her hypothesis about the cause of the behaviour having ‘cultural undertones’. She then pursued the house surgeon who counselled her to let it go so she didn’t get into trouble. She waited for the change in consultants and then pursued her concerns. This consultant was open to her suggestions and held a meeting with the patient, student, house surgeon, Māori health worker and themselves. The patient froze within the situation but allowed the student to share their story. The Māori health worker identified that there was a cultural base to the concern and along with the Māori clergy made an assessment and put into place an intervention. The patient was released and up to a year later had not represented to psychological services. Another medical student shared with the class how pivotal the initial student’s persistence had been in the care of this Māori patient.

Incident Two: A TI (6\textsuperscript{th} year) student reported to a member of the indigenous health teaching team that three TI students had been on a ward round in paediatrics. The consultant (new to New Zealand) was asked by a Māori father if after his son’s appendix was removed he could have it back. The consultant dismissed the request and said “we don’t do that here”. The student said that the three TI students “Māori radar went on” and discussed amongst themselves that this was their opportunity to intervene. They approached the consultant and explained the importance of the return of body parts based on cultural beliefs. They were then instructed if they wanted to intervene they would have to take full responsibility. The students rang through to pathology and arranged for the appendix to be returned. They then informed the father; they noted a change in his body language and his interaction with them for the rest of the time his child was in hospital. They reported that this experience had taught them they could change the experience of Māori within the health system.

Students and the indigenous health teaching team shared specific experiences that demonstrated that students saw that the curriculum had added value by providing them with the knowledge and skills to demonstrate Hauora Māori competencies within clinical settings. There is also evidence emerging that the curriculum is having an impact on patient outcomes.

7.3.1.4 Hauora Māori curriculum and its impact on Māori students

The indigenous health teaching team voiced concern that the overall Hauora Māori curriculum was tailored to meet the needs of those who had limited exposure to the Māori
community, and were unsure if there were enough options to extend those Māori students who may have required an extension module of the teaching content.

The indigenous health teaching team also commented that they were concerned about the impact of the Hauora Māori curriculum on Māori students. In the past (prior to the 2009 interviewing), some Māori students had reported to the indigenous health teaching team that non-Māori students had made negative comments to them about having to study Hauora Māori as part of a medical curriculum and made racist comments about Māori in general. These comments had placed Māori students in a position where they were expected to defend the Hauora Māori curriculum, and if they attempted to do so it would often lead to more adverse comments. Māori medical students had also reported being frustrated by the level of interpersonal racism they had to endure from their peers during both in ELM and ALM components of their training. However, Māori students who were selected to participate in this research reported feeling positive about the Hauora Māori content, and articulated that they had gained a lot from the curriculum. They reported that they liked that it was not expected, that as Māori students, they would be well versed in Māori health models of practice, or be able to interview a Māori patient with fluency. Some of the students liked how the Hauora Māori curriculum helped them to see how they could fuse their clinical learning with their cultural beliefs for the benefit of the Māori community. They also felt that they could access the indigenous health teaching team if they had any concerns or wanted to extend their learning.

Of those Māori students interviewed, some discussed how, because their peers knew they were Māori, their peers had shared with them their perspective of the Hauora Māori curriculum. The experiences of non-Māori students shared with Māori students tended to be more positive than those reported in earlier years to the indigenous health teaching team. The Māori students reported that the positive comments about the Hauora Māori curriculum assisted them not to feel marginalised as Māori within their class, and supported them with a sense of place within the medical school:

He goes to me... oh you know I am going to tell you something, it’s not just cause you are Māori, but you know I am just going to tell you anyway. I absolutely love the
Māori students also reported that they perceived that the UOC Hauora Māori curriculum had a positive influence on their peers, which was often revealed in a change of attitude towards Hauora Māori being in the UOC curriculum, and also in a change of their overall perception of the Māori community:

*I know that talking to people initially everyone is a wee bit apprehensive about having it in the curriculum. But I think the way that the MIHI team has taught it has been really really good and I’ve talked to lots of my friends and just feel so much more comfortable talking to Māori patients having done the course. I think it’s something that definitely needs to be in there.* (SST 14)

Therefore, although previous Māori medical students had reported high levels of exposure to interpersonal racism and negative feedback about the Hauora Māori curriculum, the Māori students interviewed for this project reported more positive relationships between themselves and their peers with respect to the Hauora Māori curriculum. These students reported feeling positive about identifying as Māori within their student cohort because their peers valued the teaching within the Hauora Māori curriculum. However, Māori students also believed that if the Hauora Māori curriculum introduced content or a teaching method that was not acceptable to their peers, they would feel at risk of marginalisation amongst their student peers.

Māori students reported that they came to medical school with different levels of confidence in articulating the place of Māori health within a medical curriculum and overall Māori health status. Māori students also noted that there were expectations from their peers that they should already be competent in Hauora Māori. However, they commented that the Hauora Māori curriculum had a positive impact on them, because it provided them with further knowledge and skills to become an effective Māori clinician when working within their own communities.
7.3.2  Application of Hauora Māori to clinical practice

The indigenous health teaching team and Māori health stakeholders were concerned about the transferability of the Hauora Māori curriculum to clinical environments, especially because students were being asked to enact knowledge/skills that were not perceived to be ‘common place’. However, students reported that there were specific opportunities within the clinical environment that either supported students to use their Hauora Māori competencies to transform their clinical practice when working with Māori patients/whānau or incidents where students did not feel safe to transform their current ‘medical approach’. These enablers and barriers will be presented in the following section.

7.3.2.1 Experiences that reinforced Hauora Māori curriculum in clinical practice

Students used the indigenous health framework when interviewing a Māori patient for their Hauora Māori patient case. They also discussed how they applied the Hauora Māori curriculum to all Māori patients they talked with, or worked alongside on the wards. Within their experiences they noted that one of the things that reinforced the use of the indigenous health framework in a clinical setting was how it contributed to positive interactions with Māori patients/whānau. Specifically, students noted that they had an increased engagement with Māori patients, Māori patients positively reinforced them for using the indigenous health framework, and within their interactions with Māori patients they could see their role as a change agent for Māori health outcomes. These specific sub-categories will now be presented.

7.3.2.1.1 Increased engagement with Māori patients

Students reported that the indigenous health framework increased their overall engagement with Māori patients. These experiences included navigating the engagement process to build confidence with the patient/whānau, exploring social and whānau histories in more depth than using the ‘usual’ biomedical history taking and gaining information that assisted them to understand the patient/whānau journey through the health system:

And they are definitely the ones who get the vibe are you doing this differently because I’m Māori, don’t do that. But you can make them feel more comfortable and talk more openly and I think that’s part of the reaffirming process as well is that you take
someone who does not look at all happy to be in a hospital and foreign environment and most people don’t treat them any differently from anyone else when really they do need a little bit more support and a little bit more familiarity. By going through the MIHI course you learn some of the things which just make it a more familiar environment for someone I suppose and knowing how to balance that I guess is what you learn from experience. (SST 16)

Some students noted that they had now become more conscious of how they would think through how they could improve their engagement with patients who were Māori when seeing them on a ward round, or when they were assigned to their team. They also noted how they could use their knowledge of te ao Māori and Māori beliefs, values and experiences in order to improve the quality of service they could deliver.

I am going to see a patient and I have to deal with the cultural situation if I think that there’s one there and I showed I could do that … I guess feeding back that it shows that your teaching is working because I could do it in that setting. (SST 11)

Thus, students identified that immediate impact of using the indigenous health framework with Māori patients. They reported feeling that they could gauge how to engage with a Māori patient with enough confidence that they could apply the theoretical learning within the clinical setting.

7.3.2.1.2 Positive reinforcement by Māori patients

It was also noted in student narratives that when they were able to use the Hauora Māori content in their clinical practice, greater value was placed on what they had been taught. Students shared many experiences where patients’ reactions to the way they interviewed and their knowledge of te ao Māori acted as positive reinforcement in supporting their desire to further engage and develop Hauora Māori competencies. Patients acted as conduits that validated the Hauora Māori content, whilst also validating the students’ new skill base:

I think most students who are completely converted and think it’s amazing have had an experience where the patient was not interested, not happy, not really telling anyone what was going on and then as a student went in with a bit of a mihi background with So where are you from? It’s not going through the whole process but it’s just about building some of that common ground and making the patient feel comfortable and happy to be there. (SST 16)
Therefore, when students used the indigenous health framework alongside a Māori patient and Māori patients responded favourably to them, students knew that the content that they were being taught in the classroom had clinical and ‘real life’ relevance. This then impacted on the students’ perception of the validity of the Hauora Māori course content.

7.3.2.1.3 Role as a change agent for Māori health outcomes
Due to their perceived success in working with Māori patients, students discussed how, because they knew using the indigenous health framework could make a difference, they hoped the future of the Aotearoa/New Zealand health system would promote the importance of this approach by all doctors. They noted that it was the role of non-Māori doctors to support Māori health gain and were mindful of the Māori health workforce shortages: Therefore, the vision of the ability for the medical workforce to close disparities in Aotearoa/New Zealand between Māori and non-Māori was a vehicle for reinforcing the continuation of implementing the Hauora Māori content within their practice.

Well obviously it would be good if we see doctors making an effort to interact with Māori patients and trying to do all the whakawhanaungatanga stuff. And it would be good I guess if the next generation of GPs, that they will know how to advocate for Māori patients and access Government funding and stuff like that. I guess to be doctors where Māori patients can feel comfortable going to and because there is not enough Māori doctors and they will have to go to non-Māori doctors so I guess to come to that point where they trust each other and do the whole shared management plans as they would with non-Māori. (SST 13)

Students were able to articulate that there was an important role for doctors to positively influence the overall health environment. They also noted that with their Hauora Māori competencies they could have an impact on Māori health outcomes. However, indigenous health stakeholders were more sceptical about whether the health institution itself would provide the environment (resources and acceptance of a new institutional culture) for new doctors to be agents of change.

7.3.2.2 Barriers to implementing Hauora Māori curriculum in practice
Although students were confident that the skills they had gained through the Hauora Māori curriculum would support their practice as future doctors, some students also expressed a lack of confidence in enacting these competencies in all clinical settings. They identified a range
of reasons why they had withdrawn from using the Hauora Māori curriculum including: their limited knowledge of te ao Māori; limited clinical knowledge; and their perception of consultants/registrar. These perceived barriers will now be presented.

7.3.2.2.1 Knowledge of te ao Māori
Some students reported that their learning in te ao Māori was only in the early development stages. One student identified a time where they recognised the patient/whānau had high engagement with te ao Māori. The student did not want to put themselves in a position where they could come across as incompetent in Hauora Māori, so they instead completed the interview and interaction with the whānau as if they had no Hauora Māori knowledge. In hindsight the student regretted that they had not taken the incident as a learning opportunity to improve their knowledge of te ao Māori:

*I was just thinking about one experience I had on paediatrics .... We had a very Māori family come in, you know what I mean, and speaking te reo to each other and I was really scared. I was like oh my gosh I don't know ... my mihi went out the window, and I was like oh I don't know what to do, and then converted back to being just a kiwi medical student who pretended not to know anything, and I left and I was really ashamed of myself. I was like oh I could have done that so much better. So hopefully next time I will, with a bit more reflection. At the time I was like oh what was I thinking? I was just too scared. (SST 16)*

Thus, a perceived lack of competency in te reo and te ao Māori can be a deterrent for some students in applying the principles of the Hauora Māori curriculum to clinical practice. The impact of this perceived incompetence was that the students missed a professional development opportunity to learn more about te ao Māori and develop skills on how to navigate their way through this circumstance to have a positive clinical interaction/interview.

7.3.2.2.2 Clinical knowledge
Students identified situations where they were not confident with the clinical content and reflected on when they had struggled to implement clinical skills/knowledge. This in turn reduced their confidence to also apply their Hauora Māori skill/knowledge to the case. They reported that personal clinical confidence was a key barrier to implementing the Hauora Māori content:
It was a kid with a UTI and whether not to go in and it was partially I didn’t understand the medical side of it either, they were asking me questions which I couldn’t even be a good doctor, oh I don’t know how to answer that, it wasn’t a very good thing. I don’t think they were offended or they didn’t mind, they didn’t do anything drastic but at the same time I left feeling I could have done a lot better. (SST 16)

However, although one student (as quoted above) knew that they had not effectively undertaken the clinical task they were assigned, they did note that they were able to reflect on how they might have done it better. This included taking the opportunity to attempt the indigenous health framework in future practice:

I guess that’s one of the things even if MIHI is inspiring us to do better because we know there could be a better way, then next time I’m going to try and do it. Whereas I think if I hadn’t of done it (the Hauora Māori curriculum) then I would have been there and done my best and would have left going oh well that’s that. (SST 16)

Hence students articulated that a lack of clinical knowledge impacted on their confidence to apply any further competencies (including Hauora Māori). It also highlighted that when faced with unfamiliarity, their ability to be responsive to socio-cultural needs is reduced.

7.3.2.2.3 Perceptions of consultants/registrars

The next barrier to implementing the Hauora Māori content was the students’ perceptions of the consultants’/registrars’ expectations of them. Students were very keen to demonstrate to senior staff that they were competent. Often this was interpreted as modelling the behaviour of these senior staff, and students had observed that consultants did not implement an indigenous health framework. They were therefore fearful of being reprimanded by senior staff for implying that ‘their’ approach was inappropriate, and it became easier for students to model only what they thought the consultants/registrars expected:

I mean if your consultant doesn’t do it you’re not going to waste time in front of his eyes doing that sort of stuff, they will say what are you talking about, you talking about where you are from, why don’t you just take the history or you know that might be the impression they have. I think there needs to be a bit more of a cultural acceptance I think. (SST 4)

However, some students remarked that they were working through ways in which they could meet the perceived requirements of the consultant/registrar whilst also ensuring that they were able to put into place some of their Hauora Māori competencies. This involved
applying aspects of the indigenous health framework to the ‘general’ approach, e.g. using te reo. Some students shared experiences where they had seen a Māori patient disengage with the consultant/registrar or give little information; they had then waited for the consultant/registrar to leave and then used their own Hauora Māori competencies to re-engage with the patient, build a relationship, find out the relevant information, and then inform the consultant/registrar of their findings:

*I can’t change what I’m doing overall dramatically because the consultant expects me to do it in a certain way but you know the way I introduce myself and develop rapport might change for Māori patients, so it’s good to have all the tools in the tool box to have a really thorough way of doing things.* (SST 16)

Students had noted that when Māori patients were on the ward, consultants/registrars would either not acknowledge the ethnicity of the patient and/or not acknowledge the possible implications for the patient because they were Māori (e.g. higher prevalence of the illness, lower age of the patient, acute onset of the illness). Students identified the need for the UOC to up-skill their conveners/consultants/registrars with the hui/Meihana models. They felt this would ‘normalise’ the Hauora Māori content and assist in creating an environment where students were encouraged by all the UOC staff to develop and implement Hauora Māori competencies:

*I think we want to work towards a place where we can, where you know their senior registrar on their team goes now what did you learn in MIHI when you worked with a Māori patient, you know if we can get to there then that would be awesome.* (STT 1)

Therefore, students’ perceptions that senior doctors would reprimand them for undertaking a process not modelled by the clinician, had a major impact on students’ confidence in demonstrating and developing their Hauora Māori competencies.

### 7.3.3 Summary

The following summary points are drawn from this section.

- The indigenous health teaching team and Māori health stakeholders were concerned that the students may not transfer the learning of the Hauora Māori curriculum to clinical practice.
• The findings showed that there are many incidents that reinforce the teaching of the UOC Hauora Māori curriculum and support its external validity beyond the classroom to the clinical setting. For students this includes the indigenous health framework increasing engagement of Māori patients with students, patient experience acting as a positive reinforcement for students, and students identifying that their interaction was changing the health experience for the patient.

• However, students also noted that one of the main barriers to ‘transformative’ practice was their need to continue to grow in confidence about the knowledge they had gained about te ao Māori and clinical practice.

• It was hoped that over time and with more clinical exposure to Māori patients they would refine their skills and confidence in applying the Hauora Māori curriculum to clinical practice.

• Students also noted that the second key barrier to implementing the Hauora Māori content was fear that consultants/registrars might reprimand them for doing things differently from how it was modelled by the consultant/registrar.

• Therefore there was a perceived need for the UOC Hauora Māori curriculum to be taught to the ‘teachers’ to enable students to be able to demonstrate their Hauora Māori competencies within clinical practice.

7.4 The impact of the curriculum on the wider health environment

The UOC learning environments include both clinical wards and community health settings. This section will explore comments that described how the Hauora Māori curriculum affected practices within the CDHB. This section will also identify stakeholder perceptions of the Hauora Māori curriculum and its relationship to cultural competency within the health environment.

7.4.1 Application of the UOC model to the Canterbury District Health Board (CDHB)

Stakeholders reported that the Hauora Māori curriculum had an impact on the CDHB because it had introduced an indigenous health framework into its environment and its graduates were
demonstrating a good level of competency in working with Māori patients/whānau/community. Further elaboration on both these sub-categories will now be presented.

7.4.1.1 The use of the indigenous health framework within the Canterbury District Health Board (CDHB) environment

Māori health stakeholders and Māori patients were very positive about how they perceived the Hauora Māori curriculum was being delivered, and were confident it was influencing medical students to interact and respond to Māori using the indigenous health framework and principles that centred on the values of te ao Māori. Māori health stakeholders and patients were particularly complimentary about the level of knowledge the students had in engagement protocols and understandings of a wider set of cultural protocols:

Oh yeah she introduced herself quite well actually, she even did a whakapapa about her genealogy and showing herself as a person inside, Māori and it sort of gave the encouragement for me to speak about myself and what happens you know, the ups and downs in the medical area like me and others. (SP 2)

Māori health stakeholders noted that there had been an increase in Māori health initiatives within the CDHB and suggested this was a good start to address health inequalities. However, they discussed many cases where the approach of clinical staff had negatively impacted on the Māori patient/whānau engagement within the overall health system. It was their perspective that although many health initiatives are focused on the patient, there needed to be some initiatives that were focused on clinicians, including their roles and responsibilities to the Māori community. Māori community stakeholders suggested that if the same indigenous health framework taught at the UOC was transferred to the CDHB, they might also start to note the changes to the CDHB culture, as they had with the UOC culture:

I had experience where this doctor asked me, he spoke about an old lady that went to him for quite a long time, number of years but he couldn’t get her to talk she used to go put her head down and just agree with everything he said and he wasn’t sure whether she understood or not, she just wouldn’t talk ... he said how can I get her to communicate? And I said well “kia ora” goes a long way. (SMC 3)

Systemic stakeholders also echoed the perceptions of the Māori health stakeholders, and remarked that the UOC culture of engaging with Hauora Māori had significantly shifted.
They saw that the UOC was now more inclusive of Hauora Māori and discussed how it had added value to the wider the UOC curriculum:

*I think it’s complementary to what already exists, … but I also think there’s a synergistic relationship that’s being built … in my mind the addition of Hauora Māori has … improved it beyond what that parts are actually added up… and that first and foremost is a knowledge of Hauora Māori and how they, as graduating clinicians, will impact on that aspect, i.e. how they contribute to help outcomes of Māori and hopefully improving those health outcomes. (SS 4)*

Māori health stakeholders had noted that the medical students were demonstrating the indigenous health framework within clinical settings alongside Māori patients. Both Māori community stakeholders and systemic stakeholders noted that the Hauora Māori curriculum had impacted on the UOC culture and that if introduced within the CDHB had the potential to also positively impact the way clinicians work with Māori patients/whānau.

7.4.1.2 Impact on health workforce in Canterbury District Health Board (CDHB)

There was a lot of discussion by Māori health stakeholders on how students, coming from the UOC with a good level of Hauora Māori competencies, may influence the health workforce in Canterbury as they progress and are retained as house surgeons with the CDHB. Māori health stakeholders had already noticed over the last five years that graduates from the UOC brought with them more skills in working alongside patients/whānau. Their measures for these levels of competency included the UOC graduates’ use of te reo, patient feedback, observed clinical engagement, reports from non-Māori clinicians and comments from Māori health professionals who worked on the wards in various capacities:

*I often hear some of the senior consultants comment on how much more these new graduates know in terms of the knowledge of Hauora Māori than they ever knew when they came through the system … so the fact that senior doctors comment that they’re impressed with how much newer graduates coming through have is very good… I have noticed … little things like attempt to pronounce names correctly, but understanding of simple procedures on dealing with whānau instead of just only the patient so I’ve noticed a steady improvement and often what happens though when you notice steady improvement is you get, I guess you get a desire to see more and better. (SMC 2)*

Māori health stakeholders who worked on hospital wards had also noticed an increase in students and junior doctors accessing their services. They believed this was a direct response to the Hauora Māori content which taught the students the role and purpose of a Māori health
worker. They noted that in the past they were only accessed when relationships with whānau had become strained, whereas in more recent times students and junior doctors were introducing themselves to the Māori health workers when they first arrived in the wards and seeking their advice and guidance about specific issues to avoid difficult circumstances or experiences. Māori health stakeholders commented that this shift in student/junior doctor behaviour allowed them to play a bigger part in supporting on-going professional development in Hauora Māori competencies.

Māori health stakeholders also discussed other aspirations for the UOC medical graduates. They expressed the hope that, because these graduates have high levels of Hauora Māori competencies, the experiences for Māori within the health system might improve, to the point that clinical attitudes no longer become an influencing variable in Māori health outcomes:

_Students are getting exposed to things that the senior clinicians haven’t and it means that for the students they’re kind of coming up against barriers for senior clinicians who haven’t considered aspects of, you know, the Tikanga or Treaty of Waitangi or burden of disease...The senior clinicians, it just goes right over their heads, all they’ll see is oh this person doesn’t turn up for their appointment and live with the stereotype of how Māori don’t take care of themselves, they don’t actually have any facility to dig deeper and wonder why that is._ (SMC 1)

Students acknowledged that they as graduates had a role in influencing the CDHB environment. They noted that they could see that in future they could teach Hauora Māori by demonstrating appropriate competencies on the ward rounds, and by normalising the indigenous health framework as part of their usual practice when working alongside Māori patients. They perceived they could have a big influence on the health environment as house surgeons and registrars:

_I would like to see some graduates from this school making a change and then this school teaching about the changes that they helped and I don’t know, is that a bit too utopia? But yeah maybe I don’t know would you see it as a good thing if we, as house surgeons and registrars and all those people also have teaching or whether they want it or not, students ask questions and things and I thought that it might be good if we even, you know...Start teaching them Hauora Māori._ (SST 4)

Stakeholders noted that the Hauora Māori curriculum was already having an impact on the health workforce at the CDHB in that the new house surgeons (graduates from the UOC)
were being noted for their competence in working with Māori. Such competence included working more successfully alongside Māori health workers, using te reo, and demonstrating an understanding of te ao Māori. Students also commented that they saw they had a role to make an impact on the CDHB environment by becoming future teachers of Hauora Māori and reinforcing the principles of the UOC Hauora Māori curriculum.

7.4.2 Application of Hauora Māori curriculum to cultural competency

The indigenous health teaching team and students identified that Hauora Māori was the only place within the curriculum where the principles of cultural competence were explicitly taught. For the indigenous health teaching team it meant that the foundations of teaching cultural competence were through default (because of absence in the curriculum) and left to be covered by the Hauora Māori curriculum. The following section will discuss the consequences of not teaching cultural competence within a medical curriculum and the relevance of this to a Hauora Māori curriculum.

7.4.2.1 Absence of teaching cultural competency in other ethnic groups/populations

The indigenous health teaching team described how students would report to them the ‘gap’ of not being taught cultural competence in the UOC curriculum. This was noted to be reported more often as written formal University of Otago course feedback rather than face-to-face.

The indigenous health teaching team identified the need for a cultural competence curriculum (including learning about other ethnic and cultural groups) to ensure that the the UOC graduates could provide a positive experience for all patients within the health system. They commented that there needed to be a move at the UOC to free up curriculum time to ensure cultural competence was noted as a priority for the curriculum. They also stated that the school would benefit from students being able to have other cultural perspectives and ethnic profiles included in block module teaching. Student comments also supported the perspective of the indigenous health teaching team:
All New Zealand health professionals need to be able to treat ... see, help, assess people representing the full spectrum of New Zealanders and if they work in other countries, the full range of people they're going to see in any country. And it’s helping break medicine out of a, sort of a middle class confines to be able to understand the diversity of the people in the communities they’re meant to be serving down the line. You know, I guess in the New Zealand context, there’s sort of additional things about the Treaty and partnership and everything else, but I still think in the broader sense, it’s sort of, our people have to be responsive to the communities they’re going to serve in the years to come. (SS 1)

Students described that they perceived the role of the indigenous health teaching team was to teach indigenous health. They reported that there was a need at the UOC to build other resources to ensure that a cultural competence could be delivered. An initial intervention they suggested might work would be to draw on the cultural groups that are represented within the student cohort:

I don’t think this is really kind of the role of the MIHI team or the Hauora Māori, but I think a more general approach to be dealing with people from other cultures would be really helpful, I think you know our class is very multicultural and kind of using other students and hearing about other cultures even if it’s just very brief would be really helpful. (SST 15)

However, the indigenous health teaching team noted that a cultural competence curriculum needed to be implemented within a formal curriculum structure to ensure learning outcomes were monitored. They also pointed out (as they had experienced in the earlier Hauora Māori curriculum) that delivery by students to their peers could be unsafe, especially if students did not have adequate support and resiliency strategies in place for dealing with any potential backlash or racial/stereotype comments. The indigenous health teaching team noted that the registrar and consultant cohorts within the UOC had representation from other ethnic cultures, which might also provide an initial teaching resource for the teaching of a cultural competence curriculum.

Some students expressed resentment that Hauora Māori was given time in the curriculum, and questioned whether this was at the expense of ‘other’ cultural teaching. However, the majority of students were happy with the time allocated to the Hauora Māori curriculum, but also recommended that the UOC look at how to increase teaching within the area of cultural competence. Students noted that a cultural competence curriculum would support them to
become better clinicians and to feel more prepared for their house surgeon years (PGY 1 and 2), to work with the diverse Aotearoa/New Zealand population:

*I don’t want to lump Māori people and Pacific people into one basket like that but we have a big Pacific population here as well and it would have been good if we had a Pacific component of it as well you know not cutting back on the Māori teaching cause I think, but adding a bit of Pasifika help would have been good if you had seen the exam question.* (ST 4)

Therefore, because the only cultural competence curriculum explicitly taught at the UOC was within the Hauora Māori curriculum, the indigenous health teaching team became the conduit for student discussion and feedback about the lack of a cultural competence curriculum. There is a consistent message by students that they would like to be taught about other cultures (ethnic and community). The indigenous health teaching team also noted that if a cultural competence curriculum was taught, it would provide an appropriate context for the Hauora Māori curriculum, and reduce the cultural competence principles taught within the Hauora Māori curriculum.

**7.4.2.2 Applicability of Hauora Māori curriculum to a cultural competence curriculum**

The indigenous health teaching team acknowledged that when they taught the Hauora Māori curriculum it was targeted towards Māori health gain. However, they also acknowledged that some content areas (including inequalities, inequities and poverty) would also provide a broader context for students to use/apply to other populations/cultures. The indigenous health teaching team was cautious in their approach, as they did not want to portray that all components of the Hauora Māori curriculum could be directly applied to ‘all’ other cultures:

*But another sort of I think collateral benefit too, of exposure of students general to underserviced populations, perhaps minority populations, is cultural awareness or an awareness of the people they serve in general, in a general sense, is actually a varied people and that they need to be aware of that. Their practice needs to reflect that. And I believe without that inclusion, I believe if you want to call it the see-saw, will very much is tilted on one side.* (SS 4)

Students acknowledged that the main principles of Hauora Māori were intended for them to use with Māori. However, they pointed out that the Hauora Māori curriculum had also assisted them to see health through a different lens/paradigm than the usual biomedical
approaches. Because of this different lens, it had further provided them with opportunities to think about other ethnic groups and the broader importance of cultural competence:

*I think the main thing that it’s done is made us think about the whole cultural conscience that sort of thing so it makes you think when you have Māori patients and when you have like patients from other cultures just makes you think that maybe you need a different approach and just not use the exact same techniques with everyone because you might not get the same response and it might not be the right way of approaching their sort of problem like the best way to help them.* (SST 10)

Other comments provided by students showed that in learning to apply the indigenous health framework with Māori patients, they also were able to understand that some of these values/experiences were aligned with other ethnic groups/populations. This process assisted them to see that the biomedical approach was not always a relevant ‘culture’ for all other patients, and that in learning about Māori health they were also learning to identify potential barriers between the culture of medicine and the culture of the patient:

*I think it is and I think the (indigenous health framework) that we’ve been taught you know I think while it is absolutely appropriate for Māori patients I think aspects of that can be used for other patients as well and I find that quite helpful but just for Māori patients the ones that I’ve interviewed going through that process has I think led to a better understanding in relationship between us and I think it’s opened up a lot more, yes it has taken a lot more time but I think it’s been worth it in the end and I think it’s been really helpful.* (SST 15)

Stakeholders noted that in the absence of a cultural competence curriculum, the Hauora Māori curriculum has provided a base for students to contemplate and discuss broader cultural competence issues within clinical settings. They perceived that, because of this, the Hauora Māori curriculum has had a positive impact on supporting students to understand the impact of the culture of medicine on all patients.

### 7.4.3 Summary

The following summary points are drawn from this section.

- All stakeholders agreed that the Hauora Māori curriculum had added value to the CDHB environment by producing students/house surgeons with specific knowledge/skills for working alongside Māori patients/whānau.
• It was the aspirations of the Māori health stakeholders that over time the Hauora Māori curriculum would be accepted into the CDHB in order to influence a shift in Hauora Māori competence within the wider clinical environment.

• Students and the indigenous health teaching team identified that there is a need for the UOC to design, develop and implement a cultural competence curriculum in order to prepare the UOC students to work effectively alongside ‘other’ population (external to Māori) groups.

7.5 Chapter summary
This chapter has described stakeholders’ perceptions of the impact of the current the UOC Hauora Māori curriculum. The impact was determined by stakeholders, reflecting on their experiences as participants within the Hauora Māori curriculum. Specifically, stakeholders reported on experiences of the assessment processes; students provided further in-depth evaluation comments, and Māori community stakeholders discussed the impact of the UOC Hauora Māori curriculum on the broader CDHB environment.

The UOC has more time allocated to its curriculum than the other medical schools within this project. The UOC uses similar assessment methods to the other medical schools. Stakeholders (both students and patients) discussed the benefits of the Hauora Māori patient case. This assessment was seen by students to validate the content being taught within the Hauora Māori curriculum. For patients, this assessment provided opportunities for them to advocate for better Māori health outcomes by identifying what they thought was effective and ineffective within the current health service delivery processes.

The OSCE was seen as an appropriate method by stakeholders (students, indigenous health teaching team, and Māori health stakeholders) to provide students with an opportunity to demonstrate their ability to enact the competencies being taught to them within the Hauora Māori curriculum. This method of assessment also provided an opportunity for the indigenous health teaching team to be peer reviewed by Māori community stakeholders.
Based on the findings from phase two of this study, multiple stakeholders’ perspectives have identified curriculum content, teaching methods, assessments/evaluations and learning outcomes, thus highlighting how the UOC indigenous health curriculum demonstrates constructive alignment. Table 23 provides a brief overview of this constructive alignment (and this is further extrapolated in 8.3.3).

Students reported that they are actively attempting to transform their learning from the Hauora Māori curriculum not only into both their summative assessments and learning opportunities within the curriculum, but also into all their clinical interactions with Māori patients/whānau. They noted that patient/whānau responses to their knowledge and skills was the biggest vehicle for positive reinforcement, which assisted them to value further the learning they had received, and they wanted to be proactive in continuing to develop further and refine their knowledge and skills within Hauora Māori.

Students also pointed out that there were two major barriers that would impact on their ability to demonstrate transformative practice. Firstly, the knowledge/skills within the Hauora Māori curriculum were not being reinforced/modelled by senior clinicians. Secondly, if they lacked confidence in undertaking a clinical task, then they were less likely to attempt to demonstrate indigenous health competencies.

Māori health stakeholders were very positive about the Hauora Māori curriculum. They shared examples of their own observations and feedback from patients and staff about the UOC students. These examples were further evidence that the UOC students are attempting to use the UOC Hauora Māori curriculum within the clinical environment. Patients reported feeling that their interview with the UOC students had enhanced their experience within the hospital and they pointed out that the interview had made them feel valued not only as a patient but as a Māori.

Māori health stakeholders and Māori patients also noted that the students were expected to behave in a way that was not being modelled by other clinicians at the CDHB, and were keen for the CDHB to take the UOC Hauora Māori curriculum and provide appropriate staff training. The Hauora Māori curriculum is perceived by stakeholders as providing an
appropriate framework for students to implement when working alongside Māori patients/whānau/community. However, there still remains a need within the UOC to develop a broader cultural competence framework to support students in working with other ethnic/community populations.
<table>
<thead>
<tr>
<th>Learning outcomes (from graduate profile 5.2.2)</th>
<th>Content (subject areas)</th>
<th>Delivery mechanism</th>
<th>Learning context</th>
<th>Assessments/Evaluations</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5 An understanding of, and an ability to, respond to the obligations of the Treaty of Waitangi.</td>
<td>1. Re-presenting perspectives of indigenous health 2. Indigenous history</td>
<td>1. Lectures 2. tutorials 3. Indigenous health framework 4. Case studies</td>
<td>1. Within specific indigenous health allocated time in small teaching sessions. 2. Within specific indigenous health allocated time in teaching blocks (of a day or more) 3. Using the marae as a teaching environment</td>
<td>MCQs Informal student feedback Student course evaluation feedback</td>
</tr>
</tbody>
</table>
CHAPTER EIGHT
DISCUSSION

8.1 Introduction

This thesis began by posing five questions which were:

1. How can a theoretical map of an indigenous health curriculum identified in the literature be converted, in practice, to an ‘actual’ process by which to map an indigenous health curriculum?

2. What does constructive alignment of an indigenous health curriculum look like within a medical school and are there differences/similarities within different institutions?

3. In what ways do the institutional systems impact on indigenous medical education?

4. What might multiple stakeholder perspectives add to what we understand about the indigenous health curriculum?

5. What quality tools might be used to measure/research an indigenous health curriculum?

The purpose of this chapter is to synthesise the findings from these research questions. It will present this synthesis in three specific sections.

Section one uses the findings to address three of the research questions (questions 1, 3 and 4 respectively) that focus on the impact of institutional systems on the indigenous health curriculum, the key components integral to mapping an indigenous health curriculum, and the role of multiple stakeholder perspectives in exploring the scope and impact of the indigenous health curriculum.

Section two is a response to research questions 2, 4 and 5, and presents three frameworks that may be used by medical schools as quality methods in measuring and researching the indigenous health curriculum. The first framework demonstrates how the mapping of an indigenous health curriculum can be used as a quality tool. The second framework demonstrates how a map of constructive alignment within indigenous health curricula could
also be used as a quality tool. The third framework demonstrates how a model of social accountability acknowledging how the role of the community as stakeholders in the indigenous health curriculum could further be used as a quality tool.

The third section of this chapter identifies how the use of Kaupapa Māori research as a theoretical framework contributes to our understanding of the indigenous health curriculum.

This chapter concludes with a final summary that reviews the limitations of this research project, the overall conclusions, and recommendations, and identifies potential scope for future research.

8.2 Section One: Mapping of an indigenous health curriculum

8.2.1 Introduction

The findings of this research identified three overarching themes: the design, implementation, and impact of the indigenous health curriculum. This section will use these three themes to address three research questions of the study which were:

1. How can a theoretical map of an indigenous health curriculum identified in the literature be converted, in practice, to an 'actual' process by which to map an indigenous health curriculum?

2. In what ways do the institutional systems impact on indigenous medical education?

3. What might multiple stakeholder perspectives add to what we understand about the indigenous health curriculum?

Within the literature, a map of an indigenous health curriculum emerged (figure 1; 2.4) that included the components of design (teaching), implementation (context/assessment), and impact (student written evaluation/pre and post-tests/indigenous patient outcomes). However, through gathering data from multiple medical school sites and using multiple stakeholder perspectives of the indigenous health curriculum from the UOC, this research identified more complex interactions and relationships between the themes (and their categories) than was noted in the literature. This section will propose a framework by which
to map an indigenous health curriculum (figure 5), which is informed by both phases one and two of this research.

![Figure 6: Framework One: mapping an Indigenous Health Curriculum](image)

Framework one (figure 5) shows how variables (the general medical education systems, system support, the indigenous community, medical students, tools used in teaching and assessment, and the health system) interact with each other and how these interactions influence the design, implementation, and measurement of the impact of the indigenous health curriculum.

As each theme (design, implementation, and impact) is presented, the key components that contribute to the mapping of an indigenous health curriculum from that theme will be highlighted and described.
8.2.2 **Design of the indigenous health curriculum**

The key components that were identified that had the most influence on the design of the curriculum were a change to systems support, the indigenous community, and an indigenous health framework (as identified in figure 6). Each of these components will now be presented in more detail.

![Figure 7: Framework One: Mapping an Indigenous Health Curriculum – Design component](image)

8.2.2.1 **Systems support**

This research concluded that the design of an indigenous health curriculum was highly influenced by the level of systems support given by the medical school. This support was manifest in the school’s timetabling of an indigenous health curriculum, the inclusion of indigenous health learning outcomes within the school graduate profile, the level of internal resourcing made available to the indigenous health curriculum, the place of indigenous leadership, and the employment of indigenous health teaching teams. These key components will now be further explained.
8.2.2.1.1 Timetabling of the indigenous health curriculum
Although in the literature (39, 94-108) there was no discussion on the process of how timetabling was allocated to the indigenous health curriculum or what levels of satisfaction there were with the allocated timetabling, this research revealed that systems support had the most influence on timetabling indigenous health in the curriculum. In terms of the provision of a transparent and fair process in negotiating space within the curriculum, it was interesting to note that an indigenous health curriculum was more likely to be allocated time that aligned with its learning outcomes if the school had undergone a large overall curriculum change than if indigenous health attempted to ‘fit in’ to a traditional timetable. The findings identified that time allocated to an indigenous health curriculum that aligned with learning outcomes was an indicator of a system support for an indigenous health agenda.

8.2.2.1.2 Indigenous health outcomes within the school graduate profile
The design of indigenous health curricula was also influenced by the inclusion of indigenous health learning outcomes as part of the graduate profiles by medical schools. This also aligned with the accreditation requirement of Australian and Aotearoa/New Zealand medical schools (standard 2.2 p. 12 (153)). The presence of indigenous health outcomes was also seen as a clear indicator that a medical school had established indigenous health as a ‘core’ component of their medical curriculum. This provided a pathway for the indigenous health curriculum to become an ‘assessable’ component of the curriculum, and therefore meant that students had to meet indigenous health curriculum learning outcomes to graduate from the course. The findings in this study highlight that unless indigenous health learning outcomes were included within the core component of a medical school’s curriculum, the design of the curriculum was not linked to opportunities for students to build indigenous health competencies or contribute to indigenous health gain.

8.2.2.1.3 Resource allocation for the indigenous health curriculum
The design of an indigenous health curriculum was further influenced by the level of resourcing provided by each medical school. This resourcing included components that supported the employment of teachers to deliver the curriculum (e.g. lecturers, clinical lecturers) and other relevant resources (e.g. funding for guest lecturers, actors, appropriate
clinical equipment, administrative support etc.). This resourcing determined how the curriculum could be designed to meet the AMC accreditation requirements (standards 3.2.6, 2.3.7 and 6.1(153)). Lectures/tutorials (identified as the cheapest delivery method) were often used in the design of an indigenous health curriculum because no other resources were available. The use of cultural immersion, observed student/patient interactions, and clinical visits (which were seen as effective methods of teaching indigenous health) were only used when an institution had allocated resources to the indigenous health curriculum that aligned with the indigenous health curriculum learning outcomes. A systematic review of the literature undertaken by Coomarasamy and Khan (155) reported that teaching content external to a clinical context was not as effective at improving knowledge, skills, attitudes, and behaviour as clinically integrated teaching. Burdick et al. (4), in describing evaluation results from their Foundation for Advancement of International Medical Education and Research (FAIMER) Institute, also concluded in their research that the link between medical education and improved health outcomes needs to include educational innovations that place learners within community clinical settings. Therefore, unless resource allocation is able to support clinically integrated components of an indigenous health curriculum, there is a risk that students will have reduced opportunities to demonstrate transformative practice and/or to develop a level of engagement that will increase their interest and commitment to the indigenous community.

8.2.2.1.4 Indigenous health leadership
The articles included in the systematic review of the literature did not discuss the contextual enablers and/or barriers to the design of an indigenous health curriculum. However, this research identified that an indigenous health leadership position was seen as integral to the design of an indigenous health curriculum. This position facilitated a link between the medical school and the local indigenous community and encouraged the capturing of community aspirations and expectations of the indigenous health curriculum. These aspirations and expectations contributed to the development/refinement of learning objectives/outcomes, prioritised curriculum content, and informed what pedagogy might best be matched to ensure learning objectives/outcomes were met.
The indigenous health leadership role was seen to be positioned as an advocate for indigenous health by being a member of the systems support structures of the institution. This included being a member of the governing/management bodies that determined allocation of curriculum space, acceptance of content, and inclusion of indigenous teaching methods/context. Therefore, having indigenous leadership within a context where they could advocate for specific space and resources had a positive influence on the design of an indigenous health curriculum that was responsive to the community’s and the indigenous health teaching team’s expectations.

8.2.2.1.5 Indigenous health teaching teams
This research identified that the employment of indigenous health teaching teams provided a supportive environment that encouraged peer review and collegial support structures for dealing with institutional and interpersonal racism (experienced in their role in delivering the indigenous health curriculum), and progressed curriculum development within the indigenous health curriculum. This finding of the role of teaching teams as a recruitment and retention component of an indigenous health workforce (or even as a catalyst for other areas of medical education) is not explored within other areas of the medical education literature; instead, the focus is on the role of co-teaching (156-158) and team-based learning activities (159-161).

8.2.2.2 The role of the indigenous community
This research demonstrated that within the medical schools involved in both phases, indigenous health teaching teams had in place processes and protocols of social accountability. This ensured there was community acceptance of the indigenous health curriculum. The indigenous community was most often represented by both the indigenous health stakeholders and the indigenous patients. The design of the curriculum was influenced by experiences between the indigenous community and the health system, which contributed to:

1. determining whether current content and pedagogy is appropriately matched to indigenous community experiences within the health system.
2. identifying further content that should be included in the curriculum (especially that highlights differences between the culture of medicine and indigenous cultural beliefs, values and experiences).

3. providing content for case scenarios used in teaching sessions (paper case studies, simulated patient cases etc.).

4. providing content for case scenarios to be used in assessment material (e.g. OSCE, multiple choice questions).

This process of social accountability between a medical school and the indigenous community was not discussed in the systematic review of the literature. However, this research has shown that the social accountability process often led the indigenous health curriculum to being inclusive of new content, and adopting a different teaching pedagogy or changes to assessment methods to reflect more effectively the reality of indigenous patients.

8.2.2.3 The role of an indigenous health framework

The literature (103-106) identified that central to the design of the indigenous health curriculum was timetabling, which then influenced content and teaching delivery mechanisms. However, the UOC case study recognised that also central to the design of the indigenous health curriculum was the indigenous health framework (which used both the Hui (98) and Meihana (162) models). Hence, the curriculum design was highly influenced by providing opportunities to teach the components of this indigenous health framework and its applicability to clinical practice. This then provided a template for how constructive alignment of the curriculum evolved, and findings showed that having a clear overarching philosophy and internal consistency regarding curriculum content can contribute to a more cohesive experience for the students.

The research showed that the use of this framework provided emancipatory outcomes for stakeholders (indigenous health teaching team, students, indigenous patients, and indigenous health professionals), which included:
1. the development of a ‘shared language’ that was located within the indigenous health framework and which assisted in the requisition and sharing of knowledge/experiences between stakeholders.

2. stakeholders reporting having a positive health experience within the context of the student/patient interaction.

3. stakeholders reporting feeling ‘empowered’ to challenge current health delivery approaches and confident in what service delivery should look like between indigenous patient/communities and the health system.

4. stakeholders reporting an opportunity for equal power sharing and valuing of each other’s contribution in the health interaction.

8.2.3 Implementation of the indigenous health curriculum

The findings identified that the key components that influenced the implementation of the UOC indigenous health curriculum were the use of a sequential method of delivery and the contribution of indigenous and student stakeholders (figure 7). Each of these components will now be presented in more detail.

![Figure 8: Framework One: Mapping an Indigenous Health Curriculum – Implementation component](image-url)
8.2.3.1 Sequential method of delivery (Teaching/context/assessment) – Poutama model

This research identified that the UOC indigenous health curriculum used a sequential approach (i.e. content/knowledge/skills introduced in staged developmental approach) to how and when teaching, context, and assessment were implemented in the curriculum. This approach aligned with a Māori medium of learning called the poutama (the poutama is a traditional Māori pattern that represents progressive steps towards one’s goals), and will hence be referred to as the poutama model.

8.2.3.1.1 Teaching

The sequential nature of the poutama model (figure 8) was applied to the findings regarding the implementation of the indigenous health curriculum. Firstly, this demonstrates how the learner is first introduced to indigenous concepts and guiding principles (beliefs, values, and experiences) to assist the student in identifying indigeneity as a living culture with a history, present and future (as opposed to an anthropological archive). Second, the learner is then introduced to indigenous knowledge (including community and processes for engagement in the community) and the influences that have informed this knowledge. Third, learners are then introduced to how the prior learning can be transformed to have clinical relevance. Lastly, learners are encouraged to demonstrate praxis (putting theory into practice). This poutama was seen as integral to the curriculum, introducing concepts in a step-wise process that ensured the safety of both the learner and the indigenous community (and therefore their interaction with each other, to remove risk of offence/uncomfortable interactions/unsafe interactions).
8.2.3.1.2 Context

The UOC case study highlighted the practice of matching the sequential approach to teaching and its content, to the context in which the teaching occurred. Therefore, in order to teach about cultural realities, the first ‘teaching environment’ students were exposed to at the beginning of their clinical years was at a marae. This placed the students in an environment where Māori protocols and processes were normal, and provided students with an opportunity to learn indigenous concepts within an indigenous space. Some cultural knowledge was taught on the marae (again to provide an appropriate context for learning), and other elements of this content were taught later in the programme within the medical school (to demonstrate how that cultural knowledge is relevant to a clinical environment). Students were placed into small groups and simulated patient scenarios were used as a method of providing them with a context in which to apply the indigenous health model in a safe environment where they were provided with feedback and further learning opportunities. Lastly, learners were encouraged to identify Māori patients within clinical settings to demonstrate praxis within this setting and to reflect on this interaction.

Although the explicit/formal indigenous health curriculum at the UOC was timetabled under the umbrella of ‘Hauora Māori’, this research highlighted there is a need for the indigenous health curriculum to be further contextualised by integrating content within block modules to
assist learners to see how it can be applied in a range of clinical settings (and also as demonstrated by non-Māori clinicians). This is a further area of work identified as pivotal by all medical schools involved in the case studies.

However, the research also identified that at all medical schools (phases one and two) one of the key barriers to the implementation of indigenous health competencies (and the indigenous health curriculum content) within a clinical setting was when senior clinicians did not demonstrate indigenous health competencies (and at times demonstrated knowledge/skills that undermined the indigenous health curriculum objectives). Thus, an environment had developed by which indigenous health was taught by the indigenous health teaching team but not reinforced by other health professionals; hence, for students a clear binary for indigenous health had developed in that it was perceived that in the ‘real’ clinical environment indigenous colleagues (them) practised differently to non-indigenous colleagues (us). This binary contributed to ‘un-teaching’ of the indigenous health curriculum, or students only feeling comfortable to demonstrate indigenous health competencies in the absence of senior clinicians, because of fear of being reprimanded for doing things ‘differently’. Jones et al. (30) also identify the potential for the underpinning of the importance of the indigenous health curriculum if senior clinicians’ discourse is seen to conflict with the explicit/formal curriculum.

The findings from this research align with the recommendations of Jones et al. (30) who stress that for the indigenous health curriculum to be implemented more effectively, there is a need to develop specific training/professional development opportunities for all staff involved in teaching medical students.

8.2.3.1.3 Assessment
The UOC indigenous health curriculum involved two key summative assessments. The first was a Hauora Māori patient case which occurred in both the 4th and 5th years. The content that preceded the handing in of this assessment included the areas of cultural reality and cultural knowledge, and clinical application of indigenous health models had occurred. This assessment was timed to coincide with the end-of-year teaching. The second assessment was
the OSCE, which measured students’ abilities to demonstrate the application of the indigenous health framework within a clinical interview. This assessment was timed to occur in the 5th year, after the Hauora Māori patient case had been completed, and this was seen again to support sequential learning opportunities.

8.2.3.2 The role of stakeholders in implementation
Within the UOC case study the research emphasised that stakeholders (specifically students and the indigenous community) played key roles in the implementation of the indigenous health curriculum. These roles will now be elaborated upon.

8.2.3.2.1 Students
Students identified their role in the implementation of the indigenous health curriculum as taking opportunities to gain knowledge and skills that would assist them to become agents of change and contribute to positive Māori health outcomes. This involved students identifying their roles in the following way:

1. To participate and engage in the indigenous health curriculum.
2. To work alongside Māori patients using the indigenous health framework.
3. To identify how the curriculum was relevant to their current and future clinical practice (especially the indigenous health framework).
4. To provide feedback on potential gaps they saw between the current curriculum and experiences they had with Māori patients/whānau/community.

8.2.3.2.2 Indigenous patients
Patients/whānau identified their role within the implementation of the indigenous health curriculum as having the opportunity both to learn from, and to teach, the students. Within te reo Māori this concept of learning and teaching is called ‘ako’; there is no word that differentiates between the two experiences as they are seen within a Māori paradigm to exist as one entity (i.e. as you teach someone else – you learn; as you learn – you teach the teacher). Therefore, in this context, the findings highlighted that patients/whānau identified these roles in the implementation of the indigenous health curriculum in the following ways:
1. To teach the students by providing an authentic voice which could provide them with an understanding of core Māori beliefs and values, whilst also highlighting the importance of understanding diversity within Māori communities. Patients/whānau also saw their role involved sharing both positive and negative experiences they had in the health system, and clearly articulated experiences of racism and/or discrimination.

2. To learn about students’ cultural heritage, their health beliefs, their understanding of the presenting illness/disease (knowledge of the disease and possible diagnosis and prognosis), and their perceptions of the health system.

8.2.3.2.3 Indigenous health stakeholders

The indigenous health workers reported that they saw their role in the implementation of the indigenous health curriculum as involving the following two tasks:

1. Ensuring patients/whānau were comfortable interacting with the students, providing patients/whānau with support when required during or after the interactions, clarifying any questions patients/whānau had about their interactions with the students, and providing further health information required by patients/whānau in response to information given to them from the students.

2. Ensuring students were supported when they interacted with indigenous patients/whānau, providing relevant health service information when required (in relation to what services were available to support the patient), providing appropriate cultural direction/guidance when required, and assisting with analysis of a student’s interview data from a patient on request.

The research showed that students, indigenous patients/whānau and indigenous health workers had clear perceptions of their role in the implementation of the indigenous health curriculum. It also demonstrated that the indigenous health curriculum created relationships within the health sector that continued after teaching ceased.

8.2.4 Impact of the indigenous health curriculum

The research identified three ways medical schools could measure the impact of their curriculum – through summative assessments, stakeholder feedback and the curriculum’s
influence on the wider health environment. Each of these components will now be presented in more detail (figure 9).

**Figure 10: Framework One: Mapping an Indigenous Health Curriculum – Impact component**

8.2.4.1 Assessments

All medical school sites sought to provide an authentic context for indigenous health teaching (given that unlike clinical modules there is no indigenous ward or clinic available); the indigenous health teaching teams drew on constructing assessment practices that supported learning and used a broad clinical context in which to locate the curriculum. At the UOC, this involved using Hauora Māori patient cases and OSCE as media for students to demonstrate praxis.

The findings identified that this mode of assessment was appreciated by students who saw value in the assessment because it assisted them to put into practice what they had learned, customise their approach based on the patient, and extend their learning based on patient/whānau beliefs and experiences shared within the interview/interaction. The findings suggested that, in the absence of having a specific clinical context, the use of assessment assisted the students to identify that the whole clinical setting is a context for indigenous
health. The findings also pointed out that students noted the assessment process assisted them to identify the clinical validity of the indigenous health curriculum and their role (as a clinician) in contributing to indigenous health gain.

The indigenous patients/whānau pointed out that they saw the assessments as an opportunity for them to be valued as experts within a health context, an opportunity to share their own stories within a clinical context and provide critique on current health service delivery.

The indigenous health workers noted that patient/whānau feedback arising from the assessments assisted them to see that both the student and the indigenous community benefited from the learning. The indigenous health workers also saw themselves as experts within this context as they provided students with feedback from the patient and/or assisted with the analysis of the data and/or provided further relevant cultural knowledge.

The indigenous health teaching team identified that the assessments assisted them to measure whether the curriculum was meeting its planned learning outcomes. It also provided them with valuable feedback from their stakeholders (students and indigenous community) about the perceived validity of the indigenous health curriculum.

8.2.4.2 Stakeholder feedback
This research identified the value in gaining direct feedback from the indigenous community and students as a way to determine the impact of the indigenous health curriculum. It also identified the benefit in triangulating such feedback from multiple stakeholder perspectives to help refine the design and implementation of the curriculum. Examples of such triangulation follow.

8.2.4.2.1. Indigenous patients and indigenous health stakeholders
Initial concerns were raised by the indigenous health teaching team about the potential burden of the indigenous health curriculum on the indigenous community (patients/whānau and indigenous health workers). However, the findings noted that what motivated the indigenous health community to be involved in the indigenous health curriculum was that they saw it as an investment of their time. This meant they were prepared to give of their
resources (time, knowledge, experiences) in return for the opportunity to advocate for the health system to be more responsive to the indigenous community. The indigenous community specifically highlighted four ways in which the indigenous health curriculum impacted upon them:

1. The use of the indigenous health framework connected indigenous patients and students by providing them with a ‘common language.’ The indigenous community saw having a shared language with students as a positive impact of the indigenous health curriculum, because it made it easier for the indigenous community to understand what the student was asking, and why they were asking those questions, and also opened up an opportunity for them to use the same framework by which to ask questions of the student.

2. The indigenous community also reported that after contributing to the indigenous health curriculum (in whatever role they had played) and seeing the skills and knowledge that the indigenous health teaching team expected the medical students to demonstrate, the indigenous patients had increased their expectations of medical students and also of clinicians.

3. The indigenous patients/whānau and indigenous health stakeholders further articulated their experience as participants in the indigenous health curriculum had assisted them to see that they had a role as a ‘stakeholder’ in the health system, not just as recipients of a service.

4. The indigenous community also highlighted that one of the key impacts of being involved in the indigenous health curriculum was that it had engaged them in a positive health experience. The indigenous community clearly commented on the ‘cultural competence’ of the medical students compared to that of the senior clinicians. For many members of the indigenous community, their experience with the students had changed their perception of the health system.

These reported impacts from the indigenous community are a marked difference from indigenous hospital experiences reported in Wilson and Barton’s (163) research that explored Māori experiences of hospitalisation in surgical and medical settings. They found that
indigenous patients reported high levels of dissatisfaction with their experiences in hospital and viewed hospitals as not being conducive to healing. Wilson and Barton (163) concluded that, overall, indigenous patients felt marginalised within the current health system. Within this research, indigenous patients also reported past negative experiences in the health system and feelings of disempowerment. However, it has highlighted that by participating within the indigenous health curriculum, indigenous patients/whānau were able to have their roles within the health system redefined which led to the reporting of emancipatory experiences, further reinforcing their belief that their on-going investment in the indigenous health curriculum would result in better health experiences for themselves and their whānau. Hence, being part of the indigenous health curriculum had changed their experience in the health system.

8.2.4.2.2 Students

All medical school sites involved in this research used student evaluation/feedback as a method of determining the impact of the indigenous health curriculum on students. Within the literature (2.4.3), it appeared that students were likely to generally rate their experience within the indigenous health curriculum as positive. However, because of the poor quality of the literature it was difficult to ascertain any potential bias in the findings or directly identify the strengths/weaknesses of the programmes. From the qualitative data that were drawn from the UOC case study it was possible to explore student feedback using semi-structured interviews that were able to draw specific details of impact of the indigenous health curriculum on students’ learning and practice. These impacts will now be presented.

Positive impacts as identified by students:

1. They reported the strength of using the indigenous health framework, which assisted them to align their clinical and indigenous health knowledge in a way that supported their ability to take a history from an indigenous patient. They pointed out that the use of the framework positively affected their practice.

2. They noted that when they used the indigenous health framework, this was reinforced by indigenous patients, which made them more confident in continuing to use it.
3. The use of the indigenous health framework showed them that it had the ability to draw more appropriate clinical, cultural, and social data than they could be achieved using the usual biomedical approach. Students predicted that this would assist them to influence positive Māori health outcomes.

4. They identified that they had positive experiences with indigenous patients who made them want to spend more time with them, and to advocate more for indigenous health needs.

5. They noted that the indigenous health framework gave them a ‘shared’ language in which to speak with their peers, indigenous patients/whānau, indigenous health workers, and the indigenous health teaching team when discussing indigenous health.

Students reported negative impacts:

1. They highlighted that they now were more able to identify levels of discrimination within the health system towards indigenous peoples. They felt disempowered in many instances to know how they should respond to this.

2. They identified that senior clinicians’ indigenous health competencies were most often absent, and they wanted to be exposed to more appropriate role models within a clinical setting.

3. At times they would not demonstrate their indigenous health competencies in fear of being reprimanded by senior clinicians for doing ‘something’ different.

4. The clinical environment did not reinforce the indigenous health model and hence the shared language of the indigenous health curriculum.

Thus, the findings showed the strength of using an indigenous health framework, and documented the emancipatory opportunities that emerged from the indigenous health framework. However, they also identified that there is no alignment between the current health system and the ideals being taught within the indigenous health curriculum.
8.2.4.2.3 Triangulation of multiple stakeholder feedback

This research showed that the use of multiple stakeholder perspectives enabled a broader evaluation of the impact of the indigenous health curriculum to be captured than was possible using only student evaluation forms. The seeking of such perspectives is also consistent with the consensus recommendation of the MDANZ. The collation of multiple stakeholder perspectives has repositioned stakeholders from just ‘receivers/observers’ of the indigenous health curriculum to ‘active’ participants in the curriculum. Thus, by using this method of evaluation, each stakeholder has influence over the future of the design, implementation and impact of the indigenous health curriculum. This method has also specifically highlighted that it is able to evaluate the following:

1. The alignment between stakeholder expectations of the indigenous health curriculum and the content/pedagogy.
2. The strengths and gaps in content/delivery.
3. How students enact praxis within clinical settings.
4. The impact of the curriculum on the indigenous community.
5. Knowledge of indigenous health curriculum by non-indigenous convenors and system stakeholders.
6. Components of the planned, actual, and hidden curriculum.
7. The degree of alignment among the indigenous health curriculum, the general medical curriculum, and the broader health system.

The gathering of multiple stakeholder perspectives, for the purpose of this research, has also supported a participatory action-based research method of collating stakeholder feedback, and has therefore been able to instigate changes to the curriculum within a framework of building on the current strengths of the programme. Such feedback led to changes in the design, implementation, and assessment methods used in the indigenous health curriculum which included:

1. More exposure to the indigenous community (through simulated clinics, community clinics and practice OSCEs) to strengthen the context of the indigenous health curriculum
for students, while also providing more opportunities for indigenous community feedback.

2. Ensuring feedback from indigenous patients who were involved in indigenous patient interviews within clinical settings to monitor the impact of the experience on them and as a formal feedback loop between the indigenous health teaching team and the indigenous community.

3. The changing of a written long case (in both years 4 and 5) to now only year 4, and the introduction of a case presentation in year 5. This was in response to students identifying that case presentations allow them to hear from their peers how they applied the indigenous health model to the indigenous patients, and has supported students to be exposed to the concept of individual differences between indigenous patients.

4. The continual use of indigenous health workers in OSCEs as a formal part of peer review for the indigenous health curriculum.

5. The inclusion of the indigenous language and other specific areas of cultural content that are identified by students as areas of interest/weakness when they interacted with the indigenous community.

8.2.5 Summary

This section has discussed how the theoretical map of the indigenous health curriculum identified from the literature (namely design, implementation, and impact) was too simplistic and did not necessarily elaborate on the position of the curriculum within the medical school. Nor did it identify the role of systems support in assisting or disabling the design, implementation, and impact of the indigenous health curriculum. This research proposes a new schema by which to map an indigenous health curriculum (figure 5) and includes new elements such as the fit within a general medical education system, the place of systemic support, the employment of indigenous leadership, and the role of both the indigenous community and students/learners (formal and informal) which support further refinement of the curriculum.

The research has identified that institutional systems have a significant impact on indigenous medical education as they are the manifestation of the power brokers within a medical school
and thereby determine the validity and resourcing of indigenous health as a curriculum area. Specific indicators of systemic support were identified as including a clear and transparent process for negotiating timetabling in the curriculum, having indigenous health learning outcomes contribute to the graduate profile, and provision of adequate resources (including indigenous leadership) to enable the teaching team to meet the learning outcomes. Systemic support is important for three specific reasons:

1. It is essential to ensure accreditation requirements in indigenous health are met.
2. Indigenous health is a relatively ‘new’ curriculum area, meaning core content and pedagogy need to be refined as evidence is developed.
3. It is not a curriculum area that academic peers (other deliverers of the curriculum) were exposed to during their training; therefore, the risk of having the hidden curriculum ‘unteach’ core components is high.

This research has also identified the importance of an indigenous health framework to assist students to apply the knowledge/skills of the indigenous health curriculum within a clinical context. This section has also highlighted the need to strengthen the mapping of the indigenous health curriculum between the broader clinical health environment and health system to further promote alignment of indigenous health outcomes.

It has also been demonstrated that multiple stakeholder perspectives assisted in clarifying the role of stakeholders, and the alignment of perspectives between stakeholders provided a coherent critique of the broader medical education and health service environment in relation to the indigenous health curriculum, and has reinforced the role of an indigenous health framework within the indigenous health curriculum.

8.3 Section Two: Quality tools to measure an indigenous health curriculum

8.3.1 Introduction

The systematic review of the literature identified that very little evidence has been published that documents the connection between the delivery and evaluation of indigenous health
curricula. However, this research has sought to address and explore the following research questions:

2. What does constructive alignment look like within a medical school and are there differences/similarities within different institutions?

4. What might multiple stakeholder perspectives add to what we understand about the indigenous health curriculum?

5. What quality tools might be used to measure/research indigenous health curricula?

This research found that from exploring the indigenous health curricula of multiple sites and from multiple stakeholder perspectives clear patterns and constructs emerged in determining constructive alignment of indigenous health curricula and methods by which the impact of indigenous health curricula can be measured.

Therefore, the following section will present three specific frameworks that emerged from the findings that may be used by medical schools as quality tools in measuring and researching an indigenous health curriculum. The first framework outlines the purpose of mapping an indigenous health curriculum as a quality tool; the second framework documents the map of the constructive alignment within indigenous health curricula. The third framework identifies the role of the community as stakeholders in the indigenous health curriculum and presents a social accountability model that may support the broader medical education field.

8.3.2 Framework one: Mapping an indigenous health curriculum

Framework one (figure 5) has previously been presented (8.2.1 – 8.2.4.3). This framework provides a format to review how existing health contexts influence and inform an indigenous health curriculum. It also highlights the integral role of the indigenous health community and students in the design, implementation and impact of an indigenous health curriculum. The breadth and depth of this data was absent within the systematic review of the literature and therefore articles were only able to present the reader with a limited understanding of how variables that influence curriculum design, implementation and therefore potential impact.
In this section the relationships between mapping the indigenous health curriculum and its relationship to other medical schools will now be presented.

Figure 5: Framework One: Mapping an indigenous health curriculum

The current map for the indigenous health curriculum may assist in the following:

1. Providing a framework to assist those involved in the development of new or refinement of existing indigenous health curricula.

2. Providing a shared language by which schools can present their indigenous health curriculum.

3. For those medical schools in Australia and Aotearoa/New Zealand, providing a worked example of how AMC standards (153) might be implemented within medical schools, and
illustrating the contribution that can be made by all stakeholders, the broader general medical education field and the health system. The following list uses components of Framework One and identifies the AMC standards to which they map to.

a. Systems support [standards 1.4 Educational expertise (including professional development opportunities in indigenous health for all staff); 1.5 budget (indigenous health curriculum reflected in the budget); 1.8 preparation of culturally safe teaching environment for indigenous staff; 1.9 staff appointment, promotion and development; 2.1 included in the school’s mission; 2.2. included in schools graduate outcomes.]

b. Indigenous community [standard 1.6 Interaction with health sector; 6.3 feed-back and reporting (although this research also argues that 6.1 monitoring should be inclusive of the indigenous community).]

c. Implementation [3.2.6 behavioural and social sciences and medical law and ethics; 3.2.7 indigenous health (inclusive of CDAMS indigenous health curriculum framework(34); 6.1 monitoring (student and staff evaluation).]

d. Impact [6.1 monitoring (staff and student evaluation); 6.3 feedback and reporting (involvement with community).]

e. Health system [1.6 interaction with the health system; 3.6 the continuum of learning (alignment between prevocational in-service training, vocational training and education, research training and continuing professional education.)]

8.3.3 Framework 2: Constructive alignment within an indigenous health curriculum

The CDAMS indigenous health framework (as previously discussed in 1.2) identified learning outcomes and content areas that should be included within a medical school’s indigenous health curriculum. This study was able to draw on the findings from all six medical school sites to provide an evidenced-based framework for the CDAMS initial project (34). Therefore framework two (figure 10) identifies the documented learning outcomes, content areas and delivery mechanisms of the CDAMS indigenous health framework that are being used by medical schools (highlighted in lime colour below), whilst also adding the learning context and assessment processes to the framework drawn from the six medical
schools (highlighted in orange below). Hence framework two represents an ‘actual’ indigenous health curriculum as implemented across medical schools in both phases of this research and demonstrates how constructive alignment is being defined and implemented in the indigenous health curricula.

Key: Lime (taken from CDAMS document (34)) Orange (information drawn directly from Case Studies)

<table>
<thead>
<tr>
<th>Learning outcome*</th>
<th>Content (Subject areas)**</th>
<th>Delivery Mechanism**</th>
<th>Learning context**</th>
<th>Assessment**</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Describe an overview of indigenous history as a continuum from pre-contact to the present</td>
<td>1. Re-presentation of indigenous health</td>
<td>1. Lecturers,</td>
<td>1. Within specific indigenous health allocated time in small teaching sessions.</td>
<td>Short answer questions, reflective journal, essay, reflexive commentary.</td>
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<tr>
<td>- Identify, acknowledge and analyse one’s own emotional reactions to this history and offer opinions respectfully.</td>
<td>2. Indigenous history</td>
<td>2. Tutorials,</td>
<td>2. Within specific indigenous health allocated time in teaching blocks (of a day or more)</td>
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<tr>
<td>- Explain the connection between history and present health outcomes, including the forms and impacts of racism.</td>
<td>3. Societies, cultures and medicines</td>
<td>3. Case studies,</td>
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<td>4. Self-directed small group activities.</td>
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<tr>
<td>- Describe the key features of indigenous identity, languages, societies, cultures and spirituality.</td>
<td>1. Indigenous Societies, cultures and Medicines.</td>
<td>1. Lectures</td>
<td>1. Within clinical attachments</td>
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<tr>
<td>- Explain indigenous conceptions of health and illness, including social and emotional well-being.</td>
<td>2. Re-presenting perspectives of indigenous health through a decolonised framework</td>
<td>2. Tutorials</td>
<td>2. Integrated into clinical attachment teaching</td>
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<tr>
<td>- Outline the process of learning in Indigenous cultures.</td>
<td>3. Communication skills (or improving clinical engagement with indigenous patients)</td>
<td>3. Small group work</td>
<td>3. Within specific indigenous health allocated time in small teaching sessions.</td>
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<tr>
<td>- Demonstrate ways of respectfully acquiring cultural information.</td>
<td>4. Models of health service delivery</td>
<td>4. Online modules</td>
<td>4. Within specific indigenous health allocated time in teaching blocks (of a day or more)</td>
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<tr>
<td>- Identify the essential features of Indigenous medicine and outline the implications for doctor-patient interactions, including ways of respectfully working with Indigenous healing and spiritual practitioners.</td>
<td>5. Clinical presentations of disease</td>
<td>5. Case studies (PBL/CBL)</td>
<td>5. Within mainstream community placements with indigenous patients</td>
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<tr>
<td>- Identify protocols and processes for referrals and for utilising support from Indigenous health professionals, and other support resources.</td>
<td>6. Working with indigenous peoples-ethics, protocols and research.</td>
<td>6. Indigenous setting</td>
<td>6. Within indigenous community placements</td>
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<td>7. Simulated interviews with patients</td>
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<td>8. Interviews with indigenous patients</td>
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<td>9. Interaction with indigenous health workers</td>
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<td>10. Reflective/reflexive writing</td>
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<td>Learning outcome**</td>
<td>Content (Subject areas)**</td>
<td>Delivery Mechanism**</td>
<td>Learning context**</td>
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<td>- Demonstrate how concepts and ideas drawn from medicine and epidemiology were used to support the process of colonisation of Indigenous peoples.</td>
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<td>- Identify and demonstrate the impact of social determinants of Indigenous health, including specific health issues uncommon to the broader population.</td>
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<td>- Access the strengths and limitations of available data used as key indicators of Indigenous health.</td>
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<td>- Explain the impact of culture on prevention, definition, diagnosis and treatment of illness.</td>
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<td>- Identify the key principles of successful health surveillance including partnership, ownership, and consultation and action research.</td>
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<tr>
<td>- Identify features of overt, subtle and structural racism or discrimination in interactions between patients and health professionals and systems, identify ways to address such occurrences, and acquire skills to advocate for their resolution.</td>
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<td>- Demonstrate skills in effective consultation and collaboration with Indigenous Health</td>
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</table>

10. Within indigenous settings
Workers, and other professionals and support resources.

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<tr>
<th>Learning outcome*</th>
<th>Content (Subject areas)**</th>
<th>Delivery Mechanism**</th>
<th>Learning context**</th>
<th>Assessment**</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Outline the concept of inequity of access and the factors which contribute to it.</td>
<td>1. Models of Health Service Delivery</td>
<td>1. Lectures</td>
<td>1. Integrated into clinical attachment teaching</td>
<td>Short answer questions, essay,</td>
</tr>
<tr>
<td>- Identify ways of redressing inequity (i.e. making clinics culturally safe, employing indigenous staff, referrals to indigenous services).</td>
<td>2. Population health</td>
<td>2. Tutorials</td>
<td>2. Within specific indigenous health allocated time in small teaching sessions.</td>
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<tr>
<td>- Describe the historical development of indigenous initiatives, including the community controlled sector and IHWs, and reflect on lessons from these initiatives that can be applied to other health sectors.</td>
<td>3. Indigenous history</td>
<td>3. Small group work</td>
<td>3. Within specific indigenous health allocated time in teaching blocks (of a day or more)</td>
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<tr>
<td>- Identify features of effective indigenous health promotion and general practice programmes.</td>
<td>2. Population health</td>
<td>5. Case studies (PBL/CBL)</td>
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<tr>
<td>- Assess the features, strengths and limitations of community controlled private and government health service delivery.</td>
<td>3. Indigenous history</td>
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<td>- Outline key indigenous health policies and strategies.</td>
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</tbody>
</table>
- Identify, acknowledge and analyse one’s own cultural values and reflect on their implications for health care.
- Describe and explore the influence of culture on perspectives, attitudes, assumptions, beliefs and behaviours.
- Identify and analyse the epistemological construction of Western medical knowledge and how this might differ between cultures.
- Acknowledge and analyse the limitations of one’s own knowledge and perspectives, and incorporate new ways of seeing, valuing and understanding with regard to indigenous health practice.

**Learning outcome**

<table>
<thead>
<tr>
<th>Content (Subject areas)**</th>
<th>Delivery Mechanism**</th>
<th>Learning context**</th>
<th>Assessment**</th>
</tr>
</thead>
</table>
| 1. Working with Indigenous Peoples – Ethics, Protocols and Research  
2. Population Health | 1. Lectures  
2. Tutorials  
3. Small group work  
4. Online modules  
5. Case studies (PBL/CBL)  
6. Indigenous setting  
7. Interviews with indigenous patients  
8. Interaction with indigenous health workers | 1. Integrated into clinical attachment teaching  
2. Within specific indigenous health allocated time in small teaching sessions.  
3. Co-taught alongside non-indigenous teachers  
4. Within indigenous settings | Case studies, MCQ, Short Answer questions, |

**Figure 11: Framework 2: Constructive alignment within an indigenous health curriculum**
This framework has the potential to support two specific areas:

1. Provides a guide for developers of an indigenous health curriculum. This framework provides a clear outline of what other medical schools (via their indigenous health teaching teams) are using to meet their indigenous health learning outcomes. Medical schools may use the LIME network to access required resources and/or disseminate new resources. The LIME network could also support medical schools by providing senior mentorship for new medical schools seeking to develop a curriculum with constructive alignment.

2. Provides a template for mapping a medical school’s indigenous health curriculum against the current AMC accreditation guidelines (and the CDAMS indigenous health curriculum framework). This template may be used by medical schools to evaluate an institution’s strengths and areas for development within the indigenous health curriculum, and hence provide evidence to advocate for appropriate levels of resources to support the indigenous health curriculum.

8.3.4 Framework 3: Community as stakeholders: A model of social accountability

The current AMC accreditation guidelines encourage medical schools to engage with community stakeholder groups (with specific mention of indigenous peoples) and to include them as committee members with a role of monitoring the curriculum (153). The CDAMS indigenous health framework (34) also recommends engaging with the indigenous community to gauge acceptability of the indigenous health curriculum.

There are no documented examples or ‘best practice examples’ of an effective community engagement model currently available from the AMC. This research identified that the role of the community is not just in providing feedback at a governance level (standard 6.3 p. 26 (153)) but is also to provide input into the design, implementation, and evaluation of the impact of the curriculum (standard 6.1 p. 25 (153)).

Drawing on multiple stakeholder perspectives in this study assisted in the identification of a framework for not only how to ‘include community stakeholders’ but also the importance of
reframing the community as being stakeholders (not just participants or ‘receivers of services’) in the medical curriculum. The steps to the implementation of Framework Three involve:

1. Interviewing patients and health workers (or experts working with patients e.g. nurses, occupational therapists, speech language therapists etc) about their experience in the health system (or within a specific clinical setting) and their aspirations for what they would like to have included in the health system.

2. Using this content to determine the design of the curriculum.

3. Using patients and health workers in the implementation of the curriculum, for instance in bedside teaching, student-patient interviews, as ‘actors’, in sharing their stories/experiences and allowing them to provide feedback to students.

4. Engaging patients and health workers in the assessment of the students e.g. student-patient interactions using specific case studies in OSCE stations, using patients as ‘actors’ in OSCE stations, physical examinations.

5. Seeking feedback from patients and health workers on their aspirations for the broader health workforce.

6. Collating feedback from students on their experiences with the indigenous community (e.g. formal written evaluations, reflective practice, informal feedback, focus group interviews).

This study showed that access to the indigenous community through the design, development, implementation, and evaluation/impact components of the curriculum provided a meaningful and reciprocal relationship between the indigenous health teaching team and the indigenous community. This finding is similar to that discussed by Worley et al. (2006) which they termed symbiotic medical education, by which there is a “perceived mutual benefit, or symbiosis, between each pole of the related pair” (p. 115), therefore between the indigenous health teaching team and the indigenous community and its relationship to the indigenous health curriculum as illustrated below in framework three (figure 11).
Framework three (figure 11) specifically identifies the processes necessary to ensure that teaching team/community collaboration is purposeful and directly relates to the indigenous health curriculum:

1. acknowledging the role of the stakeholder in providing a context to the curriculum content.
2. using the curriculum to provide a vehicle to privilege the voice of the stakeholder.
3. providing opportunities to collate stakeholder feedback to identify gaps in the curriculum (i.e. differences between content and patient experiences/aspirations).
4. acknowledging the role of the stakeholder in contributing to content and design of the curriculum.

Figure 12: Framework Three: Community as stakeholders: A model of social accountability
5. acknowledging that stakeholders are able to monitor the difference in what students are being taught and what was being demonstrated by students/senior clinicians within clinical settings.

6. providing an opportunity to develop a ‘shared language/knowledge’ between the medical school/learners/community.

Framework three (figure 11) has the potential to support the general medical education environment by:

1. providing a template for medical schools to implement the framework in all areas of their curriculum.

2. providing a template that meaningfully includes the community as stakeholders in the curriculum.

3. providing medical schools with a shared language and format for discussing community engagement, then, if seen appropriate, using this language to formulate case studies that can be shared with other medical schools.

4. providing the AMC with a template for schools to document their engagement with community stakeholders.

8.3.5 Summary

Therefore, Gozu et al. (66) discussed the need for the validation of a battery of questions (with calculated reliability) to measure the impact of cultural competency (or, in this case, indigenous health) curricula on clinical behaviours and health outcomes if these tools were available they would further enhance an institution’s ability to evaluate indigenous health curricula. However, this research has also demonstrated that in order to gain a broader understanding of the impact of an indigenous health curriculum, more is required than just student/staff course feedback.

Hence, this research suggests that there are advantages in using frameworks that assist in measuring the impact of the curriculum. These frameworks may be more likely to
demonstrate how the design, implementation, and evaluation of an indigenous health curriculum impact on all stakeholders (as opposed to only students).

As a result, this section presented three frameworks that support how individual medical schools might evaluate how the complex interactions between their medical school (internal stakeholders) and external stakeholders impact on the indigenous health curriculum.

Framework one highlighted the roles of all stakeholders in the design, implementation, and impact of the indigenous health curriculum. Therefore, it provided one way that medical schools may choose to map (and therefore evaluate) their response to the development of an indigenous health curriculum and how this aligns with the AMC accreditation standards.

Framework two provided a working template to support indigenous health curriculum development to encourage collegial mentoring (possibly through the LIME network) to support constructive alignment and to promote a shared language about what constructive alignment looks like in an indigenous health curriculum. Framework two also provided a critical framework for the AMC accreditation process to consider using in partnership with medical schools when reviewing an indigenous health curriculum within medical schools.

Framework Three used the key learning experiences from the case studies on how they effectively engaged their indigenous community to be stakeholders in the medical curriculum, and presented how this template may be applied to other indigenous health curricula and other areas of the medical curriculum.

8.4 Section Three: Kaupapa Māori research

8.4.1 Introduction

This section will re-visit the rationale for using Kaupapa Māori research as a theoretical framework and determine its impact on this research.

This study used Kaupapa Māori research as a theoretical framework to ensure that an indigenous agenda (one that gave privilege to an indigenous perspective) was presented within the field of medical education research. From this agenda emerged three specific
areas where the theoretical framework was able to identify and critique the effect of colonial structures and processes on the design, implementation, and impact of the indigenous health curriculum. Specifically, this included dealing with racism, the conflict in explicit and tacit learning, and the intricacies of teaching about a community of which you are a member. These areas will now be further discussed.

8.4.2.1 Dealing with racism

Smith (115) discussed how the role of Kaupapa Māori research as a theoretical framework has the ability to identify the application of colonised and deficit influences. Racist narrative directed at the UOC indigenous health teaching team from students and colleagues illustrated the presence of such factors within a medical education setting. Although evidence exists that links the experience of racism to poorer health outcomes (164) and the impact of racism on the retention of an indigenous health clinical workforce (165), there is no research that has examined the impact of racism on indigenous health educators.

This research identified that in response to experiences of racism, the indigenous health teaching team developed specific resiliency strategies to address levels of resistance to indigenous health content and curriculum delivery. These strategies included being concerned for, and exploring the experience of indigenous students (and providing support when required), teaching as a team (as opposed to working in isolation from other Māori peers), working through specific comments that were predicted to be made again (e.g. “Māori always want more than others get from the health system”) and developing responses to these comments (that could be used as required), developing curricula that addressed racism and its role in health care outcomes, and making time to ‘debrief’ with other indigenous peers (locally and internationally) about specific incidences of racism. Developing these resiliency strategies was a key influence on retention of indigenous staff within all the medical schools.

Hence, the presence of colonial and deficit influences within the medical school highlight the impact and power of such frameworks that are held as ‘acceptable’ within mainstream society. It also notes the on-going power maintained by colonial discourse within the health system and health environment. Smith (115) recommends that in order to reduce such
colonial and deficit influences from within a curriculum there is a need to encourage further engagement within indigenous community members as ‘stakeholders’ in the curriculum to provide a social accountability process by which the medical school (and the health system) are accountable for being responsive to improving indigenous health outcomes. This research also suggests that institutional systems need to be put into place to address racist ideologies and to support the indigenous health teaching team resiliency strategies.

8.4.2.2 Conflict in explicit and tactic learning

A kaupapa Māori theoretical framework critiques two specific components of a curriculum. Smith (115) identified that “the curriculum of a university shapes the way knowledge is reproduced as a curriculum for schools and for society.” (p. 129). Therefore, the first critique of the curriculum is in determining who has the power to decide what will be included in the curriculum. Hence, if colonial (western/biomedical science) knowledge drives the curriculum, then the institution produces graduates who privilege a colonial lens.

This research identified that medical schools had provided the resources for the development of an indigenous space and curriculum. However, a conflict was identified between the broader medical education explicit curricula (which focused on cognitive skills as most important, followed by interactive skills), and the indigenous health curriculum (which focused on the importance of interactive skills as most important, followed by cognitive skills e.g. build a relationship with the patient first then investigate the presenting complaint). This is similar to the findings of Coulehan and Williams (166) who noted that the culture of medical schools tended “to devalue primary care and relationship-centred approaches to practising medicine.” (p. 600). Therefore, there is a need for a clearer alignment between both curricula to ensure that students are not being taught then ‘un-taught’ principles within the formal/explicit curriculum as this results in students identifying one of the curricula as ‘invalid’ (or less important). An invalidation of the indigenous health curriculum would result in the status quo in health care delivery which maintains current indigenous health disparities.

Secondly, Smith (115) identified the role of the hidden curriculum and its power to promote colonial understandings (the reflection of senior clinicians’ own colonial lens) of knowledge
and the impact of this on the ‘explicit’ (planned/formal) curriculum. Coulehan and Williams (166) also discuss the role of professional socialisation within the health environment (the primary teaching environment for medical students) and its ability to ‘un-teach’ the explicit curriculum of a medical school through tacit learning.36 “Tacit learning is noted as being more powerful than explicit learning not only because it is reinforced more frequently but because it relates to doing rather than saying” (p. 600). Tacit learning is a crucial component of the hidden curriculum. Coulehan and Williams (166) identify that such tacit learning promotes the characteristics of detachment, entitlement, and non-reflective professionalism.

Ewen et al. (35) explored the impact of the hidden curriculum on the indigenous health curriculum and concluded that there needed to be better alignment of the formal and hidden curriculum, if significant changes in learning outcomes were to occur. As previously discussed in the sequential method of delivery (8.2.3.1.2), students reported that the explicit indigenous health curriculum was not being demonstrated/reinforced by senior clinicians. They also identified that what they were being taught within clinical settings (tacit learning) was that the person’s ethnicity/culture was less important than the presenting complaint/illness. Therefore, indigenous health educators (at all sites) identified that it was pivotal to understand the contribution of the hidden curriculum (inclusive of tacit learning) as a barrier to transformative education, and therefore to indigenous health outcomes.

At the UOC, the non-indigenous convenors clearly articulated that they had not been exposed to an indigenous health curriculum in their medical school training (or in their postgraduate training) so were unsure whether or not their actions were counterproductive to the work of the indigenous health teaching team. They saw this as very different to other biomedical areas of the curriculum where they had some exposure to those learning outcomes (through their training and on-going education) e.g. pathology, and therefore had a common understanding and shared language of that component of biomedicine. Therefore, the hidden curriculum (inclusive of tacit learning) that

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36 “…tacit learning includes all those aspects of the curriculum and the socialization process that instil professional values and a sense of professional identity, but do so without explicitly articulating those issues.” 167. Hafferty F. The hidden curriculum, ethics teaching, and the structure of medical education. Academic Medicine. 1994;69:861-70.(Pg. 600)
impacts on the indigenous health curriculum may be both unconscious and consciously implemented.

Hence, the findings of this research confirm that there is conflict between both the explicit medical school curriculum and the indigenous health curriculum, and between the explicit medical curriculum and the tacit learning that occurs within the clinical (wider health) setting. Therefore, these two areas represent components that continue to promote a colonial lens within the curriculum, and unless alignment occurs within these two settings elements of an indigenous health curriculum will be un-taught and therefore minimalised, with the risk that clinical behaviours will not change and that there will be no benefit to indigenous health outcomes.

8.4.2.3 Teaching about one’s own community

Smith (1999) discussed the positivist nature of western science, which seeks to define an expert as an ‘outsider’ (being external to the research population). However, within feminist research, critical theory and Kaupapa Māori research, being part of the ‘researched’ community is viewed as a strength. It is also seen to ensure a level of social accountability between the researcher and the researched, whilst identifying the privilege of coming from that community and having a clear understanding of the context of health for that population.

The UOC indigenous health teaching team identified specific instances where student comments about the indigenous health curriculum reflected a positivist view. Such comments included an insinuation that the team was teaching from their ‘own experiences,’ not ‘real experiences,’ and that the content of the curriculum was influenced by the ‘teachers’ perspectives,’ not by ‘real Māori’ perspectives. Therefore, the challenge for indigenous health teaching across all schools was to identify and navigate through such positivist views.

It was identified that this challenge was somewhat unique to indigenous health teaching, because the only similar incidents where this situation could occur in medical education was if a teacher was teaching about a community they were intricately linked to, for example, a person with cancer overseeing the design, implementation, and evaluation of the oncology curriculum, an 85 year-old overseeing the design, implementation, and evaluation of a curriculum about older people, or someone with chronic kidney disease overseeing the design, implementation and
evaluation of a nephrology curriculum. There then would be a presumption that the teacher might somehow ‘bias’ or over-invest in the content emotionally (which was seen as not appropriate).

Therefore, using Kaupapa Māori as a theoretical framework enabled the identification of colonial processes that seek to validate ‘external experts’ while discrediting ‘internal experts’. This position has a detrimental influence on the learners of an indigenous health curriculum because a biomedical curriculum attaches less value to being taught by a stakeholder who is innately accountable to their community, more likely to present information on current health disparities and inequities and promote solutions to better health outcomes.

8.4.2.4 Summary
The use of Kaupapa Māori research as a theoretical framework provided a methodology for pursuing an indigenous health agenda within the medical education field. A Kaupapa Māori research methodology also assists in understanding the context of the indigenous health curriculum and is able to identify colonisation as an on-going process as one of the core barriers to the design, implementation, and impact of an indigenous health curriculum. Therefore, unlike other components of medical education, the indigenous health curriculum has to justify indigenous rights and provide an indigenous discourse on the history of Aotearoa/New Zealand in order to provide a context for its curriculum. This involves being able to clearly articulate a decolonised curriculum within a broader colonised curriculum.

This research identified how key colonial processes are manifest within medical schools and that indicators for these processes include the indigenous health teachers’ experience of racism, the conflict of explicit and tacit learning, and the lack of value (and suspicion) of being taught from ‘internal’ indigenous health experts.

8.5 Final summary
This final summary will identify the limitations of the research and the overall thesis conclusions, and will present recommendations based on the findings of this research and suggest further areas for future research.
8.5.1 Limitations of this research

It is important to note the limitations of this research. The use of a case study design meant that it is highly contextualised to the six medical schools that took part in this research and, therefore, generalisations to all medical schools cannot necessarily be made. Many of the strengths and weaknesses in the findings are placed within the context of specific institutions. However, it is hoped that the reader will be able to draw from the findings what is transferable to their own indigenous health curriculum, medical curriculum, and/or medical school.

The research was undertaken by someone who was an ‘insider’ (having the roles of lecturer/assessor/member of the indigenous community) and, although common within qualitative methodology (especially Kaupapa Māori, feminist and critical theory), it will be for the reader to determine how any potential bias was worked through and is reflected in the data that were presented in the process of this thesis. It is hoped that the high response rates from both the students and indigenous community reflect the acceptability of the researcher as an ‘insider’ and having permission by stakeholders to undertake this research. However, what cannot be clear is how the researcher (SP) who was instrumental in designing the Hauora Maori course, and who held a senior role within the University of Otago, Christchurch at the time of undertaking this research, may have made it difficult for some students (and perhaps stakeholders) to express negative comments.

Finally some of the medical schools represented in the systematic review of the literature were also involved in phases one and two of this research; therefore, there is an overlap between the literature and the medical school sites.

8.5.2 Conclusions

Within the review of the literature it was identified that very little was documented on what constituted an indigenous health curriculum and how its impact was measured. From the 16 relevant articles sourced, all were based at one medical school site (and therefore scored low against quality measure tools MERSQI) with 15 of the articles using students’ perceptions and experiences as the only measure of impact of the indigenous health curriculum.
The knowledge added by this research is that there are advantages in drawing on multiple sites and multiple stakeholder perspectives to explore the design, implementation, and determine the impact of indigenous health curricula. Multiple sites enabled cross-institutional comparisons to be made and drew together common threads that influenced and impacted on all medical schools (e.g. impact of timetabling, indigenous health leadership and indigenous health teaching teams). They also identified how the similarities and challenges within each medical school contribute to our understanding of the components necessary to map an indigenous health curriculum, and provide a working guideline on what might be included in a curriculum to demonstrate constructive alignment. The method used to explore multiple stakeholder perspectives firstly required defining who might be viewed as stakeholders in an indigenous health curriculum, and secondly gauging how the curriculum impacts on each of these stakeholder groups. The use of multiple stakeholder interviews highlighted three things:

1. That the UOC indigenous health curriculum is already having a positive impact on the interaction between the UOC students and Māori patients/whānau/community. This positive impact is recorded as the experience of meaningful engagement between students and the indigenous community through: feeling that a positive relationship was developed; sharing of power and expertise within the interview; identification of trust; exchange of relevant clinical information and a clear understanding of how the other has interpreted the interaction. If the indigenous health framework can be applied by students post-graduation, it is likely that stakeholders will continue to report positive interactions which in turn may improve indigenous health outcomes.

2. That the greatest challenge to students continuing to demonstrate indigenous health competencies within the UOC and post-graduation is the lack of cohesion between the explicit (internal to the UOC) and tacit (the UOC and the wider health system) curriculum. Hence, unless alignment is achieved, an indigenous health curriculum will continue to be marginalised as a component of a medical curriculum.
3. That there is a need to increase the interaction between the UOC (and its internal stakeholders e.g. students, staff, convenors, systems) and the indigenous community in order to fulfil two key roles:

a. To increase social accountability of the UOC to contribute to improved indigenous health outcomes.

b. To continue to provide a vehicle by which the indigenous community can contribute to the design, implementation, and evaluation of the impact of the indigenous health curriculum. Therefore, with the combination of both multiple sites and multiple stakeholders (from one site), this research was able to formulate the relevance of developing three frameworks to support medical schools, accreditation boards and the indigenous community in the design, implementation, and evaluation of indigenous health curricula.

In conclusion, when participants in this study were asked where they saw the indigenous health curriculum in 5-10 years, one UOC stakeholder commented that they saw that the indigenous health curriculum would be taught “as naturally as pathology.”37 This comment reflected a number of key points:

1. That pathology was perceived as having an important place within the current the UOC medical curriculum and that it was valued.

2. That the UOC staff were familiar with the core components of the pathology curriculum.

3. That currently there was not full integration (and perhaps acceptance) of the indigenous health curriculum as “core” curriculum within the UOC.

4. That there was a future aspiration that all staff would know the core components of the indigenous health curriculum, and that it would be valued.

5. That there was a place for indigenous health curriculum within a medical school.

This comment (and the intention behind it) sums up this thesis well, in that the indigenous health curriculum, to date, has not been fully integrated into medical education; however

37 The stakeholder was not a teacher of pathology or a pathologist.
stakeholders see the value of it being integrated (and becoming core curriculum). Therefore, there is a need to produce evidence to support how this future goal may become a reality within medical schools and medical education.

8.5.3 Recommendations

Based on the findings of this research it is therefore recommended that:

1. The UOC address how a ‘decolonised’ framework might be applied to it as an institution.

2. That a programme is developed to train the UOC academic and clinical staff in the indigenous health framework, and provide professional development opportunities for staff to implement and evaluate the impact of this programme.

3. That the UOC put in place processes that continue to strengthen relationships between itself and the indigenous community. This will ensure on-going social accountability in the design, implementation and evaluation of the impact of the indigenous health curriculum.

4. That the UOC maintains the method of using multiple stakeholder perspectives to map the future impact of its indigenous health curriculum on all stakeholders.

5. That the UOC maintain current relationships and build further relationships with other medical schools that are implementing indigenous health curricula to encourage collaborative projects to build the evidence base for this part of the medical education field.

6. Given that all three frameworks align with the documentation by the AMC, the Council consider using all three frameworks in the accreditation process of medical schools. It would then be relevant to evaluate how medical schools applied these frameworks and the appropriate consequences for those not meeting these accreditation standards.

8.5.4 Future research

This study highlighted the dearth of literature available on the indigenous health curricula within medical schools and how they are evaluated. Therefore, the following considerations are recommended for future research.
1. The initiation of joint projects between medical schools to document and evaluate the indigenous health curriculum and use the MERSQI and IHCRS (2.3.5) as a guide for developing the research method employed. This will increase the quality of critical papers necessary to build an evidence base in the indigenous health curriculum literature.

2. Further qualitative investigation into the design, implementation and impact of the indigenous health curriculum to identify whether the themes (components influencing the design, implementation, and impact) that emerged from this research are reflected in other sites, and to further explore general principles that might act as enablers and barriers to an indigenous health curriculum.

3. The exploration of the experiences of racism for those delivering the indigenous health curriculum.

4. The application of the three frameworks that emerged from this research to other medical school sites in relation to an indigenous health curriculum.

5. To design and implement a shared indigenous medical curriculum between medical schools, post-graduate college(s) and health service delivery organisation(s) in order to evaluate its impact on the differences between explicit and tacit curriculum and ultimately its impact on indigenous health outcomes.

6. That, other content areas within medical education undertake a review of their curriculum using multiple stakeholder interviews and multiple sites to determine whether such a method influences their current curriculum.

7. To apply the social accountability model (framework 3) used in indigenous health to other areas of medical education and report its impact on one’s curriculum.


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71. Thomas J, Harden A. A Methods for the thematic synthesis of qualitative research in systematic reviews. BMC Medical Research Methodology. 2008;8(45).
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129. Best E. Tuhoe, the children of the mist :a sketch of the origin, history, myths and beliefs of the Tuhoe tribe of the Maori of New Zealand, with some account of other early tribes of the Bay of Plenty district Board of Maori Ethnological Research for the Author and


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153. Australian Medical Council. Standards for Assessment and Accreditation of Medical Schools by the Australian Medical Council Kingston, ACT, Australia 2010.


204. Keene R. Educating students in a university museum environment: the Adler Museum of Medicine, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg. Medicina nei secoli. 2009;21(1):255-75.
Appendices

Appendix A: Details of 66 studies excluded at full text review

<table>
<thead>
<tr>
<th>Study characteristics</th>
<th>Studies excluded because they did not meet the applied criteria.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Population (6)</td>
<td>2 studies focused on indigenous health professional development(168-170), 1 study recorded indigenous perspectives on indigenous health knowledge(171), 2 had a focus on institutional reform(172, 173), 1 was focused on traditional medicine (174) and 1 did not have an indigenous focus. (175)</td>
</tr>
<tr>
<td>Not Exposure (15)</td>
<td>6 were focused specifically on workforce issues(67, 176-181), 7 were not Indigenous health curriculum specific (more likely to be rural or disparity discussion) (91-93, 182-186)</td>
</tr>
<tr>
<td>Not Method (32)</td>
<td>5 were commentaries (187-190), 19 were descriptive narrative with no evaluation component(30, 45, 73-88, 90, 191), 3 were about broader health disparities not indigenous health curriculum specific (192-194), 1 was a review of literature not indigenous health curriculum specific(195) and 4 were focused on institutional change not indigenous health curriculum specific (68, 196-198)</td>
</tr>
<tr>
<td>Not Outcome (8)</td>
<td>6 articles were descriptive narrative of their programmes, but the method did not clearly articulate how evaluation data was collected or synthesised (69, 199-203), 2 outcomes were not focused on indigenous health curriculum (204, 205).</td>
</tr>
<tr>
<td>Duplicates (4)</td>
<td>4 were found to be duplicates, in that the core content of the indigenous health curriculum was recorded elsewhere (and included in this systematic literature review)(89, 206-208)</td>
</tr>
</tbody>
</table>
## Appendix B: Provider/ Learner characteristics, evaluation method used and impact on learners

<table>
<thead>
<tr>
<th>Author, Year</th>
<th>Study design</th>
<th>Deliverers of curriculum</th>
<th>Learner/site characteristics</th>
<th>Duration of curriculum</th>
<th>Curriculum Content</th>
<th>Impact of curriculum on Learners</th>
<th>MERSQI quality score</th>
<th>Risk of Bias</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copeman, 1989</td>
<td>Pre and post-test on student knowledge and attitudes of Aboriginal health.</td>
<td>Medical school</td>
<td>Medical students - University based teaching</td>
<td>Not reported</td>
<td>Health disparities and inequities. Engagement in pairs in interviewing either an Aboriginal or migrant patient. Before and after measurement of student attitudes and knowledge showed a modest improvement in some attitudes, although there was an increased tendency to see all Aborigines as the same.</td>
<td>9 Low</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dowell, 2001</td>
<td>Written evaluation</td>
<td>medical school</td>
<td>Medical students - rural indigenous community</td>
<td>1 week</td>
<td>Culturally relevant activities; marae protocols, traditional oratory and songs, traditional Māori herbal medicines and undertaking a community health needs assessment. Health disparities and inequities.</td>
<td>98% reported that they had developed a better understanding of Māori health issues, 98% increased their understanding of marae protocol and 96% increased understanding of rural health issues.</td>
<td>9 Moderate</td>
<td></td>
</tr>
<tr>
<td>Ewen, 2011</td>
<td>Written evaluations, interviews with indigenous simulated patients and markers/facilitators.</td>
<td>medical school</td>
<td>medical students - University based teaching</td>
<td>different lengths for different sites</td>
<td>To meet an indigenous patient(s), to practise interview skills, apply knowledge and understanding from indigenous health curriculum to a clinical interview.</td>
<td>Indigenous health curriculum assisted them to apply content to clinical reality, felt more confident in undertaking a history taking with Indigenous patients.</td>
<td>4 High</td>
<td></td>
</tr>
<tr>
<td>Ewen 2007</td>
<td>Pre and post written case method.</td>
<td>Medical school</td>
<td>Medical students - University based teaching</td>
<td>90 minutes</td>
<td>Health disparities and inequities in Indigenous child health assessment and management.</td>
<td>Showed students more likely to account for social and cultural factors in their formulation of the assessment and management of the indigenous child case post intervention.</td>
<td>13.5 Low</td>
<td></td>
</tr>
<tr>
<td>Harrison, 2006</td>
<td>Pre and post data on oral health status of pre-kindergarten to grade 12 children.</td>
<td>medical school</td>
<td>Paediatric trainees - rural indigenous community</td>
<td>not reported</td>
<td>Health disparities and inequities/communiation/indigenous communities</td>
<td>All residents now do rotation at this site, but their perceptions of the indigenous health curriculum not reported.</td>
<td>13.5 High</td>
<td></td>
</tr>
<tr>
<td>Horsburgh 2004</td>
<td>Pre and post-test (knowledge and attitudes on Māori health and TOW).</td>
<td>medical school</td>
<td>Medical/ nursing and pharmacy students – Indigenous site as teaching venue</td>
<td>1 week</td>
<td>Treaty of Waitangi, Māori health status, language classes, marae protocols, case based learning focused on a health problem.</td>
<td>Low reliability of questionnaire could not measure changes in knowledge and attitudes. Student open question evaluation reported positive engagement with use of Māori language.</td>
<td>12 Moderate</td>
<td></td>
</tr>
<tr>
<td>Hughes, 2004</td>
<td>Written evaluation and observation data.</td>
<td>Native Hawaiian Breast Cancer Sub-committee</td>
<td>Health professionals (n=100) - within clinical sites</td>
<td>1 hour</td>
<td>Native Hawaiian spiritual beliefs, and cultural values, customs and traditions, interpersonal communications, Hawaiian language.</td>
<td>90% found training sessions good or very good, 80% information was clear, but most useful was specific cultural content.</td>
<td>6 Moderate</td>
<td></td>
</tr>
<tr>
<td>Author</td>
<td>Study design</td>
<td>Deliverers of curriculum</td>
<td>Learner/site characteristics</td>
<td>Duration of curriculum</td>
<td>Curriculum Content</td>
<td>Impact of curriculum on Learners</td>
<td>MERSQI quality score</td>
<td>Risk of Bias</td>
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</tr>
<tr>
<td>Jong, 2011</td>
<td>Written evaluation and discussion with elders</td>
<td>medical school</td>
<td>medical students-rural indigenous community</td>
<td>5 days per month for 8 months</td>
<td>Indigenous protocols and beliefs, indigenous medicine, continuity of care, community based care and experiential learning.</td>
<td>Students enjoyed immersion in the care of Indigenous patients and the ability to make decisions, learning experience in the wilderness and indigenous health workshop with elders.</td>
<td>7.5</td>
<td>Moderate</td>
</tr>
<tr>
<td>Lacey, 2011</td>
<td>written evaluation, observation of student performance on summative assessments, self-reflective comments from students (noted in written long case)</td>
<td>medical school</td>
<td>medical students-University based teaching and indigenous site as teaching venue</td>
<td>unclear</td>
<td>A framework for working effectively with Māori patients to improve engagement within a clinical interview/assessment/patient management.</td>
<td>Student feedback suggests students’ value having a specific framework and it is seen as acceptable and relevant and that they are able to apply it to a clinical interview with an indigenous person/family.</td>
<td>6.5</td>
<td>High</td>
</tr>
<tr>
<td>Meyer, 2011</td>
<td>Written evaluation</td>
<td>medical school</td>
<td>post-graduate health professionals-University based teaching and online teaching modules</td>
<td>not clear (semester course)</td>
<td>Health disparities/health inequities, understanding experience of indigenous people within the health system.</td>
<td>indigenous health curriculum valued for supporting cultural awareness, advocacy and reflexive practice among students</td>
<td>4</td>
<td>High</td>
</tr>
<tr>
<td>Newbury, 2005</td>
<td>Written evaluation</td>
<td>medical school</td>
<td>medical students- rural indigenous community</td>
<td>Selective within rural week</td>
<td>Indigenous protocols and traditional medicinal practices within the context of a rural health setting.</td>
<td>Students reported greater understanding of indigenous culture than indigenous health status. Study recommends the need for students to have some understanding of indigenous culture before attempting to interact with indigenous patients.</td>
<td>10</td>
<td>Moderate</td>
</tr>
<tr>
<td>Paul, 2006</td>
<td>24 item questionnaire and open ended comments about preparedness for practice focus.</td>
<td>medical school</td>
<td>medical students-University based teaching</td>
<td>2003 cohort 7 hours, 2004 cohort 11 hours</td>
<td>Historical, cultural and social factors and their impact on health status. Working in partnership alongside indigenous peoples, socio-cultural context of health for indigenous peoples.</td>
<td>Second cohort reported a higher preparedness to advocate and improve the health of aboriginal people.</td>
<td>11</td>
<td>Low</td>
</tr>
<tr>
<td>Author</td>
<td>Study design</td>
<td>Deliverers of curriculum</td>
<td>Learner/site characteristics</td>
<td>Duration of curriculum</td>
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<td>Risk of Bias</td>
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</tr>
<tr>
<td>Paul, 2011</td>
<td>review of reflective commentary by students on their long case</td>
<td>medical school</td>
<td>Medical-University based teaching and clinical wards</td>
<td>8 weeks</td>
<td>To apply indigenous health theory to a clinical case interview.</td>
<td>Students are able to conduct and interview with an indigenous person within framework provided.</td>
<td>4</td>
<td>Moderate</td>
</tr>
<tr>
<td>Sinnott, 2001</td>
<td>Pre and post-test</td>
<td>Queenlan d Public Hospital</td>
<td>Intern doctors- hospital setting</td>
<td>not reported</td>
<td>Using an indigenous health worker within clinical practice.</td>
<td>Yes improvement in using indigenous hospital liaison officer (88% improvement)</td>
<td>9.5</td>
<td>Low</td>
</tr>
<tr>
<td>Tesimale, 2008</td>
<td>Written evaluations</td>
<td>College of Surgeons</td>
<td>Fellows and associates of the college- online teaching module</td>
<td>not reported</td>
<td>Culture, communication and informed consent, patient consultation, trauma and interpersonal violence, building relationships with indigenous communities and health workers in their hospital.</td>
<td>Surgeons reported they had changed behaviours or intended to change behaviour in the way they worked alongside indigenous patients.</td>
<td>10</td>
<td>High</td>
</tr>
<tr>
<td>Zhou, 2011</td>
<td>pre and post test</td>
<td>Medical school</td>
<td>Medical students- University based teaching</td>
<td>3 hours</td>
<td>Social and cultural background of indigenous people and influence on health and attitudes towards western medical care, communication difficulties and challenges, pre-conceived stereotypes and attitudes towards indigenous people.</td>
<td>3 hour educational seminar showed a change in medical students' knowledge and attitudes about aboriginal health.</td>
<td>12.5</td>
<td>Moderate</td>
</tr>
</tbody>
</table>
Appendix C: General Information Form for all participants* except Māori patients

Please note participants only got the paragraph relevant to their stakeholder status.
Appendix D: General information form for Māori patients

GENERAL INFORMATION FORM

Tere Koe (INSERT NAME)

This year you were interviewed by one of our medical students. The Hauora Māori teaching team at the University of Otago, Christchurch is very grateful for the time that you have given to assist our students to learn more about Māori communities and Māori health.

I am currently undertaking a research project as part of my PhD studies. This research is evaluating our teaching programme in Māori health. I would like to ask you some questions about how the interview with the medical student went. I would also like to ask what you think we should be teaching our medical students about Māori health and communities.

What will this involve?

This will involve a 30 minute interview. We can do this face to face or on the phone. Each interview will be audio recorded and transcribed. If you would like a face to face meeting we can undertake this interview in your own home, or at the University of Otago, Christchurch.

Sharing this information with me will not affect your health care in any way. All information you give me will be confidential and you will not be identifiable in any way in my report on the research. A $40 petrol voucher will be presented as a token for the time involved in the research.

What happens to the information collected?

All transcripts will be kept in a locked filing cabinet at the Māori/Indigenous Health Institute, University of Otago, Christchurch. The transcripts will be retained for 10 years, after which time they will be destroyed using usual University procedures.

Once the study is completed, I will send you a brief report about what the research found.

Why take part?

As a University we are seeking to ensure that our graduates are responsive to Māori patients and their whānau. Your feedback will help us as we re-design our courses which we hope will produce doctors who will be confident and competent when working with Māori.

Your participation is entirely voluntary (your choice). You do not have to take part in this study. If you do agree to take part, you are free to withdraw from the interview at any time, without having to give a reason, and this will in no way affect your future health or social services care. Please feel free to contact me directly if you have any questions about this study (see details below).

This study has received ethical approval from Upper South A Regional Ethics committee (URA/08/0/208).

What comes next?

I will ring you within the next two weeks to discuss if you are willing to participate. However you are also welcome to bring me or email me directly in regards to this project.

If you have any questions or concerns about your rights as a participant in this research study you can contact an independent health and disability advocate. This is a free service provided under the Health and Disability Commissioner Act. Telephone (NZ wide): 0800 555550. Free Fax (NZ wide): 0800 555550. Email (NZ wide): advocacy@hdc.govt.nz.

Suzanne Plisma
Principal Investigator
Māori/Indigenous Health Institute
University of Otago, Christchurch

03 543 9308
suzanne.plisma@otago.ac.nz

Māori/Indigenous health Institute
University of Otago, Christchurch

Hauora Māori in Medical Training GI D P09 Version 14/03/09
Appendix E: Consent Form

I have read the General Information form concerning this project and understand what it is about. All my questions have been answered to my satisfaction.

I understand that I am free to request further information at any stage.

I know that:
1. My participation in the project is entirely voluntary.
2. I have had time to consider whether to take part.
3. I am free to withdraw from the project at any time without any disadvantage.
4. I may decline to answer any particular question(s).
5. That the information I share will be confidential and my name will not be attached to my completed survey.
6. I know who to contact if I have any questions about the study.
7. I am aware the results of the project may be published but I will not be identified.
8. I wish to have an interpreter undertake my interview. YES/NO
9. I wish to receive a copy of the results. YES/NO

I ______________________ (full name) hereby consent to take part in this study.

Date: ____________________

Signature: ________________

Your Name and Address for Report to be sent to:

mihi
māori/Indigenous health institute
University of Otago, Christchurch
PO Box 4345
CHRISTCHURCH, NEW ZEALAND
Tel +64 3 364 3630  Fax +64 3 364 3632
http://www.chmeds.ac.nz/departments/mihi

Design And Implementation Of an Indigenous Health Course Within a Medical Curriculum. 19 February 2009 CI
Appendix F: Medical School Survey

1. MEDICAL SCHOOL PROFILE

1.1 Is your medical school? (Please tick as many boxes those most appropriately describe your teaching model)
- [ ] an undergraduate course
- [ ] a graduate course
- [ ] an undergraduate course but is transitioning to graduate course
- [ ] Other (Specify)

1.2 How many students do you have within each years at medical school? (Please complete the relevant boxes for school)

<table>
<thead>
<tr>
<th>Year</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Numbers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1.3 What student population does your medical school have? (Please complete the relevant boxes for school)

Proportion of students (%)

<table>
<thead>
<tr>
<th>Student Type</th>
<th>Indigenous Students</th>
<th>National Students</th>
<th>International Students</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>% across all years</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1.4 How many years has Indigenous health teaching been taught in your institution?


2. STAFFING RESOURCING

2.1 How many FTEs are currently (2009) allocated to Indigenous health teaching positions within your institution?


2.2. In terms of staff resources for the indigenous health curriculum within your institution; what current workforce/expertise are represented? (Please tick as many boxes those most appropriately describe your teaching model)
- [ ] 1 Indigenous Doctors
- [ ] 2 Non-Indigenous Doctors
- [ ] 3 Indigenous Nurses
- [ ] 4 Non-Indigenous nurses
- [ ] 5 Indigenous Allied Health Professionals
- [ ] 6 Non-Indigenous Allied Health Professionals
- [ ] 7 Indigenous Educationalists
- [ ] 8 Non-Indigenous Educationalists
- [ ] 9 Indigenous Administrative Staff
- [ ] 10 Non-Indigenous Administrative Staff
- [ ] 12 Indigenous Community Workers
- [ ] 13 Non-Indigenous Community Workers
- [ ] 14 Other (Specify)

2.3 How often did you utilise volunteers to assist with teaching the indigenous health curriculum in 2009? (Please tick the box which is closest to the accumulated hours by anyone who assisted you in this capacity)
- [ ] 1 0 – 2 hours
- [ ] 2 3-5 hours
- [ ] 3 6-10 hours
3. TIMETABLING

3.1. How many hours are formally allocated to Indigenous Health within your current curriculum (for all activities relevant to meet the requirements of your course)? *(Please complete the relevant boxes for your teaching model and/or teaching site)*

<table>
<thead>
<tr>
<th>Year</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours</td>
<td>11-15 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>16-20 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>21-25 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>26-30 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>31-35 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>36-40 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>40+</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

3.2. Which of the following describes the context for your indigenous health curriculum in 2009? *(Please tick as many boxes those most appropriately describe your teaching model)*

- [ ] Within clinical attachments
- [x] Within specific Indigenous health allocated time in small teaching sessions.
- [ ] Within specific Indigenous health allocated time in teaching blocks (of a day or more)
- [ ] Within mainstream community placements with Indigenous patients.
- [ ] Within Indigenous community placements
- [ ] With guest Indigenous presenters
- [ ] Independent student learning time.
- [ ] Co-taught alongside non-indigenous teachers
- [ ] Taught by non-indigenous teachers
- [ ] Other _________________________________________

3.3. What type of Assessments are used as part of your indigenous health curriculum? *(Please tick as many boxes those most appropriately describe your teaching model)*

- [ ] No assessments
- [x] Short Case with indigenous patient
- [x] Long Case with indigenous patient
- [ ] Log Book
- [ ] Clinical Interview with indigenous patient
- [ ] MCQ
- [ ] Short Answer Questions.
- [ ] Evaluation of Course
- [ ] Other (Specify)
Appendix G: Interview Protocol

Design and Implementation Of
An Indigenous health Course within a Medical Curriculum

Interview PROTOCOL

1. Introduce self
2. Engage in whakawhānaungatanga
3. Review information sheet with participant (using diagram to show where their shared information will contribute to the overall research project).
4. Consent form
   - All consents forms will be coded to identify which interview cohort the participant belongs to.
   - All participants would have received general information sheet and consent form in the mail prior to the interview.
   - The interviewer will go through the consent process with each participant/focus group. This will include an explanation of each bullet point of the consent form.
   - if undertaking the interview via telephone, participants will be asked to mail in the consent form, but their verbal acceptance will be taken as initial consent for the proceeding interview.
5. Explain that if they do not want to ask a question, just say pass and I will proceed to the next question.
6. At the end of the interview all participants will be thanked for their time, the next stage of the research project will again be reiterated, including when dissemination of results should occur.
7. A koha will be given to participants.
Appendix H: Phase 1 – Interview Schedule for Medical Schools

Interview Schedule
Key Informant: Medical School Site

- Follow Interview protocol prior to starting Interview Schedule.

| 1. | What has encouraged you to become involved in indigenous curriculum? | - Explore what the barriers to engaging in the indigenous health curriculum
- Explore what barriers that they may be currently addressing or working against to support indigenous health curriculum
- What systemic enablers have supported them to support indigenous health curriculum
- Have they had any particular personal or systemic experiences at their site that has motivated them to support its place in the curriculum? |
|---|---|---|
| 2. | What do you think is the place of indigenous health in the u/grad medical curriculum? | - Explore socio-political motives
- Explore educational needs?
- Ethnic minority? Indigenous rights?
- Place of other ethnic minority teaching in curriculum? |
| 3. | What value do you think the current indigenous health content has added to your medical school? | - Explore perceptions around the roll out of the indigenous health curriculum
- Explore how they have formed their knowledge around the indigenous health curriculum e.g. what do they think is taught?
- Have they noticed any changes in attitude of their institution towards indigenous health? |
| 4. | What has assisted the development of the current curriculum content within your school? | - What are their expectations/aspirations for their curriculum?
- What are their perceptions of where students are at? What they expect?
- And what they should know?
- What has been the main drivers to the development of the current curriculum?
- Explore expected content of curriculum |
| 5. | What do you see the role of non-indigenous staff is in teaching indigenous health? | - Explore what are the perceptions of whom is accountable for teaching indigenous health?
- Different teaching models for indigenous health?
- Development they would like to see in their institution with regards to indigenous health
- Barriers to having non-Māori teach indigenous health
- Defining what indigenous health is and how it is different than having a case that is ‘indigenous’ |
| 6. | What do you think the future of indigenous health teaching will look like at your institution? And why? | - Perceived pathway developments for indigenous health
- Explore future projections for indigenous health staffing
- Role in teaching PGY1 and PGY2?
- Role in registrar training? Explore this.
- Overall interface between the Med Council and indigenous health curriculum?
- Aspirations of the school? |
Appendix I: Phase 2 – Interview Schedule for
Stakeholders/Convenors/Indigenous health teaching team

<table>
<thead>
<tr>
<th>Questions</th>
<th>Systemic/Convenors/Indigenous Health Teaching Team</th>
</tr>
</thead>
</table>
| 1  What has encouraged you to actively support Hauora Māori within the curriculum? | Explore what the barriers were to having Hauora Māori at the UOC prior to 2001  
Explore what barriers that they may be currently addressing or working against to support Hauora Māori What systemic enablers have supported them to support Hauora Māori Have they had any particular personal or systemic experiences in Hauora Māori that has motivated them to support its place in the curriculum? |
| 2  What do you think is the place of Hauora Māori in the u/grad medical curriculum? | Explore socio-political motives. Explore educational needs?  
Ethnic minority? Indigenous rights? Place of other ethnic minority teaching in curriculum?                                                                                                                                                                         |
| 3  What value do you think the current Hauora Māori content has added to the UOC? | Explore perceptions around the roll out of the UOC Hauora Māori curriculum  
Explore how they have formed their knowledge around the Hauora Māori curriculum e.g. what do they think is taught?  
Have they noticed any changes in attitude of the UOC towards Hauora Māori health?                                                                                                                                                                   |
| 4  What would you like the UOC to be teaching medical students about Māori communities and Māori health? | What are their expectations/aspirations for the UOC Hauora Māori curriculum?  
- What are their perceptions of where students are at? And what they should know?  
Explore expected content of curriculum  
What are their perceptions of where students are at? And what they should know?  
What has been the main drivers to the development of the current curriculum?                                                                                                                                                       |
| 5  What do you see the role of non- Māori staff is in teaching Hauora Māori? | Explore what are the perceptions of whom is accountable for teaching Hauora Māori?  
Different teaching models for Hauora Māori?  
Development they would like to see in the faculty with regards to Hauora Māori  
Barriers to having non- Māori teach Hauora Māori  
Defining what Hauora Māori is and how it is different than having a case that is ‘Māori’                                                                                                                                               |
## Appendix J: Phase 2 – Interview Schedule for Māori health stakeholders

<table>
<thead>
<tr>
<th></th>
<th>What has encouraged you to actively support Hauora Māori within the curriculum?</th>
<th>Explore what the barriers to the Hauora Māori curriculum and barriers that they may be currently addressing or working against to support Hauora Māori. What systemic enablers have supported them to support Hauora Māori? Perspectives of current MIHI teaching staff? Have they had any particular personal or systemic experiences in Hauora Māori that has motivated them to support its place in the curriculum?</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>What do you think is the place of Hauora Māori in the u/grad medical curriculum?</td>
<td>Explore socio-political motives. Explore educational needs? Ethnic minority? Indigenous rights? Place of other ethnic minority teaching in curriculum?</td>
</tr>
<tr>
<td>3</td>
<td>What value do you think the current Hauora Māori content has added to the Canterbury Region?</td>
<td>Explore perceptions around the roll out of the the UOC Hauora Māori curriculum. Explore how they have formed their knowledge around the Hauora Māori curriculum e.g. what do they think is taught? Have they been aware of any particular experiences from patients/whanau who have reported interface with the students?</td>
</tr>
<tr>
<td>4</td>
<td>What would you like the UOC to be teaching medical students about Māori communities and Māori health?</td>
<td>What are their expectations/aspirations for the the UOC Hauora Māori curriculum? - What are their perceptions of where students are at? And what they should know? Explore expected content of curriculum.</td>
</tr>
<tr>
<td>5</td>
<td>What do you see the role of non-Māori staff is in teaching Hauora Māori?</td>
<td>Explore what the perceptions are of whom is accountable for teaching Hauora Māori? Different teaching models for Hauora Māori? Development they would like to see in the faculty with regards to Hauora Māori? Barriers to having non-Māori teach Hauora Māori? Defining what Hauora Māori is and how it is different than having a case that is ‘Māori’?</td>
</tr>
</tbody>
</table>
## Appendix K: Phase 2 – Interview Schedule for Māori patients

<table>
<thead>
<tr>
<th></th>
<th>Question</th>
<th>Explore how they were identified as being Māori patients</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Can you please tell me about how you were approached by the medical student(s) to be interviewed?</td>
<td>Explore how the student requested to undertake the interview</td>
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<tr>
<td></td>
<td></td>
<td>The patient’s level of comfortability in being interviewed</td>
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<td>How many interviews did the patient undertake by students while they were in the hospital/GP setting</td>
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<td></td>
<td></td>
<td>Were they on their own or with others while they were being interviewed</td>
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<td></td>
<td></td>
<td>What did they think was being asked of them for this project</td>
</tr>
<tr>
<td>2</td>
<td>How did you feel about specifically being asked questions as a ‘Māori’ patient?</td>
<td>Did they understand that this was specifically targeted to them because they were Māori?</td>
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<tr>
<td></td>
<td></td>
<td>Did they feel uncomfortable with this concept?</td>
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<tr>
<td></td>
<td></td>
<td>How were they asked if they were Māori?</td>
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<td></td>
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<td>Have they been interviewed for a similar project before?</td>
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<td></td>
<td></td>
<td>Did they had to do the interview?</td>
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<tr>
<td>3</td>
<td>What did you feel the student did well in the interview?</td>
<td>What went well in the interview from their perspective</td>
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<td></td>
<td></td>
<td>Explore interviewing techniques</td>
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<td></td>
<td></td>
<td>Explore questions raised by the students</td>
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<td></td>
<td></td>
<td>Explore perceptions of student attitude and behaviour</td>
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<td></td>
<td></td>
<td>Did they feel safe in this environment?</td>
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<td></td>
<td></td>
<td>Were there any questions specifically that made them feel connected to the student? Or that encouraged them to share information more freely?</td>
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<td></td>
<td></td>
<td>Did they feel the student undertook the process of whakawhānaungatanga with them?</td>
</tr>
<tr>
<td>4</td>
<td>What do you think would have made this interview more successful from your perspective?</td>
<td>Explore what could have been done better?</td>
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<td></td>
<td></td>
<td>What were their expectations of what the interview should have included?</td>
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<td></td>
<td>Was there anything about the student’s comments or behaviour that was not appropriate?</td>
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<td></td>
<td>Was any part of this interview incongruent to tikanga processes?</td>
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<tr>
<td></td>
<td></td>
<td>Was there anything they thought they might be asked but that they were not?</td>
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<td></td>
<td></td>
<td>Did they think the range of questions by the students capture their story?</td>
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<tr>
<td>5</td>
<td>What would you like the UOC to be teaching medical students about Māori communities and Māori health?</td>
<td>What are their expectations/aspirations for the UOC Hauora Māori curriculum?</td>
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<tr>
<td></td>
<td></td>
<td>- What are their perceptions of where students are at? And what they should know?</td>
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<tr>
<td></td>
<td></td>
<td>Explore expected content of curriculum</td>
</tr>
<tr>
<td>6</td>
<td>Would you participate in interviews with students in the future?</td>
<td>Checking here about gauging how often patients are prepared to be individually approached for these projects? Is this a sustainable resource in Christchurch? Should we be flagging in patient files when they have been interviewed by students to ensure they are only accessed once a year? More? Less?</td>
</tr>
</tbody>
</table>
### Appendix L: Phase 2 – Interview Schedule for students

| 1. | What do you think is the place of Hauora Māori in the u/grad medical curriculum? | Explore socio-political motives  
Explore educational needs?  
Ethnic minority? Indigenous rights?  
Place of other ethnic minority teaching in curriculum?  
Explore if they report they do not think it has a place – and why?  
What have been the disablers to them feeling the programme is not of worth? |
| 2. | What value do you think the current Hauora Māori content has added to your medical education? | Explore perceptions around the roll out of the UOC Hauora Māori curriculum  
Explore positive and negative experiences within Hauora Māori curriculum.  
Explore highlights and also ineffective teaching  
Did they have any particular experiences with patients/whanau/staff that shaped their opinion? |
| 3. | What would you like the UOC to be teaching medical students about Māori communities and Māori health? | What are their expectations/aspirations for the UOC Hauora Māori curriculum?  
- What are their perceptions of what they think they should be being taught?  
Explore expected content of curriculum |
| 4. | What do you see the role of non-Māori staff is in teaching Hauora Māori? | Explore what are the perceptions are of whom is accountable for teaching Hauora Māori?  
Different teaching models for Hauora Māori?  
Development they would like to see in the faculty with regards to Hauora Māori  
Perceived Barriers to having non-Māori teach Hauora Māori  
Defining what Hauora Māori is and how it is different than having a case that is ‘Māori’ |
| 5. | What do you think the future of Hauora Māori teaching should look like at the UOC? And why? | Perceived pathway developments for Hauora Māori  
Explore future projections for Hauora Māori staffing  
Role in teaching PGY1 and PGY2?  
Role in registrar training? Explore this.  
Overall interface between the Med Council and Hauora Māori curriculum?  
Aspirations of the school?  
Community interface? Its role?  
Collaborative projects? |