

**Training Pharmacists in providing cultural safety  
for Aboriginal and Torres Strait Islander  
Australians**

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BPharm (Hons)

*A thesis submitted in fulfilment of the requirements of the degree of Doctor of Philosophy*

Sydney Pharmacy School

Faculty of Medicine and Health

The University of Sydney

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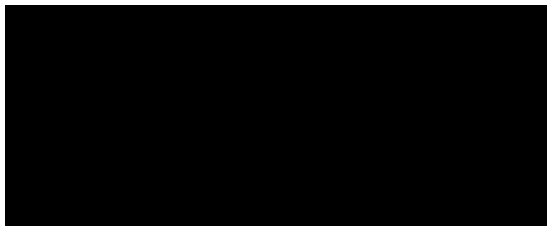
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Alexander Burke BPharm (Hons)

27th June 2025



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## **PUBLICATIONS AND COMMUNICATIONS**

The following are a list of publications and communications resulting from this thesis.

### **Publications:**

1. Exploring First Nations' and Cultural Safety Content of Pharmacy Curricula with Academics in Australia Burke, Alexander W. et al. American Journal of Pharmaceutical Education, Volume 88, Issue 1, 100605.

### **Conference presentations:**

1. Clinical yarning with Aboriginal and/or Torres Strait Islander Peoples: – A systematic review of its use and impacts. Alexander Burke, Susan Welch, Dr Tamara Power, Dr Cherie Lucas and A/Prof Rebekah Moles. ISPW July 12<sup>th</sup>, 2022.
2. Status of Aboriginal and Torres Strait Islander people's cultural safety/competence education in Australian pharmacy schools. Alexander Burke, Josephine Maundu, Bronwyn Clark, Glenys Wilkinson, Prof Bandana Saini, A/Prof Rebekah Moles. ISPW July 13<sup>th</sup>, 2022.
3. Mapping a Pharmacy curriculum in Australia: looking at First Nations cultural safety with an example. Alexander Burke, Prof Bandana Saini, Prof Parisa Aslani, A/Prof Rebekah Moles. PSA conference July 23<sup>rd</sup>, 2023.

### **Conference posters:**

1. Examining the First nations Cultural Safety content in Australian Pharmacy Schools: Alexander Burke, Josephine Maundu, Bronwyn Clark, Glenys Wilkinson, Prof Bandana Saini, A/Prof Rebekah Moles. APSA conference 2022.
2. How to Indigenise a Pharmacy Curriculum: An Australian example. Alexander Burke, Prof Bandana Saini, A/Prof Rebekah Moles. FIP 2023.

3. What does Community Want? How pharmacy should walk with First Nations Australians. Alexander Burke, Prof Bandana Saini, Prof Faye McMillan, Prof Rebekah Moles. APSA conference 2024.

**Invited talks/Other presentations:**

1. LIPPE at noon webinar: What pharmacy academics say about cultural safety curriculum design. August 2022.
2. Professor Lloyd Sansom AO Lecture Series November 2022.
3. IPE Colloquium 2024 Winhangarra: listen, hear and think. May 2024
4. Monash Seminar Series How to Indigenise a Pharmacy Curriculum: An Australian example. November 2024.
5. CULTURAL ENGAGEMENT FORUM Creating cultural connections: Speakers: Rebekah Moles, Alexander Burke, Sarira El-Den, Jack Collins. APP March 2025.
6. CULTURAL ENGAGEMENT FORUM Ask Me Anything. Speakers: Summah Holden, Kirra Natty, Gillian Starr, Matthew Battams, Hannah Mann, Erica Vowles, Alexander Burke and Mike Stephens. APP March 2025.

## **GRANTS, SCHOLARLY AWARDS AND PRIZES**

The following is a list of Scholarly awards and prizes awarded during the period of candidature.

1. Health Executive dean stipend scholarship **2021-2025**
2. Best poster Prize APSA Conference **2022**
3. Best poster Prize FIP/APSA **2023**
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## **ABSTRACT**

Culturally safe healthcare delivery is increasingly recognised as essential in addressing the persistent health disparities experienced by Aboriginal and Torres Strait Islander peoples. Originating in Aotearoa/New Zealand, the concept of cultural safety requires healthcare professionals to engage in reflexivity, acknowledge power imbalances, and ensure care is defined as safe by those receiving it. Despite national mandates and accreditation requirements, the implementation of cultural safety in Australian pharmacy education remains inconsistent and often symbolic.

This PhD addresses the urgent need for systematic approaches to embedding, mapping, and evaluating cultural safety within pharmacy curricula. The research aimed to assess the inclusion of cultural safety across all accredited pharmacy programs in Australia; develop curriculum mapping tools based on the Aboriginal and Torres Strait Islander Health Curriculum Framework; evaluate constructive alignment in a newly revised curriculum; amplify First Nations voices in curriculum co-design; and reflect critically on the researcher's own positionality.

Using a multi-method approach, the thesis involved a systematic scoping literature review, a national and local audit of pharmacy schools' cultural safety teaching, an institutional level curriculum mapping study, a constructive alignment analysis and a community consultation study. Reflexivity and relationality were also key to the methodology.

Findings revealed widespread inclusion of cultural content but poor alignment to outcomes and assessments. Cultural safety was often not scaffolded, assessed, or treated with the same rigour as clinical content. However, the thesis demonstrates that structured mapping and alignment tools can support meaningful reform.

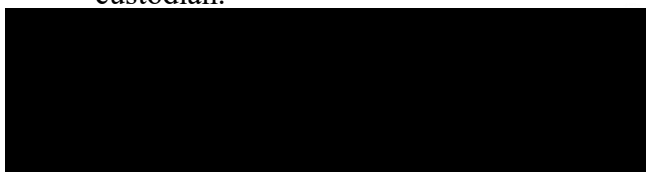
This thesis offers a replicable model for embedding cultural safety in health curricula. While focused on pharmacy, its methods and findings have broad relevance for improving equity and accountability across all health disciplines.

**Table 1.** Candidate’s contribution to works in the Thesis

Chapter	Candidate’s contribution to published work	Coauthors’ contribution
2. Systematic scoping review	Developed search strategy; screened titles and abstracts; reviewed full text potentially relevant articles, writing — original draft; writing – reviewing; editing	<b>Bronwyn Clarke:</b> writing – reviewing; editing <b>Rebekah Moles:</b> screened titles and abstracts; reviewed full text potentially relevant articles original draft; writing – reviewing; editing <b>Bandana Saini:</b> writing – reviewing; editing
3. Exploring First Nations’ and Cultural Safety Content of Pharmacy Curricula with Academics in Australia	Conceptualisation; funding acquisition; methodology; investigation/data extraction; data curation; project administration; data synthesis; formal analysis; writing — original draft; writing – reviewing; editing	<b>Bronwyn Clarke:</b> writing – reviewing; editing <b>Josephine Maundu:</b> assisted with data analysis and write up. <b>Rebekah Moles:</b> co-designed the study, assisted with data analysis and write up. <b>Bandana Saini:</b> co-designed the study, assisted with data analysis and write up. <b>Glenys Wilkinson:</b> writing – reviewing; editing
4. Mapping Pharmacy curricula to the Aboriginal and Torres Strait Islander health curriculum framework: a deep dive in one Australian pharmacy school	Conceptualisation; funding acquisition; methodology; investigation/data extraction; data curation; project administration; data synthesis; formal analysis; writing — original draft; writing – reviewing; editing	<b>Parisa Aslani:</b> Conceptualisation, Funding acquisition <b>Rebekah Moles:</b> Conceptualisation, Funding acquisition, Methodology, Data synthesis, Formal analysis, Writing — reviewing and editing <b>Bandana Saini:</b> Conceptualisation, Funding acquisition, Methodology, Formal analysis, Writing — reviewing and editing
5. What does it mean to be Aboriginal in Pharmacy?: A Personal reflection of my journey as an undergraduate, post graduate and staff member.	Conceptualisation; writing – original draft; writing – review & editing.	<b>Rebekah Moles:</b> Resources, Supervision, Validation, Visualization, Writing – review & editing. <b>Bandana Saini:</b> Resources, Supervision, Validation, Visualization, Writing – review & editing.
6. Using constructive alignment to map a pharmacy curriculum to the Aboriginal and Torres Strait Islander Curriculum Framework.	Conceptualisation; methodology; data curation; writing – review and editing; writing – original draft; formal analysis; investigation;	<b>Rebekah Moles:</b> Resources, Supervision, Validation, Visualization, Writing – review & editing.

	validation; project administration; software.	<b>Rebecca Roubin:</b> Resources, Validation, Visualization, Writing – review & editing. <b>Bandana Saini:</b> Resources, Validation, Visualization, Writing – review & editing.
7. What does Community Want? - A Qualitative Study of how the pharmacy profession should walk with First Nations Australians	Conceptualisation; Methodology; Investigation/Data extraction; Data curation; Project administration; Data synthesis; Formal analysis; Writing — original draft; Writing — reviewing and editing	<b>Faye McMillan:</b> Conceptualisation, Methodology, Formal analysis, Writing — original draft, Writing — reviewing and editing <b>Rebekah Moles:</b> Conceptualisation, Methodology, Formal analysis, Writing — reviewing and editing <b>Bandana Saini:</b> Formal analysis, Writing — original draft, Writing — reviewing and editing

Data collected outside of the PhD candidature were used with permission of the data custodian.



Alexander Burke

27<sup>th</sup> June 2025

As supervisor for the candidature upon which this thesis is based, I can confirm that the authorship attribution statements above are correct.



Professor Rebekah Moles

27<sup>th</sup> June 2025

## NOTES

- This thesis is prepared as a thesis with Publications in accordance with Part 6 of the University of Sydney Thesis and Examination of Higher Degrees by research procedures (2020).
- References are listed in each chapter rather than continuously throughout the thesis.
- Figures and Tables are numbered continuously for each chapter rather than continuously throughout the thesis.
- Due to unforeseen circumstances during the undertaking of this PhD, not all chapters have yet been published in journals, the content presented here are currently in a state where they have recently been submitted to a Journal or are about to be submitted to a Journal.
- Chapters and Appendices where formatting is different is due to formatting requirements of different Journals before submission.
- The Data for chapter 3 was collected in 2020 when the candidate was enrolled in an honour's degree. The analysis used to evaluate the data was developed during the PhD candidature.

# **Chapter 1- Thesis Introduction**

# Thesis Introduction

The Healthcare system in Australia is a luxury that many countries around the world seek to have. Regularly ranked as one of the best providers of care<sup>1</sup>, it can be easy to see why in some regards it could be considered the envy of the world with subsidised hospital and general practitioner visits and a pharmaceutical benefits scheme that allows affordable access to medicines<sup>2</sup>. Whilst these aspects of the healthcare system, allow many Australians to access care, for some, access to holistic healthcare in Australia still poses several barriers<sup>3</sup>. This is particularly pertinent to Australia's most vulnerable groups, including the First Nations' populations of Australia, known as the Aboriginal and Torres Strait Islander People<sup>4</sup>. For many, with cultural differences and language barriers, when people go to seek care, they do not feel safe whilst doing so<sup>5</sup>. The Aboriginal and Torres Strait Islander community, to this day, still live the legacy and trauma wrought by the British during their colonial project and further perpetuated when Australia became a nation in 1901, which in turn, has resulted in several factors affecting the social determinants of health for these peoples<sup>6</sup>. To truly understand the deep distrust this community has for healthcare in Australia, one must start by looking at the history of this country. Only then, can ideas and solutions be put forward to try and reconcile and close the significant health gaps of these peoples.

## **Abbreviated history of Australia pre-1770: pre-colonisation:**

Aboriginal and Torres Strait Islander people have lived on this continent for at least 60,000 years<sup>7</sup> and in this time some 250 nation groups developed which was divided by recognisable landmarks<sup>8</sup>. For example, the Wiradjuri nation, from which my ancestors hail, is known as the land of the three rivers, the Macquarie (Wambool), Lachlan (Kalari), and Murrumbidgee (Murrumbidjeri) which represent the "borders"<sup>9</sup>. Within nations, they may be further subdivided into clans. An example of this is seen in the Eora nation which encompasses the Sydney basin. The clan the Central Business District lies on, and where I work at The University of Sydney, is that of the Gadigal people. Some suburbs and cities today with this country are still named after the clans that occupy(ied) these lands. For example, Parramatta, (on Dharug country) has loaned its name from Burrumattagal (the people who lived on the

parramatta river meaning place of the eel)<sup>10</sup>. Correspondingly, each nation group had individual languages, further broken down into different dialects, with the estimates citing over 250 languages spoken within the country now known as Australia, with an estimated 800 dialects<sup>11</sup>. What this means, is a speaker of one of the Noongar languages around the Perth area would not be able to speak the Dharug language of the Western Sydney region. It is therefore a disservice to classify the Aboriginal people of Australia as a monolith due to such a large difference in the cultures and beliefs of the different nation groups<sup>12</sup>. In addition, this above dialogue does not cover the Torres Strait Islander people who have a culture that is entirely distinct from Aboriginal Australians and has more in common with the people of Papua New Guinea<sup>13</sup>. Habitation of the Torres Strait Islander peoples, on the country now known as Australia, is unknown due to rising sea levels, but occupation has been traced back to at least 9000 years<sup>14</sup> with two distinct language groups and six recognised dialects<sup>15</sup>. Despite, these distinct differences, between nation groups, the First Nations people have joined together, as the effects of colonisation, were felt by all the nations, and hence the Aboriginal and Torres Strait Islander groups have been documented as having the oldest continuing culture on this earth<sup>16</sup>. So, what does that mean?

History and stories were not passed down through books or writing in Aboriginal culture, it was and, in many cases, still is, passed down verbally and through tradition and ceremony<sup>17</sup>. Some stories often had deep cultural ties and explained why certain rules were adhered to, for example, when hunting for certain animals was allowed to commence. These stories often contained history passed down through generations. There have been recorded instances of historical events from tens of thousands of years ago being passed down through verbal tradition. An example of this is in Victoria, where a story talks of a time when Australia had an active volcanic eruption. It is now recognised that this event did indeed happen in that region of Victoria, but it happened more than 10,000 years ago<sup>18</sup> and with further stories surviving for more than 30,000 years<sup>19</sup>. This is an example of continual history being passed down through families over generations of an actual historic event.

Living in a country for millennia also must mean a population evolves and grows with the landscape. First Nations people had to adapt to the living conditions of this continent as it changed over the

years, finding food in the form of animals or fruits and vegetables<sup>20</sup>. Aboriginal people had to learn when certain foods were harvestable and how much to take to not affect the biodiversity of this continent<sup>21</sup>. Learning too what plants were safe to eat due to toxicity would have taken many years, but these learnings were passed through the generations to make sure that people did not make the same mistakes the ancestors would have made<sup>22</sup>. To survive on any continent, any group of people would have had to deal with disease and the impacts it could have. Today modern medicine relies on plants still, to extract the compounds needed to produce some of the medications we still use today<sup>23</sup>. Cultures of the past relied on plants too, to have a pharmaceutical effect and help in the treatment of an ailment. First Nation Australians relied on the flora of this country to cure ailments and get back to the duties that they needed to attend to<sup>24</sup>. These “Bush Medicines” came in many forms and were used in a variety of ways and would have had to been discovered through trial and error over millennia<sup>24</sup>. In turn, First Nations people had and still have traditional Aboriginal healers. An emerging trend is to refer to the Australian First Nations community as Australia’s First pharmacists, due to this long history of using bush medicines to heal themselves, still in effect today<sup>25</sup>.

## **Colonisation:**

When educating people around the issues faced by Aboriginal and Torres Strait Islander people, it is important to take it from a strengths-based approach. It is important to show that the First Nations people of any continent were and are not an amorphous group of people that were just waiting to be civilised and saved by the ‘white’ man. The issue of looking at First Nations people from a deficit discourse is that it can lead to false perceptions and that the issues afflicting First Nations communities are brought onto themselves<sup>26</sup>. This in turn, can lead to interpersonal racism where this dialogue is internalised, and an individual is led to believe that the issue around their health is a product of the ethnicity they were born into<sup>26</sup>. It is therefore important to look at the events of Australia that have led to First Nations peoples to have worse health outcomes, largely impacted by the social determinants of health which have been dictated by the effects of colonisation in this country<sup>27</sup>. To do this we must start from 1770 when a then lieutenant James Cook captained the ship, the Bark Endeavour, with the task of finding this great southern land that had been landed on

previously by other explorers of non-British nations. He did just that, when he landed in Botany Bay declaring it Terra Nullius (Latin for land belonging to no one)<sup>28</sup>. In one fell swoop he extinguished First Nations sovereignty because they did not live like the British. It is also important to note that it was not Cook himself that advocated heavily for the colonisation of Australia but in fact the trip's botanist Sir Joseph Banks, who lobbied the king and parliament about expanding the empire to these so-called uninhabited lands<sup>29</sup>.

Fast forward almost two decades to 1788 and the First convicts and colonists arrived under the command of the then Governor Arthur Phillip, of the newly crowned New South Wales. Unlike many colonised countries such as the United States, Canada or New Zealand, Australia was placed into a unique position, because, unlike the countries previously mentioned, no treaty was ever signed between the crown and the First Nations people<sup>30</sup>. In contrast, in New Zealand, the treaty of Waitangi was signed between the Māori people and the British<sup>31</sup>. This lack of treaty is still an ongoing problem today and will be discussed later. To try and establish contact with the Eora people, as ordered by then King George the 3<sup>rd</sup>, Governor Phillip ordered the kidnapping of Bennelong, to be used as a translator and diplomat between the Aboriginal people and colonists<sup>32</sup>. Bennelong escaped multiple times to live with his people and had a mixed relationship with the governor afterwards<sup>33</sup>. Relations between the first peoples and the colonists only worsened from there, with people like Governor Macquarie ordering the Massacre at Appin in 1816 one of many in the nation's history<sup>34</sup>, of which over meet the definition of six or more unarmed people killed<sup>35</sup>.

The formation of Australia as a country when the 6 states federated in 1901 did not stop the violence being perpetrated, as many massacres still occurred with the last state sanction massacre occurring in 1928 at Coniston<sup>36</sup>. In fact, in many instances it codified it legislatively. The white Australia policy was one of the first in this nation's history and wasn't fully dismantled until the 1960s<sup>37</sup>. This policy set the foundation for many of the policies that have had profound impacts on Aboriginal and Torres Strait Islander people today. Assimilation was one of the key goals of successive governments, where Aboriginal people were expected to give up their culture and past ways to become "whiter"<sup>38</sup>. This was achieved through the missions and reserves implemented by the colonials, where speaking

language or practicing culture were actively punished<sup>39</sup>. The forced removal of children from families to separate them from their culture and assimilate them into white Australia, with the idea of breeding out First Nations Australians and let them “die off”, euphemistically referred to as “smoothing the dying pillow”<sup>40</sup>, was government policy until the 1960s and was still happening into the 1970s. Segregation was also law in many Australian states with policies like the NSW Aborigines Protection Act 1909, which allowed The Board for the Protection of Aborigines to remove Aboriginal people from towns, to set up managers, local committees and local police for reserves, control reserves, prevent alcohol being sold to Aboriginal people and to stop “whites” from associating with Aboriginal people or entering reserves<sup>41</sup>.

Voting for Aboriginal peoples was not made legal until the commonwealth electoral act 1962 which meant that First Nation’s Australians had the option to enrol to vote, while for the rest of the country it was compulsory, and this change was not rectified until 1983<sup>42</sup>. Education, whilst considered a state issue, was also highly discriminatory with the policy in NSW being of “Exclusion on Demand”, meaning that if any family complained about a First Nations child in the school, they needed to be removed, and this policy had ramifications affecting students until the 1970s<sup>43</sup>.

It would be unfair, however, to categorise only the failures of the Australian government, as there was progress made in some areas during the late 1900s. Under the Whitlam government, the racial discrimination act was passed in 1975, the 1967 referendum, amended the constitution to allow the federal government to make laws for First Nations people and not the states (aligned with policy for all other Australians), and also allowed the federal government to officially count First Nations people in the census, to help with the allocation of funding and also the arrangement of federal seats in the house of representatives. The many high court decisions, such as: Mabo, which extinguished the concept of terra nullius and allowed for native title to be claimed<sup>44</sup>; Wik, which stated that pastoral leases did not extinguish native title and could co-exist<sup>45</sup> and Love + Thoms, which stated that Aboriginal people could not be considered Aliens to Australia under section 51 of the Australian constitution and therefore cannot be deported, also followed<sup>46</sup>. But unfortunately, much of the positives in recent times, have made minimal impact on the damage that colonisation had already had.

For example, the number of children in out of home care is significantly higher than it ever was during the stolen generations with First Nations children ten times more likely to be removed<sup>47</sup>.

The failure of the voice referendum in Australia in 2023, which proposed a consultative body that would view and comment on laws specifically aimed at First Nations people, was effectively destroyed by sowing seeds of doubt about lack of detail and asking people to not do their own research and play on their ignorance<sup>48</sup>. This was further compounded by the Prime Minister Anthony Albanese, after the failure of the vote, downplaying the calls of a makarrata commission or “truth telling”<sup>49</sup>. The Conservative Country Liberal party, which won the 2024 election in the Northern Territory, dismantled the treaty process that they were undertaking, setting back years of progress<sup>50</sup> along with lowering the age of legal responsibility, which many experts warned would increase the number of youth incarceration which in Australia is 60% for Aboriginal children<sup>51</sup> (adult incarceration is 35%). The conservative Howard government amended the native title act in 1998 because they believed the Wik decision “pushed the pendulum too far in the Aboriginal direction”<sup>52</sup>, and as such they proceeded to make native title claims harder to prove. Also, in the case of the Mabo decision, which in many ways was a net positive to First Nations Australians, it was very careful in its wording to make sure that Aboriginal sovereignty was rejected and extinguished when Australia was colonised.

As previously mentioned, Australia is in a unique position when it comes to the founding of this country, as no treaty was ever pursued with the Aboriginal and Torres Strait Islander populations. There are a multitude of reasons why, ranging from the original circumstance that Australia was set up as a penal colony, ranging to extreme racist attitudes. A treaty in Australia would be guided by the United Nations Declaration on the Rights of Indigenous Peoples with three guiding principles

- A treaty acknowledges Indigenous peoples are a distinct political community different to other Australians as they were here on the continent before colonisation
- A treaty is a political agreement reached by a fair process of negotiation between equals
- Treaties involve both sides committing to responsibilities, promises and principles that bind the parties in an ongoing relationship of mutual obligation and shared responsibility

The reasons for setting out and agreeing to a treaty are to settle fundamental grievances and establishing binding frameworks of future engagement and dispute resolution<sup>53</sup>. The process in Australia will be different however, due to it being an already existing nation, and the fact that modern treaties are fundamentally different to the colonial treaties organised in the 18<sup>th</sup> and 19<sup>th</sup> centuries. On top of all that, a treaty will need to be somewhat agreed to by a plurality of First Nations Australians, which as previously mentioned are not a monolith. With no treaty ever being pursued, it has always allowed the government to act from a position of power when deciding rules around First Nations people, and therefore a power imbalance remains, where the vast majority of the community can have an influence on the lives of First Nations people, and in return First Nations people have very little power in rectifying past wrongs perpetrated on them by governments.

Unfortunately, much of this history has either been left out of the primary or secondary schooling curricula of Australian children, or the content has been poorly covered. From my own experience, when I was a primary and high school student (2003-2015), I also received little education on the full history of the Australian nation; however, it was apparent in those years that a shift in curricula was starting. Children today, are more likely to have a better understanding of colonisation its effects on First Nations peoples, however, many educators in tertiary institutions, grew up without this knowledge and many grew up in a time when racism and discrimination was not only acceptable, but also government policy. Other educators may have been taught this content, but have not included it in their way of practicing, because they believe it has no bearing or importance on what they teach, despite the impact history may have on the social determinants of health and wellbeing. These ideas and practices are hopefully being challenged with the ideas of cultural competence and cultural safety.

### **Development of cultural safety:**

First, we'll start by talking about cultural competence. The concept of cultural competency has been around since the 1980s but was heavily expanded on and really defined in the health context by Joseph R. Betancourt, Alexander R. Green and J. Emilio Carrillo, in the report called Cultural Competence in Health Care: Emerging Frameworks and Practical Approaches<sup>54</sup>. They defined cultural

competency as the ability of systems to provide care to patients with diverse values, beliefs and behaviours, including tailoring delivery to meet patients' social, cultural, and linguistic needs. To these authors, the benefits were very clear. They performed a literature review and found that including this behaviour into health care had a direct link to the elimination of racial/ethnic disparities in health care. While this notion of competency has been a very important stepping stone, there are still issues directly related to the idea of cultural competence. The issue with cultural competence, is the notion of competence. Can one become fully competent when working with people with other cultures? Can you know all the ins and outs of someone's culture and how they relate to it? The idea also has an idea of finality that you can become competent and at that endpoint one has no more to learn. Cultural awareness and cultural safety, however, have no endpoints and always assumes there is more to learn, and the shift moves to the patient's perspective.

Cultural awareness represents one of the earliest conceptual steps toward understanding and working with cultural difference in health care. It refers to a practitioner's recognition and acknowledgment of cultural diversity, especially the ways in which their own background, beliefs, and values can influence professional interactions<sup>55</sup>. While cultural awareness encourages health professionals to be mindful of the differences between themselves and the people they serve, it has been criticised for being overly individualistic and lacking critical engagement with power imbalances or systemic discrimination. Cultural awareness is often limited to understanding the superficial aspects of culture such as customs, dress, or language without necessarily challenging the social and historical structures that create health inequities. As highlighted by Walker, Schultz, and Sonn (2014)<sup>56</sup>, cultural awareness can be a useful starting point, but without deeper reflection and structural critique, it risks reducing culture to a checklist and may inadvertently reinforce stereotypes. Thus, while cultural awareness may initiate the journey toward more inclusive care, it must be complemented by cultural safety approaches that centre the patient experience and recognise power imbalances.

Cultural safety is an idea coming from New Zealand and was largely defined by Elaine Papps and Irweti Ramsden in their paper, "Cultural Safety in Nursing: the New Zealand Experience"<sup>57</sup>. Cultural safety was an idea defined in the 1990s with this paper explaining that the assumption that each health

care relationship between a professional and a consumer is unique, power-laden and culturally dyadic. From this perspective, whenever two people meet in health care interactions, it inevitably involves the convergence of two cultures. This bicultural component not only involves unequal power and different statuses, but also often involves two cultures with differing colonial histories, ethnicities or levels of material advantage. This idea shifts the narrative to ‘being’ or ‘feeling’ safe and the only people who can make that call, are the people receiving the care. This shifts the dynamic in all care interactions, because it means that there is no longer this set competency, and no one people are a monolith. The care you give one person might be different to another depending on the situation. Similarly, one person’s feeling of cultural safety may be different to another’s helping the growth of the practitioner allowing them to pick up new skills, as this idea does not infer an end point and all can improve. Another important aspect of this, is that to be safe, one must assume that the practitioner is competent and so in that sense, cultural safety subsumes cultural competence as one of its many aspects.

### **Impact on pharmacy:**

Despite being the most accessible health care professionals<sup>58</sup>, Pharmacists seem to always be left out of this conversation. Pharmacists have roles in diagnosing, screening, supplying and prescribing medications to the public, and are an integral part of Australians healthcare system. It is fair to assume every person, will interact with a pharmacist at some point. It is important that pharmacists are just as culturally safe as any other health care practitioner in Australia. As such, they must abide by the Australian Health Practitioner Regulation Agency (AHPRA) shared code of ethics, which specifically mentions First Nations people and cultural safety<sup>59</sup>. The Australian Pharmacy Council (APC), the body responsible for accrediting pharmacy schools, has guidelines around the teaching of cultural safety and how best to include First Nations voices in pharmacy curricula<sup>60</sup>. From my own personal experience, the cultural safety training I received (2016-2020), did not adequately prepare me to work with First Nations people, and it was my ethnicity, background and experiences I could use to inform my practice and knowledge of my people’s history and about why healthcare was not seen as a trusted institution. I am, however, cognisant of the fact that my own knowledge and experience is different to

a non-First Nations student's experience and I wanted to make sure this issue around a lack of cultural safety training could be rectified going forward. This experience is therefore was the impetus of the work contained in this thesis - the cultural safety training of pharmacists regarding Aboriginal and Torres Strait Islander Peoples.

### **Thesis Aim:**

This thesis aims to critically explore the current state of cultural safety inclusion within Australian pharmacy education, with particular attention to the needs and perspectives of Aboriginal and Torres Strait Islander peoples. Specifically, it seeks to examine how cultural safety is conceptualised, taught, and assessed across pharmacy curricula, and to identify strengths, gaps, and opportunities for reform. Through a combination of curriculum mapping, institutional analysis, and community consultation, the work seeks to generate a clearer understanding of both the systemic barriers and the potential enablers of culturally safe pharmacy practice. The overarching goal is to provide evidence-informed strategies for embedding cultural safety into pharmacy education in a way that honours First Nations voices, challenges colonial legacies, and equips future pharmacists to deliver care that is safe, respectful, and responsive.

### **Structure of the Thesis and Methodological Overview:**

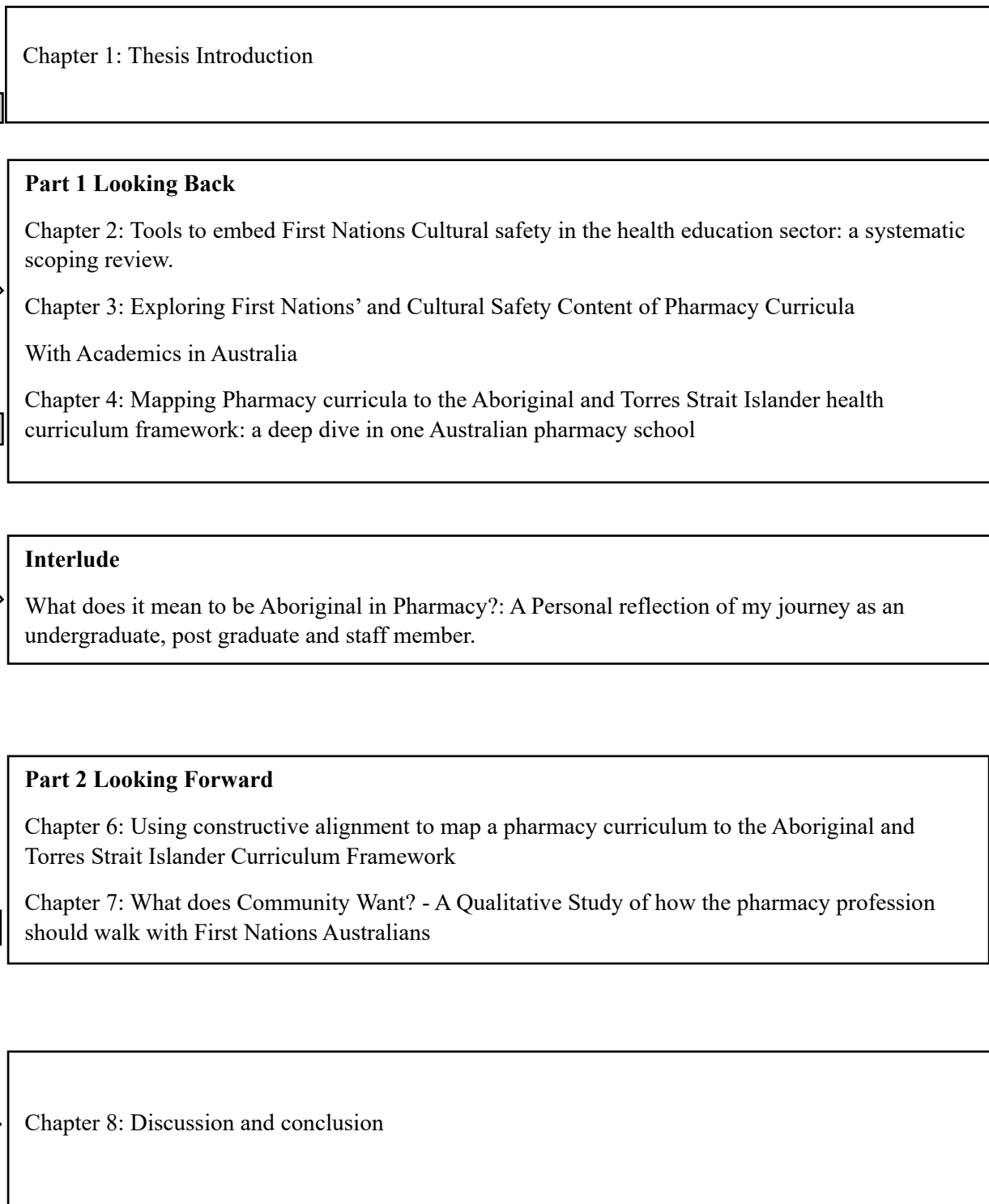
This thesis comprises a collection of five interrelated papers, framed by an introduction, a personal reflection chapter, and a concluding discussion. Together, these components work to critically examine how cultural safety training is understood, embedded, and experienced within pharmacy education in Australia, with a particular emphasis on the perspectives and needs of Aboriginal and Torres Strait Islander communities. The work is situated within the broader context of settler-colonial health systems, drawing on interdisciplinary literature, education frameworks, and community engagement to explore the transformation of pharmacy curricula toward culturally safe practice.

This thesis is also best looked at in 2 major components: Part 1 contains chapters 2-4, which frames and allows for institutions to self-examine what they are doing and pinpoint the areas that need

improvement. Part 2 contains chapters 6 and 7, which are both more forward thinking and discuss methods that universities can employ to be able to both map and include First Nations voices in the curriculum.

## Thesis Overview:

Table 1:



The first paper presents a systematic scoping review of literature on frameworks used to guide cultural safety and related concepts in health education curricula. Sources were drawn from Australia, Aotearoa/New Zealand, Canada, and the United States settler-colonial contexts that share parallels in Indigenous health challenges and education reform efforts. The review identifies common themes, strengths, and gaps in how cultural safety (and adjacent terms such as cultural competence or humility) are operationalised, and highlights the importance of local community engagement, reflexivity, and structural change.

#### **Methodology:**

This study employed a systematic scoping review methodology, following the Joanna Briggs Institute guidelines<sup>61</sup>. Inclusion and exclusion criteria were applied to peer-reviewed literature, and thematic synthesis was used to categorise approaches to cultural safety in university health curricula.

### **Chapter 3: Curriculum Mapping of Australian Pharmacy Programs**

The second paper explores the extent and nature of cultural safety training across accredited pharmacy programs in Australia. By qualitative means, I interviewed the heads of school or their delegates from all Australian Pharmacy Schools. This study applied the Aboriginal and Torres Strait Islander Health Curriculum Framework to map existing content, learning outcomes, and assessment approaches.

#### **Methodology:**

A qualitative curriculum mapping methodology was used, underpinned by Ritchie and Spencer's framework analysis<sup>62</sup>. Data were extracted from interviews with heads of school or their delegates, coded against the Curriculum Framework's eight domains, and thematically analysed to identify trends, gaps, and variation across institutions.

### **Chapter 4: In-Depth Curriculum Analysis at One Institution**

Building upon the national snapshot, the third paper Focuses on one Australian pharmacy school to conduct a more granular analysis of its curriculum. This paper aims to identify not just what is included in the curriculum, but how cultural safety is framed, taught, and assessed.

**Methodology:**

This study also utilised curriculum mapping and framework analysis but was supplemented by deeper content analysis of interviews with all unit of study coordinators. This allowed for a richer interpretation of how cultural safety was enacted in practice within a single institutional context.

**Chapter 5: Author's Reflection – Navigating a First Nations Identity within a Western Institution**

This chapter provides a reflective account of my journey as a First Nations Australian undertaking research on cultural safety within the structures of a Western academic institution. It explores the tensions, responsibilities, and opportunities that arise when working both within and against institutional systems that have historically marginalised First Nations voices. The chapter serves as a bridge between the analytical foundations laid in the first three papers and the more future-focused and community-centred final two studies.

As a First Nations scholar, I occupy a dual position that is simultaneously part of both the communities this research seeks to support, and part of an academic system that often continues colonial legacies and hierarchies. This positionality brings both insight and burden. On one hand, it affords a lived and living understanding of the stakes of cultural safety; on the other, it demands constant navigation of institutional expectations, cultural obligations, and the imperative to speak truth to systems not designed for First Nations ways of knowing, being, or doing.

This chapter reflects on that navigation, including the methodological choices made throughout the thesis, the importance of maintaining accountability to community, and the ethical commitments that extend beyond formal research protocols. It also considers the ways in which the earlier papers particularly the analytical mapping of curricula, were shaped by a desire to establish a robust evidence base that could support community-led reform and strengthen cultural safety from within the profession. In doing so, it sets the stage for the final two papers, which examine action and advocacy, guided by First Nations voices and aspirations.

**Methodology:**

While not empirical in the traditional sense, this chapter is grounded in critical reflexivity and First Nations research methodologies. It draws on elements of autoethnography and yarning as reflective practice<sup>63,64</sup>. The reflections are informed by the author's lived experience, ongoing community engagement, and commitment to privileging Aboriginal and Torres Strait Islander knowledges and sovereignty in all aspects of the research process.

**Chapter 6: Mapping a New Pharmacy Curriculum**

The fourth paper presents a forward-looking curriculum mapping exercise, exploring how a newly developed pharmacy curriculum can be aligned with the Aboriginal and Torres Strait Islander Health Curriculum Framework. This chapter represents a shift from analysis to design, offering practical guidance for embedding cultural safety in new curricular structures. This study was informative and invaluable in the creation of the Cultural Safety Curriculum Inclusion Tool developed in chapter 8.

**Methodology:**

This work employed a qualitative mapping process, integrating principles of constructive alignment with the Framework<sup>65</sup>. The mapping was done iteratively, with ongoing consultation with curriculum designers and teaching staff, ensuring that the design aligned with both the pedagogical intent and the ethical commitments of cultural safety education.

**Chapter 7: First Nations Perspectives on Pharmacy Education**

The final paper centres the voices of Aboriginal and Torres Strait Islander people from New South Wales, who were invited to share their views on the role of pharmacists, the shortcomings of current pharmacy education, and their visions for a culturally safe health system. This chapter foregrounds community expertise as essential to informing future curriculum development and professional practice.

**Methodology:**

This qualitative study employed an inductive thematic analysis of interviews with First Nations participants. The research was conducted in accordance with ethical guidelines for Indigenous

research, including principles of community ownership, free prior and informed consent, and reciprocity<sup>66</sup>. Thematic analysis was conducted collaboratively, ensuring that emergent themes accurately reflected participant meanings and priorities.

## **Chapter 8: Discussion and Conclusion**

The final chapter synthesises the findings across the five papers and personal reflection, drawing connections between policy, pedagogy, institutional practice, and community voices. It discusses the implications of the research for pharmacy education, academic governance, and the broader movement toward culturally safe healthcare systems in Australia. The chapter also reflects on the limitations of the work and proposes future directions for research and reform.

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## **Part 1- Looking Back**

**Chapter 2 - Tools to embed First Nations Cultural safety in the health education sector: a systematic scoping review.**

# **Tools to embed First Nations Cultural safety in the health education sector: a systematic scoping review.**

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**Tables:** 1

**Supplementary Material:** 0

**Abstract:**

**Background/Aim:** First Nations peoples in Australia and other colonised nations experience persistent health disparities driven by systemic racism, intergenerational trauma, and colonial legacies. Cultural safety education is recognised as a key strategy to improve health equity, yet its implementation in tertiary health curricula remains inconsistent and under-evaluated. This review aimed to systematically examine how cultural safety, competence, or awareness education for healthcare students has been designed, implemented, and assessed in Australia, Aotearoa/New Zealand, Canada, and the United States.

**Method:** A systematic scoping review was conducted across nine databases to identify peer-reviewed studies published between 2000 and 2024. Inclusion criteria focused on studies describing the development, delivery, or assessment of Indigenous cultural safety education within tertiary health education. A total of 35 studies met the inclusion criteria and were thematically categorised.

**Results:** 28 of the 35 studies, described curriculum frameworks or guiding models and 7 focused on assessment or evaluation tools. Australian institutions commonly used national frameworks such as CDAMS or the Aboriginal and Torres Strait Islander Health Curriculum Framework. International studies drew on treaty obligations, community-led designs, or pedagogical theories. Evaluation was limited; only 6 studies used validated tools to assess student outcomes.

**Conclusion:** Cultural safety education is gaining traction but lacks standardised implementation and evaluation. Stronger accountability, consistent framework use, and culturally grounded assessment tools are needed. Embedding cultural safety meaningfully in health education requires both structural commitment and sustained collaboration with Indigenous communities

## **Introduction:**

Australia is a multicultural country with a richly diverse population. Health in Australia is overall one of the best in the world with life expectancy ranked at seventh in the world for both sexes at 83.2 years<sup>1</sup>. In saying this, however, many people from linguistically and diverse backgrounds suffer from worse health outcomes than the population average<sup>2</sup>. One such group of Australians with poorer health outcomes are the First Nations people of the country, the Aboriginal and/or Torres Strait Islander peoples, who continue to experience disproportionately poorer health outcomes compared to the national average, with life expectancy rates some 8-9 years less than their non-Indigenous counterparts<sup>1</sup>.

Before the advent of colonisation First Nations Peoples were thriving on the lands now known as Australia. The First Nations countries are diverse, with over 250 countries and language groups<sup>3</sup>. For over 60,000 years<sup>4</sup>, these First Nations peoples have had long histories of culture and lore which vary from country to country within the continent. Aboriginal and/or Torres Strait Islander people had their own healthcare practices based on spirituality and using the medicinal properties of the flora and fauna of the land<sup>5</sup>.

Currently however, First Nations peoples' health disparities are rooted in a long history of colonial dispossession, cultural disruption, and systemic racism<sup>6,7</sup>. Since the violent imposition of British rule, followed by Australian legal and institutional frameworks that codified racial discrimination, many First Nations Australians have experienced intergenerational trauma and ongoing marginalisation. This unfortunately causes a differential exposure to the social determinants of health, including reduced access to quality housing, education, employment, and healthcare<sup>8</sup>. Similarities can also be seen with other First Nations communities in other countries around the world where colonisation has had considerable health impacts in populations<sup>9</sup>.

In the United States the Native American populations have faced centuries of dispossession and broken treaties such as the seizure of the black hills, breaking the treaty of Laramie depriving the Lakota access to one of their sacred sites<sup>10</sup>. Due to experiences such as this, the USA's First Nations population experience a 10 year difference in life expectancy compared to the rest of the population, the lowest life expectancy of all racial and ethnic groups in the United States<sup>11</sup>.

In Aotearoa/New Zealand the same apathy towards the Māori population has been seen recently with the conservative government of the time, trying to 'water down' the power that the Treaty of Waitangi has in modern society<sup>12</sup>. Again, like all countries with an Indigenous population that was then colonised, the life expectancy of Māori people is 7-8 years less than the non-Māori population<sup>13</sup>.

Unfortunately, research institutions and health facilities have historically helped perpetuate systemic racism in these colonised settings<sup>14</sup>. As a result, many First Nations people around the globe, continue to view health systems with mistrust, which can contribute to delayed engagement with medical services. This not only exacerbates individual health outcomes but also places increased strain on the healthcare system when preventable conditions become acute<sup>15</sup>. A study by a Melbourne university showed that many of Victoria's First Nations people still viewed hospitals as places of trauma<sup>16</sup> and a review carried out by the Australian Institute of Health and welfare showed that as many of a quarter of Australia's First Nations people had been discriminated against by a doctor or other healthcare professional<sup>17</sup>.

These figures, that outline such stark differences in life-expectancy rates of Indigenous populations compared to their counterparts<sup>18</sup>, underscore the urgent need to address racism and culturally unsafe practices within healthcare. The rejection of the proposed First Nations Voice to Parliament in the Australian 2023 referendum<sup>19</sup>, alongside political resistance to the

broader Uluru Statement from the Heart, including its calls for treaty and truth-telling<sup>20</sup>, demonstrate that structural inequities remain deeply entrenched. These broader societal attitudes also inevitably manifest within healthcare, further contributing to unsafe and exclusionary environments for First Nations Peoples.

Universities, as training grounds for future health professionals, have a critical role to play in changing this dynamic. A majority of Australia's universities provide a pathway to becoming a healthcare professional with 16% of Australian tertiary students studying a health degree<sup>21</sup>. Given the weight of historical and current injustice and contemporary disparities, it is essential that educational institutions adequately prepare graduates to deliver culturally safe care.

It's important to define cultural safety in this context, according to Curtis et al.<sup>22</sup>, cultural safety requires “ongoing self-reflection and self-awareness” and holds healthcare professionals and organisations accountable for the impact of their own culture on healthcare delivery. Crucially, cultural safety is defined not by the practitioner, but by the patient and their communities, and is measured by progress toward health equity<sup>22</sup>.

National accreditation bodies, like the Australian Health Practitioner Regulation Agency (AHPRA), now mandate that cultural safety be embedded in health curricula. These authorities such as AHPRA have also demonstrated that breaches of culturally safe practice can lead to professional consequences, including suspension or loss of registration. In fact, the severe consequences of racist behaviour were illustrated in a case where a doctor in the Australian Capital Territory acted in a racist manner to a First Nations healthcare practitioner and was ultimately struck off the register<sup>23</sup>.

Cultural safety not only enhances workplace inclusion for First Nations and culturally and linguistically diverse professionals but is also associated with better health outcomes for

patients. Culturally and linguistically diverse people report better patient outcomes when met with a culturally safe environment<sup>24</sup>, this also extends to First Nations people, who report better engagement and satisfaction with their healthcare when experiencing a culturally safe environment<sup>25,26</sup>.

While there is broad professional and institutional agreement on the importance of cultural safety education, supported by growing evidence<sup>27</sup> and mandated by regulatory bodies<sup>28</sup>, there is no systematic review, exploring the Implementation of First Nations cultural safety education in health degrees.

This literature review aims to examine how First Nations cultural safety education is being implemented in tertiary institutions in developed countries, with First Nations populations, to help inform the Australian landscape. This work builds upon the earlier work of Dr Erica Sainsbury, whose 2020 narrative literature review<sup>29</sup> provided an initial overview of the field. This review takes a systematic approach to looking at both curriculum frameworks and assessment tools used to support cultural safety education in healthcare training.

### **Methods:**

A comprehensive search of the literature was conducted to identify studies describing the implementation of Indigenous cultural competency, cultural safety, or cultural humility education within tertiary health curricula in Australia, New Zealand, Canada and the USA. The search included the following databases: Embase, CINAHL, Medline, PsycINFO, Scopus, AIATSIS, APAIS-ATIS, ERIC, and A+ Education. The search window covered publications from January 2000 to January 2025. The year 2000 was selected as a starting point to capture emerging literature prior to the more widespread formalisation of cultural competence in healthcare around 2002<sup>30</sup>.

The following search strategy was used across the listed databases:

*(aboriginal OR "first nation" OR indigenous OR "native american\*" OR maori)\**

*AND*

*(university\* OR tertiary OR tafe OR college OR nurs\* OR medicine OR pharmacy OR psychology OR "health science" OR "allied health")\**

*AND*

*curric\**

*AND*

*("cultural\* compet\*" OR "cultural\* safe\*" OR "cultural\* aware")\**

*AND*

*(framework OR model OR guid\* OR strateg\* OR integrat\* OR implement\* OR polic\*)\**

This search returned n = 740 results. After removal of duplicates, n = 453 articles remained.

Title screening reduced this to n = 210, followed by abstract screening which further narrowed the pool to n = 89 articles for full-text review. The lead author (AB) conducted the initial screening using pre-defined inclusion and exclusion criteria (see tables below), with validation undertaken by the second author (RM), who conducted independent searches in a subset of databases and confirmed equivalent yields.

Initial data extraction was conducted by AB and verified by RM. AB and RM included other authors into consensus if disagreements on inclusion and exclusion was present. After all articles were extracted and sorted the table was available for all authors to view and comment on if there were disagreements, however no disagreements were present.

### **Inclusion Criteria:**

Studies were eligible for inclusion if they:

- Were published in English

- Described the design, development, implementation or Assessment of cultural competency, safety, or humility education
- Focused on students in healthcare disciplines (e.g., medicine, nursing, pharmacy, allied health, psychology)
- Took place in Australia, Aotearoa/New Zealand, Canada, or the United States
- Involved undergraduate or postgraduate (coursework) tertiary-level education

### **Exclusion Criteria:**

Studies were excluded if they:

- Were not peer-reviewed journal articles
- Focused on generic multicultural or cross-cultural content without an explicit Indigenous focus\*
- Described programs targeted solely at Indigenous students
- Were aimed at currently practising health professionals (i.e., continuing professional development)
- Did not take place within a tertiary education context
- Discussed curriculum evaluation without describing the underlying educational framework

\*Ewen<sup>31</sup>, emphasised the distinctiveness of Indigenous cultural safety education and cautioned against conflating it with general multicultural training, hence why it was an exclusion criterion. A further breakdown of the article exclusion can be seen in the prisma diagram (figure 1).

## **Results:**

A total of 35 studies met the inclusion criteria, describing the development and implementation of cultural safety, competence, or awareness education for health care students in tertiary settings. Studies were drawn from Australia (n = 18) and international contexts (n = 17), including Aotearoa/New Zealand (n = 10), Canada (n = 2), and the United States (n = 5). These studies encompassed a wide range of health disciplines, including nursing, medicine, pharmacy, psychology, public health, and allied health.

Studies were categorised into two major types: Curriculum frameworks or guiding models (n = 28) or assessment or evaluation tools (n = 7).

Data from the included studies were extracted using a structured form and included:

- Country of origin
- Institution (where available)
- Health discipline involved
- Description of curriculum or initiative
- Whether formal evaluation of the intervention was reported

This has been tabulised can be seen in Table 1.

### **Australian Studies (n = 18)**

#### **Frameworks:**

Several Australian studies adopted national or institutional frameworks to guide curriculum design: Six studies used the Committee of Deans of Australian Medical Schools Indigenous Health Curriculum Framework (CDAMS) Indigenous Health Curriculum Framework: Implemented widely across medical and health disciplines (Medicine, Nursing, Oral Health,

Psychology): Andersen<sup>32</sup>, Bazen et al.<sup>33</sup>, Nash et al.<sup>34</sup>, Smith et al.<sup>35</sup>, Paul et al.<sup>36</sup>, and Ranzijn et al.<sup>37</sup>. Outcomes included structured Aboriginal and Torres Strait Islander health learning pathways and measurable gains in cultural awareness.

Four studies used the Aboriginal and Torres Strait Islander Health Curriculum Framework: Used as a benchmark for curriculum redesign (Nursing, Allied Health, Interprofessional): Delbridge et al.<sup>38</sup>, Hall et al.<sup>39</sup>, Zimmerman et al.<sup>40</sup>, and West et al.<sup>41</sup>. Outcomes included improved alignment of course content with national cultural safety standards.

Other frameworks included: Indigenous Graduate Attributes: Anning<sup>42</sup>, Reconciliation Action Plan (RAP): Flavell et al.<sup>43</sup>, National Strategic Framework for Mental Health: Hampton & McCann<sup>44</sup>, National Aboriginal and Torres Strait Islander Workforce Strategy: Gray et al.<sup>45</sup> and Reflective Practice Framework: Khanna et al.<sup>46</sup> These frameworks were used in various fields (Nursing and Midwifery, Allied Health and Medicine)

These studies reflected varying degrees of implementation, with some embedding Indigenous content throughout programs, while others described stand-alone or pilot interventions.

### **Assessment Tools**

Several Australian studies focused on evaluating the impact of cultural safety education:

Validated tools were used in three studies: West et al.<sup>41,47</sup>: Developed and validated the Cultural Capability Measurement Tool which was used in health sciences, and McCullough et al.<sup>48</sup>: Used a validated attitude change tool to assess student development in nursing

Rubric-aligned assessment: Power et al.<sup>49</sup>: Aligned marking rubrics with the REM Framework and embedded Indigenous content across a nursing course

Assessment-driven engagement: Paul et al.<sup>36</sup>: Demonstrated that formal assessment of Aboriginal health led to improved student learning outcomes

Other studies relied on reflective writing, feedback, and qualitative methods, with varied levels of follow-up data.

Common outcomes were: improved student attitudes and cultural awareness, enhanced curriculum coherence and constructive alignment, validation of assessment instruments and institutional embedding of First Nations health priorities into accreditation and teaching systems.

### **International Studies (n = 17)**

#### **Frameworks:**

##### **In Aotearoa/New Zealand:**

The Treaty of Waitangi was used as a foundational framework in 4 studies in various disciplines (Medicine, Psychology, Public Health): Aspden et al.<sup>50</sup>, Herbert<sup>51</sup>, R. G. Jones<sup>52</sup> Severinsen et al.<sup>53</sup>.

Other culturally specific or theoretical frameworks included: Medical Deans of Australia and New Zealand Indigenous Health Curriculum Framework Jones et al.<sup>54</sup>, *ARC (Attend-Reflect-Collaborate)*: Lang & Gardiner<sup>55</sup>, *Te Whare Tapa Whā model*: Sculley & Smith<sup>56</sup> *Transformative Learning Theory*: Bullen & Roberts<sup>57</sup>. The various disciplines included public health, nursing, counselling, health science, pharmacy and medicine

Outcomes were: Strengthened bicultural learning outcomes and alignment with Treaty obligations, Documented growth in student confidence, reflection, and critical thinking, Recognition of transformative learning processes and remaining gaps in achieving cultural safety consistency.

##### **In Canada:**

Min et al.<sup>58</sup> used the Heuristic Framework of Hubball and Burt to guide pharmacy curriculum

## **In the United States:**

Reflective and immersive models were the predominant approach:

Alexander-Ruff & Kinion<sup>59,60</sup>: Applied service-learning and cultural immersion models in nursing, Amundson et al.<sup>61</sup>: Used a project-based interdisciplinary rural immersion model, Kreif et al.<sup>62</sup>: Framed their study by the interprofessional education (IPE) framework in a Hawaiian public health course and Mattingly<sup>63</sup> (2021): Applied Transformative Learning Theory within a community health clinical nursing placement

## **Assessment Tools:**

International studies used a mix of validated and experiential assessment strategies:

Validated or adapted tools: Doucette et al.<sup>64</sup> (2015) Canada Adapted the CCCQ to evaluate student preparedness. Fraser et al.<sup>65</sup> (2022) NZ Used Cultural Lens Theory to evaluate reflective assignments, Harrison et al.<sup>66</sup> (2019) NZ *Stereotype Content Model*,

Some of the studies did not include long-term follow-up data; however, several reported promising improvements in student engagement and awareness. For example, Doucette et al.<sup>64</sup> found increased self-perceived knowledge and preparedness via student surveys. Fraser et al.<sup>65</sup> reported improved professional confidence, communication, and critical thinking, although findings on cultural safety development were mixed. Harrison et al.<sup>66</sup> used a curriculum audit to reveal that students were still being taught stereotypical representations of Māori peoples, indicating the need for deeper systemic reform.

While most international studies reported positive changes in student awareness or confidence, many lacked validated outcome measures or longitudinal evaluation of impact.

Further details are provided in Table 1.

## **Discussion:**

This review revealed a notable diversity in the frameworks used to guide cultural safety education across institutions and countries, with little consistency in how these frameworks were applied. Unlike previous literature reviews in this area such as the health workforce of Australia review<sup>67</sup>, Fazelipour's review<sup>68</sup> and Dawson's review<sup>69</sup>, which have tended to take a broad view of Indigenous curriculum development often focusing on themes such as community engagement, student experience, or general pedagogical approaches, this review offers a focused analysis of the frameworks and assessment tools used to guide the implementation of cultural safety education into health curricula.

By specifically examining whether and how formal frameworks have been adopted, and what mechanisms are in place to evaluate outcomes, this review addresses a critical gap in the literature. This narrower lens allows for a deeper understanding of the structural supports (or lack thereof) underpinning cultural safety education and provides clearer insights into the consistency, accountability, and effectiveness of current implementation strategies.

While some Australian institutions adopted national resources such as the CDAMS Indigenous Health Curriculum Framework or the Aboriginal and Torres Strait Islander Health Curriculum Framework, others used institution-specific approaches or relied on Aboriginal and/or Torres Strait Islander stakeholder input without formalised models. In Aotearoa/New Zealand, the Treaty of Waitangi underpinned many curriculum developments, whereas in Canada and the United States, practice was more localised and often community led. This fragmentation suggests that there is no single, shared standard for implementing cultural safety in health education globally, which may contribute to uneven educational experiences and outcomes.

A key factor in this inconsistency is the lack of mandated frameworks. In Australia, for example, although several frameworks exist to support First Nations curriculum implementation, their use is not mandated, and there is limited accountability for their implementation. In contrast, Aotearoa/New Zealand's Treaty of Waitangi provides a legally binding foundation that some institutions have used to guide the development of culturally responsive education. However, even in this context, the specific frameworks developed from the Treaty are not enforceable, and there is no formal requirement to follow them. This raises questions about the utility of frameworks that lack regulatory backing and whether stronger governance mechanisms are needed to ensure their adoption.

Many studies included in this review described curriculum development processes that involved Indigenous communities, Elders, or advisors, yet did not use an established framework. This may reflect genuine efforts to co-design culturally appropriate content in a flexible and responsive way. Optimistically, it suggests that institutions recognise the importance of Indigenous leadership and are working to build relationships. However, from a more critical perspective, it could also indicate that the absence of formal frameworks allows institutions to adopt inconsistent approaches with minimal oversight. Without structured models and evaluation mechanisms, it could potentially become difficult to ensure accountability or measure the depth and quality of First Nation curriculum integration.

That said, it is also important to acknowledge that frameworks are not the only path forward. Several studies demonstrated the value of alternative approaches, including community-led models, transformative learning theories, or service-learning projects<sup>57</sup>. These methods may be more adaptive to local contexts and cultural protocols, especially in regions where Indigenous knowledge systems differ substantially. A flexible approach that allows for multiple, culturally grounded strategies including, but not limited to, formal frameworks may better serve the diverse needs of Indigenous communities and learners.

Still, involving Indigenous voices, while crucial, may be insufficient in the absence of a structured framework or robust evaluation methods. Co-design alone does not guarantee effectiveness if the resulting curriculum is poorly implemented or lacks mechanisms to assess impact. A tension therefore arises between honouring Indigenous ways of knowing, which may resist rigid frameworks, and the institutional need for standardisation and quality assurance. Bridging this gap may require a new generation of culturally appropriate evaluation tools, ideally developed in collaboration with Indigenous educators and communities.

The experience of Aotearoa/New Zealand also highlights the potential benefits of a formalised treaty relationship. Shown above, the principles of the Treaty of Waitangi served as the framework itself, offering institutions a clear, rights-based foundation upon which to build cultural safety education. The Treaty's legal status means that its principles carry enforceable weight, a critical distinction when compared to Australia, where no national treaty with First Nations peoples has been established. As Australian states move toward treaty processes, and a potential national treaty is considered, there is an opportunity to embed cultural safety education as a condition of treaty implementation, supported by legislation, funding, and national policy.

Another significant finding was the limited attention paid to evaluation. Although many studies provided descriptive accounts of curriculum design and delivery, relatively few reported on outcomes or effectiveness. Where evaluation was included, it was often based on self-reported student reflections or anecdotal evidence. Validated tools were used in only a handful of studies, such as the Cultural Capability Measurement Tool developed by West et al.<sup>41</sup>. Without more rigorous evaluation especially by the First Nations communities who will be receiving the care, it is difficult to determine whether these educational efforts lead to sustained behaviour change or improved clinical practice with First Nations patients.

In addition, some studies identified staff capability as a barrier to effective implementation. Power et al.<sup>70</sup> noted that non-Indigenous educators may lack the confidence, training, or cultural understanding needed to teach Indigenous health content effectively. Without adequate professional development and institutional support, even well-designed frameworks may fail to translate into meaningful classroom experiences. This highlights the need for not just curriculum reform, but broader organisational change to build culturally safe learning environments.

Looking forward, future efforts should focus on systematically assessing how tertiary institutions are aligning their programs with national frameworks, where these exist, or with Indigenous community expectations where formal frameworks are absent. There is a strong case for governments and accreditation bodies to mandate the use of cultural safety frameworks in health curricula, supported by clear implementation guidelines and measurable outcomes. This would help shift cultural safety from a well-intentioned goal to an embedded, enforceable standard across the health education sector.

A key limitation of this paper is its geographical scope. The literature reviewed and frameworks analysed were drawn exclusively from Australia, Aotearoa/New Zealand, Canada, and the United States. While these countries share similar colonial histories and have developed explicit national strategies to incorporate cultural safety in health professional education, this narrow focus may have excluded relevant frameworks or practices from other regions with Indigenous or culturally diverse populations. For instance, countries in Latin America, parts of Asia, and the circumpolar north also contend with the legacies of colonisation and structural health inequities and may have developed culturally specific models of health education that were not captured in this review. As such, the findings of this study cannot be assumed to represent the full global landscape of cultural safety curriculum development and should be interpreted within this contextual limitation.

A second limitation lies in the difficulty of assessing frameworks that are conceptually robust but lack documentation regarding their implementation. For example, the Aboriginal and Torres Strait Islander Psychology Education Project (AIPEP)<sup>71</sup>, developed by Dudgeon and colleagues, presents a comprehensive framework for embedding cultural safety within psychology education. However, while its theoretical foundation is strong, there is limited publicly available evidence on how the framework has been implemented across institutions or how its impact on teaching and learning has been evaluated. This highlights a broader issue within the field: many frameworks provide aspirational or guiding principles without offering insight into how these principles are operationalised within curricula or assessed for effectiveness. This makes it difficult to evaluate whether such frameworks contribute to meaningful change in student learning or graduate competency and underscores the need for more implementation-focused research.

A further limitation of this review is the exclusion of disciplines that, while not strictly classified as health degrees, nonetheless engage directly with health and wellbeing in their professional practice. For example, social work programs often address health-related issues such as mental health, disability, family violence, and social determinants of health. However, because the inclusion criteria were restricted to healthcare disciplines (medicine, nursing, pharmacy etc.), programs such as social work were not captured. This narrower focus means the findings may not reflect the full extent of cultural safety education occurring in broader professional domains that intersect with health, potentially overlooking valuable models or frameworks that could inform healthcare curricula.

## **Conclusion**

This review demonstrates progress in integrating cultural safety education into health curricula, supported in part using guiding frameworks. However, implementation remains

inconsistent across institutions and countries. While some programs effectively embed First Nations perspectives, many lack evaluation or alignment with established frameworks. Further research is needed to strengthen curriculum design and assess how well these initiatives translate into culturally safe practice. Importantly, frameworks may not be the only effective approach. Community-led and values-based models also show promise, particularly when grounded in Indigenous leadership. Embedding cultural safety as a standard across health education requires both structural commitment and ongoing evaluation to ensure lasting impact on practitioner competence and health equity.

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List of articles included in review: Table 1

Author/Year	Country/State	HCP school	Description	Framework	Curriculum/Assessment	Comments
<b>Australia</b>						
C. Andersen 2008	Australia Tasmania (UTAS)	Allied Health	Curriculum redesign process with 4 stages components: awareness, foundation, integration and consolidation	CDAMS (Committee of Deans of Australian Medical Schools) Indigenous Health Curriculum Framework	Curriculum Tool	Confirmed as a formal national curriculum framework in Australia.
B. Anning 2010	Australia NSW (UWS)	Allied Health	an Indigenous graduate attribute at UWS in 2008 was influenced by the 2006 Australian University Quality Agency (AUQA)	Indigenous graduate attribute framework	Curriculum Tool	Institution-specific framework; correctly classified, aligns with broader national reform.
J. Bazen, D. Paul and M. Tennant 2007	Australia WA (UWA)	Oral health	The University of Western Australia's (UWA) Centre for Rural and Remote Oral Health (CRROH) and Centre for Aboriginal Medical and Dental Health (CAMDH) developed a comprehensive, integrated Indigenous Oral Health Curriculum	CDAMS (Committee of Deans of Australian Medical Schools) Indigenous Health Curriculum Framework	Curriculum Tool	aligned with national curriculum development for oral health.

R. Delbridge, L. Garvey, J. L. Mackelprang, N. Cassar, E. Ward-Pahl, M. Egan, et al. 2022	Australia Victoria	Multiple Health professions	Framework for the Bachelor of Dental Science (BDS) course	Co-creating Aboriginal curriculum content	Nakata's theoretical framework, the <i>cultural interface</i> , which conceptualises the convergence of knowledge systems Aboriginal and Torres Strait Islander Health Curriculum Framework	Curriculum Tool	article uses both a theoretical lens and national framework.
H. Flavell, R. Thackrah and J. Hoffman 2013	Australia WA (Curtin)	Nursing+Midwifery	Curriculum redesign within RAP context	Curriculum redesign within RAP context	Reconciliation Action Plan (RAP) framework	Curriculum Tool	Such plans are structured around three key areas: relationships, respect and opportunities (Reconciliation Australia, 2005-2012), and IAHC was designed and implemented with these three areas in mind. RAP is institutional change framework applied to curriculum
M. Gray, Y. Thomas, M. Bonassi, J. Elston and G. Tapia 2021	Australia	Allied Health	This project employed a quantitative before-and-after design. Surveys (pre and post) were devised to determine the level of attitudinal	The National Aboriginal and Torres Strait Islander Health Workforce Strategic Framework 2016-2023	Curriculum Tool	Curriculum Tool	Pre/post data showed improved attitudinal awareness.

<p>K. Hall, S. Vervoort, L. Del Fabbro, F. Rowe Minniss, V. Saunders, K. Martin, et al. 2023</p>	<p>Australia Griffith University</p>	<p>Nursing</p>	<p>change experienced by the various student cohorts through attending the two 1-day workshops (beginning of 1st year and end of 4th year). Qualitative data were also gained via provision on the survey for open-ended responses and a reflective activity</p>	<p>The AHPRA and National Scheme's Aboriginal and Torres Strait Islander Health and Cultural Safety Strategy 2020–2025 (AHPRA, 2020) • Aboriginal and Torres Strait Islander Health Curriculum Frame-work (Department of Health, 2014) • National Aboriginal and Torres Strait Islander Health Plan (Australian Government, 2013) • National Aboriginal and Torres Strait Islander Health Workers Association</p>	<p>Curriculum Tool</p>	<p>uses multiple national frameworks.</p>
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R. Hampton and W. McCann 2007	Australia QLD (uni of southern QLD)	Health Science	Postgrad program in mental health	The National Strategic Framework for Aboriginal and Torres Strait Islander Peoples' Mental Health and Social and Emotional Well-Being 20042009	Curriculum Tool	uses multiple national frameworks.
P. Khanna, E. Walke, J. Bailie and C. Angelo 2024	Australia	Medicine	Based on the Indigenous ways of knowing (epistemology) and being (ontology), 12 our adaptations of the reflective framework conceptualises students' reflections on a continuum of four ways of knowing: reluctant, receiving, relating and reconstructing new knowledge for future action. Students' ways of 'being' varied across four levels: privileged, feeling discomforted, being humbled and agentic.	Reflective Practice Framework	Curriculum Tool	Theoretical reflective tool guiding student awareness
K. McCullough, A. Genoni, M. Murray,	Australia WA	Nursing	Measuring attitude change	Validated attitude change tool	Assessment Tool	Post-unit surveys showed significant improvements in student attitudes.

D. Garvey and L. Coventry 2024	Australia QLD, QLD university of technology	Nursing	Indigenous health perspectives in curriculum	CDAMS	Curriculum Tool	Valid use of national framework.
R. Nash, B. Meiklejohn and S. Sacre 2006	Australia WA	Medicine	Using assessment to drive learning	CDAMS Committee of Deans of Australian Medical Schools Indigenous Health Curriculum Framework	Assessment Tool	On completion of the 6 year Aboriginal health curriculum, graduates are expected to be able to: demonstrate a working knowledge of the historical, geographical and socio-cultural context of healthcare for Aboriginal and Torres Strait Islander peoples, and an ability to plan and provide care in a comprehensive, multidisciplinary culturally secure context. This is achieved via a stepwise learning pathway guided by year level outcomes in Aboriginal health
D. Paul, C. Allen and P. Edgill 2011						
T. Power, C. Virdun, E.	Australia NSW UTS	Nursing	pilot the REM ACT, we rewrote	REM Framework	Assessment Tool	Rubrics aligned to Indigenous content

Gorman, A. Doab, R. Smith, A. Phillips, et al. 2018			marking rubrics for Indigenous assessment embedded across our Bachelor of Nursing course and aligned teaching and learning practices accordingly. As previously noted, all Indigenous content and assessments were developed collaboratively with Aboriginal and non-Indigenous staff during accreditation and reviewed by key Indigenous stakeholders prior to finalisation	Assessment criteria template (ACT)	improved teaching/assessment coherence.
R. Ranzijn, K. McConnochie, A. Day, W. Nolan and M. Wharton 2008	Australia	Psychology	Curriculum inclusion	CDAMS	early national effort to embed Indigenous content
J. D. Smith, C. Wolfe, S. Springer, M.	Australia QLD Bond university	Medicine	Cultural immersion in med ed	(CDAMS) Committee of Deans of Australian Medical	The review of the Implementation of Aboriginal and Torres Strait

<p>Martin, J. Togno, K. A. Bramstedt, et al. 2015</p>				<p>Schools, in association with the Australian Indigenous Doctors Association, developed an Aboriginal and Torres Strait Islander Health Curriculum Framework</p>		<p>Islander Health Curriculum Framework in 2012 clearly identified cultural immersion as one of the most effective implementation initiatives for introducing cultural awareness education to medical students<sup>8</sup>. As a result, in 2011 Bond reviewed its curriculum and in 2012 piloted immersion as an introductory part of an overall program in Aboriginal and Torres Strait Islander health. This paper reports on the © JD Smith, C Wolfe, S Springer, M Martin, J Togno, KA Bramstedl, S Sargeant, B Murphy, 2015. A licence to publish this material has been given to James Cook University, <a href="http://www.rrh.org.au">http://www.rrh.org.au</a> 3 evaluation findings of this compulsory cultural immersion process for all first year students from 2012 to 2014.</p>
<p>R. West, K. Mills, D. Rowland and D. K. Creedy 2018</p>	<p>Australia</p>	<p>Health Science</p>	<p>Validation of tool</p>	<p>Cultural Capability Measurement Tool</p>	<p>Assessment Tool</p>	<p>Validated tool with strong psychometric properties; supports ongoing assessment.</p>

R. West, S. Wrigley, K. Mills, K. Taylor, D. Rowland and D. K. Creedy 2017	Australia	Midwifery	Tool development using framework	Aboriginal and Torres Strait Islander Health Curriculum Framework 22 item Cultural Capability measurement Tool	Assessment Tool And curriculum tool	Used the Framework to build curriculum but built a tool to see if the implementation was working
P.-A. Zimmerman, T. Stringfellow, D. Rowland, V. Armstrong and R. West 2019	Australia Griffith uni	Nursing	Curriculum review Bachelor of Nursing program meets the Australian Nursing and Midwifery Council accreditation requirements, yet Aboriginal and Torres Strait Islander health content within the program is fragmented and inconsistent	The Aboriginal and Torres Strait Islander Health Curriculum Framework	Curriculum Tool	review Aboriginal and Torres Strait Islander content included in the Bachelor of Nursing Program at an Australian university, assessing alignment with The Framework
<b>New Zealand</b>						
T. Aspden, R. Butler, F. Heinrich, M. Harwood and J. Sheridan 2017	New Zealand	Pharmacy	TACCT-R provides a useful starting template to inform the curriculum content for pharmacy undergraduates in NZ.	Treaty of Waitangi TACCT-R (assessment)	Curriculum Tool	Curriculum design based on national Treaty obligations; also tested a revised assessment tool. (TACCT-R)
J. Bullen and L. Roberts 2019	New Zealand	Health Science	Thirteen non-Indigenous students were	Mezirow's transformative learning theory	Curriculum Tool	There is an increasing recognition and adoption of the principles of

<p>C. Fraser, J. Honeyfield, M. White, W. Qiu, D. Sims and A. Proverbs 2022</p>	<p>New Zealand</p>	<p>Nursing</p>	<p>interviewed about their learning experiences within this context. Explicitly framed by Mezirow's transformative learning theory, thematic analysis findings suggest students consistently experience precursor steps to transformative learning including disorienting dilemmas, self-examination with guilt or shame, critical reflection on assumptions, exploration of new roles, and trying on new roles</p>	<p>Cultural Lens Approach theory to data collected from third year nursing students related to an assignment undertaken during their month-long practicum placement in</p>	<p>Assessment Tool</p>	<p>transformative learning theory (Mezirow, Citation2000) as a framework to guide the development of Indigenous Studies curriculum. Built upon Habermas, (Citation1984) distinction between instrumental and communicative learning, and informed by Freire's (Citation1970) concept of conscientization, Mezirow's theory revolves around the shifting of individuals' frames of reference, via a dialogical and critically reflective practice. This process is suggested as triggered by the introduction of new experiences or knowledge that highlights discrepancies between the individual's existing schemas and this newly introduced information</p>	<p>Qualitative analysis revealed students' increased professional confidence, improving communication and critical thinking skills. Responses as to development of cultural</p>
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C. Harrison, R. Jones and M. A. Henning 2019	New Zealand	Nursing, Pharmacy and Medicine	This study employs the Stereotype Content Model (SCM) as an analytical tool to investigate student perceptions of ethnic group stereotype content pertaining to Māori in the University of Auckland's health professional education programmes.	an aged residential care facility	Stereotype Content Model	Assessment Tool	competence and cultural safety were mixed: Curriculum audit showed stereotyping of Māori; recommends reform.
A. M. Herbert 2002	New Zealand	Psychology	Clinical training partnerships	Treaty of Waitangi	Curriculum Tool	Curriculum Tool	Formal framework guiding graduate attribute development; The two graduate profiles have a number of common elements, with a focus on critically analysing ethnic inequalities in health, understanding how to reduce health inequalities, engaging appropriately with Māori patients, whānau and communities, and culturally safe practice. In general, the areas of divergence reflect differences in emphasis rather than any fundamental inconsistency in the desired
R. Jones, S. Pitama, T. Huria, P. Poole, J. McKimm, R. Pinnoch, et al. 2010	New Zealand Otago uni and Aukland uni	Medicine	Recent work at both the University of Auckland <sup>30</sup> and the University of Otago has used the Framework <sup>33</sup> as the basis for defining the scope and content of Māori health curricula. This has resulted in the following graduate attributes	CDAMS, now MDANZ, the Medical Deans of Australia and New Zealand) has adopted an Indigenous Health Curriculum Framework.	Curriculum Tool	Curriculum Tool	The two graduate profiles have a number of common elements, with a focus on critically analysing ethnic inequalities in health, understanding how to reduce health inequalities, engaging appropriately with Māori patients, whānau and communities, and culturally safe practice. In general, the areas of divergence reflect differences in emphasis rather than any fundamental inconsistency in the desired

R. G. Jones 2011	New Zealand	Medical and Health Sciences	Pathway in Indigenous health	Treaty of Waitangi, Health Practitioners Competence Assurance Act 2003	Curriculum Tool	Legislative and Treaty-based frameworks support curriculum structure.	attributes. These differences are largely attributable to the way curricula have developed historically, shaped by a range of institutional and other factors
S. K. W. Lang and B. D. Gardiner 2014	New Zealand	counselling	Pluralistic Indigenous education	attend-reflect-collaborate (ARC) framework	Curriculum Tool	Framework to structure engagement and reflection	
D. A. Sculley and L. E. E. Smith 2023	New Zealand	Nursing	anecdotal evidence suggesting the curriculum change has been transformational; however, further research evidence is needed. In future research, it would be useful to capture and report the experiences of ākonga and the outcomes for tangata whaiora. Educators should challenge themselves to think	Te Whare Tapa Whā model of holistic health	Curriculum Tool	Te Whare Tapa Whā model of holistic health has been identified as a heuristic framework that supports a Māori trauma-informed approach (Kiyimba & Anderson, 2023). Within a holistic lens, it avoids pathologisation (Momo, 2023), enabling individuals to understand their relationship with each corner of the whare.	

<p>C. Severinsen, B. Erueti, L. Murray, S. Phibbs, C. Roseveare and C. Egwuba 2024</p>	<p>New Zealand Massey University</p>	<p>Public Health</p>	<p>critically, review the importance of teaching Māori models of practice, include more bicultural concepts in mental health nursing practice and have a greater influence on holistic care. Curriculum co-development</p>	<p>Treaty of Waitangi Aotearoa NZ Public Health competencies framework</p>	<p>Curriculum Tool</p>	<p>Aotearoa NZ Public Health competencies framework with course learning outcomes created a shared collective vision for the program through consensus decision-making and collaboration Whakapiri, Whakamārama, and Whakamana (Durie, 2008) framework. This relational and processional model outlines the achievement of learning outcomes at both the whole program and course levels. Our ākonga journey through a progression that begins with their engagement (Whakapiri), encourages their thinking into enlightenment (Whakamāra)</p>
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							ma), and advances their criticality intoempowerment (Whakamana) Used dual frameworks to support collaborative development.
Canada							
H. J. Doucette, P. J. Maillet, M. G. Brillant and C. L. Tax 2015	Canada t Dalhousie University School of Dental Hygiene, Halifax, Nova Scotia	Oral Health	Cultural competence in tobacco dependence education	A survey was developed to assess the effect of the revised curriculum on students' perceived knowledge of Canadian Aboriginals and their perceived preparedness to provide TDE to these populations. The survey, which was adapted with permission from the Clinical Cultural Competency Questionnaire CCCQ tool	Assessment Tool	Student surveys showed improved self-perceived knowledge and confidence in cultural contexts.	
J. Min, S. Albon, L. Leung and A. Clarke 2020	Canada University of British Columbia	Pharmacy	Indigenous health elective	the heuristic framework of Hubball and Burt13 has been particularly helpful while the latter has drawn extensively from the work of Sherwood and Edwards,14 Gaudry and Hancock,15 and Sinclair	Curriculum Tool	to describe the creation, development, and impact of a novel, undergraduate elective course on Indigenous health in our faculty. The primary goal of the course was to provide opportunities for third- and fourth-year pharmacy students to learn about Indigenous health in BC and Canada and the role of	

						the pharmacist in providing culturally safe, collaborative, and respectful care to Indigenous people in Canada
<b>United States of America</b>						
J. H. Alexander-Ruff and E. Kinion 2018	USA Northern Plains Indian Reservation	Nursing	pedagogical method facilitating authentic community practice among student nurses The experience focused on three of the course objectives: 1. Provide culturally sensitive and competent nursing care to children and families. 2. Use community-based nursing concepts in caring for children	Service-learning model (not formal framework)	Curriculum Tool	Reflective, immersive pedagogy; supports cultural consciousness but better classified as a curriculum design model.

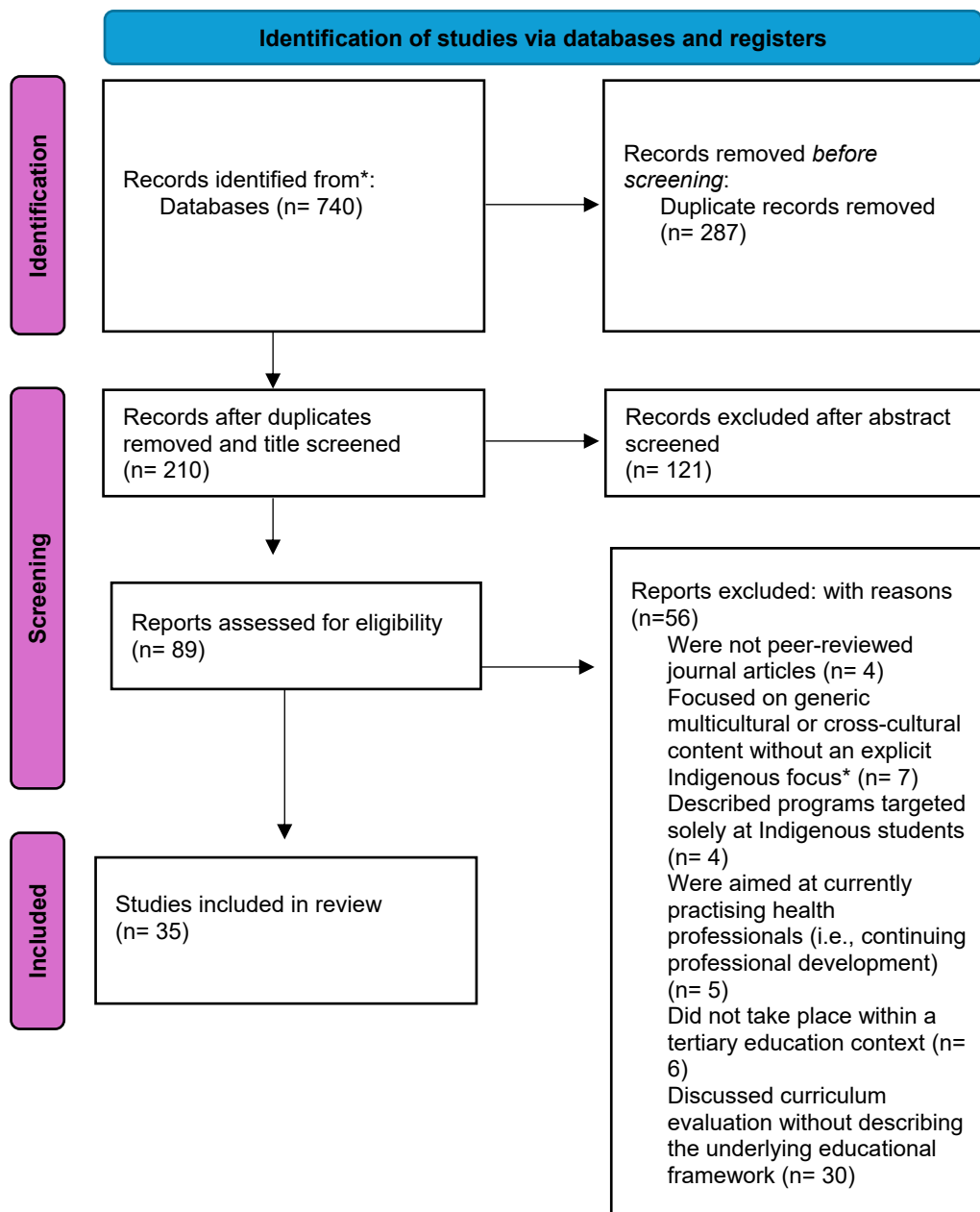
<p>J. H. Alexander-Ruff and E. S. Kinion 2019</p>	<p>USA</p>	<p>Nursing</p>	<p>and their families. 3. Demonstrate responsibility and accountability reflecting professional values.</p>	<p>reciprocal service-learning model</p>	<p>Curriculum Tool</p>	<p>engages students in situations that foster reflection and critical thinking about health care and social disparity Four learning objectives guided the CISL experience: To demonstrate an understanding and appreciation of culture practiced by two Northern Plains Indian tribes. To evaluate the impact of historical trauma on healthy lifestyles, well-being, and social justice. To analyze the complex link between poverty and health. To work collaboratively to achieve the stated short-term goals provided by community Elders.</p>
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<p>M. L. Amundson, P. L. Moulton, S. S. Zimmerman and B. J. Johnson 2008</p>	<p>USA North Dakota</p>	<p>typical student group consisted of five to eight students, from the disciplines of medicine, occupational therapy, physical therapy, social work, dietetics, nutrition, clinical laboratory science, radiology technology, and psychology</p>	<p>Project CRISTAL (Collaborative Rural Interdisciplinary Service Training and Learning) for interprofessional rural experience</p>	<p>None explicitly named</p>	<p>Curriculum Tool</p>	<p>Pre- and post-questionnaires measured student confidence and interdisciplinary readiness; showed increased preparedness. To assess the impact of the program on students' confidence in applying their interprofessional and patient care skills, students were asked to complete a pre and post-test program questionnaire</p>
<p>T. M. Kreif, S. K. Yoshimoto and N. Mokuau 2018</p>	<p>USA Hawaii University of Hawai'i (UH)</p>	<p>Public Health</p>	<p>Cultural immersion training</p>	<p>Interprofessional education (IPE) framework</p>	<p>Curriculum Tool</p>	<p>The 18 <i>haumana</i> were given two opportunities to evaluate the course: (a) an assessment tool uniquely created for this course in its evaluation of cultural aspects and (b) the standard course tool administered by UH Manoa eCafe which evaluates general aspects. Evaluative scores indicated strongly positive appraisal of the training, instructional materials, and contribution to overall knowledge and education. Based on a Likert scale assessment too</p>

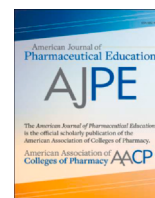
<p>J. A. Mattingly 2021</p>	<p>USA south dakota</p>	<p>Nursing</p>	<p>With a framework of experiential learning as the foundation, Transformative Learning Theory posits that learning is deep and includes a perspective change (Wang et al., <a href="#">Citation2019</a>). Service-learning via community health promotion activities provokes a disequilibrium in nursing students during the Pine Ridge clinical experience; this disequilibrium has been identified as a precursor to a change in perspective that comes with transformative learning. Reflective practice allows the learner to interpret and reinterpret experiences to make meaning and is considered the</p>	<p>Transformative Learning Theory</p>	<p>Curriculum Tool</p>	<p>Supports curriculum development through reflective experiential learning.</p>
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				conduit for transformative learning				
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PRISMA flow diagram of included studies



# **Chapter 3 - Exploring First Nations' and Cultural Safety Content of Pharmacy Curricula With Academics in Australia**



## Qualitative Research

## Exploring First Nations' and Cultural Safety Content of Pharmacy Curricula With Academics in Australia

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## ABSTRACT

**Objective:** This study aimed to explore academics' views on Aboriginal and/or Torres Strait Islander Health and Cultural Safety content in pharmacy school curricula to inform recommendations for future curricula.

**Methods:** All 18 Australian pharmacy schools were contacted, and interviews were conducted with consenting heads of school and/or their delegate(s). The interviews covered what the school was doing with respect to the First Nations theme in the revised accreditation standards and further ideas for improvement. Audio recordings of interviews were transcribed verbatim via an online transcription service. Transcripts were thematically analyzed and coded according to the framework approach and mapped to the Aboriginal and Torres Strait Islander Health Curriculum Framework. Coding was facilitated using NVivo software.

**Results:** All 18 schools consented to participate and a total of 22 interviews were conducted. The pharmacy accreditation standards were well known to most educators, however, the dissemination of the Aboriginal and Torres Strait Islander Health Curriculum Framework, introduced in 2014, appeared to be poor. Many interviewees ( $n = 14$ ) expressed that the current content regarding Aboriginal health and cultural safety/competence was lacking and cited barriers that have led to a lack of development such as a lack of First Nations staff and expertise.

**Conclusion:** While cultural safety/competency was taught in all Australian pharmacy schools, it is apparent that pharmacy schools are at various stages in their development of Aboriginal and Torres Strait Islander Health curriculum design and implementation. Future resources should be developed and made available.

## 1. Introduction

We acknowledge Aboriginal and Torres Strait Islander People as the traditional custodians of the country known as Australia and that sovereignty was never ceded. Three authors study/work on Gadigal land, two authors work on Ngunnawal land, and one lives on Wurundjeri Woi Wurrung land. These lands are Aboriginal, and education and practices have been provided by First Nations people for tens of thousands of years.<sup>1</sup> The phrase First Nations people(s) (Aboriginal and Torres Strait Islander Australians) will be used throughout this paper except when quoting from resources or transcripts that have used alternative terminology.

Historically there has been a lack of awareness of First Nations people's histories and cultures or an understanding of the impact of

colonization on health. Today, however, acknowledgment of history with cultural awareness and safety mandates are included in health policies.<sup>2-5</sup> However, there is still work to be done to translate policy into education and meaningful effects on health outcomes, such as the 9-year difference in life expectancy of First Nations peoples.<sup>3,6,7</sup> The intersecting reasons for disparities, including dispossession, transgenerational trauma lead to socio-economic disadvantage, and discriminatory practices within mainstream health care.<sup>8,9</sup> In fact, First Nations people have not always felt safe seeking health care. A study surveying 755 Aboriginal Victorians in 2013 reported that 97% of respondents had experienced at least 1 incident of racism in the preceding 12 months in a health care setting,<sup>2</sup> and a 2017 evaluation of services found that people continued to experience hospitals as sites of trauma.<sup>2</sup> A lack of health professionals' awareness of, or reflection about, the rich

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cultural traditions that shape beliefs and values in First Nations peoples is a key factor.<sup>2</sup> This likely leads to many First Nations people being less satisfied with imposed norms of mainstream health care. It is therefore important that health care providers are trained to provide a culturally safe environment for First Nations peoples.

Within the pharmacy setting, there is a lack of research outlining the role pharmacists play in assisting First Nations people,<sup>10</sup> and perhaps the lack of research and service provision is further compounded by the small percentage of First Nations pharmacists. Current statistics state that out of 34,000 registered pharmacists in Australia, only 0.31% identify as First Nations.<sup>11</sup> This is alarming, as First Nations people are 3.2% of the general population.<sup>12</sup>

The accreditation standards for Pharmacy Degree Programs in Australia (2020) now state that program planning, design, implementation, evaluation, review, and quality improvement processes are to be carried out in a systematic and inclusive manner,<sup>4</sup> mandating First Nations people are consulted stakeholders when designing or reviewing a degree program.<sup>4</sup> Further, program design, content, delivery, and assessment are to specifically emphasize and promote First Nations cultures, cultural safety, and improved health outcomes.<sup>4</sup>

Cultural competence is a key strategy for reducing inequalities in health care access and improving the quality and effectiveness of care for First Nations people.<sup>7</sup> Cultural competence is more than cultural awareness, it is the set of behaviors, attitudes, and policies that come together to enable a system, agency, or professionals to work effectively in cross-cultural situations.<sup>7</sup> To become more culturally competent, awareness of one's own cultural values and world views and their implications for making respectful, reflective, and reasoned choices, including the capacity to imagine and collaborate across cultural boundaries, are required.<sup>13</sup> Cultural safety occurs when cultural competence is put into practice. Cultural safety is the principle underpinning programs and policies to address the remnants of colonial outlooks in health systems.<sup>6</sup>

Learning about how to provide culturally safe health care starts with preregistration training. The Cultural Respect Framework 2016–2026 has 6 domains, with domain 3 (*Workforce development and training*) and domain 5 (*Stakeholder partnership and collaboration*) stating that cultural competence needs to be integrated into health care training.<sup>5</sup> Not only is inclusion of First Nations health content mandatory in pharmacy degrees according to the Australian Pharmacy Council (APC),<sup>4</sup> but cultural competence is also articulated as a university graduate outcome across several universities.<sup>14,15</sup> Despite these proactive and affirmative policies, little is known about how cultural competence/safety has been integrated into pharmacy curricula. Further, exploration of hidden curriculum and its impact on students, and strategies to address systemic, institutional racism may be required. The hidden curriculum, defined as the unwritten “rules, regulations, and routines” of the institutional environment is more “concerned with replicating the culture of the profession/society rather than with the teaching of knowledge and techniques.”<sup>16</sup> A study conducted by Roberts and colleagues<sup>17</sup> exploring barriers to learning about culture, race, and ethnicity, found that students perceived institutions were failing to provide a learning environment encouraging constructive discussion about culture. They recognized that cultural competence was essential for their future professional practice but felt that their school placed lower priority on these learnings.<sup>17</sup>

The Aboriginal and Torres Strait Islander Health Curriculum Framework (the Framework) was created to help support tertiary education providers in implementing First Nations health curricula across degrees.<sup>18</sup> The Framework aims to facilitate the provision of culturally safe health services to First Nation's people through development of cultural capabilities. Underpinning this Framework are 8 key principles for implementation (Table 1).

This study aimed to explore pharmacy heads of schools and/or delegates' views on how First Nation's health topics are taught in Australian pharmacy schools, using the Framework as a benchmark to inform future curriculum design and resources.

**Table 1**  
The Aboriginal and Torres Strait Islander Health Curriculum Framework Principles.<sup>12</sup>

	XXX	XXX
Principle 1	Leadership at all levels is key to supporting effective implementation of Aboriginal and Torres Strait Islander Health curricula.	<ul style="list-style-type: none"> <li>Organizational leadership, commitment, and accountability at all levels, including the executive level, supports full implementation of Aboriginal and Torres Strait Islander Health curricula</li> <li>Undertaking cyclical organizational assessments provides opportunities to enhance and support more effective curriculum implementation</li> <li>Building leadership capabilities in graduates to be advocates and agents of change in their chosen health profession is key to transforming health practice</li> </ul>
Principle 2	Respectful partnerships and collaboration with shared responsibility between Aboriginal and Torres Strait Islander and non-Indigenous people are required in curriculum design and implementation.	<ul style="list-style-type: none"> <li>Meaningful involvement of local Aboriginal and Torres Strait Islander peoples in the development and implementation of curricula is essential</li> <li>Curriculum content and the learning process must emphasize learning ‘from’ and ‘with’ rather than ‘about’ Aboriginal and Torres Strait Islander peoples</li> <li>Shared responsibility between Aboriginal and Torres Strait Islander and non-Indigenous staff for leading and dealing with Aboriginal and Torres Strait Islander matters is critical</li> </ul>
Principle 3	The process of learning is equally as important as content.	<ul style="list-style-type: none"> <li>Transformational teaching and learning approaches that favor adult learning principles and enable a critically reflexive learning experience while caring for the wellbeing of students is essential</li> <li>Aboriginal and Torres Strait Islander pedagogies should be integrated into teaching practice</li> <li>Strengths-based learning<sup>1</sup> incorporating innovative, experiential and practice-based examples should be emphasized</li> </ul>
Principle 4	Self-reflexivity and humility develop respectful health care practice.	<ul style="list-style-type: none"> <li>Self-reflexivity and critical analysis of one's own cultural values and privileges are integral to respectful health care practice</li> <li>Development of humility and respectful person-centered health care practice involves recognizing and understanding the feelings and experiences of Aboriginal and Torres Strait Islander peoples</li> </ul>
Principle 5	Holistic health service delivery is essential.	<ul style="list-style-type: none"> <li>Aboriginal and Torres Strait Islander peoples have unique health needs shaped by the local context and colonial history, which requires responsive, effective person-centered health services</li> <li>Health services should be informed by comprehensive primary health care principles and models of interprofessional<sup>2</sup> practice, these elements are integral in the education of health graduates</li> </ul>
Principle 6	Local context and diversity must be recognized.	<ul style="list-style-type: none"> <li>Curriculum content and the teaching and learning process should reflect the local Aboriginal and Torres Strait Islander context and the diversity of Aboriginal and Torres Strait Islander People</li> </ul>
Principle 7	Development of intercultural capabilities is a lifelong learning journey.	<ul style="list-style-type: none"> <li>Foundational content on Aboriginal and Torres Strait Islander Health should be introduced in the first year of study and then built on through horizontal and vertical integration throughout HPPs</li> <li>The development of cultural capabilities is a lifelong journey, extending beyond formal education and practice</li> </ul>
Principle 8	Ongoing professional development and professional support for Aboriginal and Torres Strait Islander and non-Indigenous	

(continued on next page)

Table 1 (continued)

XXX	XXX
educators is essential.	
<ul style="list-style-type: none"> <li>• HPPs should offer ongoing cultural learning and professional development opportunities for all levels of staff</li> <li>• Support needs to be provided for Aboriginal and Torres Strait Islander and non-Indigenous educators, recognizing the emotional load encountered while teaching in this context</li> <li>• Educators should have strong theoretical and practical understanding of Aboriginal and Torres Strait Islander pedagogical principles that support safe and effective transformational learning.</li> </ul>	

## 2. Methods

The research team brought a variety of identities and perspectives to this study. Team members were both internal and external to the pharmacy program and included faculty members and APC collaborators. The team represented diversity through the lenses of race, gender identity, immigration status. This diversity was deemed important to ensure data were interpreted through lenses that represented target populations (See [Supplementary Appendix 1](#)).

Ethical approval was obtained through the Human Research Ethics Committee of The University of Sydney reference number 2020/526. A list of all Australian pharmacy schools and key contacts was obtained from the APC website.<sup>19</sup> Emails were sent by AB inviting heads of schools or delegates to take part in interviews in August 2021. Heads of school were chosen, as it was expected they would have a general overview of curriculum taught in their institution. If, however, they identified an additional teacher/coordinator, the investigator allowed for a represented delegate to take part instead, or in addition to, the head of school. Follow-up emails were sent 2 months later in October and final emails were sent in February 2022 to nonrespondents. All interviews were completed by March 2022. Interviews were conducted by AB using the Zoom video-conferencing application.

Interview questions focused on what the pharmacy school curriculum currently included regarding First Nations health and cultural safety ([Supplementary Appendix 2](#)). Interviews were audio recorded and transcribed verbatim via a third-party transcription service (Rev.com). Transcripts were uploaded to NVivo where quotes were coded according to themes derived from the Framework. In addition, quotes within the 8 Framework themes ([Table 1](#)) were further coded using the framework analysis approach of Ritchie and Spencer,<sup>20</sup> with validation of coding by RM. Discrepancy in coding between AB and RM was discussed until consensus was reached. Ritchie and colleagues<sup>20</sup> state the framework analysis is suited to research aiming to uncover new phenomena, and is useful in assessing policies and procedures from the people affected<sup>20</sup> (in this case, academics from Australian pharmacy schools). The framework analysis allows one to explore data through 4 frames: (1) contextual (what is happening); (2) diagnostic (the reasons for or against doing something); (3) evaluative (does it work?); and (4) strategic (new plans). Using these 2 frameworks, a matrix of quotes was developed ([Table 2](#)). In addition, some inductively derived concerns presented across the matrix of themes and are reported.

## 3. Results

Interviews were conducted with at least 1 representative of all 18 Australian pharmacy schools. In total, 22 interviews were conducted, with 4 schools offering 2 representatives (head of school and teaching academic). Of the 22 participants, 2 identified as First Nations. [Table 2](#) reports the main study findings with specific quotes mapped against the Framework<sup>12</sup> and the 4 frames of Ritchie and Spencer.<sup>20</sup>

### 3.1. Mapping to Frameworks

When looking at the Framework, the 8 principles were broken down into 3 key areas: (1) Expert Involvement: Who are pharmacy schools hiring to teach this content and who are they consulting when organizing curriculum design? (principles 1 and 2); (2) Processes used: How are pharmacy schools going about teaching this content, what are the processes that they are using when creating this content? (principles 3–5); (3) Preparing for future success: How are pharmacy schools setting up students, academics, and First Nations people for success when they go out into the field, teach and design curricula? (principles 6 and 7).

### 3.2. Expert Involvement

Principle 2 describes the need for involvement of First Nations people in developing and teaching content. Participants identified the need for and the importance of First Nations people playing a role. Often, external stakeholders were reported to be brought in to help teach content, however, few participants mentioned the importance of hiring First Nations people and having them in positions of leadership (principle 1). A participant from one school mentioned that people made redundant during the COVID-19 pandemic were those casually employed which often included First Nations people. When discussing barriers that prevented the implementation of principles 1 and 2, funding was described as a key barrier to employing people to help implement, teach, and evaluate. *“Money is definitely an issue. Most academics I know work 70 h a week. Since COVID and all the international students disappearing, it’s got worse.”* An area where participants noted that improvements could be made, was working with First Nations people in creating case studies or bringing community into classrooms to talk about issues they have faced. Some participants noted that there should be opportunities for First Nations people to become permanent staff members.

### 3.3. Processes Used

Covered by principles 3, 4, 5, and 6, this was an area where many schools struggled. Principle 3 focuses on the way content is delivered. Interestingly, many participants indicated that while relevant content was often included, approaches to how this should be taught and assessed were rarely discussed. Similarly, there appeared to be some lack of consideration of what content could be delivered by a First Nations person so that the First Nations experience is embedded into student learning. principle 5, about holistic health, did not map to many response quotes as participants did not talk about this point, ie, ideas around how an individual perceives their health. Therefore, the data suggest that few looked at this principle from a First Nations perspective. Further, most schools believed they should be doing more and often cited specific barriers to lack of content but also ideas on future improvements *“I was really inspired by the medicine course last year... they have a welcome to the course which involves more of a cultural immersion.”*

In the cases where the head of school and other nominated staff were interviewed, there were conflicting accounts of what they reported. In one case, the head of school was concerned as they did not believe they were doing enough to meet accreditation standards *“I know that we are going to struggle this year”* and when asked about how adequately they were preparing students for First Nation’s needs *“It’s pretty woeful...we don’t have any experts in that space”* this was contradicted by one of their staff members who believed that they were preparing students adequately. In another school a similar situation occurred where a staff member believed what they were doing was *“adequate,”* but the head of school thought it was inadequate *“Why do I say it’s not adequate? Because it’s not...normalized. It’s out there as a separate thing and it should be just embedded”* they also had a very clear picture of what was included and where and how they wanted the school to progress *“If*

**Table 2**  
Selected Quotes Mapped to Aboriginal and Torres Strait Islander Health Curriculum Framework and Framework Analysis of Ritchie and Spencer.<sup>20</sup>

Contextual	Diagnostic	Evaluative	Strategic
<p>Principle 1. Leadership at all levels is key to supporting effective implementation of Aboriginal and Torres Strait Islander Health curricula.</p>	<ul style="list-style-type: none"> <li>“We don’t have any Aboriginal academics on staff. So, we did have one, but she’s somewhere else now. But we had Aunty X, who was based in the nursing field ... but we haven’t had anyone replace and she’s been gone for about 3 years now.”</li> <li>“I Think one of the best things that the uni did was that they employed at the university level a[n] Aboriginal women who is overlooking all of the teaching, learning activities and supporting all the teaching and learning activities”</li> <li>“We also have some people a[s] pharmacists who work with Aboriginals in various communit [ies], talk to students about those things that they do, and as white people relating with First Nations people”</li> <li>“So, I’m moving into an aspect where I try to get stuff that’s been authored or written or videos by Aboriginal people to use, to illustrate points rather than me speaking on their behalf, because I think that’s not appropriate anymore”</li> </ul>	<ul style="list-style-type: none"> <li>“The issue is having the capacity of Indigenous staff to teach it because it should be taught by them”</li> <li>“I think we need more access to Indigenous academics to help us with better content, better focus in our program”</li> </ul>	<ul style="list-style-type: none"> <li>“Just more Indigenous staff, is what the university needs”</li> <li>“I think we definitely need more representation. That’s the resource we need the most, is more academics that know this stuff”</li> </ul>
<p>Principle 2. Respectful partnerships and collaboration with shared responsibility between Aboriginal and Torres Strait Islander and non-Indigenous people are required in curriculum design and implementation.</p>	<ul style="list-style-type: none"> <li>“I would love to get another academic to teach it. Ideally, I would get more input from First Nations academics, but unfortunately X university, many universities have very much a lack of Indigenous academics”</li> <li>“The ongoing issue is having access to Aboriginal people who are not burnt out by having to do 10 billion of the same things everywhere, and I totally understand that we have a very small population of Aboriginal people and an even smaller population of them who are willing and able to actually deliver training like this”</li> <li>“To be fair, mostly it comes down to money resources”</li> <li>“There’s been no specific resources... we do need some pharmacy-specific resources”</li> <li>“I think that is the challenge, actually building on content”</li> </ul>	<ul style="list-style-type: none"> <li>“[I] don’t think we’ve done enough local engagement and that’s something I think we need to change, and it’s just trying to find that balance”</li> <li>“As non-Aboriginal people... We have to be careful that we’re not doing things that we think are right, rather than things that they think are right”</li> </ul>	<ul style="list-style-type: none"> <li>“I’d like time. I’d like some money, because I would like input from Aboriginal health academics. And I would like input from perhaps some Indigenous health workers”</li> <li>“I think it would be much better if we had an Aboriginal person deliver it”</li> <li>“It would be really good if we had... This is just a pipe dream, I suppose. But we need Indigenous people with education backgrounds included in our curriculums”</li> </ul>
<p>Principle 3. The process of learning is equally as important as content.</p>	<ul style="list-style-type: none"> <li>“So, we always teach from a deficit model, and I think we need to move on from a deficit model”</li> <li>“The indigenous content is solely lacking in our course, and we are certainly trying things to rectify this”</li> </ul>	<ul style="list-style-type: none"> <li>“I think the best way to assess it is to actually see them try and do it in practice”</li> <li>“The universities aren’t going to let us do that... They’re not going to let us fail someone that’s clinically capable, but we judge [a]s culturally unsafe”</li> </ul>	<ul style="list-style-type: none"> <li>“Making it sort of as a learning experience rather than I’m doing it for the sake of doing it or I need to do it”</li> <li>“Proposing a new course where... about 1/3 of content will be focussed on Indigenous health, as opposed to 1/10”</li> <li>“Set really challenging assessment tasks... you need 80% of the knowledge even to get 50% marks or you make the pass mark 65 or 70 for a student to pass”</li> <li>“I don’t think what many of us call learning ball about the exotic other is the solution. I think it’s more about turning the gaze inwards, thinking about themselves and how their views, attitudes, beliefs, assumptions impact on Aboriginal [and] Torres Strait Islander people when they’re providing care”</li> <li>“So, I think that you need to approach the curriculum with a purpose. And that is, if you understand the</li> </ul>
<p>Principle 4. Self-reflexivity and humility develop respectful health care practice.</p>	<ul style="list-style-type: none"> <li>“I guess my own training is more an awareness of my lack of knowledge and the need to ask questions of the appropriate people”</li> <li>“We have values, beliefs and attitudes sessions, where the students delve into their own personal values, beliefs and attitudes”</li> </ul>	<ul style="list-style-type: none"> <li>“Depends on what they’ve learnt before they’ve come. If they’ve come with an open mindset, that’s fine. If they’ve come with a closed mindset, no way. It takes years for that to happen”</li> <li>“People do lots of cultural awareness training. It doesn’t mean they can create a culturally safe space”</li> <li>“I hope it’s enough, but I don’t know. I’m saying I hope it’s enough because I hope that our broad approach to</li> </ul>	<ul style="list-style-type: none"> <li>“Set really challenging assessment tasks... you need 80% of the knowledge even to get 50% marks or you make the pass mark 65 or 70 for a student to pass”</li> <li>“I don’t think what many of us call learning ball about the exotic other is the solution. I think it’s more about turning the gaze inwards, thinking about themselves and how their views, attitudes, beliefs, assumptions impact on Aboriginal [and] Torres Strait Islander people when they’re providing care”</li> <li>“So, I think that you need to approach the curriculum with a purpose. And that is, if you understand the</li> </ul>

(Continued on next page)

Table 2 (continued)

XXX	Contextual	Diagnostic	Evaluative	Strategic
Principle 5. Holistic health service delivery is essential.	<ul style="list-style-type: none"> <li>• “The lens of these are Aboriginal people who have cultural values, beliefs, language, customs first. Not seeing them as sick people who need health services”</li> <li>• “I think the only point that I haven’t got across... we’re the sovereign people of this country. We’re not an afterthought and we’re not waiting to be saved. We’re actually deserving of care. We’re human beings. We have basic human rights, not only to health, but to self-determination in our lives and within our choices around health”</li> </ul>	<ul style="list-style-type: none"> <li>• “It’s probably not a money area, no one’s done the research”</li> <li>• “There’s an emphasis on Aboriginal and Torres Strait Islander cultural background, but I think we’re still neglecting that larger cultural aspect and its effects on health care”</li> </ul>	<p>thinking about broad culture and broad cultural differences, is enough that they’re getting enough skill that they should be able to apply that to anybody of any culture, regardless.”</p> <ul style="list-style-type: none"> <li>• “Cultural safety skills are implicitly linked with clinical safety. So, I think a really good understanding of what cultural safety is and how it applies to their own practice is a really important skill”</li> <li>• “What I think it does is prepare them to engage with the person to find out what they need”</li> <li>• “I want people to feel safe to be able to talk to me about cultural issues. And I also would like to feel safe to talk about cultural issues with others”</li> </ul>	<p>background, then you will become a better health care practitioner”</p> <ul style="list-style-type: none"> <li>• “I say this to any of the disciplines I work with... on a placement consider going regional remote, you will learn so much more. And I think it makes you a better practicing clinician”</li> <li>• “Provide a space... where people of any culture... can feel safe and comfortable, and also have their culture recognized as an important part of their health philosophy”</li> </ul>
Principle 6. Local context and diversity must be recognized.	<ul style="list-style-type: none"> <li>• “I do think there are some students that show genuine commitment, genuine self-reflection and a genuine desire for the right reasons to go and spend time in a black space to build their skills”</li> <li>• “Our students get exposed not all of them, but a number of them get exposed to the Aboriginal Health Services that are in our region. And all of our students go on remote placements at least once in their 4-year degree”</li> </ul>	<ul style="list-style-type: none"> <li>• “I’d love to have some money to bring mob into the classroom or to take people out, students out on country”</li> <li>• “Understanding how to find out about their local group, rather than a generic thing that applies to all Aboriginal people, because that wouldn’t be appropriate”</li> <li>• “If those universities determine that there’s a significant body of work for clinicians to do in that environment that relate to health and wellbeing of indigenous Australians, then it should be a stronger feature in the programs”</li> <li>• “APC Accreditation standards only say that you must have that there. They don’t really provide a framework for the content”</li> <li>• “You don’t want to just drop an activity around First Nations health and Cultural Safety into a subject when it just doesn’t fit... the students pick up on, well, they’ve just shoved that in randomly”</li> </ul>	<ul style="list-style-type: none"> <li>• “I also push in my subject the need to get them to reflect on statistics. Statistics can be useful. They can tell a story, but are they telling the whole story”</li> <li>• “Are the learning experiences of the students more important than the risks we put community out by just rushing in and sending students out”</li> </ul>	<ul style="list-style-type: none"> <li>• Speaker 1: “should [placements] be made mandatory” speaker 2: “I think you can argue it both ways. I think you need to do it in a way that it’s not a burden [on] community and it’s not going to be unsafe”</li> <li>• “I would rather see them go on a placement to an Aboriginal health clinic”</li> </ul>
Principle 7. Development of intercultural capabilities is a lifelong learning journey.	<ul style="list-style-type: none"> <li>• “We weave cultural competence or diversity competence throughout the whole curriculum”</li> <li>• “At the university, all new students have to complete an indigenous study as a central unit, which is a zero-credit bearing unit”</li> </ul>	<ul style="list-style-type: none"> <li>• “I think people try, but I don’t, I think it can be done better because I think people, again, in the same way, people are still on this learning journey”</li> <li>• “I think the thing that sort of worries my team, the ones that who are doing it is we don’t want to do it wrong. we</li> </ul>	<ul style="list-style-type: none"> <li>• “If we are training people appropriately in the right context and they’re learning it and they understand what they’re learning... Then it should stay with them, and they should draw upon it when it’s needed”</li> </ul>	<ul style="list-style-type: none"> <li>• “The importance of Aboriginal and Torres Strait Islander voices and perspectives. So sometimes with just a little bit of thought and creativity, you can find places where content can go”</li> <li>• “I think what they need is a little of the high-level stuff, but they need actual actionable advice, skills, pieces of knowledge, that allow them to apply their broader knowledge around primary care and of delivering quality pharmaceutical services to that specific population”</li> <li>• “I do think we need some very specific skills for teachers in the classroom around anti-racism and being able to deescalate conversations that start to get a bit racist”</li> </ul>
Principle 8. Ongoing professional development and professional support for Aboriginal and Torres Strait Islander and non-Indigenous educators is essential.	<ul style="list-style-type: none"> <li>• “I don’t use the word cultural competence because I think competence suggests that there’s a finite set of skills that you need to learn, and you reach an end point. And I don’t believe that’s the case in cultural safety. I think it’s about a</li> </ul>	<ul style="list-style-type: none"> <li>• “If they go into a black space and they innocently do something really stupid or really racist, and one of our mob has a go at them about it”</li> <li>• “Then we turn them away from working in Aboriginal health forever”</li> </ul>		

(continued on next page)

Table 2 (continued)

XXX	Contextual	Diagnostic	Evaluative	Strategic
	lifelong learning and constant reflection” • “I’ve done about three or four cultural competence workshops, that and my own interest and reading, but nothing more formal and just general”	don’t want to come across as being tokenistic. But then at the same time, well, we don’t know how to do it”	• “I think that’s a skill that you build over time by learning from patients, but also from attending training. I don’t think anyone can go, “right now I’m competent.” I don’t think it’s an endpoint, I think it’s just something you continue to build”	• “I actually think the boards could do more, I actually think Boards could update their standards a bit more often”

we could pull our resources in terms of creating cases and learning materials that we could share and use together, I think that would be really helpful, of common pharmacy-related scenarios that we could embed... and other people could embed it where it would work for them.” Furthermore, most stakeholders either did not believe they were adequately preparing students to meet First Nations consumer needs, or they believed that they could be doing more “I would say, at the moment, we’re not meeting needs, but we’re trying. And I guess that’s just from my point of view, but I’m sure it’s probably the same around many universities.” With respect to the structure of how and when First Nations health content should be delivered, there seemed to be a majority opinion. Fifteen interviewees favored an integrated approach that had been built upon in all the years “Integrated, obviously. Embedded. Because if you have a unit that’s just Aboriginal...” “Okay, I’ve covered Aboriginal, it’s in that unit, I don’t have to worry about it.” “Then students silo things.” One interviewee, however, favored a discrete unit where these outcomes form the basis of a separate unit of study “It works for us having a discrete unit because we know the people who are teaching it really well.”

Three interviewees favored an approach where a discrete unit introduces concepts in early years and builds upon them in later years via an integrated approach “Look, I think there’s a middle ground for most things... And I think that having some standalone units, which are particularly focused on that... And then it’s integrated later on.”

Many interviewees (8) wanted to see an eventual move to mandatory placements for students in either a First Nations community or a rural setting where a higher percentage of First Nations people resided “I would love to see that, because rural placements seem to change students. I’ve seen really quite apathetic students come back completely changed from a rural experience.”

Five interviewees however noted that this could be troublesome and did not favor this approach, as it could be seen as a form of “cultural tourism” and if students who are not culturally safe go into communities, they could do damage “I don’t hear enough conversation about risk management for community.”

The issue of assessment was also raised. Some interviewees noted that “soft skills” such as cultural safety/competence would be difficult to assess “So, these things where you are assessing things that are not necessarily very tangible...it’s this ability to communicate and connect and actually make a difference.” To combat these issues, interviewees wanted to move to skills-based assessments “but can we have an OSCE [Objective Structured Clinical Exam]... specifically around addressing Indigenous health needs?.that’s something that we’re looking at,” supplemented by reflections “We do have a big priority regarding reflection in our course in general, and so we definitely want students to be examining their own worldview. So, there’s learning outcomes to do with examining their own cultural worldview and values and describing implications for health care practice.” The consensus was that there should be a move away from multiple choice and short answer questions. Preparing for future success covered by principles 7 and 8, schools understood that they had shortcomings and had ideas about how these could be addressed in the future such as designated roles for First Nations people or increased funding to make employment viable, however, there were many disagreements about outside roles and even internal conflicts that could hamper this effort.

Interviews revealed clear variations between “what” and “how” First Nations’ content was delivered. Often, there was acknowledgment by participants that the inclusion of Aboriginal health content in pharmacy curricula is in its infancy. Participants identified that they were at various stages of the accreditation cycles, with some accredited against new standards and others still waiting to undergo evaluation. Some schools had recently undergone curriculum reform allowing them to have a more structured approach to the inclusion of First Nations’ health. One interviewee stated “You’re right, it could mean that one might have a lot and one might have hardly any. Having said that, that’s the strength of our higher education system and the differentiation between the different universities.” Further into this idea, was how much schools

should adapt the accreditation standards of the APC. Some interviewees felt that accreditation standards were a good starting place but more effort from the school was needed to go above and beyond. Some schools however felt that APC standards were adequate in helping them develop the minimum standard to teach to.

When asked about the role of the APC, some schools wanted them to take a more active role in providing resources to help reach accreditation standards and some felt that the standards do not go far enough, and more emphasis on First Nations health should be provided. This was not the opinion of some stating, *“I think that it is probably... stepping outside the bounds of the accreditation to mandate how much it should be because they are not the pedagogy experts.”*

To see a more comprehensive look at how the framework and analysis were used see [Table 2](#).

#### 4. Discussion

This study explored key academic views on how First Nations health topics are taught in Australian pharmacy schools, using the Framework<sup>12</sup> as a benchmark of what institutions should be achieving. All current pharmacy schools in Australia were represented, therefore this study has gathered a national census of opinions. The study highlighted that all pharmacy academic institutions include some content around First Nations health and culture, with a large variety of ways and amounts of teaching. Overall, most academics expressed keenness to include this topic more comprehensively and strongly desired deeper involvement of First Nations teachers.

As identified, the individual schools were at various stages of the accreditation process meaning some had implemented changes while others had not. Similarly, a study by Onyoni and colleagues<sup>21</sup> was conducted in the United States of America and Canada which found that curriculum change committees recognized that cultural competence needed to be added to curriculum, but not all respondents had implemented changes in their schools. It should be noted that it takes time to develop and renew curricula so implementation change needs to occur thoughtfully over time allowing one to create more awareness of issues, such as the plight of First Nations people. Further, political change can also drive curricula. For example, the current curriculum at some Australian pharmacy schools may have predated political changes. For example, in 2007, the then Prime Minister's approach to First Nations affairs was very different.<sup>22</sup> In 2007, the government was refusing to apologize for the stolen generations of First Nations peoples and the government made it harder to claim native title.<sup>22</sup> This time also predated the ‘closing the gap’ strategy, implemented after “the national apology” of 2008.<sup>3</sup> Looking at this example, it could be a reason why variation between pharmacy schools exists.

Although it was positive to see schools teaching some content, what was troubling was a lack of standardization, and what one was doing may not be replicated in another. Within some schools it appeared that First Nations issues were seen as an afterthought with 1 participant saying: *“sometimes with just a little bit of thought and creativity, you can find places where content can go.”* Although the interviewee may mean well, this is indicative of the current culture in that First Nations issues find itself in. This is not a problem unique to pharmacy. A study in contemporary nursing noted that one of the weaknesses of the nursing curricula was the minimal inclusion of First Nations health and the disparity in how it was covered in curricula.<sup>23</sup> The authors of this paper took the approach of incorporating key aims from the Graduate attributes into a school's curriculum.<sup>23</sup> They made sure to effectively embed First Nation's content and made it the business of non-First Nations people to teach this content. They noted that the lack of explicit responsibility for the development and teaching of Indigenous elements by non-Indigenous academics can manifest as weak engagement or interest in either developing students or dealing with unacceptable behavior.<sup>23</sup> Encouragement of all academics to be involved and engaged in the teaching of this content may be one way to ensure at least some standardization and integration into all curricula.

A problem seen throughout the interviews was an undertone of racism. The academic who stated: *“that's the strength of our higher education system...”* perpetuates the idea that cultural safety content is less “important” than the competition between schools. Ideas such as these may foster structural racism, still very prevalent in Western society. Structural and systemic racism can be further seen in the lack of First Nations leadership throughout the pharmacy education sector. None of the interviews mentioned the input of a First Nations pharmacist nor did any school, at the time of interview, employ a First Nations pharmacist. While some universities had input from First Nations health care professionals, documents they provided “had to be adapted” by non-Indigenous persons to fit the pharmacy curricula. Although some schools were doing better than others, it is hard to make a link that advances were due to the input of First Nations staff. This lack of First Nations leadership adds to hidden curriculum, sending undertones of a lack of importance of First Nations content. This was further exemplified when it was uncovered that First Nations staff were mostly casual employees and as such were the first to be “laid off” during the COVID-19 pandemic. While many schools noted that the lack of First Nations leadership was concerning, none commented on possible solutions. Many participants noted a lack of funding to employ people, however, these sentiments again display a culture of school's unwillingness to spend money on First Nations workforce development.

In contrast, nearly all participants wanted to have more engagement and employment of First Nations people. This cultural shift and re-structure of how educators deal with the damage hidden curriculum can cause is needed. The notion of just ticking a box to show cultural safety has been included with ad hoc implementation of content vs a dedicated effort to make sure staff and students understand the content, its importance, and the conscience effort to include First Nations people at all stages of curriculum development was recognized by some as the only way forward. Strategies to move forward include doing more to advertise pharmacy to First Nations high school students through outreach programs, the creation of alternative entry pathways, the possible reduction of university entry marks into pharmacy, and the creation of dedicated roles for First Nations pharmacists to enhance the creation of a strong First Nations workforce.

The issue of assessment was also raised by participants. As stated, most wanted to see a switch to the assessment of soft skills such as interview techniques. However, pharmacists are experts in medication management and can easily assess a student on medication content, but when talking to a patient of a First Nations background, only a person from that background can make an accurate determination of culturally safe provision. Pharmacy schools need to be making conscious efforts to have First Nations people perform assessments with students. A review from Nguyen and colleagues<sup>24</sup> reported that when consumers are used in the education and assessment of students, not only do the students report improvements in self-confidence and communication skills, but consumers also report higher satisfaction from sharing lived experience with students.

Although this study explored what schools were doing currently, it did not specifically go into every individual unit of study but asked for a general overview. Because of this general approach, some important information and key areas of improvement could have been missed. When multiple people in the school were asked the same questions there were sometimes conflicting opinions, which should be further explored. Therefore, this study can be used as a template for adaptation to individual schools to take a “deep dive” into their own curricula to identify areas of improvement. In addition to using a similar method within individual schools in Australia, the approach could also be applied to other countries with First Nations people such as the United States of America and Canada where accreditation standards are undergoing review. This article may therefore provide schools with some advice/pathways for identifying curricula gaps, systemic racism, and hidden curriculum.

## 5. Conclusion

This study explored what was being taught in Australian pharmacy schools regarding First Nations health and cultural safety and uncovered potential gaps and barriers to meeting the Aboriginal and Torres Strait Islander Health Curriculum Framework. The fact that many schools see this as an area that must be taken seriously was promising. Resources including funding and involvement of First Nations people in design and teaching were identified as key facilitators to meet standards. Further studies into individual school's curricula will be needed to explore their specific gaps in meeting accreditation requirements and the health needs of First Nations' peoples.

## Author contributions

*Conceptualization, Methodology, Validation, Formal analysis, Investigation, Data curation, Writing – original draft:* Alexander W. Burke. *Supervision, Writing – review & editing, Methodology, Conceptualization:* Bandana Saini. *Writing – review & editing, Funding acquisition:* Josephine Maundu. *Writing – review & editing, Funding acquisition:* Bronwyn Clark. *Writing – review & editing, Funding acquisition:* Glenys Wilkinson. *Supervision, Writing – review & editing, Validation, Resources, Methodology, Conceptualization:* Rebekah J. Moles.

## Declaration of Competing Interest

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## Appendix A. Supporting information

Supplementary data associated with this article can be found in the online version at [doi:10.1016/j.ajpe.2023.100605](https://doi.org/10.1016/j.ajpe.2023.100605).

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**Chapter 4 - Mapping Pharmacy curricula to the  
Aboriginal and Torres Strait Islander health  
curriculum framework: a deep dive in one  
Australian pharmacy school**

## Research Article

**Mapping Pharmacy curricula to the eight principles of the Aboriginal and Torres Strait Islander health curriculum framework: a deep dive in one Australian pharmacy school**

**Abbreviated Title: Mapping Pharmacy curricula in one pharmacy school**

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**Keywords:** Health Curriculum Framework, Aboriginal and/or Torres Strait Islander, Pharmacy Schools, Australia.

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ceded. Four authors are studying/employed on the lands of the Gadigal, and the lead author identifies as Aboriginal. This Aboriginal land has seen education and healing practices conducted by Aboriginal and Torres Strait Islander Peoples on it for tens of thousands of years. Given the lands now host a teaching institute, makes it imperative to action the acknowledgement and integration of Aboriginal and Torres Strait Island ways of knowledge creation and knowledge sharing with the more occidental approaches that the institute has previously espoused. This research embodies this purpose.

I would like to also state that although this paper may portray a very negative view of the pharmacy school, this research is not meant to demean or belittle the efforts of those who have contributed time to build this pharmacy curriculum, but is meant to be a critical look and a path forward to making a more inclusive and better learning environment, and I would like to thank all those who took part.

**Conflict of interest statement:** All authors on this paper were employed or studied with the Sydney University School of Pharmacy at the time of writing and data collection.

**Ethics Approval and Informed Consent:** Ethical approval was obtained on September 4th, 2020, from the University of Sydney Human Research Ethics Committee with the reference number (Ref No. 2020/526). The whole study protocol adhered closely to relevant laws guiding the research involving human subjects. Informed consent was obtained from all study participants. The Transcripts were then deidentified and stored on a password protected computer in a locked room.

**Credit Statement:**

**Alex Burke:** Conceptualisation; funding acquisition; methodology; investigation/data extraction; data curation; project administration; data synthesis; formal analysis; writing — original draft; writing – reviewing; editing

**Parisa Aslani:** Conceptualisation, Funding acquisition

**Rebekah Moles:** Conceptualisation, Funding acquisition, Methodology, Data synthesis, Formal analysis, Writing — reviewing and editing

**Bandana Saini:** Conceptualisation, Funding acquisition, Methodology, Formal analysis, Writing — reviewing and editing

**Abstract:**

**Introduction:** In recent years there has been a focus in higher educational facilities to decolonise curricula and incorporate First Nations' ways of knowledge into university degrees. the Australian Government has put forward the Aboriginal and Torres Strait Islander health curriculum framework (2014) to facilitate the integration of First Nations' ways of knowing and being into health curricula. This study aimed to map a pharmacy school's curriculum to the eight principles of the Aboriginal and Torres Strait Islander health Curriculum Framework and identify barriers associated with the teaching of First Nations content.

**Method:** Semi-structured interviews (n=30) were conducted with key stakeholders. Interviews were audio-recorded and transcribed verbatim. Transcripts were coded in NVivo to Ritchie and Spencer's Framework and the Aboriginal and Torres Strait Islander Health Curriculum Framework.

**Results:** Interviews revealed that although cultural safety was covered in curricula, it was sporadically integrated more in practice-based units in comparison to science-based units. Mapping participant quotes to the Framework, revealed that of the eight areas of the Aboriginal and Torres Strait Islander Framework, five areas needed further development.

**Conclusion:** Through curriculum mapping, a holistic picture of a curricula's' First Nations' health and cultural safety was gathered and allowed for the identification of gaps in content and barriers were identified.

**Keywords:** Aboriginal and/or Torres Strait Islander, Australia, Curriculum mapping, Health Curriculum Framework, Pharmacy schools.

## **Introduction:**

The phrase First-Nations People/s representing Aboriginal and Torres Strait Islander Australians will be used throughout this paper except when quoting from resources or transcripts which have used alternative terminology.

First Nations Australians are one of the oldest continuing cultures on this earth with occupation of Australia stretching back 60,000 years(Clarkson et al., 2017). Unfortunately, there are significant health disparities between Australians who identify as First Nations versus those who do not. These inequities are amply reported upon; however, they are not often attributed to lack of awareness about history, culture, and the long term impact of invasive colonisation (Markwick et al., 2014). Awareness of key determinants of health is crucial for health professionals' understanding and ensuing safe clinical practice. This awareness needs to occur at a foundational level of education (primary/secondary school curricula). It also needs to be threaded through professional clinical training(Al-Habbal & Ibrahim, 2024). However, since inception of formal education systems in Australia, First Nations history and perspective have not traditionally been included in curricula(Foley, 2013) and systemic racism within education is an ongoing issue(de Plevitz, 2007). This discounting of First Nations' knowledges, traditions and cultural sciences at all levels, has resulted in 'whitewashed curricula' (Dowling & Flintoff, 2018).

Australian health education, is predominantly couched in biomedical frames and normalise deficit discourse leading to embedded racism as it represents people through failures and deficiencies(W. Fogarty, 2018). It is increasingly recommended that curricula require decolonisation so learners can frame their learning from the perspective of First Nations people in strength-based frames shifting the paradigm towards equity and

inclusivity(Dowling & Flintoff, 2018). Curriculum decolonisation may be defined as “*an inherently plural set of practices that aim to interrupt the dominant power/knowledge matrix in educational practices*”(Morreira et al., 2020). These practices subsequently affect both knowledge produced via research and selected for a curricula (what content is taught), and, the ways in which teaching, learning, and assessment occur (how curriculum is taught, including the social power relations at work in teaching and learning). Therefore, decolonisation should be a wholistic approach involving all stakeholders regardless of content taught (e.g. science vs practice).

According to du Plessis 2021(Plessis, 2021), decolonisation involves those who are marginalised telling their history and sharing culture to enable institutions to reflect the values of all(Plessis, 2021). One way to start the decolonisation process is mapping curricula, exploring if content is meaningful, enhances student learning and aligns with First Nations education frameworks. Curriculum mapping is the systematic analysis of content in a curriculum and is critically important to identify and rectify curricula gaps and alignment of learning to outcomes(Archambault & Masunaga, 2015). It is specifically important to map curricula to government-led frameworks, as they have been co-designed and specifically focus on improving First Nations content. In turn, this exercise can ensure health professionals are appropriately trained to provide healthcare to First Nations’ people.

In Australia, health curricula can be guided by a Federal Government framework referred to as the Aboriginal and Torres Strait Islander Health Curriculum Framework(care, 2014). This framework outlines ways universities can integrate and embed First Nations ways of knowledge. The framework consists of suggested primary learning outcomes, assessments, a cultural capability model and graduate learning outcomes. The framework as a whole,

assists to develop students into culturally safe health care professionals. It is underpinned by eight key principles (see Table 1) forming the basis of this study, to review curricula from an academic point of view.

Even though the Framework was published in 2014, its inclusion is not mandatory in curriculum development in the Australian Higher Education Sector. On the other hand, The Australian Pharmacy Council (APC), states that pharmacy curricula should have inputs from First Nations people ("Accreditation Standards for Pharmacy Programs," 2020) and the Shared Code of Conduct published by the Australian Health Practitioner Regulation Agency (AHPRA) talks of providing a culturally safe environment with specific mention of First Nations people (*Shared Code of conduct*, 2022). With cultural safety being made a disciplinary issue, practice behaviours can be mapped to the standards (Appendix A), and further training recommended when practitioners breach the code (*Doctor banned for discriminatory and offensive behaviour*, 2023).

Pharmacy is a profession, whose practitioners are mainly community facing, thus, it is particularly important that training is framed within the Aboriginal and Torres Strait Islander Health Curriculum Framework (care, 2014) as well as compliant to professional codes. (*Shared Code of conduct*, 2022) There have been steps to help pharmacists become more culturally safe, with the development of continuing professional development modules co-designed by the Pharmaceutical Society of Australia and First Nations' stake holders. The Deadly Pharmacist modules created in 2022 (*Training for pharmacists working within Aboriginal Community-Controlled Health Services*, 2022), and the development of the Leaders in Indigenous Pharmacy Profession (LIPPE) network (2021) aim to enable First Nations

leadership in the delivery of pharmacy education (*Leaders in Indigenous Pharmacy Profession Education Network*, 2021).

It is therefore timely to explore if pre-registration pharmacy training, is meeting such standards, understand how pharmacy degree providers evaluate the effectiveness of cultural safety content in relation to the health of First Nations Peoples and uncover reasons for why curricula may fall short. A previous study by the authors reported gaps in pharmacy curricula on a nationwide scale (Burke et al., 2024) however no study has looked in depth at specific pharmacy units of study.. Given research is scant, a 'deep dive' exploration into specific curricula offered by one Institution presents a good starting point that could serve as a case study for other programs to follow.

The University of Sydney was chosen as it is the Alma Mater of the Author, and the Sydney Pharmacy School is the largest, oldest and one of the most prestigious providers of pharmacy education in Australia. (*PHARMACOLOGY AT THE UNIVERSITY OF SYDNEY: A BRIEF HISTORY* 1999). This single site pharmacy curricula mapping would serve to identify gaps and areas for improvement to ensure that future pharmacists are trained to practice ways deemed to be culturally safe. This research project aimed to demonstrate an effective method of combing through a Pharmacy school's curricula and mapping it to the eight principles of the Framework to identify gaps and find strategic ways forward to improve curricula design.

#### **Methods:**

Approval to conduct the qualitative study was obtained through the Human Research Ethics Committee of The University of Sydney (Ref No. 2020/526).

The study was reported in accordance with the COREQ-32 checklist criteria(Tong et al., 2007).

*Research Setting:* Sydney Pharmacy School (SPS), Faculty of Medicine and Health, The University of Sydney. At the time of recruiting and interviews (2020), the Sydney Pharmacy School (SPS) offered three main pharmacy degrees (1. **Bachelor of Pharmacy:** a 4-year undergraduate degree with yearly cohorts of approximately 250 students, 2. **BPharm & Management:** a 5-year undergraduate degree with yearly cohorts of approximately 50 students, 3. **Master of Pharmacy:** a 2-year postgraduate degree with several science-based pre-requisites with cohorts of approximately 65 per year).

*Sampling strategy:* Key academic stakeholders were identified through their allocations to specific Units of Study (UoS) (n=42) taught within the Sydney pharmacy school. A Unit of Study defines a unit subject with a defined volume of teaching activity. At Sydney, each UoS is has a Unit of Study Outline, (subject outline) and an academic lead responsible for teaching delivery, content design, assessment, marks and student communication (UoS Coordinator). The UoS outlines are available publicly on the university's internet pages(Sydney, 2021). To supplement data collected from UoS coordinators, two other key stakeholders including a tutor and a staff member in the Faculty of Medicine and Health (External to SPS), who identified as First Nations, were also interviewed.

Each participant was emailed the participant information statement and consent form with reminder emails sent at 2 weekly intervals if a response was not received. A convenient time for the lead researcher (Alexander Burke (AB) – A male Aboriginal PhD student) and consenting participant was arranged, and a subsequent semi-structured interview was conducted either face to face or via an internet-based video conferencing facility (Zoom).

The interview guide (Appendix B) consisted of questions around the delivery of Australian First Nations health and cultural competence/safety content in UoS, the perceptions of the

adequacy of the school's teaching of cultural competence/safety and participants' experiences and professional learning, regarding cultural competence/safety. The interview guide was developed by the research team after exploring the then current Australian Pharmacy Council's accreditation standards and consisted of open-ended questions with prompts.

The specific interview technique used was yarning. The term 'yarning' is used by First Nations Australians which consist of conversations that relies on and creates specific forms of relationality between people, lands, and knowledge systems. As a research method, it may be considered 'as a First Nation's mode of sharing and delivering knowledges and experiences reflecting and respecting First Nation's worldviews and ways of knowing, being and doing, and reciprocity'(Kennedy et al., 2022; Walker et al., 2014). This style of semi-structured interview approach, allowed for a more casual conversation that could be employed by the lead researcher(Walker et al., 2014).

*Data handling and analyses:* Audio recordings of interviews were transcribed verbatim using a third-party transcription service – Rev.com. AB re-listened to recordings and read each transcript to confirm accuracy. Transcripts were then analysed and coded according to the Framework analysis approach of Ritchie and Spencer (2003)(Ritchie et al., 2003). Framework analysis often applies a more deductive approach to data handling, however, Gale et al states that inductive approaches also have a role therefore, emergent themes outside of the Framework were also explored(Gale et al., 2013). Coding was facilitated using NVivo. AB was responsible for initial codes, and discussion with supervisors resulted in the finalisation of quotes mapped to the dimensions of the Frameworks(care, 2014; Ritchie et al., 2003).

Ritchie and Spencer (2003) pose that using a Framework for qualitative analysis is best suited to research that asks specific questions and as such aims to uncover new phenomena. Framework analysis can also serve as a method to assess policies and procedures from the very people that will be affected. The Framework proposed by Ritchie and Spencer (2003) for qualitative data analyses allows one to explore data through four major frames.

- Contextual frame: -analyses the current context, i.e., *' what is happening'*,
- Diagnostic frame: - outlines the reasons for or against doing something, or reasons for *why* a phenomenon is occurring the way it is.
- Evaluative frame: - analyses *how well the current context is working*.
- Strategic frames: - analyses the current context and helps define *ways forward for improvement*.

This resulted in the creation of a matrix of quotes seen in table 2 and one emergent theme.

### **Results:**

A total of 30 academic stakeholders were interviewed (28 staff responsible for the coordination of 33/42 UoS and 2 First Nations stakeholders) Interviews ranged from 12 to 40 minutes (average 20 minutes). Table 2 reports the main study findings with illustrative quotes mapped against Frameworks (Care, 2014; Ritchie et al., 2003).

The school was providing a range of activities across degree programs in different UoS that focused on First Nations health, however after mapping quotes, it was apparent that there were deficits in all principles with principles 1,2,3, 5 and 7 being most neglected. Overall, curricula volume devoted to First Nations content was minimal, offered in a fragmented way and without continuity. For example, most participants stated there was a lack of clear direction and, content they 'feel' is relevant is included, rather than based on curriculum

mapping and identified gaps. One participant devoted *“only half an hour”* to First Nations content within a UoS involving 115-200 hours of time dedicated to learning and activities.

*Principle 1:* Participants noted that there was *“No Aboriginal leadership”*. It was however discussed that nurturing future leaders was difficult, as there was a lack of First Nations students coming through the degree with only three enrolling in the eight years prior to 2020 and two after 2020. This issue is not specific to pharmacy, but rather *“a university wide thing”*.

Participants also stated that while the Faculty of Medicine and Health was doing better than other faculties in the university, *“there’s a lot of work to be done* and many noted funding as a major barrier with minimal money available to support leadership roles. Academics also reported a lack of advocates and incentive to support the inclusion of the First Nations content, however, most believed ‘there should be no excuses’, and a position should be made available for First Nations leadership. It was also noted that this should start at the ground level with attracting more First Nations students to the degrees. Conversely, there were some staff that were apprehensive of having one First Nations leader, as they were concerned that if a dedicated role became available, it could potentially stiffen cultural change as people may then not see this content as *“everyone’s responsibility”*.

*Principle 2:* Participants noted *“We also probably haven’t done the level of consultation that we should have”* with community members or organisations. Participants noted that First Nations content was often taught by in house School/Faculty staff, without First Nations heritage. When participants did source First Nations input into teaching, it was valued highly with a participant noting *“That was a really interesting perspective for students to get”*. Participants stated that it was important for students to hear an *“Indigenous voice”* on issues relating to First Nations health. Many participants wanted to have open dialogue with

community and to have First Nations people in the classroom teaching and assessing students but were unaware of where to source First Nation community members.

*Principle 3:* When talking about why processes haven't been changing, many stated that this may be due to institutional inertia, being a "hundred-year-old organisation", it may be "stuck in its ways". Going forward, staff wanted to see content integrated across UoS's and assessments moved from multiple choice questions and short answer responses to application/skills-based assessments around First Nation's health. Clearly these ideas align with Principle 3, which advocates use of transformative adult pedagogies and consider the use of pedagogically innovative teaching methods equally important to insertion of content. It was noted that embedding this kind of assessment would however be challenging.

*Principle 5:* Holistic health service delivery was the most poorly reported aspect of the Framework. Staff were aware that culture plays a large part in understanding the health of First Nations people and, culture should not be taught in isolation. There were few ideas made by participants as to why holistic health currently is or is not being explored, and ideas for future plans were limited, with mention that non-clinical competencies should be assessed in ways other than written exams.

*Principle 7:* Participants noted that curricula should be built upon and consolidated using a spiral approach, where concepts are introduced early in a degree and becoming deeper and more complex as students' progress. Participants however believed this was currently ineffective, with one noting: "I think we're introducing it well, I think we're not developing it well". Participants also noted that content inclusion decisions were "siloed", and they were unsure about what content was being taught in preceding or forthcoming years.

*Institutionalised racism and tokenism:* An additional theme that was evident in the data was that of embedded systemic racism and tokenism. Some participants reported not seeing the relevance of including First Nations content into their UoS or they could not think of ways to include this content in a meaningful way, with responses framed around concepts of equality, rather than equity. Further, participants' responses suggested that cultural safety is given lower priority than therapeutic knowledge. One participant stating *"if we improve anything by putting more stuff in, we have to take something else out"* alluding to more First Nations content would mean removal of clinical content. Data also portrayed the impression that cultural safety was an afterthought in the curricula and would be 'slotted in' after all therapeutic content had been covered *"Oh, I have got to put some Indigenous content in my lecture, what do I do with 1 hour"*.

Based on participant perceptions, systemic racism may appear to be institutionalised, with some stating that clear barriers would be their colleagues: *"People just do not want to change... the course coordinators themselves will be barriers."* Another example of possible systemic racism was the implied notion of impartiality in the curriculum, ignoring the impact racism has in First Nation people's health and health-seeking behaviours: *"I think it's still content...there is not much I can do because this theory applies to every population...It doesn't really differentiate between Indigenous people or knowing Indigenous people...there is nothing I can force to embed into my teaching"*. Another issue evident related to systemic racism was tokenism, with one participant stating: *"There's a lot of parts to the case... It's still possibly just tokenistic that the person is Indigenous."* This statement alluded to a specific case study, where the case patient was First Nations, but there were no specific learnings built around First Nations issues, cultural considerations or the ways First Nations people see health, making this a tokenised gesture.

## **Discussion:**

This study took a deep dive into the pharmacy curricula in one of the country's teaching Institutes to identify areas for future improvement. This deep dive specifically involved mapping curricula content against the principles of the Aboriginal and Torres Strait Islander health Curriculum Framework (Care, 2014). Difficulty with incorporating principles 1, 2, 3, 5 and 7 with 1 and 2 specifically being about having designated roles for First Nations staff were evident deficits.

Importantly, this research highlighted that some participants were unclear about the amount of substantive consultation conducted with respect to pharmacy curricula. Adhering to Principles 1 and 2 is especially important in the context of Australia, where First Nations people have been subject to hundreds of years of programs and directives—designed without their direct input and consent, explicitly disrespecting the self-governance and decision-making capabilities of First Nations people. This non-consultative approach to curriculum design in health may be deemed as an example of systemic or institutionalised racism that is perpetuated.

This research also brings up other questions of importance. Accredited degrees are offered by the school under study, however, similar to other pharmacy schools (Burke et al., 2024), there are clear gaps in adhering to principles (1-7) of the Framework (Care, 2014). This issue highlights a serious concern that faces all Pharmacy schools. Are the concepts that are being taught around cultural safety and First Nations health being represented correctly? And are they an accurate reflection of the views of First Nations people? This also leads to an issue around a tokenistic approach to meeting accreditation standards. It may be suggested that the Australian Pharmacy Council play a critical role in guiding and facilitating pharmacy

schools to meet these standards. First Nations health content needs to be woven in the weft and warp of the curricular fabric. Currently such content is patchy and siloed, as noted by participants in this study and, whilst content inclusion may be led by academics in a genuine desire to ensure coverage, the planning perhaps needs to be overarched, else the exercise becomes tokenistic. It appeared that at the time of interview, there was no linkage of content within and across UoS and such content had not been thoughtfully sequenced or spaced within the degree. A future direction may be to place an experienced pharmacy educator to lead this topic/theme across curricula with meaningful linkage that adheres to key principles of the Framework. Ideally this staff lead should be a First Nations person, but until such time, the school can work by establishing meaningful and consultative engagement with First Nations communities.

Curriculum that meaningfully incorporates First Nations health content should espouse key principles of adult pedagogy as well as First Nations' pedagogy. Assessing knowledge should not be in the stilted form of multiple-choice questions (MCQs), but far more reflective (Delany et al., 2018). As noted by Jaris Swidrovich, there is a fundamental difference in the way knowledge is passed in First Nations communities vs traditional western institutions and without concerted efforts by institutions to instil these ideas into students he states *"Pharmacy students and pharmacy practitioners are socialized into perceiving Western intellectual traditions as the superior knowledge system"* (Swidrovich, 2023).

Beyond the curriculum, our results indicate that there are problems such as systemic racism and tokenism ingrained in institutional culture. Tokenism, as defined by the Cambridge dictionary *'is something that a person or organisation does that seems to support or help a group of people who are treated unfairly in society, such as giving a member of that group an*

*important or public position, but which is not meant to make changes that would help that group of people in a lasting way'*(2024). In other words, it is about merely paying lip service, for example, having a visible minority to give the appearance that issues are being taken seriously, which can manifest as indifference. Many participants thought it was not their business to address problems, that those allocated to such positions should take the onus of making changes around First Nations content in curricula. This has been noted by First Nations health researchers. Viridun 2013 states, where *"The lack of explicit responsibility for the development and teaching of Indigenous elements of the curriculum by non-Indigenous academics can manifest as weak engagement or interest in either developing students or dealing with unacceptable behaviour"*(Viridun et al., 2013). The issue is not just about incorporating content in curricula, but ensuring the academic community sees this as a priority and shared responsibility.

Moving forward, pharmacy can look to other fields that also identified gaps in their curricula and have developed and evaluated new approaches to their learning and teaching. Gongora et al. explained how they integrated cultural competence into their Sydney university veterinary science curriculum. In their example, students were rotated through learning stations with clients of culturally diverse backgrounds including First Nations people, and teachers talked to students gathering their thoughts on the experience both individually and as a group. Further, they discussed at lengths the relationships between animals and humans across cultures, and also taught First Nations practices and knowledge in conservation and managing biodiversity(Gongora et al., 2020). Importantly, Gongora et al. explains that these students were taught about the value of, and how to, communicate cross-culturally(Gongora et al., 2020). By doing this, they introduced fundamental levels of awareness which could be scaffolded into more complex ideas of cultural competence and humility(Gongora et al.,

2020) They have since observed that the integration of cultural competence into the curriculum resulted in positive changes in attitudes and behaviours of students.

In this study we uncovered that some aspects of cultural competence were perceived to be quite well structured in the early years of the degrees, which was encouraging. As noted, though, many participants stated they were isolated in their field and were unaware of what was happening in other UOS's. This is important because without knowing what is going on in other UOS it is hard to know if the content in one's own unit is being duplicated, or alternatively, if one believes that cultural competence is being covered in another UOS, they may neglect to cover content in theirs. Having an overarching view and designing a new curriculum is a great way to have strategic oversight of the whole degree. It is noted that this issue is practicable to those going through the process of curriculum redesign. But starting this process is an appropriate way to see what should be addressed and can be implemented in all schools.

Moving on from here, there are other measures that can be implemented to help further decolonise curriculum. For many years the idea of 'nothing about us without us' originally a slogan used by disability activists to emphasise that research and ideas about that community should not be conducted without the input of that group(Koontz et al., 2022), is now being used by members of all minority groups(Lumby, 2024). Therefore, schools should make sure that community consultation is conducted in line with what has been stated in both the Health Curriculum Framework(care, 2014) and the accreditation standards ("Accreditation Standards for Pharmacy Programs," 2020), with a needs-based analysis with First Nations people to see if what is being taught aligns with what community wants. Furthermore, co-designed case studies to ensure real-life experiences of First Nations people, creating

accurate pictures of what pharmacy students may experience while practicing and, dedicated roles for First Nations people to help with the continuing update of curricula is warranted. Further, having staff whose role is ensuring that the inclusion of cultural safety content remains 'everyone's business' and that pharmacy schools are basing their curriculum on degrees that have done well in this area should be prioritised.

It should be noted that this study is a pointed method for how schools can both audit and start to look inwards at their own curricula to start the process of decolonisation. The study had a number of strengths, including collection of data representing 79% of the pharmacy units taught across three degrees in one pharmacy school, as well as employing an approach conducive to First Nations ways of knowing and being as the principal researcher was a First Nations pharmacist and applied a yarning approach. There were however some limitations to this study. The sample was only one pharmacy school and did not explore units outside of the school's control. Future studies may look at units taught external to a singular university department. Secondly, the questions posed were not directly based on the Health Curriculum Framework but covered broader curriculum design. This could have limited participants responses, however many points raised crossed over with the Framework. This study only explored the views of UoS coordinators hence only applied the eight underpinning principles of the Framework. Future studies may wish to explore further elements of the Framework such as graduate capabilities from the student perspective. Another limitation was that the interviews were conducted in 2020 and were analysed recently against the Framework. Therefore, it should be noted that within the last 5 years the Sydney Pharmacy School has begun to implement a new curriculum where these findings have been incorporated to Indigenise the curriculum. However, as the new curriculum is being introduced, the old

curriculum must be taught out and will continue to be part of the school for many more years, acting as a benchmark and a way to improve the future degrees.

**Conclusion:**

This study mapped a pharmacy school's curricula to the 8 key principles of the Aboriginal and Torres Strait Islander Health Curriculum Framework. Whilst cultural competency was embedded in many UoS, gaps in the teaching of content were identified. Many staff members had ideas for future improvements to be incorporated into future curricula, now being ensued.

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**Table 1:** The Aboriginal and Torres Strait Islander Health Curriculum Framework Principles

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PRINCIPLE 1	<p>Leadership at all levels is key to supporting effective implementation of Aboriginal and Torres Strait Islander health curricula.</p> <ul style="list-style-type: none"><li>• Organisational leadership, commitment and accountability at all levels, including the executive level, supports full implementation of Aboriginal and Torres Strait Islander health curricula</li><li>• Undertaking cyclical organisational assessments provides opportunities to enhance and support more effective curriculum implementation</li><li>• Building leadership capabilities in graduates to be advocates and agents of change in their chosen health profession is key to transforming health practice</li></ul>
PRINCIPLE 2	<p>Respectful partnerships and collaboration with shared responsibility between Aboriginal and Torres Strait Islander and non-Indigenous people are required in curriculum design and implementation.</p> <ul style="list-style-type: none"><li>• Meaningful involvement of local Aboriginal and Torres Strait Islander peoples in the development and implementation of curricula is essential</li><li>• Curriculum content and the learning process must emphasise learning ‘from’ and ‘with’ rather than ‘about’ Aboriginal and Torres Strait Islander peoples</li><li>• Shared responsibility between Aboriginal and Torres Strait Islander and non-Indigenous staff for leading and dealing with Aboriginal and Torres Strait Islander matters is critical</li></ul>
PRINCIPLE 3	<p>The process of learning is equally as important as content.</p> <ul style="list-style-type: none"><li>• Transformational teaching and learning approaches that favour adult learning principles and enable a critically reflexive learning experience whilst caring for the wellbeing of students is essential</li><li>• Aboriginal and Torres Strait Islander pedagogies should be integrated into teaching practice</li><li>• Strengths-based learning<sup>1</sup> incorporating innovative, experiential and practice-based examples should be emphasised</li></ul>
PRINCIPLE 4	<p>Self-reflexivity and humility develop respectful health care practice.</p> <ul style="list-style-type: none"><li>• Self-reflexivity and critical analysis of one’s own cultural values and privileges are integral to respectful health care practice</li><li>• Development of humility and respectful person-centred health care practice involves recognising and understanding the feelings and experiences of Aboriginal and Torres Strait Islander peoples</li></ul>
PRINCIPLE 5	<p>Holistic health service delivery is essential.</p> <ul style="list-style-type: none"><li>• Aboriginal and Torres Strait Islander peoples have unique health needs shaped by the local context and colonial history, which requires responsive, effective person-centred health services</li><li>• Health services should be informed by comprehensive primary health care principles and models of interprofessional<sup>2</sup> practice, these elements are integral in the education of health graduates</li></ul>
PRINCIPLE 6	<p>Local context and diversity must be recognised.</p> <ul style="list-style-type: none"><li>• Curriculum content and the teaching and learning process should reflect the local Aboriginal and Torres Strait Islander context and the diversity of Aboriginal and Torres Strait Islander people</li></ul>
PRINCIPLE 7	<p>Development of intercultural capabilities is a lifelong learning journey.</p> <ul style="list-style-type: none"><li>• Foundational content on Aboriginal and Torres Strait Islander health should be introduced in the first year of study and then built on through horizontal and vertical integration throughout HPPs</li></ul>

- The development of cultural capabilities is a lifelong journey, extending beyond formal education and practice

PRINCIPLE 8 Ongoing professional development and professional support for Aboriginal and Torres Strait Islander and non-Indigenous educators is essential.

- HPPs should offer ongoing cultural learning and professional development opportunities for all levels of staff
  - Support needs to be provided for Aboriginal and Torres Strait Islander and non-Indigenous educators, recognising the emotional load encountered while teaching in this context
  - Educators should have strong theoretical and practical understanding of Aboriginal and Torres Strait Islander pedagogical principles that support safe and effective transformational learning.
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**Table 2:** Quotes mapped to Aboriginal and Torres Strait Islander Health Curriculum Framework and Srivastava's and Thomson's Framework Analysis

	Contextual	Diagnostic	Evaluative	Strategic
PRINCIPLE. 1. Leadership at all levels is key to supporting effective implementation of Aboriginal and Torres Strait Islander health curricula.	<ul style="list-style-type: none"> <li>• "There's no Aboriginal leadership".</li> <li>• "There's no structural support for it...and no structural acknowledgement".</li> <li>• "we've been trying to do everything we can to get more Aboriginal students doing pharmacy. And in the eight years that I've been here, we've recruited two, in eight years".</li> </ul>	<ul style="list-style-type: none"> <li>• "Look if a budget wasn't an issue, then I think we would have an Aboriginal health worker as one of our staff members and teachers".</li> <li>• "Knowledge, time, resources finances. I don't think there's a champion for it. I don't think it's rewarded even if there was. I think if you were the champion, that's good on you".</li> </ul>	<ul style="list-style-type: none"> <li>• "A dedicated role, I guess, would be really good. But I guess the problem with a dedicated role is then it doesn't become embedded through the culture of the actual school itself".</li> </ul>	<ul style="list-style-type: none"> <li>• "I think within the university now it has been recognised that we need to have this. And if that means providing a salary for Aboriginal [and] Torres Strait Islander people to contribute in a genuine way then that's what the university needs to do".</li> </ul>
PRINCIPLE. 2 Respectful partnerships and collaboration with shared responsibility between Aboriginal and Torres Strait Islander and non-Indigenous people are required in curriculum design and implementation.	<ul style="list-style-type: none"> <li>• "We also probably haven't done the level of consultation that we should have".</li> <li>• "I guess that goes back to my point about consultation and input that is external, where we perhaps we may not have it in our school with the current academic or professional staff we have".</li> <li>• "I haven't collaborated with the cultural competence centre".</li> </ul>	<ul style="list-style-type: none"> <li>• "What would be really good would be to know who to contact or if we could actually get somebody who's indigenous to do the lecture".</li> <li>• "I think that should be taught by someone who knows what they're doing. I don't think any of us in the pharmacy school will ever be at a level where we should be teaching that because we're not experts in it. We need people who are properly expert to have it done properly".</li> </ul>	<ul style="list-style-type: none"> <li>• "I don't know if they've consulted with the community. I think they need to consult with the community to ask whether or not the Indigenous people need more".</li> <li>• "We need to be more visible in doing something in advocating for Indigenous health".</li> <li>• "I think there should be a consultative process with the relevant Indigenous Australian representatives, both have education and cultural insight and there needs to be a focus on them, definitely".</li> </ul>	<ul style="list-style-type: none"> <li>• "I don't know if they've consulted with the community. I think they need to consult with the community to ask whether or not the Indigenous people need more".</li> <li>• "We need to be more visible in doing something in advocating for Indigenous health".</li> <li>• "I think there should be a consultative process with the relevant Indigenous Australian representatives, both have education and cultural insight and there needs to be a focus on them, definitely".</li> </ul>
PRINCIPLE. 3 The process of learning is equally as	<ul style="list-style-type: none"> <li>• "It's one thing to teach them something, and then it's another, when it's the application point of view".</li> </ul>	<ul style="list-style-type: none"> <li>• "I guess in terms of barriers, I think the main thing would be seeing how it fits in".</li> <li>• "I think that the University of Sydney, it's a very large and</li> </ul>	<ul style="list-style-type: none"> <li>• "They will learn. They will learn because they're young and they're impressionable and they know. They're not dull</li> </ul>	<ul style="list-style-type: none"> <li>• "It should be integrated".</li> <li>• "If we take the example of New Zealand again, I'm absolutely certain, if they have OSCE's, they will have a mock patient</li> </ul>

- important as content.

    - “I think at the moment everybody puts in what they feel is relevant and sometimes you’re repeating the information and sometimes you’re completely omitting something that may be quite useful”.
    - “I think of even complimentary medicines as well. Sometimes I feel like that’s something that’s just been shoved into the curriculum at times, same as cultural competence and Aboriginal health”.
  - traditional organisation and we find it challenging to accept that there may be better ways of delivering education in other settings”.

    - “I definitely don’t think there should be any barriers, because I can see the importance of the inclusion of it in the curriculum and I would be all for it”.
    - “Another barrier would be the current internal change. And so, it’s unclear in general how curriculum development should be authorised. So, we don’t know what level of change to our unit of study requires approval”.
  - people, but I think we could give them more preparation”.

    - “We don’t have tools to measure the impact of what we’re doing”.
    - “So, integration is great for learning, but integration is very poor when it comes to having barriers for assessment”.
  - situation where you have a Māori patient. So, absolutely”.

    - “Skills assessment needs to be applied rather than exam assessment. So, it needs to be embedded in our communication skills and perhaps some of the barriers or elements that go into our oral communication skills assessments or standalone, but again, skills assessments”.
- PRINCIPLE. 4
- Self-reflexivity and humility develop respectful health care practice.
- “I guess I never really thought about it, to tell you the truth”.
  - “A student said, but I was born in Australia. So therefore, I’m Indigenous. So, I think, we need to make sure that they’re coming out of uni, not saying those things”.
- PRINCIPLE. 5
- Holistic health service delivery is essential.
- “We can’t take the person away from the culture because then we’ll just become a stereotype. So, we need to have an understanding that there are cultural beliefs, there are cultural issues, but there are also specific people issues too”.
- “But really how to assess it is not something that I... Well, I can’t hold them back in their profession.
  - “Just doing lip service to, and I think that is disgraceful, and we should apologise for it”.
  - “I feel people need to know that they’re part of the problem, also part of the solution, before you start teaching it”.
  - “Aboriginal students like yourself can be proud to come to the university for yourself. Understand the good and bad of our history. That’s something that needs to be done. I don’t think that’s done enough”.
  - “In my opinion, the non-clinical competencies would be around communication, communication that is culturally safe, that is respectful, that reflects on perhaps the entrenched values and beliefs and history of

*Indigenous people. Also, I think to be able to play a role of advocacy for Indigenous peoples”.*

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|--------------|---|---|---|--|---|
| PRINCIPLE. 6 | Local context and diversity must be recognised.                           | <ul style="list-style-type: none"> <li>• <i>“Look at the end of the day, I would argue that our placement exposure is minimal at best... Even if you spend all six weeks out in a practice that looks after Aboriginal [and] Torres Strait Islanders, I don't expect you to be awesome at it after six weeks, I don't expect anyone to be awesome at it after six weeks”.</i></li> <li>• <i>“There's a history in Australia of research ethics that is pertinent to Indigenous people in particular, because there's a history of abuse and a lack of respect that we are trying to overcome in modern times”.</i></li> </ul> | <ul style="list-style-type: none"> <li>• <i>“That big understanding is really key, if you're going to work with us. And the big thing is, even if you don't think you're going to work with an Aboriginal Person, you probably are. You're a pharmacist”.</i></li> <li>• <i>“Students don't want to do rural placements. They want to do the ones that's a walk down the street from their house or at worst, in the suburb over”.</i></li> </ul> | <ul style="list-style-type: none"> <li>• <i>“We had, I think, two students go out last year and it seemed to have been really fantastic experience where I got to go out at the time to the indigenous health service”.</i></li> <li>• <i>“Some people would want our graduates to hit the ground running and be able to provide a benefit. I feel that our stage, our graduates, they need a bit of time before they start providing the benefit. I think they're very ready to learn, but maybe they should have learned more”.</i></li> </ul> | <ul style="list-style-type: none"> <li>• <i>“I would like to see more Placements in the future and given that we are here in Camperdown close to probably one of the biggest urban Aboriginal communities in Australia or indeed the world, then it makes sense that we try and leverage that more closely”.</i></li> </ul>   |
| PRINCIPLE. 7 | Development of intercultural capabilities is a lifelong learning journey. | <ul style="list-style-type: none"> <li>• <i>“I don't think that, that this is explicitly covered... I think it's assumed that this knowledge will be gathered on the job, rather than explained as they go through the degree, which it should be from day one”.</i></li> <li>• <i>“I think that curriculum development is not provided much time”.</i></li> <li>• <i>“I think we're introducing it well; I think we're not developing it well... We're giving people a first stage understanding, we're not integrating</i></li> </ul>   | <ul style="list-style-type: none"> <li>• <i>“Teaching cultural competence to the students, every hour an academic staff member spends on worrying about teaching cultural competence is one less hour they have for research and less for everything else”.</i></li> <li>• <i>“Students don't have an infinite amount of time. And every time we put something in, we have to take something out, so it doesn't get longer”.</i></li> </ul>       | <ul style="list-style-type: none"> <li>• <i>“We don't know if what we're doing is working. You don't know if it's sustainable and having an impact on our patients... Like I said before, I feel the content is sometimes not as important as long as they understand the basic framework and how to approach these scenarios”.</i></li> <li>• <i>“I would say even within the different academic</i></li> </ul>   | <ul style="list-style-type: none"> <li>• <i>“I am aware of the graduate cultural capability model that the Australian government department of health instituted, and perhaps that could be a starting framework for us to think about what we could include in our new curriculum”.</i></li> <li>• <i>“I think if it becomes mandatory that every unit has to have three hours or five ours or something like that, of particular cultural competence</i></li> </ul> |

<p>and following up enough in the senior years of the degree".</p>	<ul style="list-style-type: none"> <li>• "Look, my honest opinion is that it's always going to be difficult because we are a pharmacy school, not necessarily a public health school, unless he had a unit of study that was focused on indigenous health and that certainly should be taught off as included in the new curriculum".</li> <li>• "I know there has been some opportunities for some staff to participate in cultural competence training, but not all staff".</li> <li>• "Academic staff interest... The university essentially doesn't care about teaching and cares about research. Teaching is what you do to bring in the money. Teaching is not what gets you promoted, which is what people care about".</li> </ul>	<p>institutions, particularly within pharmacy, I don't think anyone can point to anyone and go, "They're doing great. I wish we w[ere] like that." And they do and they exist, which highlights that it's not a priority in any group".</p>
<p>or indigenous study embedded into it and there is no way out of it, I think then people will make it happen".</p>		<ul style="list-style-type: none"> <li>• "At this point? Any training".</li> <li>• "Perhaps a few pharmacy teaching retreats that are simply focused on this topic".</li> <li>• "I think that training shouldn't just be for staff, it needs to be for students. And I'm aware that the university does have these service learning courses</li> </ul>
<p>PRINCIPLE. 8 Ongoing professional development and professional support for Aboriginal and Torres Strait Islander and non-Indigenous educators is essential.</p>	<ul style="list-style-type: none"> <li>• "I have no specific training in that area, but having said that, as academic staff, we generally don't host specific training in many of the fields that we teach in".</li> <li>• "I Think myself as a staff member, I would need some sort of training or, because I must admit, maybe when I first joined, I had some sort of very generic cultural confidence module, but I can't even remember it. And I wouldn't even know how to go about incorporating this into my unit</li> </ul>	

**Chapter 5 - What does it mean to be Aboriginal in Pharmacy?: A Personal reflection of my journey as an undergraduate, post graduate and staff member.**

# **What does it mean to be Aboriginal in Pharmacy?: A Personal reflection of my journey as an undergraduate, postgraduate and staff member.**

This editorial reflects my journey as a First Nations Australian (Wiradjuri/Dharug) navigating academia from a Western perspective while working to reform cultural safety training in pharmacy education. It serves both as a reflexive account of how my lived experiences have shaped my research, and as a critique of the institutional structures that continue to marginalise First Nations voices in health education, especially from my experiences in pharmacy. It also provides a link between the analytical mapping work and the more forward-facing, community-driven inquiry research I have conducted as a First Nations PhD student in pharmacy.

As an Aboriginal Australian and as an Aboriginal pharmacist, researcher, and educator, I occupy a unique space in the pharmacy sector that is both insider and outsider. Insider, in that I have lived, and know people who have lived as Aboriginal Australians and experienced the gaps and silences my research seeks to interrogate. Outsider, in that the university remains shaped by Western epistemologies and institutional logics that rarely centre First Nations worldviews. Despite Aboriginal peoples having lived on this continent for tens of thousands of years with our own teaching systems, knowledge structures, and research methodologies, I am often required to set these aside to placate and conform to the demands of Western research institutions.

This dual position is both a strength and a tension that I have. It provides me with deep insight into the systemic failures of current pharmacy education and exposes pathways for reform grounded in community values. But it also means constantly navigating compromise, contradiction, and the exhaustion that comes with carrying a colonial load.

Whilst undertaking my undergraduate degree in pharmacy, from my experience, there was a lack of well thought out and developed content pertaining to First Nations health. The content that was

included, whilst accurate, could sometimes lean more on the side of deficit-based discourse and did not do an adequate job (in my eyes) of painting an accurate picture of the true causes underpinning many of the health disparities of Aboriginal peoples. Content that was included usually felt as if it were ‘tacked on’ and not integrated adequately. Often it felt as if this content was added to meet a quota set out by the accreditation guidelines of the Australian Pharmacy Council (APC). This felt like, First Nations content was seen as an ‘afterthought’ and that content was developed in a ‘tokenistic’ manner. This was further compounded by the lack of teachers who identified as First Nations Australian, further alienating me from the content and reinforcing the idea that Western pharmacy was the ‘only way’ we were expected to practice. This problem is still facing many pharmacy schools today, with no concerted efforts to increase First Nation student enrolments, and no dedicated roles to ensure that registered First Nations pharmacists can teach at pharmacy schools or be members of staff. While accreditation guidelines help inform schools of their obligations and are used by accreditors to evaluate whether appropriate standards are being met, the process itself is inconsistent. What one accreditor deems a sufficient level of cultural safety content may be seen as inadequate or even excessive by another. This lack of standardisation is a serious problem. Moving forward, a more unified and transparent accreditation process is needed. Whether through a single accrediting body or clearer guidelines, the goal should be to eliminate ambiguity and set a consistent, enforceable standard for all schools to reach.

When completing my honours projects (2020) and seeing that many of the identifiable gaps that were elucidated through interviews with pharmacy staff, were problems to me that did not seem insurmountable to overcome, I embarked on my PhD research journey. Problems identified included but were not limited to: 1. having First Nations pharmacists on staff working on Indigenising curricula and teaching content, and 2. case-based assessments where clinical content is assessed by pharmacists, while cultural safety is assessed by a First Nations assessors (as cultural safety can only be adjudged by the one receiving the care).

To address these identified issues, I needed to first explore the ‘lay out of the land’ both in our pharmacy school and in all pharmacy schools in the country. With the help of the APC this initial

work was achieved and reported in Chapters 2 and 3. What I found was disappointing but not surprising (see chapter 3). At the time of undertaken research, there was little standardisation of First Nations content across or within schools, except for the inclusion of guidelines set out by the APC. It also seemed apparent that depending on who did the accrediting, the definition of “community consultation” in the development of curricula could be stretched in meaning. Many schools relied on the First Nations people in their universities as their community consultation and when asked responses such as “*we don't know where to go or start*” were common. One can understand that when there is no connection, it is hard to make a start but using that as a defence when no attempt has been made can be very disappointing to me. Also disappointing, was the lack of staff identifying as First Nations. My research also uncovered insights, where participants explained that many universities, during the pandemic, had “*let go*” many casual staff. Participants noted that most First Nations workers at universities were casually employed, meaning that they were in the group of staff who were the first to be made redundant at this time. To me, this outlines a wider problem of the pathway from casual to contracted workers, but also that First Nations people are the last hired and the first fired where positions in faculties are not made available and further, I learned that in many institutions, First Nations people are only hired on an ‘as needed’ basis.

Whilst on this journey, I also wanted to explore the impact that the federal government’s Aboriginal and Torres Strait Islander Health Curriculum Framework was having on pharmacy school curricula. It was again disappointing when talking to many academics who had never heard of this framework and as such never used it to help them in their own journeys to decolonise and indigenise their own units of study. On reflection, this has been changing since starting my research journey, where I make sure that wherever I can share this document and identify its importance and ease of use. Also of note is that even though this framework exists and was created by the government to be used by health schools, its use is not mandatory and as such only interested individuals who know of its existence are inclined to use it. However, even knowing of its existence does not guarantee a university is open to implementing and using it.

As this Framework is widely available and provided to be used, I believed it would make the most sense to use this as the benchmark for mapping processes schools were using. As such, in chapters 3 and 4 I broadly mapped all pharmacy schools in Australia then took a more depth and detailed view of my own school's curriculum. What we uncovered is that content was not well mapped to most of the principles set out in the framework and there is much work to be done.

While all this was happening, coincidentally the University of Sydney pharmacy school was undergoing a change of curriculum, creating a new degree, meaning the old degree would be taught out and discontinued while this new degree would take over and supplant it. To ensure that certain content was identified as important and integrated into the curriculum, the school decided that 10 'themes' to spiral through curriculum would be created with leaders of each theme whose job was to make sure that unit of study co-ordinators and their corresponding units of study contained aspects of all these themes where it was deemed appropriate. These themes are: T1: Communication and collaboration, T2: Clinical decision making, T3: Health and medicine services, T4: Body systems, T5: Drug substance and action, medicinal products, therapeutic principles, T6: Professionalism, ethics and social accountability, T7: Indigenous health, T8: Research and inquiry, T9: Leadership and management and T10: Work integrated learning, I was co-lead of T7. As a PhD student and as only a casual worker at the time it would not have been feasible for me to take over as the head of a whole theme, but it was decided that I would in my capacity, work as a co-lead to whoever was in the lead position. As a current PhD student, much of my research would go on to help inform the leader of the theme who would implement the findings and recommendations of my research.

As my involvement in curriculum reform deepened, so too did the colonial load I was expected to carry. Being one of the only First Nations people engaged in this work often meant I was relied upon not only as a researcher, but as a cultural representative, educator, and a convenient 'go-between' for anything relating to Aboriginal and Torres Strait Islander content. The emotional labour of this role is immense and is often unseen to those who benefit and make use from it.

Staff frequently approached me with requests to 'help with' First Nations content and I felt and feel, not because of my formal role, but because I was there and Aboriginal, I was obliged to help. This

included being asked to give guest lectures, review learning materials, and providing feedback on cultural safety elements in all units of study. There is also this persistent assumption that I would have an expansive list of community contacts ready to be shared, as if being Aboriginal automatically made me a directory of cultural knowledge and my “Black telephone” link was expansive with many people on speed dial. This assumption is not only reductive, but to me it can sometimes feel disrespectful. It ignores the diversity of our communities, the depth of relationships needed for ethical engagement, and the personal toll of constantly being asked to give more.

One moment that was particularly frustrating and emblematic of the kind of institutional resistance that exists was the school’s unwillingness to change the name of Theme 7 from “Indigenous Health” to “Aboriginal and Torres Strait Islander Health” or even more simply “First Nations Health.”

Despite being a relatively simple shift in wording, it was met with resistance. I advocated for the change along with several others, because “Indigenous” is a broad and often externally applied term, while “First Nations” or “Aboriginal and Torres Strait Islander” are more specific, self-determined, and preferred by many in our communities. The reluctance to make this change spoke volumes: even minor symbolic forms of respect and recognition could be deemed ‘too hard’ or ‘not worth the trouble’. This kind of pushback makes clear that while institutions may welcome First Nations participation, they often resist First Nations leadership.

It is not just the work of contributing ideas, but the ongoing burden of having to justify, explain, and persuade, to constantly fight for change within a structure that was never built to support us. The expectation that this be done patiently and without visible frustration, adds another layer to the colonial load. It is exhausting. And yet, this is the labour that is required of us, simply to ensure that our perspectives are included and even then, often only partially or superficially.

A constant tension I have experienced throughout this journey has been the fear of what might happen if I am not involved. That fear doesn’t come from ego or a sense of superiority, it comes from experience. I have seen too many moments where cultural safety was sidelined, mishandled, or reduced to token gestures, when no one with lived experience was in the room. Having been let down by people and processes in the past, I often carry a deep sense of mistrust, not always of individuals,

but of systems that continually fall short, even when intentions are good. It creates a kind of hypervigilance: a sense that if I step back, things will be forgotten or done poorly, and that real harm might follow. This feeling has often driven me to take on more than I should, not because I want to be the only voice, but because I fear what happens when there is no voice. It feeds into the belief that if something is going to be done right, with integrity, depth, and accountability, I must be the one to do it. While this sense of responsibility has been a strong motivator, it has also been exhausting. It highlights the urgent need for systems that don't rely on the labour of a few committed individuals, but instead build the structures, relationships, and accountability mechanisms needed to ensure this work continues even when we or I need to rest.

At the same time, being constantly relied upon has created another layer of doubt one that is harder to speak about. When people come to me for advice, connections, cultural input, or guidance, it can feel like they are placing the weight of an entire system on my shoulders. And while I understand the intent, it is a heavy responsibility to carry, especially when I don't always have the answers. There are moments when I fear that my own connection to culture is not as strong, or as deep, as others assume, or even as I would like it to be. I worry that because I cannot always provide a name, a protocol, a definitive position, that I'm somehow not "Aboriginal enough" to be doing this work. These doubts are hard to sit with, particularly in a space where cultural identity is often oversimplified or politicised. But, I've come to understand that part of doing this work, part of walking in both worlds, is holding space for those uncertainties. Being connected does not mean knowing everything; it means approaching the work with respect, humility, and a willingness to learn alongside community. Still, that does not always make the weight feel any lighter.

While much of this work has felt isolating, I have not been completely alone in it. There have been a small number of non-Indigenous staff members within the school who have been generous with their time, their ears, and their willingness to act. These allies have offered me space to speak candidly to vent, to process, and to strategize and have used their positions within the institution help elevate my concerns to those with decision-making power. While I have often had to initiate these conversations,

it has made a difference to know that there are people who will back me when it counts, even when the broader system is slow to change.

Just as importantly, the small number of First Nations pharmacy students who have come through the program have also been powerful allies. Their observations, frustrations, and insights have sharpened my own critique of the curriculum and helped identify gaps and oversights that might otherwise have been missed. Our shared experiences have created a kind of informal network of accountability, not just to each other, but to the generations of students yet to come. Even if we do not all remain in academia, we are laying the groundwork together for what should be a more culturally safe and affirming educational experience.

Still, however, the resistance remains. Some staff continue to question why my work focuses exclusively on First Nations cultural safety, even after I explain the clear and urgent need for targeted reform. These questions often do not come from a place of curiosity, but often from a refusal to accept that First Nations people have specific needs that require specific attention or from a discomfort with any work that challenges the dominant narrative. I have also had people ask for my help developing lectures or learning resources, only for those contributions to never be used, or used without consultation, or dropped entirely when it became 'too difficult'. These moments of performative inclusion are disheartening, as they reveal that in many cases, cultural safety is treated as a side project rather than a fundamental pillar of professional education.

Then there are the more overt, but often unacknowledged, forms of racism and microaggressions that go unchecked and unchallenged. One moment that stays with me, was being asked by a senior member of staff, "*how Aboriginal are you?*", a question that not only delegitimises my identity but reflects the lingering presence of racialised gatekeeping in academia. These kinds of interactions are rarely seen as racist by the people who say them, but they chip away at a person's sense of belonging, safety, and worth. They remind me that no matter how much I contribute to the institution, I can still be seen as conditional or even expendable, accepted only so long as I do not challenge the dominant ways of thinking too directly.

I share this not as a personal grievance, but as a structural observation. These experiences reflect a broader issue in Australian universities, where inclusion is often confused with equity, and where visibility can come at the expense of wellbeing. The work described in my research is, I believe, grounded in hope and purpose, but it has not come without cost. My wish is that future First Nations students and staff do not have to carry this burden alone, and that the systems we build begin to take real responsibility for doing the work themselves.

Despite these challenges, there have been moments of genuine progress, instances where I felt the institution has shown signs of listening and shifting. While the burden I carry often feels isolating, it also has created space for influence. Slowly, there have been opportunities to embed First Nations voices more meaningfully in governance and curriculum design. One such opportunity came through my involvement in broader faculty-level efforts to coordinate and strengthen First Nations health teaching across all health disciplines within the University. These experiences marked a shift from there being a few advocates, to being part of a more coordinated push for structural change, albeit still within systems that remain deeply colonial in their foundations. An overall First Nations subcommittee dedicated to Indigenising health curriculum has been established. At the pharmacy school, the head of the 'Indigenous' theme is the nominated representative. To help facilitate and enhance the role of the overall subcommittee, each school has set up their own working group, and, with each group working in tandem, overall decisions from the subcommittee are passed down to action and initiatives in individual schools also fed back up. In my eyes this initiative is a big step forward in the seriousness that First Nations health deserves.

While this initiative was taking place, members of our working group (myself included), engaged in meetings with colleagues from other health science disciplines. These discussions were incredibly fruitful. One of the most important insights we gained was around the potential of the curriculum mapping tool, AKARI (University of Sydney's online curriculum database), and how it could be leveraged not just for standard program learning outcomes, but to map teaching content directly to the Aboriginal and Torres Strait Islander Health Curriculum Framework. At the Sydney Pharmacy School,

the new curriculum units - already uploaded into AKARI, has allowed content mapping with the Aboriginal and Torres Strait Islander Framework.

This approach has allowed for a more robust form of constructive alignment<sup>1</sup>. Rather than treating First Nations content as an add-on or a checkbox, this method has enabled us to ensure that the intended learning outcomes, teaching strategies, and assessment tasks are explicitly and consistently connected to cultural safety learning objectives. Constructive alignment in this context is crucial, it ensures that what is taught is directly linked to what students are expected to learn and be assessed on, creating a cohesive and intentional learning experience. It also supports accountability by making visible where cultural safety is (or is not) embedded, helping identify both gaps and redundancies.

This level of transparency was especially important for ensuring that cultural safety content was not simply repeated across units or concentrated in one standalone subject. Instead, it could be woven throughout the degree in a way that reflected both the Framework's intent and the lived realities of First Nations people. This new knowledge has allowed us to develop a plan for mapping new curriculum strategically, targeting specific units of study where coordinators are more engaged and sympathetic to our aims. By working with those staff members and building on existing curriculum structures, we have embedded cultural safety more deliberately, using constructive alignment as both a pedagogical and political strategy.

While all this work has been internal to the workings of pharmacy schools, I still felt it was necessary to have more involvement of First Nations communities in the development of curricula content and processes. This area of the Framework Principal 1 Leadership at all levels is key to supporting effective implementation of Aboriginal and Torres Strait Islander health curricula and 2 Respectful partnerships and collaboration with shared responsibility between Aboriginal and Torres Strait Islander and non-Indigenous people are required in curriculum design and implementation is where interpretation plays a large role in what 'community involvement' looks like. One's perspective could be using the First Nations people already employed at your institution and adapting resources created to fit one's curriculum may be enough. There are of course benefits to this, in that, yes, you are using a First Nations' perspective and in lieu of not having great community outreach, this is better than

having no voice at all. Also, having an individual at the institution means they are aware of the processes and what needs to be done to get content approved or accredited. The downside to this, however, is that being embedded in a Western institution, no matter how well intentioned, can shape one's thinking in ways that align more with the institution than with community needs. From my perspective, First Nations consultation should be a grassroots effort. One that reaches beyond the institution and into communities. It should involve people whose lives will be directly affected by those going out to practise in Australian and Aboriginal and Torres Strait Islander health settings. In my view, this kind of genuine, grounded consultation has been largely missing. That absence represents one of the most critical failures in efforts to decolonise pharmacy education. This work forms the basis of my final research work which focuses on First Nations perspectives on what pharmacy should be doing both in practice and within university teaching. Community want to be involved, they want to feel safe entering pharmacy, and their voices need to be shared. I am most proud of this latest research, which centres community voice, lived experience, and grassroots knowledge as essential to defining what culturally safe pharmacy education truly looks like. Only by grounding our work in the perspectives of community can we begin to decolonise pharmacy in a meaningful way not just within the curriculum, but in practice, in mindset, and in responsibility.

The work outlined in this chapter represents the beginning of systemic change. My experience shows what can happen when space is made, even incrementally, for First Nations voices within institutional processes. But this kind of mapping, critique, and reform from within can only take us so far. True cultural safety cannot be defined solely by universities, nor by accrediting bodies, policies, or internal working groups. It must be shaped in collaboration with the people most affected - First Nations communities.

The work I have undertaken so far, goes some way to addressing my initial concerns to overcome issues unveiled as an undergraduate student. That is: 1. having first nations pharmacists on staff working on Indigenising the curriculum and teaching content, and 2. case-based assessments where clinical content is assessed by pharmacists while cultural safety is assessed by a First Nations assessors, as cultural safety can only be adjudged by the one receiving the care. There is still a long

way to go to solving these issues, but this work allows me to reflect on progress made, and the future journey ahead to make these barriers dissolve.

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## **Part 2- Looking Forward**

**Chapter 6 - Using constructive alignment to map a pharmacy curriculum to the Aboriginal and Torres Strait Islander Curriculum Framework.**

**Using constructive alignment to map a pharmacy curriculum to the Aboriginal and Torres Strait Islander Curriculum Framework.**

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**Supplementary Material: 1**

**Abstract:**

**Background/aim:** Cultural safety is a vital component of healthcare education, particularly in countries with colonial histories such as Australia. Ensuring that cultural safety is meaningfully embedded and assessed within health professional programs is essential for improving health outcomes for Aboriginal and Torres Strait Islander peoples. Constructive alignment, as defined by Biggs, provides a useful theoretical framework to evaluate the coherence between intended learning outcomes, teaching activities, and assessments. The aim of this study was to apply constructive alignment principles to audit the inclusion and assessment of cultural safety within the first two years of the University of Sydney's newly implemented five-year pharmacy degree.

**Methods:** Using Akari curriculum mapping software, we reviewed unit-level intended learning outcomes for explicit or implicit references to cultural safety. These were cross-referenced against Australian Pharmacy Council standards and the Aboriginal and Torres Strait Islander Health Curriculum Framework. Content from lectures, tutorials, and assessments were analysed via course outlines and Canvas pages to identify alignment with cultural safety outcomes. Findings were summarised in tables indicating the presence and depth of alignment.

**Results:** Seven units of study were reviewed. While some demonstrated partial constructive alignment between outcomes, content, and assessment, many displayed significant misalignment. Several units included learning outcomes related to cultural safety that were not assessed or included relevant content that was unlinked to formal learning outcomes.

**Conclusion:** Despite national standards, cultural safety is inconsistently embedded and poorly assessed. Further curricular refinement is necessary to achieve meaningful alignment and accountability.

## **Introduction:**

Curriculum development is an intensive, iterative process requiring careful consideration of content, pedagogy, and assessment<sup>1</sup>. Effective curriculum design ensures that relevant and contemporary content is taught, meaningful learning outcomes are articulated, and assessments are designed not only to measure student achievement but also to identify potential barriers to learning<sup>2</sup>. It also presents a critical opportunity for institutions to modernise educational practices, implement innovative teaching methods, and remove outdated or redundant material. Informed curriculum development draws on multiple inputs, including expert opinion both from educational specialists, who advise on effective pedagogical strategies and assessment design, and from content experts, who ensure disciplinary relevance and accuracy. Such collaboration ensures that students are equipped with the knowledge and skills necessary for both academic progression and professional success<sup>3</sup>. Other key strategies informing curriculum design include needs-based assessments, the identification of priority content areas, and clearly articulated goals for what the curriculum aims to achieve<sup>4</sup>.

A widely adopted methodology for ensuring alignment between learning outcomes, teaching content, and assessment is constructive alignment, developed by John Biggs<sup>5</sup>. Constructive alignment is an outcomes-based approach that begins with clearly defined Intended Learning Outcomes (ILOs), followed by the design of learning activities and assessment tasks that are directly aligned to these outcomes. In essence, both teaching and assessment should flow from and reinforce the stated outcomes<sup>4</sup>. This principle is grounded in a simple yet powerful logic: if an outcome is deemed important enough to be included in the curriculum, then it should be both taught and assessed. Conversely, content that is neither explicitly tied to an outcome nor appropriately assessed raises questions about its relevance and purpose. This

alignment fosters clarity, coherence, and intentionality in the learning experience and has become a foundational principle in contemporary curriculum design across disciplines.

Within professional health education, one area of increasing importance is the integration of cultural safety. Cultural safety is a concept originating in Aotearoa/New Zealand that acknowledges the inherent power imbalances in healthcare relationships between the First Nations people of the land and their counterparts and emphasises the practitioner's responsibility to provide care that is safe, respectful, and responsive to each patient's unique cultural identity<sup>6</sup>. Unlike cultural competence, cultural safety is patient-defined and dynamic, requiring clinicians to continually adapt their approach based on the needs and perspectives of those receiving care<sup>7</sup>.

To meaningfully embed cultural safety within health curricula, educational institutions must ensure that it is explicitly incorporated into learning outcomes, supported by targeted teaching activities, and evaluated through appropriate assessment. Without this alignment, the integration of cultural safety risks becoming tokenistic or symbolic rather than substantive and transformative<sup>8</sup>.

Frameworks already exist in Australia to enable health disciplines to track and map the inclusion of cultural safety content<sup>9,10</sup>. The Aboriginal and Torres Strait Islander Health Curriculum Framework (to be referred as the Framework)<sup>11</sup>, was the tool that was utilised in this mapping exercise and was developed by the Federal government explicitly to be used for this purpose. It has 8 underlying principles (listed in Table 1) that govern how First Nations people should be utilised in curriculum development and that First Nations content should be covered in order for students to understand that First Nations issues are not surface level, and cultural safety education is a journey and process that students need to undertake.

The Sydney Pharmacy School has recently undertaken a major curriculum renewal process. Recognising the centrality of cultural safety to effective and ethical pharmacy practice, this paper aims to critically examine how cultural safety is embedded within the first two years of the revised curriculum. Specifically, it investigates whether cultural safety-related learning outcomes are adequately mapped to relevant teaching content and assessment tasks, and whether this alignment is consistent with the principles outlined in the Aboriginal and Torres Strait Islander Health Curriculum Framework. Through a process of constructive alignment, this study evaluates the curriculum's current capacity to prepare graduates for culturally safe practice and identifies areas for improvement and further development.

## **Methods:**

### Setting

This study was conducted at the University of Sydney and focused on the new Bachelor of Pharmacy (Honours) and Master of Pharmacy Practice program; a five-year, integrated degree with an approximate 300 students currently enrolled in the first and second years. At the time of analysis, only the first two years of the revised curriculum had been fully implemented and delivered. Accordingly, this study is limited to an evaluation of the pharmacy-specific units taught in Years 1 and 2 of the degree. Units of study within the program vary in value, comprising either 6 or 12 credit points, with credit points serving as a measure of workload and instructional intensity. A single credit point should equate notionally to a minimum expectation of 1.5 – 2 hours of student effort per week for units of study offered over a semester, inclusive of class time, readings, and assessment preparation<sup>12</sup>. Each unit is coordinated by a Unit of Study Coordinator, and in larger or more content-heavy units, a Co-Coordinator may also be appointed to support the delivery, administration, and academic oversight of the unit.

### Identification of Explicit and Implicit Learning Outcomes

To examine how cultural safety was embedded into the curriculum, unit-level learning outcomes were accessed via Akari, the University of Sydney's internal curriculum management system. For each unit of study, all Intended Learning Outcomes (ILOs) were extracted and examined for references to Aboriginal and Torres Strait Islander health or cultural safety. Where such terms appeared directly in the learning outcome, they were coded as Explicit (E). If cultural safety was not directly mentioned in the ILO but the outcome was mapped to an Australian Pharmacy Council (APC) standard that included cultural safety requirements, it was coded as Implicit (I). These classifications were tabulated in a Supplementary Table, allowing for a comparative overview of how cultural safety appeared across the different units either as a direct curricular priority or as an embedded competency inferred through broader accreditation standards.

### Content and Assessment Mapping

A second table (Table 1) was developed to evaluate constructive alignment by mapping content and assessment tasks against the Aboriginal and Torres Strait Islander Health Curriculum Framework. This table cross-referenced: Identified explicit or implicit learning outcomes; Teaching content (lectures, tutorials, workshops); Assessment tasks (e.g., multiple-choice questions, short-answer questions, attendance-based workshops). To support this mapping process, publicly available unit outlines from the University of Sydney's course webpage were reviewed to identify which ILOs corresponded to which teaching and assessment components. Further exploration of each unit's Canvas learning management system site enabled a more granular analysis of the actual content delivered such as lecture slides, workshop activities, and supporting materials with a focus on identifying explicit references to cultural safety and Indigenous health.

As the analysis involved review of internal curriculum documents and course materials but did not involve human participants or personal data, ethics approval was not required.

However, all data were accessed in accordance with institutional permissions and privacy protocols.

### **Results:**

In the new pharmacy degree, there are currently seven units of study explicitly delivered by the pharmacy school in the first and second years. In the first year, these include **PHAR1911** Fundamentals of Pharmacy, **PHAR1921** Pharmaceutics and Pharmacy Practice, and **PHAR1922** How Drugs Work. In the second year, the units comprise **PHAR2911** Pharmaceutics and Professional Practice, **PHAR2912** Therapeutic Principles, **PHAR2921** Infectious Diseases, and **PHAR2922** Respiratory. The number of Explicit and Implicit learning outcomes are summarised in Table 2.

The extent to which cultural safety was embedded varied across these units. Units were evaluated on three criteria: 1. whether cultural safety was mentioned in the Intended Learning Outcomes (ILOs) or the APC learning outcomes, 2. whether content related to cultural safety was delivered, and 3. whether this content was assessed. This alignment was further compared against the Aboriginal and Torres Strait Islander Health Curriculum Framework to determine which principles, if any, were addressed. This has been tabulated and can be seen in Table 1

**PHAR1911:** contained 10 ILOs with 2 implicit LOs mapped to cultural safety. LO6 was mapped to a lecture titled Introduction to First Nations People, Culture, and Worldview, aligning with Framework Principles 1 and 6, however LO9 which implicitly mapped to the APC had no First Nations content, activity, or assessment. Even the content aligned with

LO6, was not assessed in examinations or other assessment tasks. Therefore, we deem that overall, the First Nations content in this unit is not constructively aligned.

**PHAR1921:** contained 10 ILOs with 3 implicit LOs mapped to cultural safety. LO6 was mapped to lectures on First Nations health, cultural safety, parasitic infections, and culturally competent communication. LO7 aligned with an introductory lecture on the Pharmaceutical Benefits Scheme (PBS). These aligned with Principles 1, 4, 6, and 7 of the Framework. No exam questions were however identified, although there was one compulsory attendance workshop (Race, Racism, and Privilege in Health). We conclude that PHAR 1921 has minimal alignment.

**PHAR1922:** contained 10 ILOs with 1 implicit LO mapped to cultural safety. LO4 was mapped to a lecture on bush medicine and LO5 to a lecture on Kangaroo apple extract, addressing Principles 1, 5, and 6 of the Framework. One multiple choice question (MCQ) was included in the final exam. We conclude this unit has minimal constructive alignment.

**PHAR2911:** contained 15 ILOs with 2 explicit and 2 implicit LO's mapped to cultural safety. Cultural content included lectures on Indigenous health, mental health, diabetes, depression, asthma, and cardiovascular disease, mapped to multiple ILOs (including LO5, 8, 10, and 13). Tutorials included an Indigenous health case and an Ear & Hearing session. These addressed Framework Principles 3, 4, 5, and 6. Exam content included both MCQs and short-answer questions (SAQs). We conclude this unit has some constructive alignment.

**PHAR2912:** contained 8 ILOs with 1 implicit LO mapped to cultural safety. No First Nations content, or assessment however was identified, hence we conclude there is no constructive alignment of First Nations content in this unit.

**PHAR2921:** contained 13 ILOs with 1 explicit LO mapped to cultural safety. LO9 was mapped to a lecture on Antimicrobials in Indigenous Australians, which was assessed via MCQs. Minimal constructive alignment was concluded.

**PHAR2922:** contained 15 ILOs with 2 explicit LOs mapped to cultural safety. However, no First Nations content was identified and hence no alignment was concluded.

### Principles addressed in The Aboriginal and Torres Strait Islander Health Curriculum

#### Framework

Across the curriculum, Framework Principles 5 and 6 were most addressed. These principles focus on the influence of broader social and cultural determinants of health and the need for a holistic approach to healthcare. Principle 1, which focuses on recruiting First Nations people was addressed in a limited capacity primarily through guest lectures by First Nations educators. Other principles, particularly those related to partnerships, advocacy, and cultural capability development (i.e., Principles 2, 3, 7), were largely absent from the mapped content.

#### **Discussion:**

This study presents a novel and systematic approach to examining the extent to which cultural safety is constructively aligned within a newly developed pharmacy curriculum. By mapping learning outcomes, associated content, and corresponding assessment tasks against the principles of the Aboriginal and Torres Strait Islander Health Curriculum Framework, this process offers a detailed insight into not only what is formally included in the curriculum, but also how consistently and meaningfully that content is implemented. This type of curriculum mapping and alignment analysis is increasingly being used in health education to identify gaps between policy commitments and actual pedagogical practice<sup>13,14</sup>, similar to methods employed in curriculum evaluations in medical and nursing education. This process reveals not just the presence of culturally relevant content, but its pedagogical weight and structural

integration key factors in determining whether students are likely to engage with, internalise, and apply the knowledge in professional settings.

Compared to earlier studies which primarily relied on document analysis or interviews with faculty<sup>15</sup>, this paper employs a direct, framework-based alignment approach inspired by Biggs' constructive alignment model<sup>16</sup>, providing a more granular view of how intentions translate into actual learning experiences. Constructive alignment has been widely endorsed for its capacity to promote coherence and transparency in curriculum design<sup>17,18</sup> and has been increasingly applied in health sciences education to align teaching strategies with both competency standards and principles of social accountability. However, while constructive alignment is conceptually straightforward, its implementation particularly for complex and reflexive learning domains like cultural safety can be inconsistent in practice.

A notable pattern observed during the mapping process was the repetition of similar, and in some cases identical, learning outcomes across multiple units of study particularly those referencing cultural safety or culturally capable communication. On the surface, this may be interpreted positively: it reflects an attempt to embed cultural safety as a recurring theme throughout the curriculum, reinforcing key concepts across multiple contexts and reinforcing vertical integration. Repetition of learning outcomes can support spiral curriculum design principles, where foundational knowledge is revisited and expanded upon in more complex or applied ways over time<sup>17</sup>. However, viewed more critically, this duplication may also represent a strategic but superficial response to accreditation requirements, particularly those set by the APC, which mandate inclusion of content related to Aboriginal and Torres Strait Islander health and cultural safety.

By replicating a small number of generic learning outcomes across several units for instance, outcomes focused on culturally appropriate communication or teamwork, the program can

technically demonstrate compliance with APC standards without necessarily ensuring that cultural safety is meaningfully taught, contextualised, or assessed in a diverse and evolving manner. In this sense, duplication risks functioning as a curricular shortcut: a way of ‘ticking boxes’ to meet external requirements without the corresponding depth or contextualisation that cultural safety education demands. This is particularly concerning given the relational, situated, and reflective dimensions of cultural safety, which cannot be adequately conveyed through static or generic outcomes alone<sup>7</sup>.

Moreover, when identical outcomes are used in multiple units without differentiated assessment tasks or context-specific learning activities, students may perceive the content as repetitive or tokenistic. This can contribute to disengagement, especially if students do not see a clear progression or increasing complexity in how cultural safety is addressed across the curriculum. From a curriculum design perspective, the repeated use of outcomes should be intentional and scaffolded not merely replicated to ensure that students are building toward more nuanced understandings and applications of cultural safety principles. While aligning with accreditation is necessary, the overuse of shared outcomes highlights the need for greater curricular integrity, where learning outcomes are tailored to the specific aims, content, and level of each unit, and contribute meaningfully to the development of culturally responsive pharmacy graduates.

An important observation that emerged from the curriculum mapping process was the frequency with which content was mapped to a wide range of learning outcomes, but with very limited corresponding assessment. This disconnect between what is taught and what is assessed is of particular concern within the framework of constructive alignment. One of the foundational principles of Biggs’ model is that intended learning outcomes, teaching and learning activities, and assessment tasks must be deliberately and coherently aligned.

According to Biggs, learning is most effective when students are made explicitly aware of

what is expected of them, are given opportunities to engage with the content in meaningful ways and are assessed on those same expectations. If content is taught but not assessed, the alignment breaks down. This undermines not only the internal coherence of the curriculum but also the perceived value of that content in the eyes of students. Learners tend to strategically allocate their time and cognitive effort toward what they know will be assessed. When assessment fails to capture the full scope of intended learning, it sends an implicit message that some areas of content are optional, secondary, or irrelevant. This can lead to the development of gaps in knowledge, especially in programs such as pharmacy, where the curriculum is already dense and highly integrated, and where overlooking certain concepts could have real-world consequences for patient care and professional practice. Furthermore, failure to assess mapped content may contribute to what Biggs describes as “surface learning,” where students focus on passing exams rather than deeply understanding and applying knowledge. If alignment is to be more than a theoretical ideal, curriculum designers must take seriously the need to ensure that every mapped learning outcome is meaningfully and proportionately assessed. This does not necessarily require exhaustive testing of every detail, but rather thoughtful integration of content into authentic and strategically designed assessment tasks that reflect the broader competencies expected of graduates. In the context of culturally safe pharmacy practice, this is particularly critical. Omitting the assessment of content related to Aboriginal and Torres Strait Islander health, for example, not only diminishes its perceived importance but risks perpetuating a curriculum that lacks accountability in developing socially responsive practitioners. Thus, constructive alignment is not merely a technical exercise in curriculum design it is a values-based commitment to ensuring that what we teach, and what we claim to value, is genuinely reflected in how students are assessed and how learning is reinforced.

During the process of aligning learning outcomes, content, and assessment criteria, several concerning patterns emerged. One notable issue was the misalignment between stated learning outcomes and the actual content delivered within units of study. Cultural safety was at times mapped to a generic outcome (e.g., “LO1”), yet upon closer inspection, the relevant content was either aligned with a different outcome that did not adequately encapsulate the principles of cultural safety or was omitted from formal mapping entirely. This kind of misalignment undermines the coherence of the curriculum and poses multiple challenges for both students and educators. For students, the inability to trace a clear line from learning outcomes to taught content and subsequent assessment creates confusion, potentially leading to disengagement and superficial learning. Students may struggle to understand what is expected of them or may deprioritise key areas of content such as cultural safety if these are not clearly reinforced through aligned assessment.

For educators, the lack of internal consistency in outcome mapping can similarly create confusion, particularly when they are tasked with designing learning activities and assessments that reflect curriculum-level objectives. This burden is compounded when the misalignment stems from structural or institutional oversight rather than individual teaching practice. Most concerning, however, was the discovery that in specific cases, learning outcomes explicitly referencing cultural safety had been created but were not mapped to any specific content or assessment tasks. This disconnect is deeply problematic from both an educational and ethical standpoint. In discussions with unit coordinators during curriculum development, it was revealed that while requests for assistance and culturally relevant content were made and in many cases such content was provided, this material was either excluded from the final version of the unit or not embedded into the teaching program for other, unspecified reasons. The result is that cultural safety appears in the curriculum on paper, but not in practice.

This symbolic inclusion risks reinforcing a performative approach to cultural safety, where the presence of a learning outcome gives the illusion of integration without ensuring students engage with or are assessed on the material. Such inconsistencies not only hinder constructive alignment but also jeopardise the development of culturally responsive graduates. In professional degrees such as pharmacy, where culturally safe practice is critical, ensuring that learning outcomes are meaningfully supported by both content and assessment is not optional: it is a pedagogical and ethical imperative. These findings highlight the need for more robust oversight mechanisms and collaborative curriculum design processes that ensure all declared outcomes, particularly those tied to cultural safety, are substantively addressed.

During the process of aligning assessments particularly final examinations with the intended learning outcomes and taught content, further issues of inconsistency were identified. It is expected and, indeed, pedagogically appropriate for specific exam questions to vary from cohort to cohort, both to ensure academic integrity and to encourage comprehensive learning rather than rote memorisation of past papers. However, the concern identified was not simply variation in the questions themselves, but rather the complete omission of certain core content areas in replacement exams. Of particular concern was the inconsistent inclusion of cultural safety content. In some cases, students were assessed on cultural safety, reinforcing its relevance and encouraging engagement with the material throughout the semester. In other instances, this content was excluded entirely from assessment, despite being part of the formally taught curriculum and mapped learning outcomes.

This inconsistency has significant implications. Firstly, it undermines the principle of constructive alignment, which relies on the integrated relationship between what students are expected to learn (learning outcomes), how they are supported in learning it (teaching activities and content), and how their achievement is measured (assessments). When students are not assessed on specific content particularly content of high professional and social

relevance such as cultural safety it risks sending mixed signals about its importance. Students are strategic learners, and in the absence of assessment, some may deprioritise or disregard this content altogether. This creates inequity within the cohort, where some students leave the unit with reinforced understanding of culturally safe practices while others may not engage with the material to the same extent.

This selective assessment practice can have downstream impacts on student perceptions and future professional conduct. Cultural safety should not be treated as an optional or peripheral topic in pharmacy education; it is a foundational component of ethical and effective practice. Inconsistently assessing this content diminishes its perceived value and can contribute to a culture of tokenism, where cultural safety is viewed as supplementary rather than integral to clinical competence. These findings underscore the necessity of ensuring not only that content is taught and mapped to appropriate outcomes, but that it is also consistently and meaningfully assessed across all iterations of a unit. In doing so, educators can uphold the integrity of the curriculum, support equitable student learning, and reinforce the essential nature of cultural safety in health professional education.

Another issue that emerged during the curriculum mapping and alignment process was the treatment of certain assessments, particularly those related to cultural safety, as ‘barrier tasks’ with no associated weighting. While barrier tasks can serve an important function in ensuring that essential competencies are achieved (e.g., pass/fail requirements for professional practice), the decision to assign no weighting to these tasks can have unintended and concerning consequences. Within the framework of constructive alignment, assessment is not merely a mechanism for grading, but a central tool that signals the importance of content and drives student learning. When cultural safety content is assessed only through non-weighted tasks, it risks being perceived as peripheral or symbolic rather than integral to the learning

outcomes of the unit. This sends mixed messages to students about the value of this content and its relevance to their professional identity and future practice.

From a student perspective, summative assessments are often deprioritised, particularly in high-stakes or time-pressured academic environments<sup>19</sup>. Students tend to focus their efforts on tasks that directly impact their grades, and unless a barrier task is clearly framed as essential to progression or graduation, it may not receive the attention or depth of engagement it warrants<sup>20</sup>. Even when students do complete these tasks, the lack of weighting may lead to minimal effort, superficial responses, or performative engagement particularly problematic when the task pertains to concepts such as cultural safety, which require critical reflection, empathy, and personal growth. Additionally, the lack of weighting undermines the perceived legitimacy of cultural safety as a rigorous and assessable component of the curriculum, reinforcing the false dichotomy between “soft skills” and “core clinical knowledge.”<sup>21</sup>

This issue also affects educators, who may struggle to justify allocating teaching time and support to content that is not formally weighted in assessment. When cultural safety is siloed into pass/fail tasks rather than integrated into major assessments, it may become harder to embed it meaningfully into the broader learning experience. Ultimately, the use of non-weighted barrier tasks for culturally significant content reflects a disconnect between institutional commitments to cultural safety and actual teaching practice. To uphold the principles of constructive alignment and educational equity, cultural safety content should be treated with the same academic seriousness as other critical areas reflected through both assessment design and weighting.

Inadvertently, whilst undertaking this mapping project, it was discovered that many units of study far exceeded the number of learning outcomes recommended by Biggs. John Biggs’

framework of constructive alignment, which underpins much of contemporary curriculum design in higher education, emphasizes the importance of aligning learning activities and assessment tasks with clearly articulated Intended Learning Outcomes (ILOs). In his paper *"Aligning Teaching for Constructing Learning"*, Biggs recommended no more than five to six ILOs per unit<sup>22</sup>. This guidance is based on the understanding that too many outcomes can undermine clarity and coherence, leading students to engage in surface learning strategies prioritising memorisation or box-ticking rather than developing a deep understanding of core concepts. Moreover, the assessment design becomes more difficult to manage, increasing the likelihood that some outcomes such as cultural safety are under-assessed or entirely overlooked. This weakens the alignment at the heart of Biggs' model. The curriculum can also become fragmented, with teaching sessions lacking cohesion. This is particularly problematic in professional programs like pharmacy, where integration of knowledge is critical to practice-readiness. During the mapping of the University of Sydney pharmacy curriculum, many units were found to contain more than double the recommended number of ILOs, in some cases upwards of 12 to 15. While this may reflect a desire to capture a broad range of skills, it inadvertently dilutes curricular focus and adds complexity to assessment alignment. It also places a cognitive burden on students, who must navigate numerous objectives without a clear sense of priority. Reducing the number of ILOs is not about lowering standards but rather enhancing strategic focus and integrative potential. By concentrating on fewer, more thoughtfully constructed outcomes, educators can better design tasks that promote higher-order thinking, reflective practice, and professional competence. As part of constructive alignment, curriculum teams are encouraged to critically review and consolidate existing ILOs, ensuring each is assessable, meaningful, and aligned to broader program-level capabilities. This is especially important in pharmacy, where practice-based competencies and culturally safe care are essential.

By using this alignment methodology specifically to evaluate cultural safety, this study adds a new layer to the existing literature. Whereas many curriculum evaluations highlight the inclusion of cultural content<sup>23</sup>, fewer assess how that content is distributed across learning outcomes and assessments. The findings here suggest that inclusion alone is insufficient without thoughtful alignment and reinforcement through assessment and highlights important content such as cultural safety may be perceived as optional or peripheral. This reinforces critiques in the literature that tokenistic inclusion of Indigenous content persists in many curricula<sup>24</sup> and highlights the importance of integrated approaches that reflect both pedagogical integrity and ethical responsibility.

A key limitation of this study is its moment in time. The analysis presented here focuses on the first and second years of a newly introduced pharmacy curriculum, which, at the time of writing, have only been implemented for 1-2 academic years. As such, the findings must be understood as a snapshot of a curriculum in its early stages of development and operationalisation. Curriculum development is inherently iterative; it inevitably evolves through cycles of implementation, evaluation, feedback, and revision. This is especially true for large-scale curricular reforms in health education, which often require several years of continuous refinement before achieving their intended outcomes in full<sup>17</sup>.

It is therefore plausible that some of the misalignments, omissions, or inconsistencies identified in this paper, particularly those related to the integration and assessment of cultural safety may already be in the process of being addressed by the curriculum leaders. Indeed, as teaching teams gain experience with the new curriculum, and as feedback is gathered from students, staff, professional bodies, and accreditation agencies, adjustments are likely to occur. This may include the refinement of Intended Learning Outcomes, the incorporation of new teaching materials, improved assessment strategies, or deeper engagement with the principles of the Aboriginal and Torres Strait Islander Health Curriculum Framework.

Institutional responsiveness, especially when driven by equity-focused mandates or accreditation requirements, can lead to significant curriculum shifts over relatively short periods.

Moreover, the broader educational and sociopolitical context is also evolving. Increased national focus on Indigenous health equity, strengthened calls for decolonising health curricula, and professional guidelines requiring cultural safety training may exert additional pressure on programs to embed cultural safety more consistently and meaningfully. As such, the critiques offered in this paper should not be read as definitive or static, but rather as part of an ongoing quality improvement process. They provide a valuable baseline against which future iterations of the curriculum can be measured.

Future work should involve extending the curriculum mapping process to the later years of the pharmacy program to determine whether improvements in cultural safety integration occur over time. Longitudinal studies could help track whether gaps identified in this early-stage evaluation are addressed through iterative curriculum revisions. Additionally, incorporating student, educator and Indigenous perspectives through qualitative methods such as focus groups or reflective surveys or yarning circles would offer richer insight into how cultural safety is experienced and enacted in practice, beyond what formal documentation reveals. Finally, developing and trialling culturally responsive assessment tools could support more meaningful evaluation of student learning in this area.

### **Conclusion:**

Constructive alignment is an effective systematic way of mapping out a pharmacy curriculum to determine if learning outcomes meet content being taught and then if that content is being assessed. In this paper we used the Aboriginal and Torres Strait Health curriculum framework to determine if content being taught aligns to any of the principles, and it only appears to be

covering principles 5 and 6, while sometimes incorporating principles 1 and 4. From this we can determine that the pharmacy curricula at the university of Sydney whilst having learning outcomes linked to the APC's own accreditation document and in passing sometimes the Health Framework, it is not constructively aligned in a meaningful way, with content added but not assessed or learning outcomes added with no content assigned to them.

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Aboriginal and Torres Strait Islander Health Curriculum Framework Principles: **Table 1**

Principle 1	Leadership at all levels is key to supporting effective implementation of Aboriginal and Torres Strait Islander health curricula
Principle 2	Respectful partnerships and collaboration with shared responsibility between Aboriginal and Torres Strait Islander and non-Indigenous people are required in curriculum design and implementation
Principle 3	The process of learning is equally as important as content
Principle 4	Self-reflexivity and humility develop respectful health care practice
Principle 5	Holistic health service delivery is essential
Principle 6	Local context and diversity must be recognised
Principle 7	Development of intercultural capabilities is a lifelong learning journey
Principle 8	Ongoing professional development and professional support for Aboriginal and Torres Strait Islander and non-Indigenous educators is essential

Unit of study: Phar1911												Aligned
Learning outcome	Description	P1	P2	P3	P4	P5	P6	P7	P8	Assessment		
LO6: Communicate effectively and appropriately, in a culturally capable manner with peers, university staff and health professionals.	Introduction to First Nations Peoples, culture and health worldview	✓	x	x	x	x	✓	x	x	No exam content	No	
LO9: Work effectively and cooperatively as a member of a learning team.	No content mapped	x	x	x	x	x	x	x	x	N/A		

Unit of study: Phar1921												Aligned
Learning outcome	Description	P1	P2	P3	P4	P5	P6	P7	P8	Assessment		
LO6: Communicate effectively and appropriately in a culturally capable manner with patients, families, carers and other health professionals.	Lectures: First Nations Health lecture, social accountability lecture, ethically and culturally competent communication lecture, parasitic infections lecture	✓	x	x	✓	x	✓	x	x	No content	Minimal Alignment	
LO7: Identify, access and process appropriate sources of evidence-based clinical information and effectively communicate the relevant information.	Lectures: introduction to the pbs	x	x	x	x	x	✓	x	x	Compulsory Racism workshop		
LO14: Work effectively and cooperatively as a member of a learning team.	No content	x	x	x	x	x	x	x	x	N/A		

Unit of study: Phar1922											
Learning outcome	Description	P1	P2	P3	P4	P5	P6	P7	P8	Assessment	Aligned
LO10: Work effectively and cooperatively as a member of a learning team.	No content	x	x	x	x	x	x	x	x	N/A	Some alignment, but not documented accurately
LO4: Identify the sources of drugs, the way they are discovered and designed, purified, characterised and analysed, and their physicochemical properties.	Bush medicines lecture	✓	x	x	x	✓	✓	x	x	MCQ exam content Which of these is the most accurate description of First Nations' Australians view of health?	
LO5: Explain the pharmacological mechanism of action and the interaction of drugs with their targets.	Kangaroo extract lecture	✓	x	x	x	✓	✓	x	x	No assessment content	

Unit of study: Phar2911											
Learning outcome	Description	P1	P2	P3	P4	P5	P6	P7	P8	Assessment	Aligned
LO5 Identify, access and process appropriate sources of evidence-based information and effectively communicate the relevant information	common ear conditions, introduction to depression, introduction to asthma, introduction to cv health, ear & hearing tutorial	x	x	x	x	✓	✓	x	x	Exam SaQ and McQ Hospitalisation rates for Indigenous Australians with cardiovascular disease are higher and commence at a younger age.	Some alignment
LO8 Recognise the presence and causes of health inequities and disparities and describe their impact on different patient populations including Aboriginal and Torres Strait Islander peoples.	introduction to mental health, introduction to depression, introduction to asthma, introduction to cv health, indigenous health lecture, indigenous health tutorial, ear & hearing tutorial	x	x	✓	✓	✓	✓	x	x	Describe THREE factors that contribute to this Which organ is 2.4 times more likely to have issues causing hospitalisation for Indigenous	Some content in course not mapped to LO but included in exam
LO10 Communicate effectively and appropriately in a culturally capable manner with patients, families, carers and other health professionals.	common ear conditions, ear & hearing tutorial	x	x	x	x	✓	x	x	x		
LO13 Work effectively and cooperatively as a member of a learning and/or working team.	ear & hearing tutorial	x	x	x	x	✓	x	x	x		

Unit of study: Phar2912	Description										Aligned
Learning outcome	P1	P2	P3	P4	P5	P6	P7	P8	Assessment		
LO7 Apply knowledge of therapeutic principles to communicate and provide appropriate information to patients and other health professionals.	x	x	x	x	x	x	x	x	N/A	No	

Unit of study: Phar2921										Aligned	
Learning outcome	Description	P1	P2	P3	P4	P5	P6	P7	P8	Assessment	
LO9: Communicate effectively and appropriately, in a culturally capable manner with patients, families, carers and other health professionals.	Antimicrobials in indigenous Australians lecture	x	x	x	x	x	✓	x	x	MCQ exam questions. E.g. How might the pharmacokinetics of antimicrobials differ in Australian Aboriginal populations compared to non-Indigenous Australian populations? Why is the use of antimicrobials higher among rural and remote Australian Aboriginal communities compared to non-Indigenous Australian populations?	Some Alignment

Unit of study: Phar2922											Assessment	Aligned
Learning outcome	Description	P1	P2	P3	P4	P5	P6	P7	P8			
LO4: Communicate effectively and appropriately in a culturally capable manner with patients, families, carers and other health professionals.	No content	x	x	x	x	x	x	x	x		N/A	No
LO6: Demonstrate appropriate skills for interacting with Aboriginal and Torres Strait Islander patients, families and carers in a way which fosters cultural awareness and respect.	No content	x	x	x	x	x	x	x	x			

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Principle 1	Leadership at all levels is key to supporting effective implementation of Aboriginal and Torres Strait Islander health curricula
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Principle 6	Local context and diversity must be recognised
Principle 7	Development of intercultural capabilities is a lifelong learning journey
Principle 8	Ongoing professional development and professional support for Aboriginal and Torres Strait Islander and non-Indigenous educators is essential

Unit of study: Phar1911												Aligned
Learning outcome	Description	P1	P2	P3	P4	P5	P6	P7	P8	Assessment		
LO6: Communicate effectively and appropriately, in a culturally capable manner with peers, university staff and health professionals.	Introduction to First Nations Peoples, culture and health worldview	✓	x	x	x	x	✓	x	x	No exam content	No	
LO9: Work effectively and cooperatively as a member of a learning team.	No content mapped	x	x	x	x	x	x	x	x	N/A		

Unit of study: Phar1921												Aligned
Learning outcome	Description	P1	P2	P3	P4	P5	P6	P7	P8	Assessment		
LO6: Communicate effectively and appropriately in a culturally capable manner with patients, families, carers and other health professionals.	Lectures: First Nations Health lecture, social accountability lecture, ethically and culturally competent communication lecture, parasitic infections lecture	✓	x	x	✓	x	✓	x	x	No content	Minimal Alignment	
LO7: Identify, access and process appropriate sources of evidence-based clinical information and effectively communicate the relevant information.	Lectures: introduction to the pbs	x	x	x	x	x	✓	x	x	Compulsory Racism workshop		
LO14: Work effectively and cooperatively as a member of a learning team.	No content	x	x	x	x	x	x	x	x	N/A		

Unit of study: Phar1922											
Learning outcome	Description	P1	P2	P3	P4	P5	P6	P7	P8	Assessment	Aligned
LO10: Work effectively and cooperatively as a member of a learning team.	No content	x	x	x	x	x	x	x	x	N/A	Some alignment, but not documented accurately
LO4: Identify the sources of drugs, the way they are discovered and designed, purified, characterised and analysed, and their physicochemical properties.	Bush medicines lecture	✓	x	x	x	✓	✓	x	x	MCQ exam content Which of these is the most accurate description of First Nations' Australians view of health?	
LO5: Explain the pharmacological mechanism of action and the interaction of drugs with their targets.	Kangaroo extract lecture	✓	x	x	x	✓	✓	x	x	No assessment content	

Unit of study: Phar2911												Aligned
Learning outcome	Description	P1	P2	P3	P4	P5	P6	P7	P8	Assessment		
LO5 Identify, access and process appropriate sources of evidence-based information and effectively communicate the relevant information	common ear conditions, introduction to depression, introduction to asthma, introduction to cv health, ear & hearing tutorial	x	x	x	x	✓	✓	x	x	Exam SaQ and McQ Hospitalisation rates for Indigenous Australians with cardiovascular disease are higher and commence at a younger age.	Some alignment	
LO8 Recognise the presence and causes of health inequities and disparities and describe their impact on different patient populations including Aboriginal and Torres Strait Islander peoples.	introduction to mental health, introduction to depression, introduction to asthma, introduction to cv health, indigenous health lecture, indigenous health tutorial, ear & hearing tutorial	x	x	✓	✓	✓	✓	x	x	Describe THREE factors that contribute to this Which organ is 2.4 times more likely to have issues causing hospitalisation for Indigenous	Some content in course not mapped to LO but included in exam	
LO10 Communicate effectively and appropriately in a culturally capable manner with patients, families, carers and other health professionals.	common ear conditions, ear & hearing tutorial	x	x	x	x	✓	x	x	x			
LO13 Work effectively and cooperatively as a member of a learning and/or working team.	ear & hearing tutorial	x	x	x	x	✓	x	x	x			

Unit of study: Phar2912	Description										Aligned
Learning outcome	P1	P2	P3	P4	P5	P6	P7	P8	Assessment		
LO7 Apply knowledge of therapeutic principles to communicate and provide appropriate information to patients and other health professionals.	x	x	x	x	x	x	x	x	N/A	No	

Unit of study: Phar2921										Aligned	
Learning outcome	Description	P1	P2	P3	P4	P5	P6	P7	P8	Assessment	
LO9: Communicate effectively and appropriately, in a culturally capable manner with patients, families, carers and other health professionals.	Antimicrobials in indigenous Australians lecture	x	x	x	x	x	✓	x	x	MCQ exam questions. E.g. How might the pharmacokinetics of antimicrobials differ in Australian Aboriginal populations compared to non-Indigenous Australian populations? Why is the use of antimicrobials higher among rural and remote Australian Aboriginal communities compared to non-Indigenous Australian populations?	Some Alignment

Unit of study: Phar2922											Assessment	Aligned
Learning outcome	Description	P1	P2	P3	P4	P5	P6	P7	P8			
LO4: Communicate effectively and appropriately in a culturally capable manner with patients, families, carers and other health professionals.	No content	x	x	x	x	x	x	x	x	x	N/A	No
LO6: Demonstrate appropriate skills for interacting with Aboriginal and Torres Strait Islander patients, families and carers in a way which fosters cultural awareness and respect.	No content	x	x	x	x	x	x	x	x	x		

**Table 2**

<b>Unit of Study</b>	<b>Total ILO</b>	<b>Total relevant ILO</b>
Phar1911 <b>Fundamentals of Pharmacy</b> CP-12	14	2 (Implicit)
Phar1921 <b>Pharmaceutics and Pharmacy Practice</b> CP-12	10	3 (Implicit)
Phar1922 <b>How Drugs Work</b> CP-12	10	1 (Implicit)
Phar2911 <b>Pharmaceutics and Professional Practice</b> CP-12	15	2 (Explicit) 2 (Implicit)
Phar2912 <b>Therapeutic Principles</b> CP-12	8	1 (implicit)
Phar2921 <b>Infectious Diseases</b> CP-6	13	1 (Explicit)
Phar2922 <b>Respiratory</b> CP-6	15	2 (Explicit)

ILO-Intended Learning Outcomes

CP-Credit Points

**Chapter 7 - What does Community Want? - A  
Qualitative Study of how the pharmacy profession  
should walk with First Nations Australians**

# **What does Community Want? - A Qualitative Study of how the pharmacy profession should walk with First Nations Australians**

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**Abstract:** 145

**Manuscript:** 6273

**Tables:** 0

**Supplementary Material:** 2

**Ethics approval and consent to Participate:** Ethical approval was obtained from the University of Sydney Human Research Ethics Committee **2022/357** and the NSW Aboriginal Health and Medical Research Council **1944/22**. Written informed consent was obtained from all participants.

## **Abstract**

**Background:** First Nations people whilst having a rich culture and connection to land, health disparities have arisen for several reasons. Little is known about how First Nations people view the pharmacy profession and the way it impacts their wellbeing and regards their cultural needs.

**Methods:** Semi-structured interviews (n=30) were conducted. Interviews were audio-recorded and transcribed. Transcripts were then thematically coded through an inductive approach.

**Results:** Themes were identified about community issues such as issues with communication to patients, and systemic failings of the sector through racism and discrimination. Despite these failings, community members openly expressed their thoughts of how the pharmacy sector can begin to mend these shortcomings.

**Conclusions:** The pharmacy profession and teaching institutions need to spend more time and effort consulting with First Nation communities to receive their input about what affects them and take these considerations to heart to start implementing change

**Keywords:** Pharmacy, First Nations perspectives, Community Involvement, Pharmacy Curricula

## **Introduction:**

Aboriginal and Torres Strait Islander people have resided in the land now known as Australia for 60,000 years plus, with strong ties to the land and a strong tradition that has lasted for millennia<sup>1</sup>. Up until the time of colonisation Aboriginal and Torres Strait Islander people were thriving with their own ways of life including their own healthcare traditions and treatments<sup>2</sup>. Unfortunately, the events following colonisation have led to dramatic changes in the way traditional healthcare practices are provided and unfortunately have led to several factors that have negatively affected Aboriginal and Torres Strait Islander Peoples' health and access to healthcare services and treatment<sup>3</sup>. Whilst efforts to improve access to healthcare have been made, to create systems that do not lock out First Nations people, such as Aboriginal Community Controlled Health Organisations (ACCHOs)<sup>4</sup>, there are not enough ACCHOs and other Aboriginal controlled systems spread throughout Australia to service all communities<sup>5</sup>. This therefore means that that available and accessible health services such as pharmacies, and general medical practices should and must service these communities. Unfortunately, however, these services have not always been considered as culturally safe<sup>6</sup>.

Pharmacy is a key player in the healthcare system<sup>7</sup> with 5935 community pharmacies at time of writing<sup>8</sup> as well as many pharmacy departments in Australian hospitals<sup>9</sup>. To train pharmacists in this country there are 19 pharmacy schools that offer several programs from Bachelor to Master of Pharmacy degrees. Additionally, Australia also recruits pharmacists from overseas where they undertake an exam and supervised practise to be certified in the country<sup>10</sup>.

First Nations people live in all corners of this country with significant populations ranging from city suburbs to remote and rural areas<sup>11</sup>. Community pharmacies are the most accessible healthcare destination, found in most metropolitan and rural environments<sup>12</sup>, with people living on average 2.5km from a community pharmacy<sup>13</sup>. Despite this proximity, there is a lack of literature on how the pharmacy profession works with Australia's First Nation communities and no current data on how culturally safe First Nations people feel seeking care in a pharmacy. Research into Pharmacy School leaders' actions to teach First Nations health curricula highlighted gaps in cultural safety training of

graduates, and therefore this research aimed to gather the perspectives of First Nations communities of the pharmacy sector and how the sector can work together to close gaps identified.

### **Methods:**

Ethics to conduct this study was approved by the University of Sydney HREC **2022/357** and NSW AH&MRC **1944/22**. Expressions of interest to participate in a study interview were sent out via email, word of mouth or through intermediary sources to Aboriginal and/or Torres Strait Islander People from various backgrounds, and education status to gather a wide variety of views and experiences of First Nations people's interactions with the healthcare system and pharmacists and pharmacies.

An interview guide was developed by AB with the help of a steering committee. These questions looked at: how community members were currently taking medicines or caring for someone with medicines; how general practitioners (GPs) and pharmacists talk to them about their medicines and healthcare conditions; racism and/or discrimination they have faced from the healthcare system; and what they want pharmacists to be taught going forward. Interviews were set up either in person or on a video conferencing app (Zoom). Interviews were conducted by the chief investigator AB an Aboriginal man of Wiradjuri/Dharug descent. Interviews were conducted in a semi-structured form with a yarning approach<sup>14</sup>, to allow for a free flow of discussion<sup>15,16</sup>. (please see interview questions attached in Appendix 1). Interviews were audio-recorded with participant consent and were then transcribed verbatim through a third-party transcription service Rev.com. Transcripts were then de-identified and imported into the thematic coding software Nvivo where themes were identified through an inductive approach where themes running through multiple interviews were identified and quotes were coded to those themes<sup>17</sup>. These interviews were then recoded by RM for validation. Discrepancy in coding between AB and RM was discussed until consensus was reached.

### **Results:**

Thirty participants were recruited to take part (n=30) with all but one having First Nations ancestry. The individual who did not identify as First Nations worked for a corporation that provided cultural safety training for health care professionals. At the time of the interviews, eight of the participants

worked in a field related to the health care sector and were interviewed with this knowledge. The remaining 21 participants were classified as consumers without intimate knowledge of the healthcare system. The First Nations people who took part in the study came from different areas of NSW including: The Sydney region; Western NSW; and the Lismore area. These individuals identified with different First Nation Countries of Australia.

Themes that showed up consistently between all the interviews included: communication/ better explanations, too much effort, cultural understanding, systematic processes, money, racism and discrimination, self-determination/advocacy and pharmacy improvements. Below are these themes with illustrative quotes that uncover why these ideas were felt amongst participants.

**Communication/ Better explanations:** *“there’s a way, it’s not what you say [it], it’s how you say it a lot of the times”.*

Many of the interviewees expressed that they would like healthcare professionals to communicate with them in a more appropriate manner. One interviewee explained that she gets much of her drug information from her local pharmacist stating:

*“All of my information to do with medication has always come from [pharmacist name], not from my doctor. Even though my doctors are amazing, they just never go into so much detail”.*

Further on this sentiment another person stated, *“If the doctor can’t do it and explain it, the pharmacist’s job is to explain the side effects and they need to do it on a level that our mob can understand.”*

These two participants express the sentiment that the pharmacist role was directly linked to medication provision and that they rely on them for information regarding medication. As such, participants expressed that pharmacists need to be able to deliver this information in a way that the people directly affected by a health condition and the subsequent process of taking medicines to treat or prevent the condition can be understood.

Another point of consideration is ensuring people understand the information that they have received and not assuming they understand when no questions have been asked, because from the experience of this interviewee, *“Us Aboriginal people, we don’t ask questions.”*

So, making sure to check in with the patient and their current understanding was stated as extremely important by community participants.

Unfortunately, many participants recalled times that they had experiences with pharmacists who they felt did not communicate effectively with them. One participant explained that they felt like the pharmacist was not actively involved in their care stating, *“My pharmacist hasn’t spoken to me about it, they just fill my scripts basically”*.

Following on within the theme of communication, was the idea of better explanations. When people were spoken to by pharmacists, participants expressed that they believed pharmacists thought consumers would automatically understand what was going on and said that sometimes pharmacists made little effort to make sure that people understood what was happening.

*“I actually had to educate myself a lot around that space around it because all they did was like, “yep, ok, here’s the medication...” And it was very distressing. I didn’t really get educated on it.”*

On the flip side of this however, there was also a concern from a First Nations healthcare professional who was interviewed stating that there was a real risk of the omission of information in trying to give out simplified advice and that they had seen firsthand experiences of that happening and their advice was: *“Don’t be so afraid of jargon. Be more afraid that you haven’t told them something.”*

**Too much effort:** *“A couple of times I think there was a bit of, “Oh, we can get away with saying less””*.

An area of concern with the participants who were interviewed was that they felt that reasons why true connections were not being made between pharmacists and community was because they perceived it would take too much time and effort.

In conversation with a community member when discussing this concept, they felt that when organisations use the excuse that they do not know who to talk with or where to start, they felt this was a deliberate attempt to avoid criticism and to not approach community and put in the effort to make connections.

*“And so, when you’re saying that that doesn’t exist, well maybe it’s your job to build it”.*

A couple of participants also noted strongly that they felt they weren’t receiving the best care because they were viewed as too complex with too many medicines with one stating:

*“Oh, it’s too much, it’s too difficult. Every time I go in there, they put it in the too hard basket, they don’t explain it to you rightly”.*

Many people noted that a lot of the times they visited the pharmacists they were “*flat out*”<sup>1</sup> and even if they wanted to make time, they just physically could not with the number of people coming in to the pharmacy. Although the interviewees understood that it may not be the fault of the pharmacist, they still felt frustrated that they were not getting the care they deserved.

When speculating about the reasons why these attitudes persist in the health care setting especially with pharmacists, the idea of healthcare institutions being private businesses was raised,

*“I would be speculating... they probably know that patients are going to come in with the prescriptions regardless of whether they do or they don’t”,*

The perception that pharmacies care about profits more than outcomes and the idea that if they lose a First Nation’s customer due to being culturally unsafe will not be felt, as they are a commodity that can be replaced by another. Participants believed that the mix of commercial business with healthcare may be a difficult barrier to overcome and stated that it will require concerted efforts by pharmacy institutions reaching out to community to overcome these perceptions and show that effort is being made by pharmacy ‘as a whole’.

<sup>1</sup> Australian slang ‘Flat out like a lizard drinking’ meaning really busy

**Cultural understanding:** *“The recognition of our history, but I think the recognition of how that impacts contemporary Australia”.*

An issue that was raised in multiple interviews was the idea of culture and a lack of cultural awareness. Participants perceived that many pharmacists do not take this understanding onboard when pharmacists are counselling First Nations people in practice, nor when it is being taught in universities. Participants believed that many don't take the time to bring culture into 'it' which in many circumstances alienates First Nations people from receiving care.

*“Just be respectful and understand that it's their land... And if the Aboriginal person doesn't feel that I'd go elsewhere”.*

One individual stated that pharmacy was a key profession where the understanding of culture should be of high importance and how the impacts of colonialism still affect health.

*“When they don't make those connections... Then I don't think Aboriginal and Torres Strait Islander peoples who are engaged in the health system are getting a fair deal”.*

Some individuals opened up and described how they themselves had been hurt by the system and they either only engage with health care through ACCHOs or they don't engage with western healthcare at all. One individual mentioning the struggle they feel when going to a non-culturally safe health setting said:

*“And in any situation, you feel as though you're going to be confronted with prejudice and discrimination”.*

Many individuals thought too that pharmacists were not taught enough about the colonial history of Australia.

*“Do they know the history of this country? How Aboriginal people were treated?”.*

To emphasise the importance of culture, many participants believed that cultural safety should be assessed at university and continually developed throughout one's career and stressed that if one

could not demonstrate cultural safety, they either could not pass the course or could not satisfy aspects of the course.

*“Our take... is that that student hasn't satisfied the requirements... They can't go meet any Black<sup>2</sup> folks”.*

**Systematic processes:** *“It should be about making it easy for the person”.*

Many people who were interviewed stated that the lack of processes and follow up had been major ‘turn offs’ when approaching pharmacists for help. Closing the Gap (CTG) Scripts, a program initiated by the federal government to help First Nations people afford prescriptions was a point that appeared in many conversations and how pharmacists are not making this process any easier as stated by one participant:

*“No matter where you live, you could be up the coast, you could be in another state... half of them don't even know what CTG is, or any kind of provider that could help the Aboriginal patient for the community”.*

Important to note was that it was recognised by some participants that it is not always the healthcare professional that cause issues, it can be other members of staff causing people to not want to go to the pharmacy or hospital with a participant stating.

*“I think it goes to the administrative staff that can be sometimes gatekeepers to the professionals themselves, that there's been some really quite negative tones”.*

**Money:** *“And some people don't have that money to pay that”.*

An issue for pharmacies, patients and pharmacy schools that was highlighted by many participants was a lack of access to appropriate resources, cited as a barrier to providing care or receiving care, as well as employing people from a First Nations background.

<sup>2</sup> Black in this context referring to Aboriginal and Torres Strait Islander People

Very importantly, lack of funds was a very big deciding factor on whether people should go the doctor or pharmacy. Many patients have stated that without closing the gap they would go “*bankrupt*”. When adding up the costs of medicines many were shocked by the amount they had to pay.

*“We added it up one day... it was \$2900 just to go once a month to the chemist”.*

With the amount of money that is paid out for healthcare, some interviewees knew people or had to themselves weigh up whether that month their family had to have less food and could get by with a lower number of weekly meals, or, if they could go through a month without needing a specific prescription filled.

*“And you know that you’ve got to get it next fortnight, or next month, that takes a couple of meals out for families”.*

This is not an issue that is just affecting choices about filling prescriptions, but one that may be being felt across the healthcare sector, as an interviewee stated:

*“We also hear that from psychologists about the clients not turning up to appointments and repeatedly trying to get them back in again”.*

Sometimes money itself has been procured for the appointment but the associated costs of getting to the appointed are keeping people away from attending healthcare appointments.

*“It could also be to do with they might not have had the money that day just to even afford the transport to get to the appointment”.*

In some interviews, participants mentioned some healthcare providers that assisted community financially by not charging ‘out of pocket’ and ensuring government funding covered services. For example, a participant explained that some GPs who do not ‘bulk bill’ (Use government funding to cover the whole GP visit) generally, will look at individuals on a case-by-case basis and stated that they let clients know to enquire with GPs about financial assistance. This situation is not well known, however, as many GPs do not want to advertise this service as mentioned by this interviewee.

*“They may also receive backlash from the non-Aboriginal community members that they don’t have access to that”.*

**Racism and Discrimination:** *“I have certainly seen a lot of agency taken out of the hands of Aboriginal people by all health service providers... and I don’t understand what happens”.*

Unfortunately, but not surprisingly, many First Nations people have expressed feeling uncomfortable going to a healthcare setting due to an experience of racism or discrimination. One carer expressed that they normally go to one pharmacy, and they don’t like going to others because in their words they *“don’t always fulfil their professional obligations”.*

This was the case with many participants who found one pharmacy and stuck with them because they felt they were treated in a culturally safe manner. One participant noted that they were thinking of switching pharmacies because the pharmacist they felt culturally safe around left, and the new pharmacists did not make them feel *‘looked after’* and they expressed that they needed more time to find out who the good pharmacist is at that area.

Many participants sadly noted that they were overtly discriminated against. A participant who was recently discharged from hospital and went to a pharmacy said:

*“they looked me up and down, judged me and kept watching me because I had patches and other stuff on me.*

Participants also noted the explicit racist language that is used in health care settings with one being openly discriminated against when they presented their closing the gap script.

*“The pharmacy assistant, she just threw my script and said, “Oh, this is another one that doesn’t pay.” I was so humiliated”.*

*“They wouldn’t say it to your face, but they look at you as, why do you get this free? Why do you get that free?”*

Another issue was not the overt aspects of racism but the judgement they felt because they were First Nations people, one participant noting that because someone might be obese or diabetic you would be judged as

*“you don’t look after yourself”,*

One participant recalled a story from their youth where they had a medical emergency and first presented to the pharmacy only to be dismissed as a drug user with sores on them and was able to seek help elsewhere. They stated:

*“I would have been dead because I was dismissed as being a drug addict”.*

Participants also touched on the generational effects that racism has had on people and their thoughts of going to a healthcare setting. An individual brought up the effects that past attitudes still affect them today, they stated:

*“I’ve gotten into the habit I guess, by being Aboriginal, is that when I go in and out of a store, including a pharmacy, I’d say, “You want to have a look at my bag?” It’s a force of habit we grew up with”.*

A participant who was in a caregiver role noted that the racism their mother experienced unfortunately did not phase her anymore because she was used to receiving it from pharmacies.

A large contributor to the feelings of racism expressed above were amplified due to explicitly biased attitudes of healthcare professional. One participant in a healthcare role at an ACCHO worked with a GP who *“refuses to write CTG on the scripts or print them on the scripts”,*

They noted that this is a huge issue, as this policy to improve access to prescription medicines, implemented by the federal government is designed to make accessing prescriptions easier and allow for better continuation of care and better health outcomes for First Nations people. A non-indigenous participant who provides cultural safety training to healthcare providers expressed concern that both GPs and Pharmacists expressed racist ideas noting:

*“we’ve had GPs and pharmacists alike say, “I have blonde haired, blue-eyed people with fair skin that come in and tell me that they’re Aboriginal, But I don’t really believe them.”*

**Self-determination/advocacy:** *“We just want a voice, and we want to be heard”.*

Due to the way the healthcare system has been set up, a paternalistic view of healthcare has become the norm and this many times bleeds over into the interactions that many First Nations people have had. A participant noted why they felt reticent about receiving care was the feeling of losing their independence:

*“I think that’s part of the issue, it’s the I’m losing my independence by allowing these people to tell me when I have to take it, I know when to take it... if it was communicated a little bit easier”*

Another individual noted that when given medications they were not given explanations about why to take tablets but was just expected to take them

*“The tablets we give you, you need them”.*

A feeling expressed by a couple of participants was that they felt like they were being talked down to, or they were being treated like they were ‘less intelligent’ than other patients

*“We need to be treated like we’re human and we know”.*

Another issue that many people felt, was the lack of a First Nations voice in matters that affect them:

*“Why can’t they have a voice there... Why can’t there be an advocate that actually has a voice in that space as well?”.*

One way people thought that a First Nations voice could be added to pharmacy and to make sure that pharmacists were better trained was making sure that more First Nations people were becoming pharmacists

*“Get an Aboriginal f\*\*\*\*\*g pharmacist”.*

**Pharmacy Improvements:** *“What I’m trying to say is I think the more culturally safe we can get, the better”.*

As discussed above, many barriers are in place that create an environment where many First Nations people do not feel culturally safe. Despite this however, several ideas were put forward by these community members to create a pharmacy environment that individuals would feel happy about accessing. These ideas for improvement covered both pharmacy schools and pharmacies with some ideas applying to both the education and clinical sector.

Participants noted that the best pharmacists that they went to, were ones who took the time to make a connection with the patient and were openly friendly

*“The pharmacists I go to are really good... They’re more community minded”.*

In saying that though, for registered pharmacists the idea of mandatory Continuing Professional Development (CPD) points was put forward by participants to make sure that people every year were improving themselves culturally to ensure that community members, no matter what pharmacy a First Nations person attended, they would be able to seek care that was culturally safe. It was also reported that CPD points should be a “*continuum*” and constantly updated. There were, however, concerns about making such tasks mandatory and ‘people only engaging because they had to’ and not out of good faith

*“I feel like some of it is forcing, and people need to learn in their own journey as well. I think to turn around and force people to do things gives a bad taste towards our people”.*

As mentioned before, many individuals had issues with the paternalism that is intrinsic in Western healthcare and ideas were put forward as to how to make interactions more comfortable. One such idea was changing the pharmacy layout including artworks to make it feel like an inclusive area:

*“They should have a sign up in the pharmacy saying that [we are] respectful of Aboriginal and Torres Strait Islander people”*

Another simple solution voiced was the removal of physical barriers that can hinder communication, such as coming out from the dispensing area and engaging and talking to someone out in the open:

*“they’re up on another level and they look down upon you... you could just step down and talk to the people”.*

One of the issues that was frequently brought up was the idea of interprofessional communication between pharmacists and doctors or more accurately the ‘lack of communication’. To many community members, there seemed to be a barrier separating the two professions (doctors and pharmacists), and at times this led to issues that made the provision of care more bothersome to patients. For some participants they noted that many people are using pharmacists as their first port of call for simple ailments and not going to a GP as depending on the region wait times for the GP can be long:

*“It’s more common now to go to the chemist for help”.*

Again, one of the big issues around this lack of two-way communication between doctors and pharmacists was in the provision of CTG scripts, where currently pharmacists cannot enrol patients onto the system, with one interviewee remarking about the role of pharmacists:

*“They just don’t really think about pharmacists as being someone who can offer a wide range of healthcare services.”*

This is not just an issue that is caused by doctors however as one participant noted that all their doctors and specialists make sure that their scripts are registered as CTG but when it comes to the pharmacy their response was:

*“Oh, we don’t have that, oh, by the way, that’s not covered on the PBS”.*

The general view was that there was not enough communication between pharmacists and doctors with many variations of people stating

*“No, they don’t communicate with each other”.*

Although in most cases where this was brought up, it was noted as a frustrating experience, it was also noted that the lack of this two-way communication can easily become a serious issue. For example, some individuals who took part in these interviews were on medications that were not easily sourced

due to products being ‘out of stock’ and this could mean that their health condition could go untreated and cause harm. One participant who was incredibly frustrated that pharmacists and doctors were not communicating about this and selecting drugs that could be readily available said:

*“The doctor will prescribe something and when you go to the pharmacy... we can’t get it anywhere. Well doesn’t that come up on their system, to say, hold on, we can’t get it”.*

Many participants thought improvements in the sector should start with university pharmacy schools. The idea of student pharmacist assessment was talked about at length with the idea that there was no use in teaching cultural safety in a curriculum without it being assessable

*“So they should do some form of assessment first which shows that they are actually able to go in community and not make a ... damaged relationships out there”.*

Also very importantly to note First Nations people were in favour of schools having cultural safety barrier assessments being implemented in curriculum with students unable to progress or undertake aspects of the course until they demonstrated that they could act in a culturally safe manner.

*“If you cannot be culturally competent, you should not be able to go through”*

When teaching this content there was broad support for having First Nations’ experiences brought into the classroom through having First Nations people coming in and being candid in their experiences with the healthcare system and challenges, they have faced:

*“I think the active engagement with Aboriginal and Torres strait Islander peoples in role playing, in understanding and how that gets assessed”*

The idea of placements was also talked about at length with no consensus on what should be done, although the consensus was that mandatory rural placements should be undertaken with multiple reasons given as to why:

*“They will see the health problems... I find in rural areas; they will also see the discrimination Aboriginal people face”.*

Mandatory placements in a First Nations predominant community were not agreed upon, reasons given as to why it should be done included that people do not know what is going on unless they have firsthand experience:

*“I have mixed emotions about mandatory placements, just because it can be so wrong for the community”*

Further improvements include better community consultation, many individuals believed that pharmacy has failed to reach out to communities to get their insights into issues that affect them:

*“From the community members perspective, they sometimes feel that the health professional won’t really understand their background or the contributing factors towards their wellbeing”*

Many as previously mentioned want a voice in this space to make sure that what is going on directly impacts them. A direct consequence of this especially from the pharmacy workforce not reaching out is that many individuals did not know what the role of the pharmacist was and how they fit into the care of an individual.

Another area of improvement that many individuals want to see is better representation of First Nations people in pharmacy. Individuals expressed that they would feel more comfortable going to a pharmacist of their background as they felt they could connect more easily and that they would understand them more completely. Sometimes too there were unreal expectations of how to talk with people in a culturally safe manner, with pharmacists believing that they can get First Nations people to open up about themselves with an individual pointing out:

*“Not expecting someone to come in straight away and within two minutes divulge their whole family history or their history of health needs”.*

### **Discussion:**

This study is unique as it examines the beliefs of First Nations Australians around pharmacy and what they believe needs to be done to make pharmacies a culturally appropriate place to receive healthcare. Interviews with participants revealed that whilst there are many ideas for improvements being posited

by the community that could be implemented in both pharmacy education and practice settings, there were significant barriers to the inclusion of this content such as racism and discrimination and a lack of perceived effort from these institutions.

It is important to report on and call out racism and discrimination as they are significant barriers to accessing healthcare<sup>18</sup>, it leads to reduced satisfaction of care, mistrust of healthcare professionals and leads to difficulties of communicating with healthcare professionals and can ultimately lead to delaying care seeking<sup>19</sup>. This is an issue for pharmacy as the same study pointed out that these factors can impact on treatment adherence negatively, meaning people are less likely to take medications<sup>19</sup>.

Whilst the experiences detailed by participants in this study are shocking and upsetting, they are by no means the outliers with the Australian Institute of Health and Welfare reporting that 20-25% of First Nations Australians reported being racially discriminated against by either doctors, nurses or other medical staff in the preceding 12 months<sup>20</sup>.

A similar study conducted in Canada looked at First Nations beliefs of primary healthcare, it did not, however, delve into specific disciplines such as pharmacy<sup>21</sup>. There were several similar issues found in this study, such as needing better trained healthcare professionals, better resourcing and funding and including First Nations people in healthcare decisions<sup>21</sup>. It is therefore important to note that First Nations people are aware of health care factors that are affecting them and know what need to be done to help them, but not enough is being done to listen and take onboard what is being said.

The research presented in this paper is significant, as it may indicate that what is currently being done in the pharmacy sector does not meet the needs and wants of Australian First Nations people.

Participants revealed that cultural awareness, understanding and safety needs to start in pharmacy school to produce pharmacists that can meet the needs of community. Pharmacy schools, therefore, have a vital role in teaching and installing a sense of cultural awareness and imparting the ideas of cultural safety (Australian pharmacy council accreditation). Whilst the current APC standard does include standards that mandate First Nations content and First Nations people creating content<sup>22</sup>, it may take some time before we witness any impact of curriculum change. In addition, despite the new standard, previous research exploring the perspectives of pharmacy school leaders in Australia cited

several barriers to fully implement such standards in their school<sup>23</sup>. For example, from previous studies it is known that academics have felt that without proper funding it was hard to include content that would delve more into cultural safety, as funds were needed to be able to develop content through the paying of the developers of this content and paying people to come in and teach this content, a lack of funding also meant the First Nations people were not being employed at institutions<sup>23</sup>. Therefore, it could be proposed that the current degrees may not meet the expectations of First Nations communities.

Issues that were raised by community to improve curricula included having cultural safety assessments or placements in specific environments. This was, however, in contrast with what schools were doing with varying degrees of community consultation and implementation of cultural safety aspects<sup>23</sup>. This lack of commitment is seen by some in the community as ‘hand waving’ and ‘lip service’ where institutions talk of making an environment that is culturally safe but are not actively implementing measures to make this a reality.

However, it is the authors’ beliefs that Pharmacy schools have a professional obligation to teach this content and make sure that new pharmacists who are entering the workforce have an appropriate level of cultural safety training, if a pharmacist can demonstrate a lack of training provided by the institution, the blame could shift from the individual back onto the pharmacy school. If a practitioner who has been reprimanded by the Health Care Complaints Commission (HCCC) for not being culturally safe can demonstrate that during their course they were not taught about cultural safety and its importance, there could be a real case against a pharmacy school for failing to appropriately train individuals. Perhaps instilling such fear in some individuals, could be a driving factor that will cause schools to start looking at this issue seriously. However, as found in this research, meaning and true connections, involving First Nations people is probably the most important start for pharmacy schools in improving the way they teach and assess their students.

Outside of the university environment, notions uncovered in this research also beg the question- do pharmacies care if they are culturally safe or not? In a similar notion to pharmacy schools stepping up to improve course content, it would be argued that pharmacist should and need to be culturally safe, as

the health regulatory body does have strict ethical guidelines about working with First Nations communities and from a punitive perspective, they can face reprimands<sup>24</sup>. From a business perspective however, if they still make a profit without First Nations communities, there may be the thought by many that there would be no need to change, and/or a feeling of complacency, organisational change literature indicates that even when external pressures mandate adaptation, businesses often resist change due to status quo bias, complacency, and profit inertia<sup>25</sup>. If there is such a disconnect between the pharmacy sector and First Nations communities, there is a question of if the pharmacy sector will heed the call of community? Will they seek to change themselves in a meaningful way that will uplift and include First Nations voices in a show of good faith and of the want to improve health outcomes or will it wait until the last moment by being forced to under the threat of punitive measures when the good faith criticism from community has been disregarded?

In saying this, efforts by the Pharmaceutical Society of Australia (PSA) to improve the cultural safety training of registered pharmacists and health support staff has commenced. This includes updated standards of practice<sup>26</sup> and co-designed training modules<sup>27</sup>. These were developed to ensure that pharmacists have a foundational understanding to provide services in Aboriginal and Torres Strait Islander primary health care settings. To date over 2000 pharmacists have enrolled in the course. PSA also plan to develop modules specifically for community pharmacists in the future.

This study is not without its limitations. This study mainly focussed on the community groups of NSW, which means First Nations peoples from other states and territories could have differing opinions. In saying that, focussing on NSW specifically allows universities and pharmacies from this state to take on the feedback and make positive changes that the local communities want to see. Another limitation was the number of interviewees, only 30 participants were involved. With 29 identifying as First Nations and one other participant was not First Nations but did a lot of work around cultural safety training of healthcare professionals, this means that it is hard to make broad generalisations of what the collective Australian First Nations community want. However, most interviewees spoke of similar experiences and had similar ideas about what they want going forward and therefore data saturation of themes was considered achieved.

Future research should investigate how institutions can better include First Nations voices in the building of curricula and improvements in the pharmacy sector. This can include co-designing materials to include in the teaching of students and comparing these materials and results to previous years and monitoring improvement in beliefs and attitudes pre and post implementation. Furthermore, involvement of First Nations consumers in the classroom and within assessments could also enhance the cultural safety training of future pharmacists so that community can have more positive experiences when requiring services from this sector. It is also of importance to make sure that support staff at these institutions receive training as noted by many individuals that they themselves can be barriers to accessing care.

**Conclusion:**

Different aspects of the Pharmacy profession were discussed at length with First Nations people. They expressed perceived failings within the healthcare system as a whole and how pharmacy has perpetuated some of those failings. In these discussions it was identified that First Nations people believe that pharmacists need more training about how to work with First Nations people and identify failures in healthcare that relate to First Nations people. Pharmacists need to do more to reach out to communities and make themselves known and put in the required effort to make long lasting connections. Pharmacy schools need to include communities in the creation of resources and teaching of the degree as they have much information and personal experiences that can be delivered to students to give them deeper insights into how the current healthcare system is failing many First Nations people.

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A.B. Main author of manuscript and was responsible for the first round of coding. All authors reviewed manuscript.

B.S. Second PhD supervisor of main author. Helped with methodological framework and reviewed final coding. All authors reviewed manuscript.

F.M. Final round of thematic code checking. All authors reviewed manuscript.

R.M. Primary PhD supervisor of main author. Reviewed coding independently. Helped with methodological framework. All authors reviewed manuscript.

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## **Chapter 8 – Discussion and Conclusion**

## Discussion Overview:

This thesis makes a significant and original contribution by developing a structured, replicable method for mapping health curricula against national cultural safety expectations, identifying both explicit and hidden gaps, and guiding future curricular transformation.

Across five integrated studies, I have created a step-by-step model (see section learning from others to improve pharmacy), that not only critiques the current state of cultural safety in pharmacy education but also offers a clear pathway forward for health education institutions seeking to improve their responsiveness to Aboriginal and Torres Strait Islander communities.

Through this research, I have shown that curriculum mapping when undertaken rigorously and informed by government-endorsed frameworks like the Aboriginal and Torres Strait Islander Health Curriculum Framework<sup>1</sup> is not merely an administrative exercise. Instead, it is a critical diagnostic tool that reveals the structural failings, missed opportunities, and the often-fragmented nature of First Nations content delivery in health education. This thesis elevates curriculum mapping to a strategic, evaluative, and restorative process.

After a thorough and ongoing review of literature (chapters 2), I was able to establish a broad, sector-wide understanding of how cultural safety content is currently handled in Australian pharmacy programs (Chapter 3 national study of all pharmacy schools). Using a thematic framework aligned to both the Curriculum Framework and Ritchie & Spencer's qualitative analysis tool<sup>2</sup>, I identified widespread variation, poor awareness of the framework, and lack of First Nations leadership. This study demonstrated the urgent need for systematic curriculum review and laid the foundation for a model that could be applied across schools and disciplines.

Building on chapter 3, Chapter 4 (the deep-dive mapping of one school) translated this critique into practice. By systematically coding 30 interviews with unit coordinators and key stakeholders and again mapping their responses to the eight principles of the Curriculum Framework, I revealed five critical areas of underperformance particularly around leadership (Principle 1), community consultation (Principle 2), pedagogical innovation (Principle 3), holistic health perspectives (Principle 5), and continuity of content across the degree (Principle 7). This process generated a replicable methodology for how to assess not just whether cultural safety content exists, but how well it is integrated, aligned, and justified. Importantly, this methodology went further than content auditing. By aligning themes to contextual, diagnostic, evaluative, and strategic frames of the framework analysis<sup>2</sup>, my mapping approach functioned as both a mirror and a map. It leads the way in holding institutions accountable for present practice while also guiding them toward aspirational reform. It exposed hidden curriculum dynamics and institutional inertia, such as tokenism, fragmentation, and the tendency to ‘slot in’ First Nations content after all other material had been prioritised. These insights cannot be obtained through standard curriculum reviews alone. This work demonstrated the value of a culturally informed, reflexive, and critical approach.

A next component of this thesis extended the model further by applying the principle of constructive alignment to the newly revised pharmacy curriculum<sup>3</sup>. In chapter 6, I critically evaluated whether the revised units of study meaningfully integrated Aboriginal and Torres Strait Islander health content across the domains of intended learning outcomes, in-class activities, and assessment. By mapping these curriculum components against the Aboriginal and Torres Strait Islander Health Curriculum Framework<sup>1</sup>, this paper aimed to determine whether inclusion has improved beyond performative additions probing instead whether content is aligned, taught, and assessed in culturally safe and pedagogically sound ways. This

thereby has created an auditing tool that allows educators and institutions to examine the coherence between what they claim to teach and what students engage with and are evaluated on. It also allows us to assess whether key domains of the Framework such as local context, reflexive learning, and respectful partnerships are embedded throughout the learning journey, or confined to surface-level inclusions. In doing so, this piece completed the full cycle of curriculum analysis: from sector-wide mapping to institutional deep dives, to forward-facing alignment tools designed to ensure sustainable and accountable curriculum reform.

The last key component of the work contained in this thesis emerged in Chapter 7 (community consultation). This study validated the need for the mapping model to be responsive to the lived experiences and expectations of Aboriginal and Torres Strait Islander communities. By centering the voices of community members from a variety of regions and backgrounds, this chapter provided a cultural and moral compass for curriculum reform. It showed that what matters most to communities' respectful communication, cultural understanding, institutional accountability, and the rejection of tokenism is often what is missing in current pharmacy education. These findings not only informed the mapping criteria used in chapters 3/4 but also emphasized that cultural safety is not something that can be 'mapped' without community input. As a result, I proposed a model that combines curricular evaluation with community validation.

## The strength of Self reflexivity

A key strength to the work contained in this thesis is the ongoing reflective practice I was able to bring to the entire body of work.

The decisions made about what to ask, how to listen, and how to interpret the findings are inseparable from my own lived experience and cultural positioning as a First Nations researcher<sup>4</sup>. For this reason, chapter 5, describing the process of self-reflexivity plays a vital role in this work. It acknowledges that all research, especially work concerning cultural safety, is relational and situated<sup>5</sup>. The reflective chapter offers transparency around how my identity, responsibilities, and cultural obligations influenced the research process. It also provides a necessary space to confront the emotional and ethical complexities involved in conducting work that interrogates systems I am both part of and impacted by. In doing so, the thesis moves beyond conventional models of researcher neutrality and instead embraces a culturally grounded approach where reflexivity is not an add-on, but a core element of methodological integrity.

The inclusion of a reflective chapter within this thesis is not an ancillary or personal indulgence, but rather a critical and culturally grounded component of the research. For a First Nations scholar, reflection is both a methodological necessity and a cultural responsibility<sup>6</sup>. It serves to embed relationality, honesty, and positionality into a body of work that aims to speak not just to the institution, but to community. It acknowledges that knowledge creation is not a neutral or detached process it is deeply entangled with who we are, where we come from, and the responsibilities we carry as Aboriginal and Torres Strait Islander people working within colonial institutions.

Western academic conventions have historically demanded detachment from research subjects<sup>7</sup>. The model of the ‘objective’ researcher is still widely revered in many scientific and health-based disciplines, where emotional neutrality is often mistaken for rigour. Yet, this model is fundamentally at odds with First Nations worldviews<sup>8</sup>. In our traditions, knowledge is not extracted it is shared. It is not removed from the personal it is shaped by it. Relationships are not a complication to be managed they are the foundation upon which trust, learning, and truth are built. A reflective chapter within this thesis honours that relational epistemology.

In practical terms, this chapter creates space to unpack my own position in the research: as an Aboriginal person navigating both the university system and the pharmacy profession; as someone who has experienced the effects of systemic exclusion; and as someone who has had to carry expectations, doubts, and hopes often all at once. These reflections matter. They offer insight into how the work was approached, why certain decisions were made, and what emotional, cultural, and political considerations shaped the research journey.

This is especially important in the context of cultural safety. Cultural safety, at its core, is about the power dynamics that shape care, learning, and representation. As a researcher writing about cultural safety, it would be incongruent to ignore the power dynamics that also exist within the research process itself. Reflection allows me to expose and interrogate those dynamics with my own authority, my limitations, and the pressures placed upon me by the university, by community, and by myself. In doing so, the chapter makes the thesis more accountable, not less. It grounds the analytical in the deeply personal and resists the illusion of neutrality that so often obscures the real-life implications of this kind of research.

Moreover, this chapter functions as a cultural practice of self-checking. In many Aboriginal communities, self-reflection is a vital part of knowledge stewardship<sup>9</sup>. It’s how we ensure we

are walking the right way, with the right people, and for the right reasons. In chapter 5, I reflected on the emotional toll of being seen as the ‘go-to’ person for First Nations issues in academic and professional settings, and the fear that my connection to culture is not ‘enough’ to justify that expectation. These fears are not unique to me. They are shared by many Aboriginal scholars and professionals who find themselves navigating institutions that rely on us heavily, while still excluding us from decision-making spaces. By naming these dynamics, the reflective chapter does not seek pity, it seeks honesty. It reveals the unseen labour that often accompanies First Nations-led research and reframes it as a strength rather than a burden.

For First Nations readers, I hope this entire thesis and particularly chapter 5 provides affirmation. It says: you are allowed to bring your whole self into the work. You are allowed to feel deeply about what you are researching. You are allowed to acknowledge the fatigue, the frustration, and the fear and continue. You are not less rigorous for being emotionally invested in your people’s future. In fact, that investment is what makes the work rigorous in a different and necessary way.

For non-Indigenous readers, the thesis and particularly chapter 5, offers a counterpoint to traditional academic writing by inviting you into the complexity of doing this kind of work. It may challenge assumptions about what an ‘academic’ thesis should look like, but that is the point. Cultural safety cannot be achieved without discomfort without rethinking how we define knowledge, expertise, and authority. The reflective chapter plays an educative role here: it models what it means to take cultural safety seriously, not just in theory, but in the structure and presentation of scholarly work.

From a methodological standpoint, the reflective chapter also serves to increase transparency. It contextualises the data, not just in terms of the methods used to gather it, but in terms of the

human being who interpreted it. Reflexivity is a hallmark of high-quality qualitative research<sup>10</sup>, and this chapter adheres to that principle in a culturally appropriate way. It also supports research validity not by erasing bias, but by naming it, understanding it, and engaging with it openly.

Ultimately, this thesis closes the loop between the research I have conducted and the responsibilities I carry as a First Nations person doing that work. It reminds the reader and myself that this is not just an academic thesis. It is a living document of one person's attempt to honour their community, challenge an institution, and offer something useful to the next person who walks this path. Reflection, in this sense, is not just important it is essential.

While chapter 5 takes a step back from formal academic structure to offer a deeply personal reflection, it is a critical part of the broader research journey. That chapter gave voice to the tensions, responsibilities, and emotional labour that have accompanied this work particularly as a First Nations scholar working within systems that have historically excluded or marginalised First Nations knowledge and voices. It was not a departure from research, but rather a grounding; a reassertion of why this work matters and for whom it is being done.

# Learning from others to inform Pharmacy

This thesis critically examines the content and development of cultural safety training within pharmacy education. However, it is instructive to look beyond pharmacy to other health disciplines and agencies that are actively progressing in this area. Fields such as nursing, medicine, and allied health have initiated significant steps toward embedding cultural safety into their curricula, offering valuable insights and models that pharmacy education can adapt and build upon.

## **Nursing and Midwifery:**

### Pioneers in Cultural Safety Integration:

Nursing and midwifery have long been at the forefront of cultural safety education in Australia<sup>11</sup>. The Nursing and Midwifery Board of Australia (NMBA) has embedded cultural safety into its codes of conduct and professional standards, requiring nurses and midwives to engage in ongoing reflection and learning to provide culturally safe care.<sup>12</sup> Educational institutions have responded by integrating cultural safety into curricula through co-designed modules, reflective practices, and assessments that emphasize the importance of understanding and respecting Aboriginal and Torres Strait Islander cultures. For instance, some nursing programs have implemented immersive learning experiences, such as community placements and yarning circles, to foster deeper cultural understanding<sup>13,14</sup>. These approaches not only enhance students' knowledge but also encourage the development of empathy and the ability to provide culturally responsive care. In saying this nursing still has a ways to go with study showing the lack of nursing academics in both Australia and Aetoroa/New Zealand<sup>15</sup>

## **Medicine:**

### Embedding Cultural Safety into Accreditation and Practice:

The medical profession has also made strides in incorporating cultural safety into education and practice<sup>16</sup>. The Australian Medical Council (AMC) has updated its accreditation standards to include cultural safety as a core component, emphasizing the need for medical graduates to understand the impact of colonization, systemic racism, and social determinants on Indigenous health<sup>17</sup>.

Medical schools are now required to demonstrate how cultural safety is integrated into their programs, including through co-designed curricula and assessments that evaluate students' competencies in this area<sup>18</sup>. Additionally, the Medical Board of Australia mandates cultural safety education for specialist registration, ensuring that practitioners engage in continuous learning to provide culturally safe care<sup>19</sup>.

## **Allied Health:**

### Co-Design and Community Engagement:

Allied health disciplines, including occupational therapy<sup>20</sup>, physiotherapy<sup>21</sup>, and speech pathology<sup>22</sup>, have increasingly recognized the importance of cultural safety. The Indigenous Allied Health Australia (IAHA) organization has developed a Cultural Responsiveness Training program that emphasizes co-design and community engagement<sup>23</sup>. This program encourages allied health professionals to work collaboratively with Aboriginal and Torres Strait Islander communities to develop culturally appropriate services and interventions.

Educational institutions offering allied health programs have begun to incorporate these principles into their curricula, fostering partnerships with Indigenous communities to co-create learning materials and assessment tools<sup>24,25</sup>. This collaborative approach ensures that

cultural safety is not only taught but also practiced in a manner that respects and reflects the values and needs of Indigenous peoples.

### **Building a Model for Curriculum design and review**

Taken together, the review of the literature and exploration of cultural safety elements of health curricula, coupled with National and local policy and guidelines as well as the systematic process of exploring key stakeholder views on curriculum design, including the voice of community and my own reflections, these chapters contained within this thesis do not just highlight the inadequacies of current pharmacy curricula they offer a concrete and constructive model to remedy them. (Figure 1)

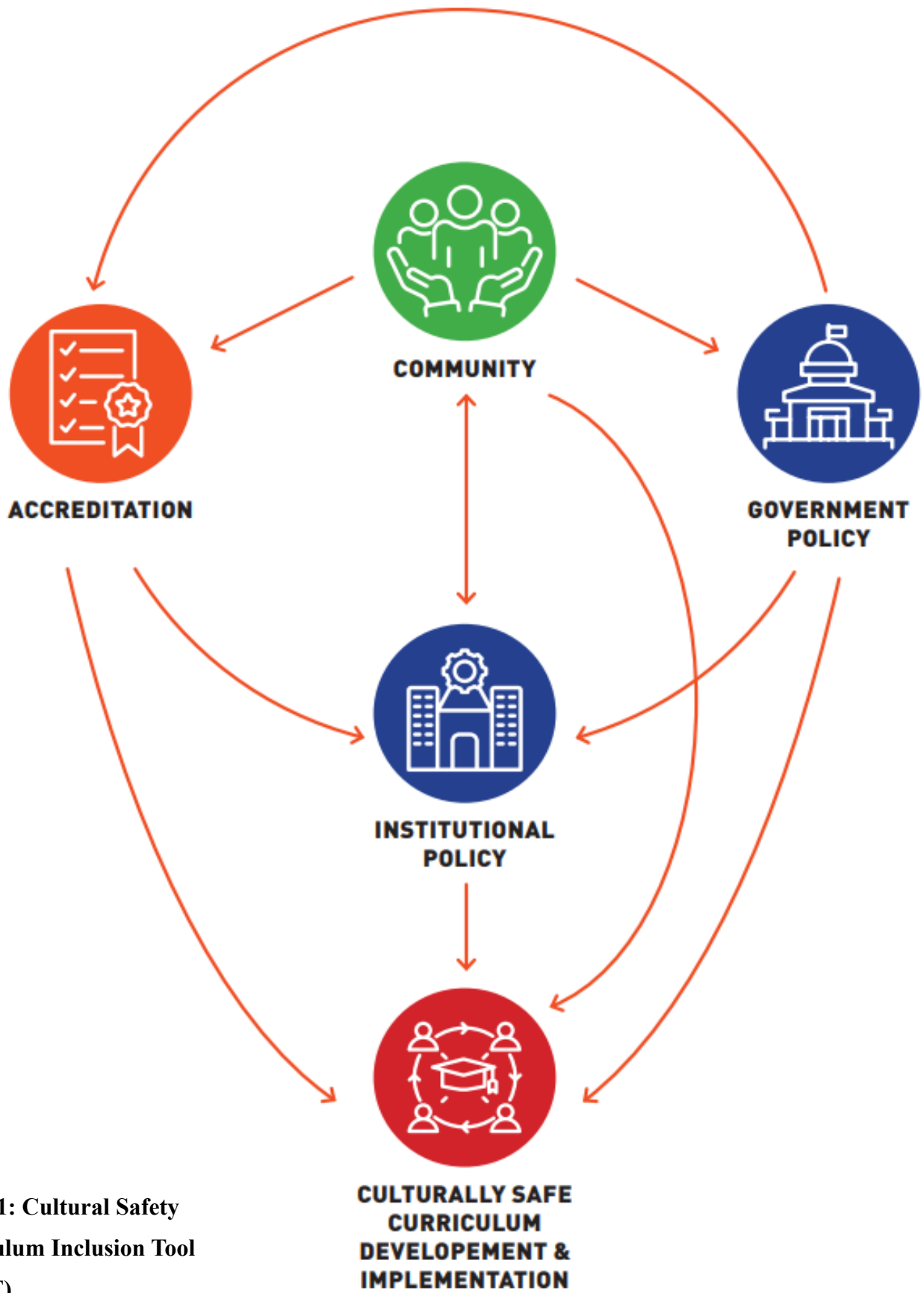
The mapping framework I've developed and named the 'Cultural Safety Curriculum Inclusion Tool' enables institutions to:

- Identify where and how gaps occur (not just what is missing, but why it is missing).
- Trace fragmentation and lack of continuity across units of study.
- Evaluate how power, leadership, and accountability are distributed in curriculum design.
- Integrate community perspectives directly into curriculum mapping.
- Provide tailored strategies for addressing shortfalls, especially in staffing, pedagogy, and assessment.

### **Building a Model for Curriculum Design and Review**

To move beyond critique and towards constructive reform, this thesis proposes a model for embedding cultural safety into health curricula: the **Cultural Safety Curriculum Inclusion Tool (CSCIT)**. This tool translates broad policy intentions and accreditation requirements

into a structured, usable process for curriculum review and redesign. At its core, CSCIT operates across four interconnected layers.



**Figure 1: Cultural Safety Curriculum Inclusion Tool (CSCIT)**

## How it would look in practice:

Level	Guiding Question	Evidence / Example	Gaps Identified	Action Required	Community Input Sought?
Government Policy	Does the curriculum align with national frameworks (e.g., Aboriginal and Torres Strait Islander Health Curriculum Framework, Cultural Respect Framework)?	E.g., Unit includes reflexivity and partnership outcomes.	E.g., No evidence of holistic health perspectives in policy.	E.g., Revise learning outcomes to reflect broader domains.	Yes / No (specify details).
Accreditation	Does program documentation demonstrate cultural safety competence beyond compliance statements?	E.g., Accreditation report includes cultural safety as a graduate competency.	E.g., Reliance on self-report; no evidence of community validation.	E.g., Include mapping evidence in accreditation submission.	Yes / No.
Institutional Policy	E.g., Are graduate attributes and unit learning outcomes explicitly linked to cultural safety? Is the program helping students meet these attributes	E.g., Graduate qualities include “cultural capability.”	E.g., Not consistently embedded in all units.	E.g., Audit units for alignment; embed into assessments.	Yes / No.
Curriculum Content	Where and how is cultural safety taught?	E.g., Compulsory racism workshop in Year 1.	E.g., No follow-up or assessment in later years.	E.g., Scaffold cultural safety throughout degree; embed assessments.	Yes / No.

## Worked Example: Applying CSCIT to a Pharmacy Unit

Level	Guiding Question	Evidence/Example	Gaps Identified	Action required	Community Input Sought
Curriculum Content	Where and how is cultural safety taught?	Year 2 Professional Practice unit includes a 2-hour compulsory workshop on racism, with group discussions and reflective journaling.	Workshop is a stand-alone activity, no integration with pharmacology or therapeutics. Content not formally assessed.	Scaffold cultural safety themes across Years 2–4. Integrate case studies in therapeutics units. Develop follow-up assessments linked to learning outcomes.	No (content developed internally by staff without formal community consultation).

While this model reflects my interpretation as a First Nations researcher, it is grounded in evidence, applied, and cross-validated by both national trends and community voices. It is therefore not a static blueprint but a context-sensitive tool. It offers a how-to guide that moves institutions from performative inclusion to genuine cultural responsiveness. The importance of this work lies in its practicality, transferability, and grounding in both institutional analysis and community accountability. It enables universities to move from good intentions to concrete action, and from ad hoc efforts to structurally embedded cultural safety. These points will be further explained

### **Giving people a “how to” - (not just pharmacy but all health disciplines):**

CSCIT, though developed within the context of pharmacy education, has broader applicability across all health disciplines where cultural safety is either a mandated requirement or a necessary aspiration. While its origins are grounded in the specific challenges and limitations of pharmacy curricula, the core methodology of systematic curriculum mapping, diagnostic analysis, and alignment with community-informed frameworks transcends disciplinary boundaries. The issues identified through this thesis are

not unique to pharmacy. They reflect a wider systemic pattern of piecemeal inclusion, performative engagement, and a lack of deep integration of First Nations knowledge and priorities across the Australian higher education sector<sup>26</sup>.

Across nursing, medicine, midwifery, physiotherapy, and allied health education, institutions continue to struggle with embedding cultural safety in a manner that is both meaningful and assessable<sup>27,28</sup>. There is often a disconnect between what universities are required to teach, what students are exposed to, and what Aboriginal and Torres Strait Islander communities need<sup>29</sup>. In this sense, the model developed offers more than a critique of pharmacy it offers a roadmap for institutions navigating this wider disjuncture<sup>30</sup>.

At the heart of CSCIT is a bridging function. It acts as a bridge between four distinct but interconnected layers: government policy, accreditation standards, institutional teaching practices, and the lived expectations of First Nations communities.

First, the model offers a mechanism to action government policy. While documents such as the Aboriginal and Torres Strait Islander Health Curriculum Framework (2014)<sup>1</sup>, the Cultural Respect Framework for Aboriginal and Torres Strait Islander Health 2016–2026<sup>30</sup>, and the National Safety and Quality Health Service Standards<sup>31</sup> set strong policy intentions, these often remain aspirational without clear implementation pathways. The model presented in this thesis provides a concrete methodology to translate these broad policy goals into curriculum structure, content, pedagogy, and assessment. It does this through structured analysis of learning outcomes, classroom practice, and evaluation mechanisms allowing institutions to track not only *if* content is included, but *how*, *where*, and *to what effect*.

Second, the model helps align accreditation and professional standards with the internal workings of degree programs. For example, the Australian Pharmacy Council. Like many accrediting bodies, this document includes cultural safety as a core domain of professional

competence. Yet, accreditation reviews often depend on self-reporting, isolated course outlines, or static curriculum documents.<sup>32</sup> These forms of reporting can mask deep inconsistencies in how content is delivered across different units of study<sup>33</sup>. By combining curriculum mapping with thematic analysis and constructive alignment, the model developed here enables a deeper evaluation of whether programs are meeting their professional obligations in substance, not just in form. This tool has the potential to be adapted and used by other accreditation bodies across the health sector.

Third, the model speaks directly to institutional practice and pedagogical decision-making. One of the challenges faced by educators is not knowing where to begin or how to embed First Nations content in ways that are transformative rather than tokenistic<sup>34</sup>. This model's layered approach beginning with thematic mapping, then moving through deep unit-by-unit analysis and culminating in a constructive alignment audit provides educators with a scaffolded process. It empowers both individual lecturers and curriculum committees to interrogate their current practices, identify areas for growth, and make informed decisions about teaching and learning. Importantly, this model does not impose a one-size-fits-all solution. It is designed to be adapted to the unique context of each discipline, faculty, and institution. For example, in a nursing degree, the model could be used to assess how community-based placements integrate cultural safety principles. In physiotherapy or occupational therapy, it could be used to evaluate whether students are being prepared to understand and respond to culturally informed perceptions of disability and recovery.

Finally, and most importantly CSCIT reconnects curriculum development with community expectation and cultural accountability. Too often, cultural safety is interpreted through a compliance lens something that must be "covered" to meet external requirements<sup>35</sup>. This framing strips it of its ethical core: that cultural safety is defined by the person receiving care, not by the institution delivering education. Through the inclusion of community perspectives

(as explored in chapter 7), this thesis reinforces the principle that First Nations communities must be co-creators and co-assessors of curriculum. Without their voices, cultural safety risks becoming an abstract concept. The model actively builds space for these voices to be heard, responded to, and embedded not just through symbolic gestures, but through the structures of teaching and learning themselves.

In bridging these four domains, CSCIT has the potential to disrupt siloed thinking. It invites governments, regulators, universities, educators, and communities to sit at the same table as equals. It also demands a new kind of leadership: one that understands curriculum not as a static list of content, but as a living, evolving space of relationship, responsibility, and reflection. It urges institutions to move beyond audit culture and towards cultural accountability where the questions are not just ‘Did we include this content?’ but ‘Did we include it in a way that affirms sovereignty, centres First Nations knowledge, and leads to better health outcomes?’

In this sense, the model can be seen as both as product and process. As a product, it generates clear outputs maps, gaps, and action plans. As a process, it invites ongoing dialogue, improvement, and re-alignment. It has already proven useful in pharmacy education, but its full value will be realised when adapted and adopted across other health disciplines.

Ultimately, if Australia is to honour its commitments to close the gap in health outcomes and uphold the principles of equity and justice, then cultural safety can no longer be optional. It must be embedded, enacted, and evaluated across all domains of health education. The model developed in this thesis offers a tangible way to do just that and in doing so, helps reorient the health professions back toward their primary ethical obligation: to do no harm, and to provide care that is not only clinically competent, but culturally just.

While the model developed in this thesis is rooted in the Australian context, its principles of constructive alignment ensuring coherence between learning outcomes, teaching activities, and assessments are universally applicable. In countries like Canada and Aotearoa/New Zealand, where cultural safety frameworks are well-established, this model can serve as a complementary tool to enhance existing systems.

### **Canada: Strengthening Accreditation through Constructive Alignment**

Canada has made significant strides in integrating cultural safety into health education, particularly in response to the Truth and Reconciliation Commission's Calls to Action. Accreditation Canada, through its EQual program, provides accreditation services for health education programs, emphasizing cultural safety and humility in its standards. The Health Standards Organization (HSO) is developing a National Standard of Canada for cultural safety and humility (CAN/HSO 75001:2026), aiming to provide measurable, outcome-based requirements for health and social service organizations to deliver culturally safe services to First Nations, Inuit, and Métis peoples<sup>36,37</sup>.

Despite these advancements, challenges remain in ensuring consistent implementation and assessment across institutions. The model proposed in this thesis, with one of its focuses being constructive alignment, can provide a structured approach to mapping learning outcomes, teaching activities, and assessments against these cultural safety competencies. By adopting this model, Canadian institutions can identify gaps in their curricula and ensure that cultural safety principles are not only taught but effectively assessed, leading to measurable improvements in healthcare delivery to Indigenous populations.

### **Aotearoa/New Zealand: Integrating Constructive Alignment into Established Frameworks**

Aotearoa/New Zealand has been a pioneer in the development of cultural safety in healthcare<sup>38</sup>, with the Nursing Council's guidelines emphasizing the importance of cultural safety and the Treaty of Waitangi in nursing education and practice. The Medical Council of New Zealand also underscores cultural safety as a critical component of professional standards<sup>39</sup>.

While these frameworks provide a solid foundation, the integration of constructive alignment can further enhance the effectiveness of cultural safety education. By systematically aligning learning outcomes with teaching methods and assessments, educational institutions can ensure that cultural safety is embedded throughout the curriculum. This approach facilitates continuous evaluation and refinement of educational practices, ensuring that they meet the evolving needs of both students and the communities they serve.

### **Global Implications: A Versatile Tool for Diverse Contexts**

The adaptability of this model makes it an asset for health education systems worldwide. By focusing on the alignment of educational components, it offers a practical framework for institutions seeking to enhance cultural safety in their curricula. Whether in countries with established cultural safety frameworks or those in the early stages of development, this model provides a roadmap for integrating cultural safety into health education effectively.

So, while rooted in the Australian context, the model developed in this thesis offers a versatile tool that can be adapted to various international settings. By emphasizing constructive alignment, it complements existing frameworks in countries like Canada and Aotearoa/New Zealand, supporting the global advancement of culturally safe healthcare education.

# Strengths of the methodologies used within this thesis

## **National scan and deep dive:**

The strength of this thesis lies not only in its findings but in the way this model is structured. By combining a national scan of all accredited pharmacy schools in Australia with a deep case study of one institution, Chapters 3 and 4 work in tandem to provide both breadth and depth, offering a rare and nuanced understanding of how cultural safety is being addressed or overlooked within pharmacy education.

Chapter 3 adopts a national lens, drawing on semi-structured interviews with representatives from (then) all 18 accredited pharmacy programs across Australia. This is a significant methodological achievement. In an environment where cultural safety often varies widely between institutions, securing full participation means that the findings presented in this chapter are not speculative or anecdotal they are representative of the national landscape. The data collected allows for an authoritative, sector-wide analysis, enabling the identification of patterns, gaps, and promising practices that transcend individual institutions.

Participants included heads of school or their nominated delegates those with a strategic and operational understanding of curriculum structure and accreditation compliance. This sampling strategy ensured that the insights gathered reflected both the vision and practical realities of cultural safety implementation in pharmacy education. Interviews were conducted using a flexible semi-structured format, allowing participants to articulate their perspectives openly while also guiding them to speak directly to specific principles from the Aboriginal and Torres Strait Islander Health Curriculum Framework (2014)<sup>1</sup>.

One of the methodological strengths of this chapter is its dual-framework analysis. Data were coded using both the Curriculum Framework and Ritchie and Spencer's Framework Analysis model<sup>2</sup>, which divides qualitative findings into four interpretive frames: contextual (what is happening), diagnostic (why it is happening), evaluative (how well it is happening), and strategic (what could be improved). This allowed the research to move beyond surface-level description and into critical analysis. It revealed not only what was being done across pharmacy schools, but why certain approaches were adopted, where key failures were occurring, and what kinds of reforms might be possible. Mapping quotes against both the policy framework and the four analytical lenses created a rich matrix of findings.

This methodological approach gave shape to a consistent national picture: while cultural safety is acknowledged as important, it is often implemented in fragmented, underdeveloped, or tokenistic ways. The absence of vertical curriculum integration, and the lack of First Nations leadership in teaching and governance were all common findings. Importantly, the methodology also captured internal contradictions between institutional policy and day-to-day practice, and even between different participants at the same institution.

Where Chapter 3 offers national coverage, the work in Chapter 4 provided institutional depth. It shifted the lens inward, focusing on a single pharmacy school, the University of Sydney and application of the mapping model in greater detail. This chapter demonstrated how the national trends identified in Chapter 3 manifest on the ground, unit by unit. In this case study, 30 interviews were conducted with Unit of Study Coordinators and key staff responsible for content delivery, assessment, and curriculum governance. The inclusion of a wide range of teaching staff not just those involved in cultural safety was a strength, as it allowed the mapping to reveal inconsistencies across disciplines, year levels, and types of content.

The methodological approach in Chapter 4 closely mirrored that of Chapter 3, maintaining consistency in analytical strategy while expanding its practical application. Data were again coded using both the Curriculum Framework<sup>1</sup> and the Ritchie and Spencer model<sup>2</sup>. However, in this chapter, the focus was more granular: instead of mapping broad institutional strategies, the analysis examined how cultural safety principles were or were not embedded into specific units of study. This included not just what content was included, but how it was taught, who delivered it, and how (or whether) it was assessed.

A key strength of this chapter's methodology was the integration of constructive yarning a culturally appropriate and relational approach to interviewing, developed from First Nations research methods<sup>9</sup>. This was particularly important given that participants were reflecting on culturally sensitive material, and in some cases, their own discomfort or uncertainty about teaching Aboriginal and Torres Strait Islander content. The yarning method allowed for more honest, reflexive responses and supported the ethical rigour of the study<sup>9</sup>. It also reinforced the relational integrity of the thesis, acknowledging that research on cultural safety must itself be conducted in a culturally respectful manner.

Chapter 4 also demonstrated the diagnostic capacity of the model developed in Chapter 3. It showed how mapping to the Curriculum Framework could uncover structural fragmentation, misalignment, and gaps in staff knowledge. For example, some units included First Nations content as stand-alone case studies without any cultural scaffolding; others made no attempt to include such content at all. Assessment practices were rarely aligned with cultural safety principles, and staff were often unaware of what content was being taught across the broader program. By applying the same mapping principles at a finer scale, Chapter 4 validated the broader themes from Chapter 3 while providing specific evidence to support targeted reform.

Taken together, these first two data-based chapters exemplify a methodologically robust and strategically layered approach. Chapter 3 defined the scope of the problem nationally, while Chapter 4 proved that the model can be meaningfully applied to interrogate local practice. This dual approach allowed the work in this thesis to offer not just critique, but a tested method for self-assessment and improvement. It moved from theory to practice, from policy to pedagogy, and from abstraction to real-world action.

While Chapters 3 and 4 demonstrated the methodological strength and analytical rigour of this thesis capturing both a national landscape and institutional realities, they are also shaped by the lens through which the research was conducted. As described above.

### **Mapping:**

Having made visible the lens through which the research has been conducted, this thesis returned to the formal outputs of that work continuing with the same analytical and cultural integrity that shaped the previous chapters. Chapter 6 built upon the structural mapping and diagnostic tools developed earlier but turned to the question of alignment: not only whether cultural safety was present in curricula, but whether it was embedded in a way that is pedagogically sound, assessable, and accountable. With the reflexive foundations made explicit, the research that followed continued with greater clarity of purpose and a strengthened ethical base seeking not only to understand the system, but to offer a path toward meaningful change.

So, building on the national scan and institutional mapping work presented in Chapters 3 and 4, this chapter shifted focus to the crucial relationship between curriculum design and educational integrity through the lens of constructive alignment. While the earlier chapters explored whether and where cultural safety appears in pharmacy curricula, this chapter asked

a deeper question: when cultural safety is included, is it embedded in a way that supports meaningful learning and accountability? By applying Biggs' theory of constructive alignment where learning outcomes, activities, and assessments must be purposefully linked<sup>3</sup>, this chapter introduced an evaluative layer that moved beyond presence to examine pedagogical coherence. It interrogated whether cultural safety in pharmacy education is being taught in ways that are not just visible, but learnable, assessable, and professionally meaningful.

This chapter applied the Aboriginal and Torres Strait Islander Health Curriculum Framework as its evaluative benchmark<sup>1</sup>, building directly on the mapping methods developed earlier in the thesis. However, the analytical focus shifted: instead of simply asking whether content exists, the chapter analysed whether cultural safety-related learning outcomes were supported by in-class learning activities and aligned to authentic assessments. The study is based on the newly revised pharmacy curriculum at the University of Sydney, a timely site given the school's recent degree redevelopment. The curriculum offers an opportunity to apply the same mapping process to a different curricular structure, allowing for both an assessment of change over time and a more targeted investigation into alignment practices.

The process began by identifying all stated learning outcomes across the first and second year of the revised program that relate to Aboriginal and Torres Strait Islander health, cultural safety, health equity, or related domains. These outcomes were then mapped against the key domains of the Framework to determine their coverage of core cultural safety principles, including reflexivity, partnership, respect, communication, and holistic care. The next stage involved identifying the learning activities and assessments linked to each outcome to determine whether constructive alignment has been achieved: Are students being given the opportunity to develop the knowledge and capabilities expected by the outcomes, and are they being assessed in ways that demonstrate those capabilities?

Preliminary findings revealed a pattern of partial and inconsistent alignment. For example, while several units now include learning outcomes that reference cultural safety, Indigenous health, or equity, the follow-through into learning activities and assessments were often weak or absent. The most prominent cultural safety intervention is a compulsory workshop on racism. This workshop is a clear institutional commitment to cultural safety learning, and the activities group discussions and reflection are pedagogically appropriate. However, the chapter identifies a key shortcoming: the workshop is not formally assessed. This gap signals a missed opportunity to consolidate learning and undermines the seriousness with which the content is treated within the broader curriculum. Students are expected to attend, but not to demonstrate growth, understanding, or reflexivity in a way that contributes to their professional evaluation.

This disconnect is significant. In a curriculum that rigorously assesses knowledge in pharmacokinetics, clinical skills, and chemistry through exams, Objective Structured Clinical Examination (OSCEs), and practicals, the absence of equivalent rigour for cultural safety signals its marginal status. It risks conveying to students that cultural safety is supplementary rather than essential. The chapter argues that if we are to treat cultural safety as a legitimate and vital health competency as both the pharmacy Deans of Australia and the Pharmacy Board suggest then it must be subjected to the same pedagogical standards as all other learning domains. This means scaffolded, meaningful engagement; opportunities for practice and feedback; and assessment that is both formative and summative.

The analysis extends beyond the workshop. Across other units of study, there is evidence of cultural content, particularly through case studies or references to health inequities. However, this content is often not contextualised within a cultural safety framework, nor explicitly linked to assessment. In some units, First Nations health issues are addressed in lectures or

tutorials but remain unexamined in tests, assignments, or reflective exercises. In others, culturally relevant case studies are included but not assessed in ways that value cultural responsiveness as a professional skill. This indicates that even when cultural content exists, it may not be institutionally prioritised through alignment.

The chapter highlights that where constructive alignment breaks down, the implications go beyond curriculum design they reflect underlying values and power dynamics. Misalignment may occur because of curriculum overload, lack of staff training, or uncertainty about how to assess cultural learning in an appropriate and non-harmful way. These are not technical problems alone; they are political and ethical challenges. If universities are serious about preparing culturally safe graduates, they must support their educators through training, resourcing, and shared pedagogical frameworks that treat cultural learning with the same rigour as scientific domains.

Importantly, this chapter does not treat constructive alignment as a rigid formula, but as a flexible, culturally responsive tool for illuminating where institutional practices fall short and where they can be improved. It advocates for the use of culturally appropriate assessment methods, such as yarning-based reflections, scenario-based oral assessments, and community co-assessment models. These methods may look different from standard exams, but they are no less rigorous. Indeed, they often provide a better measure of the capabilities required for cultural safety: reflexivity, relational understanding, and context-sensitive decision-making.

Throughout, the chapter continues the thesis's commitment to ethical and relational research. The purpose of this audit is not to criticise individuals or name and shame programs it is to offer institutions a constructive way to evaluate their efforts, identify areas for improvement, and align practice with policy. The method is designed to be replicable, adaptable, and

scalable, allowing other faculties and disciplines to use the same approach to evaluate their curricula against national frameworks and their own professional mandates.

In conclusion, chapter 6 extends the thesis's methodological contributions by demonstrating that constructive alignment audits offer a practical means of evaluating whether cultural safety content is effectively integrated into curriculum design. It reveals that despite structural reforms; significant misalignments persist particularly in the absence of assessment and in the fragmented delivery of Indigenous content across units. Until cultural safety is not only taught but assessed, scaffolded, and valued, it will remain peripheral to professional identity formation. This chapter provides both the evidence and the tools for moving beyond tokenism toward a truly aligned, accountable, and culturally responsive health curriculum.

### **Involvement of community:**

While the earlier chapters of this thesis have focused on the policies, structures, and processes that guide cultural safety in pharmacy education from within the institution, chapter 7 marks a deliberate and essential shift in scope. It moves the conversation from an internal review of curricula 'what institutions say they are doing' to an external, community-driven lens that asks, 'how do First Nations people experience the pharmacy profession, and what do they expect from it going forward?'

This pivot is more than methodological; it is philosophical. It repositions Aboriginal and Torres Strait Islander communities not as passive recipients of health services or educational content, but as rightful co-designers, evaluators, and knowledge-holders. It acknowledges that cultural safety, by definition, cannot be declared by institutions, but must be determined by those on the receiving end of care. This community paper, therefore, is not an add-on or a

supplement, it is a central component of the thesis, giving authority to the very voices that should shape the future of healthcare education in this country.

The study involved interviews with 30 Aboriginal and Torres Strait Islander people from diverse regions and backgrounds, including both healthcare professionals and health consumers. The yarning-based methodology culturally appropriate, relational, and grounded in trust, allowed participants to speak freely and reflectively about their lived experiences with pharmacists, pharmacy settings, and the broader healthcare system. The themes that emerged communication, racism, institutional barriers, systemic neglect, and the desire for culturally grounded education were powerful, consistent, and in many cases, deeply confronting.

One of the most important contributions of this chapter is its clear reframing of accountability. Much of the literature on curriculum reform focuses on internal institutional standards, accreditation, and regulatory benchmarks. These are important, and earlier chapters of this thesis have explored them in depth. However, they are insufficient. What this chapter highlights are that communities have their own standards grounded in respect, lived knowledge, and historical memory and these often do not align with how institutions measure success. For example, while a university might consider it sufficient to “cover” Aboriginal health through a lecture or workshop, participants in this study consistently expressed that tokenistic inclusions were not only inadequate they may be harmful.

Participants detailed experiences of being dismissed, judged, or dehumanised in pharmacy settings. These stories were not occasional or anecdotal they were systemic. From being racially profiled to receiving minimal or dismissive communication, First Nations people described patterns of treatment that fundamentally breached the principles of culturally safe care. These experiences were not just attributed to individual ignorance, but to a lack of

cultural training, accountability, and reflexivity within the system. The clear message from community was that educational institutions have a responsibility to change the way future pharmacists are trained and that this cannot happen without community involvement from the outset.

A major strength of this paper is how it challenges the traditional hierarchy of knowledge production in health education. In most curriculum development processes, universities and professional bodies hold the power to decide what is important, how it is taught, and how it is assessed. Community input (if it is sought at all) is often limited to consultation sessions at the tail end of course development<sup>40</sup>. This paper refutes that model. It shows that if cultural safety is truly the goal, then First Nations communities must be involved not only in identifying what content is missing, but in shaping the entire pedagogical process: from curriculum design, to who teaches, to how student learning is assessed.

One of the clearest community demands was that cultural safety content must be assessed, and that passing such content should be treated as seriously as any other professional requirement. As participants put it, ‘you should not be able to become a pharmacist if you cannot demonstrate respect, understanding, and humility toward Aboriginal and Torres Strait Islander people’. Several participants also challenged the notion that learning about First Nations health is a ‘soft skill’ or elective add-on, instead arguing that it is central to safe practice. These views aligned strongly with critiques raised in the earlier chapters of this thesis, especially in Chapter 6, which identified the lack of cultural safety assessments in the current curriculum including a compulsory workshop that, despite its good intentions, is not evaluated in any meaningful way.

This chapter also re-introduced the theme of emotional and cultural burden. Participants often expressed frustration and exhaustion at having to repeatedly explain their needs to non-

Indigenous healthcare providers who had not been properly trained. This highlighted another critical insight: when education fails, community members become the ones who carry the burden. The inadequacies of the curriculum do not simply remain within the university, they travel into clinics, dispensaries, and community health settings, where inadequate training/competence are felt by real people, often in moments of vulnerability. It is not enough then for institutions to be well-meaning; they must be accountable for the real-world consequences of their teaching.

By elevating community voices, this chapter also reinforces the thesis's commitment to culturally safe research practice. In line with Indigenous research principles, the research process was guided by respect, reciprocity, and relationship-building. This was not a study conducted on community, but with community, and for community. Participants were treated not as data points, but as knowledge holders whose insights would shape the future of pharmacy education.

Importantly, the findings of this chapter have not only theoretical implications but direct practical applications. They provide a blueprint for how educational institutions can restructure their engagement with community. This includes not only co-designing curriculum content, but also ensuring that Elders, community health workers, and cultural educators are meaningfully involved in teaching, mentoring, and evaluation. It also suggests the need for formal mechanisms through which community members can evaluate whether graduates are ready to practice in culturally safe ways not as a form of gatekeeping, but as a necessary form of cultural accountability.

In summary, this chapter marks a significant broadening of the thesis. Where the early chapters examined institutional frameworks and curriculum structure, this chapter makes clear that no curriculum is complete without community. It reinforces that cultural safety

cannot be achieved from within the institution alone it must be shaped in partnership with those it seeks to serve. The community paper brings forward the voices that are too often left out of educational reform, and in doing so, it realigns the focus of the thesis: from internal compliance to external accountability, from curriculum-as-text to curriculum-as-relationship.

Whilst being a critique this chapter is also an invitation for institutions to listen, to shift, and to share power. In placing community at the heart of curriculum reform, it ensures that cultural safety is not a theoretical ideal, but a lived practice with the potential to transform both education and health outcomes.

Together, the methodologies employed throughout this thesis form a layered, rigorous, and culturally grounded approach to examining and reforming cultural safety education in pharmacy. Beginning with a national scan of all accredited pharmacy schools, the research provided a sector-wide snapshot of current practices, exposing systemic inconsistencies and the lack of unified frameworks. This was followed by a deep institutional case study, applying a refined mapping model to explore how cultural safety is or is not embedded within individual units of study. From there, the forthcoming constructive alignment analysis takes this model further, critically evaluating not just the presence of cultural content, but its pedagogical coherence and whether students are meaningfully assessed on this knowledge. Reflexivity was embedded throughout and given space in a dedicated chapter to acknowledge the unique cultural responsibilities, tensions, and lived experiences brought by undertaking this work as a First Nations scholar. Finally, the community consultation chapter completed the circle repositioning First Nations voices not as passive stakeholders, but as essential partners in curriculum design, implementation, and evaluation.

The strength of this thesis lies not only in its findings, but in its format: multi-scalar, adaptable, and grounded in First Nations values. It offers a practical and replicable model that

can be adopted by health education providers beyond pharmacy, including medicine, nursing, midwifery, and allied health. Each layer sectoral, institutional, pedagogical, personal, and community adds dimension and integrity to the overall framework, demonstrating that cultural safety must be evaluated holistically. Most importantly, the thesis provides not just critique, but a path forward. By centring community expectations, aligning teaching with learning outcomes, and creating space for reflexive accountability, this work offers a roadmap for education that is culturally responsive, ethically sound, and structurally sustainable. It stands as a call to action: that cultural safety be treated not as a symbolic gesture, but as a core component of professional readiness one that must be planned, taught, assessed, and continuously shaped by the people it most effects.

## **Limitations of the work within this thesis**

That said, no research is without limitation. Each data chapter, including the literature review, outlines the specific limitations of the sections. However, I will briefly describe global limitations of the thesis below.

An important limitation of this thesis ultimately is that it represents a snapshot in time. While it provides a detailed and timely examination of the state of cultural safety in pharmacy education in Australia, it does so within the bounds of a particular historical, political, and institutional moment. The findings, model, and recommendations have been developed based on the current policy landscape, accreditation standards, community expectations, and institutional practices. However, all these elements are dynamic and subject to change sometimes rapidly.

One of the most significant future developments that may reshape the terrain of cultural safety in health education is the potential for a national treaty or treaties with First Nations peoples. Such a treaty would represent a fundamental shift in the relationship between First Nations communities and the Australian state, and it would likely carry implications for all sectors, including education and health. A treaty could enshrine principles of self-determination, formalise co-governance structures, and mandate more robust forms of Indigenous representation and authority within curriculum design, delivery, and evaluation. Should this come to pass, the benchmarks and frameworks currently used such as the Aboriginal and Torres Strait Islander Health Curriculum Framework may evolve significantly or be replaced by stronger, community-led instruments.

Similarly, accreditation bodies, government departments, and universities themselves may adopt new policies and priorities that reflect such broader societal shifts. What currently

exists as a loosely enforced expectation for cultural safety may become a binding requirement with rigorous assessment criteria and formal community accountability mechanisms. In such a future, some of the critiques and reform strategies offered in this thesis may need to be re-examined or even rendered obsolete by a more structurally transformed system.

Even beyond treaty-making, societal understandings of cultural safety and equity in healthcare are continuing to evolve. Concepts such as cultural humility, decolonising education, and Indigenous data sovereignty are gaining prominence and may reshape how institutions understand their obligations to First Nations communities. This thesis, while aligned with those values, has necessarily drawn upon the dominant discourses and tools available at the time of writing.

Therefore, the work presented here should not be viewed as a final or fixed solution. It is best understood as a rigorous, evidence-based contribution that responds to the needs and gaps of the current moment, with an openness to future adaptation. The mapping model developed in this thesis is intended to be flexible capable of evolving alongside new policy, pedagogical, and political developments. However, its application and relevance will always depend on context, and that context is likely to change.

In this sense, the limitation of temporality is not a flaw, but a feature of socially engaged research. It reinforces the need for ongoing, constant scholarship that remains accountable to both the present and the future. This thesis offers a foundation upon which future researchers, educators, and communities can build, critique, and transform as the broader landscape of First Nations justice in Australia continues to unfold.

A further important limitation of this thesis is that, while it proposes a comprehensive and practical model for evaluating and enhancing cultural safety education, it has not included

formal evaluation of outcomes following the implementation of these recommendations. In other words, this thesis stops at the point of developing tools, revealing gaps, and proposing change, it does not measure whether those changes, once adopted, lead to improved cultural safety in teaching, learning, or health service delivery. This absence is not a result of methodological oversight, but of the natural constraints of a doctoral project's timeline and scope.

The work presented here is inherently forward-facing. It builds and tests a curriculum mapping model, audits alignment between learning outcomes and assessment, and elevates the voices of community in ways that challenge the current practices of pharmacy education. However, as these contributions were developed during this PhD, there has not yet been time for schools of pharmacy or health more broadly to integrate and trial these tools in a sustained and measurable way. Evaluating the impact of curriculum reform, particularly in the realm of cultural safety, requires long-term tracking of student learning, behavioural change, and perhaps most importantly, shifts in health outcomes and community trust. These are processes that unfold over years, not months.

As such, this thesis represents a significant diagnostic and design phase what might be called the foundational work of reform. It identifies the gaps, proposes the frameworks, and develops methodologies that can guide future evaluation. But the question of effectiveness (whether these changes lead to safer, more respectful, and more accountable practice) remains open. This is not a weakness of the research design itself, but a function of the stage at which this work currently sits. The contribution of this thesis is to make evaluation possible by providing clear criteria, tools, and standards against which future initiatives can be judged.

This limitation is particularly relevant when viewed through the lens of constructive alignment. One of the key findings of this thesis is that while cultural safety content may exist within pharmacy curricula, it is not always aligned to learning outcomes or assessed in meaningful ways. This misalignment can undermine the entire purpose of cultural safety education. However, while this thesis identifies those misalignments, it does not yet test whether the proposed solutions more rigorous assessment design, community-informed learning outcomes, or spiral curriculum integration improve student learning or shift professional behaviours in practice. These are questions that will require subsequent research, perhaps through longitudinal tracking of graduate cohorts, direct observation of clinical placements, or post-graduation interviews with First Nations patients and practitioners.

There is also an important ethical dimension to this limitation. Cultural safety is not simply an academic concept it has real-world consequences. The absence of evaluation data means that, at this stage, the proposed model cannot yet claim to reduce harm or increase safety in any measurable way. This matters, especially in First Nations research, where the stakes of inaction or inadequate action are high. At the same time, it is precisely because those stakes are high that foundational work like this is needed. Institutions cannot evaluate what they have not first built. In this sense, while evaluation is not yet part of this thesis, enabling that evaluation is very much part of its contribution.

Importantly, the thesis anticipates this limitation and addresses it by embedding evaluative thinking into the proposed tools. The curriculum mapping model is designed not only to reveal current gaps, but to be used iteratively, re-applied over time to measure progress. The constructive alignment audit offers criteria against which improvements can be tracked. And the emphasis on community voices throughout the research offers a culturally grounded standard of success: not merely whether content is included, but whether that inclusion feels

respectful, safe, and empowering to Aboriginal and Torres Strait Islander people. That said, we also need to acknowledge that there are many more community voices to be heard, and this thesis only acknowledges the voices of the 30 community members interviewed, and it must be noted that this continued practice of engaging community is required.

In future work, these tools can be integrated into cycles of curriculum review, staff development, and even accreditation. Longitudinal studies could be conducted to test whether programs that apply this model see improvements in student cultural capability, changes in teaching staff practice, or increased satisfaction and trust among First Nations patients. These are critical next steps, and while they fall outside the scope of this thesis, they are only possible because of the groundwork laid here.

The absence of outcome evaluation in this thesis does present a limitation but it is a limitation borne of timing, not conceptual weakness. This research provides a robust foundation, a set of tools, and a clear rationale for why cultural safety must be more than an aspirational goal. While the true impact of these contributions remains to be measured, this thesis ensures that future evaluations will have something meaningful to measure against and in doing so, takes an essential step toward long-term, community-accountable reform in health education.

An important limitation of this thesis is that the central model for curriculum mapping and reform is fundamentally shaped by the perspective, positionality, and interpretive lens of a single researcher. While the research has been informed by extensive interviews with stakeholders across academia and community, and is grounded in established theoretical and policy frameworks, the final model and associated recommendations ultimately reflect one person's synthesis and proposed solution. This limitation must be acknowledged both methodologically and ethically.

As an Aboriginal researcher working within the university, my experiences, commitments, and responsibilities have shaped how I've interpreted data, framed problems, and envisioned pathways forward. This perspective brings a range of strengths: it offers an insider understanding of the cultural and institutional dynamics at play, a sensitivity to the legacy of colonial harm in education and health systems, and a commitment to cultural accountability that is not abstract but lived. It also offers a degree of reflexive honesty that is often missing in institutional self-assessments. My position has enabled me to ask questions that others might not, to notice silences that others might miss, and to engage with participants in ways that foster trust, particularly in community settings.

At the same time, no one person can speak for all First Nations people, nor should they. Cultural safety, by definition, is determined by the person receiving care not by the educator, the clinician, or even the researcher. While I have aimed to centre community voices, particularly through the community consultation study of chapter 7, and to analyse data with methodological rigor, the conclusions drawn and the model developed remain my interpretation. Another researcher with a different cultural background, academic training, or lived experience may have approached the same data differently and reached alternate conclusions. In that sense, this thesis does not claim to be a final or universal blueprint. Rather, it should be seen as one contribution albeit a rigorous and deeply considered one within a much broader, ongoing conversation about how health curricula can serve Aboriginal and Torres Strait Islander communities more justly.

This limitation is particularly salient given the thesis's emphasis on system-wide reform. While the proposed mapping model has shown promise in identifying gaps and offering actionable strategies, it has not yet been co-developed or co-implemented in partnership with multiple institutions or First Nations working groups. It represents a first iteration, grounded

in evidence and shaped by community feedback, but not yet tested through widespread collaborative application. This raises questions not about the value of the model itself, but about the risks of over-reliance on any single voice especially in a space where cultural safety is relational, collective, and context specific.

Additionally, there is a danger that institutions may adopt the model superficially, focusing on the structure without engaging with the deeper values that underpin it. Because the model is authored by one researcher, there is a risk that it could be treated as a closed product rather than an open, iterative process. To mitigate this, I have deliberately framed the model as adaptable, modular, and open to reconfiguration depending on the needs and feedback of each institutional and community context. Nonetheless, the very act of publishing a model creates a perception of authority, and that authority must be held lightly and offered in service, not imposed.

It is also worth noting that while I have aimed for transparency and self-reflexivity throughout this project, there are inherent blind spots in all research. My proximity to both the subject matter and the community of concern creates a dual challenge: on one hand, it allows me to bring urgency, depth, and cultural accountability to the work; on the other, it may also lead to assumptions, emotional entanglements, or unintentional over-identification with certain narratives. I have tried to address this by working with co-researchers and supervisors, validating coding decisions with collaborators, and engaging in critical dialogue with peers but these efforts, while helpful, cannot erase the fact that the final synthesis is mine.

Therefore, this thesis should not be viewed as a fixed endpoint or as a definitive ‘solution’ to the challenges of embedding cultural safety in health curricula. Rather, it should be read as an informed proposition a way of making visible what is often obscured, and of offering a

method that others can test, adapt, improve, and even challenge. It is my hope that in acknowledging this limitation openly, I make room for further voices to shape, refine, and extend this work. The future of cultural safety in health education cannot and should not rest on individual initiative alone. It must be grounded in collective responsibility, shared leadership, and the continuous presence of First Nations voices in all aspects of teaching, research, and institutional decision-making.

## Implications of this work

A fundamental implication arising from this body of work is that, despite decades of discussion, commitment statements, and policy frameworks, we are simply not doing enough to embed cultural safety in pharmacy education or health education more broadly in a way that honours its foundational principles. Cultural safety is not and should not be treated as a checklist item. It cannot be achieved through representation alone or by inserting isolated content into curricula. It is a transformative approach that challenges power imbalances, centres First Nation voices, and places the ultimate authority for determining whether care is culturally safe in the hands of those receiving that care. This principle is not optional. It is embedded in the very definition of cultural safety as first articulated by Māori nurse Irihapeti Ramsden and further reinforced by Aboriginal and Torres Strait Islander health leaders across Australia<sup>41</sup>. And yet, as this thesis has revealed, many of our institutions have failed to uphold that core standard.

The findings presented throughout this research point to a concerning reality: the people who are meant to determine whether healthcare is culturally safe are often not included at all in designing, delivering, or assessing cultural safety education. This exclusion takes many forms. Sometimes it is deliberate a consequence of institutional resistance, racism, or a lack of will to share power. In other cases, it is unintentional arising from uncertainty about where to begin, lack of relationships with community, or misplaced confidence that existing structures are sufficient. Regardless of the reason, the result is the same: a system that claims to be teaching cultural safety while failing to meet the basic criteria of what cultural safety demands.

This thesis argues that such failures cannot be brushed aside as technical gaps or growing pains. They are ethical systematic failures, reflecting a profound misalignment between institutional rhetoric and practice. If cultural safety is determined by the recipient, then any approach that does not actively and continuously involve Aboriginal and Torres Strait Islander communities in its formation, delivery, and evaluation cannot be said to be delivering cultural safety. At best, it is delivering cultural awareness, important but ultimately insufficient approaches that do not address structural power or relational accountability.

There is a temptation in health education to adopt an optimistic view to assume that progress is inevitable, that incremental steps will add up to transformation, and that goodwill is enough. This thesis challenges that assumption. While good intentions were evident in many of the participants interviewed across pharmacy schools, they did not always translate into good practice. As shown in Chapter 4, many staff were unsure how to include cultural safety in their teaching, felt unsupported in doing so, or viewed it as the responsibility of someone else often imagined as a single First Nations staff member who could carry the weight of the institution's obligations. Cultural safety was often included late in the curriculum design process or added to lecture slides with minimal integration or assessment. These findings suggest that the default position of institutions is not cultural safety, but cultural neglect unless conscious, collective, and well-supported action is taken to counteract it.

From a more critical view, the pattern of exclusion seen across this research may be seen not as a series of individual oversights, but as an expression of systemic racism. That is, the structures of health education continue to operate in ways that centre Western biomedical knowledge and marginalise First Nation voices, not simply through ignorance, but through entrenched logics of control, credentialism, and institutional self-protection. In this view, the exclusion of Aboriginal and Torres Strait Islander people from curriculum design is not an

accident it is a feature of systems that were never built with our people in mind. And when cultural safety is introduced, it is often through performative inclusion tokenistic case studies, one-off workshops, or invited talks that allow the institution to claim progress without surrendering any actual power.

But while this critical lens is important, because it forces institutions to confront the reality of systemic racism, it is not the only lens. This thesis also makes space for a more optimistic reading. In many cases, the exclusion of Aboriginal and Torres Strait Islander voices was not due to resistance or malice, but rather to uncertainty and lack of infrastructure. Staff were not always sure how to reach out to community, what cultural protocols to follow, or how to integrate First Nations knowledges in ways that were not superficial. The work presented here aims to respond to that uncertainty with structure, clarity, and direction. It offers a roadmap, not only for identifying what is missing, but for building processes of inclusion that are deliberate, respectful, and enduring.

The model developed in this thesis (see fig 1) through national mapping, institutional deep dive, constructive alignment auditing, and community validation provides a practical and culturally accountable tool for institutions to begin this work or to refine it. It makes clear that cultural safety cannot be delivered through content alone. It must be structurally embedded: in leadership, in curriculum governance, in staff capability building, in assessment, and most importantly, in the presence and power of Aboriginal and Torres Strait Islander people at all levels of the educational process. Without this, institutions will continue to teach about cultural safety in ways that are not, themselves, culturally safe.

The implications of this thesis extend beyond pharmacy. Every health profession in Australia is now expected either through policy, accreditation, or public expectation to embed cultural safety in its training programs. Yet few have clear strategies for how to do this meaningfully.

This research provides both the diagnostic tools, and the critical framing required to move forward. It reminds us that improving cultural safety is not about adding more content or hiring one First Nations academic. It is about redistributing power, centering relational accountability, and being willing to be judged not by what we say we are doing, but by what communities tell us we are doing.

The notion that cultural safety is determined by the recipient is not just a semantic point, it is a radical shift in authority. It requires health educators and institutions to give up the idea that they alone are the experts, and instead to become listeners, learners, and collaborators. This is deeply uncomfortable for many, especially within systems that reward control, certainty, and hierarchical expertise. But it is also necessary. Until Aboriginal and Torres Strait Islander people are at the table not just in consultation but in leadership, institutions cannot claim to be teaching cultural safety in any meaningful way.

This thesis makes one thing clear that we are not there yet. Cultural safety remains more of a promise than a reality in many programs. But the tools exist, the voices are speaking, and the frameworks are in place. What is required now is the courage to act and the humility to know that you can't know everything, and structural supports to ensure that inclusion is not episodic but enduring. Whether it is viewed with cautious optimism or justified frustration, the responsibility remains the same: we must do more.

## **Where do First Nations people fit in (curriculum design, co-design, assessments)**

A central implication emerging from this research and one that cannot be overstated, is the need to clarify and elevate the role of First Nations people within curriculum development, delivery, and evaluation. If cultural safety is determined by those receiving care, then the question of where Aboriginal and Torres Strait Islander people fit into this process is not a peripheral concern. It is a critical consideration. Without our inclusion at every level of curriculum planning and implementation, cultural safety risks becoming a hollow promise one that reproduces the very exclusion it claims to redress.

Throughout this thesis, it has become clear that despite policy rhetoric and high-level commitments to inclusion, First Nations people are often not meaningfully involved in decisions about what is taught, how it is taught, or how student learning is assessed. In some cases, there are attempts to involve First Nations staff, Elders, or community members but these engagements are often ad hoc, underfunded, or tokenistic. In other instances, there is no involvement at all, either because of institutional inertia, lack of cultural capability, or the absence of structures to support respectful engagement.

This must change. First Nations people must be embedded throughout the curriculum lifecycle not simply consulted once a unit is already designed but involved from the earliest stages of conceptualisation through to delivery and ongoing evaluation. This includes formal roles in curriculum governance committees, co-leadership in curriculum design teams, and inclusion in the development and marking of assessments that relate to cultural safety.

Anything less than this undermines the integrity of cultural safety education and perpetuates the very power imbalances that the concept seeks to dismantle.

In terms of curriculum design, this means moving beyond the practice of ‘fitting’ First Nations content into existing Western frameworks and instead co-creating curricula that value First Nations knowledges on their own terms. This does not mean rejecting biomedical content or clinical standards; instead, it means creating space for multiple knowledge systems to sit alongside one another, and for students to engage critically with both. It also means recognising First Nations pedagogies such as storytelling, yarning, deep listening, and relationship-based learning have just as much value as traditional lecture-based formats. These ways of teaching are not merely culturally appropriate; they are powerful tools for building empathy, reflexivity, and relational accountability among future health professionals.

First Nations inclusion in curriculum design also requires institutions to actively recruit, support, and retain First Nations academics and educators. At present, the burden of cultural safety education often falls on a very small number of Aboriginal and Torres Strait Islander staff, who are expected to speak on behalf of diverse communities, deliver culturally specific content, mentor First Nations students, and advise on curriculum all while navigating systemic racism and institutional marginalisation. This is not sustainable, nor is it fair. Institutions must commit to building a culturally safe workplace for First Nations staff and ensure that the workload of embedding cultural safety is distributed across all teaching staff, not just those with lived experience.

Co-design must also be extended beyond the university walls. As the community consultation chapter in this thesis revealed, many First Nations people want to be involved in shaping how health professionals are trained. They bring a depth of knowledge that is grounded in lived

experience, cultural practice, and community expectations. When asked, they offer thoughtful, specific, and constructive feedback not only on what is missing from current curricula, but on how teaching and learning could be improved. Yet these voices are rarely invited into curriculum design in any formal or ongoing way. This reflects a wider issue: the professionalisation of health education has created barriers to inclusion for those who may not hold academic titles or credentials, but who carry vital cultural and experiential knowledge.

To address this, institutions need to establish clear, respectful, and well-resourced pathways for community involvement. This might include formal partnerships with Aboriginal Community Controlled Health Organisations (ACCHOs), Elders councils, or regional Indigenous education boards. It should also include appropriate compensation, recognition, and support for community members who contribute to curriculum work. Their time and knowledge are valuable, and they should not be asked to give it freely for the sake of institutional optics. More than that, they should be recognised as co-educators, not as guests.

The question of assessment is equally critical. As earlier chapters revealed, even when cultural safety content is included in teaching, it is often left out of formal assessment. This sends a clear message: that cultural safety is not as important as pharmacology, therapeutics, or clinical procedures. If students can graduate without ever being tested on their ability to work respectfully and safely with Aboriginal and Torres Strait Islander people, then institutions are failing in their duty to produce culturally competent graduates.

To meaningfully assess cultural safety, institutions must ensure that First Nations people are involved not only in assessment design, but as assessors. Cultural safety is about more than what a student knows it is about how they engage with patients, communities, and cultural difference. This cannot be judged solely by non-Indigenous academics. If cultural safety is

defined by the patient, then those from the community must have a role in determining whether a student can deliver it.

This does not mean simply inviting Elders to sit in on final presentations or giving feedback on written reflections. It means building structured, culturally safe assessment mechanisms where First Nations assessors hold real authority in marking, grading, and determining whether a student is ready to practice. These assessors may include First Nations academics, Aboriginal Health Workers, cultural mentors, or trained community representatives, depending on the context and resources available. Their involvement sends a powerful message: that cultural safety is not something the university alone can determine.

Including First Nations assessors also ensures that cultural safety assessment is relational, not abstract. Much of what defines culturally safe practice such as humility, listening, respect, and responsiveness cannot be measured through multiple-choice exams or lecture attendance. Instead, it must be assessed through reflection, dialogue, and performance in context. This may include oral assessments, case-based discussions, role plays with community assessors, or feedback from placements in Aboriginal health settings. Such assessments require time, trust, and cultural integrity but they are essential if we are to move beyond performative inclusion.

Moreover, assessment must carry real academic weight. Students should not be able to fail in cultural safety and still pass their degree. Institutions must be willing to uphold cultural safety as a non-negotiable graduate attribute. That also means providing students with meaningful opportunities to build their capabilities over time not just assessing them at the end. Spiral curricula, scaffolded assessment tasks, and integrated placements all have a role to play here, but only if First Nations people are embedded in their design and evaluation.

In the end, the question ‘Where do First Nations people fit in?’ is about more than representation it is about shared governance and structural reform. It is a question that must be answered not through statements of commitment, but through real shifts in power and practice. As this thesis demonstrates, cultural safety cannot be taught or assessed in culturally unsafe systems. Institutions that continue to exclude First Nations people from curriculum design and assessment processes are failing not only their Indigenous stakeholders, but all their students who graduate without the full set of skills they need to practice ethically and competently.

# **Where do Universities/Researchers fit in (spots for allies, spots for First Nations researchers, efforts to bring in First Nations students)**

## **Universities as Structural Gatekeepers:**

Universities are not neutral institutions. They are active agents in shaping who becomes a health professional, what knowledge is validated, and how care is conceptualised and delivered. In doing so, they act as gatekeepers of professional identity and power<sup>42</sup>. If they continue to centre Western biomedical paradigms while marginalising First Nations perspectives, they risk reproducing the very structures of exclusion and cultural unsafety that cultural safety seeks to dismantle.

This thesis highlights that cultural safety is not merely about ‘content inclusion’ but about structural transformation. Universities must be willing to examine their internal cultures, governance systems, and pedagogical norms through a decolonial lens. This means acknowledging the institution itself as a colonial structure built on stolen land, historically exclusionary, and still failing to adequately support First Nations peoples. To teach cultural safety while upholding these structural inequities is to undermine its very purpose.

## **Creating Space for First Nations Researchers and Educators:**

A key implication of this work is that Aboriginal and Torres Strait Islander people must lead cultural safety initiatives. This leadership must not be symbolic or reactive it must be structurally embedded in faculties, committees, curriculum teams, and decision-making roles. First Nations researchers bring a lived and relational understanding of cultural safety that is not replicable through theory alone.

However, for this leadership to be meaningful, universities must go beyond appointment and ensure sustained, culturally safe support. This includes culturally appropriate supervision, protected time for cultural labour, flexible leave arrangements, recognition of service work, and targeted career development. Institutions must take seriously the emotional and cultural burden carried by First Nations staff, many of whom are asked to simultaneously represent, reform, and educate within hostile systems.

### **Recruiting and Supporting First Nations Students:**

Universities must also make cultural safety real by expanding access to education for Aboriginal and Torres Strait Islander students particularly in health and health education disciplines. This requires more than scholarship brochures and outreach campaigns. True inclusion means ensuring that students feel safe, seen, and supported throughout their academic journey.

Support must be holistic and relational. Cultural mentorship, cohort programs, First Nation-led tutorials, and the visible presence of Aboriginal and Torres Strait Islander staff are essential. Academic support should reflect First Nations pedagogies, not just Western models of excellence. Universities must ask: What are we doing to ensure that First Nations students can feel safe to be themselves in this space? Because where cultural safety is lacking, attrition is high, and the profession is poorer for it.

### **Where Non-Indigenous Researchers Fit: The Role of the Ally:**

While cultural safety must be First Nations-led, non-Indigenous researchers have a critical role as allies provided that role is enacted with humility and accountability. Too often, allyship is performative. True allyship requires deep listening, the willingness to share or relinquish control, and the capacity to support change without centring oneself in it.

Non-Indigenous researchers can:

- Secure funding to support Indigenous led initiatives.
- Use their institutional privilege to advocate for reform.
- Provide mentorship and co-teaching support.
- Step back when appropriate to create space for First Nation voices.
- Engage in critical self-reflection and remain teachable.
- Support cultural supervision structures within research teams.

However, non-Indigenous researchers must also understand that not all spaces are theirs to enter. Some decisions and discussions must be held exclusively by Aboriginal and Torres Strait Islander peoples. Respecting these boundaries is a vital part of cultural safety and of being a responsible member of the academic community.

### **Institutionalising Allyship and Accountability:**

Allyship should not be left to chance. Universities must formalise and support culturally safe allyship across teaching and research. This includes embedding cultural safety competencies into professional development, recognising culturally responsive work in promotion pathways, and incentivising collaboration between First Nation and non-Indigenous staff.

Cultural safety cannot be optional. It must be treated like any other core area of academic competence with structures of assessment, improvement, and accountability. In doing so, universities move from individual goodwill to collective responsibility.

### **Cultural Safety in Research: Beyond Compliance:**

Universities must ensure that cultural safety principles are not just embedded in teaching, but also in research governance and practice. Research involving Aboriginal and Torres Strait

Islander people must be co-designed, community-led, and subject to cultural ethics approval through bodies such as the Aboriginal Health and Medical Research Council (AH&MRC).

Beyond ethics compliance, researchers must prioritise long-term relationships, reciprocity, and cultural integrity. This means valuing First Nations ways of knowing and involving community at every stage from framing the research question to disseminating the findings. Cultural safety in research is not about ticking boxes; it is about building trust and shifting power.

### **A Whole-of-Institution Commitment:**

Cultural safety cannot be siloed within Indigenous centres or health faculties. It requires a whole-of-institution approach. Deans, university executives, HR departments, professional services, and curriculum committees must all take responsibility for embedding cultural safety into their structures and everyday operations.

This also includes ensuring adequate funding for First Nations-led teaching, research, and student services. Without long-term resourcing, efforts will remain short-lived and dependent on a small number of overworked staff.

### **Universities as Sites of Healing and Transformation:**

In the end, this thesis positions universities not only as sites of knowledge production, but as potential sites of healing and transformation. For too long, these institutions have excluded, harmed, or assimilated Aboriginal and Torres Strait Islander peoples<sup>43</sup>. But they can be reimagined through shared governance, cultural humility, and a commitment to listening.

Asking, ‘Where do universities and researchers fit in?’, is to ask whether they are willing to change themselves, not just adjust their messaging. It is to ask whether they will support not just the presence of First Nations people, but our leadership. Whether they will treat cultural

safety as central to professional readiness. And whether they will walk the walk not just with strategy documents, but with structural change.

This thesis offers a roadmap. It identifies the gaps, the tools, and the next steps. But it is universities and researchers who must walk the path. Cultural safety is not an abstract value. It is an ongoing practice a relational, moral, and institutional commitment to doing better. The time for symbolic gestures is over. The time for structural allyship, sustained leadership, and institutional accountability is now.

# **Where do governments and regulatory agencies fit in (mandates, stricter enforcing, stronger accreditation, frameworks)**

## **Beyond Encouragement: The Need for Mandates**

While universities and researchers carry significant responsibility for embedding cultural safety within health education, they do not operate in a vacuum. Government bodies and professional regulatory agencies set the policy conditions and accreditation standards that influence institutional priorities. Therefore, a central implication of this thesis is that governments and regulators must move beyond soft encouragement and take an active, mandated role in requiring cultural safety as a core and non-negotiable standard within health education and practice.

At present, many policy documents including the Aboriginal and Torres Strait Islander Health Curriculum Framework (2014)<sup>1</sup> and the National Safety and Quality Health Service Standards<sup>31</sup> recognise cultural safety as a goal. However, these documents often use non-binding language such as “*should*” or “*is encouraged*”. This ambiguity allows institutions to interpret cultural safety in ways that are inconsistent, superficial, or tokenistic<sup>35,44</sup>. What is needed is clear legislative and regulatory mandates that define cultural safety not as an aspirational value but as a required standard one that must be demonstrably met through structured curricula, meaningful assessment, and institutional accountability.

Governments at both federal and state levels must take the lead in embedding cultural safety expectations into funding agreements, professional registration requirements, and education sector performance measures. Without government-led mandates, progress will remain

dependent on individual champions within institutions and, as this thesis has shown, that approach is inconsistent and unsustainable.

### **Accreditation as a Tool for Change:**

One of the most powerful tools for enforcing cultural safety standards lies in the accreditation process. Accreditation bodies such as the Australian Pharmacy Council, Australian Medical Council, and Australian Nursing and Midwifery Accreditation Council are responsible for evaluating whether educational programs meet the competencies required for professional registration. These bodies have the capacity to drive structural change if they choose to treat cultural safety with the same seriousness as clinical skills or scientific knowledge.

Currently, cultural safety is included in many accreditation frameworks, but the depth and consistency of enforcement vary considerably. For instance, programs may be asked to demonstrate where Indigenous content is included, but not how it is taught, assessed, or governed. Some accreditation bodies require institutions to ‘consider’ community consultation, but do not mandate co-design or Indigenous leadership. Others may acknowledge cultural safety in principle but fail to ensure that institutions are held accountable to community-informed definitions of what constitutes culturally safe practice.

This thesis argues for a strengthening of accreditation requirements to ensure cultural safety is evaluated as a core component of curriculum design, delivery, and graduate outcomes.

Accreditation bodies must:

- Require institutions to provide evidence of First Nations co-leadership in curriculum governance.
- Evaluate the alignment between learning outcomes, activities, and assessment as they relate to cultural safety (constructive alignment).

- Review how programs include First Nations people in assessment and evaluation of student capabilities.
- Insist on demonstrated community partnerships in the design and delivery of relevant teaching.
- Refuse to accredit or re-accredit programs that fail to meet these minimum standards.

In effect, cultural safety must become a ‘dealbreaker’ in accreditation; no longer an optional or symbolic inclusion, but a pillar of professional education integrity.

### **Stronger Oversight, Stricter Enforcement:**

Mandates and standards mean little without enforcement<sup>45</sup>. Governments and regulators must therefore develop mechanisms for monitoring and enforcing compliance with cultural safety requirements. This includes more robust data collection, public reporting of institutional performance, and the power to impose consequences such as conditional accreditation, public notice of non-compliance, or funding restrictions.

At present, there are few formal pathways for Aboriginal and Torres Strait Islander communities to hold universities or regulators accountable when cultural safety is ignored or implemented poorly<sup>46</sup>. This is a major gap in governance. Regulators must embed community accountability mechanisms into their oversight frameworks such as requiring regular community feedback reports, embedding First Nations representatives on accreditation panels, and incorporating community evaluation of graduate cultural safety in their outcomes reporting.

Furthermore, cultural safety must be monitored not only at the program level, but across the student lifecycle and workforce pathway. This means tracking how cultural safety content is introduced, scaffolded, and assessed throughout degrees; how staff are trained to teach it; and

whether graduates enter the workforce with the competencies required to deliver culturally safe care. Regulatory bodies can play a leading role in standardising these expectations and ensuring they are enforced uniformly across disciplines.

### **Improving and Updating Frameworks:**

The Aboriginal and Torres Strait Islander Health Curriculum Framework (2014)<sup>1</sup> has been instrumental in shaping conversations about cultural safety in education. However, as this thesis has shown, it is often poorly implemented, inconsistently understood, or sidelined in favour of institutional preferences. While the framework remains a strong foundation, it requires renewal, reinforcement, and more formal status if it is to achieve its full impact.

Governments and regulators should work in partnership with Aboriginal and Torres Strait Islander stakeholders including educators, community leaders, and peak bodies to revise and elevate the framework. This revision should:

- Include clear performance indicators and examples of good practice.
- Clarify expectations around co-design, assessment, and staff training.
- Identify roles for both First Nations and non-Indigenous staff and institutions.
- And embed evaluation tools that can be used by accreditation bodies and institutions alike.

Once updated, the framework should be formally adopted as a national standard across all health disciplines-not just pharmacy, and linked to professional registration, course accreditation, and government reporting mechanisms. In this way, the framework can move from being a reference document to a compulsory benchmark for culturally safe education.

### **The Role of Funding Levers:**

Governments have a critical role to play in shaping institutional priorities through funding. At present, cultural safety initiatives are often underfunded or dependent on short-term grants, leaving them vulnerable to leadership change or budget cuts. This undermines continuity and limits long-term cultural change<sup>47,48</sup>.

To address this, governments should:

- Tie funding allocations for health faculties to demonstrable progress in cultural safety.
- Establish dedicated streams for First Nations-led curriculum design, staff development, and student support.
- Fund national centres of excellence in culturally safe health education to drive innovation and capacity building.
- Require annual reporting on First Nations student recruitment, retention, and graduate outcomes across universities.
- Create and fund ongoing positions for First Nations researchers within health faculties, ensuring leadership in both education and research agendas, and embedding First Nations knowledge systems into institutional priorities.

Through these levers, governments can create the conditions for sustainability, ensuring that cultural safety is not treated as an add-on or compliance exercise, but as a long-term institutional priority.

### **Shared Accountability, Shared Authority:**

Ultimately, the question ‘Where do governments and regulatory agencies fit in?’ must be answered with a commitment to shared accountability and shared authority. Cultural safety cannot be regulated from above without Indigenous leadership. At the same time, Indigenous communities cannot bear the burden of cultural reform without structural support.

Governments and regulators must walk the line between setting standards and ceding space ensuring strong expectations are in place, while also recognising that First Nations communities must determine what cultural safety looks like in their own contexts. This means creating formal roles for Aboriginal and Torres Strait Islander organisations in regulatory decision-making, accreditation design, and evaluation processes. It also means investing in self-determined governance mechanisms that allow communities to set their own benchmarks and oversee implementation.

In doing so, governments and regulators can help shift the centre of power away from Western institutions that define success according to their own metrics, and toward community-led models that prioritise health justice, cultural authority, and relational integrity.

# Future Directions

## **Where do we go From Here:**

This thesis has mapped the landscape of cultural safety within pharmacy education and provided a practical, structured model for identifying and addressing gaps. It has done so through a multi-layered methodology that spans national mapping, institutional case study, alignment auditing, reflexivity, and community engagement. However, as this research has consistently shown, building a culturally safe curriculum is not a one-time achievement it is a continual process of engagement, reflection, and accountability. The work must continue well beyond the bounds of this thesis. What follows are the key directions for the next phase of this work, for institutions, regulators, governments, and communities alike.

## **Future evaluations:**

One of the most pressing next steps is the formal evaluation of cultural safety interventions in health education. While this thesis has provided tools for diagnosing gaps and aligning curricula with national frameworks, it has not yet measured the long-term impacts of such interventions on student learning, professional practice, or patient outcomes. Future research must go beyond mapping presence or absence and move toward understanding effectiveness.

Longitudinal studies are needed to assess whether students who participate in culturally safe learning environments go on to provide safer, more respectful care to Aboriginal and Torres Strait Islander patients. This might include graduate tracking, workplace-based assessments, and patient feedback mechanisms. Equally, evaluations must assess whether cultural safety education leads to behavioural change, not just improved knowledge or attitudes. Evaluations should include multiple data points across the student journey and into early career practice, with a focus on both self-reported confidence and community-validated competence.

These evaluations must be co-designed and led by First Nations communities to ensure that the criteria used reflect cultural safety as defined by those receiving care. Evaluation frameworks must be built around Indigenous measures of success and incorporate community voices as both assessors and co-owners of the process. Without this, evaluation risks falling back into Western metrics that fail to capture the relational and cultural dimensions of the work.

### **Inclusion of co-design:**

This thesis has shown that while there is growing institutional awareness of cultural safety, co-design remains underutilised, and culturally safe assessment practices are inconsistently applied. Moving forward, institutions must transition from consultation models to genuine co-design particularly in how they build case studies, design assessment tasks, and determine graduate readiness.

Future work should document and evaluate case studies of successful co-design partnerships between faculties and Aboriginal and Torres Strait Islander communities. These examples can serve as practical guidance for institutions unsure where to begin or how to sustain partnerships in ethical and culturally appropriate ways. Case studies should include examples of:

- Embedding Elders and community leaders in curriculum teams.
- Designing clinical scenarios grounded in real community contexts.
- Using narrative, yarning, or oral assessments to test student understanding.
- Including First Nations assessors in OSCEs, reflective tasks, or community placements.

In assessment, universities must move toward performance-based evaluation of cultural safety, with First Nations people involved as both co-designers and assessors. This ensures that students are not just learning about cultural safety but are being held accountable for demonstrating it in practice. Assessment must also become progressive and scaffolded, building across the years of a degree, rather than being relegated to isolated units or capstone tasks.

Importantly, co-design and culturally safe assessment are not just teaching strategies they are indicators of institutional cultural change. The presence (or absence) of these practices can be used as internal metrics for evaluating institutional commitment to cultural safety. Institutions should begin capturing this data regularly and transparently.

### **Monitoring:**

If cultural safety is to be taken seriously, it must be subject to the same levels of monitoring, quality assurance, and performance tracking as any other graduate competency. At present, cultural safety efforts are often fragmented and poorly monitored. Few universities track where cultural content is taught, how it is assessed, or whether students pass or fail those assessments<sup>49-51</sup>. Fewer still, gather formal feedback from Aboriginal and Torres Strait Islander students or communities on the safety and relevance of teaching practices.

The future of cultural safety in education requires the development of formalised monitoring systems. These systems should include:

- Annual curriculum audits using national frameworks.
- Mapping of learning outcomes and assessments to cultural safety principles.
- Regular review of staff training, capability, and confidence in teaching cultural safety.
- Structured feedback from students and First Nations community partners.

- Inclusion of cultural safety data in program accreditation, performance reviews, and faculty reporting processes.

Crucially, monitoring systems must avoid becoming bureaucratic exercises. Data collection must be relational and meaningful, not extractive. Community voices must be part of both the design and interpretation of data, and institutions must respond to findings with concrete actions not just reports. Where problems are identified, universities must have remediation plans, just as they would for clinical or academic accreditation risks.

To ensure integrity, these monitoring systems should be overseen by culturally informed governance bodies, including First Nations staff and external community representatives. This ensures that internal reporting is not simply internal justification, but part of a transparent cycle of continuous improvement.

### **Government oversight:**

Finally, the sustainability and effectiveness of cultural safety reform depend heavily on government leadership and regulatory enforcement. As outlined earlier in this thesis, governments and accrediting bodies currently play a limited role in actively enforcing cultural safety beyond initial program approval. This must change.

Governments must:

- Move cultural safety from a ‘guiding principle’ to a mandated standard in all publicly funded health education.
- Tie funding to demonstrated progress in cultural safety teaching, assessment, staffing, and graduate outcomes.
- Fund community-led evaluation projects and case-study banks.

- Require cultural safety reporting as part of national education performance metrics.
- Embed cultural safety into workforce registration, continuing professional development (CPD), and health service accreditation.

In parallel, regulatory agencies must strengthen accreditation standards to ensure that cultural safety is not treated as a peripheral topic but as a core criterion for program approval and renewal. Institutions that fail to meet cultural safety standards should be given limited or conditional accreditation with clear timelines for improvement and external community oversight. Agencies should also require that First Nations people are included on accreditation review panels, particularly for programs serving high proportions of First Nations populations.

Oversight must also extend beyond universities. Governments and regulators must track whether cultural safety education translates into workforce readiness, and whether First Nation patients report improvements in safety, respect, and care experiences. This could be achieved through integrated national data systems or through partnerships with Aboriginal Community Controlled Health Organisations (ACCHOs) that monitor workforce practice in community settings.

The findings of this thesis demonstrate cultural safety cannot be achieved through content alone. It requires systemic transformation: in how curricula are designed, how content is taught (and how we instruct and grow those who teach it), how students are assessed, how institutions are held accountable, and how governments and regulators define success.

‘Where do we go from here’ is not simply a question of what comes next academically; it is a call to action. We have frameworks, models, and voices. What is needed now is evaluation, enforcement, co-design, and transparency. Cultural safety must move from an abstract value

to a measurable, assessable, and lived experience for both students and the communities they will go on to serve.

The tools developed in this thesis provide a roadmap. But a map is only useful if people are willing to use it. The next chapter of this work belongs to institutions, governments, regulators, and communities willing to commit to cultural safety as a shared, ongoing, and accountable responsibility.

### **Final Note**

While this discussion presents a critical examination of the current state of cultural safety in pharmacy education, it is important to emphasise that these findings represent a snapshot in time. The issues identified throughout this thesis systemic exclusion, inconsistent implementation, and insufficient accountability paint a picture that is, at times, confronting and deeply frustrating. However, this should not be read as a declaration of hopelessness. Rather, it reflects the necessary act of holding up a mirror to a system amid slow but meaningful change. There are clear signs of a shift: growing recognition of cultural safety across accreditation bodies, increased presence of First Nations educators and scholars, and emerging examples of genuine co-design. This thesis contributes to that shift by offering practical tools and frameworks to support the work ahead. Cultural safety is not yet embedded but the will to move forward is growing. This moment offers an opportunity to turn critique into action and to ensure that the next snapshot tells a very different story.

## **Conclusion**

This thesis outlines my journey as an Aboriginal researcher to date. It developed a model to ensure that curriculum review, with respect to cultural safety teaching, can be achieved through a systematic process of interview and mapping, but it also demonstrated that it is not a static, but ongoing process that must ensure the inclusion of community voice. It also demonstrated that there is still a way to go to ensure better training of pharmacists to provide culturally safe care. It has challenged me to grow in ways that I never believed were possible and I will continue to strive for change to ensure First Nations people receive better and safer healthcare.

Mandaang Guwu (thank you) for reading.

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# APPENDICES

## **Appendix I – Chapter 3 Supplementary Material**

1 Appendix 1

2 The lead author AB is a proud Wiradjuri pharmacist who has brought an Aboriginal perspective to this  
3 study. Author BS was born outside of Australia and migrated to Australia as an adult. Her country of  
4 birth had a colonial history, and she has witnessed the aftermath of colonial rule and the building of a  
5 nationalistic identity in a newly independent nation. Author JM was born and raised in a country with  
6 post-colonial history before migrating to Australia as an adult. She was forced to hold on to and  
7 reconstruct her identify as a black woman in a predominantly white western society which has  
8 emboldened her to participate in changing the narrative particularly within education systems. Author  
9 BC is a cis-gender Caucasian woman who was born in Aotearoa New Zealand, a country with a  
10 colonial history. Her experience of living in that country has given her a deep appreciation of ways  
11 and culture of the Tangata Whenua (Māori people) and the inequities in healthcare experienced by  
12 them due to exclusion and racism. Author GW is a white Australian born woman who has come to  
13 understand and grieve the effects of colonisation on Australia's Indigenous peoples. Author RM is a  
14 Caucasian woman with a Settler history in Australia. The true history and impact of colonialism has  
15 only been made aware to her over the past two decades and she is passionate about reducing the  
16 inequities present in Australia.

1 **Appendix 2**

2 **Interview Guide**

3 **1. In starting the discussion, what in your opinion are the skills/capabilities or knowledge that**  
4 **pharmacy graduates need to provide health services to Indigenous patients.**

5

6 **2. What does the term cultural safety mean to you?**

7 a. What other terms do you associate with this concept? Can you explain what they mean to  
8 you?

9

10

11 **3. Could you start by telling me a bit about the unit of study that you teach? (NB this question is**  
12 **only asked to the teachers, other stakeholder start at Question 3)**

13 a. How long have you taught this unit?

14 b. What does it mainly aim to teach?

15

16 **4. Would you describe in detail any Aboriginal and Torres Strait Islander health/cultural**  
17 **competence/safety content at your university, within your pharmacy program and within**  
18 **particular units of study?**

19 a. What frameworks are used to inform strategy on cultural safety? (APC accreditation standards  
20 – influence, Health curriculum framework, university graduate standards)

21 b. Who made the decision to include the content?

22 c. Who teaches the content?

23 d. What is the format of teaching for this content?

24 e. How much time is devoted to this content (face to face teaching, self-directed learning and  
25 assessment)

26 f. What resources are needed to sustain it/ change it?

27 g. If there is no such content- --reasons for not including any topics related to this

28

29 **5. In your opinion how adequate is the Aboriginal and Torres Strait Islander Health/ Cultural**  
30 **Competence/Safety content taught in the pharmacy program?**

31 a. Adequate /why not?

32 b. Meets or does not meet national need

33 c. Sufficiently /insufficiently prepares graduates to meet Indigenous consumer need

34

35 **6. How do you think Aboriginal and Torres Strait Islander Health and cultural competence/safety**  
36 **should be taught in a new curriculum?**

37 a. Topics (specific to pharmacy)

38 b. Teachers (Indigenous staff, Aboriginal Health Workers, others with experience)

39 c. Positioning in the curriculum

40 d. Instructional format (tute/wshops/ experiential/simulated patients, case studies, service  
41 learning)

42 e. Assessment method (assess knowledge, capability or competence)

43 f. Evaluation of impact (finding if curriculum addition makes a difference)

44

45 **7. What is your own training with respect Aboriginal and Torres Strait Islander Cultural**  
46 **Competence/Safety?**

47 a. How did you gain this training?

48 b. What more training would you like/need?

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**8. If you were asked to include this content in a Unit of Study you were designing, what resources would you like to help you do this?**

- a. Frameworks (Standards/Guides/Case studies) -
- b. Consultation opportunities -local University Indigenous Health Experts/other pharmacy educators – (potential network of leaders in pharmacy Indigenous Education) (LIPPE)
- c. other resources

**9. Any other information you wish to share on this matter?**

## **Appendix II – Chapter 4 Supplementary Material**

**Appendix A:** Australian Pharmacy council Criterion that mention the Inclusion of First Nation Australians

**Criterion 3.3:** Program planning, design, implementation, evaluation, review and quality improvement processes are carried out in a systematic and inclusive manner, involving input where relevant from staff, students/interns, graduates, supervisors, practitioners, employers, patients and consumers, Aboriginal and Torres Strait Islander peoples, and other key external stakeholders to ensure that the program remains fit-for-purpose. Outcomes from these processes are clearly communicated in a timely manner to stakeholders.

**Criterion 3.4:** Program design, content, delivery and assessment specifically emphasise and promote Aboriginal and Torres Strait Islander cultures, cultural safety and improved health outcomes. Aboriginal and Torres Strait Islander peoples should have direct input into curriculum design and content, and where possible should be involved directly in delivery and assessment.

## **Appendix B: Interview Guide**

Thank you for agreeing to be interviewed today. My name is Alex Burke and I am currently completing my honours research under the guidance of Rebekah Moles, Bandana Saini and others.

My research is aiming to look at the current Aboriginal and Torres Strait Islander or Indigenous Health/Cultural Content that is currently taught with the pharmacy degrees at the University of Sydney. If you coordinate any Units of Study, please feel free to reference your discussion to these Units of Study or you may talk generally. Apart from hearing about the topics/depth of content in your Unit of Study (or the degrees generally), I would like to gather ideas on how this content was developed, its benefits as well as ideas for future improvements.

Please note that everything you say will be confidential and that you can stop this interview at any time. I would like to start the recording now, is that ok with you?

**In starting the discussion, what in your opinion are the skills/capabilities or knowledge that pharmacy graduates need to provide health services to Indigenous patients**

- 1. Could you start by telling me a bit about the unit of study that you teach? (NB this question is only asked to the teachers, other stakeholder start at Question 3)**
  - a. How long have you taught this unit?

- b. What does it mainly aim to teach?

**2. Would you describe in detail any Aboriginal and Torres Strait Islander health/cultural competence content in your UoS (or the general pharmacy curriculum)?**

- a. Who made the decision to include the content?
- b. Who teaches the content?
- c. What is the format of teaching for this content?
- d. How much time is devoted to this content (face to face teaching, self-directed learning and assessment)
- e. What resources are needed to sustain it/ change it?
- f. If there is no such content- --reasons for not including any topics related to this

**3. In your opinion how adequate is the Aboriginal and Torres Strait Islander Health/ Cultural Competence content taught in the pharmacy program?**

- a. Adequate /why not?
- b. Meets or does not meet national need
- c. Sufficiently /insufficiently prepares graduates to meet Indigenous consumer need

**4. How do you think Aboriginal and Torres Strait Islander Health and cultural competence should be taught in a new curriculum?**

- a. Topics (specific to pharmacy)
- b. Teachers (Indigenous staff, Aboriginal Health Workers, others with experience)
- c. Positioning in the curriculum
- d. Instructional format (tute/wshops/ experiential/simulated patients, case studies, service learning)
- e. Assessment method (assess knowledge, capability or competence)
- f. Evaluation of impact (finding if curriculum addition makes a difference)

**5. What is your own training with respect Aboriginal and Torres Strait Islander Cultural Competence?**

- a. How did you gain this training?
- b. What more training would you like/need?

**6. If you were asked to include this content in a Unit of Study you were designing, what resources would you like to help you do this?**

- a. Frameworks (Standards/Guides/Case studies)
- b. Consultation opportunities -local University Indigenous Health Experts/other pharmacy educators
- c. other resources

## 7. Any other information you wish to share on this matter?

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### General Demographics

Would you mind if I asked a few questions about yourself, so as a research exercise, my team and I are able to see if different participants had different viewpoints?

Age bracket – 25-35, 36-45, 46-55, 56-65, 65+

Gender (can just be noted rather than asked)

Experience with Indigenous Health/Indigenous patients/consumers yes/no

Born in Australia yes/no

Identify yourself as being Culturally and Linguistically Diverse yes/no

Have educational qualifications eg Grad Cert/other yes/no

Teaching experience in other Uni yes/no

Teaching experience in another country yes/no

**Appendix C:** Anonymous table of the interviews conducted the year in which it was taught and overall what they were teaching

Year taught	Science/Practice/Pharmacy Science/Business /Integrated	Interviewed y/n	Reason not interviewed	Aboriginal content in curriculum Y/N
1	Science	N	Not taught by internal pharmacy academic	N/A
1	Science	N	Not taught by internal pharmacy academic	N/A
1	Practice	Y		Y
1	Pharmacy Science	Y		N
1	Science	N	Not taught by internal pharmacy academic	N/A
1	Science	N	Not taught by internal pharmacy academic	N/A
1	Practice	Y		Y
1	Pharmacy Science	Y		N
1	Business	N	Not taught by internal pharmacy academic	N/A
1	Business	N	Not taught by internal pharmacy academic	N/A
2	Pharmacy Science	Y		N
2	Pharmacy Science	N	Participant did not respond	Y
2	Pharmacy Science	Y		N
2	Science	N	Not taught by internal pharmacy academic	N/A
2	Science	N	Not taught by internal pharmacy academic	N/A
2	Pharmacy Science	Y		N
2	Practice	Y		Y
2	Pharmacy Science	N	Participant did not respond	N
2	Business	N	Not taught by internal pharmacy academic	N/A
2	Business	N	Not taught by internal pharmacy academic	N/A

3	Practice	Y		N
3	Integrated	Y		Y
3	Integrated	Y		Y
3	Integrated	N	Participant did not respond	N/A
3	Integrated	N	Participant did not respond	N/A
3	Practice	Y		N
3	Integrated	Y		Y
3	Integrated	Y		Y
3	Integrated	Y		Y
3	Business	N	Not taught by internal pharmacy academic	N/A
3	Business	N	Not taught by internal pharmacy academic	N/A
3	Business	N	Not taught by internal pharmacy academic	N/A
3	Business	N	Not taught by internal pharmacy academic	N/A
4	Pharmacy Science	N	Participant did not respond	N/A
4	Practice	Y		N
4	Cross School	Y		N
4	Honours	Y		N
4	Honours	Y		N
4	Practice	Y		N
4	Practice	Y		Y
4	Practice	N	Participant did not respond	N/A
4	Practice	Y		N
M1	Practice	Y		Y
M1	Pharmacy Science	Y		N
M1	Pharmacy Science	N	Participant did not respond	N/A
M1	Pharmacy Science	N	Participant did not respond	N/A

M1	Pharmacy Science	Y		N
M1	Practice	Y		Y
M1	Practice	Y		Y
M2	Pharmacy Science	Y		N
M2	Pharmacy Science	Y		N
M2	Pharmacy Science	N	Participant did not respond	N/A
M2	Practice	Y		Y
M2	Practice	Y		Y
M2	Practice	Y		Y
M2	Capstone	Y		N

## Checklist

<p><b>Study identification:</b></p>	<p>Mapping Pharmacy curricula to the Aboriginal and Torres Strait Islander health curriculum framework: a deep dive in one Australian pharmacy school</p>
<p><b>Guidance topic:</b></p>	<p><b>Key research question/aim:</b> demonstrate an effective method of combing through a Pharmacy school's curricula and mapping it to frameworks to identify gaps and find strategic ways forward to improve curriculum design.</p>
<p><b>Checklist completed by:</b></p>	<p>Alex Burke</p>
<p><b>Theoretical approach:</b> Thematic analysis, Framework Mapping</p>	
<p><b>1. Is a qualitative approach appropriate?</b></p> <p>For example:</p> <ul style="list-style-type: none"> <li>• Does the research question seek to understand processes or structures, or illuminate subjective experiences or meanings?</li> <li>• Could a quantitative approach better have addressed the research question?</li> </ul>	<p>Appropriate</p> <p>Comments: Thematic analysis and Framework mapping are widely used qualitative methods. This research would not be suited to quantitative work</p>
<p><b>2. Is the study clear in what it seeks to do?</b></p> <p>For example:</p>	<p>Clear</p> <p>Comments: The aims are stated clearly with results and conclusion reflecting as such.</p>

<ul style="list-style-type: none"> <li>• Is the purpose of the study discussed – aims/objectives/research question/s?</li> <li>• Is there adequate/appropriate reference to the literature?</li> <li>• Are underpinning values/assumptions/theory discussed?</li> </ul>		
<b>Study design</b>		
<p><b>3. How defensible/rigorous is the research design/methodology?</b></p> <p>For example:</p> <ul style="list-style-type: none"> <li>• Is the design appropriate to the research question?</li> <li>• Is a rationale given for using a qualitative approach?</li> <li>• Are there clear accounts of the rationale/justification for the sampling, data collection and data analysis techniques used?</li> <li>• Is the selection of cases/sampling strategy theoretically justified?</li> </ul>	Defensible	<p>Comments: The Frameworks used are a widely used qualitative framework developed in 2003 by Ritchie and Spencer. The education framework was developed by the Australian government for Universities and inductive thematic analysis is a widely used and accepted form of analysis in qualitative research</p>
<b>Data collection</b>		

<p><b>4. How well was the data collection carried out?</b></p> <p>For example:</p> <ul style="list-style-type: none"> <li>• Are the data collection methods clearly described?</li> <li>• Were the appropriate data collected to address the research question?</li> <li>• Was the data collection and record keeping systematic?</li> </ul>	<p>Appropriately</p>	<p>Comments: A table was provided showing each unit of study interviewed and a table provided showing the mapping process. Data collection is also clearly described.</p>
<p><b>Trustworthiness</b></p>		
<p><b>5. Is the role of the researcher clearly described?</b></p> <p>For example:</p> <ul style="list-style-type: none"> <li>• Has the relationship between the researcher and the participants been adequately considered?</li> <li>• Does the paper describe how the research was explained and presented to the participants?</li> </ul>	<p>Clearly described</p>	<p>Comments: The main researcher describes himself and his role adequately we believe (A First Nations PhD student)</p> <p>The questions asked are also added for clarity.</p>

<p><b>6. Is the context clearly described?</b></p> <p>For example:</p> <ul style="list-style-type: none"> <li>• Are the characteristics of the participants and settings clearly defined?</li> <li>• Were observations made in a sufficient variety of circumstances</li> <li>• Was context bias considered</li> </ul>	<p>Clear</p>	<p>Comments: The authors clearly describe this taking place in a pharmacy school and the rationale behind why that setting was used</p>
<p><b>7. Were the methods reliable?</b></p> <p>For example:</p> <ul style="list-style-type: none"> <li>• Was data collected by more than 1 method?</li> <li>• Is there justification for triangulation, or for not triangulating?</li> <li>• Do the methods investigate what they claim to?</li> </ul>	<p>Not sure</p>	<p>Comments: This is for the reviewers to decide, we believe our methods are reliable using two qualitative methods to both map and describe what is/was happening in the school</p>
<p><b>Analysis</b></p>		
<p><b>8. Is the data analysis sufficiently rigorous?</b></p> <p>For example:</p>	<p>Rigorous</p>	<p>Comments: Again, we believe this will be for the reviewers to decide. But we do believe that our analysis was rigorous, analysis was coded by 2 authors independently and all authors agreed and again themes talked about have data to support where it is coming from</p>

<ul style="list-style-type: none"> <li>• Is the procedure explicit – i.e. is it clear how the data was analysed to arrive at the results?</li> <li>• How systematic is the analysis, is the procedure reliable/dependable?</li> <li>• Is it clear how the themes and concepts were derived from the data?</li> </ul>		
<p><b>9. Is the data 'rich'?</b></p> <p>For example:</p> <ul style="list-style-type: none"> <li>• How well are the contexts of the data described?</li> <li>• Has the diversity of perspective and content been explored?</li> <li>• How well has the detail and depth been demonstrated?</li> <li>• Are responses compared and contrasted across groups/sites?</li> </ul>	<p>Rich</p> <p>Poor</p> <p>Not sure/not reported</p>	<p>Comments:</p>
<p><b>10. Is the analysis reliable?</b></p> <p>For example:</p> <ul style="list-style-type: none"> <li>• Did more than 1 researcher theme and code transcripts/data?</li> <li>• If so, how were differences resolved?</li> </ul>	<p>Not sure/not reported</p>	<p>Comments: In the manuscript it is stated that 2 authors coded independently with very similar results and consensus with the whole team was agreed upon. But this is for the reviewers to decide</p>

<ul style="list-style-type: none"> <li>• Did participants feed back on the transcripts/data if possible and relevant?</li> <li>• Were negative/discrepant results addressed or ignored?</li> </ul>		
<p><b>11. Are the findings convincing?</b></p> <p>For example:</p> <ul style="list-style-type: none"> <li>• Are the findings clearly presented?</li> <li>• Are the findings internally coherent?</li> <li>• Are extracts from the original data included?</li> <li>• Are the data appropriately referenced?</li> <li>• Is the reporting clear and coherent?</li> </ul>	<p>Convincing</p>	<p>Comments: Data is clearly displayed in both tables and intertext. It should be noted that this data is highly sensitive and could be deemed inflammatory and as such anonymity is of the utmost importance. There is a table showing what units of study were interviewed</p>
<p><b>12. Are the findings relevant to the aims of the study?</b></p>	<p>Relevant</p>	<p>Comments: the findings showed that these two frameworks can convincingly map a pharmacy school curriculum and through thematic analysis we could uncover reasons as to why there were gaps or perceived shortcomings.</p>
<p><b>13. Conclusions</b></p> <p>For example:</p> <ul style="list-style-type: none"> <li>• How clear are the links between data, interpretation and conclusions?</li> </ul>	<p>Adequate</p>	<p>Comments: Limitations were noted in the discussion about timeframes and questions asked. Implications were adequately reported on, and we believe that this goes to showing how pharmacy schools (not just in Australia) can map curricula to frameworks to identify gaps in them. The thematic analysis allows for the reporting and discussion as to why these gaps occur.</p>

<ul style="list-style-type: none"> <li>• Are the conclusions plausible and coherent?</li> <li>• Have alternative explanations been explored and discounted?</li> <li>• Does this enhance understanding of the research topic?</li> <li>• Are the implications of the research clearly defined?</li> </ul> <p><b>Is there adequate discussion of any limitations encountered?</b></p>		
<b>Ethics</b>		
<p><b>14. How clear and coherent is the reporting of ethics?</b></p> <p>For example:</p> <ul style="list-style-type: none"> <li>• Have ethical issues been taken into consideration?</li> <li>• Are they adequately discussed e.g. do they address consent and anonymity?</li> <li>• Have the consequences of the research been considered i.e. raising expectations, changing behaviour?</li> <li>• Was the study approved by an ethics committee?</li> </ul>	Appropriate	<p>Comments: Ethics was approved, and the reference is shown. The results and discussion talks much about how behaviours can change</p>

<b>Overall assessment</b>		
<b>As far as can be ascertained from the paper, how well was the study conducted? (see guidance notes)</b>	++	Comments: we believe that this is a valuable rigorous paper. But we wish to hear back from the reviewers.
	+	
	-	

## **Appendix III – Chapter 6 Supplementary Material**

Supplementary tables

Phar1911	Learning outcomes	Cultural safety content	Implicit(I)/Explicit(E)
	LO1: Describe the main characteristics of the structure and properties of drug molecules and large biological molecules.	No	
	LO2: Describe principles of laboratory safety practices and pharmaceutical calculations which underpin simple extemporaneous product preparations	No	
	LO3: Assess and critically evaluate the appropriateness, quality and reliability of information resources used to arrive at evidence-based conclusions when solving medicine and disease-related problems in pharmacy	No	
	LO4: Explain the fundamental characteristics and organisation of the pharmacy profession, including professional, legal and ethical considerations that inform patient care.	No	
	LO5: Discuss the pharmacist's role in ensuring safe and effective provision of medicines and health services across Australian health settings, and how this contributes to and complements the roles of other health professionals.	No	
	LO6: Communicate effectively and appropriately, in a culturally capable manner with peers, university staff and health professionals.	Yes	I
	LO7: Apply appropriate writing and referencing techniques, including appropriately acknowledging sources, to uphold academic honesty	No	
	LO8: Demonstrate responsibility for personal and professional development through independent learning and continuous reflection.	No	
	LO9: Work effectively and cooperatively as a member of a learning team.	Yes	I
	LO10: Identify the different elements of a unit of study (including learning outcomes, learning tasks, assessments and feedback) and recognise how they contribute to learning.	No	

Phar1921	Learning outcomes	Cultural safety content	Implicit(I)/Explicit(E)
	LO1: Describe the different types of pharmaceutical dosage forms, and explain why and when each dosage form would be appropriate, and how each dosage form is prepared.	No	
	LO2: Describe the forces, science and terminology behind different dosage forms.	No	
	LO3: Prepare extemporaneous products to appropriate standards of safety and quality.	No	
	LO4: Conduct multi-step pharmaceutical calculations.	No	
	LO5: Define patient-centred care, and list examples of elements which demonstrate patientcentred care and why they are important	No	
	LO6: Communicate effectively and appropriately in a culturally capable manner with patients, families, carers and other health professionals.	Yes	I
	LO7: Identify, access and process appropriate sources of evidence-based clinical information and effectively communicate the relevant information.	Yes	I
	LO8: Describe the role of a pharmacist in ensuring safe and effective use of a medicine.	No	
	LO9: Identify key elements of shared decision making and describe its benefits for patients, health professionals and the health system.	No	
	LO10: Apply a systematic reasoning process to diagnose and manage a range of simple, ambulatory conditions in pharmacy using appropriate non-p	No	
	LO11: Demonstrate and apply knowledge of fundamental concepts involved in dispensing a prescription legally and correctly.	No	
	LO12: Demonstrate responsibility for personal and professional development through independent learning and continuous reflection.	No	
	LO13: Recognise the importance of personal physical, emotional and mental health, list simple strategies to improve personal health and wellbeing, and recognise when it may be appropriate to seek support.	No	
	LO14: Work effectively and cooperatively as a member of a learning team.	Yes	I

Learning outcomes	Cultural safety content	Implicit(I)/Explicit(E)
Phar1922 LO1: Outline fundamental concepts in chemistry necessary for understanding drug delivery, drug action, and therapeutics.	No	
LO2: Explain the relationship between molecular structure and the different types of molecular interactions, and the importance of molecular interactions in the bioavailability of drugs.	No	
LO3: Identify the properties of biologically relevant molecules, including proteins and genes	No	
LO4: Identify the sources of drugs, the way they are discovered and designed, purified, characterised and analysed, and their physicochemical properties.	No	
LO5: Explain the pharmacological mechanism of action and the interaction of drugs with their targets.	No	
LO6: Apply appropriate numeracy skills to solve pharmaceutical problems.	No	
LO7: Use laboratory and computing techniques in structured experiments and interpret and draw conclusions from obtained data.	No	
LO8: Apply appropriate writing and referencing techniques, including appropriately acknowledging sources, to uphold academic honesty.	No	
LO9: Demonstrate responsibility for personal and professional development through independent learning and continuous reflection.	No	
LO10: Work effectively and cooperatively as a member of a learning team.	Yes	I

Learning outcomes	Cultural safety content	Implicit(I)/Explicit(E)
Phar2911 LO1 Describe the physicochemical properties of different dosage forms and the principals involved in formulating them.	No	
LO2 Discuss manufacturing and quality control procedures including stability considerations for different pharmaceutical dosage forms and demonstrate effective laboratory skills for scientific evaluation of products and procedures.	No	
LO3 Prepare extemporaneous products to appropriate standards of safety and quality.	No	
LO4 Describe how different medicines are stored appropriately to ensure safety and efficacy, and disposed of safely in an environmentally appropriate manner	No	
LO5 Identify, access and process appropriate sources of evidence-based information and effectively communicate the relevant information	Yes	I
LO6 Identify and access current pharmacy and related legislations which govern the supply and dispensing of medicines and the practice of pharmacy.	No	
LO7 Describe the professional pharmacy services that pharmacists deliver and demonstrate the skills to use common devices involved in delivering some of these services.	No	
LO8 Recognise the presence and causes of health inequities and disparities and describe their impact on different patient populations including Aboriginal and Torres Strait Islander peoples.	Yes	E
LO9 Identify barriers for implementing patient-centred care and shared decision making in practice, and strategies to overcome these barriers.	No	
LO10 Communicate effectively and appropriately in a culturally capable manner with patients, families, carers and other health professionals.	Yes	E
LO11 Demonstrate responsibility for personal and professional development through independent learning and continuous reflection	No	
LO12 Discuss strategies to support personal and peer health and wellbeing, including physical, emotional and mental health.	No	
LO13 Work effectively and cooperatively as a member of a learning and/or working team.	Yes	I
LO14 Apply a systematic reasoning process to identify and treat a range of health and medication related problems that present in pharmacy using over the counter products or referral.	No	
LO15 Develop Scientific laboratory skills including work health and Safety and apply pharmaceutical chemistry and formulation knowledge	No	

Phar2912	Learning outcomes	Cultural safety content	Implicit(I)/Explicit(E)
	LO1 Describe pharmacodynamic and pharmacokinetic principles and interpret pharmacodynamic and pharmacokinetic information	No	
	LO2 Calculate relevant pharmacodynamic and pharmacokinetic parameters using appropriate equations.	No	
	LO3 Explain how genetic variations can influence the response to medicines and contribute to variability in response between individuals.	No	
	LO4 Explain basic reasons for variability in response to medicines in different individuals, including the effects of disease, demographics, genetics and other medicines	No	
	LO5 Apply appropriate numeracy skills to solve pharmaceutical problems.	No	
	LO6 Apply knowledge of therapeutic principles to solve and manage pharmaceutical and clinical problems, including those relating to the metabolism and degradation of drugs	No	
	LO7 Apply knowledge of therapeutic principles to communicate and provide appropriate information to patients and other health professionals.	Yes	I
	LO8 Demonstrate responsibility for personal and professional development through independent learning and continuous reflection.	No	

Phar2921	Learning outcomes	Cultural safety content	Implicit(I)/Explicit(E)
	LO1: Describe a microorganism's structure, function, bio-relationships and pathological processes of infection in humans for each major microbial group (bacteria, fungi, viruses and protozoas)	No	
	LO2: Explain the chemistry and pharmacology that underpin the mechanism of action and activity of antimicrobial medicines.	No	
	LO3: Describe the physiology, epidemiology and pathophysiology of infectious diseases	No	
	LO4: Describe the importance of managing microbial contamination in pharmaceutical products and demonstrate knowledge of good manufacturing practice and skills in sterile production.	No	
	LO5: Explain the cause and impact of antimicrobial resistance and list the main components of Australia's national antimicrobial resistance strategy.	No	
	LO6: Describe the pharmacist's role in infectious diseases management, including in antimicrobial stewardship.	No	
	LO7: Propose, and justify the rationale for, the most appropriate pharmacological and/or nonpharmacological treatment(s) tailored for a specific patient and their circumstances, using relevant evidence-based resources.	No	
	LO8: Dispense and/or prepare pharmaceutical products for a patient with an infectious condition in a legal, safe and ethical manner.	No	
	LO9: Communicate effectively and appropriately, in a culturally capable manner with patients, families, carers and other health professionals.	Yes	E
	LO10: Demonstrate patient-centred care in interactions with patients, families and carers relating to antimicrobial medicines.	No	
	LO11: Provide appropriate tailored advice and counselling to a patient with an infectious condition to ensure the quality use of medicines	No	
	LO12: Demonstrate responsibility for personal and professional development through independent learning and continuous reflection	No	
	LO13: Work effectively and cooperatively as a member of a learning team.	No	

Phar2922	Learning outcomes	Cultural safety content	Implicit(I)/Explicit(E)
	LO1: Explain the chemistry and pharmacology that underpin the mechanism of action and activity of medicines used in respiratory conditions	No	
	LO2: Describe the physiology, epidemiology and pathophysiology of respiratory conditions	No	
	LO3: Apply clinical reasoning, knowledge of relevant legislation and ethical principles to identify, assess and address a range of health, ethical and medication-related issues.	No	
	LO4: Communicate effectively and appropriately in a culturally capable manner with patients, families, carers and other health professionals.	Yes	E
	LO5: Demonstrate patient-centred care and shared decision making in interactions with patients, families and carers relating to respiratory conditions.	No	
	LO6: Demonstrate appropriate skills for interacting with Aboriginal and Torres Strait Islander patients, families and carers in a way which fosters cultural awareness and respect.	Yes	E
	LO7: Gather, document, assess and manage relevant information appropriately and accurately from patients, families, carers, health care professionals and other sources.	No	
	LO8: Propose, and justify the rationale for, the most appropriate pharmacological and/or nonpharmacological treatment(s) tailored for a specific patient and their circumstances, using relevant evidence-based resources.	No	
	LO9: Dispense and/or prepare pharmaceutical products for a patient with a respiratory condition in a legal, safe and ethical manner.	No	
	LO10: Provide appropriate tailored advice and counselling to a patient with a respiratory condition to ensure the quality use of medicines.	No	
	LO11: Identify, assess and resolve potential or actual adverse effects from the use/misuse of legal or illegal medicines.	No	
	LO12: Demonstrate responsibility for personal and professional development through independent learning and continuous reflection	No	
	LO13: Work effectively and cooperatively as a member of a learning and/or working team.	No	
	LO14: Contribute effectively as a pharmacist member of a multidisciplinary health care team to optimise patient outcomes.	No	
	LO15: Uphold the reputation of the pharmacy profession, including practising within relevant legal requirements, professional guidelines and ethical frameworks, and demonstrating appropriate attitudes and values.	No	

## **Appendix IV – Chapter 7 Supplementary Material**

## **INTERVIEW GUIDE FOR THE STUDY**

Co-designing case-studies to educate Australian Pharmacists to provide culturally safe healthcare and competently handle health inquiries of Aboriginal and/or Torres Strait Islander people

## Interview guide

Thank you for talking to me. This is my research project, something I am doing for my study. We would like to know how YOU feel about your health y having a yarn with you. With us talking today is just like you share things with your family and friends. I will not be repeating this to your doctor/pharmacist. If you do choose to help me, this information on how you feel about your health and all the things you have to do to manage/take care of your health will help me and your doctors/pharmacists understand how to make things better for you or your friends who may have other health issues. If you feel you don't want to talk to me it is all right. You don't have to. Not talking to me will not change anything.

We would like to audio-record the yarn today so that I can accurately remember issues raised and better reflect your desires for how pharmacists and health professionals can better serve you. This is because I may not be able to write as fast as you speak and I would like to make sure I know what you said exactly, so I make no mistakes. Again, I am not going to give the recording to anyone- only me and my supervisors/colleagues at university will hear this recording, as they are also interested in my work. Anyone hearing the recording will not know who you are, who your parents/family or friends are.

*Q1. How do you feel about having a health issue?*

### **Prompts**

- No problem
- Not able to perform daily activities
- Makes my family worried
- Worries me
- Have to take medication

*Q2. What did your doctor tell you about your health problem?*

**Prompts**

- Did not tell
- Talked about medicines/medicine
- Not a big problem
- It may go away

*Q3. How frequently do you take these medicines/medications?*

**Prompts**

- What are the symptoms you have when you use the medications?
- When do they happen?
  - In the morning
  - At night
  - Other times
- How often do they happen?
  - Every day
  - Few times a week
  - Few times a year

*Q4. How do you understand when the doctor/pharmacist talks to you or about your medications?*

**Prompts**

- Don't understand
- Understand some things but not others

*Q5. How would you like the doctor/pharmacist to explain more to YOU about the treatment for your health problem?*

**Prompts**

- Talk to you so you understand
- Use social media
- Use alternative ways

*Q6. Do you have any concerns or faced any discrimination when dealing with the doctor/pharmacist? Could you discuss?*

**Prompts**

- Never faced
- Faced few/many times

*Q7. How do you think pharmacists can be better trained to help you and your communities?*

*We would like to thank you for your time and commitment to research about the management/ training of pharmacists about Indigenous Health.*

**Declaration of interest statement:**

**Funding:** Alexander Burke received grant funding from the NSW Pharmacy Research Trust and the Rowan Nicks Russell Drysdale Fellowship

Bandana Saini: N/A

Faye McMillan: N/A

Rebekah Moles: N/A

## **Governance**

1.

Describe partnership agreements between the research institution and Indigenous-governing organization for the research, (e.g., Informal agreements through to MOU (Memorandum of Understanding) or MOA (Memorandum of Agreement)).

- Letters of support from NACCHO and also from an AMS were sought out

2.

Describe accountability and review mechanisms within the partnership agreement that addresses harm minimization.

- This research was done under the supervision of a steering committee, who comprised of pharmacists and predominantly First Nations Stakeholders. They helped with the building of interview questions and made sure that my processes were culturally safe. Also a safe guard was the ethics organisation and provided on the participant information sheets was how to complain if they felt I was out of line

3.

Specify how the research partnership agreement includes protection of Indigenous intellectual property and knowledge arising from the research, including financial and intellectual benefits generated (e.g., development of traditional medicines for commercial purposes or supporting the Indigenous community to develop commercialization proposals generated from the research).

- From our point of view this information was not gathered to make a product but a why we should listen to First Nations voices as they often have a very different story to tell when it comes to the care that they receive.

## **Prioritization**

4.

Explain how the research aims emerged from priorities identified by either Indigenous stakeholders, governing bodies, funders, non-government organization(s), stakeholders, consumers, and empirical evidence.

- Pharmacy is the 5<sup>th</sup> largest healthcare force in Australia, but the worst represented when it comes to Aboriginal and Torres Strait Islander representation, this research is aimed at giving

them a voice in how the education should be delivered and how the care they receive should be delivered

### **Relationships (Indigenous stakeholders/participants and Research team)**

5.

Specify measures that adhere and honor Indigenous ethical guidelines, processes, and approvals for all relevant Indigenous stakeholders, recognizing that multiple Indigenous partners may be involved, e.g., Indigenous ethics committee approval, regional/national ethics approval processes.

- This research was approved by the NSW AH&MRC, while this research was conducted in NSW voices were sought out across the state with yarning circles or one on one interviews taking place in Lismore, western NSW and the Sydney region both metropolitan and western Sydney as we believed it was important that we gathered multiple different voices.

6.

Report how Indigenous stakeholders were involved in the research processes (i.e., research design, funding, implementation, analysis, dissemination/recruitment).

- The research itself was conducted by a Wiradjuri/Dharug man who is also a pharmacist completing his PhD, one of the co-authors who helped with drafting and supervision is a Wiradjuri woman, the interview questions were developed with the help of a steering committee that was majority First Nations.

7.

Describe the expertise of the research team in Indigenous health and research.

- The main author is completing his PhD in Aboriginal and Torres Strait Islander cultural safety education, one of the co-authors at the time of writing is the deputy rural health commissioner and has strong community connections driving her interest in this area of research. The other 2 authors have also done research on both rural communities which does not automatically correspond to knowing about First Nations issues but was invaluable nonetheless and the also culturally and linguistically diverse communities.

### **Methodologies**

8.

Describe the methodological approach of the research including a rationale of methods used and implication for Indigenous stakeholders, e.g., privacy and confidentiality (individual and collective).

- This research used a yarning approach, semi structured interviews with overarching themes to help drive the discussion along. This allowed for a free flowing discussion to allow people to express themselves in a relaxed environment and didn't feel too constrained by simple yes/no responses. The interviews were transcribed verbatim and de-identified with only the authors of the research being able to see the transcripts, we wanted to make sure that anonymity is of the utmost importance due to concerns of information getting out and circulating in the community.

9.

Describe how the research methodology incorporated consideration of the physical, social, economic and cultural environment of the participants and prospective participants. (e.g., impacts of colonization, racism, and social justice). As well as Indigenous worldviews.

- As mentioned, we wanted the "interviews" to be as free flowing as possible and these interviews wherever possible were done in person to make sure we had a face-to-face connection, in some instances we had a meeting beforehand for individuals to get to know me and about my research to help alleviate any concerns they had. It was also important to let people know that there was a confronting question about racism or discrimination they faced in a pharmacy and before asking it I made sure to let them know that it was about to be asked and that they could give as much or as little information as they saw fit.

## **Participation**

10.

Specify how individual and collective consent was sought to conduct future analysis on collected samples and data (e.g., additional secondary analyses; third-parties accessing samples (genetic, tissue, blood) for further analyses).

- Consent was granted via a signature, as these were interviews with ethics guiding who can see these transcripts the are located on a password protected computer in a locked room and the consent forms are located in a locked drawer.

11.

Described how the resource demands (current and future) placed on Indigenous participants and communities involved in the research were identified and agreed upon including any resourcing for participation, knowledge, and expertise.

- For the time participants were given a gift voucher that they could use at any store.

12.

Specify how biological tissue and other samples including data were stored, explaining the processes of removal from traditional lands, if done, and of disposal.

- No tissue samples were collected, interviews consented were to be de-identified so there would be no fear of information getting out

### **Capacity**

13.

Explain how the research supported the development and maintenance of Indigenous research capacity (e.g., specific funding of Indigenous researchers).

This research is being used directly in the PhD thesis of the main author. The research is also being used to help inform and guide pharmacy practice and curricula to better suit the needs of First Nations Australians

14.

Discuss how the research team undertook professional development opportunities to develop the capacity to partner with Indigenous stakeholders?

### **Analysis and interpretation**

15.

Specify how the research analysis and reporting supported critical inquiry and a strength-based approach that was inclusive of Indigenous values.

- A lot of the time research about “helping” first nations people is still done through the lens of western ways of knowing and does look at how systems can be fixed but fundamentally staying the same. This paper is putting First Nations voices first and hearing directly how the health care system has let them down and how do they want it to be fixed.

### **Dissemination**

16.

Describe the dissemination of the research findings to relevant Indigenous governing bodies and peoples.

- This paper will be made freely accessible for anyone to see, and direct dissemination to all those who took part.

17.

Discuss the process for knowledge translation and implementation to support Indigenous advancement (e.g., research capacity, policy, investment).

- The work of this paper will be used specifically to help build a pharmacy sector more Intune to the needs and wants of the First Nations communities, It will give First Nations people a direct voice in how they want to be treated and what people getting into healthcare need to know.

## Author Biographies

**Alexander Burke:** Alex Burke is a Wiradjuri/Dharug pharmacist whose research is focused around the cultural safety training of pharmacists and incorporating cultural safety training into curricula.

**Bandana Saini:** Professor Saini trained as a pharmacist at the University Institute of Pharmaceutical Sciences, Chandigarh, India (1990). Professor Saini has led and collaborated in implementing and evaluating several successful pharmacy-based models that involve screening (sleep disorders and chronic obstructive pulmonary disease), patient self-management (allergic rhinitis, sleep disorders, asthma) and clinical audits (sleep medications), as well as pharmacovigilance (sleep medications).

**Faye McMillan:** Is a proud Wiradjuri yinaa (woman) originally from Trangie, NSW, now living and working between rural/regional and urban NSW. joining UTS in Oct 2022 with over 20 years of experience in the Higher Education Sector and over 30 years in the health sector.

**Rebekah Moles:** Associate Professor Moles is passionate about the Quality Use of Medicines for Children and her research interests have focused in the management of common ailments such as fever, cough/cold and asthma in young children. There are several opportunities for small and large research projects in this paediatric area using a mix of both quantitative and qualitative methods. Also of interest is the development of educational interventions targeted at consumers as well as health care practitioners to facilitate quality use of medicines in children. In recent years her interests have taken her to researching rural health.

## **Appendix V – Ethics Approval Letters**

The following letters are evidence of ethics approval from the University of Sydney Human Research Ethics Committee and the Aboriginal Health and Medical Research Council of NSW to conduct the research presented in this thesis

The Protocol numbers and correspond chapters and appendices in this thesis are as follows

- Protocol 2020/526: Chapter 4 and Appendix II
- Protocol 2020/526 mod: Chapter 3 and Appendix I
- Protocol 2022/357: Chapter 7 and Appendix IV
- Protocol 1944/22: Chapter 7 and Appendix IV

Assoc Prof Rebekah Moles  
Pharmacy; Faculty of Medicine and Health  
Email: rebekah.moles@sydney.edu.au

Dear Rebekah,

The University of Sydney Human Research Ethics Committee (HREC) has considered your application.

I am pleased to inform you that after consideration of your response, your project has been approved.

Details of the approval are as follows:

**Project No.:** 2020/526

**Project Title:** Indigenous Health and Cultural Competence within the Sydney Pharmacy Curriculum: An in-depth analysis.

**Authorised Personnel:** Moles Rebekah; Aslani Parisa; Burke Alexander; Groundwater Paul; Heathcote Jeremy; Saini Bandana; Welch Susan;

**Approval Period:** 4 September 2020 to 4 September 2024

**First Annual Report Due:** 4 September 2021

**Documents Approved:**

Date Uploaded	Version Number	Document Name
7/08/2020	Version 2	PIS
07/08/2020	Version 2	Email
07/08/2020	Version 2	safety protocol
19/06/2020	Version 1	Consent form
19/06/2020	Version 1	Interview protocol

**Condition/s of Approval**

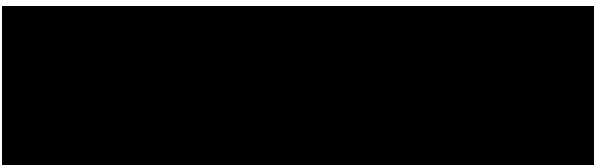
- Research must be conducted according to the approved proposal.
- An annual progress report must be submitted to the Ethics Office on or before the anniversary of approval and on completion of the project.
- You must report as soon as practicable anything that might warrant review of ethical approval of the project including:
  - Serious or unexpected adverse events (which should be reported within 72 hours).
  - Unforeseen events that might affect continued ethical acceptability of the project.
- Any changes to the proposal must be approved prior to their implementation (except where an amendment is undertaken to eliminate *immediate* risk to participants).
- Personnel working on this project must be sufficiently qualified by education, training and experience for their role, or adequately supervised. Changes to personnel must be reported and approved.

- Personnel must disclose any actual or potential conflicts of interest, including any financial or other interest or affiliation, as relevant to this project.
- Data and primary materials must be retained and stored in accordance with the relevant legislation and University guidelines.
- Ethics approval is dependent upon ongoing compliance of the research with the *National Statement on Ethical Conduct in Human Research*, the *Australian Code for the Responsible Conduct of Research*, applicable legal requirements, and with University policies, procedures and governance requirements.
- The Ethics Office may conduct audits on approved projects.
- The Chief Investigator has ultimate responsibility for the conduct of the research and is responsible for ensuring all others involved will conduct the research in accordance with the above.

This letter constitutes ethical approval only.

Please contact the Ethics Office should you require further information or clarification.

Sincerely,



**Associate Professor Michael Skilton**  
Chair, Health Review Committee (Low Risk)

The University of Sydney of Sydney HRECs are constituted and operate in accordance with the National Health and Medical Research Council's (NHMRC) [National Statement on Ethical Conduct in Human Research \(2018\)](#) and the NHMRC's [Australian Code for the Responsible Conduct of Research \(2018\)](#)

Assoc Prof Rebekah Moles  
Pharmacy; Faculty of Medicine and Health  
Email: rebekah.moles@sydney.edu.au

Dear Rebekah,

Your request to modify this project, which was submitted on 18 June 2021, has been considered.

After consideration of your response to the comments raised, this project has been approved to proceed with the proposed amendments.

**Protocol Number: 2020/526**

**Protocol Title: Indigenous Health and Cultural Safety within Pharmacy Curricula: An in-depth analysis.**

**Addition of Authorised Persons: Clark, Bronwyn (external investigator); McMillan, Faye (external investigator); Maundu Josephine (external investigator)**

**Annual Report Due: 4 September 2021**

**Documents Approved:**

Date Uploaded	Version Number	Document Name
12/07/2021	Version 3	Safety Protocol Clean
18/06/2021	Version 2	Interview guide clean
18/06/2021	Version 2	Consent clean
18/06/2021	Version 3	PIS clean
18/06/2021	Version 3	Email Invite Clean

Please contact the ethics office should you require further information.

Sincerely,



**Dr Clifton Chan**  
Chair  
Modification Review Committee Chair (MRC 3)

The University of Sydney of Sydney HRECs are constituted and operate in accordance with the National Health and Medical Research Council's (NHMRC) [National Statement on Ethical Conduct in Human Research \(2018\)](#) and the NHMRC's [Australian Code for the Responsible Conduct of Research \(2018\)](#)

Assoc Prof Rebekah Moles  
Pharmacy; Faculty of Medicine and Health  
Email: rebekah.moles@sydney.edu.au

Dear Rebekah,

The University of Sydney Human Research Ethics Committee (HREC) has considered your application.

I am pleased to inform you that after consideration of your response, your project has been approved.

Details of the approval are as follows:

**Project No.:** 2022/357  
**Project Title:** Co-designing case-studies to educate Australian Pharmacists to provide culturally safe healthcare and competently handle health inquiries of Aboriginal and/or Torres Strait Islander people.  
**Authorised Personnel:** Moles Rebekah; Burke Alexander; Saini Bandana; Hall Kerry; Kelly Fiona; Maynard Gregg; McMillan Faye; Simpson Maree; Tsingos-Lucas Cherie;  
**Approval Period:** 06/09/2022 to 06/09/2026  
**First Annual Report Due:** 06/09/2023

**Documents Approved:**

Date Uploaded	Version Number	Document Name
25/08/2022		PISCF track change
25/08/2022		PISCFclean

**Condition/s of Approval**

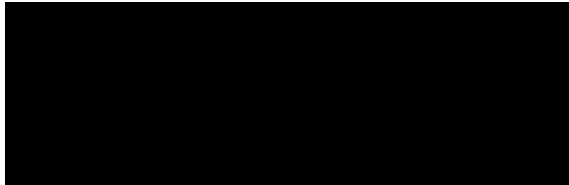
- Research must be conducted according to the approved proposal.
- An annual progress report must be submitted to the Ethics Office on or before the anniversary of approval and on completion of the project.
- You must report as soon as practicable anything that might warrant review of ethical approval of the project including:
  - Serious or unexpected adverse events (which should be reported within 72 hours).
  - Unforeseen events that might affect continued ethical acceptability of the project.
- Any changes to the proposal must be approved prior to their implementation (except where an amendment is undertaken to eliminate *immediate* risk to participants).
- Personnel working on this project must be sufficiently qualified by education, training and experience for their role, or adequately supervised. Changes to personnel must be reported and approved.
- Personnel must disclose any actual or potential conflicts of interest, including any financial or other interest or affiliation, as relevant to this project.
- Data and primary materials must be retained and stored in accordance with the relevant legislation and University guidelines.

- Ethics approval is dependent upon ongoing compliance of the research with the *National Statement on Ethical Conduct in Human Research*, the *Australian Code for the Responsible Conduct of Research*, applicable legal requirements, and with University policies, procedures and governance requirements.
- The Ethics Office may conduct audits on approved projects.
- The Chief Investigator has ultimate responsibility for the conduct of the research and is responsible for ensuring all others involved will conduct the research in accordance with the above.

This letter constitutes ethical approval only.

Please contact the Ethics Office should you require further information or clarification.

Sincerely,



**Associate Professor Haryana Dhillon**  
Chair  
Human Research Ethics Committee (HREC 3)

The University of Sydney of Sydney HRECs are constituted and operate in accordance with the National Health and Medical Research Council's (NHMRC) [National Statement on Ethical Conduct in Human Research \(2018\)](#) and the NHMRC's [Australian Code for the Responsible Conduct of Research \(2018\)](#)

23/08/2022

Mr Alexander Burke  
The University of Sydney

Dear Alex Burke,

**RE: 1944/22: Co-designing case-studies to educate Australian Pharmacists to provide culturally safe healthcare and competently handle health inquiries of Aboriginal and/or Torres Strait Islander people**

I am pleased to advise you that the above research project meets the requirements of the National Statement on Ethical Conduct in Human Research (2007 update 2018) and ethical approval for this research project has been granted by AH&MRC Human Research Ethics Committee.

This approval is valid from 23/08/2022 until 23/08/2023, with ongoing approval subject to the receipt and approval of an annual report.

The documents listed below are approved:

- RMolesCURRICULUM\_VITAE\_2022\_2\_pages.doc
- Faye\_McMillan\_CV.docx
- A.Burke\_resume.docx
- KHall\_2page\_CV.docx
- Saini\_CV\_BRIEF.docx
- Kelly\_CV\_21.docx
- Dr\_CHERIE\_LUCAS-Summary\_CV\_2022-\_Ethics\_Application.pdf
- Greg\_CV.docx
- 08042022\_Letter\_of\_Support\_Co-Designing\_case-studies\_to\_educate\_Australian\_Healthcare\_Professionals.pdf
- Babana\_Support\_Letter\_-\_Alexander\_Burke.pdf

- Orange\_Letter\_of\_Support\_-\_2022.doc
- TOR\_document.docx
- USYD\_HREC\_application.pdf
- RESEARCH\_PROTOCOL\_FOR\_THE\_STUDY.pdf
- PARTICIPANT\_INFORMATION\_SHEETS\_AND\_CONSENT\_FORMS.pdf
- FLYER\_FOR\_THE\_STUDY.pdf
- INTERVIEW\_GUIDE\_PHASE\_1.pdf
- INTERVIEW\_PROCESS\_FOR\_THE\_STUDY.pdf
- SAFETY\_PROTOCOL.pdf

The amended documents listed below that were submitted as a result of the AH&MRC HRECs request for further information are approved.

- ethics\_responses\_complete.docx
- CSU\_Letter\_of\_Support\_-\_2022\_1.doc
- 30062022\_Letter\_of\_Support\_-\_Codesigning\_case-studies\_to\_educate\_Australian\_Healthcare\_professionals.pdf
- Research\_Protocol\_Updated\_19072022.docx
- Babana\_Support\_Letter\_-\_Alexander\_Burke.pdf

[Note: The amended documents supersede the original document version].

**Please note: Any amendments are made to the project in the future to submit a tracked changed and clean version of any relevant documents.**

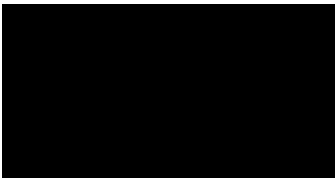
Approval of this project from the AH&MRC HREC is subject to the following conditions being met:

- The Coordinating Principal Investigator will immediately report anything that might warrant a review of the ethical approval of the project.
  
- The Coordinating Principal Investigator will notify the AH&MRC Ethics Committee of any event that requires a modification to the protocol or other project documents and submit any required amendments in accordance with the instructions provided by the HREC. These instructions can be found at [www.ahmrc.org.au/ethics](http://www.ahmrc.org.au/ethics).
  
- The Coordinating Principal Investigator will submit any necessary reports related to the safety of research participants in accordance with the AH&MRC Ethics Committee policy and procedures. These instructions can be found at [www.ahmrc.org.au/ethics](http://www.ahmrc.org.au/ethics).
  
- The Coordinating Principal Investigator will report to the AH&MRC Ethics Committee annually in the specified format and notify the HREC when the project is completed at all sites.
  
- The Coordinating Principal Investigator will notify the AH&MRC Ethics Committee if the project is discontinued at a participating site before the expected completion date, with reasons provided.
  
- The Coordinating Principal Investigator will notify the AH&MRC Ethics Committee of any plan to extend the duration of the project past the approval period listed above and will submit any associated required documentation. Instructions for obtaining an extension of approval can be found at [www.ahmrc.org.au/ethics](http://www.ahmrc.org.au/ethics).
  
- The Coordinating Principal Investigator will notify the AH&MRC Ethics Committee of his or her inability to continue as Coordinating Principal Investigator including the name of and contact information for a replacement.
  
- The Coordinating Principal Investigator will submit the final draft report from the research, and any publication or presentation where data or findings are presented, to the AH&MRC Ethics Committee to be reviewed for compliance with ethical and cultural criteria prior to:

- Any submission for publication; and/or
- Any dissemination of the report

Should you have any queries about the AH&MRC HREC's consideration of your project please login to Submittable, contact [ethics@ahmrc.org.au](mailto:ethics@ahmrc.org.au) or phone (02) 9212 4777.

Yours Faithfully,



Dr Michael Doyle  
**Co-Chair**  
AH&MRC Ethics Committee



Dr Summer Finlay  
**Co-Chair**  
AH&MRC Ethics Committee

**Appendix VI – Clinical yarning with Aboriginal and/ or Torres Strait Islander peoples—a systematic scoping review of its use and impacts**

**Burke, A.W., Welch, S., Power, T. *et al.* Clinical yarning with Aboriginal and/or Torres Strait Islander peoples—a systematic scoping review of its use and impacts. *Syst Rev* 11, 129 (2022). <https://doi.org/10.1186/s13643-022-02008-0>**

SYSTEMATIC REVIEW UPDATE

Open Access



# Clinical yarning with Aboriginal and/or Torres Strait Islander peoples—a systematic scoping review of its use and impacts

Alexander W. Burke<sup>1</sup>, Susan Welch<sup>1,2</sup>, Tamara Power<sup>3</sup>, Cherie Lucas<sup>4</sup> and Rebekah J. Moles<sup>1\*</sup> 

## Abstract

**Objectives:** To explore how clinical yarning has been utilised as a health intervention for Aboriginal and/or Torres Strait Islander peoples and if there are any reported impacts yarning might have on health outcomes.

**Study design:** Systematic scoping review of published literature.

**Data sources:** A one-word search term “yarning” was applied in Scopus, EMBASE, CINAHL, MEDLINE, International Pharmaceutical Abstracts, Australian Public Affairs Information Service-Health, and the Aboriginal and/or Torres Strait Islander Health Bibliography databases. Databases were searched from inception to May 20, 2020.

**Study selection:** Studies were included where clinical yarning had been used as a health intervention. Inclusion and exclusion criteria were developed and applied according to PRISMA systematic and scoping review reporting methods.

**Data synthesis:** A total of 375 manuscripts were found from the initial data search. After removal of duplicates and removal of manuscripts based on abstract review, a total of 61 studies underwent full-text review. Of these, only five met the inclusion criteria of utilising yarning as a clinical intervention. Four of these studies described consumer self-reported health outcomes, with only one study looking at improvements in objective physiological health outcomes.

**Conclusions:** Whilst clinical yarning may be a culturally appropriate intervention in healthcare, there are limited studies that have measured the impact of this intervention. Further research may be needed to ascertain the true benefits of this intervention.

**Keywords:** Aboriginal and/or Torres Strait Islander, Yarning, Clinical yarning, Health outcomes

## Background

Aboriginal and/or Torres Strait Islander peoples in Australia belong to the world’s oldest continuing cultures. As a direct consequence of colonisation, Aboriginal and Torres Strait Islander peoples face far worse health outcomes than the broader population of the nation [1]. The gap

in life expectancy is 8 years less than the national average with two thirds of Aboriginal and/or Torres Strait Islander peoples dying before the age of 65 years [2]. This has been an ongoing problem, with various strategies put in place to try to improve the gap that exists between Aboriginal and Torres Strait Islander peoples and the rest of Australia. The Closing the Gap (CTG) strategy has been in place since 2007, where Australian governments have worked together to deliver better health, education and employment outcomes [1]. Despite these efforts, recent reports still estimate that the targets for reducing the gap in mortality will not be met by 2031 [1].

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Issues impacting the health of Aboriginal and/or Torres Strait Islander peoples include having higher rates of non-communicable diseases, as well as increased disadvantage and lower levels of education [1]. With respect to health, they are 2 times more likely to have a myocardial infarction compared to the standard population, 1.2 times more likely to have hypertension and 4 times more likely to have type 2 diabetes [1, 3]. These statistics are important, because any change that can potentially improve health outcomes for Aboriginal and/or Torres Strait Islander peoples should be considered as a serious alternative to the systems currently in place. Providing healthcare to Aboriginal and/or Torres Strait Islander peoples should ensure a holistic approach that is provided in a culturally safe and appropriate manner [4]. One of the techniques that is considered culturally appropriate is clinical yarning [4].

Before a more in-depth look at what clinical yarning is, a general look at what the term yarning means to Aboriginal and/or Torres Strait Islander Australians is important. Yarning is a conversation that involves the sharing of one's own stories and the creation of new knowledge [4]. It prioritises Aboriginal and/or Torres Strait Islander ways of communicating, in that it is culturally appropriate and respectful [5]. Yarning has a special place in Aboriginal culture, and the practice has been around for millennia. Yarning involves a 2-way dialogue of sharing and receiving information between people that is built on the relationship that the parties involved have with each other, certain cultural protocols that should be followed and respects what each person wishes to get out of the dialogue [4]. It should be noted that this is however a general definition, and it is hard to make an accurate description of exactly what yarning is, as it can be applied differently from person to person and even have different application across Aboriginal nations in Australia [4].

Due to the long history of the use of yarning as a culturally safe form of communication between Aboriginal and/or Torres Strait Islander Australians, there recently has been a switch to yarning-based communication for research and therapies for Aboriginal and/or Torres Strait Islander populations [5]. The idea behind this move to approach research and health in the framework of the yarn is to hopefully result in more accurate portrayal of Aboriginal and/or Torres Strait Islander perspectives compared to standard closed-style questioning [5]. Closed-style questioning could also be confrontational to an Aboriginal and/or Torres Strait Islander person and trying to further develop a relationship when this barrier has been formed can be difficult [5]. In this way, it is apparent that clinical yarning may be aligned with patient-centred care and shared decision making

principles, allowing opportunities for a less paternalistic approach to healthcare [5].

Yarning in a clinical setting has three interrelated areas that are recommended in order to engage a patient in their healthcare journey. The first involves the "social yarn" where one tries to find common ground with the patient. This first part of the yarn is the steppingstone for applying the other two areas of the clinical yarn [5]. The second dimension of the clinical yarn is known as the "diagnostic yarn" where the diagnostician encourages the patient to tell their health story which means the patient might describe in detail the events about their life that may relate to the patient's present medical conditions. This is best performed as an open-ended dialogue where the practitioner will unpack the relevant pieces of information and apply it to their own knowledge which will inform their decision about how to best manage the condition the patient has presented with [5]. Finally, the "management yarn" is implemented. In this stage, the practitioner will provide straight forward information to the patient but may use metaphors and stories connected to the patient's life to make it easier for the patient to understand the condition they have. Also, by involving the patient in the decision-making process they may become more motivated in their own health and regain their autonomy. Regaining autonomy has been cited as being a key part of the clinical yarn, as many Aboriginal and/or Torres Strait Islander peoples believe their autonomy has been stripped from them since the time of colonisation [5].

Other countries with Indigenous populations have similar interventions that Australia could integrate into its healthcare system. The Native American people have a similar concept to yarning groups called "Talking circles" [6]. Talking circles are a traditional way that Native Americans come together to communicate and solve problem. In the circle, people are given a voice to express themselves freely and are empowered to have a voice and feel heard and supported [6]. A study by Nadeau et al. looked at the implementation of monthly 2-h talking circles with other interventions to get Native elders to talk about tobacco use and their beliefs and perceptions with it [7]. They found that from these interventions, elder knowledge about commercial tobacco products was increased and the elders who took part believed that the implementation of the talking circles was effective [7]. Another study conducted by Wilken and Nunn, looked at the effect talking circles may have on medication adherence [8]. They found that although more studies are needed in the area, talking circles may have an impact in improving medication adherence in Native Americans with uncontrolled type 2 diabetes [8].

The studies mentioned did show that Indigenous focused communication methods and using it as a clinical tool may lead to improvements in Indigenous patient outcomes. By implementing a clinical yarning approach to Aboriginal and/or Torres Strait Islander health care, there could be benefits associated with it that are not seen within the conventional healthcare system. It has been stated that the conventional system is often seen as a barrier to improving health outcomes for Aboriginal and/or Torres Strait Islander peoples [5]. Issues include lack of the use of Indigenous languages, the use of medical jargon and the clinical approach to providing “Western” healthcare [5]. These issues can cause Aboriginal and/or Torres Strait Islander peoples to feel alienated from their healthcare and make them disengage from the healthcare system [5]. Generally, Aboriginal and/or Torres Strait Islander peoples do want to be involved with their healthcare [5, 9]; however, the information is often presented in a way that is incongruent with Aboriginal and/or Torres Strait Islander peoples’ beliefs about health, making it harder for them to connect [5, 9].

Using clinical yarning as a framework may make conversing with Aboriginal and/or Torres Strait Islander peoples more accessible and meaningful and potentially may have positive impacts on health outcomes contributing to lessening the health disparity gap. This review therefore questioned “how has clinical yarning has been utilised as a health intervention for Aboriginal and/or Torres Strait Islander Peoples?” and “what are the impacts of yarning on health outcomes?” By answering these questions, we may be able to make inference as to whether health outcomes may be better achieved using traditional communication techniques than through western styles of health communication.

**Method**

**Search strategy**

A single-word search strategy was used—“yarning”. This single term was chosen because yarning is a unique word to explain conversation within the Aboriginal and/or Torres Strait Islander context. “Clinical yarning” due to being a new and developing concept was not used as the search term as it was perceived that this may be too narrow to pick up the relevant studies. The term “yarning” was therefore entered as a keyword search term into seven databases. Databases included Scopus, EMBASE, CINAHL, MEDLINE, International Pharmaceutical Abstracts (IPA), Australian Public Affairs Information Service (APAIS)-Health and the Aboriginal and/or Torres Strait Islander (ATSI)-Health Bibliography. The database searches were conducted

between March 2020 and May 2020 and identified published publications from database inception up until May 20, 2020. The PRISMA systematic review reporting method was used to collate the data obtained [10]. Details of the search strategy and yields are tabulated in [Appendix 1](#).

**Eligibility criteria**

Only manuscripts written in English, reporting on primary research outcomes, were included for review. Hence, conference abstracts, editorials, commentaries, opinion articles and other literature reviews were excluded. Studies were excluded if the manuscript did not pertain to yarning for health and if yarning was used only as a data collection tool rather than a health intervention. If yarning was use as both a data collection tool AND a health intervention, the manuscript was included. Studies were also excluded if yarning was reported only as an important outcome of how healthcare should be delivered. For example, if yarning was considered a useful method to convey health information however it was not actually used as the health intervention itself, the manuscript was excluded. Table 1 shows all inclusion and exclusion criteria applied.

**Study selection and data extraction**

The searches were undertaken by one author (AB) by using the agreed upon inclusion/exclusion criteria. Validation of search results was conducted by another author (RM), who undertook independent searches in three of the seven databases with the same yields identified. Search results from all databases were exported into EndNote [11] where duplicates were removed.

**Table 1** Inclusion/exclusion criteria

Inclusion	Exclusion
Written in English	Not written in English
Publication reporting on primary research outcomes	Conference abstract, editorials, commentaries, opinion articles and other literature reviews
Yarning was used as a health intervention	Yarning not in the context of health
Australian	Not Australian
	Yarning only used for data collection
	Yarning mentioned as a way health-care should be delivered but not used as an intervention

Titles and article types were then screened by the lead author (AB), followed by an abstract review. Full-text review followed and was conducted by two authors, and where there was any ambiguity over a publication's inclusion or exclusion, a discussion by two authors (RM and AB) occurred to reach consensus. Hand searches of references were also conducted to identify other relevant studies.

Data were extracted from the included publications according to the following descriptive categories found in Table 2. These included the location of the intervention; the healthcare professional or other involved in the yarn (for example, if it involved an Aboriginal and/or Torres Strait Islander healthcare professional or non-Indigenous person), which population group was targeted (i.e. health condition and other demographics); how yarning had been used in the health care system (for example, how it was applied—individual or group, face to face or via another medium); and the outcomes reported and the tools used to measure the outcomes (for example qualitative interviews or monitoring of health parameters). Two authors were responsible for the data extraction and analysis. Data were initially extracted by AB and validated and supplemented by RM.

#### Data analysis and quality appraisal

The data extracted from each of the studies under the framework were then descriptively analysed using an inductive approach to explore which if any participant outcomes were improved and if these improvements were believed to be a direct result of the yarning intervention. No other themes were explored. Both AB and RM analysed each of the publications separately and came to the same conclusions with respect to the outcomes of yarning after discussion. Comments about the outcomes were tabulated in the “Other Comments” section of Table 2.

The quality of included publications was assessed by utilising the appropriate Joanna Briggs Institute (JBI) checklist [17]. These included the checklist for quasi-experimental studies, and the checklist for qualitative research where appropriate. JBI was chosen, as it contains tools for various types of research studies. The authors assigned a quality score of one for every met criterion of the appropriate checklist applied (Appendix 2). This meant that a maximum score of nine was possible. A descriptor of a poor quality was applied to any publication that received a score of 4 or lower, moderate was the descriptor used for publication scoring between 5 and 7 and good was the applied descriptor to those scoring 8 and above. Regardless of quality

ranking, no publications were excluded based on their quality assessment.

#### Results

In total, there were 375 papers identified via the database search. After duplicate removal and title screening, 184 abstracts were screened for inclusion. During the abstract review phase, publications were removed where it was apparent that the manuscript was not a primary research article, or yarning was not used as a health intervention. The remaining 61 publications underwent a full-text review where a further 56 publications were removed and no additional publications identified. The majority of those removed at this stage were excluded as the yarning was primarily a data collection tool only and not used as a healthcare intervention ( $n=35$ ). Other reasons for exclusion included publications where yarning was reported as an intervention but was not used as the intervention in the study ( $n=8$ ) or the manuscript was an editorial or conference abstract rather than a primary research article ( $n=13$ ) (Fig. 1). In total, five publications were included in the extraction phase [12–16]. Table 2 provides a description of each individual study including the overall study objective, who conducted the yarning process and the outcome of each study.

The five yarning studies were published between 2005 and 2018. There was a range of health topics that were the focus of the yarning interventions with two out of the five studies focusing on maternal and child health [15, 16]. One focused on a range of health topics [12], one focused on smoking [13] and one on cardiovascular health [14]. In two of the studies, the people providing the yarning intervention were Aboriginal [13, 16]. In two studies, the people conducting the yarning were non-Indigenous [12, 15], and in one study, the nationality of the staff at the Aboriginal Medical Service (AMS) that were involved in the yarning intervention was not stated [14]. The involvement of Aboriginal community in the development of the interventions or the research study was apparent in four out of the five studies [12–15].

Two of the studies were mainly focused on the creation of a resource [15] or policy [13] document and used a participatory action research approach to create these resources that would eventually be health interventions. Both studies used yarning to gather stories and experiences of participants to empower participants to improve health behaviours by applying a trauma informed lens, such as the damage a mother may cause her unborn child through unhealthy

**Table 2** Data extracted from included publications

Author and year	Location	Overall study objective	Who performed the yarning and training received	Involvement of Community in development of intervention	How the yarning intervention was conducted	Target audience of the yarning intervention	Main topic of focus/health condition addressed.	Method of programme evaluation	Programme outcomes	Other Comments
Begley et al. [12]	Brisbane South Division of General Practice, Queensland	To provide information on health to local Aboriginal community	General practitioners (non-Indigenous) in the area that had expressed interest (N=8). Cultural awareness and communication training were provided, and GPs were supplied an Indigenous health resource manual	Inala elders, were involved in selecting topics of interest and reviewing GP training resources	GPs delivered group education sessions in a community setting in their lunch breaks. Yarning was used to improve access to quality health information	Local Aboriginal community members including elders, young women's groups and parent groups.	General topic areas: common cold, immunisation, women's health, chronic disease management, and child health.	Self-Report A qualitative and quantitative evaluation is conducted after each topic cycle	Knowledge (100% of participants reported "they learnt something"). Satisfaction and understanding (85% reporting ease of understanding based on yarning format). GPs reported improved understanding of Indigenous community, communication, holistic health and importance of family.	This intervention was reported as an ongoing initiative and improved knowledge and programme satisfaction
Fletcher et al. [13]	Victorian Aboriginal Community Controlled Health Organisation (VACCHO)	To develop an inclusive policy around smoking habits for workers in the VACCHO.	The Project Officer who conducted yarns was an Aboriginal staff member of VACCHO. Details re-training were not reported	Aboriginal staff were involved in this participatory research at both the development and implementation stages.	The intervention was conducted in phases. These included drop-in sessions for all VACCHO workers, informal yarns in corridors and meeting places where smoking was common, and yarning sessions with managers after policy development.	All VACCHO staff members were involved in order to start conversations about smoking and produce a smoking policy for VACCHO	Smoking	Personal views around smoking habits and smoking consequence were qualitatively gathered during yarning sessions. A participatory action research framework was used to develop policy.	This programme resulted in policy development that banned smoking within all VACCHO buildings and vehicles, and within 3 m of air vents or within 3 m of all entrances and exits of the buildings. Many staff also reported wanting to give up smoking and support was imbedded into policy.	The intervention described resulted in a new policy, rather than having a focus on individual outcomes. Indirect impact on health however was reported.

**Table 2** (continued)

Author and year	Location	Overall study objective	Who performed the yarning and training and received	Involvement of Community in development of intervention	How the yarning intervention was conducted	Target audience of the yarning intervention	Main topic of focus/health condition addressed.	Method of programme evaluation	Programme outcomes	Other Comments
Dimer et al. [14]	Metropolitan Aboriginal Medical Service (AMS) in Western Australia	To improve cardiovascular health	Staff at the AMS provided the intervention (not stated if Indigenous) Details of training were not reported	Focus groups with Aboriginal health professionals and community members were conducted prior to programme implementation to ensure it would meet community needs and expectations.	Yarning was used to deliver education about cardiovascular disease including diet, exercise, medications, risk factors. This was provided alongside an exercise-based intervention. The clinic was run each Thursday from 9am-1pm, and participants could come at any time within this timeframe with a flexible approach to attendance rather than an appointment-based system.	Aboriginal people were referred by a medical practitioner or self-referred based on high cardiovascular risk. 64% of participants were female.	Cardiovascular health	Mixed methods were employed to evaluate the outcomes of the programme. These included interviews, questionnaires and yarning sessions as well as objective assessment of cardiovascular risk factors. Changes in risk factors were evaluated pre- and post-programme using paired <i>t</i> tests, <i>P</i> < 0.05 was accepted for statistical significance	Twenty-eight participants who attended at least 8 weeks of sessions achieved a significant decrease in BMI, waist girth, blood pressure, and an increase in 6-min walking distance. Qualitative consultation revealed strong support for the programme.	The flexibility of the intervention offered was perceived as more culturally appropriate. Participation increased during the study period. The yarning outcomes of improvements in physiological health parameters cannot be separated from the exercise effect.

**Table 2** (continued)

Author and year	Location	Overall study objective	Who performed the yarning and training received	Involvement of Community in development of intervention	How the yarning intervention was conducted	Target audience of the yarning intervention	Main topic of focus/health condition addressed.	Method of programme evaluation	Programme outcomes	Other Comments
Crouch [15]	The Loddon Mallee rural region of Victoria	To develop and test a community-led resource to support parents to improve health behaviours	The interviewer was a female full-time Mallee District Aboriginal Service (MDAS) clinician of Anglo-Saxon heritage. Details of training were not reported.	Permission was sought by local elders to conduct the participatory action research study.	21 Aboriginal individuals, families, Elders, professionals and various community members were invited to share their experiences of positive parenting, childhood memories and what children can teach carers. Yarning was used to create an antenatal yarning resource that was written from the perspective of a baby in the womb. This resource was then used with small groups to see how they responded to the tool.	Community members (men, woman and Elders) were involved in the first yarning stages to create the resource. The tool being developed was targeted at Pregnant Aboriginal women.	Antenatal health	Qualitative yarning interviews to create a resource using a participatory action research framework.	The outcomes of the research were the development of a resource for pregnant women to improve their health and the health of their unborn children.	The intervention described resulted in a new resource for pregnant females and their families, rather than have a focus on individual's outcomes. Indirect impact on health was reported.

**Table 2** (continued)

Author and year	Location	Overall study objective	Who performed the yarning and training received	Involvement of Community in development of intervention	How the yarning intervention was conducted	Target audience of the yarning intervention	Main topic of focus/health condition addressed.	Method of programme evaluation	Programme outcomes	Other Comments
Campbell et al. [16]	Nine remote Cape York communities, Queensland	To evaluate the implementation of the Baby One Program (BOP), an Australian family-centred programme for improving child health.	Indigenous health workers from the Apunipma Aboriginal community-controlled health organisation. Details of training were not reported	Not stated	BOP includes 15 visits from health-workers throughout pregnancy and up until the time the child is 2 years and 10 months. 7 Baby baskets are delivered with contents of the baskets containing resources for mother and baby. The health worker also has a yarn with the family at each visit with a range of health promotion topics to cover. A programme that started at confirmation of pregnancy and lasted until the baby was 2 years, yarning was used as an information delivery tool	Pregnant women from the time they know they're pregnant until the baby is 2 years and 10 months	Child health and development	Qualitative evaluation through yarning with staff and families in the community.	The programme was perceived to be useful and necessary by both health workers and family members. Yarning was seen to be beneficial in exchanging information; Information was easier for the mothers to understand, the programme promoted good health through behaviours such as quitting smoking and reducing consumption of alcohol. Health workers reported a reduced risk of families engaging with the Department of Child Safety because of the support provided by the BOP	This study focuses mainly on the implementation of the service rather than health outcomes for children. Improved knowledge was perceived.

behaviours such as smoking [15]. A powerful quote from the Fletcher et al. study page 95 “we need to talk about why we are doing this; smoking is killing our mob, and this is part of trying to change that” highlights how the participation in creating these resources was also allowing participants to reflect on their own health behaviours, therefore possibly having indirect impact of health outcomes of participants [13]. One study focused on implementation evaluation rather than direct health outcomes [16]. Only two studies therefore aimed to have direct impact on health outcomes [12, 14]. However, the study by Begley et al. only measured self-reported process outcomes such as knowledge and perceptions of the programme rather than actual health outcomes [12]. The study by Dimer et al. was the only study to evaluate physiological outcomes as a result of the intervention [14]. This pre-post evaluation of cardiovascular risk showed significant changes in participants’ health parameters, although the effect of the yarning without the other intervention of exercise cannot be determined [14].

Quality of the included publications was ascertained using the appropriate JBI checklists. The Qualitative research JBI checklist was applied to 4 studies [12, 13, 15, 16] and the Quasi-experimental JBI experimental checklist applied to the Dimer et al. study [14]. The study quality varied from poor to moderate (Appendix 2); however, based on the death of literature, no studies were removed based on quality assessment.

## Discussion

This review focused on the use of yarning as a health intervention. Only five papers out of the 375 found during the initial search had attempted to use clinical yarning as an intervention, and even of those included, only one reported on physiological patient results. The study quality also varied from poor to moderate based on the JBI quality appraisal. Studies showed that yarning was used in a variety of settings and modes which included individual one-on-one yarning or group yarning. It was also used as part of a multimodal intervention, or to create policy or healthcare resources, or as a tool to improve overall public health knowledge. Due to the large variation in studies and the way yarning was used as an intervention and the lack of patient-specific outcomes reported, it is difficult to make any overall conclusions on the impact yarning has on health outcomes.

All included studies in this review had been published within the last 15 years. This may be because focus on Aboriginal and/or Torres Strait Islander health may

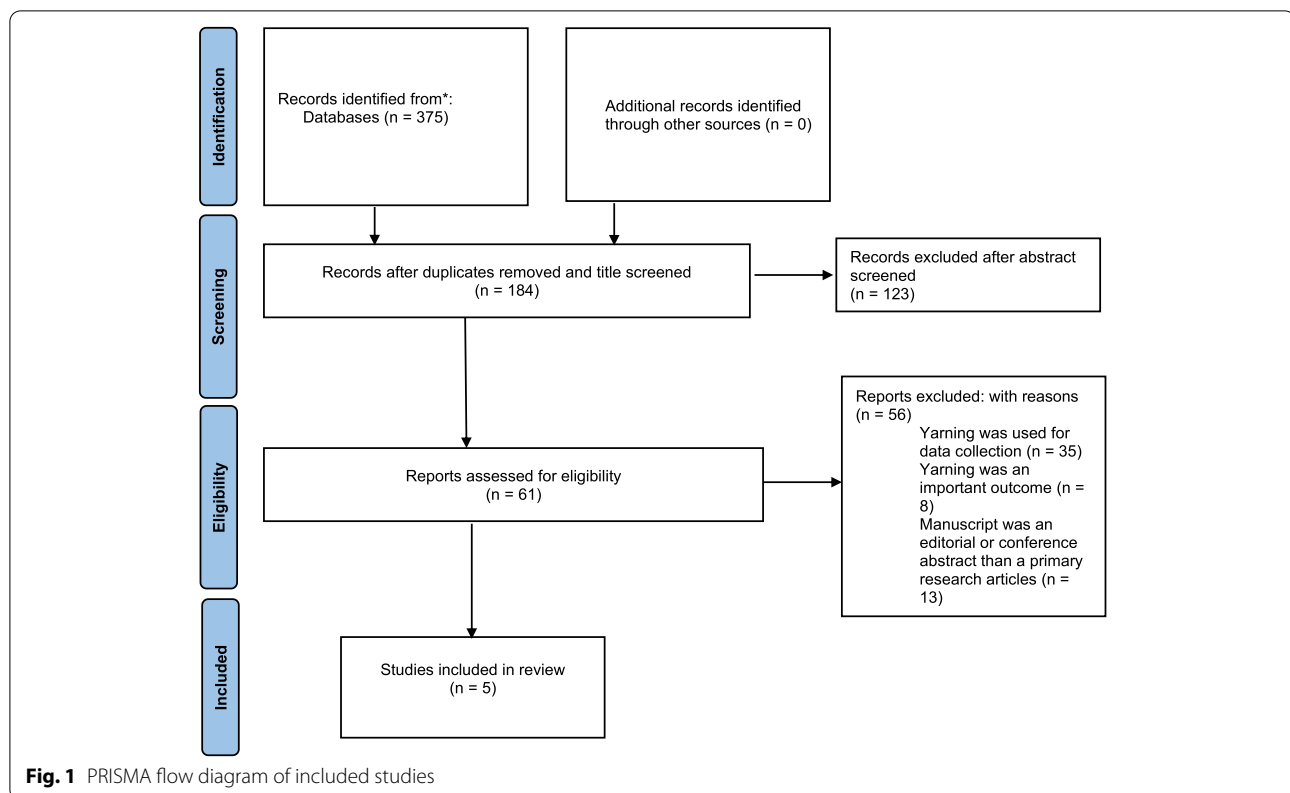
have gained greater momentum in more recent times. The health disparities between Aboriginal and/or Torres Strait Islander peoples and non-Indigenous Australians was described in the title of a news article from *The Age* as a “disgrace” [18] around the time of the first publication included in this review [12]. Today, whilst the health statistics for Aboriginal and/or Torres Strait Islander peoples have improved somewhat [2], Australia still has a very long way to go to improving Aboriginal and/or Torres Strait Islander health and healthcare.

Looking at literature from outside Australia, conducted using Indigenous communication strategies in Native American cultures that bare similarities to “yarning” [7, 8], researchers have concluded that there does seem to be a correlation between an Indigenous focus in communication and some improvement of health outcomes [7, 8]. However, it should be noted that due to these being separate cultures, we cannot draw firm conclusions that the same results would occur in Australia hence more research, using a variety of methods in Australia may need to occur.

As culturally appropriate healthcare has been reported to be necessary [19], it may be more appropriate for Aboriginal and/or Torres Strait Islander health professionals to be the healthcare providers for Aboriginal and/or Torres Strait Islander patients. However, the number of Aboriginal and/or Torres Strait Islander health workers are scarce [20], which means that all health professionals may need to be trained to provide culturally appropriate healthcare to this population. In this review, two studies involved non-Indigenous health professionals as the people conducting the yarning [12, 15]. For example, in the study by Begley, local general practitioners were trained to provide clinical yarning on a range of topics [12]. Other studies in the review however did not describe the training provided to the clinical yarners.

The “Yarn with me” resource explores the framework of the clinical yarn and the three fundamental areas that form its framework [5]. It should be noted however that none of the studies in this review referred to this framework nor was it identified or described in any published manuscript. It is not fully clear how the yarning was provided within these studies. In fact, some studies were conducted prior to the release of this framework [12–14]. This framework [5] however may be a useful guide for future clinicians and researchers and may assist in health practitioner training.

Including Aboriginal and/or Torres Strait Islander health in curricula are now mandated accreditation



requirements in medical, pharmacy, and nursing schools in Australia [21, 22]. Universities also have graduate attributes that articulate the importance of Aboriginal and Torres Strait Islander cultural awareness and safety and have also recognised that all academic staff should gain knowledge and awareness to assist graduates to obtain these attributes [22]. Recent initiatives have been undertaken to empower health students to open their eyes to the importance of Aboriginal culture and health issues [23, 24]; however, there is still a long way to go to ensure health graduates are ready to provide specialised and tailored services to Aboriginal and/or Torres Strait Islander consumers, such as yarning. A systematic review by Ewen et al. in 2012 identified two studies that had evaluated medical students' skills in providing culturally appropriate care, and similar to this review, they were unable to conclude that Indigenous health curricula is having any impact on Indigenous health care outcomes [25]. What can be concluded however is that more research and education in this space is required. It should also be noted that whilst learning about and participating in clinical yarning may be part of the journey to becoming a culturally competent practitioner, it is not

the full picture. Other aspects to cultural competence include being able to provide a safe space where Aboriginal and/or Torres Strait Islander peoples feel comfortable seeking advice, being able to recognise one's own personal biases and being able to overcome them and having a background knowledge of the history that Aboriginal and/or Torres Strait Islander peoples went through in the country now called Australia that led to certain outcomes today.

The studies included in this review were not established to be of high quality after the application of the appropriate JBI checklist. No conclusive data were gathered to prove the effectiveness of clinical yarning, and none employed high-quality design to assess this outcome [26]. In fact, the studies by Fletcher et al. [13] and Crouch et al. [15] were borderline in whether clinical yarning was in fact used as an intervention and received a moderate score in their quality appraisal. As stated however, though yarning was used primarily as a method to create a resource or policy, these studies in fact resulted in behaviour changes for some involved in these studies. For these reasons, in comparison to the other excluded studies these two studies which involved yarning for a "clinical" purpose were included in this review.

Only one study reported on actual physiological outcomes [14] while others reported on other process evaluation outcomes only [12, 13, 15, 16]. The study by Dimer et al. [14] used both yarning and exercise as the intervention to improve cardiovascular risk factors, and because of the multimodal intervention and the lack of a control group, it is difficult to make a determination if the yarning added to improvements in patient outcomes. In saying that, it may not be culturally appropriate and hence ethical to undertake more rigorous clinical trials in this area to prove that yarning indeed has impact on health outcomes. Further, future studies may also look to gather patient perspectives of clinical yarning interventions in a more qualitative manner to draw inferences of benefit. Despite the lack of findings of clinical yarning’s impact, it is apparent that none of the publications stated that clinical yarning would be a detriment to healthcare and health communication. Hence, it does appear that it is a well-received way to provide health information to Aboriginal and/or Torres Strait Islander patients. Some papers cite the use of clinical and research yarning is a good method to break down barriers and walls of communication that would generally be present when using standard methods of communication [5, 27]. Due to centuries of the First Nations People being treated in the traditional western paternalistic style of health care, implementation of this more culturally appropriate style of care could be seen as an olive branch in trying to address the issues that have for been affecting these communities for years. Future studies of the benefits of using a variety of techniques could occur simultaneously as this becomes more widespread in practice and policy.

From the included studies therefore, inference can be made that if yarning was widely used as a healthcare intervention in this population group, health outcomes may be improved. In fact, the study by Dimer et al. noted that over the duration of the Cardiac Rehabilitation Service, patient attendance rates increased [14]. This is important because it points to the hypothesis that if culturally competent healthcare delivery is implemented, it may be possible to facilitate greater interest in one’s healthcare and encourage Aboriginal and/or Torres Strait Islander peoples to actively take part in their healthcare.

The main strengths of this review include the wide array of databases that were used to undertake the search and that the lead author was able to review the studies with an Aboriginal lens, as he is a proud

Wiradjuri man. Further, the validation of the database yields and data extraction from included publications was provided by a second author. The review however is not without limitations. As the reviewers restricted the search strategy to “yarning” only, articles may have been missed describing communications with Aboriginal and/or Torres Strait Islander peoples that chose not to use this terminology. Further, by only including publications published as primary research articles, some articles may have missed other reported outcomes of clinical yarning that could be found in the grey literature such as conference abstracts or unpublished research reports.

**Conclusion**

Whilst clinical yarning may be an appropriate way to provide care to Aboriginal and/or Torres Strait Islander peoples, more research is needed in this area due to the scarcity of research. This review showed a range of ways that clinical yarning had been utilised as a healthcare intervention but did not allow for any clear conclusions to be made regarding its impact on health outcomes.

**Appendix 1**

Table 3

**Table 3** Database Yield with the single word “yarning” search strategy

Database	Extracted papers
Scopus	116
Embase	87
CINAHL	49
MEDLINE	61
IPA	0
APAIS-Health	47
ATSI-Health	15

**Appendix 2**

**Quality appraisal rankings**

Table 4

Table 5

**Table 4** JBI qualitative research checklist

	Is there congruity between the stated philosophical perspective and the research methodology?	Is there congruity between the research methodology and the research question or objectives?	Is there congruity between the research methodology and the methods used to collect data?	Is there congruity between the research methodology and the representation and analysis of data?	Is there congruity between the research methodology and the interpretation of results?	Is there a statement locating the researcher culturally or theoretically?	Is the influence of the researcher on the research, and vice-versa, addressed?	Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?	Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?	Author quality rank
Begley et al.	U	Y	Y	U	Y	U	N	U	Y	Poor
Fletcher et al.	Y	Y	Y	U	Y	Y	Y	U	Y	Moderate
Crouch	U	Y	Y	Y	Y	Y	N	N	Y	Moderate
Campbell	U	Y	Y	Y	Y	N	N	Y	Y	Moderate

**Table 5** JBI quasi-experimental JBI checklist

Is it clear in the study what is the cause and what is the "effect" (i.e., there is no confusion about which variable comes first)?	Were the participants included in any comparisons similar?	Were the participants included in any comparisons receiving similar treatment/care, other than the exposure or intervention of interest?	Was there a control group?	Were there multiple measurements of the outcome both pre- and post-intervention/exposure?	Was follow up complete and if not, were differences between groups in terms of their follow up adequately described and analysed?	Were the outcomes of participants included in any comparisons measured in the same way?	Were outcomes measured in a reliable way?	Was appropriate statistical analysis used?	Author quality rank
Dimer et al. Y	Y	Y	N	N	Y	Y	Y	Y	Moderate

JBI checklist legend (Y yes, N no, U unsure, NA not applicable)

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This paper was written on the lands of the Gadigal, Gundungurra and Dharug Peoples. Two of the five authors are proud Wiradjuri healthcare professionals (AB and TP) who brought an Aboriginal perspective to this review. The phrase Aboriginal and/or Torres Strait Islander peoples (the First-Nations Peoples of Australia) will be used throughout this paper except when quoting from resources which have used alternative terminology.

### Authors' contributions

AB and RM were responsible for the literature search, data extraction, manuscript writing and review. SW, TP and CL were responsible for the manuscript writing and review. The author(s) read and approved the final manuscript.

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### Availability of data and materials

Full texts of included publications are publicly available.

### Declarations

#### Ethics approval and consent to participate

As this is a review of the literature, no consent was required.

#### Consent for publication

All authors have consented to having this manuscript published.

#### Competing interests

The authors declare that they have no competing interests.

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