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ORIGINAL RESEARCH

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Positive oral health outcomes: A partnership model improves care in a rural Indigenous community

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Abstract

Objective: The purpose of this study was to explore the benefits of a partnership between a university dental school and a Community Controlled Health Service, specifically in relation to improving the oral health of an underserved rural Indigenous community. We sought community opinions on health and social outcomes arising from the service provided by the dental student clinical outplacement.

Setting: In Dalby, Queensland.

Participants: In total, 38 participants in five focus groups were representative of local Indigenous community Elders, community health support group members and management and staff.

Design: A descriptive qualitative study employing semi-structured audio-recorded focus group discussions conducted with purposefully selected Indigenous community groups to explore participant views and experience of the partnership model. Qualitative data were analysed using thematic content analysis.

Results: The Indigenous community representatives expressed positive benefit in both their general and oral health awareness, in improved access to dental care provided in their own safe space, while they were pleased to assist with students' learning. They viewed the partnership as mutually beneficial. Suggestions for enhancement of the oral health service were also offered.

Conclusion: This partnership between a university and a Community Controlled Health Service provides sustainable positive social and health benefits for the targeted Indigenous community and for the wider local population, while simultaneously providing enhanced educational benefits for students on clinical outplacement. Translation and uptake of this successful model of care would benefit both underserved communities and dental and other health care professional educators worldwide.

KEYWORDS

Aboriginal and Torres Strait Islander peoples, dental student outplacements, Indigenous health, Indigenous oral health, rural health

1 | INTRODUCTION

In Australia, Aboriginal peoples and Torres Strait Islander peoples make up approximately 3% of the population.[1] This study respectfully refers to Aboriginal and Torres Strait Islander peoples as Indigenous. Around 43% of the Indigenous population reside in rural and regional areas.[2] These two groups have their own established values and protocols and their own unique ways of expressing their different values. They maintain distinct languages, culture and beliefs. Elders (uncles and aunts) are knowledge custodians for the community.[3] They maintain very close contact with their community and are seen as authoritative. Elders play an important role in keeping social, cultural and spiritual customs alive and in upholding Indigenous peoples' right to self-determination.[4,5]

Worldwide, Indigenous communities have been shown to have worse health outcomes compared with their non-Indigenous counterparts. Culture, history, background and geographical location have all been identified as contributing factors to health inequalities experienced by these populations.[6–8] They face barriers to accessing culturally appropriate, family-centred care. Living in remote and rural areas also contributes to endemic inequality and poorer oral health outcomes.[9–12]

Health disparities for Indigenous peoples are widely reported in the existing literature and include a higher prevalence of chronic conditions such as diabetes, obesity and heart disease, which have associations with poor oral health.[7,12] Lack of access to dental care, particularly in rural and remote settings where the number of dental practitioners is low, has been shown to significantly contribute to disparities in health for Indigenous Australians.[5,10]

The distinct socioeconomic makeup of Indigenous communities requires customisation to provide culturally appropriate general and oral health care.[9,10] Improving access for these communities by the establishment of oral health outplacement programs is an approach that enhances Indigenous oral health.[13,14] Rural clinical outplacement programs for training dental students are an internationally recognised and adopted approach in dental education, which also supports the health care needs of rural and remote communities.[15–18]

Clinical outplacement programs for training dental students in rural and remote settings can improve access to dental care[13,14] and create an opportunity for students to engage with Indigenous peoples. Rural workplace experience also enables future dentists to operate confidently in the public health care system.[15–17]

Historically, strategies to tackle oral health disparities in rural Indigenous communities have included community oral health outreach initiatives[19,20] and clinical outplacements of dental students in rural communities.[13] The anticipated benefits from the latter would be improved access to oral health services for rural communities and an enriching and authentic learning experience for the students.[18,21]

What is already known on this subject:

- Student rural clinical outplacements are an effective way of improving access to oral health care in rural and remote communities
- Community Controlled Health Services have a positive impact on the health of Aboriginal and Torres Strait Islander communities

What this study adds:

- Engaging the Indigenous community as partners empowers and enables self-led design and delivery of services that improve equitable access to culturally safe oral health care as determined by Indigenous people themselves
- A unique partnership between a university and a Community Controlled Health Service creates a successful model of oral health care in rural communities. This model may well translate to other health and education contexts to improve health and well-being outcomes for underserved communities

While there is increased interest in the engagement of university programs with rural communities,[16,17] to date there has been limited evaluation of the effectiveness of community-based partnerships in terms of improving access to culturally appropriate care from the community's perspective.[22] Evaluation of strategies and models of care that improve access to oral health care in Indigenous communities, including utilising a dental student workforce, has focused on outcomes of rural outplacements for students, such as enhanced clinical experience and intentions to contribute to the future rural health workforce.[14,17,18]

This study examines the integration of an Australian dental school's rural clinical outplacement program into the local Indigenous community health service. It evaluates how this model of care improves oral health from an Indigenous community viewpoint. The program directly targets the needs of Indigenous people. This research aims to determine whether the Dalby Indigenous community perceives the partnership between Goondir Health Services (GHS), their Community Controlled Health Service and The University of Queensland (UQ) School of Dentistry to be an effective means of improving Indigenous oral health outcomes.

2 | METHODS

2.1 | Context

An Aboriginal and Torres Strait Islander Community Controlled Health Service (ATSICCHS) is an independent, non-profit organisation usually set up through an elected board to provide culturally competent and holistic health care to the population it serves. These health services have had a significant positive effect on the health of Aboriginal and Torres Strait Islander peoples.[1,23]

University of Queensland School of Dentistry partnered with GHS, a federally funded ATSICCHS, in the rural towns of Dalby (from 2013) and St George (from 2017) to provide Indigenous communities across rural South-West Queensland with access to free dental care.[24] During the clinical outplacements undertaken during their fifth year of the undergraduate dentistry program, groups of students are assigned rotations in these clinics. Clinical experience external to the learning institution (outplacement) is designed to enhance students' clinical competence by exposure to an authentic dental clinic environment, to working in a dental team, and through enhanced interactions with other medical and allied health practitioners.[18,21] The preventive and therapeutic care provided by the UQ/GHS student dental clinic serves a considerable catchment. Many people travel from well outside the local rural area to access this clinic. While most GHS clients identify as Indigenous, the service also serves non-Indigenous clients.

2.2 | Study design and participants

It was essential to ensure the research exploring community perceptions of the partnership model of care involving dental students was collaborative and ethical and engaged the Indigenous community in a culturally appropriate manner.[25–27] During a preliminary visit to Dalby by the research team, the Indigenous GHS management and staff were consulted as to the most culturally appropriate approaches to effectively hear the voice of the Indigenous community.

Consultation with Indigenous staff from the GHS management team as representatives of the community identified prospective participant community groups. They also assisted with the study design in reviewing discussion prompts and topics (Appendix S1).

While prospective participant community groups were identified through a purposive sampling strategy, individual participation in the study was voluntary. The Indigenous representatives did not participate in the community focus groups. Instead, they joined the focus group discussions as advocates, ensuring culturally safe and appropriate research conduct.

Voluntary semi-structured discussions allowed for Indigenous participants to communicate freely. The focus group discussions ran for approximately 45–60 mins and with participant permission were audio recorded. They were conducted over 2 days and facilitated by a female member of the research team who was a research assistant at the time and was trained in qualitative research methods and design.

Focus group discussions were designed to explore perceived health and accessibility benefits of the clinic located within the local health services, the social value placed by the Indigenous and wider community on the dental services provided through the student clinic and to establish the interprofessional benefits of situating the clinic alongside the local Indigenous health service.

Following GHS Indigenous representatives' advice, the following approach to face-to-face focus group discussions with local Indigenous community members was adopted:

- Discussion prompts were developed in consultation with GHS Indigenous representatives.
- All members of several representative community support groups were invited by GHS representatives to participate in scheduled focus group discussions with the researchers. Discussions were held in GHS premises familiar to participants.
- A Goondir advocate was present at each focus group discussion. Country was acknowledged, and the researchers introduced themselves and explained the purpose for the gathering.

Central to their holistic care model, GHS runs several support programs targeting the health and wellbeing of community members.[24]

In total, there were 38 participants in five focus groups representative of local Indigenous community Elders, GHS community health support group members and GHS management and staff. These groups from which participants were invited were as follows:

Focus Group A: *Sugar Shakers*. This is a diabetes and other chronic disease awareness group.

Focus Group B: *Gira Gira Women's Group*. This group promotes self-reliance and empowerment of women in the community.

Focus Group C: *Wandir Gunde Playgroup Parents and Carers*. This is a group of parents, carers and facilitators focused on supporting Indigenous families with under-school-aged children to improve childhood development, health care and education via a community playgroup.

Membership of Sugar Shakers, Gira Gira Women's Group and Wandir Gunde Playgroup Parents and Carers reflects a positive engagement with health attitudes and behaviours. Understanding these groups' awareness of the linkage between general health and oral health was seen as important for identifying more effective ways to improve delivery of the dental clinic service to the community.

Focus Group D: *Community Elders*. Referred to as aunts and uncles, this group are custodians of the community and play a pivotal role in keeping social, cultural and spiritual customs. They are permitted to disclose cultural knowledge and beliefs. The Elders were expected to accurately represent the attitudes and knowledge of the entire Dalby Indigenous community. Culturally they have very close ties with the community, being seen as figures of authority.

Focus Group E: *Management and staff*. This group comprises clinical and professional Indigenous health workers contributing to the operation of GHS clinics and services. They provided both the Aboriginal Health Workers' voice and an interprofessional perspective.[27,28]

2.2.1 | Ethical considerations

The focus group discussions were audio recorded with written consent from participants. The recordings were transcribed to facilitate data analysis with all identifying information removed from transcripts to protect the identity of the participants. All researchers' notes were de-identified. Participation in any of the research activities associated with the study was completely voluntary with written and verbal informed consent gained. Confidentiality and anonymity of participants was maintained, and there were no foreseeable risks of discomfort or harm apart from that of inconvenience by giving up time to participate in the focus group discussions.

Given the importance of engaging Indigenous peoples in culturally appropriate research, the researchers ensured continued support from the community and the research was also guided by the Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS) code of ethics for Aboriginal and Torres Strait Islander Research, as well as the National Health and Medical Council (NHRMC) guidelines on ethical conduct in research with Indigenous communities.[27,28] These key principles ensured the research provided meaningful engagement and reciprocity.

2.3 | Ethics approval

Ethics approval for the study was granted by the University of Queensland (The approval process also included gaining support for the research from Indigenous representatives from the management team before seeking institutional ethics approval).

2.4 | Data analysis

Two of the research team members (SM and CM) verified the focus group recordings for accuracy. A codebook with nine codes developed from the discussion prompts was utilised and additional codes were added if new concepts emerged (Appendix S2). The two researchers used the codebook to code the anonymised transcripts using NVivo version 12 software (QRS International). The two researchers met regularly to establish intercoder reliability. The coded data were then analysed using thematic content analysis utilising both inductive and deductive approaches to the point of saturation.[29]

Using a social–ecological framework, a thematic analysis approach to the emerging topics was analysed and classified into subthemes according to the frequency and commonalities and summarised using a coding tree.[29] To account for reflexivity, the two researchers interpreted the results independently and then crosschecked the outcomes from the thematic analysis agreeing on the accuracy of the emerging themes with an inter-rater reliability (IRR) score of 1.[29]

A manuscript draft was also sent to GHS community representatives who had participated in the focus group discussions, who reviewed the manuscript and expressed the interpretations were an accurate representation of the discussions. This approach was followed to obviate potential bias by the researchers and to validate the perspectives of the Indigenous community and ensure that they were accurately represented.[27,28] The Consolidated Criteria for Reporting Qualitative Research (COREQ) checklist (Appendix S3) was also used as an approach to ensure rigour of this research.[29]

3 | RESULTS

3.1 | Participant characteristics

In total, 38 participants took part in the focus group discussions, with each focus group having at least five participants and up to 11 in the largest group. While specific age demographic data were not collected, participants ranged across different age brackets, for example, the Wandir Gunde Playgroup Parents and Carers consisted mainly of younger community members, while the chronic disease management and community Elders' groups consisted of older members. This gave the opportunity for diverse

opinions.[28,29] There was a higher proportion of females (63%) to males (37%).

3.2 | Summary of results

According to the participants in this study, Indigenous peoples' health behaviours in the community were positively influenced by the partnership between their Community Controlled Health Service and the university. The Indigenous community expressed positive benefit in general, increased oral health awareness and improved access to care in their own safe space. They believed that this was a culturally safe and appropriate model of care. They appreciated that the student dental clinical service had holistically integrated with the work of other health professions in the health service and believed that this also served to assist student learning. Some participants offered suggestions for mutual enhancement of the experience aimed at enhancing perceived benefits and reducing the perceived barriers to the partnership.

Discoveries made through the data analysis process were indexed and organised into five emerging broad themes pertaining to the Indigenous community's perception of the partnership between their Community Controlled Health Service and the student dental clinic. The data analysis process enabled the development of the following themes: cultural safety, increased oral health literacy and well-being, improved accessibility, interprofessional collaboration and relationships, waiting times and Indigenous health workers' representation. These themes are further discussed using the words of individual participants to illustrate the key points.

3.2.1 | Cultural safety

A key point raised by the Indigenous community was the importance of the provision of culturally appropriate care. The Indigenous community highly valued the integration of the student clinic with GHS and it being situated in the same building. They view the dental clinic as 'their own'.

> We know it's run by UQ, because it's within the Goondir complex we see it as our own type of thing.
>
> Gira Gira Women's Group participant

> ....the older community and the adults is that this is their place that they come to get it all done. They come here to see the doctor, they come down to see Allied Health. It's all at one-stop shop...they are not going to a dental clinic down the street that they don't know.
>
> Community Elder participant

> I think the dental, UQ Dental, probably plays a huge role in the chronic disease management that... It's about closing the gap and making sure that we trying to implement as many things as we can, and dental is a huge part of that. Like lots of our chronic diseases lead into dental issues, so I feel that the UQ dental and Goondir work hand in hand and in ticking off a lot of the goals that need to be set for Indigenous peoples.
>
> GHS management and staff participant

3.2.2 | Increased oral health literacy and well-being

The community perceived an improvement in their oral health literacy, identifying positive changes in habits and attitudes towards oral health arising from their attendance at the student dental clinic. The participants, particularly members of Sugar Shakers, the diabetes and other chronic disease awareness group, acknowledged their increased awareness of the relationship between oral health and chronic disease.

> ...I never used to go to the dentist. But since using the clinic I've realised now the importance of dental health and that. And my daughter has too. I suppose through education we've become aware that it is really important to have good oral hygiene, good dental health.
>
> Sugar Shakers group participant

> I think more of us take more care of our teeth since it's been here, otherwise, we'd have to go to the hospital and a couple of my children have dental problems....
>
> Gira Gira Women's group participant

3.2.3 | Improved accessibility

The community expressed the view that the student clinic has improved access to oral health care, not just for the local Dalby community, but also for the region.

Transport services for patients from neighbouring townships implemented by GHS to facilitate access to services including the student clinic indicate a further successful collaborative approach of this partnership.

> So, we have transport offered for our Indigenous clients, transport to get to dental appointments, so it's something we can all do to go out to the outreach suburbs or towns basically and get all the clients and bring them in if we need to.
>
> Community Elder participant

> I pick up all the clients and they've always said that it's a great asset and people in outlying areas that normally wouldn't be able to get in, it's really helping them....
>
> GHS management and staff participant

3.2.4 | Interprofessional collaboration and relationships

Participants acknowledged increased use and awareness of the student dental clinic, enabling self-access as well as referrals by their general medical practitioners (GPs).

> I took my kids to health checks at Goondir, and they ask you questions like, "Have they been to a dentist?" And I said, "Not for a while," and they said there's one there....
>
> Wandir Gunde Playgroup participant

> The 715 is a general check-up and they do a promotion on that so that everyone goes, you'll get a shirt or a voucher or something. And you go and you have your history done, any problems and that's when they give you then your referrals if you need podiatrist, the dentist, you know...all of those things....
>
> GHS management and staff participant

3.2.5 | Indigenous health workers' representation

Lack of representation of Indigenous health workers as dental operators was also highlighted.

> ....as far as this world we live in.... And I don't mean that to be disrespectful at all. I just mean it's a stereotype. I don't think they're not being culturally aware. But you find that with a lot of Indigenous medical centres now, they don't, they're not all Indigenous, are they?
>
> Wandir Gunde Playgroup participant

> I won't say offended or anything like that, but I do find it funny...When you go to an Aboriginal clinic there's an Indian doctor or it would be like a white woman going to a bra shop and there'd be a man, it's the same.
>
> Gira Gira Women's group participant

3.2.6 | Communication and wait times

Another common theme that emerged was the effectiveness of communication highlighted as a positive aspect and in some cases perceived as a barrier.

Occasional intercultural language barriers pertaining to a largely international cohort of dental students were mentioned by participants. The more common student error of using too much professional jargon was also identified; however, the participants indicated their patience and understanding for such issues. Participants also expressed that effective and open communication enhanced their experience.

> I was just thinking when you were saying all the different cultures and stuff. I think the biggest thing for me is if I can't understand what they're saying, that's frustrating because you're like... especially if they use big words, like the language they're using. They have different terms for doing things like we might just say "Oh we're going to get our teeth pulled out" but it's called an extraction, things like that and some people might not know what that is.
>
> Wandir Gunde Playgroup participant

> I'm very impressed by the Goondir Health Service/UQ partnership as a whole, I have to say....not to say that they're aren't things that we can't look at improving and I think with everything it's communication and keeping those lines of communication open and co-operation and understanding between the people.
>
> Gira Gira Women's group participant

> I think it also helps too because the dentist staff attend our end of year workshops and so

> we have...where they tell us where they're at, what they are doing and what they're looking to have and stuff like that and they see what we're doing. Everyone works in really well together and it's an open book with communication wise, it's great.
>
> GHS management and staff participant

While the integration of the clinic increased awareness and knowledge of the service, the community felt communication with them about the clinic and its operation could be improved and expressed some barriers to accessing the clinic timely due to long wait times.

> Very long wait though sometimes...Nine to 12 weeks.
>
> Gira Gira Women's Group participant

> I can remember the wait is very long, but my husband had a very bad something happening in there, an ulcer or something, and they gave him a voucher because they couldn't see him straight away.
>
> Gira Gira Women's Group participant

> I'm not sure of the times that they're open, like their holiday times. Like Goondir, I know they close early Monday, they close early Wednesday, they close on Friday.
>
> Community Elder

> Does it close in the school holidays because they are students?
>
> Sugar Shakers participant

4 | DISCUSSION

It has been demonstrated that collaboration between universities and the public health sector can be beneficial for all stakeholders with the most significant outcome being improved health and community wellbeing.[13,15] Partnerships in health care are fundamental to the improvement of health outcomes for Indigenous communities and can effectively enhance the quality of public health services and delivery of care.[27,30,31] Partnering with Indigenous organisations to undertake health care provision has the advantages of ensuring efficacy in enhancing health outcomes and in encouraging community self-determination.[3] This study has reinforced the value of organised student outplacements in fostering cross-cultural understanding, particularly among Indigenous peoples.[3,4]

This study demonstrates that the Dalby Indigenous community values the partnership of their Community Controlled Health Service with the student dental clinic. They feel that the student dental clinic provides a culturally appropriate approach for improving their health. In terms of cultural safety and self-determination, participants clearly identified that the student clinic effectively promotes cultural comfort and allows appropriate and timely referral pathways for the community, a central aspect to Indigenous health and self-determination.[5,30] Previous studies have demonstrated referral pathways and integration of primary care services within the same setting act positively to influence awareness and uptake of health services by rural communities.[30,32] Consistent with the recognised association and link between poor general health and poor oral health and greater oral disease, increased oral health literacy and wellbeing can improve general health outcomes.[7,9] Greater oral health awareness in the Indigenous community was a consistent theme that emerged in discussions. When it comes to oral health care, Indigenous peoples develop trust and confidence in non-Indigenous practitioners through sharing their experiences.[5,25,26] Despite some communication issues, this partnership model of health care and its integrated oral health services demonstrated positive benefits.

Indigenous peoples' attitudes towards health and oral health are common across different geographical areas, with similar extent and impact of inequalities faced. Conversations with Indigenous members of this rural community have repeated many of the same issues identified in current literature pertaining to access to oral health care.[5–7] As previously highlighted, remoteness has been shown to be a significant contributor to oral health inequalities in Australia.[10] This community reported a positive experience of improved geographical access to oral health services. The findings of this study confirmed those of previous studies, which evidenced positive oral health outcomes from the use of dental student outplacement programs to increase accessibility and timely care for rural communities.[18,33]

An approach to addressing the chronic burden of poor oral health among Indigenous peoples around the globe is through oral health outreach programs.[6,12] Student clinical outplacement programs with a focus on prevention and education effectively achieve this.[17] The positive impact of this strategy can be seen in the success of dental student clinical outplacements within an Australian context where students gain a first-hand view of health problems affecting Indigenous people, while preparing for possible careers working in rural areas.[13,18]

The community perceived an improvement in their oral health literacy and positive attitudes towards oral health arising from their attendance at the student dental clinic demonstrating the positive impact of oral health promotion.[6,9,10] This study indicated that the presence of the student dental clinic increased knowledge and awareness of oral health services in the Indigenous community.[34] This partnership model of care demonstrates an interdisciplinary health care approach works positively to improve the Indigenous community's health outcomes by improving access and enabling uptake of oral health services.[4,31]

Collaboration benefits all stakeholders. Groups of professionals and the public have a significant role to play in mediating conflicting societal interests to promote the health and well-being of Indigenous communities.[35,36] Transportation is a known barrier to accessing health care in rural and remote communities.[19] Provision of free transport by GHS to better access the dental clinic contributes strongly to removing the barrier. Recognising and respecting the value of Indigenous self-led initiatives and approaches to oral health care positively impacts on health outcomes.[5,19] As an example, local community Elders can collaborate directly with oral health providers, the student clinic, to arrange appropriate case referrals that consider culturally appropriate service delivery and specific community needs.[31,36,37]

4.1 | Implications

This research strengthens the case for collaboration and partnership with Indigenous community organisations to effectively deliver oral health care. Interprofessional collaboration, as demonstrated by a holistic concept and referral pathways, improves health outcomes for such communities.[36] Over time, the dental student clinic in Dalby has become integral to GHS and is recognised as their own by the Goondir community. Data from our concurrent studies yet to be published demonstrate improved oral health outcomes and mutual benefits to stakeholders.

Findings of this study suggest that improved and strengthened medical–dental connections and enhanced practitioner ability in interprofessional collaboration can achieve better rural health and oral health outcomes.[32] For example, the interprofessional collaboration and relationships identified with the GP's referring clients not only to other allied health practitioners but also to the student dental clinic as well.

4.2 | Study limitations

4.2.1 | Participants

While purposive sampling provided an effective approach to meet the aim of this study, the participants that attended this group were all local to the Dalby community. A wider sampling frame could have been adopted to ensure those clients travelling from other surrounding areas to access the clinic were included to gain their perspective. Due to logistical restrictions, these participants were not included.

UQ/GHS partnership also has a student clinic in the more remote location of St George. Gaining perspectives and experience of this partnership model of care would be useful in gaining the St George community' perspective and experiences of this partnership model of care.

The existing support programs targeting the health and wellbeing of community members that the focus group participants were recruited from represent active engagement and awareness of health and wellbeing. This may contribute to participant bias as they are overrepresented and may also be inclined to speak more positively about the partnership.

4.2.2 | Methods

While yarning was not used as a formal methodological approach in this study, the presence of an Indigenous advocate to facilitate free communication during focus group discussions was a culturally sensitive approach. Yarning is an important aspect of connecting and building respectful relationships through telling and sharing stories in Indigenous culture, prioritising Indigenous ways of communication.[38] However, the use of yarning circles may have been a more effective method prioritising Indigenous ways of communication and ensuring it was participant led as opposed to the semi-structured focus group discussion approach used.

While most of those patients accessing the service identify as Goondir peoples,[24] the student clinic provides free dental care to all patients no matter their financial status or identity. The location of the clinic within the GHS building itself may be a limiting factor to non-Indigenous members of the rural community who may feel excluded from access, potentially causing a divide.[19] Despite this limitation, the student clinic operation adds positive value to this entire rural community by providing free oral health care that would not otherwise have been available.

4.3 | Recommendations

It is important to make recommendations that align with Indigenous-led, culturally safe and inclusive oral health initiatives.[3,36] Consultation with Indigenous communities and collaborative research with more meaningful indicators and targeted outcomes in oral health as defined by the community is needed to enhance and guide culturally safe oral health policies that better meet the needs of Indigenous populations.[31,39] Many Indigenous peoples are still unable to access equitable oral health services due to affordability issues. Additionally, limited public health clinics in rural and remote areas further compound the issue of access.[6,19,20]

Culturally safe public health services are seen as integral to Indigenous health practice.[35] Maintaining this meaningful and sustainable partnership between an Indigenous health service and university is therefore imperative in the bid to improve health outcomes for such a community. A co-design approach to health initiatives and research with Indigenous communities would be advantageous in ensuring a more self-led and determined research design and participation that further strengthens meaningful engagement and reciprocity. This will ensure that Indigenous communities are able to meet their social, cultural and economic needs.[25–28]

Funding student clinical outplacement programs can be challenging for already overstretched institutions and organisations.[13,19] Ongoing assured federal government financial support is therefore vital to sustain this model. This model of care can be appropriately viewed as long-term investment in population health and a cost-effective approach to public health that will not only have invaluable social and health benefits for underserved communities, but also be of economic benefit to public health services.[13,15]

4.3.1 | Practice

While this partnership model demonstrates continued and sustainable positive outcomes for the Indigenous community, findings of the current investigation indicate that it would be advantageous to formalise and articulate a joint management plan to maximise benefits for all stakeholders. Successes of this model can then be more readily applied to situations such as in even more remote areas, or with other professional training programs.

Limited representation of Indigenous peoples in the oral health workforce and other professions has been attributed to cultural sensitivity issues not being entirely met.[4,6] Other literature suggests that increasing representation of Indigenous health workers improves engagement with services and builds trust. In such circumstances, the community is more likely to perceive the services as culturally safe and be more likely to feel empowered to act to better their oral health.[33,37]

As Indigenous communities prefer to include Indigenous health workers in approaches to improving health outcomes, Indigenous inclusion in leadership and management roles such as with the GHS holistic care model further encourages a cultural and interprofessional collaborative approach.[6,37] In practice, this participation ensures a strong Indigenous representation in the partnership and university-employed Indigenous dental clinic support staff enhance patient comfort with the service. Additionally, ongoing university affirmative action policies to increase Indigenous student participation in dental programs are designed to increase Indigenous health worker participation in the oral health workforce.

Working in partnership with Indigenous communities is critical in terms of self-determination. Empowerment ensures equitable access to care that is culturally safe as determined by Indigenous people themselves.[20,25–27] Translation of this partnership model of care to other health practitioner training programs can inform both better oral health policy and contribute to better overall health outcomes.

Effective communication facilitates quality services that better meet community needs.[30,32] Indigenous community participants of the study respectfully offered several recommendations for operational improvement of the dental clinic, which included better communication about the clinic hours and scope of available treatment. While participants deemed services provided by the clinic were culturally appropriate, some felt students' cultural orientation preparation before the rural Indigenous outplacement experience could be more extensive. Addressing such concerns, Indigenous culture modules have since been embedded in the dental students' curriculum. Additionally, local Indigenous community members now play a key role in student induction activities as each new student rotation arrives through community events involvement.

An all-student dental workforce will automatically impose limitations related to care complexity and logistics.[13] Cases outside the scope of dental students must be referred elsewhere. Students operate only as specified by their university timetable, for 38 weeks on 4 days per week. Outside this schedule, patients must seek alternative care, choosing between attending the overburdened Dalby government clinic, paying private practice fees or travelling 85 kilometres to the nearest regional city. Greater community access to oral health services would be facilitated by professionally manning the dental clinic during the students' absence, perhaps funded by GHS.

4.3.2 | Policy

From an equity viewpoint, the Australian public health system could better address oral health inequities. Current policies such as 'Close the Gap' and Australia's National Oral Health Plan,[20,39] which address the broader context of health inequalities for Indigenous communities, a negative indicator for health outcomes,[5,6,11] fall short. These approaches require regular evaluation for negative implications and shortcomings and then revision to improve access to oral health for underserved communities.[32,35,39]

Recommendations to overcome identified barriers made in recent literature include ideas such as adoption by the Australian Government of a universal dental care scheme,[40] as a possible means to overcome system and structural impediments to oral health service delivery and to integration of oral health service into existing systems. Fully integrating oral health provision into daily life, including free access to health care for all,[36,40] would create optimum circumstances for accomplishing health improvement objectives.

Partnerships in health promotion have been shown to have a broader impact by allowing for health to be promoted via lobbying, legislation, policy reform initiatives, community projects, consultative processes and the study of local health demands and needs.[31,36] Other positive partnership initiatives can include provision for the specific needs of people as a community, and effective health promotion that is more all-inclusive and targeted.[3,20] An evidence-based approach to health promotion results in superior outcomes in oral health, health and wellness objectives and empowers communities to act.[20,39]

5 | CONCLUSION

This evaluation of a sustainable partnership between an Australian academic institution (UQ) and an Indigenous health service (GHS) identifies an effective strategy to address oral health disparities by delivering much-needed services to the community[14,19] while simultaneously providing educational opportunities for students.

The active support and participation of the Dalby Indigenous community and GHS personnel enhanced this investigation. The Indigenous community's perceptions of health and oral health and their relationship as well as the positive impact of dental student clinical outplacement activities had on social and health outcomes for the community were clarified. Engaging the Indigenous community as partners empowers and enables Indigenous self-led planning, design and delivery of systems and services. Advantageous health outcomes result from equitable access to culturally safe oral health care, which meets self-determined community needs.[36,39]

To our knowledge, the GHS and UQ dental student clinical outplacement arrangement and partnership is unique in Australia. The partnership model of care could translate to other health professional clinical education programs and be considered for international contexts. This successful model can also apply across different geographical areas because findings suggest that underlying experiences of Indigenous communities such as cultural safety and barriers to access transcend geographical regions.

AUTHOR CONTRIBUTIONS

All authors gave their final approval and agreed to be accountable for all aspects of the work. Clare Mangoyana contributed to the design of the study, conducted the focus group discussions, interpretation of the data, drafted and critically revised the manuscript. Sandra March contributed to the design of the study and interpretation of the data and critically revised the manuscript. Ratilal Lalloo contributed to the design of the study and critically revised the manuscript. Laurence J. Walsh contributed to the design of the study and critically revised the manuscript.

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CONFLICT OF INTEREST

The authors declare that there are no conflicts of interest regarding the publication of this article.

ETHICAL APPROVAL

Ethics approval for the study was granted by the UQ Human Research Ethics Committee [Approval number: HREC2019001480]. The approval process also included gaining formal support from Goondir Health Services (GHS), as a precedent to institutional ethics approval.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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