

A Scoping Review of Indigenous Health Curricular Content in Graduate Medical Education

Marghalara Rashid¹, PhD
Julie Nguyen, MA
Jessica L. Foulds², MD

Liz Dennett³, MLIS
Nicole Cardinal, MD
Sarah E. Forgie⁴, MD, MEd

ABSTRACT

Background Graduate medical education is refocusing on the reconciliation process with Indigenous peoples and integrating Indigenous healing practices, cultural humility training, and courses on Indigenous health issues in their curricula. Physicians and all health care workers must be able to recognize, respect, and address the distinct health needs of all Indigenous peoples.

Objective The aim of this scoping review was to explore and describe what exists in the current literature on the impact and challenges associated with Indigenous curricula developed for resident physicians.

Methods The search was conducted using 9 bibliographic databases from inception until April 19, 2021. Two reviewers independently screened for inclusion using Covidence. Three reviewers extracted data and all 3 checked for completeness and accuracy.

Results Eleven reports were included. Our included reports consisted of qualitative research (n=2), commentaries (n=1), special articles (n=3), systematic reviews (n=1), innovation reports (n=1), published abstracts (n=1), and program evaluation papers (n=2). Findings are presented by 3 themes: (1) Misunderstandings and cultural bias toward Indigenous people; (2) Increasing community-driven Indigenous partnerships to create a safe environment; and (3) Challenges in implementing Indigenous health curricula.

Conclusions Themes identified related to Indigenous involvement, culturally competent care, common misconceptions about Indigenous peoples, as well as challenges and barriers to implementing Indigenous curricula for residency programs. A collaborative approach involving stakeholders with training in the community is a viable path forward. But comprehensive program evaluation, a source of stable funding, and further research focusing on effective Indigenous curricula for residents are needed.

Introduction

Many stakeholders have called upon residency programs to recognize, respect, and address the distinct health needs of Indigenous peoples and provide skills-based training in intercultural competency, conflict resolution, human rights, and anti-racism.¹ Bias, microaggressions, and a lack of understanding of Indigenous traditional practices and unique health care requirements contribute to these needs not being met.² The existing literature shows that institutional barriers play a large role in sustaining health inequities and these barriers greatly impact the effectiveness of an educational curriculum.^{3,4}

To overcome these barriers, Anderson et al⁵ suggest that graduate medical education (GME) curricula must include Indigenous health issues to help residents address the inequities Indigenous people may

face in the health care setting. Infusing Indigenous principles and creating a true partnership with Indigenous communities will be vital for learners at all levels of training.⁴ Residency programs, in particular, need to focus on incorporating Indigenous health content that will assist in reducing the systemic prejudices that exist in medical schools and clinics to diminish Indigenous health disparities.³ An existing study showed that while a majority (52%) of family medicine residents saw themselves as quite likely or definitely working with Aboriginal populations in the future, 40% felt underprepared to do so. Residents who have had exposure to Indigenous contexts and who had been part of Indigenous communities were more likely to work in settings with Indigenous clients.² Additionally, developing interventions and programs that support Indigenous empowerment is viewed as vital in the current body of literature.⁶ Active involvement of Indigenous knowledge keepers and teachers in the design and implementation will facilitate culturally appropriate and inclusive residency curricula.⁷

DOI: <http://dx.doi.org/10.4300/JGME-D-22-00180.1>

Editor's Note: The online version of this article contains full details of the search strategy and protocol and an example data charting form.

Health care professions education and residency training should scaffold cultural humility and Indigenous health training, beginning with residents' professional identity formation through their development into independent clinicians.⁸ Despite this strong call to action and a desire to equip trainees with the proper knowledge, cultural humility, and skills to care for Indigenous patient populations, the problem lies in not knowing what curricula exist or how effective these methods are. The aim of this scoping review was to explore and analyze what exists in the current literature and the impact and challenges associated with Indigenous curricula developed for residents.

Methods

We conducted this scoping review using the 6-step framework of Arksey and O'Malley⁹ and following the PRISMA-ScR checklist.¹⁰ Our protocol was developed *a priori* and revised by research team members, with the guidance of our health sciences librarian (L.D.). The 6-step framework⁹ involves first identifying the research question, then finding relevant reports, report selection, charting/extracting data, and reporting summarized results.

Search Strategy and Databases

A health sciences librarian (L.D.) conducted searches in 9 electronic bibliographic databases: Medline (Ovid MEDLINE ALL), Embase (Ovid interface), CINAHL Plus with Full Text (EBSCOhost interface), ProQuest Education Database, Canadian Business & Current Affairs Database (ProQuest interface), ERIC (ProQuest interface), ProQuest Theses and Dissertations Global, and Scopus from database inception until April 19, 2021. The search strategy used a mix of free text terms and subject headings and combined synonymous search terms for medical education with terms for Indigenous peoples and either cultural competency or curriculum terms. Subject headings and database syntax were adapted for each database to optimize the search strategy's performance. Reference lists of included articles were reviewed for additional studies. The full details of the search strategy and protocol are available in the online supplementary data and are in keeping with PRISMA-S guidelines.

Identifying Relevant Reports

Two reviewers (M.R., J.N.) independently screened all titles and abstracts to be included in the scoping review. Articles focusing on the impact and challenges associated with Indigenous curricula developed for

residents. All methodologies, including qualitative and quantitative articles, were included and no date limits were used. Non-English language publications, publications focusing on postgraduate fellows, video summaries, protocols, poster presentations or conference abstracts, and articles detailing single experiences or sessions were excluded. Final search results were exported into Covidence, an online subscription-based review software (Veritas Health Innovation), and duplicates were removed. Primary screening and abstract review were conducted using Covidence. Three reviewers (M.R., J.N., J.L.F.) thereafter independently evaluated the full text of the included articles.

Charting the Data

A data charting form was jointly developed by 3 reviewers (M.R., J.N., J.L.F.) for consistency on what variables to extract. In an iterative process, reviewers independently extracted data, discussed elements, and modified the data charting form as required. Key data charting components are reflected in the TABLE.

Data Extraction and Analysis

We extracted data into tables housed in a cloud-based online word processor software (Google Drive). Data extracted included article characteristics (title, country of origin), participant characteristics (sample size, discipline), curriculum/intervention characteristics (duration, components, theory), results of any formal assessment/design and analysis, impact, significance, challenges, and main findings/conclusions. Disagreements on data charting were resolved by discussion and consensus with other reviewers as required, per PRISMA-ScR.¹⁰ Critical appraisal of individual sources of evidence was not completed, as it is not typically part of the scoping review process. Reports were summarized in tabular format, and types of curricula, pedagogical approaches, theories, disciplines, designs, and future directions were summarized in narrative forms.

Thematic analysis was conducted using Braun and Clarke's framework,¹¹ which involves 6 steps: (1) becoming familiar with the data, (2) generating codes, (3) searching for themes, (4) reviewing themes, (5) naming themes, and (6) writing the report. Critical theory¹² guided our analysis of the included articles. Critical theory is a philosophical approach that challenges social, structural, and ideological forces that constrain it.¹² The rationale for using this theory was that it offers explanations for mechanisms that drive biases, stigmas, and injustices toward vulnerable sections of society. First, included reports were read multiple times by 2 authors (M.R., J.N.) to get

TABLE
Summary of Included Studies (N=11)

Authors (Year), Country	Title	Objective	Study Design	Discipline	Instructional Strategies	Curriculum Related to Indigenous Populations	Themes Reported in the Included Articles
Cappa et al (2016), USA ²¹	Better preparing emergency medicine physician trainees for global and rural practice settings: a longitudinal component of University of Arizona's south campus emergency medicine graduate medical education curriculum	This program addresses national efforts to better educate residents in population-based health, intercultural care, and ultimately reduce health disparities.	Published abstract	Emergency department residents	Lecture series	The 3-year resident curriculum occurred in a community hospital setting where the focus was on cultural immersive experiences of Indigenous peoples through educational quality improvement projects. This was done through collaborations with rural communities.	Theme 3: Challenges in implementing Indigenous health curricula
Doty and Pastorino (2000), USA ¹⁵	Cultural competency training in a new-start rural/frontier family practice residency: a cultural immersion integrated model	The aim of the integrated curriculum was to prepare residents to practice in rural or frontier communities with scarce resources, small populations, and strong influences by Indigenous cultures.	Program evaluation	Family medicine residents	Self-discovery, progressive learning model, group discussions, clinical experience	The curriculum was integrated throughout the residency program. Emphasis was placed on developing appropriate communication skills and better understanding of the Indigenous culture. The cultural aspects were integrated into all aspects of the curriculum. The success of the curriculum was credited through the collaboration of the Indigenous community and the family medicine program.	Theme 1: Digging deeper, beyond bias Theme 2: Increasing community-driven Indigenous partnerships to create a safe environment

TABLE
Summary of Included Studies (N=11) (continued)

Authors (Year), Country	Title	Objective	Study Design	Discipline	Instructional Strategies	Curriculum Related to Indigenous Populations	Themes Reported in the Included Articles
Fitzpatrick et al (2019), Australia ¹⁶	Learning about aboriginal health and wellbeing at the postgraduate level: novel application of the growth and empowerment measure	This article reports findings regarding the feasibility, specificity, and sensitivity of the growth and empowerment measure in the evaluation of 2 innovations focused on aboriginal health and well-being.	Qualitative	Residents	Videos, discussion, vignettes, presentations, reflective journal	In this article the authors introduced two 13-week public health electives: (1) "Perspectives" course and (2) the Aboriginal empowerment and well-being "Lifespan." These electives played a vital role in changing residents' perspective about indigenous care. The electives were taught by non-indigenous faculty and community leaders.	Theme 1: Digging deeper, beyond bias Theme 2: Increasing community-driven Indigenous partnerships to create a safe environment
Kesler et al (2015), USA ⁷	Assimilating traditional healing into preventive medicine residency curriculum	The aim of this article is to address current gaps in knowledge through outlining curricular components that focus on traditional healing and its prevalence in residency.	Qualitative	Preventative medicine residents	Progressive learning model, clinical experience, lecture, group discussion, case-based learning, self-study	This curriculum introduced residents to community health organizations that incorporate cultural learning into their services followed by a 4-week practicum rotation on health equity. The goal of this curriculum was to improve students' communication skills with their patients and gain knowledge about the value and role of traditional healing practice that may be used by their patients.	Theme 2: Increasing community-driven Indigenous partnerships to create a safe environment Theme 3: Challenges in implementing Indigenous health curricula

TABLE
Summary of Included Studies (N=11) (continued)

Authors (Year), Country	Title	Objective	Study Design	Discipline	Instructional Strategies	Curriculum Related to Indigenous Populations	Themes Reported in the Included Articles
Owens (2019), Canada ¹³	Tailoring cultural safety training in health care to the local context of Indigenous communities	This article highlights the importance of understanding that Indigenous populations are not homogeneous.	Innovation report	Graduate health professionals	Online training module Community experiences	Cultural safety training program focused on the treatment of type 2 diabetes that is specific to Inuit people and culture.	Theme 1: Digging deeper, beyond bias Theme 2: Increasing community-driven Indigenous partnerships to create a safe environment
Pitama et al (2018), New Zealand ¹⁸	Implementation and impact of Indigenous health curricula: a systematic review	To explore the factors that influence the development of Indigenous health curricula	Systematic review	Medical students, residents, nurses, allied health	Lecture, cultural or rural immersion, video, problem-based learning, case-based	Findings related to Indigenous curriculum reported in the systematic review found that 19 studies were related to cultural protocols and practices. An additional 16 studies looked at disparities and inequities and health status. Lastly, 12 studies examined communication skills and health literacy.	Theme 2: Increasing community-driven Indigenous partnerships to create a safe environment

TABLE
Summary of Included Studies (N=11) (continued)

Authors (Year), Country	Title	Objective	Study Design	Discipline	Instructional Strategies	Curriculum Related to Indigenous Populations	Themes Reported in the Included Articles
Reifler et al (1980), USA ¹⁹	A psychiatry rotation in Alaska as preparation for an academic career	The objective of this commentary was to report lessons learned from resident's psychiatry rotations in rural Alaska.	Commentary	Psychiatry residents	Community experiences	The curriculum included a 6-month rotation, where 3 months were half-time duty at 4 different sites. These sites include private psychiatry clinic, state psychiatry hospital, mental health division at Air Force hospital, and US public health service hospital. Additionally, 6 remote visits of a few days to a week were interspersed throughout the curriculum.	Theme 2: Increasing community-driven Indigenous partnerships to create a safe environment
Silversides (2008), Canada ²⁰	Aboriginal curriculum framework developed	The objective of this special article is to create a more culturally safe environment within medical schools.	CMAJ news article	Medical students, faculty, and residents	Community experiences, lectures	The framework emphasized relationship building with local Indigenous communities to create an inclusive educational environment.	Theme 2: Increasing community-driven Indigenous partnerships to create a safe environment Theme 3: Challenges in implementing Indigenous health curricula

TABLE
Summary of Included Studies (N=11) (continued)

Authors (Year), Country	Title	Objective	Study Design	Discipline	Instructional Strategies	Curriculum Related to Indigenous Populations	Themes Reported in the Included Articles
Sundberg et al (2019), USA ¹⁷	Developing graduate medical education partnerships in American Indian/ Alaska Native communities	Within the health care system there appears to be a lack of providers with the knowledge/heritage of Indigenous populations. This article aims to address underrepresentation and trainees' awareness.	Program evaluation	Residents	Group discussions, lectures	This article laid out a distinctive framework to increase representation and residents' awareness of Indigenous populations. The topics are as follows: Understand health care delivery systems, recognize rural communities' social determinants of health, gain an appreciation for community-driven solutions on Indigenous reservations, and build motivation for a career addressing health inequities in an Indigenous context.	Theme 2: Increasing community- driven Indigenous partnerships to create a safe environment Theme 3: Challenges in implementing Indigenous health curricula

TABLE
Summary of Included Studies (N=11) (continued)

Authors (Year), Country	Title	Objective	Study Design	Discipline	Instructional Strategies	Curriculum Related to Indigenous Populations	Themes Reported in the Included Articles
Thompson (1996), USA ⁶	A curriculum for learning about American Indians and Alaska Natives in psychiatry residency training	The aim of this article was to examine areas where cultural training can be integrated into existing curricula.	CMAJ news article	Psychiatry residents	Lectures, group discussion	The 4-year curriculum for residents is broken down into 4 priorities. Residents in years 1 and 2 are expected to acquire knowledge of basic history related to Indigenous people through factual material and courses. In year 3 residents should understand how to utilize different services, illness prevention, and clinical care of the group. Lastly, in year 4 residents must focus on honing their knowledge, skills, and attitudes through clinical cases involving Indigenous patients.	Theme 1: Digging deeper, beyond bias Theme 2: Increasing community-driven Indigenous partnerships to create a safe environment
Vogel (2018), Canada ^{1,4}	Residency programs grapple with new Indigenous cultural safety training requirements	The goal of the Royal College of Physicians and Surgeons of Canada is to integrate Indigenous health and cultural safety training into all residency programs.	CMAJ news article	Residents	Lectures	This article explored the efficacy of online-based cultural safety training curricula.	Theme 1: Digging deeper, beyond bias Theme 2: Increasing community-driven Indigenous partnerships to create a safe environment Theme 3: Challenges in implementing Indigenous health curricula

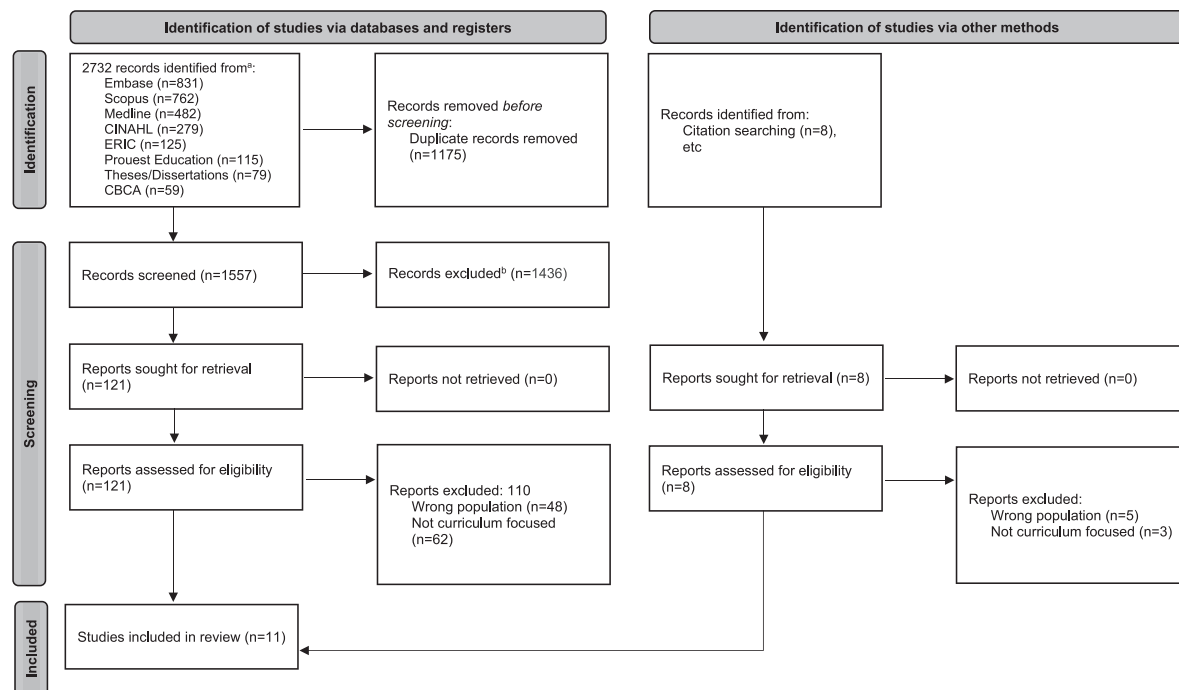


FIGURE
PRISMA 2020 Flow Diagram for New Systematic Reviews Which Included Searches of Databases, Registers, and Other Sources

^a Consider, if feasible to do so, reporting the number of records identified from each database or register searched (rather than the total number across all databases/registers).

^b If automation tools were used, indicate how many records were excluded by a human and how many were excluded by automation tools.

Note: From Page MJ, McKenzie JE, Bossuyt PM, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ*. 2021;372:n71. doi:10.1136/bmj.n71. For more information, visit <http://www.prisma-statement.org/>.

familiarized with the content of the included reports. We used text highlighting to extract salient statements from the reports, which were then coded and placed into data tables. We then reviewed the coding process and coded similar ideas/patterns within the extracted data from the included studies. M.R. and J.N. organized all proposed patterns, which the research team collectively examined and discussed as the themes were identified for the data. All authors reviewed and finalized the ideas emerging from the data analysis. All authors were involved in naming the final themes.

Results

Description of Included Reports

The electronic database search generated 2732 results, and after duplicates were removed, 1557 articles were left for screening. After title and abstract review, 121 articles were selected for full-text review with 11 reports meeting the inclusion criteria (FIGURE). General report characteristics are presented in the TABLE. Most of the articles included in this scoping review were published in the United States (n=6).

Three reports were from Canada, one was from Australia, and one was from New Zealand. We did not impose any restrictions on the design; hence, our included reports consisted of qualitative research (n =2), commentaries (n=1), special articles (n=3), systematic reviews (n=1), innovation reports (n=1), published abstracts (n=1), and program evaluation papers (n=2). Instructional strategies and educational methods are reported in the TABLE. We highlight some of the most common teaching methods used in GME programs while teaching Indigenous curricula. These teaching methods include presentations, group discussions, lectures, videos, workshops, online modules, and community-based experiences. Such teaching methods allow residents to engage in conversations and discussions which often lead to increased critical thinking.⁷ Findings are presented by 3 themes: (1) Misunderstandings and cultural bias toward Indigenous people (2) Increasing community-driven Indigenous partnerships to create a safe environment, and (3) Challenges in implementing Indigenous health curricula.

Misunderstandings and Cultural Bias Toward Indigenous People

Included studies showed that most of the residency programs do not have core Indigenous curricula, nor do they offer any cultural safety training to residents. In the case of residency programs that do have Indigenous curricula, it is normally optional or combined together with global health topics/curricula.^{13,14} Reports in our review also revealed misunderstandings about Indigenous people that continue to impact residency training programs.^{6,14} This included suspicion about Indigenous traditional medicine,¹⁴ stigma associated with Indigenous patients “being irresponsible,” and that all “Indian cultures are ‘dead’ (when in fact many are alive and well).”^{6(p9)}

Five studies in this review reported findings related to biases and misconceptions that residents have toward Indigenous patients and their cultures.^{6,13,16} One report revealed that psychiatry residents may come in with prior misconceptions and attitudes toward Indigenous patients.⁶ Aside from harmful misconceptions and attitudes, a lack of exposure to Indigenous cultures may further impede culturally competent care.^{6,13,15} Owens¹³ pointed out that although many Indigenous cultures have a concept of a medicine wheel, medicine within Inuit culture refers to mind, body, and soul rather than “a continuous interaction of the physical, emotional, mental, and spiritual realities.”^{13(pE846)} One article suggested that while some residents described feelings of discomfort with the incorporation of some Indigenous health issues into the curriculum, many felt the value of learning outweighed the feelings of discomfort.¹⁶ However, exposure to different Indigenous cultures was not the only proposed way to reduce biases. Using evaluation surveys and semi-structured focus groups, 2 articles proposed that exposure to Indigenous curricula played a vital role in improving initial psychosocial inequities, enabling the most disempowered trainees to experience profound growth over time, changing their attitudes toward Indigenous patients and their cultures.^{13,16} In one report it was proposed that teaching residents about introspection, reflection, and examination of their own biases were significant in decreasing bias toward Indigenous care.¹⁴

Increasing Community-Driven Indigenous Partnerships to Create a Safe Environment

Eight reports included in our scoping review stated that building a collaborative and safe environment for residents and Indigenous stakeholders was a key component for developing community-driven graduate Indigenous curricula.^{6,7,15-20}

Three articles recommended that an Indigenous residency curriculum be designed in a manner that fosters transformative learning based on empathy and healing processes rooted in trauma-informed care.¹⁴⁻¹⁶ For example, Fitzpatrick et al introduced 2 courses that were taken by residents from all specialties to stimulate transformative learning based on Indigenous empowerment principles, with the goal of ensuring that graduate health professionals will grow in how they understand themselves, appreciate strengths in others, and recognize trauma.¹⁶ Although several reports placed significant emphasis on the inclusion of traditional healers, elders, and Indigenous leadership for creating an equitable Indigenous curriculum,^{18,19} only one report highlighted the need for the inclusion of more Indigenous faculty members in GME.¹⁴ Two reports showed that curricula based on Indigenous empowerment and leadership resulted in building trusting relationships and promoting open dialogue between learners and Indigenous educators^{13,16} as well as exposing learners to community-led healing practices.^{6,7} Literature reviewed showed that developing partnerships between Indigenous communities and GME reduced disparities, increasing equity in GME and improving training.¹⁴ Community-driven Indigenous partnerships allow residents and fellows to gain firsthand experiences and give them an opportunity to learn from experts in the field.¹⁷

Challenges in Implementing Indigenous Health Curricula

Four articles found that residency programs may struggle with incorporating Indigenous curricula due to barriers interpreting and implementing Indigenous teaching and practice including a lack of tools and knowledge expertise.^{7,14,17,20} Another barrier was the limited time given by institutions to Indigenous communities to come together and discuss among themselves and their communities as well as to decide how, when, and what they can share with their collaborators in order to establish Indigenous curricula.^{4,20} In addition, 3 articles included in our review indicate that in order for seamless incorporation of Indigenous curricula, programs must ensure there is ample funding.^{7,17,21} Vogel¹⁴ argued that although a lecture-based model is a step in the right direction, medical programs should ensure that residents have opportunities to put into practice the skills acquired during their lectures. Lastly, faculty members must not only pledge to implement programs but must also prioritize collaboration with elders, traditional healers, and teachers to design and deliver curricula.¹⁴

Discussion

This scoping review identified 11 reports that focused on Indigenous curricula for GME. Several key findings related to the role of Indigenous involvement, culturally competent care, misconceptions about Indigenous people, and challenges for implementing an Indigenous curriculum. Our review revealed that this was a sparse field of research with limited work done on determining effective approaches to teaching Indigenous health interventions and their outcomes to residents and fellows. Collectively, these findings pointed to evidence gaps in the literature and potential implications for designing inclusive and comprehensive Indigenous curricula. Further research directions are suggested, and recommendations are provided for developing an inclusive Indigenous curriculum.

Skills-based training in Indigenous health in GME is limited and there is a need for programs to address this. Two-thirds of the health sciences programs in Ontario, Canada, had incorporated some elements of Indigenous history and colonization into their curricula.²² However, practical content knowledge and skills-based training were rarely incorporated in the residency curricula.²² We recommend that academic institutions and teaching networks come together to share information and best practices in fostering intercultural understanding, empathy, and mutual respect through effective and practical Indigenous curricula with the goal of providing culturally sensitive and safe care.

Misconceptions about Indigenous peoples and lack of understanding about Indigenous healing practices and traditional medicine were identified as major biases in the included studies. Similarly, existing literature suggests these biases and negative stereotypes contribute to the hidden curriculum, which strengthened the colonial agenda. While some studies have attempted to remedy these misconceptions, many addressed the biases through elective rather than core curricula.^{8,20,22,23} Increasing interprofessional collaboration and integrating community practice models in the existing Indigenous health curriculum is deemed significant. Hence, we recommend that residency programs develop a core curriculum for teaching Indigenous content and increase interprofessional collaboration.

We recommend that more scientific data, both qualitative and quantitative, be collected on how to evaluate the impact of these curricula on residents and the overall effect on care delivery. At present we have found a lack of program evaluation data on the impact, value, and merit of these curricula to learners, their programs, and other stakeholders including Indigenous communities. Without rigorous program

evaluation, it is impossible to know whether these curricula have lasting significance for programs, learners, and patients. We recommend that residency programs incorporate more structured assessments and program evaluations to regularly measure the impact of Indigenous curricula on all stakeholders.

Funding remains a large concern for medical schools and their community partners who frequently rely on unstable grant funding.²¹ Existing literature suggests that there was a lack of targeted funds and resources which led many programs to rely on the goodwill and in-kind contributions from Indigenous community members.^{22,24} Limited monetary resources also prevented residents and fellows from spending time in Indigenous communities to gain hands-on knowledge and participate in experiential learning.²⁵ Therefore, we recommend that a stable source of support and funding be allocated at the institutional level for residents to engage in community-based educational activities in partnership with the community, and for Indigenous community partners to participate in developing inclusive Indigenous curricula in GME.

Strengths and Limitations

The final optional step of Arksey and O'Malley's methodology is consultation with consumers and involving stakeholders. We consulted with local Indigenous leadership within our faculty from the stage of theme development onward but we did not consult broader Indigenous stakeholders in the community. While we used rigorous methods to conduct our scoping review, there were some limitations. Our inclusion/exclusion criteria were clear, and we conducted multiple independent reviews of the article selection process. Our search strategy may have unintentionally omitted some relevant reports because we imposed limits on language by only including English language reports. Cultural and intercultural competency curricula that included Indigenous health may have been missed if Indigenous health was only mentioned in the full text of the article. We also restricted our search to residency/GME, and interprofessional collaborations that included more than just residents may have been missed in our search strategy. Additionally, in accordance with the scoping review methodology protocol, we were not required to conduct a quality assessment for the included articles. Hence, this may reduce the generalizability of the results from this scoping review.

Conclusions

Findings from our review related to the role of Indigenous involvement, culturally competent care,

common misconceptions about Indigenous peoples, as well as challenges and barriers to implementing an Indigenous curriculum. A collaborative approach to creating core Indigenous curricula involving community stakeholders with training in the community is a viable path forward. But comprehensive program evaluation to assess the effectiveness of these Indigenous curricula and a source of stable funding is needed, as well as further research focusing on effective Indigenous curricula for residents.

References

1. Truth and Reconciliation Commission of Canada. Truth and Reconciliation Commission of Canada: Interim Report. Accessed November 7, 2022. https://www.bishop-accountability.org/reports/TRC_Canada/TRC_Canada_Interim_Report_2012_02_24_Original.pdf
2. Larson B, Herx L, Williamson T, Crowshoe L. Beyond the barriers: family medicine residents' attitudes towards providing aboriginal health care. *Med Educ*. 2011;45(4):400-406. doi:10.1111/j.1365-2923.2010.03892.x
3. Ewen S, Mazel O, Knoche D. Exposing the hidden curriculum influencing medical education on the health of Indigenous people in Australia and New Zealand: the role of the critical reflection tool. *Acad Med*. 2012;87(2):200-205. doi:10.1097/ACM.0b013e31823fd777
4. Paul D, Ewen SC, Jones R. Cultural competence in medical education: aligning the formal, informal and hidden curricula. *Adv Health Sci Educ Theory Pract*. 2014;19(5):751-758. doi:10.1007/s10459-014-9497-5
5. Anderson IPS, Ewen SC, Knoche DA. Indigenous medical workforce development: current status and future directions. *Med J Aust*. 2009;190(10):580-581. doi:10.5694/j.1326-5377.2009.tb02570.x
6. Thompson JW. A curriculum for learning about American Indians and Alaska Natives in psychiatry residency training. *Acad Psychiatry*. 1996;20(1):5-14. doi:10.1007/BF03341956
7. Kesler DO, Hopkins LO, Torres E, Prasad A. Assimilating traditional healing into preventive medicine residency curriculum. *Am J Prev Med*. 2015;49(suppl 5):263-269. doi:10.1016/j.amepre.2015.07.007
8. Gaylord SA, Mann JD. Rationales for CAM education in health professions training programs. *Acad Med*. 2007;82(10):927-933. doi:10.1097/ACM.0b013e31814a5b43
9. Arksey H, O'Malley L. Scoping studies: towards a methodological framework. *Int J Soc Res Methodol*. 2005;8(1):19-32. doi:10.1080/1364557032000119616
10. Tricco AC, Lillie E, Zarin W, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): checklist and explanation. *Ann Intern Med*. 2018;169(7):467-473. doi:10.7326/M18-0850
11. Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol*. 2006;3(2):77-101. doi:10.1191/1478088706qp063o
12. McCarthy T, Hoy D. *Critical Theory*. 1st ed. Basil Blackwell; 1994.
13. Owens B. Tailoring cultural safety training in health care to the local context of Indigenous communities. *CMAJ*. 2019;191(30):e845-e846. doi:10.1503/cmaj.1095780
14. Vogel L. Residency programs grapple with new Indigenous cultural safety training requirements. *CMAJ*. 2018;190(25):e778-e779. doi:10.1503/cmaj.109-5616
15. Doty BJ, Pastorino R. Cultural competency training in a new-start rural/frontier family practice residency: a cultural immersion integrated model. *J Rural Health*. 2000;16:278-279. doi:10.1111/j.1748-0361.2000.tb00473.x
16. Fitzpatrick SA, Haswell MR, Williams MM, et al. Learning about aboriginal health and wellbeing at the postgraduate level: novel application of the growth and empowerment measure. *Rural Remote Health*. 2019;19(2):4708. doi:10.22605/RRH4708
17. Sundberg MA, Charge DPL, Owen MJ, et al. Developing graduate medical education partnerships in American Indian/Alaska Native communities. *J Grad Med Educ*. 2019;11(6):624-628. doi:10.4300/JGME-D-19-00078.1
18. Pitama SG, Palmer SC, Huria T, Lacey C, Wilkinson T. Implementation and impact of Indigenous health curricula: a systematic review. *Med Educ*. 2018;52(9):898-909. doi:10.1111/medu.13613
19. Reifler B, Bokan J, Katon W, Dunn C, Kraus R. A psychiatry rotation in Alaska as preparation for an academic career. *J Med Educ*. 1980;55(10):880-882. doi:10.1097/00001888-198010000-00013
20. Silversides A. Aboriginal curriculum framework developed. *CMAJ*. 2008;178(13):1650. doi:10.1503/cmaj.080803
21. Cappa A, Stoneking L, Dreifuss B. Better preparing emergency medicine physician trainees for global and rural practice settings: a longitudinal component of university of Arizona's south campus emergency medicine graduate medical education curriculum. *Ann Glob Health*. 2016;82(3):351. doi:10.1016/j.aogh.2016.04.058
22. Shah CP, Reeves A. The aboriginal cultural safety initiative: an innovative health sciences curriculum in Ontario colleges and universities. *Int J Indig Health*. 2015;10(2):117-131. doi:10.18357/ijih.102201514388
23. Hudson GL, Maar M. Faculty analysis of distributed medical education in northern Canadian Aboriginal

- communities. *Rural Remote Health*. 2014;14(3):2664. doi:10.22605/RRH2664
24. Sinnott MJ, Wittmann B. An introduction to Indigenous health and culture: the first tier of the three tiered plan. *Aust J Rural Health*. 2001;9(3):116-120. doi:10.1046/j.1440-1584.2001.00295.x
25. Meyer L, Pulver LRJ, Fitzpatrick S, Haswell MR. Scenario planning in Indigenous health. *Focus Health Prof Educ*. 2011;13(1):65-67.



All authors are with the University of Alberta, Edmonton, Alberta, Canada. **Marghalara Rashid, PhD**, is a Scientist in Health Professions Education, Department of Pediatrics; **Julie Nguyen, MA**, is a Research Assistant, Department of Pediatrics; **Jessica L.**

Foulds, MD, is an Assistant Professor and Program Director, Department of Pediatrics; **Liz Dennett, MLIS**, is a Librarian, Scott Health Sciences Library; **Nicole Cardinal, MD**, is an Assistant Professor, Post Graduate Medical Education, and Clinical Lead for Education, Indigenous Health Initiatives, Faculty of Medicine and Dentistry; and **Sarah E. Forgie, MD, MEd**, is a Professor and Chair, Department of Paediatrics, Faculty of Medicine and Dentistry.

Funding: The authors report no external funding source for this study.

Conflict of interest: The authors declare they have no competing interests.

Corresponding author: Sarah E. Forgie, MD, MEd, University of Alberta, Edmonton, Alberta, Canada, sforgie@ualberta.ca

Received February 22, 2022; revisions received May 20, 2022, and October 27, 2022; accepted October 31, 2022.