Indigenous oral health equity: The path forward

Joan R Pelletier*, MHS, BScDH; **Michelle Monkman**§, MN, BN, RN; **Jacqueline M. Limoges**‡**,** PhD, RN

*Clinical dental hygienist, Winnipeg, Manitoba, Canada

§Vice President, Health Programs and Services, Southern Chiefs' Organization, Winnipeg, Manitoba, Canada

‡Associate Professor, Athabasca University and Chair, Ontario Cancer Research Ethics Board, Toronto, Ontario, Canada

Corresponding author: Joan R Pelletier, **MHS, BScDH**

Email address: Joanpelletier@hotmail.com

The term Indigenous is an umbrella term to describe First Nations, Inuit and Métis People/Nations/Communities in Canada, each of which are culturally diverse and distinct. The term Indigenous will be used throughout the paper unless the literature cited is specific to one of these Nations. All efforts have been made to ensure the perspectives of each of these diverse and distinct Peoples/Nations/Communities were captured within this manuscript.

ABSTRACT

Objective: This narrative review explores current research on Indigenous oral health equity (OHE) and proposes a framework and strategies to guide Registered Dental Hygienists (RDHs) in addressing OHE and health disparities experienced by Indigenous peoples. **Methods:** An electronic literature search was performed using PubMed and Google Scholar. Full-text, peer reviewed articles, written in English, and published in Canada within the last 10 years were selected for the review. The relevant gray literature was also included to ensure Indigenous perspectives relating to oral health (OH) inequity in Canada were considered and to increase the utility of the proposed strategies. Included articles were analyzed for themes. **Results:** Ten articles and 6 publications from the gray literature met the inclusion criteria. **Discussion:** The framework has four elements: policy driven changes to dental hygiene regulation, relationship building and allyship, workforce development, and research and education. Strategies within the framework can assist RDHs to adapt their approaches to oral healthcare (OHC) with Indigenous peoples and promote OHE by providing inclusive and culturally safer OHC. **Conclusion:** Indigenous peoples throughout Canada have the right to safe OHC, and RDHs can use this framework and these recommendations to promote Indigenous OHE.

Keywords: Indigenous peoples, health equity, oral health equity, dental hygiene, cultural safety, primary care

CDHA Research Agenda category: access to care and unmet needs

BACKGROUND

Interrupting historical and ongoing colonial structures that perpetuate health disparities such as lower life expectancy, higher infant mortality, diabetes and cancer rates, and poorer oral health (OH) for Indigenous Peoples in Canada requires collective action by all healthcare providers (1–7). Registered Dental Hygienists (RDHs) are ideally situated within the health system to advance oral health equity (OHE) as they are cost-effective OH professionals that focus on OH promotion and disease prevention (8). However, policies and concerted strategies are needed to advance this idea. Given the importance of OH to physical and psychosocial wellbeing and the longstanding inequalities experienced by Indigenous peoples related to accessing oral health care (OHC) and related health outcomes, accelerating the integration of these strategies is crucial. Strategies that address structural barriers to OH services, improve clinical interventions (9,10) and prepare the RDH workforce to deliver culturally safer care can promote Indigenous OHE (11–14). Therefore, this review was undertaken to develop a framework and recommendations for RDHs that could optimize their scope of practice, influence practices across the continuum of OHC and to promote health and address health inequities. In alignment with the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), Article 23, Indigenous peoples' right to self-determination of health initiatives and the Truth and Reconciliation's Commission of Canada's (TRC) Calls to Action, implementation of any strategies requires consultation with Indigenous peoples and the communities for whom these strategies will involve (6,15). As such, this framework and recommendations provide a starting point for action.

The World Health Organization (WHO) defines OH as "the state of the mouth, teeth and orofacial structures that enables individuals to perform essential functions, such as eating, breathing and speaking, and encompasses psychosocial dimensions, such as self-confidence, well-being and the ability to socialize and work without pain, discomfort and embarrassment" (16 p.1). OHE refers to the right of every individual to have access to safe OHC services to achieve the healthiest mouth possible, free from pain and disease (17). In the UNDRIP, Article 24 affirms that health equity is a right for all Indigenous peoples (15) and is reaffirmed by the Calls to Action made by the TRC (6).

Recognition that some people must overcome more obstacles and have fewer resources when trying to be healthy must underpin any initiative aimed at rectifying gaps in health (5,17). As such, prior to embarking on any strategy with Indigenous peoples, it is important to acknowledge the cruel and inadequate dental care that was provided to Indigenous peoples. This historical fact continues to impact survivors and their descendants, inducing patterns of avoidance and fear which perpetuate OH inequities (9–14,18,19). Achieving OHE for Indigenous peoples in Canada requires improvements in social situations with a focus on self-determination, Indigenization of research and education and social justice (1,3,16,20–22).

The intergenerational impact of colonialism and the ongoing legacy of residential schools is a significant social determinant of health (SDoH) affecting Indigenous peoples (5,23). This should be considered in all encounters with Indigenous peoples. Further, healthcare providers must also recognize that each Nation defined within the term Indigenous will experience the variable intricacies of historical and ongoing colonialism differently. For example, the Métis Peoples of Canada have traditionally been excluded from accessing federal health benefits (24) while the extraordinary inflated cost of living in the high north makes it virtually impossible for

Inuit Peoples residing in that region to consistently access nutritious foods such as fruits and vegetables (3). Therefore, recognizing the social and structural determinants of health and rectifying the damages created by both historical and contemporary colonial processes and policies is crucial to any equity strategy(6,21).

Worldwide, the burden of oral disease weighs heavily on Indigenous populations (16). There are links between OH inequities experienced by Indigenous peoples and the growing gaps in their life expectancy when compared to all other Canadians (25–27). First Nations' cultures recognizes four phases of life: child, youth, adult and elder and that oral health impacts individuals in each of these phases of life. For example, the ability to eat, speak, and the level of self-confidence and joy are impacted by one's OH (1,28). In Canada, Indigenous children have rates of early childhood caries as high as 90% compared to the national average rate of less than 5% (29,30). These OH inequities present early in life and impact Indigenous Peoples health throughout their entire lives (16). This situation can potentially exacerbate existing health disparities through intersections with nutritional deficits, decreased quality of life and increased isolation in the Elderly phase of life (1,31).

There are more than 30,000 RDHs in Canada working in private practice, public health, hospitals, long term care, education, research and dental industries (8). All of these RDHs must have received education from accredited programs and be licensed by their provincial regulatory body (32). These provincial regulatory bodies protect the public by ensuring that all RDHs meet the practice standards for safe and competent OHC, and provide practice support through education and policy. Recognizing OH inequity, some provincial regulatory bodies have mandated health equity training for RDHs, yet the standardization of these programs and the efficacy of the training have not been adequately studied. Additionally, the clinical integration of

this education to ensure sustainable knowledge transfer and practice change requires further attention.

The Government of Canada invests over $200 million annually in OHC for First Nations and Inuit Peoples through the Non-Insured Health Benefit Program (NHIB) and the Children's Oral Health Initiative (COHI) (9). Yet the impact on OH improvement is questionable and their strategic plan to reduce OH inequities has yet to be finalized (9). To ensure that these resources achieve their desired impact, development of the workforce and strategies that specifically address OHE must be developed. OHE can be effectively guided through a framework that acknowledges colonialism and structural determinants of health. Additionally, deficit-based discourses that dominate health research and equity strategies (7,14,33) must be countered and replaced with data from Indigenous research methods and discourses on successful implementation of services that promote culturally safe healthcare, including OH programming (1,3,11,34).

METHODS

An electronic search of the literature was conducted using PubMed and Google Scholar to locate articles that would provide evidence to inform the development of a framework and recommendations that could be used by RDHs to promote OHE. The following terms were used to search for relevant literature: Indigenous, Aboriginal, First Nations, dental hygiene, nursing, public health, primary care, oral health, reconciliation, Calls to Action, health equity, oral health equity and cultural safety. Reference lists were scanned to find additional relevant articles. For this narrative review, all types of journal articles were reviewed, and only full-text, peer-reviewed literature was included. To keep the focus on current Canadian health equity

approaches and shifts in research methods with Indigenous groups, research performed outside of Canada and prior to 2015 was excluded from the results. Articles were also excluded if they discussed health equity in built environments, health equity economics and did not relate to our review topic. Additionally, we included grey literature to add breadth to our writing and the inclusion of Indigenous perspectives. A narrative review was chosen for its practical application to health education and research. Narrative review methods were chosen as they permit the inclusion of a wide variety of studies and are suitable for areas such as OHE that is under researched. This method permits a range of interpretations and critiques to yield a summary and thus our framework(35).

RESULTS

A total of thirty-five articles were found and ten (11,21,36–43)were included based on their relevance to oral health settings, such as primary and public health setting and their introduction of a health equity framework or model. There is a paucity of Canadian research specific to Indigenous OHE, therefore OHE literature that considered the general population was also included. Grey literature (1,3,5,9,22,44) from Canadian sources was included. All three authors were involved in synthesizing the 10 included articles and the grey literature for recurrent structures and processes that address OHE. Through discussion and an iterative process, we identified four themes to the literature that became the four elements of a framework on strategies that can be implemented by RDHs to promote OHE (see figure 1).

DISCUSSION

Improving Indigenous OH requires an understanding of the structures, social processes and root causes associated with health disparities in OH. From synthesizing the 10 included articles and the grey literature for recurrent structures and processes that address OHE, we identified four elements that were used to create a framework for strategies that can be implemented by RDHs to promote OHE. The four elements to the framework are: 1) Policy driven changes to dental hygiene regulation 2) Relationship building and allyship, 3) Workforce development, 4) OH research. Specific strategies associated with each of the elements of the framework are provided to accelerate health system transformation and promote OHE. Please see Figure 1. This discussion supports the important work outlined by the Canadian Dental Hygienists Association related to advocacy for policy to address health equity (45) and provides pragmatic strategies that can be implemented by individual RDHs and those leading RDH education, health systems and professional bodies.

Policy driven changes to dental hygiene regulation

The causes of inequities in OH for Indigenous peoples are complex and require policy that recognizes the historical and ongoing structural determinants of health and that promotes health system transformation (5,37,38,40,46). Improving structural and systemic issues can increase access to safe and effective oral healthcare. Dental hygiene regulatory and professional colleges and policymakers must ensure that their strategic plans and policies include OHE and that actions to improve OHE are informed by Indigenous peoples (40). Explicitly naming health equity as a goal in strategic plans and evaluating equity outcomes must be a priority (37).

Healthcare workers can take it upon themselves to champion the implementation of health equity policy initiatives within their organization (37). Being an advocate for improvements in health equity can induce a wave of change within an organization and can

prompt those in formal leadership to prioritize health equity initiatives (37,43). For example, RDH's can encourage their workplace settings to find solutions to allow for direct billing to Non-Insured Health Benefits (NIHB) and to participate in the Canadian Dental Care Plan to ensure dental health coverage for all eligible individuals.

The TRC (6) is clear that the truth must be told before reconciliation can be achieved. RDH's and their regulatory bodies can advocate and collaborate with other oral health professionals, such as the Canadian Dental Association, to co-develop a position statement that acknowledges and apologizes to Indigenous peoples for inadequate and cruel oral health practices. This action will establish the groundwork required for new pathways, demonstrates humility and a commitment to change. The British Columbia College of Oral Health Professionals has set an example for other oral health regulators in Canada by creating a joint statement of apology and commitment to action as they work toward reconciliation and healing (47).

To align with Call to Action #23iii that calls upon all levels of government to provide cultural competency training for all health care professionals (6) all dental hygiene regulatory colleges should have a policy that ensures RDHs take Indigenous cultural safety training. The effectiveness of this training should also be evaluated (6). Calls to provide training to RDHs related to cultural competence pre-date the TRC (48) and were reinforced again in 2018 (49). Approaches to health equity training that promote cultural safety rather than cultural competency have been challenged, and researchers recommend cultural safety that critiques the implicit power structures present on both individual and organizational levels (12). Cultural competence involves having knowledge, skills and attitudes to reduce the number of assumptions and biases to effectively and respectfully work with people from diverse backgrounds(50) but fails to

address structural barriers that result in differential access to care. Cultural safety on the other hand is an outcome of care and the recipient of care is the sole evaluator as to whether cultural safety was achieved. Cultural safety is achieved by the application of relevant approaches, including equity-orientated strategies, in therapeutic interactions with Indigenous peoples (51).

Given the persistent equity issues with Indigenous peoples, there is an urgent need for policy and action by RDHs to systematically implement cultural safety education for students and practicing RDHs. A scan of policies by dental hygiene regulatory colleges across Canada shows varying degrees of cultural safety requirements for registrants. Many of the regulatory colleges are in the early stages of Indigenous cultural safety training, with Manitoba and British Columbia leading this movement. RDHs wishing to promote cultural safety training in their workplace can draw on their professional code of ethics to gain traction and support from administrators. The code which states "Dental Hygienists provide services to clients in a caring manner with respect for their individual needs, values, culture, safety and life circumstances, and in recognition of their inherent dignity" (52) can be leveraged. Effective Indigenous cultural safety training will strengthen an RDH's ability to advocate by building awareness and spur the transformative change required to advance Indigenous OHE. "A cohesive action plan is needed for the profession to fully embrace their role" (39 p.1).

Relationship building and allyship

Integrating Indigenous ways of knowing with self-determination and culturally safer care can guide relationship building and allyship. Allyship refers to non-Indigenous peoples recognizing their privileges, taking intentional steps towards educating themselves and self-reflecting and using strategies that support health equity in their organizations (21,37). Non-

Indigenous RDHs can become allies in their OH practice settings and strive to create an inclusive environment for Indigenous peoples accessing care (39). RDHs must be aware of privileges, professional power and biases that shape their perceptions about Indigenous peoples and be mindful of cognitive processes that influence therapeutic encounters which can inadvertently add to the existing barriers in care.

Recognizing and acknowledging that historically, OHC for Indigenous peoples was inadequate and cruel is a crucial step to building positive relationships (18). Dental extractions were performed without proper instruments and with no regard for pain management. For the survivors and their descendants, this type of treatment has led to physical and psychological trauma and has contributed to fear and the avoidance of any form of oral healthcare (18). Systemic racism that sustains health inequities must be dismantled, and there must be an ideological shift from a biomedical model towards one that acts on the SDoH (3,5,24,38). Oral healthcare that addresses the harms of systemic and structural racism and colonial processes will help improve OHE for Indigenous peoples (6). RDHs implementing health equity initiatives within their practice settings must have the courage to challenge organizational norms (38). They can critically appraise their actions and practice reflexivity to ensure that their good intentions have their desired impact (20,41,46).

Improving OHE also requires trust to form (43). Relationships that are built through integrative community-based primary care enhance the overall healthcare within the community and can assist in building trust. An example of efforts to implement these collaborations exist in Cree communities in Northern Quebec, where wellness centres integrate general medicine, homecare, OHC and social services under one roof (53). RDHs in these programs provide OHC in the wellness centre and at the community's schools and daycares (53).

Concrete strategies such as those proposed by the Inuit Tapiriit Kanatami (44)can be used by RDHs. For example, including the family in OH education and prevention and considering Traditional food sources (e.g. wild/game meats, fish, etc.) can help build connections between healthy food choices and OH improvement. Reasons for OH challenges and the content of health education must be considered through trusting relationships between RDHs and Indigenous peoples, and with consideration for the intergenerational trauma associated with impacts from colonization, including residential schools. Relationship building and trust are enhanced by consistently seeing the same OHC provider, and by improving in-community OHC availability, instead of traveling to see a provider from another community (43). To support interconnectedness, RDH should build relationships that extend beyond the individual seeking care. They should recognize that community members are not mere recipients of OH services, but rather integral contributors to the promotion of OH and wellness in their community. Additionally, RDHs can ensure that their treatment plans are individually tailored and based on collaborative efforts with the person accessing care, to meet the needs of the individual, families, and the community they work in (43,46).

The trust that improves OHE does not grow quickly and must be built on many levels. Due to decades of unethical treatment and colonization, Indigenous peoples may not trust OHC providers in their community, and a progression towards understanding and relationship building is one step towards improving OHE (43). The Educating for Equity (E4E) framework gives guidelines for deeper engagement and relationship building, improving past encounters and ultimately improving health equity and the safety that a person feels when seeking medical care (39). E4E framework emphasizes that health care providers need to understand the context in which Indigenous peoples experience their health and/or illness. (43,46)

Interprofessional collaboration, where doctors, nurses, RDHs and dentists work together with communities to make OHC more accessible can foster productive and sustainable strategies. These types of interprofessional collaborations can address gaps in services and access given the remote and rural locations of many Indigenous communities (40,44). All health services and programs delivered in Indigenous communities should be evaluated for the impact on the community (9,19,20,43). They should be assessed for the level of cultural relevance and critical reflection needs to occur to ensure that inequities are not perpetuated (46). Additionally, program evaluations must include indicators that measure cultural safety and make efforts to ensure that dominant voices are not exclusively heard (46).

Workforce development

Increasing the number of Indigenous healthcare professionals is a critical component of Call to Action 23i and 23 ii proposed by the TRC (6,24,41,44). Supporting Indigenous peoples to become RDHs can help diversify the workforce and ensure that there are role models and clinicians who can intuitively provide culturally safe care. Indigenous RDHs can help build relationships when they are part of the community rather than when they are part of a transient or contingent workforce. There is also a financial burden that comes from not having RDHs reside in Indigenous communities. The NIHB program spends over $400 million annually on medical transportation to facilitate access to healthcare services (54). RDHs can help to mitigate some of these costs by providing early preventive OH services in rural, remote and isolated communities. Ultimately, these situations improve continuity of care, help build relationships and trust, and have the potential to improve Indigenous OHE.

Within their workplace organizations, RDH's can draw attention to the TRC's (6) Call to Action 92 which offers the corporate sector specific strategies to promote reconciliation with Indigenous peoples. The case study by Monkman & Limoges (41) demonstrates how organizational integration of Call to Action 92 supported the recruitment and retention of Indigenous nurses and is relevant to OHC settings. Implementing Call to Action 92 created conditions that strengthened the ability of the organization to advance Indigenous health equity and promote reconciliation (41). Healthcare settings often function as businesses, therefore, Call to Action 92 is applicable to the oral healthcare sector including those that are private and publicly funded. Enacting reconciliation in all sectors of healthcare is a collective responsibility among all Canadian healthcare professionals and this case study provides several strategies that can enhance recruitment and retention of RDHs.

Oral health research and education

Health research that integrates Indigenous ways of knowing and knowledge can help improve health equity (5,41,46). Historically, researchers used Indigenous peoples as test subjects and performed unethical research on community members which creates mistrust in Western-informed science and medicine for many Indigenous peoples (55). Health research needs to be decolonized, unbiased and reflect a desire for community improvement. Indigenous oral health research should include Indigenous people in the study design and recognize power differences between researchers and research participants (21,38,42). This type of research can provide the evidence base to inform education and clinical practice guidelines. Furthermore, Indigenous research methods should be included in introductory research courses in the dental hygiene curriculum.

Space must be created for Indigenous knowledge and Traditional healing approaches in clinical and healthcare provider education (21). Call to Action 22 and 24 reflect this view (6). University education programs that emphasize OHE can prepare RDHs to examine long-standing OH policies and procedures that retraumatize clients or contribute to OH inequities. This education can provide RDHs with the necessary skills to interrupt these practices and to deliver culturally safer care that promotes OHE. Curricula that focus on the SDoH and equity can assist RDHs to challenge biases and assumptions to consider why Indigenous people may not seek out OH services or why they may have trouble attending appointments at their scheduled time (46). RDHs should be taught to reflect on differences, respect diversity, recognize structural barriers, and attend to power differentials to help address the historical and ongoing implicit and explicit racism that perpetuates these health inequities (41). Education can assist RDHs to learn how to balance competing priorities regarding clinical efficiency (production and staying on time) and attention to health equity (37).

Downey's model (21) and the Educating for Equity Care Framework (E4E Care) (39) provide a structure for RDH education and clinical care through attention to self-determination, consideration of Traditional healing, interconnectedness and balance. To advance OHE, universities providing OH education can decolonize their curriculum to better attract and retain Indigenous learners. Inviting Indigenous peoples to take the lead on Indigenizing health education helps to create an inclusive learning environment for Indigenous students and helps the students to feel a sense of belonging, especially if they are far away from their homes. Finally, universities should consider offering courses using alternate delivery formats including synchronous and asynchronous online learning combined with in-person learning as a methods to increase access (41).

Limitations

There were few Canadian studies specifically on RDHs and OHE. OH research specifically related to dental hygiene is very limited. This may be due to the slow progression toward seeing dental hygienists as autonomous OH professionals versus OH auxiliaries (56). Additionally, the terms Métis and Inuit were not used in the search term which may have limited the scope of the review. Additionally, it is possible that narrative methods are susceptible to the perspectives of the review team. Therefore, it is possible that our interpretation of the literature and creation of the framework reflect the unique perspectives of the writing team.

CONCLUSION

Prior to implementing any of these strategies for Indigenous OHE, the first step is to consult with Indigenous peoples and communities. This will ensure that their perspectives and needs are heard, their priorities are recognized and that distinctions-based approaches in healthcare delivery are implemented. Improvements in OHE are essential and just, and Indigenous peoples throughout Canada have the right to receive safe OHC. RDHs are ideally positioned to contribute to these goals. This review highlighted a framework with four elements and concrete actions that can be taken by RDHs to positively impact OHE. RDHs in practice, administration, education and research can use the framework and strategies to engage with Indigenous communities to help address health gaps and create new pathways for improving Indigenous OHE.

This review also highlights the urgent need for further research on Indigenous OHE in areas such as ways to increase the number of Indigenous RDHs, evaluation of the effectiveness of cultural safety training and strategies that integrate Traditional approaches in oral health

education and practice. Using Indigenous research methods can generate the evidence-base needed to transform education, practice and policy that supports OHE

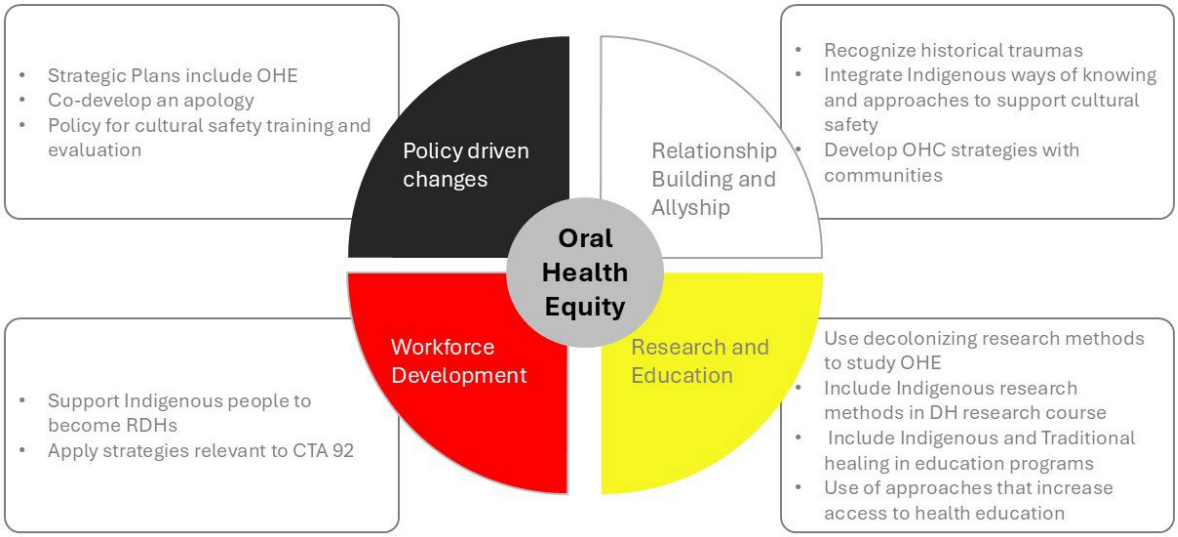
Author Information

The first author is a First Nations woman who is the daughter of a Sixties Scoop Survivor and has been a registered dental hygienist since 2002. The author has spent her career serving Indigenous peoples in both private and public dental clinics in Winnipeg, Manitoba. Through her graduate studies and onward she strives to increase her knowledge of Indigenous ways of knowing and being, and work to uncover some of the stories that were stripped from her family.

The second is a First Nations woman from Kinosao Sipi Cree Nation and has been a Registered Nurse since 2004. Michelle has spent her career supporting the health of Indigenous populations in both First Nations communities on a national scale and in urban healthcare systems. Michelle is currently in the role of Vice President of Health Services and Programs with the Southern Chiefs' Organization and is helping to drive transformative change in First Nations Health through the creation of the Southern First Nations Health Authority.

The third author is an academic ally who provided guidance in writing this paper.

Figure 1



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