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Original qualitative research

Children's Oral Health Initiative: workers' perspectives on its impact in First Nations communities

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Abstract

Introduction: Since 2004, the Children's Oral Health Initiative (COHI) has been working in many First Nations and Inuit communities in Canada to address oral health disparities, specifically early childhood caries (ECC). The COHI community-based approach improves early childhood oral health (ECOH) by balancing prevention with minimally invasive dentistry. The goal is to reduce the burden of oral disease, mainly by minimizing the need for surgery. We investigated program success in First Nations communities in the province of Manitoba, from the perspective of COHI staff.

Methods: First Nations community-based dental therapists and dental worker aides participated in three focus groups and an in-depth semistructured interview. The collected data were thematically analyzed.

Results: Data from 22 participants yielded converging and practitioner-specific themes. Participants reported that dental therapists and dental worker aides provide access to basic oral care in their communities including oral health assessments, teeth cleaning, fluoride varnish applications and sealants. The participants agreed that education, information sharing and culturally appropriate parental engagement are crucial for continuous support and capacity building in the community programs. Low enrolment, difficulty accessing homes and getting consent, limited human resources as well as lack of educational opportunities for dental worker aides were identified challenges.

Conclusion: Overall, the participants reported that the COHI program positively contributes to ECOH in First Nations communities. However, increased community-based training for dental workers, community awareness about the program, and engagement of parents to facilitate culturally appropriate programming and consent processes are critical to improving program outcomes.

Highlights

- The Children's Oral Health Initiative (COHI) program is contributing to the promotion of early childhood oral health in Manitoba First Nations communities.
- COHI workers network with existing community programs and provide dental services, preventive oral health education and care through home and school visits.
- Difficulty accessing homes and getting consent, poor housing conditions, limited resources and inadequate training of dental worker aides are barriers to providing effective preventive oral health care.
- Increased community awareness, participation and support of workers are crucial to the effectiveness of the COHI program.
- Access to timely treatment of early childhood caries and increased and sustained oral health through COHI may help reduce the incidence or severity of caries.

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Introduction

The Children's Oral Health Initiative (COHI) began as a community-based intervention in 2004. Sponsored by the federal government, COHI was implemented nationally by the First Nations and Inuit Health Branch (FNIHB) of Indigenous Services Canada in many First Nations and Inuit communities to promote early childhood oral health (ECOH) and prevent early childhood caries (ECC). This population health program was established to address the oral health inequities and disparities affecting Indigenous Peoples in Canada.[1,2] ECC in First Nations and Inuit children often progresses to severe early childhood caries (S-ECC).[3,4] COHI is directed towards children aged 0 to 7 years, their caregivers and pregnant women. Interventions include preventive and non-surgical care in community-based settings.[5]

As a community-based initiative, COHI emphasizes community ownership, with the health service administrations of participating communities hiring and supporting dental worker aides who deliver services within the community. This approach is in keeping with First Nations' self-governance and self-determination goals in health care[6,7] and recommendations of the United Nations Declaration on the Rights of Indigenous Peoples.[8]

The First Nations and Inuit Health Branch (FNIHB) of Indigenous Services Canada is responsible for providing the resources to support the implementation of COHI in communities in most Canadian provinces, including Manitoba.[9] COHI workers, that is, dental hygienists, therapists and aides, are hired through First Nations organizations or First Nations bands in those communities that have assumed responsibility for managing their health services; FNIHB operates COHI in other First Nations and Inuit communities.

COHI dental worker aides act as the community members' link to oral health care; they liaise and network with individuals and programs, raise oral health awareness and provide oral health education, collaborate with and schedule appointments with dental therapists and dental hygienists, and conduct general health promotion and disease prevention activities such as applying fluoride varnish.[5]

Previous evaluations of the COHI program targeted parents and caregivers with children in the program to assess their perspectives on the program's effectiveness in increasing access to preventive dental services.[10] The long-term effect of the services of COHI dental worker aides on access to the program's preventive dental services was also measured.[11] These studies reported that the program successfully increased access to oral health care.[10,11] The parents and caregivers who participated in one of these studies suggested that a community-based oral health prevention strategy had had a beneficial effect on the oral health knowledge and behaviours of the entire community.[10] Mathu-Muju et al.[11] also found that dental worker aides promoted enrolment and facilitated access to preventive dental services, especially where the program had been uninterrupted and consistently implemented over several years.

Until now, COHI workers' perspectives on their services as dental therapists, hygienists and aides have not been explored. In this current study, our aim was to evaluate the success of the COHI program in Manitoba First Nations communities through the observations and experiences of community-based COHI staff. The findings could inform decision-making regarding continuation, modifications and expansion of COHI to more First Nations and Inuit communities. Our overall objectives were to explore COHI worker's attitudes towards and experiences with the program, and to determine their perspectives on the impact the program has on First Nations and Inuit children's dental health, including what makes COHI successful and what the challenges are in delivering COHI.

Methods

Ethics approval

Ethics approval for the study was obtained from University of Manitoba Human Research Ethics Board (HS19539 - H2016: 096) and the Health Information and Research Governance Committee (HIRGC) at the First Nations Health and Social Secretariat of Manitoba (FNHSSM).

Study design and participant selection

This qualitative study consisted of one key informant in-depth interview and three separate, but consecutive, focus groups with COHI workers. We used purposive (criterion) sampling to select information-rich cases. FNIHB or individual First Nations organizations or bands in Manitoba employed all the COHI workers eligible to participate in this study. FNIHB helped the research team with purposive sampling and direct referrals of participants. This sampling method was deemed appropriate as FNIHB had an existing relationship with all the prospective participants.

In December 2019, the research team invited community-based COHI workers employed in Manitoba to participate in the focus groups in Winnipeg, Manitoba. We used grounded theory methodology to facilitate understanding of participants' experiences with the COHI program and determine their perspectives on the effect of the initiative on young First Nations and Inuit children's dental health. In this process, data were collected through interviews and preliminary analyses concurrently, with emerging themes applied to guide the next round of data collection sessions. Such constant comparisons are a key element in the grounded theory approach. Concepts and themes were constructed from the experiences and perspectives shared by participants in the study.

Study participants

Twenty-two COHI workers participated in the focus groups and interview. A key informant who was both a COHI coordinator and a hygienist and who worked with multiple First Nation communities was interviewed separately for their in-depth knowledge as they were unable to attend the focus groups.

Focus groups were in person and the key informant interview was conducted via telephone. Each focus group had seven participants, and sessions were approximately 90 minutes long. The focus groups were conducted at the RBC Convention Centre in Winnipeg, Manitoba, during a COHI training session. The participants received a small honorarium in appreciation for their time and participation.

The focus group procedure and interview guide were reviewed and approved by the

research team. Study information and consent forms were administered prior to starting the sessions. The participants were told that their participation was voluntary and that they could withdraw their consent at any time during the focus group and leave the session.

Data collection and analysis

Demographic questionnaires were administered at the start of the sessions, before the focus groups and the interview. The questionnaires were not shared with the qualitative researcher until all data had been collected, and the participants did not identify themselves or others throughout the focus group sessions.

The qualitative researcher (GK-A), a female from outside the communities with over 5 years of experience as a qualitative researcher, facilitated the focus group sessions along with two note takers. GK-A also conducted the key informant interview. Her not being a COHI worker put her in a position where she was able to generate themes and concepts without preconceived notions.

All the participants responded to 12 open-ended interview questions (shown in Table 1) to elucidate attitudes, beliefs and values associated with their work. The interview guide was validated through triangulation and consultation with experts in the field. Data were generated primarily through group interactions. The interview questions were intended as a guide, and the participants were encouraged to talk freely about the topic on their own terms.

The participants had a chance to review the notes taken during the focus groups and provide feedback. Interviews were audio-recorded and transcribed verbatim. Transcribed data arising from the focus groups and key informant interview were reviewed for accuracy, manually coded and assessed for distinct ideas and key themes by the qualitative reviewer (GK-A). The thematic analysis was completed with the goal of understanding the COHI workers' experiences and to determine their perspectives on the impact of COHI on young First Nations and Inuit children's dental health.

Data were uploaded and further analyzed using NVivo qualitative software version 12 (QSR International Pty Ltd., Melbourne, AU).[12]

TABLE 1
Interview guide for focus groups and the key-informant interview

Section A: Operation of COHI	
1.	In your own words, can you describe what the Children's Oral Health (COHI) program does in your community?
2.	Based on your personal experience working in COHI, do you think children benefit from COHI in your community?
3.	What motivates families to enrol their children in COHI?
Section B: Cultural safety and respect	
4.	Can you describe how COHI staff attempt to make participants feel comfortable or more at ease?
5.	In what ways do you think COHI staff demonstrate respect for culture and ways of treating one another?
Section C: COHI contribution to holistic vision of health and wellness	
6.	What are your thoughts about COHI's role in contributing towards general health and wellness of COHI clients?
Section D: Healthy children, families and communities	
7.	What are the ages of children who participate in COHI?
8.	Do pregnant women and new parents attend oral health education sessions in your community?
Section E: Impacts of COHI	
9.	Do you think that COHI has changed (improved) children's dental health in your community?
10.	Do you think dental surgeries for children are reducing in your community?
Ongoing professional development	
11.	What are your thoughts on professional development for COHI staff?
12.	Are there any other comments or experiences that you would like to share?

Abbreviation: COHI, Children's Oral Health Initiative.

Results

Demographic data

Of the 22 COHI workers who participated in the focus group discussions and interview, only 17 completed their demographic questionnaires. Fourteen participants identified as First Nation. Seven COHI workers were dental therapists, two were dental assistants, one was a dental hygienist, three were dental worker aides and one was a dentist. One participant indicated that she was trained as a "community health educator." Two did not specify their level of training.

Except for one participant, who represented six First Nations communities, and another who represented 11, participants represented one community each. Overall, approximately 25 First Nation communities were represented.

The mean (SD) age of the participants was 47.4 (10.8) years (range: 25–62 years). Sixteen were female and one preferred not to disclose their sex/gender. Participants had worked in the program for an average (SD) of 11.4 (3.5) years (range: 3–15 years).

Key themes

Key themes identified by the qualitative researcher based on data from the focus groups and the key informant interview, with detailed quotes supporting each, are shown in Table 2.

Results from the thematic analysis of the focus groups and interview are presented in two over-arching categories: COHI workers' attitudes and opinions on the impact of COHI on communities; and COHI workers' challenges when delivering the COHI program.

Thematic analysis: COHI workers' attitudes and opinions on the impact of the program on communities

All COHI workers said they primarily target children aged 0 to 7 years old. They also work with expectant mothers and

TABLE 2
COHI workers' attitudes towards and opinions of the impact of the COHI program

Themes	Quotes
Providing dental services	In my community, I just work by myself for the COHI program. So, I provide services for children from 0 to 7 [years], and I do work at the daycare with consent forms. I also provide fluoride applications in a school-based environment, right in the classrooms. But I also work with prenatal [and] postnatal [moms], and I do presentations for both those groups. I do one-on-one oral hygiene education with the children and also with the parents as a one-on-one while we do the screenings and the fluorides. Everything all in one shot. The screenings are done in my office with appointments. [A007]
	Prevention of early childhood tooth decay. Early detection of any dental disease […] Early dental visits and applications of fluoride varnish. I don't do a lot of home visits, but [people] do come to my office. [B002]
	I guess it would depend on your population where you're working... for you're more north and I'm south, so for me, our rate is not that high and the habits are different […] So, for us it works really well. [But] I find if you're trying to take stats and so you're looking at a big, big picture [...] there's two people living in a house, there's people that have 8 kids… so, the social status is all different... So this program we have works for me because I may have a kid that has two temporary fillings that need to be done. Ok, well I saved them from losing a tooth if I put that temporary in there, but we may have a kid that needs multiple extractions and pulpotomies and general anesthesia. So, it differs. For me it works. I like the program. [B003]
Providing dental hygiene products	All COHI students are supplied with toothbrushes up to Grade 2, so they have their toothbrushing program in the classrooms. And when I'm in there doing their screening and fluorides, there's stickers I give them and they're pretty excited to get a sticker after. If they say they don't [have a toothbrush] […] I tell them to come find me after and I'll give them one to take home. [B001]
	At the events, I hand out kits for the parents and the children. An adult kit with the children's materials. In the school, I don't […] For each classroom involved with the toothbrushing program, toothbrushes are given for the teacher to use in the toothbrushing program and to keep them supplied for the whole year. At the daycares, they have that as well. In the schools it's a little hit or miss, some teachers are very keen on it and [for] others it's a chore… I keep working at. There is one community, I was surprised. The principal is totally against a toothbrushing program [...] He shut me down. I was talking to the teachers about the toothbrushing program, when I mentioned it to him, he said, "The more we do in the school, the less the parents are doing at home." It kind of took me by surprise because the first question he asked me was, "How are the kids' teeth?" I had only seen a few but I had seen worse, so I said they seem to be not too bad. He took that and thought, "Okay, well we don't need a toothbrushing program." [D00TPST]
Providing preventive oral health education	Well, the parents and the children, depending on age... We go to the Head Start [Aboriginal Head Start program] at [the] daycare, and we also work with the workers in those areas [urban and Northern communities]. And we show them proper oral hygiene procedures and how to dispense the toothpaste, brush… well, just the basics. [A001]
	We also provide education, like informing new mothers and those that are pregnant, on how to care for their own mouth and how it relates to the dental health of their unborn baby. So, what we really try to do is to educate at the community level with moms and dads or whoever comes into the clinic with the child. Yeah, sometimes [other programs in the community] ask us to do presentations to their prenatal classes or like, sometimes the daycare will ask us to come in and show how to brush and how to store the toothpaste and the brushes and stuff like that. [A006]
	The COHI program is like a prevention, like for the kids' teeth, and what I do is talk to the parents of the young children and I introduce them to what COHI does, like what it's for and like we're there to help the children and not have decay… I've been alone, there's no dentist there that's working with me right now. [I do] more education to the community because some of these young mothers I see, they say that they didn't know about this program and they liked it and that's how, they're going to bring their other kids that need it. [C002]
Conducting home and schools visits	We have a big group, and we have about, say – in the school, 500 maybe […] COHI-eligible children. So, we also go to the Head Start [Aboriginal Head Start program] and daycares. And, on the downtime, we […] reach out to the community, we go for home visits. [When we go on these home visits] we introduce oral health. Like, we try and correct the way they do home care or oral care at home. But many of them don't… they don't really do oral care at home. So we try and get them started. [A001]
	I work a lot with the students in their classrooms when they're just starting. I find they're more comfortable learning in their classroom setting rather than bringing them to the clinic. So, that's how I go in and I do [brushing] with them all so they at least know what they're doing when they get their toothbrushes… They just see me come and go, so it makes them comfortable to be with me rather than just being the dentist you see once or twice a year. [B001]
	Well, I teach the kids and I talk to the kids how to brush their teeth and I do home visits with young parents, I kind of tell them about how important it is to try and keep the kids teeth clean and attend regular visits to the dental therapist. [C003]
Referral to dentist and regular dental visits	[Are] the referrals for surgery considered part of COHI? […] even making those referrals and getting the kids in to get that done is a component that is necessary and done. [A004]
	The regular dental visits, yes, I guess, maybe. Like I see after they leave the COHI program, Grade 3s and Grade 6s get dental visits. But there's always that interaction with the kids when they're older because I was right in their schools. So, they approach me if they need any dental work done, any dental visits done. So, I think that early interaction with COHI is beneficial because they're aware, they know that dental care is available to them. [B002]
	It is definitely a possibility [that participation in COHI leads to regular dental visits]; I have no way of knowing if it's my program that results in them choosing to see a dentist more than if there was no COHI. I would think anything that brings awareness to oral health and the importance of keeping baby teeth and keeping a healthy mouth for overall health [helps]. I think if parents are aware at all, they are going to do what they can for their children. [D00TPST]

Continued on the following page

TABLE 2 (continued)
COHI workers' attitudes towards and opinions of the impact of the COHI program

Themes	Quotes
Networking with programs in the community to promote ECOH	What I understood as a dental worker aide is that it was my job to go make contact with the different programs and let the community know that I'm there. And so, you would think after 10 years or so with posters and being involved with families that other people would know that we were there. [A003]
	I would say the COHI program is bringing a lot of preventative services into my community. Where I spend the majority of my clinical days doing preventative stuff such as the varnishes and the sealants, when I have a dental worker aide we're able to get more education out there and tapping into the other programs, like the pre- and postnatal, etc. Teamwork… I am a team player with my visiting dentist… We always do a weekly debrief on the kids that we're seeing, the 0- to 4-[year-olds], any referrals, we cross-reference, we follow-up […] I have no problem accessing like 4 years and up and the daycare. [C005]
	I would absolutely say, yes. They welcome me in the community, the school community is very positive for the most part for having COHI. They all welcome me in the school to see the children and allow me to do the screening and fluoride and the sealants as well. [At the] health centre, most of them are positive. I generally check in with the health director when I go in. If they are not there, I usually just go in, there is no problem whatsoever. [D00TPST]

Abbreviations: COHI, Children's Oral Health Initiative; ECOH, early childhood oral health.

mothers of newborns. According to one participant:

> COHI is designed to provide preventive oral care for children from 0 to 7 years old. In the schools, [we're] seeing the children from nursery to Grade 2, and [in the] community, parents of children 0 to 4. [D00TPST]

Some participants said that they extend their services to older children. According to one:

> Yes, I am supposed to do COHI, but I don't limit my classroom presentations to Grade 2. I go all the way through to Grade 12 […] That's the only way I know that they're still getting the information. [A003]

The participants said that they provide dental services so that clients do not have to wait for care. They raise awareness of the importance of oral hygiene in young children, educating the children and their parents on oral health. They also distribute oral hygiene products where needed and conduct home and school visits to bring oral health information to parents and teachers.

The participating dental therapists described how the pressure to provide treatment often overshadowed COHI prevention and oral health promotion activities. As a result, they welcomed the support of dental worker aides' in expanding the educational aspects of ECOH:

> I've worked in the field as a dental therapist for very many years and all this COHI stuff always fell on us as a dental therapist to do it on our own. The biggest advantage of COHI is having a COHI aide that takes off your shoulders all the one-on-ones with the prenatal [moms], the one-on-ones with the parents, the presentations and doing all the networking in the community […] That takes a load off you for the preventative portion of your program. [C006]

Dental therapists said that they work alone, without dental worker aides, and tend to focus more on activities in the clinics, only sometimes extending their work to schools. Overall, they considered that COHI is helping to arrest ECC. All the participants reported seeing positive changes, with the COHI program doing what can be done to reach more people in the communities with services:

> [By] doing the annual fluorides, like we do three times a year, if we can […] I see a lot of arrested decay […] I see the extractions in [the] Grade 3s have come down quite a bit … So yeah, I do see [that] it's effective. [A007]

Thematic analysis: Challenges in delivering community-based oral health promotion and care

Some participants said that they face challenges in delivering services in the communities, finding it difficult to get access to homes and schools, to conduct oral health assessments or educational sessions with parents. Accessing homes may be hampered by an inability to locate where clients and patients live and not having enough time to include home visits in the schedule; families could be reluctant or embarrassed to be visited at home. COHI workers also expressed concerns about their safety and not knowing what may happen if they go to visit people at their homes, especially where dog attacks have been reported. Some believed patients should be directed to the local clinics for all preventive oral care:

> I don't […] do home visits, [the dental worker aide] doesn't […] do home visits... because there's [been] nurses that have gone out and they've had dog bites and stuff like that… some people don't feel comfortable. [B003]

> Like, I don't feel comfortable, someone just pulling up [into] my driveway and saying hi, I want to put varnish in your kid's mouth. Ok, well, no. And that's why the clinics are there […] I don't think we have to chase [clients]. [B003]

COHI workers reported the need for advocates in schools and community environments supporting the program:

> There is one community... The principal is totally against a toothbrushing program... He said, "The more we do in the school, the less the parents are doing at home." It kind of took me by surprise because the first question he asked me was, "How are the kids' teeth?" I had only seen a few but I had seen worse, so I said they seem to be not too bad. He took that and thought, "Okay, well we don't need a toothbrushing program. [D00TPST]

Another challenge to the effective delivery of COHI was the shortage of COHI workers and the need for more training of the available dental worker aides. Dental

therapists said they did not prioritize home visiting because of their busy schedules. According to one therapist:

> I'm not from the communities that I work in. I don't know where anybody lives, and I don't have a dental aid or anybody from the community that can take time out of their job to show me where anyone lives. Also… I usually have [clients/students] back [in] their class to get ready to go home by like 10 to 3 [...] that's the only time I see adults in the community, is after school hours. [B001]

Participants also reported that housing conditions are sometimes a barrier to caregivers adhering to oral health information. The COHI workers were concerned that the anticipatory guidance they provide during their education sessions is not being adopted and followed by parents:

> Oh, you can train [parents/caregivers] all you want, [it] doesn't mean they're going to do it. Their number one reason [is that they] don't have time or [they] don't have a sink in [their] bathroom. [B005]

Another genuine concern is that parents and caregivers in the communities have normalized the treatment of ECC under general anesthesia:

> I also find that it is almost like a rite of passage. It's just like we've got to have surgery done before we start school. Just like getting your immunizations. [A004]

> The parents think that [general anesthesia] is a normal part of life, part of childhood. [B005]

> Like, most of the children that I see […] already have gone through [general anesthesia]. [C001]

The loss of patient follow-up during referrals was a significant challenge. Participants said communication and coordination between community-based COHI workers and off-reserve dentists and dental offices is poor. For example, dentists and dental offices send patients requiring follow-up care back to their home communities without adequate documentation or preliminary information from the community-based dental workers:

> After the surgery some of the providers that do the treatment in the city do tell the parents to go in for an assessment in 2 weeks… but it doesn't get done. [Dental offices] send a report to the regional office and that report is sent to us. But sometimes [these] are like a month after the surgery [the 2-week period doesn't really happen]. And sometimes there is no report at all from the office. [A001]

The participants also reported difficulties and delays in obtaining consent forms before providing preventive oral care. Consent forms are mostly handed out to students in schools to be delivered to parents and then returned. Forms sometimes get lost in transit. Having more dental worker aides who can work more directly with families will be beneficial to getting timely consent by answering phone and community entry questions:

> I think if I can get the dental worker aide more involved, then she would be a great asset to phone people, to be the go-to person for parents to phone and ask questions, to get consent forms. The schools are very cooperative, they will send out consent forms […] but sporadically. If I go into the community, there will be maybe 3 or 4 more consent forms coming in, so they trickle in. While I'm in the community, when I fly in, I like to stay a little longer […] to allow time to send the consent forms out again, so there is time for them to come in while I'm in the community […] Having said that, it doesn't allow time for those extra consent forms to come in and see those children at the same time. [D00TPST]

Some participants said they are worried that there is not enough awareness of the program in the communities even after several years. Some dental therapists and worker aides reported feelings of despair as they worked hard to curb ECC, and yet the number of children with tooth decay was still high:

> You're creating more awareness in the community about dental health so they're receiving treatment sooner, at a younger age, but that doesn't necessarily mean the health of the children is improving because they're still getting decay. It's just being treated sooner […] the stats and the dmft [cumulative count of the number of decayed, missing and filled primary teeth due to caries] is not really changing […] I'm saying [that] COHI is making a difference, but slowly. [C005]

Overall, the participants considered the program to be helpful. They said that the changes expected of the program may not be massive, but they are addressing oral health problems in the communities:

> I think it's working, it's not […] overwhelming, like in your face, a big spat change, but it's slowly addressing small problems of the bigger issue… I am First Nation; I grew up in isolation, I know exactly what we're faced with […] But I love what I do. We try and get what we can done, and having the second set of hands to reach more people, I guess, within the working day helps. [C005]

COHI workers' descriptions of the challenges and barriers to effective delivery of oral health promotion and care are shown in Table 3.

Discussion

Investments in community-based health care to promote local control of care and improve Indigenous health outcomes are essential.[13,14] The COHI program was implemented, in 2004, in an effort to decrease the burden of ECC in Indigenous children.[5]

In this study, we evaluated the experiences of community-based COHI workers as well as their perspectives on the impact of the program on First Nations children and their families in Manitoba. The study participants said the COHI program helps to support ECOH and prevent ECC in First Nations communities. This complements the view of parents and caregivers of program beneficiaries.[10] The participants described their specific tasks as benefiting children by providing opportunities to affect ECOH positively.[5]

A key reason for the ongoing successes of the COHI program is the sustained presence of dental worker aides in participating communities.[5,11] Dental worker aides provide culturally sensitive oral health promotion activities and community outreach

TABLE 3
COHI program challenges and barriers according to COHI workers

Themes	Quotes
Difficulty getting access to homes	There's just so many families and so much children that home visits are unfortunately not possible. I don't do it, and one barrier as well is just like that reluctance from families… I'm from my community, I know where a lot of people do live, but I have given that option to parents when they do come […] We are aware that a lot of them do not call or do not let me know nor let my aide know. [B002] A lot of them don't have phones so it's a hit and miss if you volunteer [to phone] first. And if you arrive there unexpectedly, they're embarrassed usually by whatever their conditions may be. You're just waking them up, or they're embarrassed because they're not cleaned up or whatever. That's a barrier. You don't know where they are at or what they do. [B004]
Poorly educated workers	I also have been working for a great many years, and as far as I know I've been doing the COHI program since I've been a dental therapist… [This program] has been in existence for a long time, only it's called COHI now and it's for 0- to 7-year-olds and they brought a worker in. But, I really feel that some workers are good, and then there are other workers that need a bit more education, and more [are needed] with a dental background. Although the COHI worker I have right now [is] very good because she knows her community, she knows where everybody lives, she knows what works and what doesn't in her community in the way of getting through to parents on their attitude towards their health, particularly the dental health […] and like I said they should get a little bit more training, but I really feel COHI is a good service for the communities. [C007]
Not enough workers	We have an average of 150 babies born every year. Maybe the highest that I counted was… 168 per year. But never below 140 per year [which means that there are not enough workers to care for them all]. [A002] When we go do the screenings in the classrooms we have a relationship with the teachers, but otherwise we did have a brushing program and then it went downhill because of the teachers. But you also have to understand a lot of kids in those classrooms on First Nation reserves […] The balance between those kids in those classrooms is hard so it's stressful already for a teacher, now you want to throw a brushing program at them [...] So it's too hard for them […] And it's nice when they're willing […] [B003] I'm from [a remote community] and the population is very high. It's from 4000 to 5000 and it's very transient also. I would say there [are] up to 500 [transient] people. And it's a very young population, and the birthrate per year [is] up to 80 per year, but some of this is off reserve… there's a large off-reserve number too. And my current COHI program is mostly schoolchildren because I haven't had a COHI worker for a while […] But when she was there it was mostly school because she had difficulty accessing zero- to four-year-olds. I think we only went out in the community once for the school year. So, most of the time she was in the clinic with me, whereas we have like […] 60 to 80 four-year-olds and about 60 kindergartners, and we have about 60 Grade 1s. So, it's approximately, I would say, 250 to 300 COHI kids in the school. And then […] I would say between 150 to 200 zero- to four-[year-olds] that we should be seeing. [C007]
Obtaining consent	It is hard to get prenatal [moms]. The community I'm from is not an isolated community, [but] a lot of people [leave] the community to give birth. So, the health centre doesn't necessarily have a master list. The band office does, but again, I'd have to go to the band office with my eligibility list and they're telling me who resides in the community and who isn't in the community. So yeah, I have to find them myself. [A003] Well… if we have their consent form from nursery to Grade 2, that kid is seeing you every year. Then Grade 3 you have to hand out that consent form every year, and the kid is responsible for taking that consent form and returning it. It gets lost. Then that kid starts school in Winnipeg from Grade 9. [B005]
Poor housing conditions	Oh, you can train [parents/caregivers] all you want, [it] doesn't mean they're going to do it. Their number one reason [is that they] don't have time or [they] don't have a sink in [their] bathroom. [B005]
Persistent decay in primary teeth	So, with me, I mean I'm getting out there. I'm reaching out, I'm hitting all the programs. I'm doing the presentations at school and with the postnatal [moms], but my numbers are still high. And there [are] so many factors… I just feel that we're taking the initiative out [of] parents when we're in the school. Because someone's going to say, well, why aren't you brushing with the kids? Well, that's your job. We do everything, but my numbers are still really high. I feel defeated almost. So, when they're asking me [if] I feel like the children are benefiting from this COHI program, I don't know [as] my numbers are still really high for oral surgeries. [A005]
Patients getting lost in referrals	After the surgery some of the providers that do the treatment in the city do tell the parents to go in for an assessment in 2 weeks […] but it doesn't get done. [Dental offices] send a report to the regional office and that report is sent to us. But sometimes [these] are like a month after the surgery [the 2-week period doesn't really happen]. And sometimes there is no report at all from the office. [A001]

Abbreviation: COHI, Children's Oral Health Initiative.

and engagement components, working alongside dental therapists, who focus on preventive dental procedures and, where available, dentists. The dental worker aide's role is essential in community-based oral health. They facilitate access to dental care and leverage social capital through knowledge of the community's culture and language, striving to reach children at schools and families at home and networking with other community health and social programs.[15,16]

Community-based oral health promotion activities are needed to support ECOH in Indigenous communities.[17] Hodgins et al.[18] previously evaluated the role of dental health support workers in promoting oral health in the community and linking targeted families with young children to a dental practice, as part of the Childsmile program in Scotland. Their findings suggest that children who received dental health support workers' intervention were more likely to attend a dental practice and to do so earlier than those who did not receive such an intervention.[18] This highlights the value of dental worker aides in building bridges between the community and the dental care provider.

Access to culturally safe health care is a significant challenge for rural and remote Indigenous communities.[19-21] Dental services provided in communities through COHI mitigate lengthy waits for care at dental offices outside of clients' communities.

Community-based COHI workers create awareness of the importance of oral hygiene in young children, educating children and their parents on oral health. They also distribute oral hygiene products where needed and conduct home and school visits to bring oral health information to parents and teachers.

Culturally sensitive oral health promotion by Indigenous champions, in the manner provided by COHI workers,[22] takes into account social determinants of pediatric oral health.[23] The health promotion builds on existing cultural knowledge and practices to prevent ECC in Indigenous communities.[24] COHI workers and therapists, many of whom are from the communities where they work, are sensitive to local conditions and holistic needs of the people they serve. Workers in the program understand and have pointed out that social determinants and parents' choices and behaviours go hand in glove; therefore, education must meet the right conditions to enable change. For example, people who are educated in the behaviours best suited to preventing ECC must be able to afford the products to support recommended oral hygiene.

A study evaluating the perspectives of dental therapists practising in Alaska's Yukon-Kuskokwim Delta reported that the community and oral health care providers noticed the benefits of the community-based education provided by the dental therapists and the improvement in access to dental care and knowledge about oral health over the years.[25] As in our study, Chi et al.[25] noted the benefit of having oral health care providers who understand the culture and needs of the local communities. Another study conducted in Alaska's Yukon-Kuskokwim Delta reported that the number of dental treatment days provided in the community by dental therapists was negatively associated with extractions and positively associated with preventive care utilization for children and adults, demonstrating the importance of dental therapists in oral health promotion in underserved communities.[26]

Recruiting and training more dental professionals so that they could function effectively in their roles would help build capacity, addressing some of the existing challenges. Information could be delivered through community-based workshops[27] and ongoing interprofessional collaboration across programs with similar goals of enhancing community-based resilience.[28]

Large communities may benefit from more dental worker aides to work with families and their children. Dental therapists and dental worker aides can proactively explain program availability and benefits. Awareness is key in health promotion and may serve the program by building on known avenues of community learning through interactions between people, with other community programs and through online sources.[17]

In a previous study by the same research team, parents in communities in Manitoba suggested the best ways to disseminate oral health-related information. These included information sheets and visual teaching aids in local languages plus the use of social media, provision of oral health products through community programs, and home visits for hands-on teaching.[17] In the present study, difficulty accessing homes was described as a barrier to delivering preventive oral health care, with COHI workers being concerned for their safety. A well-coordinated home visit, pre-visit phone calls, and virtual conferencing (where possible and appropriate) may help improve home access.

By increasing awareness among more families in communities, dental worker aides obtain more parental and caregiver consent for their children's enrolment in the program. To enroll children in the COHI program, parents and caregivers sign the required consent forms. However, COHI workers must be careful that all consent requested and obtained respect local protocols and individual expectations.[29] Meeting parents in person to explain the program and obtain written or oral consent would likely yield better enrolment than the current process of children being sent home with consent forms that lack sufficient context.

Participants also raised concerns about referring patients for follow-up care in the community after surgeries under general anesthesia. As some children require advanced oral care that cannot be performed by COHI staff, the program and staff need to build and maintain relationships with dental providers and specialists outside of the communities. More robust communication between COHI workers and dental offices could help improve patient referral pathways and enhance community-based follow-up schedules.

Strengths and limitations

Our study is the first to assess the perspectives of COHI community-based workers on the contribution and impact of the COHI program. The study provides an in-depth and first-hand account of structural and cultural determinants of health in the First Nations communities as they relate to children's oral health. COHI dental worker aides are knowledge keepers whose self-reported opinions and challenges provide valuable contributions to strategies aimed at improving the effectiveness of COHI programs.

However, although the qualitative approach to our study provides critical experiential insights of workers representing 25 First Nation communities altogether, the results may not be generalizable to other First Nations communities. In addition, some participants may have felt that some of the questions were leading, thereby influencing their responses. Further studies are needed to evaluate the impact of COHI workers' contribution on children's oral health by measuring changes in dental disease outcomes, such as the rate of dental surgery under general anesthesia and the proportion of children utilizing dental care in the communities.

Conclusion

Success with ECOH in Indigenous communities must continue to enhance culturally appropriate approaches to oral health that support both parents and children and ensure uptake. Dental worker aides are crucial to oral health promotion in First Nations communities, as they are usually from the communities, understand the local context, may speak the language, understand the culture and, in time, can become a household name in the community as the oral health educator.

Overall, COHI workers who participated in this qualitative study agreed that the COHI program delivers oral health services that result in meaningful ECC prevention and ECOH promotion in First Nations communities. Despite the favourable impact, some key issues still need to be addressed, such as improved and standardized training of workers and continuous support and capacity building in the ongoing community involvement.

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Conflicts of interest

The authors declare that there is no conflict of interest.

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Authors' contributions and statement

RJS and MM: Conceptualization, Supervision, Funding acquisition, Investigation, Analysis, Writing – Original draft.

GK-A: Formal analysis, Investigation, Methodology, Writing – Original draft, Writing – Review & Editing.

JE, PW, HTN, MB, AH, KH-S, LS, WMF, KY, OOO, MEKM, VCJ: Visualization, Writing – Original draft, Writing – Review & Editing.

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