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Patients' perspectives on integrated oral health care in an Indigenous primary health care organization: a qualitative study

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ABSTRACT

Objective Patient-centered care is considered to be an important element in the evaluation of integrated health care and has been effective in addressing oral health disparities. This study explored the patients' perspectives of patient-centered integrated care in oral health services integrated into a primary health care organization serving a northern Quebec Cree population.

Design This study used a multiple case study design within a qualitative approach and developmental evaluation methodology. Two theoretical models, Picker's Principles of Patient-Centered Care and Valentijn's Rainbow Model of Integrated Care, guided data collection and data analysis. The thematic analysis included transcription, debriefing, codification, data display, and interpretation.

Setting This study was conducted in purposefully selected four Cree communities of Northern Quebec.

Participants Adult patients in need of oral health care and who attended the local dental clinic identified and recruited by maximum variation sampling and snowball techniques.

Outcome measures Patients' perspectives of patient-centered integrated oral health care.

Results Data analysis generated six major themes: enhanced accessibility, empowering supportive environment, building trust through shared decision making, appreciation of public health programs, raising oral health awareness, and growing culturally competent health care providers. Patients identified the integration of dental care into primary health care with respect to colocation, provision of free oral health care services, care coordination and continuity of care, referral services, developing supportive environment, shared decision making, oral health promotion, and culturally competent care.

Conclusions These results confirmed that patient-centered care is an important element of integrated care. Patients valued the use of this concept in all domains and levels of integration. They recommended to further strengthen the clinical integration by involving parents in oral health promotion as well as optimizing care coordination and empowering a supportive environment in organizational integration.

ARTICLE SUMMARY

Strengths and limitations of this study

1. To our knowledge, this study is the first to evaluate patient-centered integrated oral health care from the patient lens in an Indigenous primary health care organization.

2. In-depth individual interviews allowed a rich exploration of patients' perspectives on patient-centered integrated oral health care in this organization.

3. Results suggest that patient-centered care is an important element of integrated care and it can be facilitated by the factors such as colocation, provision of free dental services, oral health promotion, referral services, care coordination, supportive environment, shared decision making, and culturally competent services.

4. Results are based on small sample size of patients recruited from Cree community hospitals.

INTRODUCTION

Throughout the late 20th century, influential works such as Engel's biopsychosocial model and Balint's Patient-Centered Medicine in North America and Europe have inspired the shift of health care service delivery towards a holistic patient-oriented approach.[1-3] During the late 1980s, patient-centered care (PCC) was conceptualized and defined by the Institute of Medicine as: "providing care that is respectful of, and responsive to, individual patient preferences, needs and values, and ensuring that patient values guide all clinical decisions".[4] PCC applies to all levels of health care organizations irrespective of population and ethnic or cultural groups.[3 5] Research has demonstrated that implementing PCC in health care organizations can reduce health care costs and improve health care quality and outcomes, patient adherence, patient satisfaction, and care provider satisfaction, and has the potential to alleviate health care disparities.[3 6-9]

The World Health Organization (WHO) has also developed a global strategy for programs that involve PCC in integrated care to deal with the barriers encountered by current health systems such as demographic transition, highly prevalent chronic diseases, and subsequent economic burden.[8] As defined by the WHO, integrated care is "bringing together inputs, delivery, management and organisation of services related to diagnosis, treatment, care, rehabilitation and health promotion".[10]

Several health care associations and organizations including the Canadian Nurses Association, Canadian Medical Association, and Health Action Lobby have identified PCC as one of the five foundations for integrated care, along with access, relational continuity, management continuity, and information continuity.[8 11 12] Moreover, ascribing a significant role to PCC in oral health care, several oral health care organizations in Europe, Australia, and North America have introduced PCC as a core element in the evaluation of integrated health care services.[3 4 13-15] The PCC model of integration of oral health care within primary

health has been highlighted to be effective in addressing oral health disparities among Indigenous communities.[16 17] Moreover, the role of PCC becomes imperative in the case of Indigenous populations considering historical trauma due to colonization and assimilation policies.[18] These historical traumas included loss of homeland, loss of family for children in residential schools, loss of traditional cultural practices as well as mistrust, distress, and fear towards the intentions of non-Indigenous people.[19 20] Hence, consideration of Indigenous patients' cultural values, beliefs, and preferences, as well as their holistic vision of health, is essential in the implementation of PCC in Indigenous populations.[18]

According to the recent WHO report there is still lack of evidence focusing on the application of people-centered integrated care in primary health care settings.[8] Furthermore, as highlighted in a systematic review by Mills et al. in 2014, there is still a gap in regard to the application of PCC concepts from patients' perspectives and in oral health research.[3] Also, Harnagea et al. emphasized in a recent scoping review the lack of evidence on the outcomes of integrated primary oral health care programs among disadvantaged populations.[21] Therefore, the objective of this study was to explore patients' perspectives and experiences in regard to patient-centered integrated oral health care in a primary health care organization serving a northern Quebec Cree population.

METHODS

Study Design

This collaborative study was part of a larger Canadian Institutes of Health Research–funded project entitled "Oral Health Integrated into Primary Care: Participatory Evaluation of Implementation and Performance in Quebec Cree Communities".[22] We adopted a multiple case study design within a qualitative approach and developmental evaluation methodology.[23 24] Developmental evaluation addresses the need of the key stakeholders by building a partnership between them and researchers in the assessment of emerging initiatives in their

organization.[23] Within this methodology, "a case study design is useful since it allows an in-depth understanding of a single or small number of 'cases' in their real-world context".[24]

Ethics approval for this study was obtained from the Institutional Review Board of the Université de Montréal and permission from the Research Committee of the Cree Board of Health and Social Services of James Bay. Oral and written consent was obtained from all study participants. We followed the ethical guidelines of Ownership, Control, Access and Possession (OCAP™) for First Nations.[25] This manuscript has been prepared according to the Standards for reporting qualitative research.[26]

Study setting, participants, and data collection:

Over 18,000 Cree people of Eeyou Istchee inhabit nine remote communities in the eastern James Bay region of northern Quebec, Canada.[27] The health and social services of these communities are provided by the Cree Board of Health and Social Services of James Bay (CBHSSJB).[15] This organization developed two Strategic Regional Plans, 2004–2014 and 2016–2021, which mandate a model for the integrated delivery of health and social services in the Cree communities including oral health care.[15 28] Each community has a Community Miyupimatiisiuun (wellness) Centre (CMC) that provides health care and social services through a team of primary health care providers, including para-professional community health representatives.[27] Each community has a well-equipped local dental clinic where free services are provided by dentists and dental hygienists.[27]

This study uses the community as the unit of analysis. It was conducted in four Cree communities that were purposefully selected based on population size as well as on geographical, cultural, health care, and oral care characteristics. We used maximum variation sampling and snowball techniques to identify and recruit adult patients (≥18 years) in need of oral health care and who attended the local dental clinic in 2016–2017. In-depth audio-recorded interviews, on average 60 minutes long, were conducted in English or French by

two research team members trained in qualitative methods. These team members had no existing relationship with the participants. We designed the semi-structured interview guide based on the Rainbow Model of Integrated Care.[29 30] Data collection and analysis were performed concurrently.

Data analysis:

Data analysis included transcription, debriefing, codification, data display, thematic content analysis, and triangulation.[31] We used the eight Picker Principles of PCC and Valentijn's Rainbow Model of Integrated Care as conceptual models to guide exploring and determining the scope of elements of PCC within the integrated care network.[29 30 32] Picker's principles comprise: respect for patient's preferences, information and education, access to care, emotional support, involvement of family and friends, continuity and transition, physical comfort, and coordination of care.[32] The domains of the Rainbow Model of Integrated Care are characterized by three categories: scope, types, and enablers of integration. Scope comprises person- and population-based care; types include system, organizational, professional, and clinical integration; and enablers include functional and normative integration.[29 30] We performed a combination of deductive and inductive thematic content analysis using ATLAS.TI software (ATLAS.ti, version 1.6.0, GmbH; Berlin, Germany).[33] The deductive approach encompassed the creation of provisional categories derived a priori from the conceptual models. This was embedded with an inductive approach, which consisted in adapting these provisional categories into new categories and themes based on the content of the transcripts[31 33]. Two research trainees (RS, NK) independently performed the analysis and then discussed the emerging codes in detail until they achieved a consensus on emergent categories and themes. The thematic analysis was revised by the nominated community stakeholders and other research team members (EE, YC, FG, CB, JT, MM).

RESULTS

Table 1 presents the demographic profile of the 14 participants. Among them, four were working as health care providers who attended the dental clinic as patients for their treatments. The following six themes were generated from our thematic analysis.

1. Enhanced accessibility: Participants highlighted the impact of the integration of oral health into primary health care in facilitating the access to oral health care in terms of the easily accessible location of the dental clinic as well as its proximity within the CMC. Most of the patients perceived colocation as expedient, especially in case of complications and emergencies.

> *I love how it's [location of the clinic] two in one, like almost ... I know elsewhere it's completely separate.* (Participant 3)
>
> *I think it would be better to be close just in case sometimes complications do happen, you know it's low chance but it does happen so.* (Participant 4)

They also valued the provision of free oral health care services within integrated health care.

> *[dental services are covered] It makes a difference ... I take advantage of it ... I know it's there ... that's why I always come. (*Participant 11)
>
> *[fact that the treatments are free] It's the best thing ever! I love it!* (Participant 3)

Participants also appreciated referral mechanisms of integrated care at the CBHSSJB organization. These referral mechanisms facilitated provision of specialized dental treatments by the linkage of primary health care to secondary or tertiary levels of health care.

> *I love how [the orthodontic service] has weekend visits so we don't have to miss work, most of the time I bring my kids.* (Participant 3)

Patients acknowledged the need for better care coordination to tackle the long waitlists and to enable follow-ups. They also linked the problem of long waitlists with the limited number

and non-permanency of dental care providers. Nonetheless, they valued the competencies of dental care providers in providing quality dental treatments.

> *My son came once then they never called back ... I did the fill-up sheet ... they contacted me 3 months later... and it was like a pain no. 5 .... and the time when we got here, they had to pull out his tooth* (Participant 13)
>
> *The waiting lists and I don't think they are being called! I saw that on Facebook that people complain that .... they made appointments for them because they were in pain and there is still no call.* (Participant 1)
>
> *I think ... we would ... just need another dentist. Because that's what keeps the long list.* (Participant 7)

2. Creating supportive environment: Patients expressed the importance of enabling the care, especially for those with dental fear and anxiety, by creating a supportive environment at the clinic. They preferred the dental clinic environment and oral health care team to be more welcoming and empathetic, which in turn can provide psychological support for them.

> *Yeah, the approach, the environment. You know the… positivity in the room. And here like I said they walk in and they're terrified. They won't even open their mouth.* (Participant 4)
>
> *It needs to be behavior: "Hi, how are you? When was the last time you saw the dentist?" ... To be more humane, more sympathetic. It will be very nice for someone to come ... instead of filling the form, to talk with the receptionist and to leave with an appointment ... that's ideal.* (Participant 13)

3. Building trust through shared decision making: Participants highlighted the importance of including patients in integrated care by engaging them in shared treatment decision making. Most of the patients recognized the value of information given by oral health care providers on treatment options and respecting their choices and preferences.

To be engaged in the treatments, some do and some don't. I had a bad experience with my one dentist … The other one saying, "Ok if that's the way you want it." Then they'll just tell us, "This is what's gonna happen if you do it this way." (Participant 4)

Furthermore, participants expressed that shared decision making reinforced building trust with the health care providers and improved the quality of care.

I think empowering the person to take part in the process, is not a bad thing. It actually establishes more of a relation—trust. (Participant 6)

4. Appreciation of public health programs: Participants appreciated the continuity of care via CBHSSJB public health programs, which linked promotive and preventive oral health care to primary health care. These public programs included daycare- and school-based oral health programs for children and *Â Mashkûpimâtsît Awash* program for pregnant mother and child care where promotive and preventive dental services were offered by dental and non-dental care providers.

My grandson is in kindergarten now … They [dental care providers] do some kinds of things at the school … They just teach him how to brush, they take the big teeth model and they teach them to use the brush … and they give them little toothbrushes in packages. (Participant 2)

5. *Raising oral health awareness*: Patients discussed lack of oral health awareness among the community residents. They expressed the need to promote oral health and increase oral health literacy via creating awareness programs and engaging parents in oral health education.

I think, for me … I learned how to take care of my teeth at home with my parents. (Participant 10)

The parents … should be, I think it's maybe the number one spot. [Some of the parents should be educated more?] Yes. Cause I know some parents have

*dropped out of school very early and they didn't go through a lot of what indicate a parent when it's, like I said … the dentist visits the schools… and a lot of parents don't have that. (*Participant *4)*

Patients proposed novel ideas for awareness campaigns via radio, television, social media, and short videos and also during social events such as health nights (youth awareness event), youth festivals, and sports events.

Videos, short videos like showing someone brushing their teeth like two seconds of that … flossing and then a really nice smile …. different products that could be used, just like … two-minute video … the beginning of the video to make it like that interesting … it can go on there … they can share it. (Participant 13)

Here it's sports, hockey—to advertise … It would be very helpful. People might not listen but you know it gets in their heads. (Participant 4)

6. Growing cultural humility among health care providers: Participants appreciated having Indigenous people among dental teams and hearing Indigenous language during provision of care. Patients also highly valued non-Cree health professionals' interest in learning their culture, traditions, and language by attending cultural activities and traditional ceremonies that helped them in developing affinity and building trust with the community. They also praised non-Indigenous care providers' attempts to learn and speak Indigenous language to make them feel comfortable during treatment.

I like that [dental care providers] like to learn. Like they go with the family when they go in the bush or whenever, to learn. Or to the gravel pit … There's lots of things you can learn over there. They're always doing stuff … (Participant 9)

Even the dentists. They tried the Cree [Cree word] "keep your mouth opened" and they're amazing! (Participant 3)

DISCUSSION

It has been two decades since the concept of PCC was first introduced to integrated care.[34] Shaw et al. identify PCC as a crux of integrated care and recommend including the patient's perspective as an organizing principle of service delivery.[34] To our knowledge, this study is the first to evaluate patient-centered integrated oral health care from the patient lens in an Indigenous health care organization. Study findings demonstrate that these patients valued the integration of oral health care in the primary health care in regard to colocation, free oral health care services, coordination, and continuity of care. They highlighted the importance of respecting their perspectives in clinical decision making, integrating Indigenous personnel in dental teams, optimizing care coordination, providing a supportive environment, and oral health promotion. The emphasis on culturally sensitive care, development of a more supportive environment, and parental engagement for oral health promotion were also linked to addressing the historical impacts such as intergenerational trauma, loss of cultural practices, fear and mistrust, and loss of parenting skills.

We used Picker's principles of PCC for analyzing the results due to their relevance, comprehensiveness, and ability to conceptualize various elements of PCC.[35] Our findings support these principles as essential elements in delivering PCC in integrated oral health care[32]. According to the literature, the patient is a focal point of integrated care.[36 37] Singer et al. defined integrated patient care and developed a framework based on this definition: "patient care that is coordinated across professionals, facilities, and support systems; continuous over time and between visits; tailored to the patients' needs and preferences; and based on shared responsibility between patient and caregivers for optimizing health".[37] Our findings emphasizing the significance of care coordination, continuity of care, shared decision making, and the need for patients' health awareness in PCC are consistent with the results of research studies in other health care disciplines in Australia, the United States, and

various European countries.[36 38-40] This can suggest that the key features of PCC are the same in integrated health care irrespective of patients' profile, their type of health problems, and the nature of the health care organization. Similarly, Goodwin et al. compared seven case studies on successful integrated health and social service programs for people with complex needs in seven different countries: Australia, Canada, the Netherlands, New Zealand, Sweden, the United Kingdom, and the United States.[41] All these programs have incorporated PCC by engaging patients and caregivers, and identify PCC as the basis for implementing integrated care programs.[41] Accordingly, our results align with a culturally sensitive community-based integrated care Te Whiringa Ora (Care Connections) program in New Zealand for rural and Indigenous chronic patients in emphasizing culturally relevant PCC by engaging patients and family members.[41 42] Our study results are also consistent with the evidence on valuing the role of Indigenous care providers in delivering PCC, including the Te Whiringa Ora program.[42 43]

Our results demonstrating the value of clinical shared decision making and supportive environment as key features of PCC are coherent with the systematic review and original research conducted by Mills et al. on PCC in general dental practice and from both care providers' and patients' perspectives.[3 44] Moreover, our results are also underpinned by the recommendation of the Department of Health Resources and Services Administration in the United States and other studies on the need for integration of dental and medical care and the importance of the colocation in achieving success in PCC.[17 40]

The themes from our study support the results of the comprehensive scoping reviews and original research conducted by Harnagea et al. showing the validity of Rainbow framework (Table 2) in term of domains and facilitators of integrated care including culturally relevant services and existence of public oral health programs.[17 21] Our study also identified barriers to

integration similar to those identified by Harnagea et al. including human resource issues such as lack of trained dental care providers[17 21]

The interviews used in our analysis were collected from a small sample of patients from four Cree communities. Though the qualitative approach is not intended for generalizing results, the study participants represent a degree of heterogeneity in terms of demographic, geographical, oral health status, and oral health care service. The focus on a specific setting and organization in this qualitative study generated rich information that prepares the ground for further research on the integration of oral health into primary health care.

CONCLUSION

Patients at CBHSSJB acknowledged incorporation of PCC in integrating oral health into primary health care and expressed the need to further strengthen the clinical and organizational integration. Our results support that fostering PCC can improve integrated health care performance.

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TABLES

Table 1. Sociodemographic characteristics of participants (n=14).

Characteristics	No. participants
Gender	
Male	2
Female	12
Age, years	
31-40	7
41-50	3
51-60	4
Ethnicity	
Cree	13
Non-Cree	1
Employment	
Employed	13
Non-employed	1

Table 2. Interconnections between the Picker's Principles of PCC[32] and patient-centered integrated oral health care as reported by Cree patients.

Themes	Picker's Principles
Theme 1. Enhanced accessibility	• Access to care • Coordination of care
Theme 2. Creating supportive environment	• Respect for patient's preferences • Emotional support • Physical comfort
Theme 3. Building trust through shared decision making	• Respect for patient's preferences • Information and education
Theme 4. Appreciation of public health programs	• Continuity and transition
Theme 5. Raising oral health awareness	• Information and education • Involvement of family and friends
Theme 6. Growing cultural humility among health care providers	• Respect for patient's preferences

Table 3: Interconnections between the dimensions of integrated care demonstrated in Rainbow Model[29 30] and patient-centered integrated oral health care as reported by Cree patients.

Themes	Key features of each dimension for PCC reported by Cree Patients	Domains of integrated care (Rainbow Model of Integrated Care)
Theme 1. Enhanced accessibility	• Colocation	Organizational
	• Financial mechanisms	Functional
	• Interprofessional collaboration	Organizational
	• Professional competencies	Professional
	• Inadequate human resources	Organizational
Theme 2. Creating supportive environment	• Creating supportive environment	Organizational
Theme 3. Building trust through shared decision making	• Interaction between professional and client	Clinical
	• Trust	Organizational
Theme 4. Appreciation of public health programs	• Continuity of care	Clinical
	• Public oral health programs	System
Theme 5. Raising oral health awareness	• Parents as oral health promotion champions	Clinical
Theme 6. Growing cultural humility among health care providers	• Linking cultures	Normative

FOOTNOTES:

- **Authors' Statement**

RS contributed to study concept and design; acquisition, data collection, reviewing transcripts, coding, analysis and interpretation of data; drafting and critical revision of the manuscript.

YC contributed to acquisition, data collection, revising analysis and critical revision of the manuscript.

NK contributed to study concept and design; acquisition, reviewing transcripts, coding, analysis and interpretation of data; and drafting the manuscript.

FG contributed to acquisition, data collection, revising analysis and critical revision of the manuscript.

CB contributed to acquisition, revising analysis and critical revision of the manuscript.

MM contributed to acquisition, revising analysis and critical revision of the manuscript.

JT contributed to study concept and design; acquisition, revising analysis and critical revision of the manuscript.

EE contributed to study concept and design; acquisition, data collection, revising analysis and critical revision of the manuscript.

All authors read and approved the final manuscript and are accountable for all aspects of the manuscript.

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du Québec, the Network for Canadian Oral Health Research, and the Network for Oral and Bone Health Research (CIHR grant number: GI1-145123).

- **Competing interests** None declared.
- **Patient consent** Not required.
- **Ethics approval** The study received ethical approval from the Institutional Review Board of the Université de Montréal numbered 15-130-CERES-P and permission from the Research Committee of the Cree Board of Health and Social Services of James Bay.
- **Provenance and peer review** Not commissioned; externally peer reviewed.
- **Data sharing statement** No additional data are available from this study.

Reporting checklist for qualitative study.

Based on the SRQR guidelines.

Instructions to authors

Complete this checklist by entering the page numbers from your manuscript where readers will find each of the items listed below.

Your article may not currently address all the items on the checklist. Please modify your text to include the missing information. If you are certain that an item does not apply, please write "n/a" and provide a short explanation.

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O'Brien BC, Harris IB, Beckman TJ, Reed DA, Cook DA. Standards for reporting qualitative research: a synthesis of recommendations. Acad Med. 2014;89(9):1245-1251.

	Reporting Item	Page Number
#1	Concise description of the nature and topic of the study identifying the study as qualitative or indicating the approach (e.g. ethnography, grounded theory) or data collection methods (e.g. interview, focus group) is recommended	1
#2	Summary of the key elements of the study using the abstract format of the intended publication; typically	4

		includes background, purpose, methods, results and conclusions	
Problem formulation	#3	Description and signifcance of the problem / phenomenon studied: review of relevant theory and empirical work; problem statement	7-8
Purpose or research question	#4	Purpose of the study and specific objectives or questions	8
Qualitative approach and research paradigm	#5	Qualitative approach (e.g. ethnography, grounded theory, case study, phenomenolgy, narrative research) and guiding theory if appropriate; identifying the research paradigm (e.g. postpositivist, constructivist / interpretivist) is also recommended; rationale. The rationale should briefly discuss the justification for choosing that theory, approach, method or technique rather than other options available; the assumptions and limitations implicit in those choices and how those choices influence study conclusions and transferability. As appropriate the rationale for several items might be discussed together.	8 and 9
Researcher characteristics and reflexivity	#6	Researchers' characteristics that may influence the research, including personal attributes, qualifications / experience, relationship with participants, assumptions and / or presuppositions; potential or actual interaction between researchers' characteristics and the research questions, approach, methods, results and / or transferability	10

Context	#7	Setting / site and salient contextual factors; rationale	9
Sampling strategy	#8	How and why research participants, documents, or events were selected; criteria for deciding when no further sampling was necessary (e.g. sampling saturation); rationale	9
Ethical issues pertaining to human subjects	#9	Documentation of approval by an appropriate ethics review board and participant consent, or explanation for lack thereof; other confidentiality and data security issues	9
Data collection methods	#10	Types of data collected; details of data collection procedures including (as appropriate) start and stop dates of data collection and analysis, iterative process, triangulation of sources / methods, and modification of procedures in response to evolving study findings; rationale	9
Data collection instruments and technologies	#11	Description of instruments (e.g. interview guides, questionnaires) and devices (e.g. audio recorders) used for data collection; if / how the instruments(s) changed over the course of the study	10
Units of study	#12	Number and relevant characteristics of participants, documents, or events included in the study; level of participation (could be reported in results)	9
Data processing	#13	Methods for processing data prior to and during analysis, including transcription, data entry, data management and	10

		security, verification of data integrity, data coding, and anonymisation / deidentification of excerpts	
Data analysis	#14	Process by which inferences, themes, etc. were identified and developed, including the researchers involved in data analysis; usually references a specific paradigm or approach; rationale	10
Techniques to enhance trustworthiness	#15	Techniques to enhance trustworthiness and credibility of data analysis (e.g. member checking, audit trail, triangulation); rationale	10
Syntheses and interpretation	#16	Main findings (e.g. interpretations, inferences, and themes); might include development of a theory or model, or integration with prior research or theory	11-14
Links to empirical data	#17	Evidence (e.g. quotes, field notes, text excerpts, photographs) to substantiate analytic findings	11-14
Intergration with prior work, implications, transferability and contribution(s) to the field	#18	Short summary of main findings; explanation of how findings and conclusions connect to, support, elaborate on, or challenge conclusions of earlier scholarship; discussion of scope of application / generalizability; identification of unique contributions(s) to scholarship in a discipline or field	15-17
Limitations	#19	Trustworthiness and limitations of findings	17
Conflicts of interest	#20	Potential sources of influence of perceived influence on study conduct and conclusions; how these were	24

		managed	
Funding	#21	Sources of funding and other support; role of funders in data collection, interpretation and reporting	24

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TITLE

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Patients' perspectives on integrated oral health care in a northern Quebec Indigenous primary health care organization: a qualitative study

ABSTRACT

Objective Patient-centered care is considered to be an important element in the evaluation of integrated health care and has been effective in addressing oral health disparities. This study explored the patients' perspectives of patient-centered integrated care in oral health services integrated into a primary health care organization serving a northern Quebec Cree population.

Design This study used a multiple case study design within a qualitative approach and developmental evaluation methodology. Two theoretical models, Picker's Principles of Patient-Centered Care and Valentijn's Rainbow Model of Integrated Care, guided data collection and data analysis. The thematic analysis included transcription, debriefing, codification, data display, and interpretation.

Setting This study was conducted in purposefully selected four Cree communities of Northern Quebec.

Participants Adult patients in need of oral health care and who attended the local dental clinic identified and recruited by maximum variation sampling and snowball techniques.

Outcome measures Patients' perspectives of patient-centered integrated oral health care.

Results Data analysis generated six major themes: enhanced accessibility, empowering supportive environment, building trust through shared decision making, appreciation of public health programs, raising oral health awareness, and growing culturally competent health care providers. Patients identified the integration of dental care into primary health care with respect to colocation, provision of free oral health care services, care coordination and continuity of care, referral services, developing supportive environment, shared decision making, oral health promotion, and culturally competent care.

Conclusions These results confirmed that patient-centered care is an important element of integrated care. Patients valued the use of this concept in all domains and levels of integration. They recommended to further strengthen the clinical integration by involving parents in oral health promotion as well as optimizing care coordination and empowering a supportive environment in organizational integration.

ARTICLE SUMMARY

Strengths and limitations of this study

1. To our knowledge, this study is the first worldwide research that explored the patients' perspective in regard to the integration of oral health care in an Indigenous primary health care organization.
2. In-depth individual interviews allowed a rich exploration of patients' perspectives on patient-centered integrated oral health care in this organization.
3. Results suggest that patient-centered care is an important element of integrated care and it can be facilitated by the factors such as colocation, provision of free dental services, oral health promotion, referral services, care coordination, supportive environment, shared decision making, and culturally competent services.
4. Results are based on small sample size of patients recruited from Cree community hospitals.

INTRODUCTION

Throughout the late 20th century, influential works such as Engel's biopsychosocial model and Balint's Patient-Centered Medicine in North America and Europe have inspired the shift of health care service delivery towards a holistic patient-oriented approach.[1-3] During the late 1980s, patient-centered care (PCC) was conceptualized and defined by the Institute of Medicine as: "providing care that is respectful of, and responsive to, individual patient preferences, needs and values, and ensuring that patient values guide all clinical decisions".[4] PCC applies to all levels of health care organizations irrespective of population and ethnic or cultural groups.[3 5] Research has demonstrated that implementing PCC in health care organizations can reduce health care costs and improve health care quality and outcomes, patient adherence, patient satisfaction, and care provider satisfaction, and has the potential to alleviate health care disparities.[3 6-9]

The World Health Organization (WHO) has also developed a global strategy for programs that involve PCC in integrated care to deal with the barriers encountered by current health systems such as demographic transition, highly prevalent chronic diseases, and subsequent economic burden.[8] As defined by the WHO, integrated care is "bringing together inputs, delivery, management and organization of services related to diagnosis, treatment, care, rehabilitation and health promotion".[10]

Several health care associations and organizations including the Canadian Nurses Association, Canadian Medical Association, and Health Action Lobby have identified PCC as one of the five foundations for integrated care, along with access, relational continuity, management continuity, and information continuity.[8 11 12] Moreover, ascribing a significant role to PCC in oral health care, several oral health care organizations in Europe, Australia, and North America have introduced PCC as a core element in the evaluation of integrated health care services.[3 4 13-15] The PCC model of integration of oral health care within primary

health has been highlighted to be effective in addressing oral health disparities among Indigenous communities.[16 17] Moreover, the role of PCC becomes imperative in the case of Indigenous populations considering historical trauma due to colonization and assimilation policies.[18] These historical traumas included loss of homeland, loss of family for children in residential schools, loss of traditional cultural practices as well as mistrust, distress, and fear towards the intentions of non-Indigenous people.[19 20] Hence, consideration of Indigenous patients' cultural values, beliefs, and preferences, as well as their holistic vision of health, is essential in the implementation of PCC in Indigenous populations.[18]

According to the recent WHO report there is still lack of evidence focusing on the application of people-centered integrated care in primary health care settings.[8] Furthermore, as highlighted in a systematic review by Mills et al. in 2014, there is still a gap in regard to the application of PCC concepts from patients' perspectives and in oral health research.[3] Also, Harnagea et al. emphasized in a recent scoping review the lack of evidence on the outcomes of integrated primary oral health care programs among disadvantaged populations.[21] Therefore, the objective of this study was to explore patients' perspectives and experiences in regard to patient-centered integrated oral health care in a primary health care organization serving a northern Quebec Cree population.

METHODS

Study Design

This collaborative study was part of a larger Canadian Institutes of Health Research–funded project entitled "Oral Health Integrated into Primary Care: Participatory Evaluation of Implementation and Performance in Quebec Cree Communities".[22] We adopted a multiple case study design within a qualitative approach and developmental evaluation methodology.[23 24] The case study design allows an in-depth understanding of a single or small number of 'cases' in their real-world context".[24]

Developmental evaluation addresses the need of the key stakeholders by building a partnership between them and researchers in the assessment of emerging initiatives in their organization.[23] Accordingly, the project started with a planning phase which included a 3-days stay in one of the Cree communities (Mistissini), followed by a 2-days video conferencing workshop few months later (Mistissini and Montreal).[25] The details of the workshop have been published previously.[25] In the planning phase, the research team conducted several oral presentations and had several focus group discussions and individual face-to-face meetings with Cree community health centers' administrators, community workers, health care providers, and patients. During these various communications, different aspects of the study, such as research objectives, data collection, recruitment strategies, as well as conceptual frameworks were discussed.

Ethics approval for this study was obtained from the Institutional Review Board of the Université de Montréal and permission from the Research Committee of the Cree Board of Health and Social Services of James Bay. Oral and written consent was obtained from all study participants. We followed the ethical guidelines of Ownership, Control, Access and Possession (OCAP™) for First Nations.[26] This manuscript has been prepared according to the Standards for reporting qualitative research.[27]

Study setting, participants, and data collection:

Over 18,000 Cree people of Eeyou Istchee inhabit nine remote communities in the eastern James Bay region of northern Quebec, Canada.[28] The health and social services of these communities are provided by the Cree Board of Health and Social Services of James Bay (CBHSSJB).[15] This organization developed two Strategic Regional Plans, 2004–2014 and 2016–2021, which mandate a model for the integrated delivery of health and social services in the Cree communities including oral health care.[15 29] Each community has a Community Miyupimatiisiuun (wellness) Centre (CMC) that provides health care and social services

through a team of primary health care providers, including para-professional community health representatives.[28] Each community has a well-equipped local dental clinic where free services are provided by dentists and dental hygienists.[28]

This study was conducted in four Cree communities that were purposefully selected based on population size as well as on geographical, cultural, health care, and oral care characteristics. We used maximum variation sampling and snowball techniques to identify and recruit adult patients (≥18 years) in need of oral health care and who attended the local dental clinic in 2016–2017. In-depth audio-recorded interviews, on average 60 minutes long, were conducted in English or French by two research team members trained in qualitative methods. These team members had no existing relationship with the participants. We designed the semi-structured interview guide based on the Rainbow Model of Integrated Care.[30 31] Data collection and analysis were performed concurrently until data saturation was reached.[32 33] Data saturation was reached after the 11th interview; nevertheless, data collection was continued up to 14th interview to ensure the saturation level.

Data analysis:

Data analysis included transcription, debriefing, codification, data display, thematic content analysis, and triangulation.[32] We used the eight Picker Principles of PCC and Valentijn's Rainbow Model of Integrated Care as conceptual models to guide exploring and determining the scope of elements of PCC within the integrated care network.[30 31 34] Picker's principles comprise: respect for patient's preferences, information and education, access to care, emotional support, involvement of family and friends, continuity and transition, physical comfort, and coordination of care.[34] The domains of the Rainbow Model of Integrated Care are characterized by three categories: scope, types, and enablers of integration. Scope comprises person- and population-based care; types include system, organizational, professional, and clinical integration; and enablers include functional and normative

integration.[30 31] We performed a combination of deductive and inductive thematic content analysis using ATLAS.TI software (ATLAS.ti, version 1.6.0, GmbH; Berlin, Germany).[35] The deductive approach encompassed the creation of provisional categories derived a priori from the conceptual models. This was embedded with an inductive approach, which consisted in adapting these provisional categories into new categories and themes based on the content of the transcripts.[32 35] Two research trainees (RS, NK) independently performed the analysis and then discussed the emerging codes in detail until they achieved a consensus on emergent categories and themes. The thematic analysis was then revised by other research team members (EE, YC, FG, CB, JT, MM). The results of the study were discussed and cross validated with community stakeholders.

Patient and Public Involvement:

Patients have been actively engaged and accepted to participate in the study. The study results will be shared with the community members via CHBSSJB.

RESULTS

Table 1 presents the demographic profile of the 14 participants. Among them, four were working as health care providers who attended the dental clinic as patients for their treatments. The following six themes were generated from our thematic analysis.

1. Enhanced accessibility: Participants highlighted the impact of the integration of oral health into primary health care in facilitating the access to oral health care in terms of the easily accessible location of the dental clinic as well as its proximity within the CMC. Most of the patients perceived colocation as expedient, especially in case of complications and emergencies.

> *I love how it's [location of the clinic] two in one, like almost ... I know elsewhere it's completely separate.* (Participant 3)

I think it would be better to be close just in case sometimes complications do happen, you know it's low chance but it does happen so. (Participant 4)

They also valued the provision of free oral health care services within integrated health care.

*[dental services are covered] It makes a difference ... I take advantage of it ... I know it's there ... that's why I always come. (*Participant 11)

[fact that the treatments are free] It's the best thing ever! I love it! (Participant 3)

Participants also appreciated referral mechanisms of integrated care at the CBHSSJB organization. These referral mechanisms facilitated provision of specialized dental treatments by the linkage of primary health care to secondary or tertiary levels of health care.

I love how [the orthodontic service] has weekend visits so we don't have to miss work, most of the time I bring my kids. (Participant 3)

Patients acknowledged the need for better care coordination to tackle the long waitlists and to enable follow-ups. They also linked the problem of long waitlists with the limited number and non-permanency of dental care providers. Nonetheless, they valued the competencies of dental care providers in providing quality dental treatments.

My son came once then they never called back ... I did the fill-up sheet ... they contacted me 3 months later... and it was like a pain no. 5 .... and the time when we got here, they had to pull out his tooth (Participant 13)

The waiting lists and I don't think they are being called! I saw that on Facebook that people complain that .... they made appointments for them because they were in pain and there is still no call. (Participant 1)

I think ... we would ... just need another dentist. Because that's what keeps the long list. (Participant 6)

2. Creating supportive environment: Patients expressed the importance of enabling the care, especially for those with dental fear and anxiety, by creating a supportive environment at the

clinic. They preferred the dental clinic environment and oral health care team to be more welcoming and empathetic, which in turn can provide psychological support for them.

> *Yeah, the approach, the environment. You know the… positivity in the room. And here like I said they walk in and they're terrified. They won't even open their mouth.* (Participant 4)

> *It needs to be behavior: "Hi, how are you? When was the last time you saw the dentist?" ... To be more humane, more sympathetic. It will be very nice for someone to come ... instead of filling the form, to talk with the receptionist and to leave with an appointment ... that's ideal.* (Participant 13)

3. Building trust through shared decision making: Participants highlighted the importance of including patients in integrated care by engaging them in shared treatment decision making. Most of the patients recognized the value of information given by oral health care providers on treatment options and respecting their choices and preferences.

> *To be engaged in the treatments, some do and some don't. I had a bad experience with my one dentist ... The other one saying, "Ok if that's the way you want it." Then they'll just tell us, "This is what's gonna happen if you do it this way."* (Participant 4)

Furthermore, participants expressed that shared decision making reinforced building trust with the health care providers and improved the quality of care.

> *I think empowering the person to take part in the process, is not a bad thing. It actually establishes more of a relation—trust.* (Participant 5)

4. Appreciation of public health programs: Participants appreciated the continuity of care via CBHSSJB public health programs, which linked promotive and preventive oral health care to primary health care. These public programs included daycare- and school-based oral health programs for children and *Â Mashkûpimâtsît Awash* program for pregnant mother and

child care where promotive and preventive dental services were offered by dental and non-dental care providers.

My grandson is in kindergarten now … They [dental care providers] do some kinds of things at the school … They just teach him how to brush, they take the big teeth model and they teach them to use the brush … and they give them little toothbrushes in packages. (Participant 7)

5. *Raising oral health awareness*: Patients discussed lack of oral health awareness among the community residents. They expressed the need to promote oral health and increase oral health literacy via creating awareness programs and engaging parents in oral health education.

I think, for me … I learned how to take care of my teeth at home with my parents. (Participant 9)

*The parents … should be, I think it's maybe the number one spot. [Some of the parents should be educated more?] Yes. Cause I know some parents have dropped out of school very early and they didn't go through a lot of what indicate a parent when it's, like I said … the dentist visits the schools… and a lot of parents don't have that. (*Participant 4)

Patients proposed novel ideas for awareness campaigns via radio, television, social media, and short videos and also during social events such as health nights (youth awareness event), youth festivals, and sports events.

Videos, short videos like showing someone brushing their teeth like two seconds of that … flossing and then a really nice smile …. different products that could be used, just like … two-minute video … the beginning of the video to make it like that interesting … it can go on there … they can share it. (Participant 13)

Here it's sports, hockey—to advertise … It would be very helpful. People might not listen but you know it gets in their heads. (Participant 4)

6. Growing cultural humility among health care providers: Participants appreciated having Indigenous people among dental teams and hearing Indigenous language during provision of care. Patients also highly valued non-Cree health professionals' interest in learning their culture, traditions, and language by attending cultural activities and traditional ceremonies that helped them in developing affinity and building trust with the community. They also praised non-Indigenous care providers' attempts to learn and speak Indigenous language to make them feel comfortable during treatment.

I like that [dental care providers] like to learn. Like they go with the family when they go in the bush or whenever, to learn. Or to the gravel pit … There's lots of things you can learn over there. They're always doing stuff … (Participant 8)

Even the dentists. They tried the Cree [Cree word] "keep your mouth opened" and they're amazing! (Participant 3)

DISCUSSION

It has been two decades since the concept of PCC was first introduced to integrated care.[36] Shaw et al. identify PCC as a crux of integrated care and recommend including the patient's perspective as an organizing principle of service delivery.[36] To our knowledge, this study is the first worldwide research that explored the patients' perspective in regard to the integration of oral health care in an Indigenous primary health care organization.

Study findings demonstrate that these patients valued the integration of oral health care in primary health care in regard to colocation, free oral health care services, coordination, and continuity of care. They highlighted the importance of respecting their perspectives in clinical decision making, integrating Indigenous personnel in dental teams, optimizing care

coordination, providing a supportive environment, and oral health promotion. The emphasis on culturally sensitive care, development of a more supportive environment, and parental engagement for oral health promotion were also linked to addressing the historical impacts such as intergenerational trauma, loss of cultural practices, fear and mistrust, and loss of parenting skills.

We used Picker's principles of PCC for analyzing the results due to their relevance, comprehensiveness, and ability to conceptualize various elements of PCC.[37] Our findings support these principles as essential elements in delivering PCC in integrated oral health care[34] (Table 2). According to the literature, the patient is a focal point of integrated care.[38 39] Singer et al. defined integrated patient care and developed a framework based on this definition: "patient care that is coordinated across professionals, facilities, and support systems; continuous over time and between visits; tailored to the patients' needs and preferences; and based on shared responsibility between patient and caregivers for optimizing health".[39] Our findings emphasizing the significance of care coordination, continuity of care, shared decision making, and the need for patients' health awareness in PCC are consistent with the results of research studies in other health care disciplines in Australia, the United States, and various European countries.[38 40-42] This can suggest that the key features of PCC are the same in integrated health care irrespective of patients' profile, their type of health problems, and the nature of the health care organization. Similarly, Goodwin et al. compared seven case studies on successful integrated health and social service programs for people with complex needs in seven different countries: Australia, Canada, the Netherlands, New Zealand, Sweden, the United Kingdom, and the United States.[43] All these programs have incorporated PCC by engaging patients and caregivers, and identify PCC as the basis for implementing integrated care programs.[43] Accordingly, our results align with a culturally sensitive community-based integrated care Te Whiringa Ora (Care Connections) program in

New Zealand for rural and Indigenous chronic patients in emphasizing culturally relevant PCC by engaging patients and family members.[43 44] Our study results are also consistent with the evidence on valuing the role of Indigenous care providers in delivering PCC, including the Te Whiringa Ora program.[44 45]

Our results demonstrating the value of clinical shared decision making and supportive environment as key features of PCC are coherent with the systematic review and original research conducted by Mills et al. on PCC in general dental practice and from both care providers' and patients' perspectives.[3 46] Moreover, our results are also underpinned by the recommendation of the Department of Health Resources and Services Administration in the United States and other studies on the need for integration of dental and medical care and the importance of the colocation in achieving success in PCC.[17 42]

The themes from our study support the results of the comprehensive scoping reviews and original research conducted by Harnagea et al. showing the validity of Rainbow framework in term of domains (Table 3) and facilitators of integrated care including culturally relevant services and existence of public oral health programs.[17 21] Our study also identified barriers to integration similar to those identified by Harnagea et al. including human resource issues such as lack of trained dental care providers.[17 21]

These results should be interpreted within the consideration of few limitations. Firstly, the study included a small sample of patients visiting the Cree dental clinics. This may have influenced the study results since it didn't include the perspectives of those who are not using dental services. Secondly, few males participated in the study. This could be explained by the fact that women more use dental services than men.[47-50] Finally, though the qualitative approach is not intended for generalizing results, the study participants represented a degree of heterogeneity in terms of demographics and oral health status. The focus on a specific

setting and organization in this qualitative study generated rich information that prepares the ground for further research on the integration of oral health into primary health care.

CONCLUSION

Patients at CBHSSJB acknowledged incorporation of PCC in integrating oral health into primary health care and expressed the need to further strengthen the clinical and organizational integration. Our results support that fostering PCC can improve integrated health care performance.

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TABLES

Table 1. Sociodemographic characteristics of participants (n=14).

Characteristics	No. participants
Gender	
Male	2
Female	12
Age, years	
31-40	7
41-50	3
51-60	4
Ethnicity	
Cree	13
Non-Cree	1
Employment	
Employed	13
Non-employed	1

Table 2. Interconnections between the Picker's Principles of PCC[32] and patient-centered integrated oral health care as reported by Cree patients.

Themes	Picker's Principles
Theme 1. Enhanced accessibility	• Access to care • Coordination of care
Theme 2. Creating supportive environment	• Respect for patient's preferences • Emotional support • Physical comfort
Theme 3. Building trust through shared decision making	• Respect for patient's preferences • Information and education
Theme 4. Appreciation of public health programs	• Continuity and transition
Theme 5. Raising oral health awareness	• Information and education • Involvement of family and friends
Theme 6. Growing cultural humility among health care providers	• Respect for patient's preferences

Table 3: Interconnections between the dimensions of integrated care demonstrated in Rainbow Model[29 30] and patient-centered integrated oral health care as reported by Cree patients.

Themes	Key features of each dimension for PCC reported by Cree Patients	Domains of integrated care (Rainbow Model of Integrated Care)
Theme 1. Enhanced accessibility	• Colocation	Organizational
	• Financial mechanisms	Functional
	• Interprofessional collaboration	Organizational
	• Professional competencies	Professional
	• Inadequate human resources	Organizational
Theme 2. Creating supportive environment	• Creating supportive environment	Organizational
Theme 3. Building trust through shared decision making	• Interaction between professional and client	Clinical
	• Trust	Organizational
Theme 4. Appreciation of public health programs	• Continuity of care	Clinical
	• Public oral health programs	System
Theme 5. Raising oral health awareness	• Parents as oral health promotion champions	Clinical
Theme 6. Growing cultural humility among health care providers	• Linking cultures	Normative

FOOTNOTES:

- **Authors' Statement**

RS contributed to study concept and design; acquisition, data collection, reviewing transcripts, coding, analysis and interpretation of data; drafting and critical revision of the manuscript.

YC contributed to acquisition, data collection, revising analysis and critical revision of the manuscript.

NK contributed to study concept and design; acquisition, reviewing transcripts, coding, analysis and interpretation of data; and drafting the manuscript.

FG contributed to acquisition, data collection, revising analysis and critical revision of the manuscript.

CB contributed to acquisition, revising analysis and critical revision of the manuscript.

MM contributed to acquisition, revising analysis and critical revision of the manuscript.

JT contributed to study concept and design; acquisition, revising analysis and critical revision of the manuscript.

EE contributed to study concept and design; acquisition, data collection, revising analysis and critical revision of the manuscript.

All authors read and approved the final manuscript and are accountable for all aspects of the manuscript.

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- **Competing interests** None declared.
- **Patient consent** Not required.
- **Ethics approval** The study received ethical approval from the Institutional Review Board of the Université de Montréal numbered 15-130-CERES-P and permission from the Research Committee of the Cree Board of Health and Social Services of James Bay.
- **Provenance and peer review** Not commissioned; externally peer reviewed.
- **Data sharing statement** No additional data are available from this study.

Reporting checklist for qualitative study.

Based on the SRQR guidelines.

Instructions to authors

Complete this checklist by entering the page numbers from your manuscript where readers will find each of the items listed below.

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	Reporting Item	Page Number
#1	Concise description of the nature and topic of the study identifying the study as qualitative or indicating the approach (e.g. ethnography, grounded theory) or data collection methods (e.g. interview, focus group) is recommended	1
#2	Summary of the key elements of the study using the abstract format of the intended publication; typically	4

		includes background, purpose, methods, results and conclusions	
Problem formulation	#3	Description and signifcance of the problem / phenomenon studied: review of relevant theory and empirical work; problem statement	7-8
Purpose or research question	#4	Purpose of the study and specific objectives or questions	8
Qualitative approach and research paradigm	#5	Qualitative approach (e.g. ethnography, grounded theory, case study, phenomenolgy, narrative research) and guiding theory if appropriate; identifying the research paradigm (e.g. postpositivist, constructivist / interpretivist) is also recommended; rationale. The rationale should briefly discuss the justification for choosing that theory, approach, method or technique rather than other options available; the assumptions and limitations implicit in those choices and how those choices influence study conclusions and transferability. As appropriate the rationale for several items might be discussed together.	8 and 9
Researcher characteristics and reflexivity	#6	Researchers' characteristics that may influence the research, including personal attributes, qualifications / experience, relationship with participants, assumptions and / or presuppositions; potential or actual interaction between researchers' characteristics and the research questions, approach, methods, results and / or transferability	10

Context	#7	Setting / site and salient contextual factors; rationale	9
Sampling strategy	#8	How and why research participants, documents, or events were selected; criteria for deciding when no further sampling was necessary (e.g. sampling saturation); rationale	9
Ethical issues pertaining to human subjects	#9	Documentation of approval by an appropriate ethics review board and participant consent, or explanation for lack thereof; other confidentiality and data security issues	9
Data collection methods	#10	Types of data collected; details of data collection procedures including (as appropriate) start and stop dates of data collection and analysis, iterative process, triangulation of sources / methods, and modification of procedures in response to evolving study findings; rationale	9
Data collection instruments and technologies	#11	Description of instruments (e.g. interview guides, questionnaires) and devices (e.g. audio recorders) used for data collection; if / how the instruments(s) changed over the course of the study	10
Units of study	#12	Number and relevant characteristics of participants, documents, or events included in the study; level of participation (could be reported in results)	9
Data processing	#13	Methods for processing data prior to and during analysis, including transcription, data entry, data management and	10

		security, verification of data integrity, data coding, and anonymisation / deidentification of excerpts	
Data analysis	#14	Process by which inferences, themes, etc. were identified and developed, including the researchers involved in data analysis; usually references a specific paradigm or approach; rationale	10
Techniques to enhance trustworthiness	#15	Techniques to enhance trustworthiness and credibility of data analysis (e.g. member checking, audit trail, triangulation); rationale	10
Syntheses and interpretation	#16	Main findings (e.g. interpretations, inferences, and themes); might include development of a theory or model, or integration with prior research or theory	11-14
Links to empirical data	#17	Evidence (e.g. quotes, field notes, text excerpts, photographs) to substantiate analytic findings	11-14
Intergration with prior work, implications, transferability and contribution(s) to the field	#18	Short summary of main findings; explanation of how findings and conclusions connect to, support, elaborate on, or challenge conclusions of earlier scholarship; discussion of scope of application / generalizability; identification of unique contributions(s) to scholarship in a discipline or field	15-17
Limitations	#19	Trustworthiness and limitations of findings	17
Conflicts of interest	#20	Potential sources of influence of perceived influence on study conduct and conclusions; how these were	24

		managed	
Funding	#21	Sources of funding and other support; role of funders in data collection, interpretation and reporting	24