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ORIGINAL ARTICLE

BIRTH ISSUES IN PERINATAL CARE WILEY

Giving birth in a good way when it must take place away from home: Participatory research into visions of Inuit families and their Montreal-based medical providers

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Abstract

Background: Transferring pregnant women out of their communities for childbirth continues to affect Inuit women living in Nunavik—Inuit territory in Northern Quebec. With estimates of maternal evacuation rates in the region between 14% and 33%, we examine how to support culturally safe birth for Inuit families when birth must take place away from home.

Methods: A participatory research approach explored perceptions of Inuit families and their perinatal healthcare providers in Montreal for culturally safe birth, or "birth in a good way" in the context of evacuation, using fuzzy cognitive mapping. We used thematic analysis, fuzzy transitive closure, and an application of Harris' discourse analysis to analyze the maps and synthesize the findings into policy and practice recommendations.

Results: Eighteen maps authored by 8 Inuit and 24 service providers in Montreal generated 17 recommendations related to culturally safe birth in the context of evacuation. Family presence, financial assistance, patient and family engagement, and staff training featured prominently in participant visions. Participants also highlighted the need for culturally adapted services, with provision of traditional foods and the presence of Inuit perinatal care providers. Stakeholder engagement in the research resulted in dissemination of the findings to Inuit national organizations and implementation of several immediate improvements in the cultural safety of flyout births to Montreal.

Conclusions: The findings point toward the need for culturally adapted, family-centered, and Inuit-led services to support birth that is as culturally safe as possible when evacuation is indicated. Application of these recommendations has the potential to benefit Inuit maternal, infant, and family wellness.

KEYWORDS

childbirth, cultural safety, indigenous, participatory research, women's health

1 | INTRODUCTION

Access to family-centered perinatal healthcare is an ongoing challenge for Indigenous families living in rural and remote communities in Canada.[1] Evacuation for childbirth—the practice of transferring pregnant women out of their communities for birth—is the reality for many, and not always because of obstetric indications. Separating women from their families for weeks or even months, maternal evacuation significantly affects women in Inuit Nunangat, the Arctic homeland of Inuit in Canada. In Nunavik, the Inuit territory in Northern Quebec, 14%–33% of pregnant Inuit women are evacuated to Montreal for childbirth.[2] In Nunavik, women with medically low-risk pregnancies can choose to birth in local maternities—midwife-run birth centers staffed by Inuit and non-Inuit midwives. This contrasts with elsewhere in Inuit Nunangat, where in some communities 100% of births, regardless of the medical risk of the pregnancy, are transferred outside the communities in the absence of local birthing facilities.[3]

While facilitating access to perinatal care, evacuation comes at a well-known cost. Research spanning five decades documents wide-ranging negative impacts of evacuation on mothers, their families, and communities.[3] To our knowledge, prior research has yet to map and operationalize alternative perinatal service models grounded in Inuit needs and visions. In this article, we document the visions of culturally safe birth put forward by Inuit families and their Qallunaat (non-Inuit) perinatal providers in Montreal. The findings presented here are part of a longitudinal participatory project to support community-based childbirth in Nunavik and culturally safe birth—giving birth in a good way—for families who must be transferred to Montreal.

2 | METHODS

2.1 | Research setting

Health services in Nunavik are divided between the Hudson and Ungava coasts, with small health centers in communities ranging from populations of 200 to 2700.[4] On the Hudson coast, pregnant women have access to a community hospital in Puvirnituq and three maternities in Puvirnituq, Inukjuak, and Salluit.[2] Services for women on the Ungava coast includes a community hospital and maternity in Kuujjuaq. Indeed, the availability of Inuit-led midwifery services in Nunavik is unique. In other regions of Inuit Nunangat where Inuit-led midwifery is limited or nonexistent, all pregnant women irrespective of the medical risk of the pregnancy, are evacuated outside their communities to southern hospitals for childbirth. By contrast, in Nunavik, it is mainly women with medically high-risk pregnancies who are transferred to a tertiary hospital in Montreal.[2] A local accommodation center houses them along with other Inuit patients accessing medical services. In addition to housing, the accommodation center also offers transportation, in-house medical liaisons (e.g., nurses), and interpretation services (D. Lefebvre, personal communication, March 2019).

2.2 | Study participants

Between April and November 2021, we used purposive sampling to recruit Inuit families staying at the accommodation center and perinatal providers working at the center and hospital. The researchers recruited four Inuit women evacuated to Montreal and their medical escorts, one woman and three men. The women participants ranged in age from 18 to 45 years, two of them about to give birth to their first child. One woman had previously given birth at her local birthing center in Nunavik, and another had experienced childbirth mid-flight in the air ambulance during a previous evacuation. There was a wide range in gestational age: 15–40 weeks. All three Inuit male participants were younger than 35 years of age. The participants' length of stay in Montreal ranged from several days to 2 months at the time of the study.

We also recruited 24 nurses, physicians, midwives, and medical residents working at the accommodation center and the tertiary care hospital's antenatal clinic, birthing center, and antepartum or postpartum units.

2.3 | Fuzzy cognitive mapping

Participants shared their visions of giving birth in a good way through fuzzy cognitive mapping (FCM).[5] This uses graphs to represent concepts (nodes) linked through causal relationships (arrows). The maps identify concepts impacting an issue and the causal links between them. Maps can use weights to describe different levels of influence of each cause on the corresponding outcome.[6] FCM's accessible and relatively universal principles have facilitated participatory research among First Nations[7] and Inuit[8] in Canada, and marginalized communities in Mexico,[9] Uganda[10] and Nigeria.[11]

2.4 | Drawing the maps

The question "what do Inuit families need to give birth in a good way in Montreal?" guided the mapping sessions.

We invited families and providers to create maps to answer the guiding question and identify their priority action areas. The lead author (HS) and an Inuk researcher (ST) facilitated mapping sessions in English and Inuktitut. Guided by participants, facilitators drew the concepts and arrows mentioned by participants on a whiteboard. In groups of one to four participants, Inuit made five maps and providers 13 maps. We employed conventional numerical weighting with providers to identify the perceived strength of causal relationships in the map using a scale of one for the weakest to five for the strongest. Previous mapping in Nunavik demonstrated that weighting limited communication with Inuit participants.[8] Therefore, for Inuit participants we opted for weighting based on Harris' discourse analysis. This operator-independent method assesses the weight of relationships repeated across multiple unweighted maps.[12] A useful method in intercultural contexts unsuited to participant-weighting, this adaptation of the original approach to discourse analysis derives structural meaning from the frequency of discourse elements: the more frequently a causal relationship is mentioned by participants, the stronger its causal meaning will be.[13]

2.5 | Analyzing the maps

We digitized hand-drawn maps using the software yEd.[14] In each unweighted map we assigned a value of one where a relationship between two concepts was present, and a value of zero when absent. We then used fuzzy transitive closure on each map to calculate the net influence each concept had on all other concepts either through direct or indirect relationships.[15] Transitive closure transforms a map into a network, with each relationship conditioned by surrounding relationships, and assumes that an indirect relationship between two concepts is only as strong as the weakest weight on the path between them.

To facilitate the comparison of maps between participant groups, we used inductive thematic analysis to condense concepts into categories.[16] We calculated the cumulative weight for each category-level relationship by summing the weights derived from fuzzy transitive closure on the concept-level relationship and then dividing all category-level weights by the maximum value. A weight of one indicates the strongest relationship and weights closer to zero indicate weaker relationships. We calculated out-degree and in-degree centrality scores to determine the most important causal factors and outcomes in each map, respectively.[17]

We used the categories and weights to construct a final reduced category map for Inuit participants and one for providers that included cumulative net influences ≥0.20. We validated the standardized maps through member-checking sessions with three Inuit and three care providers.

TABLE 1 Pattern matching table of recommendations for giving birth in a good way by Inuit and their medical providers.

Category	Inuit	Providers
Feeling safe & at home	1.00*	0.55*
Financial & material security	0.70	0.04
Family presence & support	0.50*	0.39*
Family is empowered & engaged in care	0.50	1.00*
Childcare services	0.40	0.08
Country foods	0.40	0.14
Care in Inuktitut	0.40*	0.36
Inuk midwife	0.40*	0.14*
Families understand health condition & care plan	0.20	0.37
Inuit culture & tradition	0.20	0.23
Mother and baby are healthy & well	0.10	0.31
Culturally safe & knowledgeable staff	0.10	0.46*
Integrated postpartum care	0.10	0.07
North & South medical teams work well together	0.10	0.12
Culturally adapted & Inuit-led services	0.10	0.21
Continuity of care	0.00	0.15
Prenatal education & preparation	0.00	0.18*

* Indicates a high priority recommendation as identified by study participants.

3 | RESULTS

Giving birth in a good way had multiple protective and supportive elements for both Inuit and their providers. The lead author developed a first level of themes using a pattern-matching table[5(p. 3827)] to arrange concepts with similar meanings into 17 corresponding categories of actionable concepts (Table 1). In the table, an asterisk indicates a high-priority recommendation.

Figure 1 depicts the reduced map for Inuit participants. Constructed from five maps made by eight individuals, it contains 11 nodes and 16 edges. The perinatal providers' map illustrates the combined perspectives of 24 staff members across 13 maps, with 11 nodes and 17 edges (Figure 2).

3.1 | Families feel safe and at home

Participants acknowledged the stress of staying at the accommodation center and made several recommendations

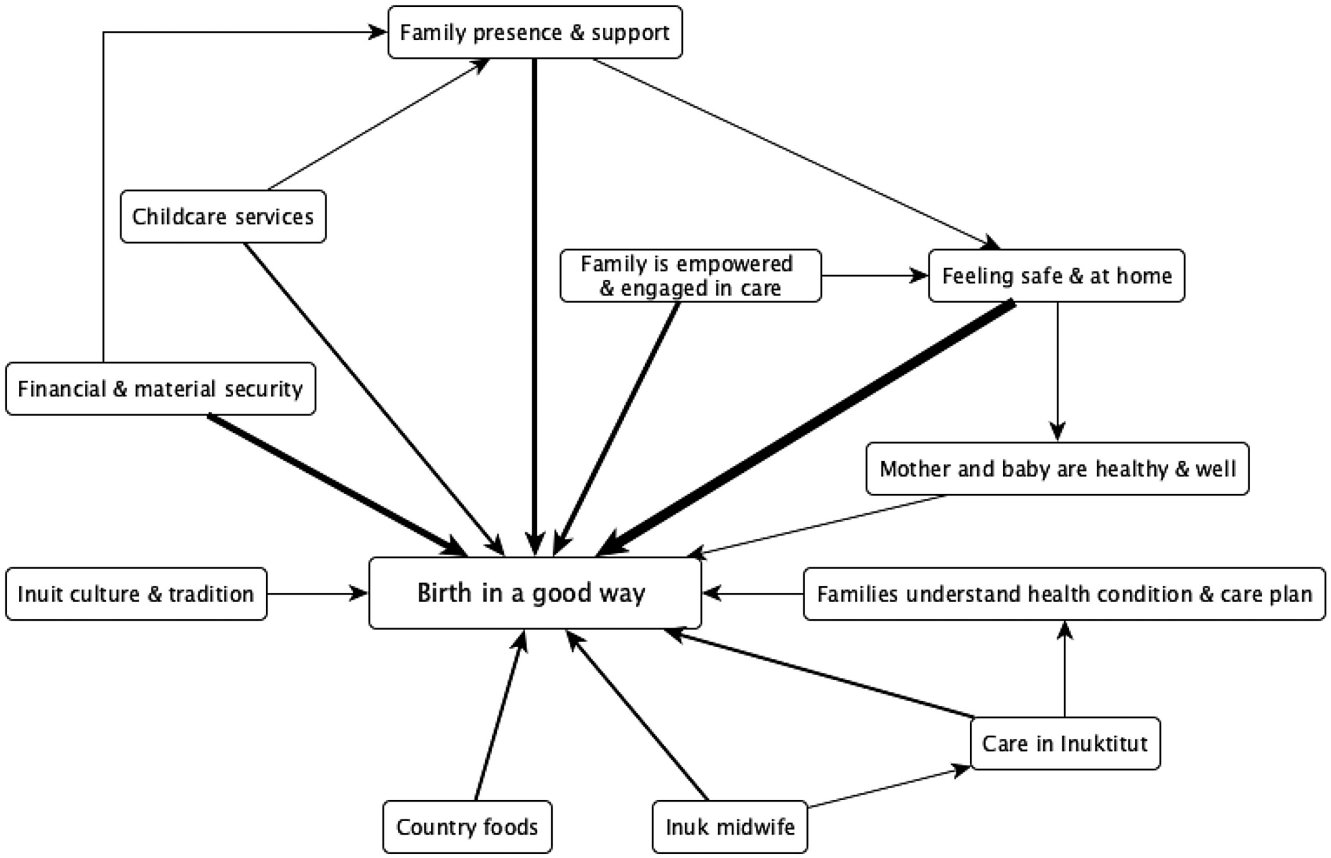

FIGURE 1 Inuit fuzzy cognitive map of giving birth in a good way in Montreal. Relationships with a cumulative net influence of ≥0.20 are indicated, with thicker edges indicating stronger relationships.

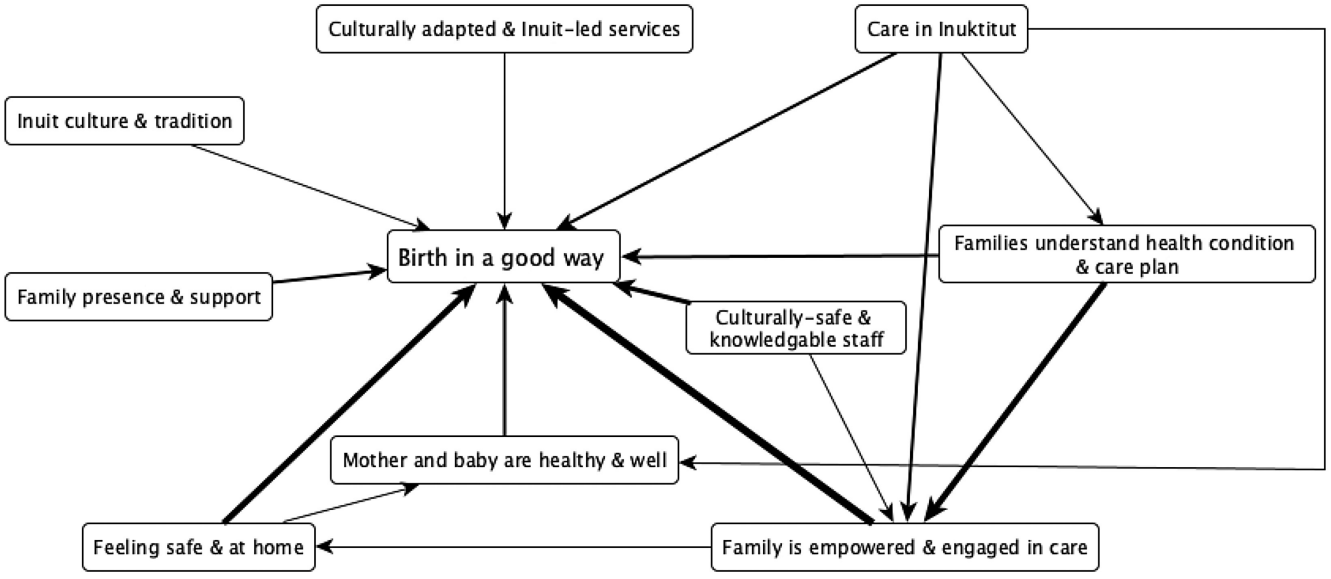

FIGURE 2 Medical provider fuzzy cognitive map of giving birth in a good way in Montreal. Relationships with a cumulative net influence of 0.20 are indicated, with thicker edges indicating stronger relationships.

for improvements. They felt the center was unsuitable to accommodate families for long durations. Small rooms, uncomfortable beds, lack of access to internet, and bathtubs were often linked to family stress and discomfort. They frequently cited security issues, illustrated by a mother's testimony:

"They [housekeeping staff] can just barge in any time they want, the lock doesn't even work because the housemaids can come in anytime they want... we had to lock our door with a chair so we could hear them coming."

In addition to the discomforts of institutional housing, participants spoke of the importance of feeling at home as a protective factor for birthing in a good way (Inuit map 1.0, provider map 0.55, on a scale of 0–1). Participants suggested addressing these challenges by establishing a family transit house in Montreal: a shared, home-like environment where families have autonomy over household tasks and childcare. Inuit who must travel outside their communities for childbirth in the Nunavik maternities have access to family-centered transit housing, giving them a point of comparison when traveling to Montreal for birth.

3.2 | Family is present and supportive

Family presence throughout women's stays in Montreal was a strong facilitator of birth in a good way for both Inuit and providers (0.50 and 0.39, respectively). In addition to the presence of partners and grandparents, Inuit also emphasized the importance of being able to bring along older siblings to establish family bonds with the newborn. A mother described the significance of older children's presence throughout the perinatal period and birth of their sibling:

"I want him to be there for every step of the way, from seeing the way my body grows to seeing the baby being born and developing that special connection with them."

Participants cited a lack of financial support as the principal barrier to family presence. The current transportation policy allows for one adult escort to accompany a mother to Montreal for childbirth. Families also identified the hospital visitor policy (two adults maximum) as a barrier to family-centered birth, contrasting their isolated and lonely experiences of birth in Montreal with those of women surrounded by family in the Nunavik birthing centers.

3.3 | Families have adequate financial & material support

Inuit advocated for additional financial and material support, especially for families evacuated for extended periods of time (Inuit map 0.70, provider map 0.04). While current policy covers transportation, lodging, and meals for one escort, women who bring down additional family members must bear the exorbitant cost. In addition to these expenses, the accompanying family must frequently miss out on wages. Inuit recommended more financial assistance for personal transportation in the city, more food coupons, and funds to bring down family, as well as newborn items (clothing, diapers, etc.). They described financial assistance as the strongest facilitator for family presence during childbirth.

3.4 | Families are empowered and engaged in care

Participants frequently mentioned that staff should engage families in their medical decision-making and care (Inuit 0.50, providers 1.0). For providers, family empowerment and engagement were underpinned by compassion and empathy. Phrases such as "trauma-informed," "culturally safe," and "anti-racist" were used to describe approaches providers believed would maximize autonomy and choice in care. For providers, this engagement was contingent upon families understanding their health condition, giving informed consent, and collaborating the care plan. This was echoed by families who described feeling that their care was outside their control and a desire to be more involved in decision-making. Providers advocated for patient education materials and consent forms in Inuktitut to increase family engagement.

Both groups advocated for more respect for families' wishes in childbirth. Recommendations included allowing women to move freely during labor, choose their birthing position, and have family members assume traditionally significant roles that help connect the newborn to the community, such as the saunik or namesake and cutting the umbilical cord.

3.5 | Staff is competent and knowledgeable about Inuit health & culture

Incidents of staff racism and disrespect arose frequently during mapping sessions. Inuit described some staff as being "mean" or "racist," and lacking compassion at the accommodation center. Their accounts shed light on the challenges they face:

"They [security guards] always have to check our pockets. I was even asked to open my water bottle because they thought it was alcohol. I was being belittled... they assumed that all Inuit are alcoholics." (Inuk mother).

"To be honest I had better treatment when I was a prisoner than when I was at [the accommodation center] ... The human rights things are out the window when you stay there" (Inuk father).

Such incidents are significant barriers to family well-being, and participants believed they stem from a lack of understanding of Inuit culture, colonialism, and the stressful reality of evacuation. Providers at both the accommodation center and hospital advocated to address these issues by training on Inuit health and culture, anti-racism, and cultural safety (Inuit map 0.10, provider map 0.46).

3.6 | Care in Inuktitut

The ability to speak Inuktitut is central to Inuit (0.40) and provider (0.40) perceptions of birthing in a good way. Although most families speak English, participants acknowledged that language barriers contributed to poor communication, misunderstandings, and tension between staff and families. The limited Inuktitut interpreters available was frequently cited as a significant barrier. Both Inuit and providers recommended hiring more interpreters at the accommodation center and hospital.

3.7 | Giving birth with an Inuk midwife

All participants recommended having Inuit midwives to offer prenatal and intrapartum care at the hospital (Inuit map 0.40, provider map 0.14). A mother described the unique support she received from her Nunavik-based Inuk midwife despite being transferred to Montreal, "Every time I spoke to the [Community] midwife I felt more safe." Both families and providers believed Inuit midwives play a critical role in ensuring a healthy pregnancy and a culturally safe birth experience, bridging the gap between traditional Inuit ways and western biomedical practice.

3.8 | Eating healthy, country foods

Fresh foods and traditional country foods figured predominantly in participant visions for good birth away from home, with caribou and beluga seen as key to maintaining women's health in the perinatal period (Inuit map 0.40, provider map 0.14). Yet, both Inuit and providers mentioned that the food provided at the accommodation center was of poor quality. Lacking access to country foods in the south, families must transport their own—a costly endeavor few can afford. Participants suggested that country foods be made available at the accommodation center and in hospital.

3.9 | Being surrounded by Inuit culture

Participants recommended offering social activities and cultural programs for families (Inuit 0.20, providers 0.23). Inuit described that between medical appointments at the hospital and waiting at the accommodation center, they felt stuck in limbo. They suggested sewing workshops, elder-led support services, and outdoor activities.

3.10 | Health services are culturally adapted and Inuit-led

Families described the cultural gaps between themselves and non-Inuit staff as a great stressor and felt that services provided by Inuit would be more attuned to their needs. Of particular concern for providers was the lack of Inuit case-workers who could provide culturally appropriate support for families under child protection services supervision.

Other recommended services included offering Inuit-led childcare services (Inuit map 0.40, provider map 0.08) and postpartum care at the accommodation center (Inuit 0.10, providers 0.07), having flexible prenatal appointments, and hiring more Inuit staff including mental health workers and patient navigators (Inuit 0.10, providers 0.21) at the hospital and accommodation center.

3.11 | Families receive prenatal education & preparation

Providers advocated for more perinatal education and support for families across the care pathway. They suggested that prenatal classes be offered at the accommodation center, as well as tours of the hospital. The significance of perinatal support and education was demonstrated in a first-time mother's account of her postpartum experience in hospital:

"For my first pregnancy I didn't know what to expect, I didn't know what I needed. It was stressing for me because after birth I wanted to feel comfortable. I didn't have those [menstrual pads and underwear] in hand and I didn't know I would be at the hospital so long."

3.12 | Mother and baby are healthy and well

Maternal-child wellness was important to participants' visions of birth in a good way (Inuit map 0.10, provider map 0.31). They regarded maternal-child physical, emotional, and spiritual wellness as intimately linked to a good birth

experience. Many Inuit also linked other concepts that contribute to birth in a good way to enhanced maternal-child wellness. While providers regarded wellness as a contributing factor, the centrality measure in the Inuit map pointed toward this being more of an outcome for Inuit (net influence of outgoing arrows summed 0, while the sum of incoming arrows was 0.40).

3.13 | Integrated knowledge translation and changes during the research

As a participatory research venture, stakeholders were highly engaged in the process. This led to several initiatives addressing the findings of the research even before its completion. For example, a group of providers and Inuit mothers developed a proposal that received funding to implement four shared recommendations to support culturally safe birth in Montreal. They include a family-centered visitor policy during childbirth, provision of country foods at the accommodation center and in hospital, a cultural safety perinatal educational program for Qallunaat staff led by Inuit midwives, and display of Inuit art on the hospital units.

4 | DISCUSSION

FCM facilitates the comparison of diverse perspectives on the same topic. We found several ways in which Inuit and Qallunaat perspectives intersect and diverge, and we discuss their relationship to the existing literature on the subject.

The theme of feeling safe and at home resonated with Inuit and providers, with the strongest positive influence on maternal-child wellness for both groups. This is also a high priority in other research on Indigenous maternal evacuation.[15] For most participants, this meant a family transit house. This could be due to the protective effects of family support and autonomy over one's living environment that a transit house could offer—a connection made by Inuit participants and elsewhere in the literature.[18] Albeit with lower scores in provider maps, participants regarded Inuit midwifery care as an important priority and a facilitator of safe birth. In addition to supporting maternal-child wellness, our findings suggest Inuit midwives play a key role in fostering family empowerment and ensuring continuity of care—another shared priority for Inuit and their providers, and a finding extensively documented in previous research.[2,18–20]

Inuit and provider views diverged on the need for financial and material support. Inuit felt financial support could free up more funds to bring down additional family members—a highly advocated priority documented elsewhere.[3(p. 7),18] The diverging views on unmet needs extended to other areas such as childcare services and traditional country foods. Addressing these inequities and other socioeconomic disparities has been at the center of Indigenous-led advocacy for perinatal wellness for decades.[18,20] Staff skills in cultural safety were a more pressing concern for providers than for Inuit. Echoing other research, our findings suggest that culturally safe encounters with well-trained providers can empower families, promote access to traditional perinatal practices, and improve overall maternal-child wellbeing.[17(p.125),21,22]

5 | LIMITATIONS

In addition to the general limitations of FCM,[5(p.3828)] particularly that this is a snapshot of current perspectives, interpreting concepts across cultural gaps adds complexity. We report here the mapping conducted in Montreal, thus including a disproportionate number of service provider maps. Additional mapping to collate Inuit community views is ongoing throughout Nunavik and will be reported separately. Our work focuses on Nunavik and does not offer comparisons with the rest of the Inuit Nunangat.

While Inuit participated in mapping sessions in English or Inuktitut, the final maps were translated into English, inevitably altering the meanings of certain concepts—a challenge documented in other intercultural settings.[9] The small number of Inuit maps also limits the reliability of the findings using Harris' discourse analysis and their generalizability to the views of all evacuated Inuit.[12] Moreover, the small number of Inuit participants relative to providers (Inuit $n=5$, providers $n=13$) further limits our interpretations of culturally safe birth, as it is Inuit who decide what constitutes cultural safety. The stressors of being away from home in the context of medically complicated pregnancies may explain the low level of Inuit participation. The research team made several assumptions, based on the mapping process and throughout the thematic analysis. Subsequent member-checking with map authors facilitated the intercultural analyses and supported our findings.[23]

6 | CONCLUSION

FCM was a useful and effective method for summarizing and comparing perspectives of culturally safe birth of Inuit and their providers. Our results outline a terrain of shared priorities from which to make concrete changes to health services, some of which are already underway. Where the

visions of Inuit diverge from those of their providers, FCM offers an opportunity to prioritize Inuit voices in health service redesign to ensure safe birth in as good a way as possible for all Inuit, even when it must occur thousands of kilometers away from home.

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DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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