Original Article

Locally delivered: Identifying factors sustaining rural Northern Ontario's remaining obstetric programmes – A qualitative study

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Abstract

Introduction: Over the past 2 decades, rural Northern Ontario has experienced widespread closure of obstetric care services, leaving only 9 sites operational. As a result, many pregnant persons in the region now face substantial travel times to access care, increasing the risk of adverse maternal and fetal outcomes. Understanding how the remaining obstetric programmes continue to operate within the same healthcare environment that has contributed to closures elsewhere in rural Northern Ontario offers insight into factors enabling programme sustainability.

Methods: A qualitative study design was used. Semi-structured interviews were conducted with physicians, nurses and administrators from the 9 rural Northern Ontario hospitals that continue to provide obstetrics. Interview guides were informed by previous research on rural obstetric closures and designed to explore the factors participants considered important to programme sustainability. Interviews were analysed using Braun and Clarke's thematic analysis framework to identify the supports, approaches and practices perceived to enable programme continuity.

Results: Twenty-three participants were interviewed. Analysis revealed 4 overarching themes participants perceived as important for supporting the continuity of rural obstetrics: (1) passion and commitment, (2) workforce capacity and sustainability, (3) collaborative systems and support and (4) adaptive and safe practices.

Conclusions: Sustainability factors identified in rural Northern Ontario's remaining obstetric programmes appear to address challenges linked to programme closures elsewhere, including workforce shortages, declining provider competence and limited structural support. Integrating these sustainability factors into programme design may strengthen current services, reduce risks of closure and guide re-establishment of obstetric care in communities where it has been lost.

Keywords: Fetal health, maternal health, Northern Ontario, obstetrics, programme sustainability, qualitative research, rural health services

Résumé

Introduction: Au cours des deux dernières décennies, le Nord rural de l'Ontario a connu de nombreuses fermetures de services obstétricaux, au point où seulement

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neuf sites demeurent en activité. Par conséquent, plusieurs personnes enceintes de la région doivent maintenant parcourir de longues distances pour accéder aux soins, ce qui augmente le risque d'issues défavorables pour la mère et le fœtus. Comprendre comment les programmes obstétricaux encore en place réussissent à fonctionner dans le même environnement de soins qui a mené à des fermetures ailleurs dans le Nord rural de l'Ontario permet de mieux cerner les facteurs qui favorisent leur pérennité.

Méthodes: Une étude qualitative a été réalisée. Des entrevues semi-dirigées ont été menées auprès de médecins, d'infirmières et d'administrateurs provenant des neuf hôpitaux ruraux du Nord de l'Ontario qui offrent encore des soins obstétricaux. Les guides d'entrevue s'appuyaient sur des recherches antérieures portant sur les fermetures de services obstétricaux en milieu rural et visaient à explorer les facteurs que les participants jugeaient importants pour assurer la pérennité des programmes. Les entrevues ont été analysées selon le cadre d'analyse thématique de Braun et Clarke afin de dégager les formes de soutien, les approches et les pratiques perçues comme favorisant la continuité des programmes.

Résultats: Vingt-trois participants ont été interviewés. L'analyse a fait ressortir quatre grands thèmes jugés importants pour soutenir la continuité des soins obstétricaux en milieu rural: (1) la passion et l'engagement; (2) la capacité et la pérennité de la main-d'œuvre; (3) les systèmes collaboratifs et le soutien; et (4) des pratiques adaptatives et sécuritaires.

Conclusions: Les facteurs de pérennité recensés dans les programmes obstétricaux encore en place dans le Nord rural de l'Ontario semblent répondre à des défis associés aux fermetures survenues ailleurs, notamment les pénuries de main-d'œuvre, l'érosion des compétences des fournisseurs de soins et le manque de soutien structurel. L'intégration de ces facteurs dans la conception des programmes pourrait renforcer les services actuels, réduire les risques de fermeture et guider le rétablissement des soins obstétricaux dans les communautés où ils ont été perdus.

Mots-clés: services de santé ruraux, obstétrique, santé maternelle, santé fœtale, pérennité des programmes, Nord de l'Ontario, recherche qualitative

INTRODUCTION

Over the past 2 decades, rural Northern Ontario has experienced widespread closure of obstetric care services.[1-4] In 1999, 20 rural hospitals across the region offered obstetrics; by 2025, only 9 remain.[1-3] As a result, many pregnant persons living in the rural North now face substantial travel times to give birth, with an estimated 636 travelling 1–2 h and 577 travelling 2–4+h each year.[4] These travel times limit access to care, increase the risk of adverse outcomes and create emotional and financial burdens for pregnant persons.[4,5]

The relationship between travel time and adverse outcomes is well established. For fetal health, residing more than 4 h from obstetric services is associated with a 3-fold increase in perinatal mortality, while living more than 2 h away is linked to higher rates of stillbirth, preterm birth and large-for-gestational-age deliveries.[5-8] For maternal health, delays in access are associated with a 2-fold increase in severe morbidity, compared to those with local access.[9,10] Beyond clinical risks, travel also imposes emotional and financial burdens. Pregnant persons who travel more than an hour for care are 7 times more likely to experience moderate-to-severe stress and often must pay out-of-pocket for transportation and accommodation.[5,6]

These impacts underscore the consequences of losing local obstetric access. Recent research examining obstetric programme closures in rural Northern Ontario has identified 3 factors contributing to service loss: (1) declining provider competence and confidence in obstetrics, (2) a shortage of obstetric health human resources and (3) limited system-level support for rural obstetrics.[3] Collectively, these challenges have created an environment in which sustaining rural obstetrics has become increasingly difficult.

Nine rural Northern Ontario hospitals continue to provide obstetrics, suggesting the presence of supports, approaches and practices that enable sustainability. By capturing the perspectives of healthcare providers and administrators involved in supporting these programmes, this study aims to identify factors underlying service sustainability. Understanding how these programmes remain operational, despite pressures that have contributed to closures elsewhere, may inform

efforts to strengthen current services, reduce risks of closure and guide re-establishment of obstetrics in communities where it has been lost.

METHODS

This qualitative study used semi-structured interviews to explore factors supporting the sustainability of obstetric programmes in rural Northern Ontario. Healthcare providers (physicians and nurses) and administrators from the 9 hospitals in rural Northern Ontario providing obstetrics were recruited using purposive sampling through professional networks. Study invitations were emailed and prospective participants received a study information letter and a consent form.

Interviews were conducted between June and August 2025 using a semi-structured interview, developed based on findings from a previous study on the factors contributing to rural obstetric programme closures.[2] To ensure contextual relevance, it was refined by a physician with over 30 years of experience providing obstetrics in rural Northern Ontario (EO). Questions explored participants' experiences supporting obstetrics and the enablers, challenges and strategies for maintaining continuity of service. All interviews were conducted via Zoom (Zoom Video Communications Inc., San Jose, CA, USA). Before each interview, verbal informed consent was obtained, including permission to audio-record. Upon completion, participants received a $100 honorarium.

Data were analysed using Braun and Clarke's thematic analysis framework.[11] In brief, members of the research team independently reviewed transcripts and generated codes using NVivo 14 (Lumivero, Denver, CO, USA). Codes were organised into themes, which were refined through discussion with the research team until consensus was reached. Thematic saturation was reached when the team determined that no additional themes emerged from the data, indicating that all thematic elements related to programme sustainability had been captured.

Ethics approval was obtained from the Lakehead University Research Ethics Board (#1471057).

RESULTS

Twenty-three participants were interviewed, representing 9 physicians, 7 nurses and 7 administrators from the 9 rural Northern Ontario hospitals providing obstetrics [Table 1]. Interviews ranged from 23 to 59 min.

Across interviews, participants described factors supporting the sustainability of rural obstetric programmes. Analysis uncovered 4 overarching themes: (1) passion and commitment, (2) workforce capacity and sustainability, (3) collaborative systems and support and (4) adaptive and safe practices.

Theme 1: Passion and commitment

'You need very passionate people who are willing to go beyond their way to keep the [obstetric] *programmes going'.*

- (Physician 7)

Across groups, a passion for obstetrics emerged as a central driver of programme sustainability. Providers often described obstetrics as one of the most meaningful and rewarding parts of their practice. This passion motivated them to maintain their skillset, take on additional responsibilities and advocate for keeping programmes operational.

Passion for practice: Participants described passion as a driving force behind the continued operation of rural obstetrics. As 1 participant explained, this passion is directly tied to programme continuity:

'… our providers are pretty passionate about it [obstetrics] *and really want it to stay. And so, I think that plays a role in the fact that we're still open'.*

- (Nurse 1)

For others, obstetrics was a central reason for remaining in rural practice:

'I would be gone tomorrow if it was like, 'We're not doing this [obstetrics] *anymore,' and they would lose the other OB provider'.*

- (Physician 6)

Participants also recognised how passion contributed to programme sustainability, with team members going beyond their clinical responsibilities to advocate for keeping services operational:

'So [the physicians] *are very passionate about the programme, and they push us to, you know, even if it's hard, we should still try to keep it open'.*

- (Admin 3)

Table 1: Participants' occupation and location of employment				
Category	Role	Northeastern Ontario (*n*=4 programmes)	Northwestern Ontario (*n*=5 programmes)	Total
Administrator	Obstetric manager	1	3	4
	CNO	2	1	3
Healthcare worker	Nurse	4	3	7
	Physician	4	5	9
Total		11	12	23

CNO: Chief nursing officer

Commitment to learning: Passion was also demonstrated through a commitment to ongoing learning and professional development. Participants described training and skill maintenance not only as a professional duty but as a personal commitment to sustaining obstetrics:

'We've made a personal or professional commitment to keep our ALARM [Advances in Labour and Risk Management]*'.*

- (Physician 3)

Theme 2: Workforce capacity and sustainability

'So, our plan now is to do onsite training as much as possible, because our reality is very different than they'll see in larger hospitals'.

- (Admin 3)

Sustaining rural obstetrics was described as being dependent on having a skilled, confident and supported workforce. Participants emphasised that building and maintaining this workforce required accessible, context-specific training, staffing models that ensured adequate obstetric coverage and opportunities for medical learners to develop competence in rural obstetrics.

Local obstetric training: Locally offered, rural-specific training was seen as important for maintaining obstetric competence, with participants viewing it as both more practical to access and more relevant to the clinical realities providers encounter in rural settings.

'So, kind of being this hub…where these tertiary hospitals come in and do surgeries with the local OSS [Obstetrical Surgical Skills] *staff to help increase their skills and do CME* [continuing medical education]*… so that people can get their volumes and maintain their skills and bring that back to their home community… So sometimes there's government programmes to provide that type of training. But knowing that it's best if it can be brought into the local communities because it takes so long to travel… because some of these programmes are not funded knowing the challenges of rural differences'.*

- (Physician 8)

Staffing Models for Sustainability: Reliable coverage was consistently cited as critical to programme sustainability. Participants described strategies such as ensuring multiple providers were available for deliveries and implementing call systems to reduce the risks and pressures of single-provider deliveries. At some sites, workforce sustainability was strengthened by integrating midwives into obstetric teams through the *Expanded Midwifery Care Model,* which helps distribute workload and provides additional on-call support:

'Our primary care midwife… she's absolutely invaluable to the [obstetric] *call burden that we've been carrying'.*

- (Physician 3)

'I instituted a system… that we would have 2 doctors on call for obstetrics, one as a backup, and they would have to attend the delivery because… what drives people out of obstetrics is being on your own in the middle of the night with a disaster'.

- (Admin 7)

Training learners: Hands-on exposure for medical learners helped build a sustainable obstetric workforce. Clerkship and residency placements in rural hospitals providing obstetrics allowed learners to gain the experience and confidence needed to pursue rural obstetric practice, and for some sites, functioned as an effective recruitment pathway:

'The person that's doing obstetrics with me now… she was one of our 4 medical students, and then she was our full-time resident and now she's doing obstetrics with me… We knew that she had an interest in obstetrics, so we were really keen on that. Then we made sure that she had the training needed while she was a resident, so that she'd be ready to do obstetrics when she's done'.

- (Physician 7)

Theme 3: Collaborative systems and support

'I know our administration is working ridiculously hard to maintain the service. It's not something that anybody wants to see go at the end of the day'.

- (Nurse 7)

Collaboration and support across professional, organisational and system levels were viewed as essential to sustaining rural obstetrics. Participants emphasised that programme continuity was not solely dependent on individual effort, but on collaboration among providers, hospital administrators, local communities and system partners.

Team-based collaborative care: Interprofessional collaboration fostered strong relationships and a shared sense of responsibility for both patient outcomes and programme sustainability. Participants described how small, tight-knit teams with open communication created a supportive culture.

'The communication and the relationships we have with the physicians and management is huge… If I get a text from a nursing supervisor saying 'We have 3 in labour. Do you mind coming in and helping out'… I will likely go in to help out my colleague'.

- (Nurse 6)

Supportive leadership and administration: Support from hospital administrators was also viewed as critical to sustaining obstetrics. Participants described actions such as supporting training opportunities and covering locum costs when government support fell short as central to keeping programmes operational.

'I think our administration has bent over backwards, recognizing the risk in not having it [obstetrics]*, and in days where they could have just abandoned it… They didn't'.*

- (Nurse 7)

'The hospital has been paying the locums out of its own budget because otherwise no one's gonna come because no one's going to work for free'.

- (Physician 7)

Community voice: Community commitment reinforced the value of maintaining local obstetrics. Participants described how families valued the option of local delivery, particularly given the risks and burdens of long-distance travel. For some, this provided the motivation and justification for sustaining service.

'We know that the community we serve, the community wants to make sure that there is a local obstetrical programme'.

- (Physician 7)

'I mean to have to travel an hour and a half at the least to get to another OB department… doesn't sound great to me … And these are Northern Ontario Highways. As we all know, it's not a great highway to travel'.

- (Nurse 2)

Government and Financial Support: Government programmes and funding were recognised as important system-level supports that helped sustain obstetrics. Participants noted that targeted investments in training helped keep providers competent:

'We received some funding recently from the Ministry that we were able to really provide a lot of NRP [Neonatal Resuscitation Programme] *certifications to our nurses… that helped really kind of get everyone back to where they should be'.*

- (Admin 1)

In addition to training, government programmes were seen as essential to ensuring adequate compensation for the demanding on-call responsibilities of rural obstetric providers. The Hospital On-Call Coverage (HOCC) programme, designed to provide physician on-call compensation, was identified as one such programme that helped sustain physician engagement in obstetrics:

'They've [hospital] *divvied up the HOCC money, some of it going directly to the doctors who are providing OB. So that's been helpful to keep physicians providing OB'.*

- (Physician 5)

Theme 4: Adaptive and safe practices

'It's just kind of not an option to close, that has been communicated from the physicians… It's not happening so our leadership has kind of been like, 'Yeah, we'll do whatever we can to make sure it [obstetrics] *doesn't* [close]'.

- (Admin 6)

The ability to adapt while prioritising patient safety emerged as a defining feature of sustainable rural obstetric programmes. Participants described adaptability as built into everyday operations, enabling teams to function within a challenging healthcare environment. Adaptation

was not viewed as a temporary response but as an ongoing process of anticipating risks and adjusting to maintain access.

Adaptability and resilience strategies: Participants emphasised that sustainability depended on proactive planning. Succession planning, strategic staffing and anticipating skill gaps helped ensure service continuity in the face of staff turnover and provider shortages.

'We definitely need to be strategic about the people who are coming in to do obstetrics… being honest and open about when people are leaving, and what is the skill set they take with them. So what do we need to try to replace?'

- (Physician 4)

'Switching to the midwifery model, I think, is number one. Without that change, without having the physicians committing to that, our programme would have been dead 3 years ago'.

- (Admin 3)

Risk Management and Safety Focus: Patient safety was also described as central to decisions about sustaining rural obstetrics. Participants described that closure would create risks for patients, which reinforced the importance of maintaining local access to care.

'If we didn't have our programme continue, it would be a huge risk to our population. So, I find that both the physicians, the nurses and members of the healthcare team really advocate to make sure we're able to keep it up and running'.

- (Nurse 6)

Backup and Referral Systems: Strong referral systems were described as important safeguards, with larger hospitals serving as safety nets to ensure urgent cases could be rapidly transferred when local resources were insufficient.

'Any bigger centre that recognizes the urgency. They just accept them [the patient]*, even if they're on the cusp of being within their capacity, because they just realize that they're a bigger centre, and they can manage it* [delivery] *easier until more help comes'.*

- (Nurse 7)

At sites with surgical services, relationships with nearby hospitals helped support programme sustainability by ensuring backup during periods of local workforce shortages. These partnerships reduced patient risk and allowed programmes to remain operational.

'Generally, what we do is a call out to all of the providers to let them know that there's no C-section provider, and that's usually known well in advance. We reach out to [community] *just an hour and a half away, and see if* [physician] *is available, and if* [physician] *is, then it's a short transfer for a C-section'.*

- (Physician 4)

DISCUSSION

Our study examined factors underlying the sustainability of obstetric programmes in rural Northern Ontario, based on the perspectives of physicians, nurses and administrators at 9 hospitals that continue to provide obstetric care. Four key elements were identified: (1) passion and commitment, (2) workforce capacity and sustainability, (3) collaborative systems and support and (4) adaptive and safe practices. These factors address many of the challenges linked to obstetric programme closure identified in previous research.[3]

Passion and commitment

A unique finding of our study was the role of passion in sustaining rural obstetric services. Across all participant groups, but especially among providers, obstetrics was described as one of the most meaningful aspects of practice. This motivation often translates into expanded team capacity reflected in a willingness to maintain high on-call demands, pursue ongoing training and work beyond clinical duties to advocate for programme continuation.

However, reliance on passion alone carries risk. Programmes dependent on a few committed and passionate individuals are vulnerable to burnout, retirement and turnover. While passion appears to expand team capacity, it is unlikely to be sustainable without structural support.[12] Notably, sites that have maintained obstetrics typically have such support in place, including efforts to develop workforce capacity and sustainability, strengthen collaborative systems and remain adaptable. Whether these are successful in sustaining passion or buffer against burnout is less clear.

Workforce capacity and sustainability

Workforce capacity and sustainability emerged as important in maintaining rural obstetrics programmes. Previous research has identified declining obstetric competence and confidence as a contributor to programme closures.[3] In contrast, participants described strategies designed to

address this risk. Training was prioritised to maintain obstetric competence and confidence, with sites making deliberate efforts to deliver education locally and ensure staff had ongoing access to learning opportunities. Even programmes with delivery volumes perceived as adequate for skill retention, CME and ongoing training remained a priority. These findings suggest that access to education is important for maintaining provider competence and confidence, and given its link to programme closures, represents a key facet of sustainability.[3]

Participants also emphasised that sustainability depends not only on maintaining provider competence, but also on an adequately staffed obstetric workforce to provide consistent coverage, distribute workload and reduce the risks of single provider deliveries. In response, participants described strategies aimed at strengthening workforce capacity. Rural clerkship and residency placements were described as important for building the future obstetric workforce, exposing learners to the realities of rural obstetrics and, in some cases, served as an effective recruitment pathway.[13] Workforce capacity was also strengthened through the integration of new provider roles, namely the incorporation of midwives into obstetrical teams through the *Expanded Midwifery Care Model*. Participants noted this approach helped redistribute workload, reducing reliance on physicians for continuous on-call coverage and improving continuity of care for patients. Taken together, these findings suggest that investment in both training pathways and innovative workforce models represents key elements in maintaining and expanding workforce capacity and is therefore an important factor in the sustainability of rural obstetric services.

Sites also implemented adaptive staffing models tailored to the realities of rural practice. These included scheduling 2 providers for deliveries, assigning a dedicated obstetrics nurse per shift and structuring call coverage to ensure physician backup coverage. While the specific strategies varied by site, their design was aimed at addressing pressures such as isolation and limited support that often drive providers to leave. By addressing these strains, adaptive staffing models may represent an important strategy for supporting provider retention and, in turn, the sustainability of rural obstetric services.

Collaborative systems and support

Collaborative systems and organisational support emerged as enablers of programme sustainability. While previous research has shown that limited system-level support contributes to rural obstetric programme closures, participants in the study described collaboration and support across multiple levels that helped to maintain local services.[3]

Institutionally, interprofessional collaboration was a key factor. Participants described small, tight-knit teams with open communication that fostered trust, mutual support and shared responsibility for both patient outcomes and programme continuity. This culture of collaboration helped teams adapt and redistribute responsibilities to maintain consistent coverage, even with limited staffing capacity.

Hospital administrations' support for obstetrics was also identified as a critical factor in sustaining local services. Their commitment provided reassurance to providers and helped mitigate the broader system-level lack of support that has contributed to rural obstetric closures elsewhere in Northern Ontario.[3] Specifically, investments in training opportunities and the willingness to cover locum costs when government funding fell short were cited by participants as some of the actions the administration took that enabled services to remain operational.

At the community level, local engagement often helped to reinforce the importance of maintaining obstetrics, particularly given the risks and burdens associated with travelling for obstetric care.[5]

Government support was identified as a necessary enabler of programme sustainability. Targeted investments, such as funding for ongoing obstetrics training, were viewed as important supports.

Adaptive and safe practices

Adaptability while maintaining safety emerged as a crucial factor in sustaining rural obstetric programmes. Participants described adaptability as embedded in day-to-day operations. Proactive succession planning, flexible staffing and backup systems were highlighted as strategies that enabled sites to anticipate risks, respond to workforce shortages and maintain continuity of

obstetric cases. The ability to adapt appeared to be a common characteristic of programmes that have remained operational, potentially enabling them to withstand pressures that contributed to obstetric closures elsewhere. This finding aligns with previous research, which has identified adaptability as a protective factor for rural health services, underscoring its importance in service sustainability.[14]

Safety was equally central to sustainability. Strong referral networks with larger hospitals and reliable physician backup were viewed as essential. These systems ensured timely transfers if complications were to arise and strengthened provider confidence by eliminating the likelihood of managing emergencies in isolation. By reducing the sense of vulnerability associated with rural practice, these supports help address factors such as professional isolation that have been shown to contribute to provider attrition and programme closure. Strong safety systems may help strengthen workforce stability and service continuity, further strengthening the sustainability of rural obstetric programmes.

Limitations

The analysis reflects perspectives on sustainability from physicians, nurses and administrators; however, obstetric care also involves other key stakeholders, including allied health professionals, patients and community members, whose insights may have offered different or broader perspectives on programme sustainability. Future research should incorporate these perspectives to inform a more complete understanding of the factors driving the sustainability of rural obstetric care.

While participants identified several factors that they perceived as supporting programme sustainability, these cannot be directly attributed to the continued operation of obstetric programmes. Further research should examine how these factors function in practice, including their impact on measurable outcomes such as provider retention, service continuity and patient safety.

CONCLUSION

The sustainability of rural obstetric programmes in Northern Ontario is driven by 4 key factors: (1) passion and commitment, (2) workforce capacity and sustainability, (3) collaborative systems and support and (4) adaptive and safe practices. Together, these elements foster resilience within a healthcare environment challenged by declining provider competence and confidence, health human resource shortages and limited system-level support.

While passion remains a powerful driver of sustainability, it cannot offset systemic gaps. It appears that sustaining rural obstetric programmes requires ongoing investment in learning and training pathways, workforce capacity, strong collaborative systems and adaptability. Together, these elements form a foundation for programme continuity and should guide future efforts to re-establish obstetric services in communities where it has been lost.

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