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Original Research

The Integration of Ontario Birth Centers into Existing Maternal-Newborn Services: Health Care Provider Experiences

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Introduction: In 2014, 2 freestanding, midwifery-led birth centers opened in Ontario, Canada. The purpose of this study was to qualitatively investigate the integration of the birth centers into the local, preexisting intrapartum systems from the perspective of health care providers and managerial staff.

Methods: Focus groups or interviews were conducted with health care providers (paramedics, midwives, nurses, physicians) and managerial staff who had experienced urgent and/or nonurgent maternal or newborn transports from a birth center to one of 4 hospitals in Ottawa or Toronto. A descriptive qualitative approach to data analysis was undertaken.

Results: Twenty-four health care providers and managerial staff participated in a focus group or interview. Participants described positive experiences transporting women and/or newborns from the birth centers to hospitals; these positive experiences were attributed to the collaborative planning, training, and communication that occurred prior to opening the birth centers. The degree of integration was dependent on hospital-specific characteristics such as history, culture, and the presence or absence of midwifery privileging. Participants described the need for only minor improvements to administrative processes as well as the challenge of keeping large numbers of staff updated with respect to urgent transport policies. Planning and opening of the birth centers was seen as a driving force in further integrating midwifery care and improving interprofessional practice.

Discussion: The collaborative approach for the planning and implementation of the birth centers was a key factor in the successful integration into the existing maternal-newborn system and contributed to improving integrated professional practice among midwives, paramedics, nurses, and physicians. This approach may be used as a template for the integration of other new independent health care facilities and programs into the existing health care system.

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INTRODUCTION

Midwifery has been a regulated health profession in Ontario, Canada, since 1994, with midwives educated through direct-entry programs providing all aspects of perinatal care.[1] Prior to 2014, women in Ontario could choose a home or hospital birth under the care of a midwife. Given the evidence that supports the safety of planned, low-risk birth outside of hospital settings,[2–12] the Ontario Ministry of Health and Long-Term Care (MOHLTC) funded 2 freestanding, midwifery-led birth centers in Toronto and Ottawa. The availability of midwifery-led birth centers varies between Canadian provinces and territories with most having none or very few. The exception is the province of Quebec, with 17 existing centers.[13] There was one existing Aboriginal birth center in Ontario, opened in 1996 under the Department of Health Services of Six Nations Council. The establishment of the Ottawa and Toronto centers marked the first instance of birth centers in Ontario being fully funded by the MOHLTC, demonstrating commitment to ensuring the "right care at the right time in the right place."[14]

To determine the locations of the new birth centers, the MOHLTC issued a call for proposals. The 2 successful midwifery-led groups demonstrated a collaborative approach with their communities including existing partnerships with regional perinatal programs, hospitals, client advocacy groups, and specialized services for priority groups. Prior to opening, each birth center team conducted numerous interprofessional planning meetings to develop clear protocols and guidelines for practice. In addition, midwives, emergency medical services (EMS), and local hospital staff rehearsed emergency situations to ensure adequate systems were in place. Table 1 lists definitions of key terms used throughout this article, which are aligned with the policies established by the 2 birth centers.

Consistent with the principles of choice of birth place and continuity of care central to Ontario midwifery practice,[17] the establishment of the 2 centers provided women with another option for place of birth and allowed eligible midwives to provide care to women across birth sites. Midwives with access to either birth center must also hold admitting privileges

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Quick Points

- Factors that influenced the integration of the birth centers into existing maternal-newborn services included 1) the receiving hospital's history and culture, 2) the urgency of the transports, and 3) whether the midwife had privileges at the receiving hospital.
- The collaborative approach used for implementation of the birth centers was a driving force in further integrating midwifery care and improving interprofessional practice.
- Challenges to be addressed to enhance integration of the birth centers into existing maternal-newborn services include 1) refining adminsitrative processes and 2) increasing staff familiarity with policies and transport hospitals.
- The collaborative approach for planning and implementing the birth centers may be used as a template for the integration of other new independent health care facilities and programs into the existing health care system.

at a hospital. This allows clients to be attended by the same midwife regardless of where they choose to give birth (home, birth center, or hospital). To ensure the viability of this third option for birth place in Ontario, it was essential that the centers were well integrated in the preexistent intrapartum systems. Although there is no universally accepted definitionof integration,[18] the World Health Organization defines integrated health service delivery as "the management and delivery of health services so that clients receive a continuum of preventive and curative services, according to their needs over time and across different levels of the health system."[19(p 1)] Similar to labor and birth at home, there is the potential for

Table 1. Definition of Key Terms Used in Article

Term	Definition
Admitting privileges	A midwife who has admitting privileges at a hospital is a member of the health care staff and can admit clients to that hospital and manage care. All midwives are required to have admitting privileges at one or more hospitals to allow for transfer from a planned home or birth center birth if required. Admitting privileges are granted based on hospital-specific criteria and proof of licensure.
Appointment	Eligibility for a midwife to provide birth services to clients who meet the criteria for admission to the birth centers. At each Ontario birth center, midwives from multiple midwifery practice groups hold appointments at the facility.
Midwifery-led birth center	A birth center developed and run by midwives for midwifery clients. There are no medical or nursing personnel on site, and care is provided totally by midwives with the assistance of birth center aides who help with equipment, cleaning, meals, etc. Typically, women will be admitted to a birth center in active labor, have 2 midwives attend the birth, and will be discharged at 4-6 h postpartum. Ontario birth centers are regulated under the Independent Health Facilities Act with the College of Midwives of Ontario responsible for inspecting and assessing the facilities.[15]
Nonurgent transport	Examples of reasons for nonurgent transports from birth center to hospital include prolonged labor and pain management.
Transfer	The transfer of care responsibility from one health care provider to another (ie, midwife to physician), in which the accepting health care provider becomes most responsible for the care of the woman and/or newborn. Note that the College of Midwives of Ontario, the provincial regulatory body for the midwifery profession, sets the clinical standard of practice for consultation and transfer of care,[16] so the opening of the 2 birth centers did not change transfer of care policies or practices.
Transport	The physical movement of a midwifery client from one location to another (ie, birth center to hospital), with or without the assistance of emergency medical services.
Urgent transport	Examples of reasons for urgent transports from birth center to hospital include the following: maternal complications such as hypertension, fever, or hemorrhage; fetal complications such as meconium or malpresentation; or newborn complications such as respiratory distress, low glucose, small for gestational age, or unexpected anomaly.
Urgent transport facility	A designated hospital to which to transport all women at a birth center requiring a higher level of care and a potential need for transfer of care from a midwife to a physician.

Table 2. Characteristics of Participating Hospitals

	Ottawa		Toronto	
Characteristics	**Hospital 1**	**Hospital 2**	**Hospital 1**	**Hospital 2**
Annual birth volume[a]	>2500	>2500	>2500	>4000
Maternal level of care[b]	IIa[c]	III[d]	III[d]	III[d]
Neonatal level of care[b]	IIa[c]	IIIa[d]	IIIa[d]	IIc[e]
Hospital designated to receive	Nonurgent transports	Maternal urgent transports	Nonurgent transports	Maternal urgent transports
Midwives had admitting privileges at this hospital	Yes (from specific midwifery groups)	No	Yes (from specific midwifery groups)	Yes (from specific midwifery groups)
Distance to local birth center	~10 km	~5 km	~10 km	~2 km

[a]In evaluation year—January 2014 to February 2015.
[b]Level of care defined as per the Provincial Council for Maternal and Child Health.[26]
[c]Level IIa: provides care for gestational ages ≥ 34 0/7 weeks.
[d]Level III: provides care for extremely preterm and sick neonates as well as any other gestational age or weight.
[e]Level IIc: provides care for gestational ages ≥ 30 0/7 weeks.

birth center clients to subsequently be transported to a hospital and their care possibly transferred to another health care provider. Because these were the first 2 birth centers in Ontario, transport data for the province were not available to guide planning. However, a large study by Hutton et al of 6692 planned home births in Ontario found a transport rate to hospital of 22%, with approximately 5% of women requiring transport by ambulance.[12]

Related to maternal or neonatal transport, one hospital in each city was designated as an urgent transport facility, based on shortest transport time. However, if a maternal transport was nonurgent, transport to the hospital where the midwife had admitting privileges was undertaken. One pediatric hospital with a level III neonatal intensive care unit in each city was designated to receive all newborns requiring further evaluation (whether urgent or nonurgent). There were 495 admissions to the 2 birth centers in the first year of operations (175 in Ottawa, 320 in Toronto). Fourteen midwifery practice groups had access to the birth centers (5 in Ottawa, 9 in Toronto). During this year, there was a total of 130 transports (26.3%): 77 urgent transports (15.6%) and 53 nonurgent transports (10.7%).

To assess whether transports and transfers of care had occurred safely, we evaluated the processes used to integrate the birth centers and examined perceptions of how integration was achieved. As part of a larger mixed-methods evaluation of the birth centers, the purpose of this study was to obtain the perspectives of health care providers and managerial staff about the integration of the birth centers one year after implementation. More specifically, we aimed to learn about their experiences with transports to hospitals. The methods and results of this study are reported according to the Consolidated Criteria for Reporting Qualitative Research.[20]

METHODS

We used a qualitative descriptive design.[21,22] A framework for the overarching evaluation was developed based on existing quality health care frameworks[23–25] and consultation with midwifery stakeholder groups. The team evaluated the following domains of quality: effective, safe, person-centered, accessible, integrated, and equitable. The qualitative project reported here examined the domain of integrated care. Research ethics board approval was obtained from the Children's Hospital of Eastern Ontario.

We used purposive sampling to recruit health care providers and managerial staff for focus groups and interviews from 4 selected hospitals and EMS in the 2 cities (Table 2). Two hospitals in each city were selected to ensure data from both urgent and nonurgent transports, maximizing the variation of health care provider experiences.

Eligible participants included registered nurses, midwives, obstetricians, family physicians, neonatologists, paramedics, and managerial staff (eg, administrators, directors, managers) who had been involved in at least one birth center-to-hospital transport. The research team distributed an information page describing the eligibility criteria to key individuals in the birth centers and hospitals to assist with recruitment.

Between December 2014 and April 2015, we conducted 4 interdisciplinary focus groups (one at each participating hospital). There was one interview for a participant from EMS unable to attend a focus group. A semi-structured question guide was developed (Table 3) and reviewed by members of the research team and then modified slightly based on their feedback.

Focus groups and interviews took place in private meeting rooms. Written consent was obtained from all participants. Discussions were facilitated by an experienced qualitative interviewer and one other research team member. The primary facilitator, who was unknown to participants, is a doctorally prepared registered nurse experienced in maternal-newborn care. Discussions lasted an average of 48 minutes (range, 32-67.5 min) and were digitally recorded with notes taken. The audio files were transcribed verbatim. The facilitators wrote field notes after each discussion to describe the setting and document initial impressions. Data saturation was achieved when the facilitators noted that the information being collected resembled data collected from previous focus groups.[27]

The transcripts were imported into NVivo 11 (QSR International Pty Ltd, Melbourne, Australia). We analyzed our data using conventional content analysis.[28] Transcripts were

Table 3. Semi-Structured Interview Guide Used for Focus Groups and Interviews with Health Care Providers and Managerial Staff

Question and Probes
Were any new processes or policies put into place surrounding transfer to your facility from the birth center? If so, describe.
Was collaboration undertaken to establish these processes, and if so, who was involved in that collaboration? Can you describe the collaboration?
What kind of communication took place before opening, and was it sufficient?
Were established processes reflected in practice once transfers occurred?
What worked well during transports from the birth center, both urgent and nonurgent?
Were any changes in process instituted once transports began?
What could have been done differently?
How has the birth center impacted interprofessional interactions in your facility?
What, if anything, do you see as different between birth at the birth center and birth in the hospital?

read and reread by 3 research team members. Initial coding was done independently and then discussed. Several iterations of coding and discussion resulted in a final coding template. All transcripts were then coded by one research team member using the final template. Through ongoing discussions and writing, the codes were organized into themes. A summary of the main themes from each focus group or interview was written. The research team met regularly to discuss the coding and emerging themes and to build consensus regarding study findings.

RESULTS

A total of 24 health care providers and managerial staff participated (Table 4). Participants reported that the birth centers were well integrated into their communities. Overall experiences with transports were positive. Four main themes and respective subthemes were identified: integration, influencing factors, challenges, and driving change (Table 5).

Integration

Participants' descriptions of transports between birth centers and hospitals reflect a well-integrated system with need for minor modifications.

Participants described positive transport experiences of women from the birth centers to hospitals and perceived that multiple agencies effectively collaborated to make the transports work well. One paramedic team member described the overall positive experience and the successful use of ongoing monitoring to improve the transport process:

But the ones [transports] that do happen, I personally find that they work well. I haven't really received any negative feedback from the medic side in the last little while. They know to contact me if something weird happens. And like I said, from when they first started up, there was maybe 2 events that … they were minor, or they were mitigated early on and since then I haven't heard anything.

Participants described the collaborative planning of the birth centers between stakeholders, including nurses, physicians, midwives, paramedics, administrators, and the regional health network. Participants from all 4 hospitals described interprofessional meetings very early in the planning process, ensuring that all voices were considered in the birth center development. Some participants gave examples of the frequency of meetings, stating that 4 interprofessional and interagency meetings occurred over the span of a year prior to the opening. The purpose of these meetings included establishing how transports or transfers would occur and how they would be tracked, developing protocols, ensuring availability of all necessary equipment, and aiming for no surprises

Table 4. Demographic Characteristics of Health Care Providers and Managerial Staff Who Participated in a Focus Group or Interview (N = 24)

Demographic Characteristics	n (%)
Sex	
Female	21 (87.5)
Male	3 (12.5)
Age, y	
<35	1 (4.2)
35-54	17 (70.8)
≥55	5 (20.8)
Missing	1 (4.2)
Current professional practice	
Registered nurse	2 (8.3)
Midwife[a]	9 (37.5)
Nurse manager/director	5 (20.8)
Nurse educator	2 (8.3)
Paramedic	3 (12.5)
Obstetrician	2 (8.3)
911 center manager	1 (4.2)
Number of years involved in intrapartum care	
<10	4 (16.7)
10-19	7 (29.2)
20-29	8 (33.3)
≥30	4 (16.7)
Missing	1 (4.2)

[a]Three of whom were birth center staff members.

Table 5. Main Themes and Subthemes from the Focus Groups and Interviews with Health Care Providers and Managerial Staff

Theme	Subtheme
Integration	Positive transport experiences
	Collaborative planning
Influencing factors	Hospital history and culture
	Nature of transports
	Hospital privileges
Challenges	Administrative challenges
	Lack of familiarity
Driving change	Increasing respect and legitimacy of midwifery
	Improving interprofessional practice

for any of the involved parties. There was agreement that these planning meetings were highly collaborative. In the words of a registered midwife:

Prior to the opening of the birth center, we managed collaboratively with our key stakeholders, so we managed with the nurse manager but also some of the physicians, the obstetricians, about developing our current [transport] protocol … But it [was] something that we, from scratch, met together collectively, collaboratively to get everyone's approval for the current protocol that we have.

Influencing Factors

Despite the finding that the birth centers are well integrated, participants described variation in ease of integration based on the context of individual hospitals.

Two of the 4 hospitals have a long-standing history and culture of supporting midwifery, and participants at these sites felt that midwives were already integrated into their system. The participants explained that prior to the opening of the birth centers, there was a history of administrators, obstetricians, and nurses welcoming midwives at these 2 hospitals. This existing history and the shared culture of birth as low risk greatly facilitated the integration of the birth centers with these hospitals.

When a hospital did not have a history of offering midwifery privileges, or had preexisting issues around collaborative practice, there were additional challenges to integration, including health care providers' lack of knowledge about the midwifery scope of practice. One nurse manager/director described the situation as follows:

There is still a lot of misunderstanding about midwifery in this institution here partly because midwives haven't actually had practice privileges here since [year] … and it's not just the nurses, but I think a lot of the residents, medical students, and even obstetricians, some of the newer ones perhaps, aren't as familiar with [midwifery] scope …

The nature of transports (nonurgent or urgent) received by hospitals also influenced the ease of integration. Prior to the birth centers opening, certain hospitals only received the occasional transport from home births. They then were designated to receive all urgent transports from the birth centers. The increase in midwifery transports for these hospitals created a need to clearly define processes. Formalized relationships necessitated the development of new policies to define processes for urgent and nonurgent transports, as well as the need to provide additional training to emergency department staff. These policies and training were viewed as essential for successful integration of the birth center. In contrast, other hospitals were already accustomed to receiving home birth transports prior to the birth centers opening. In these cases, the integration of the birth center was described as almost unnoticed. As one obstetrician said, "So from our perspective, if they [midwives] were coming in, they were coming in really in no different circumstances than we had previously been dealing with."

Whether midwives had hospital privileges at the designated transport hospital influenced how easy it was to achieve integration. With many midwives having appointments at each birth center, and a protocol that all urgent transports go to a designated hospital, midwives sometimes had to transport clients to hospitals not familiar to them. Participants at 2 hospitals spoke about the increased frequency with which they were now collaborating with nonprivileged midwives. The lack of midwifery privileges at these hospitals influenced the transport or transfer experience for all health care providers. For example, one midwife participant described the variable levels of communication when the midwives did not have privileges at the receiving hospital:

I think that's also a mixed bag in terms of communication when we're here … for example, I've had a situation where I've had someone who's here, who's a transfer of care and when I've come to visit the client postpartum, some people that I talked to, the nurses, the doctors, will give me all the information I need, and some of them will refuse to tell me anything about my clients.

Hospital privileges were identified as a consideration for midwives when determining the most appropriate receiving hospital. This then had to be further discussed or negotiated with the paramedic if an ambulance transport was required. If the woman and fetus were stable, it was important to transport to a hospital where the midwife was privileged in order to maintain continuity of care.

Challenges

Overall, participants spoke positively about the integration of the birth centers and transport or transfer processes. Generally, areas for improvement were described as minor, or tweaks to a well-developed system.

Participants described occasional administrative challenges with not knowing where to fax records prior to a transport, or who should be notified at the receiving hospital, as described by one midwife: "That's the most common issue … it's more administrative, it's more the fax machine or where to receive the fax." Strategies for addressing these issues included regularly updating current policies to reflect the most efficient processes and correct contact information.

Given the low number of urgent transports (77 in the 2 cities), participants from hospitals with many staff described the challenge of staff's lack of familiarity, for example, with policies or the transport hospital. Reviewing and debriefing previous transports and reminding staff about policies and processes were identified as a means of maintaining their knowledge and improving processes. Despite having carried out simulations together prior to the birth center openings, some midwives identified concerns about lack of familiarity in hospitals where they are not privileged (eg, lack of familiarity with hospital staff, and locations of drugs and equipment). This concern was echoed by hospital staff, as described by one registered nurse: "she [midwife] was going around saying where do you keep this and what not … it's not her fault. So we [nursing staff] were having to get her into the drug box so it made it more difficult for her to care for the patient the way she probably would have otherwise."

Driving Change

Participants described important changes driven by the creation of the birth centers. Many participants perceived that the birth centers have increased the respect and legitimacy of midwifery, both to the public and to other health care professionals, allowing these groups to learn more about midwifery and ultimately increase visibility and credibility of their education and practice. One paramedic stated, "It elevated the [midwifery] profession for sure … I think just having the facility speaks volumes to the interest, the buy-in, the respect, and the credibility of midwifery."

Participants described the planning, implementation, and monitoring of the birth centers as a motivating force that improved interprofessional practice between different stakeholders, including nurses, physicians, midwives, paramedics, administrators, and the regional health network. Some participants described few interprofessional collaborative opportunities prior to the birth centers, despite working alongside one another clinically, and perceived that the centers created a positive opportunity for collaboration. More specifically, the protocols implemented for birth center-to-hospital transports facilitated improved interprofessional practice and teamwork and created opportunities for clinicians to train together. Participants gave several examples of interprofessional training opportunities resulting from the opening of the birth centers, including hospital drills, mock EMS dispatch calls and transports from the birth centers, welcoming students from different professions to the centers, and including center tours as part of EMS personnel orientation. These opportunities increased understanding of each other's knowledge, training, and roles, and improved participants' ability to communicate with one another.

The most commonly identified improvement in interprofessional practice was between EMS and midwifery. Participants commented that no new health care facilities in Ontario had considered EMS to such an extent from start-up in both design and protocol. Although these 2 professions had previously worked together during home birth transports, the new facilities and associated policies led to an opportunity to formalize this collaboration, identify areas for improvement, and improve interprofessional practice. For example, establishment of the birth centers led to altered processes within the EMS call center to expedite response to calls initiated by midwives, even at home. In addition, many participants described the importance of defining the role of the paramedic and midwife and learning to share a common language to improve practice. In the words of a paramedic:

We've identified things that we can do better. We've identified gaps in terminology between the people talking on the phone, so we've been able to provide education. Yeah, it's been very, very helpful. Had we not done that, I could see that we could have had conflicts simply because we didn't understand each other and why we were doing things a certain way and I think we've been able to completely avoid that or interrupt it if it was going to start because we've been able to go, "Oh, why'd they do that?"

DISCUSSION

Our study found that the planning and implementation of the birth centers created opportunities for interprofessional collaboration that were an important factor for successful integration. An interprofessional team approach is a universal principle of successful health system integration.[29] Suboptimal teamwork and communication contribute to preventable maternal and infant morbidity and mortality, and outcomes may be improved by optimizing interprofessional teamwork.[30,31] In addition, improving interdisciplinary teamwork and communication may improve staff morale, positive safety culture scores, and patient satisfaction.[32] Evidence-based recommendations for improving teamwork in maternal-newborn care include use of simulation training, interprofessional training, and use of in-house rehearsals,[31] several of which were given as examples by participants in our study. Although our participants perceived an increase in opportunities for interprofessional collaboration and improved teamwork, the effect of this improvement on patient outcomes remains unknown. Further research to understand the effect of improved interprofessional teamwork on patient outcomes during birth center-hospital transport is warranted.

Clear protocols are important to facilitate a safe and smooth transport or transfer experience. Rowe[33] examined guidelines and protocols for transfers between 34 midwifery units and maternity care units in England using the Appraisal of Guidelines for Research and Evaluation (AGREE) Instrument. They concluded most were of poor quality and only 3 out of 34 guidelines could be recommended for use in clinical practice. As more women choose out-of-hospital births, access to high-quality guidelines and protocols to facilitate safe and efficient transports is essential. In addition, participants in our study identified the challenge of keeping all health care providers up to date on current protocols given the relatively low volume of transports between the birth centers and hospitals. Maintaining health care provider knowledge of current protocols and training health care providers on protocol updates is essential to sustain successful birth center integration.

Another universal principle of successful health system integration is organizational culture and leadership.[29] Prior to the opening of the birth centers, the hospitals participating in our study had varying histories of midwifery

integration, from well-established relationships with midwifery to no current midwifery services. When midwives were not privileged at the transport hospital, previous exposure of the health care team to midwives was low. Physician exposure to home birth is associated with more positive attitudes toward home births, highlighting the importance of increased exposure through interprofessional training opportunities in education and practice.[34] Some enablers identified by participants were a hospital's long-standing culture of supporting and welcoming midwifery care within their hospital and a shared culture of low-risk birth. When hospitals only receive urgent transfers from nonprivileged midwives, staff may develop a biased perception of midwifery, which can lead them to form judgments based on "the exception, rather than the rule."[35(p 449)]

When midwives lacked admitting privileges, the transfer experience was more variable because the midwifery role was less well defined upon the transfer of care. Kuliukas[36] explored midwives' experiences of transferring their clients from a birth center to a hospital and, similar to findings from our study, identified the challenge of how the change in location alters the role of the midwife, and this is influenced by the reception and level of support for the midwife at the transfer hospital. Furthermore, "feeling out of place"[36(p 21)] was a theme that emerged as the midwife had to navigate a new environment with different policies and equipment. This resonates with stories from participants in our study who identified the challenge of being unfamiliar with the physical space at the receiving hospital, especially true in a hospital where they did not have privileges. Further work is needed to support full privileges for midwives at all hospitals that act as urgent transport sites for the birth centers. Offering midwives full privileges at designated urgent transport sites may create increased opportunities for hospital staff and midwives to work together and further increase a culture of acceptance of midwifery care.

One example of a quality improvement initiative to improve integration of birth centers into the existing health care system is the Smooth Transitions program at the Washington State Perinatal Collaborative.[37–39] This program aims to improve transfer processes between home and birth center settings to hospitals when a higher level of care is required, improving safety and satisfaction of health care providers and patients. A manual provides background information on the initiative and the steps a hospital would take to participate, including a presentation by the project coordinator and physician member, development of a transfer protocol (in alignment with model practices for midwives and hospital health care providers as per the 2014 Home Birth Summit Best Practice Guideline[40]), and formation of a Planned Out-of-Hospital Birth Transfer Committee composed of obstetricians, nurses, EMS personnel, and midwives.[38] Given the success of our own local birth center planning and implementation process, the Smooth Transitions model may be a way to scale up our learnings and apply them in the integration of other birth centers on a more widespread provincial or national level.

Limitations

During the evaluation period, there were 77 transports from birth center to hospital that were deemed urgent. A smaller proportion of these urgent transports were deemed true emergencies. This low level of urgent transports likely speaks to the suitability of admissions at the birth centers and the clinical judgment of the midwives to transport before the situation became a true emergency. The small number of urgent transports spread out among these large hospitals and staff meant that participants ultimately had a low level of exposure to the process. More enablers and barriers to the transport process may be identified in the future as the teams gain further experience.

Although all eligible health care providers were invited to participate in this study, there were few physicians who attended a focus group. Only 2 obstetricians and no neonatologists or family physicians participated in this study. Further work to explore the experiences of physicians on the transport or transfer of women and neonates from the birth centers to the designated hospitals is needed.

Lastly, although the health care providers in our study generally described a positive and seamless system for transporting women between facilities, we do not know if women's experiences differ. Our team recently conducted a survey of women admitted to the birth centers, and data are currently being analyzed. These data will contribute to understanding how women and families accessing the birth centers experience continuity of care during transports and transfers of care.

Implications

Our findings suggest that the 2 new Ontario birth centers have been well integrated into the existing maternal-newborn health system. Our study highlights several implications for those planning, implementing, and evaluating independent health care facilities, such as midwifery-led birth centers. First, it is important to use an interprofessional approach to planning and implementation, both as a means to develop appropriate policies and protocols and to enhance teamwork. Second, the need to support full privileges for midwives at all hospitals designated as urgent transport sites for the birth centers should be considered. Lastly, as birth centers' volumes increase and health care providers gain more transport experience, it is essential to reevaluate the processes used and the satisfaction of both staff and families.

Our approach to the planning and implementation of the birth centers may be used as a template for the integration of other new independent health care facilities and programs into the existing health care system.

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CONFLICT OF INTEREST

The authors have no conflicts of interest to disclose.

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