


# Client Experience with the Ontario Birth Center Demonstration Project

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**Introduction:** In 2014, 2 new freestanding midwifery-led birth centers opened in Ontario, Canada. As one part of a larger mixed-methods evaluation of the first year of operations of the centers, our primary objective was to compare the experiences of women receiving midwifery care who intended to give birth at the new birth centers with those intending to give birth at home or in hospital.

**Methods:** We conducted a cross-sectional survey of women cared for by midwives with admitting privileges at one of the 2 birth centers. Consenting women received the survey 3 to 6 weeks after their due date. We stratified the analysis by intended place of birth at the beginning of labor, regardless of where the actual birth occurred. One composite indicator was created (Composite Satisfaction Score, out of 20), and statistical significance ( $P < .05$ ) was assessed using one-way analysis of variance. Responses to the open-ended questions were reviewed and grouped into broader categories.

**Results:** In total, 382 women completed the survey (response rate 54.6%). Half intended to give birth at a birth center ( $n = 191$ ). There was a significant difference on the Composite Satisfaction Scores between the birth center (19.4), home (19.5), and hospital (18.9) groups ( $P < .001$ ). Among women who intended to give birth in a birth center, scores were higher in the women admitted to the birth center compared with those who were not ( $P = .037$ ). Overall, women giving birth at a birth center were satisfied with the learners present at their birth, the accessibility of the centers, and the physical amenities, and they had suggestions for minor improvements.

**Discussion:** We found positive experiences and high satisfaction among women receiving midwifery care, regardless of intended place of birth. Women admitted to the birth centers had positive experiences with these new centers; however, future research should be planned to reassess and further understand women's experiences.

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## INTRODUCTION

Midwifery has been a regulated health profession in Ontario for just over 25 years. Midwives are primary care providers

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for women and their families during pregnancy, labor and birth, and the first 6 weeks postpartum. Midwives in Ontario work in midwifery practice groups providing care within midwifery-led continuity models of care. Choice of birthplace is a central tenet of Ontario midwifery care, and all midwives are trained to attend both in-hospital and out-of-hospital births.<sup>1</sup> In 2014, the Ontario Ministry of Health and Long-Term Care funded 2 new midwifery-led birth centers in 2 large urban areas of the province, adding a third option for place of birth: home, hospital, or birth center. These freestanding birth centers, located about 3 to 5 kilometers from the nearest hospitals, are governed by Boards of Directors that are accountable to clients, communities, partners, and funders. Midwives from the surrounding community may obtain privileges to attend births at the centers. As independent health care facilities, the centers adhere to the province's Independent Health Facilities Act,<sup>2</sup> with quality of care monitored by the College of Midwives of Ontario on behalf of the Ministry.<sup>3</sup> Given the evidence supporting the safety of out-of-hospital birth for low-risk women,<sup>4–13</sup> the opening of the 2 birth centers aimed to shift health services such as childbirth out of the hospital setting and into community settings, providing safe care close to home at a lower cost.<sup>14</sup>

Ottawa and Toronto were selected for the 2 new birth centers. Both cities are large urban centers with several established midwifery practice groups and access to hospitals



## Quick Points

- ◆ Overall, women receiving midwifery care reported positive labor and birth experiences at the newly opened birth centers.
- ◆ There was a significant difference on the Composite Satisfaction Scores between those women receiving midwifery care by intended place of birth, with women intending to give birth in a hospital having the lowest satisfaction score.
- ◆ Our study adds to the literature on positive client experiences with midwifery care and birth centers and supports midwifery-led birth centers as an option for women seeking an out-of-hospital low-intervention place of birth.

providing both low-risk and high-risk maternal and newborn care.<sup>15</sup> Both cities are ethnically and linguistically diverse, and it was anticipated that the birth centers would provide care to priority populations such as Francophone and Indigenous families. When the new birth centers opened, there were approximately 140,000 births per year in Ontario with just over 9% of births attended by midwives and 2.5% of all Ontario births taking place at home.<sup>16</sup> The only other birth center in the province was the Tsi Non:we Ionakeratstha Ona:grahsta' birth center, which opened in 1996 as part of the Six Nations Health Service to serve the local Indigenous community and educate Indigenous midwives.<sup>17</sup> By 2014, there were a total of 86 midwifery practice groups in Ontario, with 14 having admitting privileges at the 2 birth centers—5 midwifery practice groups in Ottawa and 9 midwifery practice groups in Toronto. A total of 495 women were admitted to the 2 birth centers in the first year of operation.

The opening of the birth centers provided the opportunity to complete a comprehensive evaluation. The overall mixed-methods study examined the implementation of the birth center demonstration project in the 2 cities and assessed the clinical activities and outcomes for the first year,<sup>18</sup> health care provider experiences,<sup>19</sup> and client experiences (which we report here). We demonstrated that the birth centers are a safe and effective option for women with low-risk pregnancies seeking a low-intervention approach to their labor and birth.<sup>18</sup> In addition, we found that the process used to plan and implement the birth centers facilitated integration of the centers into the existing maternal-newborn health system and increased opportunities for interprofessional collaboration.<sup>19</sup>

Here we report the results of the client experience component of the overall evaluation, where we sought to understand the experiences of women receiving midwifery care accessing the new birth centers. The primary objective of this study was to compare the experiences of women receiving midwifery care who intended to give birth at the newly opened birth centers with those who intended to give birth in the preexisting home and hospital options. Our secondary objectives were to (1) understand the experiences of women admitted to the birth centers, including satisfaction with care and the centers, as well as the transfer experience, if applicable, and (2) identify strengths and areas for improvement related to this new birth center model.

## METHODS

### Design

As one part of a larger mixed-methods evaluation, we used a cross-sectional survey design to learn about client experiences at the birth centers.

### Participants

We recruited survey participants from midwifery practice groups whose midwives had admitting privileges at one of the 2 birth centers. Women were eligible to participate if they were (1) under the care of a midwife at a midwifery practice group with admitting privileges at one of the 2 birth centers; (2) had an expected date of birth between January 31, 2014, and February 3, 2015; and (3) could read and understand English or French. Women were eligible for participation regardless of planned place of birth (ie, birth center, home, or hospital).

### Measures

We conducted a literature review on client satisfaction in health care broadly and maternity services specifically to inform the development of the survey questions.<sup>20-25</sup> Several validated tools<sup>23,25-29</sup> from our literature review were considered, but none fully met our needs. The evaluation working group had previously identified quality indicators for the overarching birth center demonstration project; we mapped findings from the literature review to these quality indicators. One of the quality indicators was the proportion of women satisfied with their birth center experience. We developed a composite indicator, which we called the Composite Satisfaction Score (CSS), comprising 5 questions that relate to satisfaction with labor and birth and that are important in the midwifery model of care. The 5 CSS questions were the following: (1) I felt emotionally supported during my labor and birth; (2) I felt my physical needs were supported during my labor and birth; (3) I felt involved in decision making during my labor and birth; (4) My preferences were respected during my labor and birth; and (5) During my labor and birth, my caregivers explained things in a way I could understand.

The final survey had 4 main groups of questions: (1) demographics, (2) satisfaction with labor and birth experience, (3) alignment with midwifery model of care (ie, proportion of women cared for by a known midwife, proportion of women with 1:1 care during labor), and (4) birth center-specific information on learner integration (ie, midwifery student involvement in labor and birth), satisfaction with birth center facilities, the transfer experience from birth center to hospital (if applicable), and perceptions of the birth center experience and areas for improvement. The first 3 groups of questions were answered by all women, regardless of intended place of birth. The last group of questions was specific to the birth center care and facilities, and the questions were therefore only answered by those admitted to a birth center.

To assess face validity, we circulated a draft survey among members of the research team as well as relevant

stakeholders with knowledge in the area of client experience. Improvements were made to the questions, and the survey was subsequently created within Research Electronic Data Capture (REDCap), a secure, web-based application designed to support data capture for research studies, hosted at the Children's Hospital of Eastern Ontario Research Institute.<sup>30</sup> We formally piloted the REDCap survey with the evaluation team, the general employee group at the Better Outcomes Registry & Network (BORN) Ontario (via a staffwide email), and midwifery clients at one midwifery practice group (via an online link posted on the midwifery practice group's Facebook page and hard copies available at the practice). We asked pilot test participants to complete the full survey and leave comments on their perceptions of the clarity of the questions and the usability of the survey in a comment box at the end. We made revisions based on the feedback of 40 pilot test participants. Most changes were minor editing or reordering of questions. The final survey version was professionally translated into French and reviewed by French-speaking colleagues. The final English and French surveys each contained 29 questions (25 close-ended questions, and 4 open-ended questions) and took approximately 20 minutes to complete (see Supporting Information: Appendix S1 for the English survey).

### Recruitment and Data Collection

The research team contacted midwifery practice groups where midwives had admitting privileges to the 2 birth centers and trained the midwives on asking for survey participation and consent processes for clients. The Research Ethics Board process required us to inform women that their decision regarding participation would not impact any care they received. Individual midwives were asked to explain the survey to women during pregnancy and provide a consent form that women could complete and drop in a box in the waiting room. The consent permitted us to contact the woman within 3 to 6 weeks after birth. Women could provide an email address to receive an electronic survey, or their mailing address for a paper-based copy with prepaid return postage. Signed consent forms were returned in batches via courier from the midwifery practice group clinics.

The research team transcribed the information from the consent forms into a Microsoft Excel spreadsheet. The research team delivered the surveys to the consenting women in their preferred format and language (ie, English or French) within 3 to 6 weeks after their birth, according to the estimated date of birth indicated on the consent form. Women received the survey and up to 2 reminders at 2-week intervals. Because the research team completed survey distribution, midwives were not aware if their clients had received and completed the survey.

### Data Analysis

Surveys were collected and compiled over the course of one year, and descriptive analysis was conducted. The analysis was stratified by *intended* place of birth at the beginning of labor, regardless of where the actual birth occurred. Response choices were categorical, and therefore the results were calculated as percentages. For the composite indicator, the CSS,

responses for the series of questions were summed.<sup>31</sup> The response choices "not at all" or "never" were assigned a value of 1, "somewhat" or "sometimes" a value of 2, "frequently" a value of 3, and "always" a value of 4. Possible values of the CSS ranged from 5 (lowest satisfaction) to 20 (highest satisfaction). Missing responses were assigned the mean for that question.<sup>31</sup> The mean and SD of the CSS was calculated for the various groups of interest, and statistical significance ( $P < .05$ ) was assessed using one-way analysis of variance. Qualitative survey data were analyzed using conventional content analysis,<sup>32</sup> whereby research team members read and coded the responses to the open-ended questions and grouped similar codes into broader categories. Frequencies for each category were also calculated to facilitate understanding of the most common positive and negative factors experienced by birth center clients.

Denominators are presented throughout the results section to indicate where there were missing data because of respondents skipping questions.

### Ethical Considerations

Approval was obtained from the Children's Hospital of Eastern Ontario's (CHEO) Research Ethics Board in September 2013 (protocol #13/136X).

## RESULTS

### Demographics

Between January 31, 2014, and February 3, 2015, 700 women receiving midwifery care consented to receive a survey. Between April 30, 2014, and March 7, 2015, 382 women completed the survey, a response rate of 54.6% (382/700) (Figure 1). Of those who responded, 50% (191/382) intended to give birth at a birth center ("birth center group"), 16.8% (64/382) intended to give birth at home ("home group"), and 33.2% (127/382) intended to give birth in a hospital ("hospital group"). Of those who intended to give birth at a birth center, 143 (74.9%) were admitted to a birth center in labor, and 125 (65.4%) actually gave birth at a birth center. An additional 12 women in the hospital group also gave birth at a birth center. The majority of women were between the ages of 26 and 35 (70.4%), spoke English (78%), had completed college or university (92.4%), and were married (79.6%). Table 1 provides a profile of the survey respondents.

### Satisfaction with Labor and Birth Experience by Intended Place of Birth

Regardless of intended place of birth, most respondents answered "always" for the 5 questions included in the CSS (Figure 2).

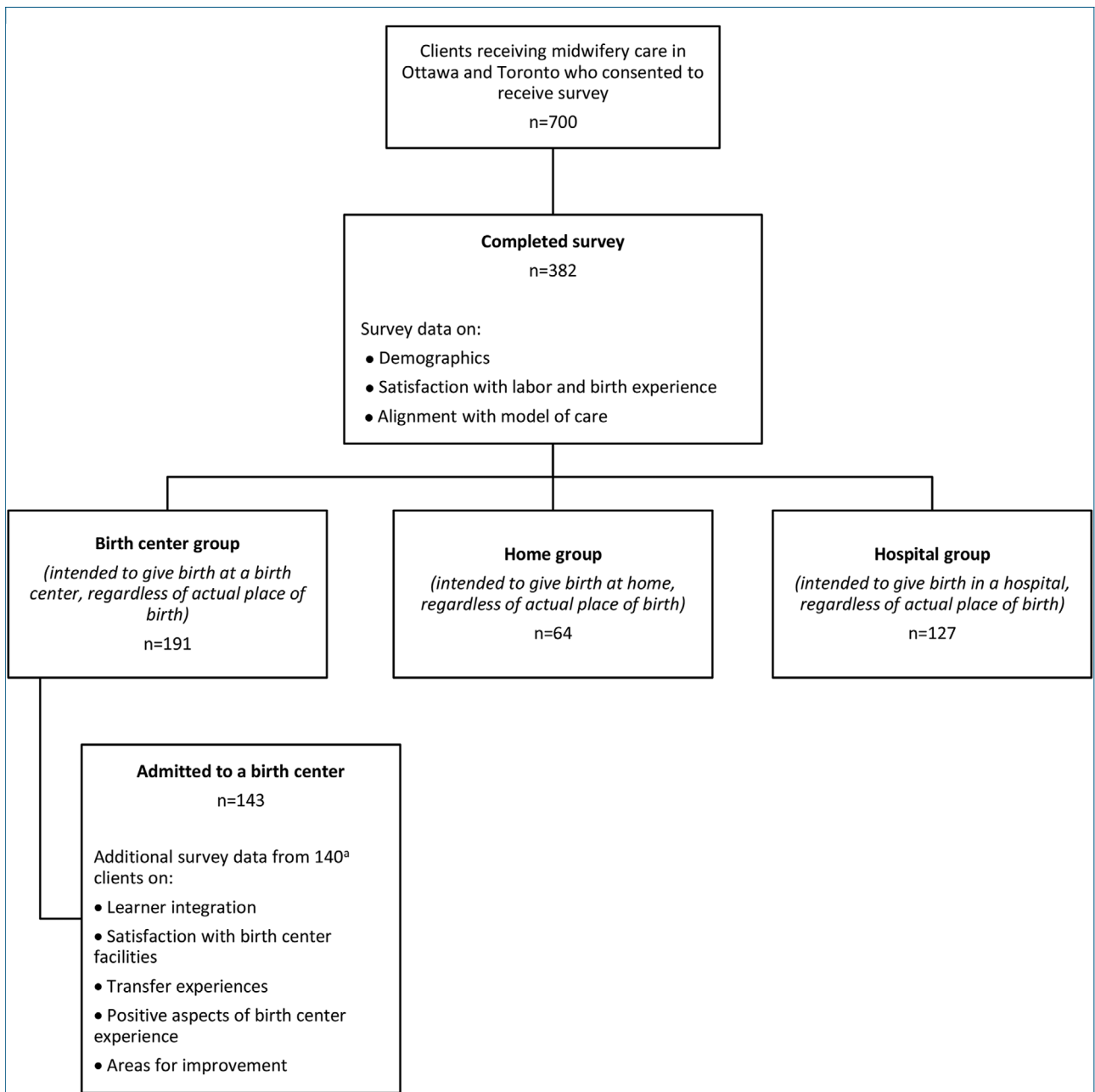
Of the 382 respondents, 3 respondents were missing responses to one of the 5 questions and therefore were assigned the mean value for that question. No respondents were missing answers to more than one question. In a sensitivity analysis, these 3 participants were excluded, which confirmed the main findings presented here (data not shown). The mean (SD) CSS was 19.2 (1.6) out of 20. There were significant differences in CSS by intended place of birth, parity, and birth type.

**Table 1. Profile of the 382 Clients Receiving Midwifery Care Who Completed the Survey**

Characteristics	Intended Birth Location Was Birth Center		Intended Birth Location Was Home		Intended Birth Location Was Hospital	
	Full Cohort (N = 382) n (%)	Center (n = 191) n (%)	Home (n = 64) n (%)	Hospital (n = 127) n (%)		
<b>Age, y</b>						
<20	2 (0.5)	2 (1.0)	0 (0)	0 (0)		
21-25	15 (3.9)	11 (5.8)	1 (1.6)	3 (2.4)		
26-30	86 (22.5)	55 (28.8)	7 (10.9)	24 (18.9)		
31-35	183 (47.9)	86 (45.0)	40 (62.5)	57 (44.9)		
36-40	86 (22.5)	35 (18.3)	14 (21.9)	37 (29.1)		
41-45	10 (2.6)	2 (1.0)	2 (3.1)	6 (4.7)		
<b>Education level</b>						
Less than high school	1 (0.3)	1 (0.5)	0 (0)	0 (0)		
Completed high school or GED certificate	9 (2.4)	7 (3.7)	0 (0)	2 (1.6)		
Some college or university	19 (5)	12 (6.3)	1 (1.6)	6 (4.7)		
Completed college or university	205 (53.7)	99 (51.8)	34 (53.1)	72 (56.7)		
Some graduate work	35 (9.2)	16 (8.4)	9 (14.1)	10 (7.9)		
Postgraduate degree	113 (29.6)	56 (29.3)	20 (31.3)	37 (29.1)		
<b>Marital status</b>						
Single	7 (1.8)	3 (1.6)	1 (1.6)	3 (2.4)		
Married	304 (79.6)	149 (78.0)	49 (76.6)	106 (83.5)		
Cohabiting (and unmarried)	67 (17.5)	37 (19.4)	14 (21.9)	16 (12.6)		
Divorced or separated	2 (0.5)	1 (0.5)	0 (0)	1 (0.8)		
Other	2 (0.5)	1 (0.5)	0 (0)	1 (0.8)		
<b>Native language</b>						
English	298 (78.0)	156 (81.7)	49 (76.6)	93 (73.2)		
French	38 (9.9)	18 (9.4)	8 (12.5)	12 (9.5)		
Other <sup>a</sup>	46 (12.0)	17 (8.9)	7 (10.9)	22 (17.3)		
<b>Nulliparous</b>						
Yes	203 (53.1)	112 (58.6)	24 (37.5)	67 (52.8)		
No	177 (46.3)	79 (41.4)	39 (60.9)	59 (46.5)		
Missing	2 (0.5)	0 (0)	1 (1.6)	1 (0.8)		
<b>Actual location of birth</b>						
At home	66 (17.3)	18 (9.4)	45 (70.3)	3 (2.4)		
In a hospital	179 (46.9)	48 (25.1)	19 (29.7)	112 (88.2)		
In a birth center	137 (35.9)	125 (65.4)	0 (0)	12 (9.5)		
<b>Type of birth</b>						
Spontaneous vaginal birth	321 (84)	173 (90.6)	58 (90.6)	90 (70.9)		
Assisted vaginal birth (forceps or vacuum)	20 (5.2)	6 (3.1)	3 (4.7)	11 (8.7)		
Cesarean birth	41 (10.7)	12 (6.3)	3 (4.7)	26 (20.5)		

Abbreviation: GED, General Education Development.

<sup>a</sup>Other languages included Arabic, various Southeast Asian languages, Chinese, and Spanish and very small numbers of other languages.



**Figure 1. Participant Flow Diagram from Recruitment to Survey Completion**

<sup>a</sup>Data missing for 3 respondents.

The birth center group was further subdivided into 2 groups, one group of women who were admitted into a birth center in labor ( $n = 143$ ) and the other who were not (ie, they labored and gave birth at home or in hospital) ( $n = 47$ ). Among women who intended to give birth in a birth center, CSS was higher in the women admitted to the birth center compared with those who were not (Table 2).

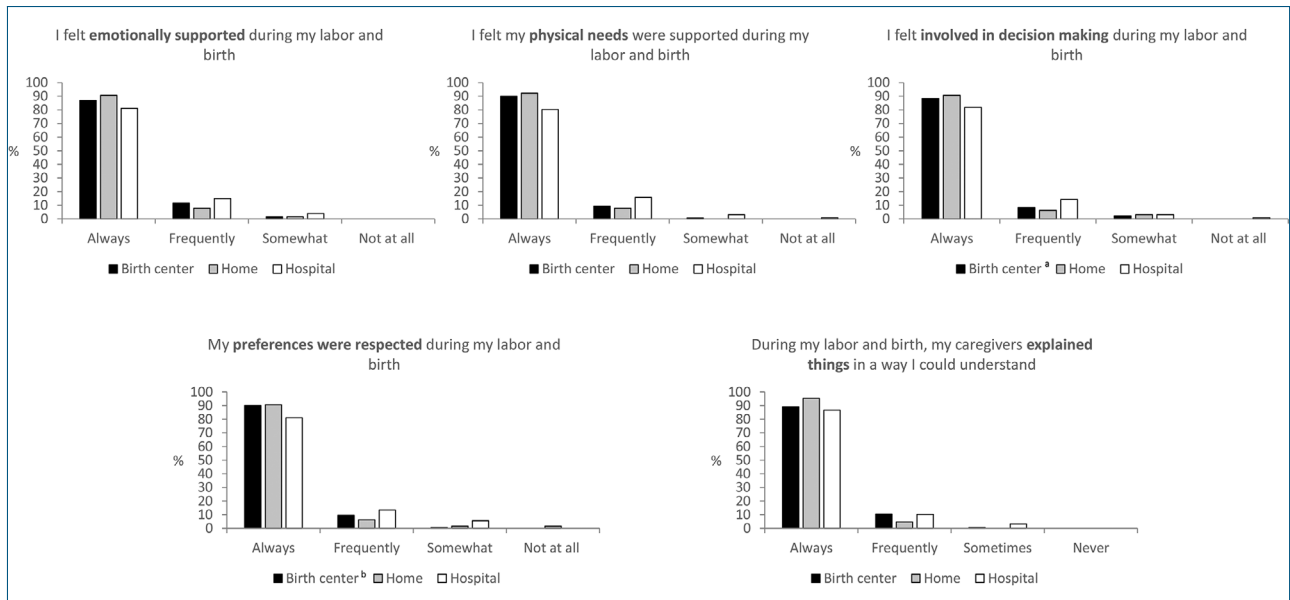
Among women in the birth center group, 84.7% (160/189) indicated that they would choose to give birth in a birth center should they become pregnant again. In the home group, 89.1% (57/64) of women indicated they would give birth at home again. In the hospital group, 72.2% (91/126) of women indicated that they would give birth in a hospital for a subsequent

pregnancy. The majority of women reported that their birth went as hoped either “very much” or “extremely so”: 73.8% (141/191) in the birth center group, 79.7% (51/64) in the home group, and 66.1% (84/127) in the hospital group.

#### **Alignment with Midwifery Model of Care by Intended Place of Birth**

The number of women who reported they had previously met at least one of the midwives or midwifery students who attended their labor and birth was high: 96.8% (182/188) in the birth center group, 95.3% (61/64) in the home group, and 97.6% (124/127) in the hospital group. Of these, 85.0%





**Figure 2.** Client Responses to the 5 Composite Satisfaction Score Questions by Intended Place of Birth (N = 382)

<sup>a</sup>Data missing for 2 respondents.

<sup>b</sup>Data missing for one respondent.

**Table 2.** Composition Satisfaction Scores for the 382 Clients in Midwifery Care

Groups	CSS <sup>a</sup>		P Value
	Mean	(SD)	
<b>CSS by intended place of birth</b>			
Birth center group (n = 191)	19.4	(1.3)	<.001
Home group (n = 64)	19.5	(1.4)	
Hospital group (n = 127)	18.9	(2.0)	
<b>CSS by parity<sup>b</sup></b>			
Nulliparous (n = 203)	19.1	(1.9)	.02
Multiparous (n = 177)	19.5	(1.2)	
<b>CSS by birth type</b>			
Spontaneous vaginal birth (n = 321)	19.4	(1.5)	.0001
Assisted vaginal birth (n = 20)	18.5	(1.8)	
Cesarean birth (n = 41)	18.4	(2.2)	
<b>CSS for birth center group, by actual place of labor (n = 190)</b>			
Admitted to birth center in labor (n = 143) <sup>c</sup>	19.5	(1.2)	.04
Not admitted to birth center in labor (n = 47) <sup>d</sup>	19.1	(1.5)	

Abbreviation: CSS, Composite Satisfaction Score.

<sup>a</sup>The CSS is a composite indicator developed by the research team, composed of 5 questions that relate to satisfaction with labor and birth and that are important in the midwifery model of care. Possible values of the CSS ranged from 5 (lowest satisfaction) to 20 (highest satisfaction).

<sup>b</sup>Responses to the question on parity were missing for 2 women, and therefore they were excluded from this subgroup analysis.

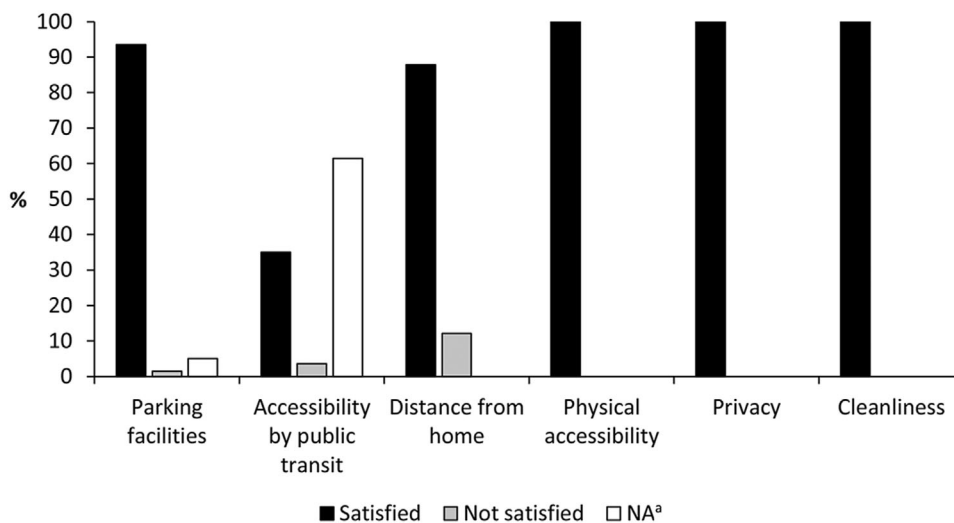
<sup>c</sup>Responses to the question on admission to the birth center were missing for one woman, and therefore they were excluded from this subgroup analysis.

<sup>d</sup>These 47 clients intended to give birth at the birth center but actually gave birth either at home or in a hospital.

(153/180) in the birth center cohort, 82.0% (50/61) in the home cohort and 80.6% (100/124) in the hospital cohort stated they had met this person “many times.”

Respondents were asked how much time their midwife or student midwife spent with them during their labor and birth. Over 90% (354/381) indicated they were attended either “at all times” or “most of the time,” with only 2.1% (8/381) select-

ing the response “I was often unattended by my midwife during labor and/or birth.” Within the birth center cohort 95.8% (183/191) indicated that their midwife or student midwife was present “at all times” or “most of the time” with only one noting that she was “often unattended.” In the home cohort and hospital cohort, 92.2% (59/64) and 88.9% (112/126), respectively, indicated their midwife or student midwife was present.



**Figure 3. Client Satisfaction with Birth Center Facilities (n = 140)**

Abbreviation: NA, not applicable.

<sup>a</sup>Two questions were not applicable to some respondents: parking facilities (if the respondent did not have a vehicle that required parking at the birth center) and accessibility by public transit (if the respondent did not use public transit to access the birth center).

### Learner Integration in Birth Centers

About half of the women in the birth center group admitted to a birth center (55%, 77/140) reported having a student involved in their care during labor and birth. Most were satisfied with the care received by the student, with only 7.8% (6/77) stating they were “somewhat” or “not at all” satisfied.

### Transfer Experience from Birth Center to Hospital

Of the 155 women who were admitted to a birth center (143 in the birth center group and 12 in the hospital group), 18 were transported from the birth center to a hospital, a transfer rate of 11.6%. All 18 respondents reported understanding the reason for their transfer. Most women (14/18, 77.8%) stated they would not have changed anything about their transport experience. Two women (11.1%) wished they had been transported to the hospital sooner, and one woman (5.6%) wished she had transported by ambulance.

### Satisfaction with Birth Center Facilities

Overall, women were satisfied with the birth centers, with most giving positive ratings for the parking facilities, accessibility by public transit, distance from home, physical accessibility, privacy, and cleanliness (Figure 3).

### Qualitative Descriptions of the Birth Center Experience and Areas for Improvement

In response to open-ended questions at the end of the survey, almost all respondents (136/140, 97%) described at least one positive aspect of their birth center experience, most frequently related to the physical space and amenities (86/140, 61%) and the atmosphere of the birth center (60/140, 43%). Some respondents (62/140, 44%) also provided constructive feedback about what could be improved. The most frequent

areas of improvement described were related to enhancements to the physical space and amenities (23/140, 16%) and to the timing of arrival and discharge at the birth center (18/140, 13%). Please see Supporting Information: Appendices S2 and S3 for categories and sample quotations.

### DISCUSSION

This study showed that women receiving midwifery care in the 2 regions with the newly opened birth centers had positive experiences and high measured rates of satisfaction with their labor and birth experience. Women giving birth at a birth center reported positive experiences and overall were satisfied with the learners present at their birth, the accessibility of the centers, and the physical amenities, with some suggestions for minor improvements.

In our survey, similar to other literature, most women gave birth in the location where they intended.<sup>33</sup> Most women would choose to give birth in the same setting again, although fewer women in the hospital group indicated they would give birth in the same setting again compared with the birth center group and the home group. Previous literature comparing client satisfaction and experiences in birth centers with those in other birth settings has shown mixed results. An integrative review on maternal outcomes in birth centers reported that women in birth centers had higher levels of satisfaction compared with women who had hospital births.<sup>34</sup> Similarly, a 2014 study in the United Kingdom reported that women receiving midwifery care who intended to give birth in a birth center rated their care more positively than those intending to give birth in a hospital.<sup>35</sup> A Dutch study<sup>36</sup> of 1134 women to assess the concept of responsiveness found that women receiving midwifery care who planned to give birth in a birth center had comparable experiences to those intending to give birth in a hospital, but less positive experiences compared with those intending to give birth at home.<sup>36</sup>

Although the specific factors that account for the high levels of satisfaction we observed in the birth center, home, and hospital groups cannot be ascertained from this current study, previous literature suggests 2 possible explanations, including the type of care provider and low rates of interventions. First, satisfaction with midwifery care in Canada<sup>37,38</sup> and internationally<sup>39</sup> is high, with women in Canadian midwifery care 3 times more likely to be satisfied with their care compared with those being cared for by an obstetrician.<sup>37</sup> Continuity of care is central to Ontario midwifery care,<sup>1</sup> and midwifery clients have the opportunity to meet and build relationships with a small group of midwives throughout their prenatal care with the goal of the client knowing the midwife who attends their labor and birth.<sup>1</sup> Our study showed that continuity of care was largely achieved in all 3 groups (birth center, home, hospital), with nearly all (>95%) clients having met at least one midwife or midwifery student attending their labor and birth. Positive relationships with midwives have been identified as a key theme in previous studies<sup>34</sup> and may also contribute to the high levels of satisfaction with labor and birth in our sample of midwifery clients. Secondly, low rates of intervention during labor and birth are correlated with satisfaction. A Canadian study found that among women having vaginal births, fewer interventions during labor was significantly associated with higher overall satisfaction with the labor and birth experience.<sup>40</sup> In our study, the assisted vaginal birth rate and the cesarean birth rate were below the provincial averages of 9% and 20%, respectively,<sup>41</sup> suggesting a lower intervention rate and a possible additional explanation for high satisfaction. Although the self-reported rates of assisted vaginal births and cesarean births were higher in the hospital group in our study, this could be due to underlying factors in self-selection for a hospital birth. More discussion of these outcomes can be found in our previous work that included a matched control group.<sup>18</sup>

In addition, respondents in our study who were admitted to a birth center indicated that the centers met their needs, and they provided positive feedback on the amenities and environment. Previous research has similarly found that women accessing birth centers appreciate the relaxing environment,<sup>34</sup> perceived the birth center met their expectations,<sup>36</sup> and rated the birth center environment and services positively.<sup>36</sup>

In the first year of operations of the 2 birth centers, we observed a transfer rate of 26.3% (130 transfers out of 495 admissions),<sup>18</sup> which was higher than the transfer rate of our survey sample. It is unknown why the transfer rate of our survey sample is lower than the overall birth center-hospital transfer rate for the corresponding period. Previous studies have described the experience of being transferred from birth center to hospital as an anxiety-provoking experience.<sup>42</sup> In our study, we found that all 18 women who were transferred from the birth center to the hospital reported understanding the reason for transfer, and most stated they would not change anything about their transfer experience. Although potential explanations for these positive transfer experiences cannot be concluded from the work we report here, they may be attributable to factors such as health care provider communication,<sup>35,43</sup> the ongoing presence of the midwife through the transfer experience,<sup>35,42</sup> and the manner in which the woman's care was handed over from one profes-

sional to another.<sup>42</sup> Previous work by our team demonstrated that health care providers generally described a positive and seamless system for transferring women between birth centers and hospitals.<sup>19</sup> Our findings from this current survey are in alignment with our previous findings from health care providers, suggesting that birth center-hospital transfers are generally working well, but further in-depth qualitative work is required to better understand specific factors that influence women's transfer experiences in our setting.

Lastly, in this study we found that just over half of birth center births had a student involved in their care during labor and birth, which was comparable to the overall rate of student involvement in 52.7% of all birth center admissions (261/495) in the corresponding period.<sup>44</sup> There is tremendous opportunity for continued learner involvement, and given the evidence on the importance of teamwork to improve safety and patient outcomes in maternity care,<sup>45,46</sup> increased inter-professional education and training on low-risk birth within the birth center model could be leveraged beyond midwifery education.

### Strengths and Limitations

This survey was one part of a larger mixed-methods evaluation of the first year of operations of 2 new freestanding midwifery-led birth centers, and it contributes essential information on the perspectives of clients accessing care at these newly funded locations.

Despite the use of multiple reminders, we had a response rate of 54.6%. A possible explanation was the timing of survey administration, which was in the postpartum period when women may have had insufficient time, energy, or interest to participate. Our response rate was comparable to other studies with new mothers, with literature reporting response rates ranging from 29%<sup>47</sup> to 57%.<sup>48</sup> Although the birth centers serve priority populations (ie, specific subpopulations that experience health inequities), our survey respondents were largely well educated and English speaking. We did not have data on nonresponders, and therefore we are unable to ascertain whether there were demographic differences between our survey respondents and those who did not participate, and caution should be taken in generalizing our results to other populations. In addition, there were 12 women who indicated that at the start of their labor they were planning to give birth at a hospital (and were therefore classified in the hospital group) but in fact ended up birthing at a birth center. Potential explanations for why a midwifery client might have planned to give birth at a hospital when their labor started but ended up giving birth at a birth center include factors such as their midwife already being at the birth center with another client, the woman feeling more confident laboring without pain relief, or the hospital being busy, leading to a new plan. The Ontario midwifery model, where midwives may attend births in all 3 settings (home, birth center, hospital), allows for this change of plan during labor, with many women registering at both the birth center and hospital prenatally. It is also possible that respondents may have misunderstood the question and answered it according to their plan during pregnancy, rather than their plan when their labor actually started.



Finally, it is important to recognize that measuring women's experiences and satisfaction with birth can be challenging. Women may rate their experience positively soon after the birth because of the happiness of the event and the relief that labor is over, with the potential for satisfaction levels to change over time.<sup>49</sup> In addition, the CSS we used was internally developed and not validated; however, the items were developed based on a review of relevant literature and reflect important dimensions of satisfaction. Nonetheless, we acknowledge that the use of our own scale is a limitation in this study as it precludes direct comparison with other literature and our tool might not have been sensitive enough to discern small but important differences in the quality of women's experiences.

### Implications

This study reported on client experiences in the first year of operations of 2 new birth centers. The finding of positive experiences among our sample of midwifery clients accessing the birth centers in Ontario, combined with our previously reported findings of positive client outcomes<sup>18</sup> and health system integration,<sup>19</sup> adds further support for this new model.

The results of this cross-sectional survey were provided to administrators and staff at the 2 birth centers. Patient experience data are increasingly becoming recognized as an important source of information to identify areas for quality improvement,<sup>50,51</sup> and ideally, this constructive feedback from clients accessing the centers may facilitate adjustments to the program and services where possible and appropriate.

The CSS scores were high in all 3 groups, although the CSS for the hospital group was slightly lower. Although this difference was marginal (but statistically significant), hospital birth settings can likely be more responsive to client needs and supportive of low-intervention approaches, for example, including options for the use of water in labor and birth and family-friendly spaces.

Although the preliminary evidence supports positive experiences of those accessing these new centers, future surveys and in-depth qualitative work should be planned to reassess and further understand women's experiences with birth centers, including a focus on populations that may not have been well captured in our survey (including those with lower education and non-English- or French-speaking clients).

### Conclusion

Overall, midwifery clients intending to give birth at birth centers in Ontario reported high levels of satisfaction and positive experiences during labor and birth. In addition, women were satisfied with the birth center physical amenities and environment. In Ontario, midwifery-led birth centers are a valuable model supporting midwifery clients seeking an out-of-hospital low-intervention place of birth.

### CONFLICT OF INTEREST

The authors have no conflicts of interest to disclose.

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### SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of the article.

**Appendix S1.** English Labor and Birth Client Experience Survey

**Appendix S2.** Summary of Categories from Open-Ended Survey Questions on Positive Things About Birth Center Experience

**Appendix S3.** Summary of Categories from Open-Ended Survey Questions on Areas for Improvement at the Birth Centers

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