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Perceptions of barriers, facilitators and motivators related to use of prenatal care: A qualitative descriptive study of inner-city women in Winnipeg, Canada

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Abstract

Objective: The objective of this qualitative descriptive study was to explore the perceptions of women living in inner-city Winnipeg, Canada, about barriers, facilitators, and motivators related to their use of prenatal care.

Methods: Individual, semi-structured interviews were conducted in person with 26 pregnant or postpartum women living in inner-city neighborhoods with high rates of inadequate prenatal care. Interviews averaged 67 min in length. Recruitment of participants continued until data saturation was achieved. Inductive content analysis was used to identify themes and subthemes under four broad topics of interest (barriers, facilitators, motivators, and suggestions). Sword's socio-ecological model of health services use provided the theoretical framework for the research. This model conceptualizes service use as a product of two interacting systems: the personal and situational attributes of potential users and the characteristics of health services.

Results: Half of the women in our sample were single and half self-identified as Aboriginal. Participants discussed several personal and system-related barriers affecting use of prenatal care, such as problems with transportation and child care, lack of prenatal care providers, and inaccessible services. Facilitating factors included transportation assistance, convenient location of services, positive care provider qualities, and tangible rewards. Women were motivated to attend prenatal care to gain knowledge and skills and to have a healthy baby.

Conclusion: Consistent with the theoretical framework, women's utilization of prenatal care was a product of two interacting systems, with several barriers related to personal and situational factors affecting women's lives, while other barriers were related to problems with service delivery and the broader healthcare system. Overcoming barriers to prenatal care and capitalizing on factors that motivate women to seek prenatal care despite difficult living circumstances may help improve use of prenatal care by inner-city women.

Keywords

Prenatal care, pregnancy, barriers, facilitators, motivators, qualitative study, access to care, inner-city

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Introduction

Prenatal care (PNC), ideally starting in the first trimester and continuing at regular intervals throughout the pregnancy, is widely recognized for its value in mitigating risks and improving outcomes for the mother and infant.[1,2] Despite these benefits, a substantial proportion of women do not receive recommended PNC, even in jurisdictions such as Canada where care is universally available and publicly funded.[3–5] Our previous research found wide regional variation in the proportion of women receiving inadequate PNC throughout Manitoba, with highest rates in the northern part of the province and in inner-city neighborhoods in the capital city of Winnipeg.[3] These disparities in utilization of PNC have persisted over time, as evidenced by the findings of a recent provincial perinatal surveillance report.[6] Understanding the factors that contribute to low uptake of PNC is a necessary step to plan programs and service improvements aimed at reducing disparities in utilization of PNC.

Several quantitative studies have been conducted on factors associated with use of PNC, summarized in a systematic review of determinants of inadequate use of PNC in high-income countries[7] and a review of barriers to PNC in the United States.[8] A smaller number of qualitative studies[9–16] and one meta-synthesis[17] explored women's views of PNC and factors influencing access to care. The majority of studies on PNC has been carried out in the United States and most have focused on barriers. Few studies asked women what facilitated or motivated them to seek PNC or what suggestions they had to improve services. In addition, many of the studies involved African American and Hispanic women or women receiving Medicaid. Given differences between the United States and Canada in terms of the healthcare systems and racial/ethnic composition, these studies are not directly generalizable to a Canadian population.

This article reports on a qualitative descriptive study involving women from inner-city Winnipeg to gain an understanding of their experiences with PNC and their ideas to improve services, in order to inform program planning. This research was part of a larger mixed-methods study of the factors associated with inadequate PNC among inner-city Winnipeg that was conducted from 2007 to 2010. Other study components included a case–control study (N = 608) of women's assessment of barriers, motivators, and facilitators related to PNC utilization[18] and a second qualitative study of healthcare providers' perceptions of factors that inhibit or contribute to the use of PNC among inner-city women in Winnipeg.[19] Sword's socio-ecological model of health service use provided the theoretical framework for the research. This model conceptualizes service use as a product of two interacting systems: the personal and situational attributes of potential users and the characteristics of health services.[20]

Methods

This study used a qualitative descriptive exploratory design, known to be useful for obtaining answers to questions of special relevance to practitioners and policy makers.[21] Ethical approval for this study was obtained from the Education/Nursing Research Ethics Board at the University of Manitoba (Protocol no. E2006:083). Written informed consent was obtained from all participants before the study. The study also received approval from the Assembly of Manitoba Chiefs Health Information Research Governance Committee. Permission to recruit participants was received from the Winnipeg Regional Health Authority Research Review Committee and the Health Sciences Centre Impact Review Committee.

Recruitment

Women were eligible to take part in the study if they were in their last trimester of pregnancy (28 weeks or greater) or up to 2 weeks postpartum and if they resided in one of eight Winnipeg inner-city neighborhoods identified as having high rates of inadequate PNC in our previous study.[3] Purposeful sampling was used to select information-rich cases, and maximum variation sampling strategies were utilized to gain a broad range of perspectives and ensure diversity in characteristics, most notably age, parity, race/ethnicity, neighborhood, and use of PNC.[22,23] Recruitment continued until data saturation was achieved.[24]

Pregnant participants were recruited through PNC providers at a variety of healthcare sites, such as the outpatient prenatal clinic of a tertiary care hospital, an inner-city community clinic, and public health offices. Because it proved difficult to recruit women with very low use of PNC through these sources, some participants were recruited from the postpartum unit of a tertiary care hospital.

Data collection

Individual, in-depth interviews were conducted in person using a semi-structured interview guide. Refer to interview guide in Supplementary Material. The questions on the guide focused on women's perceptions of barriers, facilitators, and motivators related to PNC use and their suggestions to improve services. PNC was broadly defined for participants as "visits to a doctor, midwife, or nurse practitioner, as well as community-based programs and services." The interviews were conducted by two female nurses (the project coordinator and a research nurse) who had a background in community health nursing and experience working with pregnant and postpartum women. Interviews averaged 67 min in length and took place in women's homes, in hospital, and, in one case, at the workplace. Interpreters were employed to assist with three interviews (French, Arabic, and Tagalog). A brief demographic questionnaire was completed at the end of

each interview. Participants received a CAD20 grocery gift card to thank them for their time and contribution to the study. Each interview was audio-recorded and transcribed verbatim, and the transcript was reviewed for accuracy.

Data analysis

Descriptive statistics were used to summarize the demographic data. The interview data were analyzed using content analysis.[25,26] The project coordinator worked with the first two authors of this article to develop a preliminary coding scheme after reading the first eight transcripts in their entirety. Themes and subthemes were developed inductively under four broad issues of interest (barriers, facilitators, motivators, and suggestions) and were further developed and revised through the use of comparative analysis.[24,27] Variations and contradictions in the data were investigated to further understand the emerging themes.[24,27] The qualitative analysis software QSR NVivo Version 9 was used to assist with documentation and organization of themes and subthemes.

Results

In all, 26 women were interviewed (21 in the third trimester of pregnancy and 5 within 2 weeks of giving birth). The characteristics of study participants are shown in Table 1. Notably, 50% of the women were single and 50% self-identified as Aboriginal. The themes and subthemes relevant to the objectives of the study are summarized in Table 2, including the number of women who provided responses related to the theme or subtheme. As recommended by Sandelowski,[28] we use words such as *some, many*, and *most* to refer to participants in the presentation of findings in order to avoid overuse of numbers "that detract from the aesthetic presentation of findings" (p. 237), but display the frequencies in Table 2 so the reader can look to see what the words mean.

Table 1. Characteristics of study participants (N = 26).

Characteristic	Range	Mean (SD)
Weeks pregnant at time of interview[a]	29–39	33 (2.2)
Maternal age in years	15–37	26 (6.6)
Education in years	7–17	11 (2.6)
Weeks pregnant at first prenatal care visit	4–34	12 (7.0)
Number of prenatal care visits received at time of interview	1–13	7 (3.5)
	n	%
Timing of interview		
Prenatal	21	80.8
Postpartum	5	19.2
Parity		
Multigravida	16	61.5
Primigravida	10	38.5
Marital status		
Single, never married	13	50.0
Married or living common-law	12	46.2
Separated/divorced	1	3.9
Employment status		
Full-time homemaker (not looking for work)	6	23.1
Employed full-time and currently working	4	15.4
Employed part-time and currently working	1	3.9
Unemployed (out of work and looking for work)	1	3.9
Student	8	30.8
Other	6	23.1
Winnipeg neighborhood[b]		
Downtown B	6	23.1
Downtown A	5	19.2
Point Douglas B	4	15.4
River Heights B	4	15.4
River East A	3	11.5
Point Douglas A	3	11.5
Inkster B	1	3.9
Inkster A	0	0
Race/ethnicity		
Aboriginal	13	50.0
White	8	30.8
Black	2	7.7
Arab/West Asian	2	7.7
Filipino	1	3.9

SD: standard deviation.
[a]Excludes the five women who were interviewed postpartum.
[b]Indicates distribution of participants from the eight neighborhoods used in the larger study. For a map of neighborhood clusters in the Winnipeg Regional Health Authority, refer to: http://www.wrha.mb.ca/research/cha/files/Maps_WRHAPopulation06.pdf

Barriers to PNC

Barriers were defined as factors that made accessing PNC difficult or prevented a woman from obtaining PNC. Four themes emerged: personal barriers, program and service characteristics, care provider qualities, and healthcare system characteristics.

Personal barriers. Participants expressed a number of personal barriers that interfered with attending PNC visits. Many described not knowing where to go for PNC or what services existed. One young woman confided, "I had no idea where to go. I was terrified about, like, there is [sic] so many doctors out there. I didn't know which one to go to, so I didn't even go" (G1P0, 18 years).

Logistical issues, particularly transportation and child care, posed a barrier for most of the participants. As one woman who had received minimal PNC explained, "I had no way of getting there." Difficulty finding child care was another issue for some women, while others found it problematic to take their other children to appointments because

Table 2. Barriers, facilitators, motivators, and suggestions to improve PNC: perceptions of inner-city women in Winnipeg, Manitoba, Canada[a].

Categories	Themes and subthemes
Barriers	*Personal barriers*
	• Logistical issues related to transportation and child care (20)
	• Limited awareness of PNC services (19)
	• Lack of social support (17)
	• Financial issues (13)
	• No perceived need or value in attending PNC (11)
	• Lack of motivation (10)
	• Other commitments (10)
	Care provider qualities
	• Not meeting expectations (16)
	• Negative personality characteristics (13)
	• Too busy (12)
	• Not sharing information (11)
	Program and service characteristics: inaccessible and inconvenient
	• Lengthy office wait (13)
	• Scheduling difficulties (11)
	• Geographic distance: "too far away" (10)
	Healthcare system characteristics
	• Shortage of PNC providers (10)
	• Lack of consistency in care providers (9)
Facilitators	*Transportation and child care* (23)
	Care provider qualities
	Sharing information (22)
	Making referrals to other professionals (18)
	Positive personality characteristics (18)
	Making a connection (13)
	Providing support (11)
	Social support
	• Assistance/encouragement from family members or friends (22)
	Program and service characteristics
	Located close to where women live (20)
	Flexible scheduling and convenient hours (13)
	Minimal wait times (10)
	Tangible rewards (10)
Motivators	*Gaining knowledge and skills* (24)
	Ensuring health for mother and baby (23)
	Opportunity for social interaction (11)
Suggestions to improve PNC	*Assist with transportation and provide family-friendly services* (9)
	Locate PNC services closer to where women live (7)
	Promote public awareness of PNC services and programs (6)

PNC: prenatal care.
[a]The numbers in parentheses indicate the number of participants who discussed that theme or subtheme.

of the challenges of public transportation or the long periods in a waiting room. One participant commented,

> For me, because of the fact that I have other kids, finding buses that are easy access to get a stroller onto [is a problem] … And trying to plan what it is that we are going to do in the doctor's office when we are waiting for an hour and a half with my kids. (G4P3, 27 years)

Financial issues were commonly identified as impacting PNC use. Although women did not incur any direct costs for primary care services, many women mentioned that they could not afford transportation to get to prenatal appointments, which can be particularly challenging during Winnipeg's winter months. As one woman expressed,

> I was supposed to go for an ultrasound but I couldn't go. It was cold that day and I wasn't gonna walk. I didn't have no bus fare … didn't want to freeze my ears, so I just stayed home. (G10 P4, 23 years)

Lack of social support was another personal barrier expressed by many women. In some cases, it had practical implications, when women did not have assistance from family or friends to attend PNC. For some women, a lack of encouragement from others was a disincentive to seek care.

Several women believed that they did not need PNC or did not see its value. For some, this belief was related to having previous pregnancies where everything went well, while others did not see the value in routine PNC but would attend if they thought something was wrong. For example, a woman with three children had attended a walk-in clinic for a pregnancy test and initial blood work but did not receive any other PNC: "If I felt like there was something wrong, then I would for sure go to the doctor, you know, but I had three other babies and I knew what to expect" (G4P4, 25 years).

A number of women described periods where they simply lacked motivation to attend PNC or as one young woman put it, "I was just too lazy to go" (G2P0, 17 years). Others spoke about how other commitments, such as having to attend work or school, made it difficult to attend PNC. Although not many women commented on cultural or language barriers, one woman described how cultural repression might affect Aboriginal women's confidence in seeking access to health services:

> My family is Native … A lot of Native people are really repressed and not really seeking or receiving optimal health care or education and so that affects everything … Generally, well, their communication skills are not as great and they are not expressing their needs as much and so, when you have a hard time voicing what it is that you need or want, it is sometimes just easier to avoid [the doctor]. (G4P3, 27 years)

Program and service characteristics. Barriers under program and service characteristics pertained to inaccessibility and inconvenience. Some women noted that PNC services were too far away to be easily accessible, while others discussed

difficulties getting an appointment or not being able to get an appointment as soon as they wanted:

> Well, you take the magic pregnancy test and find out that you are pregnant. I called my doctor's office and the … receptionist said, "Okay, we will see you at 11 weeks. When will that be?" And I remember thinking, "What? You're going to see me at 11 weeks! I am 5 weeks pregnant now. That's 6 weeks until then." (G2P1, 32 years)

Other women spoke about the inconvenience of lengthy office waits, including two women who recalled waiting at least 2 h for a PNC visit.

Care provider qualities. Participants identified negative personality characteristics of care providers as barriers to PNC, such as being rude or abrasive, distracted, or not caring.

Other participants criticized care providers for being too busy, not sharing information, or failing to meet their expectations. As one woman remarked,

> The doctor himself is so abrasive—Flies in to the room, does what he needs to do … it doesn't really seem like he cares, and he is out the door and on to the next patient. … I feel so rushed that I don't actually get to talk about things that are pertinent to my pregnancy. And so I leave the office feeling unsatisfied or not voicing concerns. (G4P3, 27 years)

Healthcare system characteristics. Several women identified system-related barriers, primarily a shortage of PNC providers and a lack of consistency in providers. Some women commented specifically on the shortage of midwives and finding "they were all booked up," whereas others noted the shortage of obstetricians in the city:

> Getting into the OB/GYN has been difficult and I know they have exceptional wait times and I have heard a lot of frustrations from my friends … Sometimes they [obstetricians] are not available … They are overworked and they have lots of pregnant woman out there who are desperate to get in and they can't. (G2P1, 32 years)

The lack of consistency of PNC providers and subsequently receiving impersonal care was an issue for women who received care from medical residents in teaching clinics. One woman stated,

> Like you don't even see the real doctor unless they [residents] think that it is necessary for you to have to. And then it is a different doctor all the time … they don't know you or what is going on. (G6P5, 36 years)

Facilitators of PNC

Facilitators were defined as external factors that made it easy to access PNC. Four themes emerged: program and service characteristics, care provider qualities, social support, and transportation and child care.

Program and service characteristics. The majority of women interviewed spoke of the importance of PNC services being located close to where they lived. Most appreciated services being within walking distance because many did not own a car and walking was easier than taking public transportation. Flexible scheduling, convenient hours, and minimal wait times were also seen as important facilitators to care. Women commented on tangible rewards as facilitators to PNC, including food, bus tickets, and milk and grocery coupons. One single mother, who was attending school and expecting her third child, stated, "I just want to go [to the Healthy Baby program]. I want the milk coupons. And I want to eat, and I don't eat all day until I get there" (G3P3, 26 years).

Care provider qualities. Women spoke at length about specific qualities of care providers as facilitators to PNC attendance. Most participants believed it was important that care providers shared information with them during PNC visits. A study participant commented on learning about how her baby was doing:

> Dr. [name of obstetrician] tells me the baby is okay, she tells me she is growing fine, and the heartbeat is looking good and all that, and she just tells me what is going on. I like that about her. (G1P0, 15 years)

Many women also appreciated the care providers' referrals to other professionals. In addition, positive personality characteristics were viewed as facilitators of care. Some of the terms used to describe these characteristics were *nice, kind, reassuring, caring, thorough, patient*, and *knowledgeable*. Women also spoke of the importance of trusting their providers and feeling that they were not being judged. They valued care providers who took time to make a connection with them and who provided support. One participant described her physician in the following way: "He just took the time. He respected the questions that you had, and he was a lot more thorough, it seemed, and attentive … He … uses humor and is a very positive person" (G2P1, 32 years). Another woman compared the care she received from midwives in her current pregnancy to her past experiences with physicians: "They [midwives] cared more about the experiences I was having … they cared more about the whole entire situation" (27 years, G4P3).

Social support. Most women in this study identified social support as an important facilitator of PNC. Many said family members or friends encouraged them to attend PNC, played a key role in helping them find prenatal services, and attended PNC sessions with them or provided child care so that they could attend PNC visits. One immigrant woman, speaking through an interpreter, said her husband received permission

from his school to drive her to her PNC appointment as she had experienced difficulty in the past taking public transportation "because I am new here." A teenager spoke through tears of the support she received from her mother after learning that the teenager was 8 months pregnant: "Considering my options, she was very supportive of my options. She … said she would support me in whatever I decided. And she drove me to all my appointments" (G1P1, 17 years).

Transportation and child care. Some women commented that PNC attendance was facilitated by the availability of bus service and convenient bus routes, having a car, or receiving bus tickets to attend a Healthy Baby community support program.[29] Other facilitators were having access to child care through preexisting daycare arrangements or through availability of child minding services at Healthy Baby program sites.

Motivators of PNC

Motivators were defined as internal or psychological factors that stimulated a woman to seek PNC. Participants identified a range of motivating factors within three themes: gaining knowledge and skills, ensuring health for mother and baby, and having an opportunity for social interaction.

Gaining knowledge and skills. Almost all of the women interviewed were motivated to seek PNC to gain knowledge and skills. For many, this meant learning about the pregnancy, labor and delivery, and new baby care. For others, acquiring information about housing, nutrition, relationships, lifestyle, and community supports was important. One woman who attended a Healthy Baby program puts it this way:

> They make sure that you drink lots of milk when you are pregnant because they give you the milk coupons and … they make sure that you are eating healthy and they tell you how to eat healthy and what is good for you and what isn't good for you while you are pregnant. That is the greatest thing and so that is why I kept going. (G4P4, 25 years)

Ensuring health for mother and baby. Most of the women were motivated to attend PNC by their wish to ensure health for themselves or their baby. One mother stated, "Of course you want the best for your baby, your unborn baby. … You want to take advantage of whatever is out there for the health of your baby" (32 years, G2P1). While most women spoke of this motivating factor in general terms, some participants specifically mentioned the importance of monitoring or assessing their health status and that of their baby during the pregnancy. Participants referred to the reassurance provided by various tests, such as ultrasounds, blood pressure, blood work, and fetal heart rate monitoring.

Opportunity for social interaction. Some PNC programs provided an opportunity for social interaction, which was a motivating factor for some women. For some, the social aspect was an essential component of PNC, something that "got them out of the house" and allowed them to meet and learn from others in their community. One woman remarked on the Healthy Baby program as follows:

> You got information; it was free; you got to meet other people that were going through the same stuff as you. Learn stuff that you may have forgotten, got a little snack on the side. And they give you the recipe on how to make it and some of the ingredients all for a dollar … You got everything you basically needed in one spot. (G6P5, 36 years)

Suggestions to improve PNC

Women offered a variety of ideas to improve PNC services, although we found little overlap among their suggestions, and some women could not think of anything to suggest. Three suggestions arose most frequently.

Locate PNC services closer to where women live. Women wanted to see PNC service available closer to home. Those who elaborated said this would ease any burden around transportation.

Assist with transportation and provide family-friendly services. Women suggested that transportation assistance, such as bus tickets or taxi vouchers, would help them attend PNC services. One participant suggested that directly providing transportation would be especially helpful for women with other children:

> They should have something like a van to pick up people who had more than one kid … that would probably make it a whole lot easier and I wouldn't have had to stop [getting care] because I would have had a way to get there and back. (G6P5, 36 years)

Another woman said,

> I think if the offices were more family friendly that maybe more women would actually go to their appointments. (G4P3, 27 years)

Promote public awareness of PNC services and programs. Finally, women wanted to see more promotion of PNC services and programs to increase public awareness about their importance. Numerous ideas were provided on how this might be done (e.g. phone lines, websites, information sheets, "flyers or some kind of advertisement"). One woman explained the rationale for her suggestion to make more information available:

> I looked everything up [about PNC] online and I had a really great idea about a lot of it. Not everyone can do that and not everyone will understand it or not everyone will want it. So maybe having more information available for women to understand the importance of the services they are receiving. (G3P0, 26 years)

Discussion

The inner-city women interviewed for this study identified a variety of barriers to obtaining PNC, many of which were similar to those raised by healthcare providers in the companion piece to this study.[19] As posited by Sword's[20] theoretical framework, women's utilization of PNC was a product of two interacting systems, with several barriers related to personal and situational factors affecting women's lives, while other barriers were related to problems with service delivery and the broader healthcare system. Similarly, Downe et al., in their meta-synthesis of eight qualitative studies, concluded that women's access to PNC was influenced by personal resources in terms of time, money, and social support, considered alongside service provision issues including quality of care and the sensitivity of staff.[17] While our findings are largely consistent with those of similar qualitative studies on barriers and motivators related to use of PNC,[10,11,17] this study presents the unique perspectives of inner-city women living in a Canadian city with a high proportion of Aboriginal people. An additional contribution of this study is our focus on understanding factors that make it easier for women to seek PNC. Often through deeply felt experiences, participants were able to articulate a number of positive characteristics of programs and care providers, as well as types of social support that facilitated access to PNC.

By recognizing the areas of overlap between the barriers, facilitators, and motivators identified, a number of practice implications arise. As women in the study suggested, efforts are needed to increase awareness of the benefits of PNC for pregnant women and their infants. If women and their families do not understand the importance of early and regular PNC, appointments will be meaningless and therefore will be started late or missed entirely. If women do not know where to obtain PNC, system improvements are needed to communicate where and how to access PNC, taking into account literacy levels in the inner-city, and using innovative strategies such as social marketing.[30,31] In addition, it is important that initiatives to promote PNC consider the cultural context and beliefs of various populations.[14,15] For example, Aboriginal women interviewed in two previous studies[32,33] conceptualized pregnancy as a healthy, natural state that did not necessarily require medical intervention. Public awareness and health service initiatives that respect and build on such beliefs may have a greater likelihood of success. The Aboriginal Prenatal Wellness Program offered in Wetaskiwin, Alberta, is an example of how providing culturally competent and integrated PNC to Aboriginal women and their families can result in increased participation in health care and better maternal and neonatal healthcare outcomes.[34] This program "promotes a team approach to prenatal care, addresses barriers of transportation, provides a one-stop shop and educates staff to provide culturally safe care"[34] (p. 46), thereby addressing some of the barriers identified in this study. Healthcare providers should recognize the history of colonization and the intergenerational impact of residential schools as one of the causes of health and social inequities among First Nations, Inuit, and Metis people, with important implications for women's experiences and practices surrounding pregnancy.[34,35]

Initiatives to improve accessibility and convenience of PNC have the potential to reduce frustration for women who make the effort to attend appointments while signaling to them that their time is respected. Improvements to scheduling practices could shorten office wait times and provide more flexible clinic hours, thereby addressing a number of barriers for inner-city women. Locating PNC services closer to where women live would, as study participants suggested, make it easier for them to access care, particularly when other commitments are competing for their time. Given the cold winters in many areas of Canada and the reliance on public transportation for many people in inner-city areas, more needs to be done to accommodate the long distances some women must travel to attend PNC. Innovative solutions may include a "one-stop shop" approach (where PNC is available alongside other frequently used health and community services),[19] drop-in services, a group model of PNC,[36–38] and use of a mobile van to provide PNC.[39,40] Women in this study suggested that providing transportation support would make it easier for them to attend PNC.

Changes in the delivery of PNC could encourage the qualities that women value in their healthcare providers: taking time, sharing information, and connecting on a personal level. These characteristics were identified as components of high-quality interpersonal care processes in our previous work.[41] Ensuring care providers have sufficient time to provide quality PNC may require consideration of the optimal number and types of providers and of how PNC is funded. One of the barriers identified by women in this study was a shortage of providers, consistent with the Society of Obstetricians and Gynecologists of Canada's concerns about the growing shortage of maternity care providers.[42] In Winnipeg, in 2007/2008–2008/2009, the majority of women (65%) received PNC from an obstetrician, while 13% received care from a family physician, 4% from a midwife, and 17% from a mix of providers.[6] The number of family physicians providing PNC has declined over time in Manitoba,[6] mirroring the national trend.[42] One policy issue which may affect implementation of PNC in Manitoba is the predominantly fee-for-service remuneration of physicians, which may contribute to high-volume clinics with long waiting times. In addition, midwifery is a relatively new profession in Manitoba, becoming regulated in 2000, and has not grown as quickly as projected for a number of reasons.[43] The shortage of midwives creates another system barrier to PNC, with the demand for midwifery care exceeding capacity.[43]

PNC programs and services should consider incorporating elements that women identified as facilitators. For example, women in our study spoke about how much they valued the opportunity for social interaction in the community-based drop-in programs available to pregnant women. This

finding suggests that offering clinical PNC in an environment that allows women to interact with one another may make it more attractive. Studies of group PNC like Centering Pregnancy have demonstrated benefits such as better prenatal knowledge and greater satisfaction with care.[37,38,44] In addition, the use of tangible rewards has been discussed in the literature,[45,46] and women in our study clearly expressed that such incentives encouraged them to attend.

Finally, the design of programs and services (and their promotion) should place more emphasis on what motivates women to seek PNC. Most women in our study were motivated by a desire to gain knowledge and skills and to ensure health for themselves and their baby. These motivators have the potential to override the daily challenges women face in attending PNC appointments, particularly if women value PNC. Sword describes this decision-making as "weighing the pros and cons," a process which, when considered together with Sword's[16] additional process themes of "taking charge" and "taking care of self," underscores the importance of addressing women's internal motivators in improving PNC utilization.

This study had several limitations. All participants lived in inner-city Winnipeg, were primarily of low income, and half self-identified as Aboriginal, thereby limiting the transferability of our findings. We were unable to recruit sufficient numbers of pregnant women with inadequate PNC and therefore interviewed some women in the postpartum period who had been identified as having little or no PNC. As a result, the views of women with little or no PNC may be under-represented in our sample and the potential for recall bias exists for those interviewed postpartum. All women were interviewed only once, which may have affected the degree of trust in disclosure of issues. This coupled with the fact that few women in our sample had minimal or no PNC may have contributed to an under-representation of respondents identifying certain psychosocial barriers identified in the case–control portion of our mixed-methods study, such as drug or alcohol abuse, intimate partner abuse, and fear of apprehension of the baby by Child and Family Services.[18] Finally, interpreters were used for three interviews and may not have always translated women's responses verbatim, potentially affecting accuracy of interpretation.

Conclusion

This study offered inner-city women the opportunity not only to discuss barriers, facilitators, and motivators of PNC but also to suggest ways to improve PNC in their communities. By engaging women in this discussion, we provided them a voice in influencing health policy-makers and administrators in making decisions about PNC programs and services. Future research should focus on the implementation and evaluation of new models of PNC that take these suggestions into account and that capitalize on what motivates women to seek PNC while addressing the barriers and facilitators they identified.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Ethics Approval

Ethical approval for this study was obtained from the Education/Nursing Ethics Board at the University of Manitoba (Protocol no. E2006:083).

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Informed Consent

Written informed consent was obtained from all subjects before the study.

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